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

ND TFFR Board Meeting
Thursday, November 16, 2023, 1:00 p.m.
WSI Board Room (In Person), 1600 E Century Ave, Bismarck ND
Click here to join the meeting

AGENDA

I. CALL TO ORDER AND ACCEPTANCE OF AGENDA *(Board Action)*
- A. Pledge of Allegiance
- B. Executive Summary
- C. Introduction of New Staff

II. ACCEPTANCE OF MINUTES (September 21, 2023) *(Board Action)*

III. LEGISLATION (10 minutes)

- A. Secure 2.0 changes – Ms. Murtha *(Board Action)*

IV. EDUCATION (30 Minutes) *(Information)*

- A. Actuarial Issues & Trends - GRS

V. GOVERNANCE (120 minutes)

- A. Actuarial Valuation Report – GRS *(Board Action)*
- B. Strategic Communication Plan – Ms. Mudder *(Board Action)*

(Break)

- C. PERS Board Decision & Special Legislative Session *(Information)* – Ms. Murtha
- D. Administrative Rules – Ms. Murtha *(Board Action)*
- E. Pioneer Project Update – Mr. Roberts *(Information)*
- F. GPR Committee Update – Mr. Mickelson and Mr. Roberts *(Information)*

VI. REPORTS (40 minutes) *(Board Action)*
- A. Quarterly Investment Report (9/30) – Mr. Anderson, Mr. Posch
- B. Annual Retiree Reemployment Report – Mr. Roberts
- C. Quarterly Internal Audit Report – Ms. Seiler
- D. Quarterly TFFR Ends (9/30) – Mr. Roberts
- E. Executive Limitations/Staff Relations – Ms. Murtha
    1. Awards
    2. Employee Engagement Survey

VII. OTHER BUSINESS

- A. Board Reading Materials – Material References Included
- B. Next Meetings:
    1. TFFR Board Meeting Thursday, January 25, 2024, at 1:00 p.m.

VIII. ADJOURNMENT

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

EXECUTIVE SUMMARY

TFFR Regular Meeting

November 16, 2023 – 1:00pm CT

I. **Agenda:** The **November Board Meeting will be held in the Conference Room at the WSI Building to accommodate in person attendance, however, a link will also be provided so that Board members and other attendees may join via video conference.** The board member video link is included in the email with the Board materials.

- Attendees are invited to join the Board President in the Pledge of Allegiance.
- Introduction of new staff members

II. **Minutes (Board Action):** The September 21, 2023, Board meeting minutes are included for review and approval.

III. **A. Legislation (Board Action):** Due to a change in federal law state law must be changed to comply. The Employee Benefits Programs Committee (EBPC) can approve an interim request for a state law change if the change is required by federal law. Ms. Murtha will present the proposed change and review the basis for the request for board approval.

IV. **Board Education – Actuarial Issues and Trends (Information):** Representatives from GRS will provide the board with education on variable plan models and inflationary pressures.

V. **A. Actuarial Valuation Report (Board Action):** Representatives from GRS will provide the board with an overview of the annual actuarial valuation of the fund.

B. **Strategic Communication Plan (Board Action):** Ms. Mudder will present a strategic communication plan for board approval.

C. PERS Board Decision & Special Legislative Session (Information): Ms. Murtha will provide the Board with information regarding a recent decision from the ND Supreme Court on the PERS Board litigation and the resulting need for a special legislative session.

D. Administrative Rules (Board Action): Ms. Murtha will provide the board an update on the administrative rules promulgation process and request final approval of proposed rules.

E. Pioneer Project Update (Information): Mr. Roberts will provide the Board with an update on the current status of the Pioneer project.

F. **Governance & Policy Review Committee Report (Information):** The Committee Chair and Mr. Roberts will provide an overview of committee discussion. TFFR Governance Manual amendments will be presented for second reading and final adoption.

VI. **Reports (Board Action):** Staff will provide reports on quarterly investment performance, annual retiree reemployment, quarterly audit activities, quarterly TFFR Ends and executive limitations/staff relations.

Adjournment.

NORTH DAKOTA TEACHERS' FUND FOR RETIREMENT
MINUTES OF THE
SEPTEMBER 21, 2023, BOARD MEETING

BOARD MEMBERS PRESENT: Dr. Rob Lech, President
Mike Burton, Vice President
Thomas Beadle, State Treasurer
Scott Evanoff, Trustee
Cody Mickelson, Trustee
Jordan Willgohs, Trustee

BOARD MEMBERS ABSENT: Kirsten Baesler, State Supt. DPI

STAFF PRESENT: Jennifer Ferderer, Fiscal/Investment Admin.
Missy Kopp, Exec. Assistant
Sarah Mudder, Communications/Outreach Dir.
Jan Murtha, Exec. Director
Matt Posch, Sr. Investment Officer
Chad Roberts, DED/CRO
Sara Seiler, Supvr. of Internal Audit
Stephanie Schilling, Retirement Programs Spec
Ryan Skor, CFO/COO
Rachelle Smith, Retirement Admin.
Dottie Thorsen, Internal Auditor
Tami Volkert, Compliance Specialist
Denise Weeks, Retirement Program Mgr.

OTHERS PRESENT: Michele Blumhagen, NDIT
Dean DePountis, Atty. General's Office
Jessica Newby, NDIT
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 1:00 p.m. on Thursday, September 21, 2023. The meeting was held in the WSI Board Room, 1600 E Century Avenue, Bismarck.

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

ACCEPTANCE OF AGENDA:

The Board considered the agenda for the September 21, 2023, meeting.

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

AYES: MR. BURTON, MR. MICKELSON, MR. WILLGOHS, MR. EVANOFF, AND PRES. LECH
NAYS: NONE

ABSENT: SUPT. BAESLER AND TREASURER BEADLE
MOTION CARRIED

ACCEPTANCE OF MINUTES:

The Board considered the minutes for the July 21, 2023, and August 31, 2023, TFFR Board meetings.

IT WAS MOVED BY MR. MICKELSON AND SECONDED BY MR. WILLGOHS AND CARRIED BY A VOICE VOTE TO ACCEPT THE JULY 21, 2023, AND AUGUST 31, 2023, MINUTES AS DISTRIBUTED.

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

EDUCATION:

Cybersecurity:

Ms. Jessica Newby, NDIT, provided education on cybersecurity. Ms. Newby provided an overview of the Cyber Operations Center and the services they provide. A summary of ransomware headlines and statistics were shared. ND prevents and detects over 4.5 billion threats on STAGEnet per year. The average cost of ransomware remediation has more than doubled over the last year. Ms. Newby reviewed the risk management framework and third-party risk management processes. An overview of House Bill 1528 and new international traveler guidelines were provided. Board discussion followed.

GOVERNANCE:

Governance & Policy Review (GPR) Committee Update:

Mr. Roberts summarized the review of the TFFR Policy Manual, that was completed by the GPR Committee. The Board approved the introduction and first reading of the amended policies at the July 2023 meeting. Following that meeting, the policies were reviewed by RIO's legal counsel. One change was made after the first reading to add an effective date for policy II. E-3.

IT WAS MOVED BY MR. WILLGOHS AND SECONDED BY MR. BURTON AND CARRIED BY A ROLL CALL VOTE TO APPROVE THE SECOND READING AND FINAL ADOPTION OF TFFR POLICIES SECTION 1 – A, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, AND EXHIBIT 2; SECTION 2 – A, B, D, E, F, AND G.

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

Administrative Rules:

Ms. Murtha provided an update on the Administrative Rules process. The public notice will be published next week. Staff will provide an update on the public hearing at the November 16, 2023, TFFR meeting. Board discussion followed.

IT WAS MOVED BY TREASURE BEADLE AND SECONDED BY MR. BURTON AND CARRIED BY A VOICE VOTE TO ALLOW STAFF TO SCHEDULE THE PUBLIC HEARING SOMETIME DURING THE WEEK OF OCTOBER 23, 2023.

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

Pioneer Project Update:

Mr. Roberts provided an update on the Pioneer Project. The project is on schedule and under budget. Pilot 4 began in August and will be completed in October. This pilot focuses on the design of the employer and member portals. The next stage will involve testing by the vendor and TFFR. Staff will begin to provide education to the Employers on the new system. Mr. Roberts shared mock-ups of the user interface at the Retired Teachers Association (RTA) Conference. Staff will share those with the Board in the future. The vendor lost an asset on the date migration area of the project. They have developed a plan for replacing the asset and have provided the plan to TFFR for review. This is expected to cause little delay in the data migration timeline. The system is still expected to go live in September or October 2024. Board discussion followed.

Quarterly TFFR Ends:

Mr. Roberts reviewed the TFFR Ends Report for the quarter ended June 30, 2023. The report highlights exceptions to the normal operating conditions of the TFFR program. During the quarter, an accounting intern joined RIO for the summer. Staff attended a conference, used a new communication platform to deliver email messages, and conducted a TFFR member survey. The Pioneer project continued to progress, and legislation was passed that affects the TFFR program. Board discussion followed.

Outreach Update:

Ms. Mudder provided an update on outreach activities. Staff offered Retirement Education Workshops for members both in-person and online. The online event was recorded and shared to RIO's website. GOVdelivery is now used for all newsletters and allows staff to see the open rate for items that are sent. Ms. Mudder summarized upcoming outreach activities. Board discussion followed.

REPORTS:

Annual Technology Report:

Ms. Michele Blumhagen, NDIT, provided the annual technology report. Ms. Blumhagen reviewed NDIT dedicated staff for RIO, positive trends at NDIT, and RIO IT statistics. NDIT is currently working on a request from RIO for a data warehouse for fiscal and investment data. Ms. Blumhagen reviewed the process for this type of request. NDIT is also working with RIO on the Pioneer project. Board discussion followed.

Quarterly/Annual Investment Report:

Mr. Posch provided an investment performance update as of June 30, 2023. The markets have performed much better this year. Inflation has been improving and technology companies have had a comeback with the surge of AI. Mr. Posch discussed the year to date, one, five, and ten-year performance. Using the new corridor benchmarking method, returns over one year are just slightly negative, but over five years the total relative return is 0.29%. Relative to other public funds, last year TFFR was below median, primarily because of asset allocation. Over three, five, and ten years, TFFR is in the middle or top quartile relative to peer funds. Board discussion followed.

Annual Internal Audit (IA) Report:

Ms. Seiler provided a summary of IA activities from the last fiscal year (FY). A review of the IA division and the future audit needs as the agency continues to grow was completed. A final report and recommendations were presented in May 2023. IA worked on several audits for the TFFR program and participated in the Pioneer Project, Actuarial Audit and Actuarial Services Request for Proposals (RFP). The financial statement audit was completed and received an unmodified clean opinion. Board discussion followed.

Executive Limitations/Staff Relations Report:

Ms. Murtha previewed the upcoming New Board Member Onboarding meeting which will cover performance reports, asset allocation, and investment policy statements. RIO has filled the Sr. Investment Accountant and Fiscal/Investment Administrative Assistant positions. The new Investment Accountant and Retirement Accountant will start next week. A Retirement Programs Specialist position is open. That position has been posted internally. Ms. Murtha reviewed current projects and initiatives, and staff presentations. Board discussion followed.

IT WAS MOVED BY TREASURER BEADLE AND SECONDED BY MR. MICKELSON AND CARRIED BY A VOICE VOTE TO ACCEPT THE ANNUAL TECHNOLOGY, QUARTERLY/ANNUAL INVESTMENT, ANNUAL IA, QUARTERLY TFFR ENDS, AND THE EXECUTIVE LIMITATIONS/STAFF RELATIONS REPORTS.

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

CONSENT AGENDA:

IT WAS MOVED BY MR WILLGOHS AND SECONDED BY TREASURER BEADLE AND CARRIED BY A ROLL CALL VOTE TO APPROVE THE CONSENT AGENDA ITEMS - DISABILITY APPLICATION 2023-2D AND QUALIFIED DOMESTIC RELATIONS ORDER.

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

ADJOURNMENT:

With no further business to come before the Board, Pres. Lech adjourned the meeting at 3:25 p.m.

Prepared by,

Missy Kopp, Assistant to the Board

EMPLOYEE BENEFITS PROGRAMS COMMITTEE

TFFR Plan Modification Request

Presented by

Jan Murtha, J.D., M.P.A.P. - Executive Director

November 16, 2023

What Changed? SECURE ACT 2.0

NEW RMD RULE

Beginning in 2023, the SECURE 2.0 Act raised the age that you must begin taking RMDs to age 73. If you reach age 72 in 2023, the required beginning date for your first RMD is April 1, 2025, for 2024.*

*https://www.irs.gov/retirement-plans/retirement-plans-faqs-regarding-required-minimum-distributions#

DEFINITION OF “RMD”

Required minimum distributions (RMDs) are the minimum amounts you must withdraw from your retirement accounts each year. You generally must start taking withdrawals from your traditional IRA, SEP IRA, SIMPLE IRA, and retirement plan accounts when you reach age 72 (73 if you reach age 72 after Dec. 31, 2022).*

Applicable State Law- EBPC Jurisdiction

NDCC 15-39.1-34(1)

The board shall administer the plan in compliance with section 415, section 401(a)(9), section 401(a)(17), and section 401(a)(31) of the Internal Revenue Code, as amended, and regulations adopted pursuant to those provisions as they apply to governmental plans.

NDCC 15-39.1-35

If the board determines that any section of this chapter does not comply with applicable federal statutes or rules, the board shall adopt appropriate terminology with respect to that section as will comply with those federal statutes or rules, subject to the approval of the employee benefits programs committee. Any plan modifications made by the board pursuant to this section are effective until the effective date of any measure enacted by the legislative assembly providing the necessary amendments to this chapter to ensure compliance with the federal statutes or rules.

TFFR Proposed Language

NDCC 15-39.1-10 Eligibility for normal retirement benefits.

4. ~~For a member who attains age seventy and one-half before January 1, 2020, the member's required beginning date is no later than April first of the calendar year following the year the member attains age seventy and one-half or April first of the calendar year following the year the member terminates covered employment, whichever is later. For a member who attains age seventy and one-half after December 31, 2019, the member's required beginning date is no later than April first of the calendar year following the year the member attains age seventy-two or April first of the calendar year following the year the member terminates covered employment, whichever is later.~~ Payments must be made over a period of time which does not exceed the life expectancy of the member or the joint life expectancy of the member and the beneficiary. Payment of minimum distributions must be made in accordance with section 401(a)(9) of the Internal Revenue Code, as amended, and the regulations issued under that section, as applicable to governmental plans.

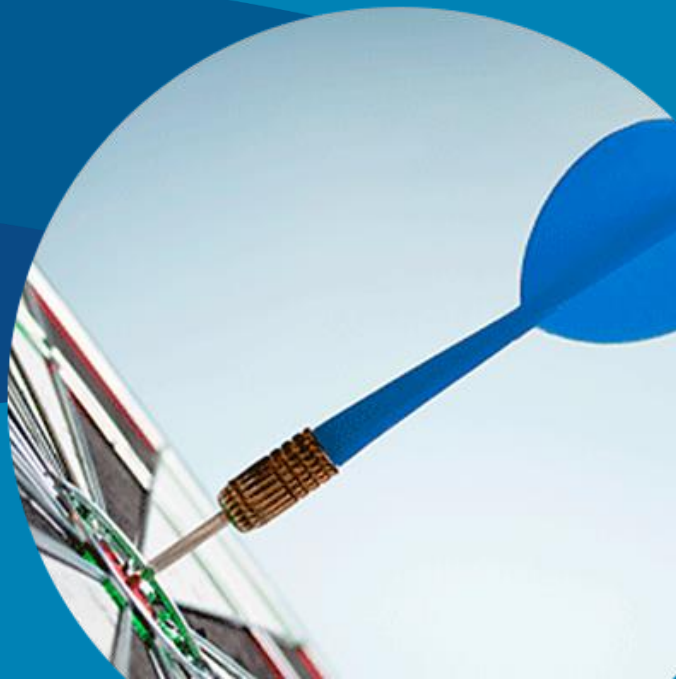
NORTH Dakota | Retirement & Investment

Be Legendary.

Actuarial Valuation as of July 1, 2023

November 16, 2023

Paul Wood, ASA
Dana Woolfrey, FSA



Officially, Hello!

- We are Gabriel, Roeder, Smith and Company
- Denver office –

Dana

Paul

Krysti

Karli

- Successful transition, thank you to staff!

Today

- Recent observations in public pensions
- Educational Intro: Key Actuarial Concepts and Terms and the NDTFFR Dynamic
- FY 2023 Experience and Key July 1, 2023 Results
- Looking Forward

RECENT OBSERVATIONS IN PUBLIC PENSIONS

Inflation!

- How it affects typical pension plans
  - COLAs
    - If inflation-related COLA provision, creates liability losses (new unfunded liability)
    - If no inflation-related COLA, increases demand for ad hoc and 13th check
- Salaries
  - Plans with significant portions of continuing actives receiving 20/25% increases
  - Over the long-term, impact to fixed rate plan is often minimal
    - More benefits/liabilities
    - More contributions

Plan Design Trends – Variable Benefits

- Respond to plan experience
- Transfer some risk back to member
  - Defined benefit less defined
- Lessens volatility of unfunded liability
  - If assets are down, so are liabilities and vice versa

Plan Design Trends – Variable Benefits

- Variable Pre- and Post-Retirement
  - **Texas Employees Retirement System**
    - Cash balance
  - Tennessee Consolidated
    - “Waterfall” system
  - Utah Retirement System
    - Stacked Hybrid
- Variable COLA
  - Wisconsin Retirement System
  - **Colorado Fire and Police Pension Association**
  - South Dakota Retirement System

Plan Design Trends – Variable Benefits
Texas Employees Cash Balance Plan

- 2021 legislative session
- Introduced cash balance plan for new hires
  - SAME *expected* employer cost
  - Still intended to produce meaningful retirement benefits
  - Slightly lower employee contributions
    - Intended to increase hiring competitiveness in tight labor market
  - Variable benefits
    - Investment related interest on cash balance accounts and investment related COLAs substantially reduce potential for *future* unfunded liabilities

Plan Design Trends – Variable Benefits
Texas Employees Cash Balance Plan

- Variable benefits
  - Investment related interest on cash balance accounts
    - 4% interest guaranteed
    - "Gain Sharing Interest Adjustment"
      - 0 – 3%
      - 50% of excess return over 4%
      - Expected = 1.5%
      - Expected total interest = 5.5%
  - Investment related COLAs
    - Same as gain sharing interest adjustment
    - Expected 1.5%

Plan Design Trends – Variable Benefits
Colorado FPPA "Breakeven COLA"

- Fixed contribution rate plan
- Following recent pressures (investment returns, changing assumptions) found that little to no COLA was prefunded
- Recent generations pay significantly higher contribution rate to change that
- Developed "Breakeven COLA"
  - What COLA is 100% funded?
  - Determined by actuarial valuation each year (responsive to experience)
  - Ensures that future generations are *expected* to get at least as much
  - Expected to grow over time

Plan Design Trends
Lifetime COLA for Purchase

- Texas ERS - 2023 legislation that retirees be able to take actuarial reduction to buy 2% escalating benefit
  - No expected cost to plan
  - At typical retirement ages, take 80% of normal form, but get 2% automatic increase each year
  - Helps retirement planning
- Wyoming Retirement System has had in place for many years now

EDUCATIONAL INTRO: KEY ACTUARIAL CONCEPTS AND TERMS AND THE NDTFFR DYNAMIC

Traditional Defined Benefit (DB) Plans

1	Final lifetime benefit ‘defined’ by a formula
2	Component: Years of Credited Service
3	Component: Final Average Compensation (FAC)
4	Component: Benefit multiplier such as 2.0%

Example
Formula: Service *x* FAC *x* Multiplier
25 years x 2% x $50,000 = $25,000 per year

Traditional Defined Benefit Plan

Will demonstrate that the TFFR benefit promise/employer risk is the primary component of the employer provided value to current members

Risk Characteristics

1. Investment Risk (Poor performance)
2. Mortality Risk (Long lives)
3. Inflation Risk (Pay increases, COLAs)
4. EMPLOYER bears the risks
5. Benefits are predictable (Defined)

The Actuarial Terms

- Present Value of Benefits (PVB)
- Actuarial Accrued Liability (AAL)
- Actuarial Value of Assets (AVA)
- Unfunded Actuarial Accrued Liability (UAAL)
- Funded Ratio
- Actuarially Determined Contribution (ADeC)

Definition Through Example

- An employer hires an employee and agrees to pay the employee $100,000 the day he or she retires in 20 years
- The employer would like to save up for this payment throughout the 20 years instead of having to come up with the whole $100,000 at the time of retirement
- Assume no investments are available
  - (earnings = $0)
- Assume works full 20 years (no pre-retirement death, disability or termination)

Present Value of Future Benefits (PVFB/PVB)

- Present value of all benefits expected to be paid to current plan members, including future service
  - On day 1 member can have large Present Value of Future Benefits
- In our example, the present value of benefits is $100,000
  - Both at hire and at retirement

– TFFR PVB = $5.7 Billion

Normal Cost

- The employer will need to save $5,000 per year to accumulate the $100,000
  - $100,000 / 20 years => $5,000 per year
  - The $5,000 can be defined as the Normal Cost
- The Normal Cost can be defined as:
  - The cost of accruing that year's benefit
  - The cost of providing benefits to a new employee

– TFFR Normal Cost ~ 12% of pay + Admin Costs

Actuarial Accrued Liability (AAL)

- So, 10 years into the arrangement the employer should have saved $50,000
  - $5,000 each year for 10 years
  - The $50,000 can be defined as the Actuarial Accrued Liability (AAL)
- Represents the *target value of assets* at the valuation date based on the funding objectives
  - AAL at Year 5 = $25,000
  - AAL at Year 20 = $100,000

– TFFR = $4.6 billion

Unfunded Actuarial Accrued Liability (UAAL)

- What if the employer had only saved $40,000 by year 10?
  - AAL (target assets): $50,000
  - Actual asset level: 40,000
  - UAAL $10,000

  - The $10,000 is the Unfunded Actuarial Accrued Liability (UAAL)

- TFFR = $4.6 billion - $3.3 billion = $1.3 billion

Funded Ratio

- The Funded Ratio is the actual asset value as a percentage of the target asset value
  - $40,000 / $50,000 = 80%

- TFFR = $3.3 billion / $4.6 billion = 71%

Amortization of the UAAL

- Additional contributions will be made so that the UAAL will be amortized over a desired period of time
  - Let's assume 10 years
  - Amortization payment = $10,000 / 10 = $1,000

- TFFR uses 20 years (this year), level % of pay
- Assumes payments will grow 3.25% per year
- 11.61% of pay
  - Similar in size to normal cost

Actuarially Determined Contribution (ADC)

- It is the sum of:
  1. The normal cost for the year and
  2. The amortization payment of the UAAL
  3. Sometimes expenses
- Another way to look at it:
  - The contribution for the current year

    plus

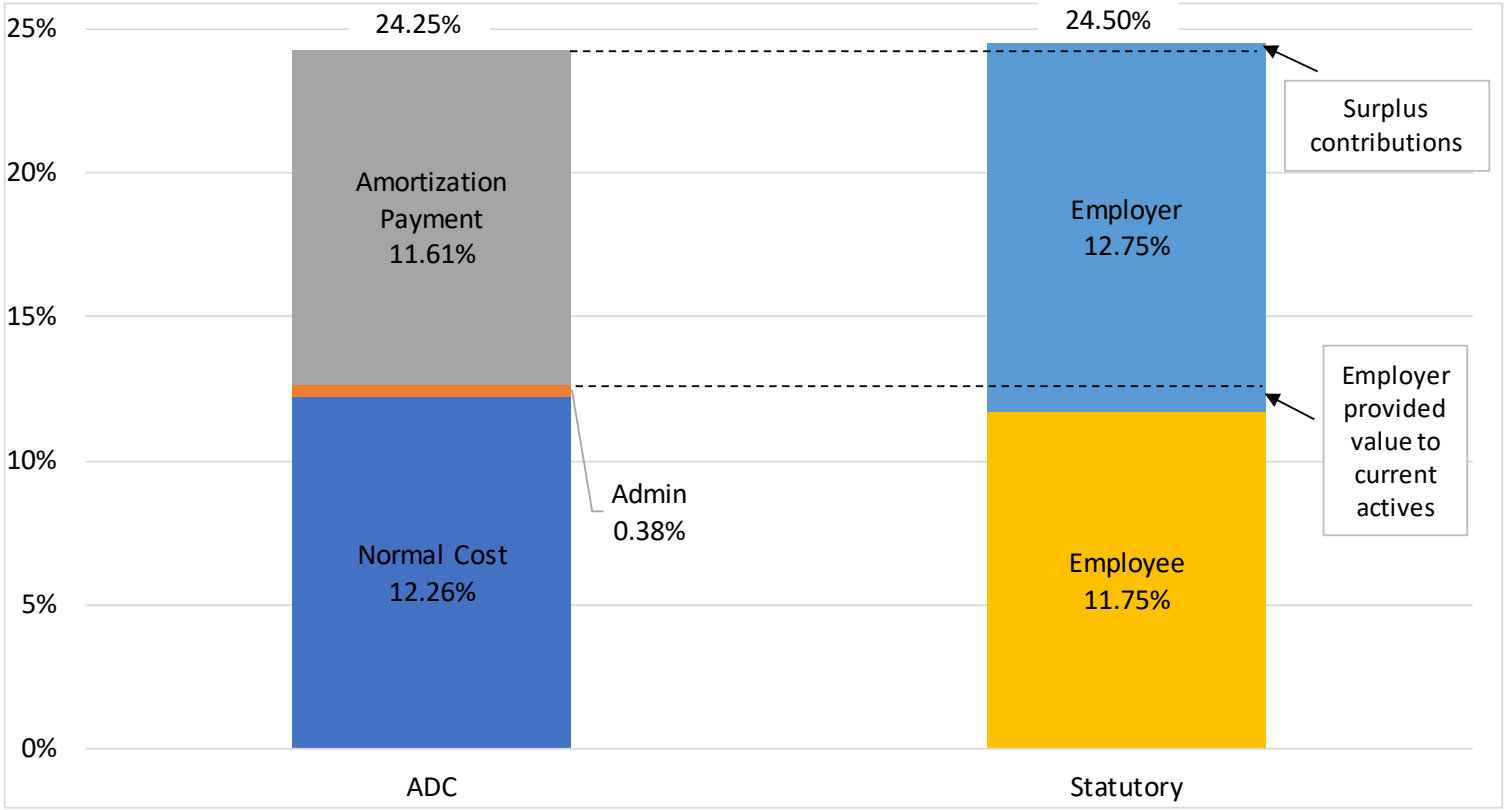
  - The contribution to make up any shortfall that may have occurred due to past experience or plan changes

Actuarially Determined Contribution (ADC)

- It is the sum of:
  1. The normal cost for the year and
  2. The amortization payment of the UAAL
  3. Sometimes expenses

  $5,000 + $1,000 = $6,000

TFFR ADC and Funding Dynamic



- Employer provided value = 12.26% + 0.38% - 11.75%
- < 1% of pay *+ benefit promise*

TFFR Dynamic vs. PERS

- PERS employer normal cost was over 5%
  - Easier to implement similar cost/ less employer risk option because providing significantly more than just the risk protection
- TFFR employer provided normal cost < 1% of pay
- TFFR primary benefit to members from employer is guaranteeing 7.25% return on employee contributions
- If implement DC plan, any employer match > 1% of pay would increase cost over current plan
  - Without even considering asset allocation implications for this plan
- If don't want the risk of DB, have to provide more contributions to provide value to member

FY 2023 EXPERIENCE AND KEY JULY 1, 2023 RESULTS

Key Results – Static
$ in millions

	7/1/2023	7/1/2022
Actuarial Accrued Liability	$ 4.58	$ 4.48
Actuarial Value of Assets (AVA)	3.26	3.13
Unfunded Liability (AVA-basis)	1.32	1.35
Funded Ratio (AVA-basis)	71.2%	69.9%
Actuarial Accrued Liability	$ 4.58	$ 4.48
Fair Value of Assets (FVA)	3.17	3.02
Unfunded Liability (FVA-basis)	1.40	1.46
Funded Ratio (FVA-basis)	69.3%	67.5%

Key results – Forward Looking
% of pay

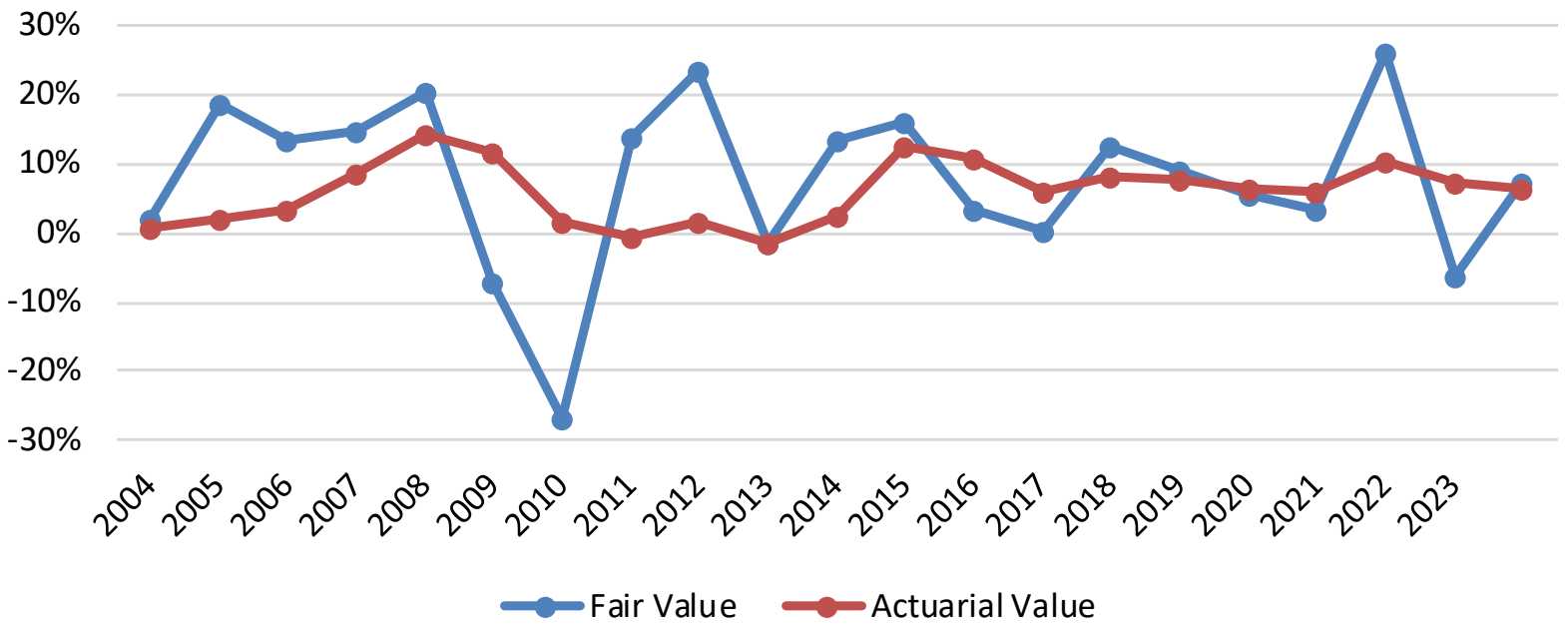
	7/1/2023	7/1/2022
Actuarially Determined Contribution (ADC)	24.25%	23.87%
Employee Contribution Rate	11.75%	11.75%
Net Employer ADC	12.50%	12.12%
Actual Employer Contribution Rate	12.75%	12.75%
Contribution Shortfall/(Surplus)	-0.25%	-0.63%
Funding Period	20 years	19 years

Key factors in FY 2023 experience

- Asset experience
  - Slightly adverse experience
  - Biggest impact item
  - Negatively impacts funded ratio, UAAL, ADC, funding period
    - Basically everything
- Salary experience
  - increased less than expected
    - both individual salary and total payroll
  - Impacts different key metrics differently

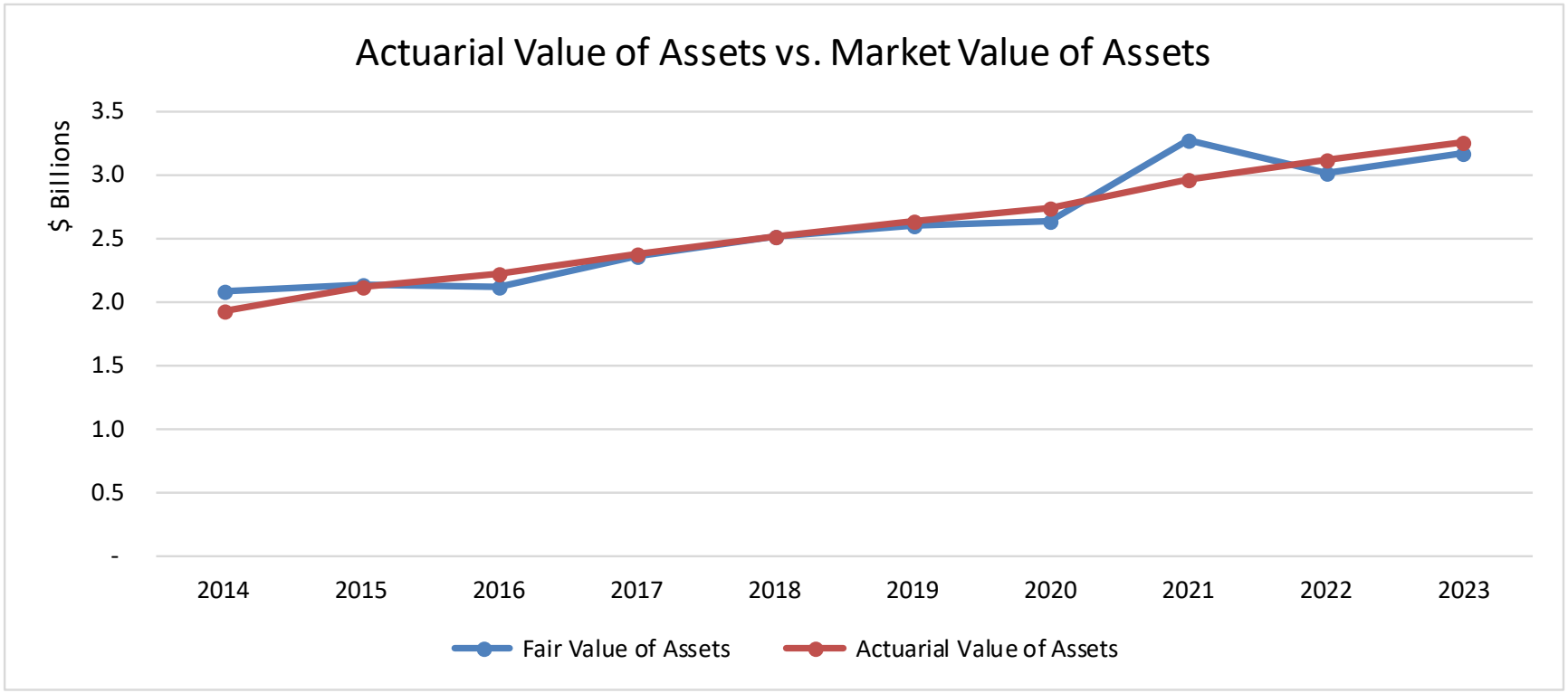
Historical returns and impact of smoothing

Exhibit C.5
Fair Value and Actuarial Value Rates of Return

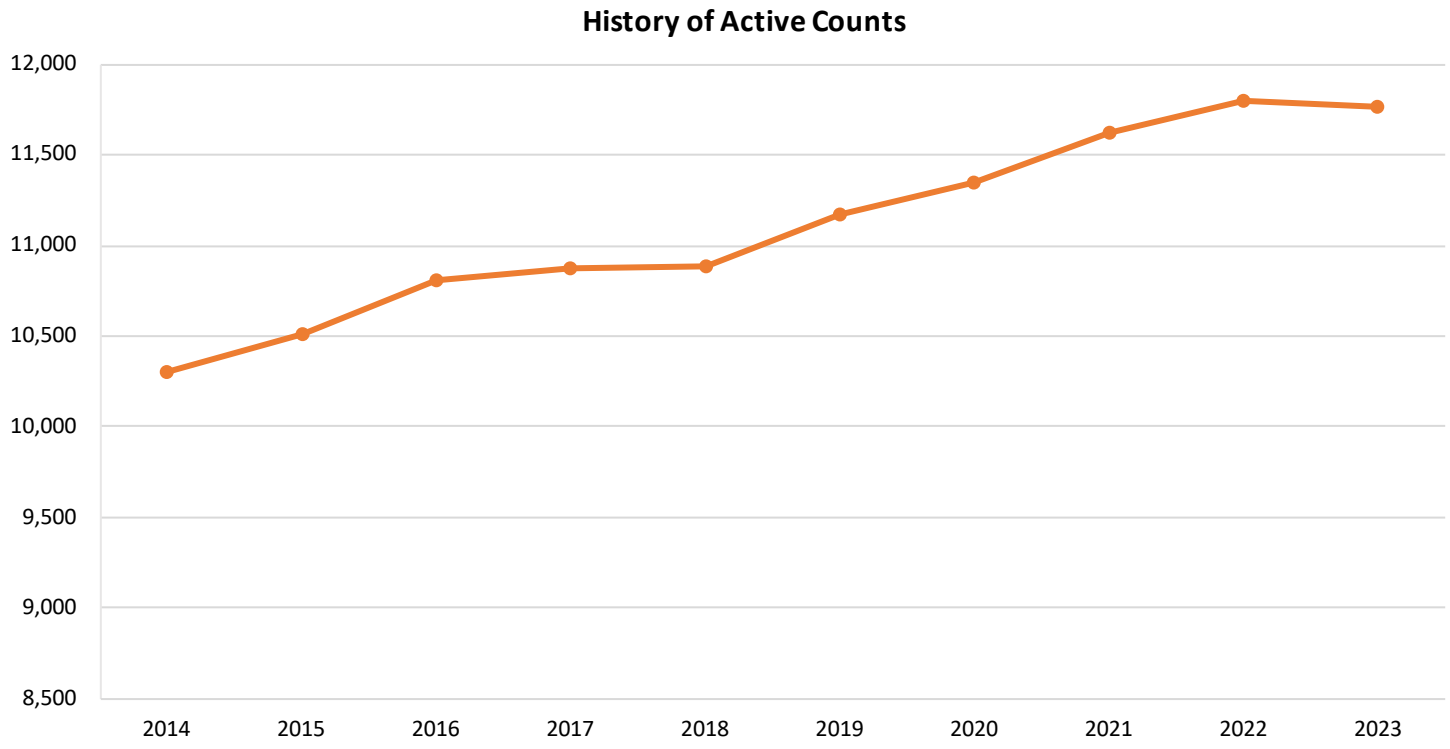


- Market value 7.3% (on target)
- Actuarial value 6.3% (actuarial loss, due to recognition of prior year outstanding losses)

Historical asset values and impact of smoothing

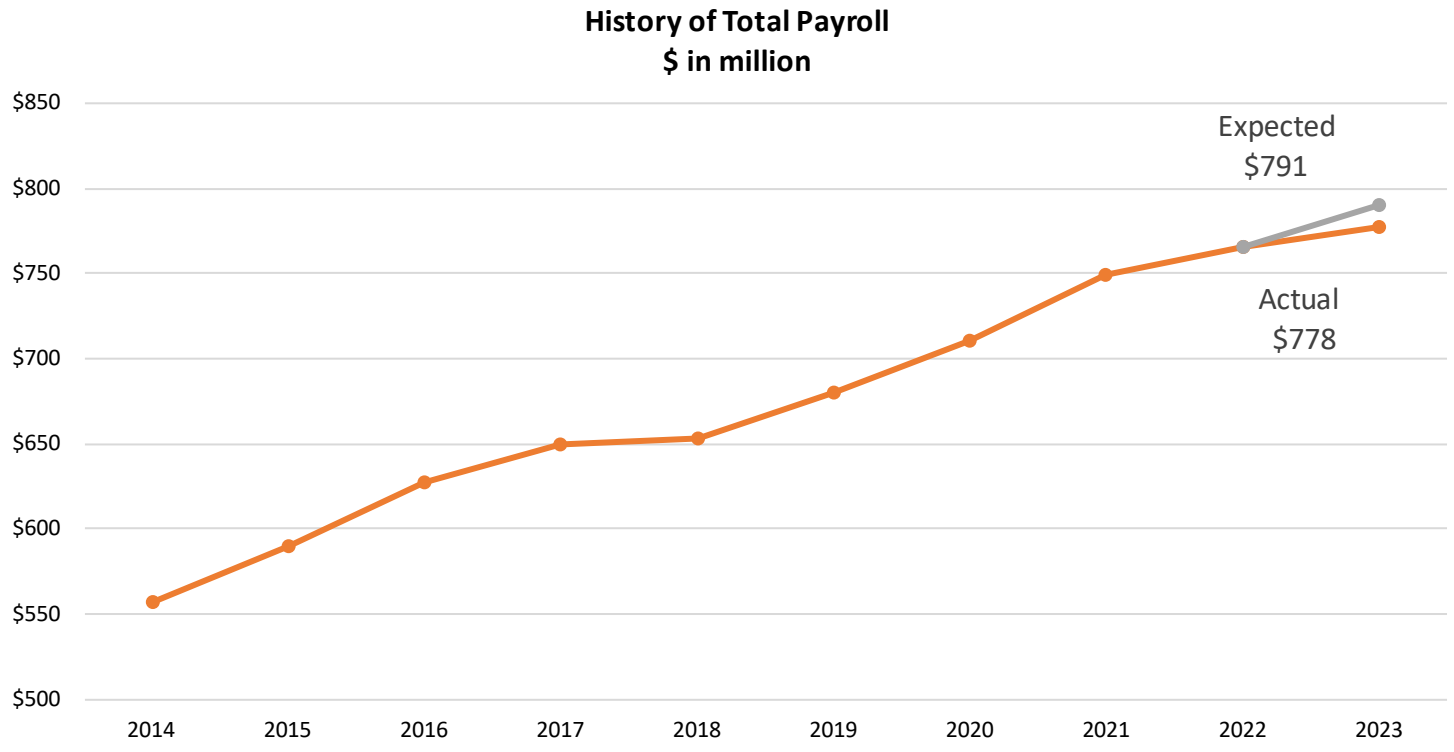


Slight Population Contraction



Total Payroll Growth Less Than Expected

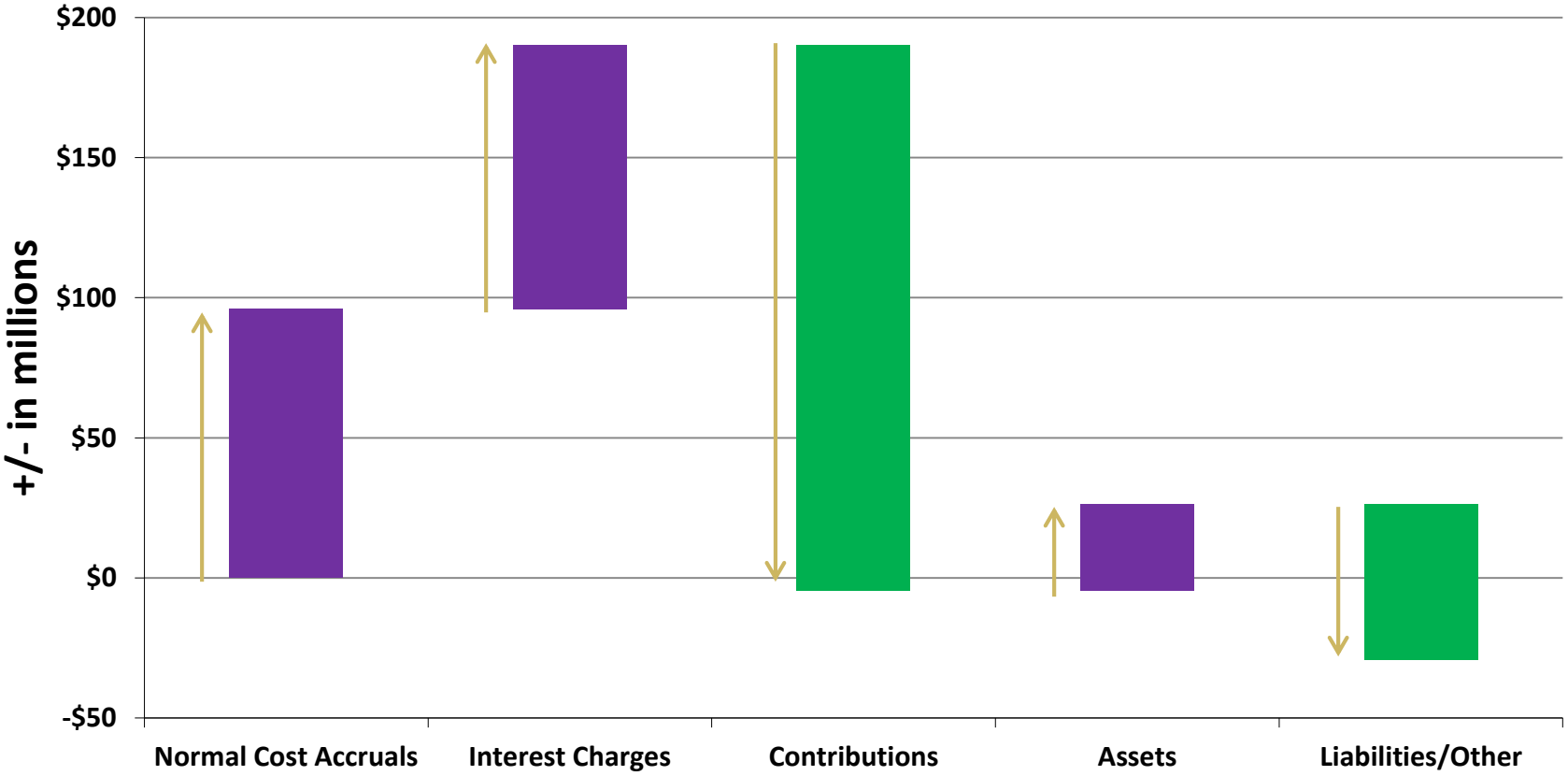
- Total payroll expected to grow 3.25%
  - *As are calculated amortization payments*
- Actually grew 1.5%



Total Payroll Growth Less Than Expected

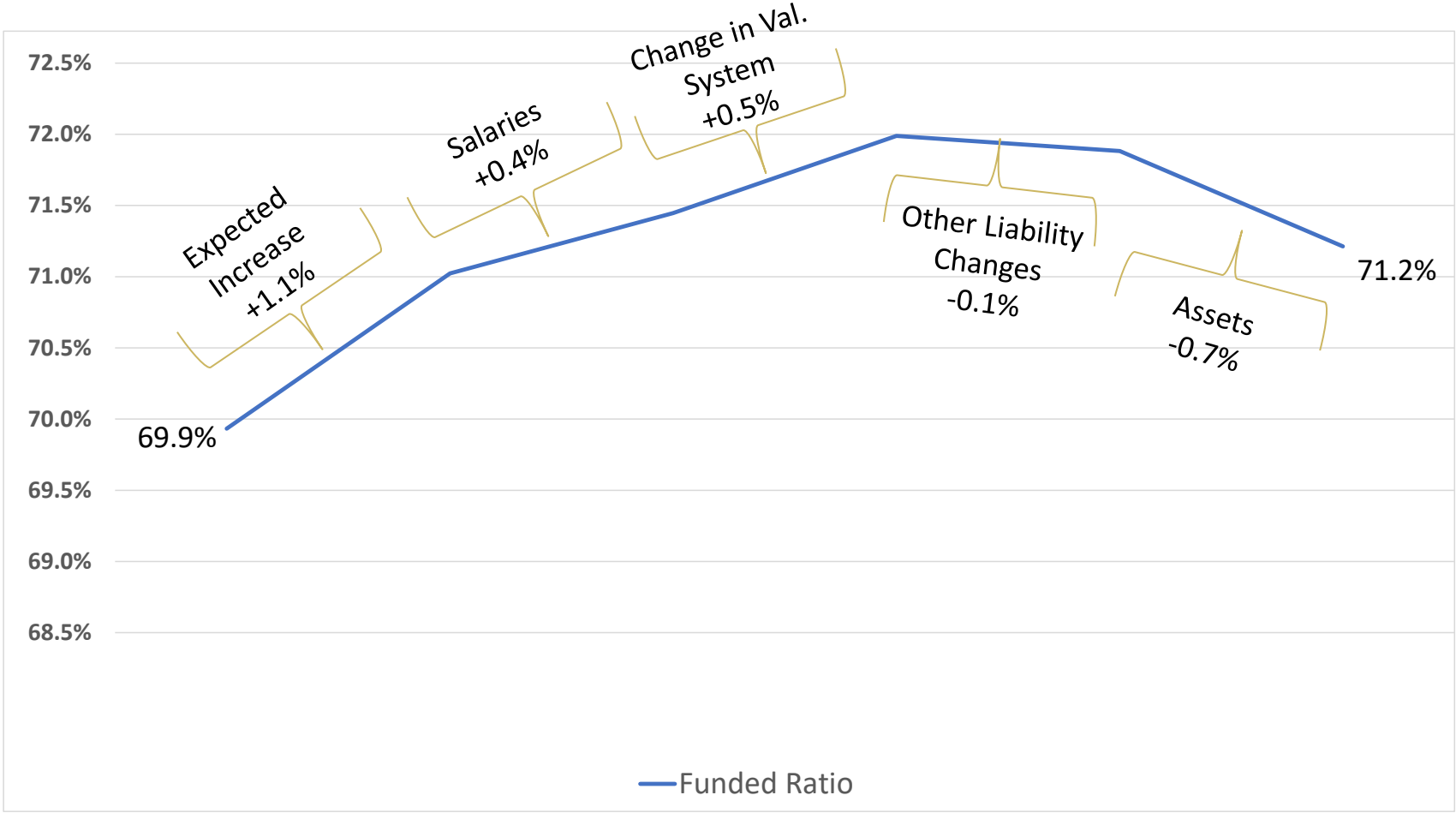
- Two sources
  - Pay increases less than expected for continuing actives
    - Primary source
    - Liability gains (projected benefits less) BUT
    - Less Contributory Payroll to spread Unfunded Liability
  - Lack of full new hire replacement increases ADC
    - Shared burden shared across less payroll
- Total combined impact
  - salary gains (*decrease*) + less contributory payroll (*increase*)
  - increase ADC by 0.18%

Change in UAAL Since Prior Valuation

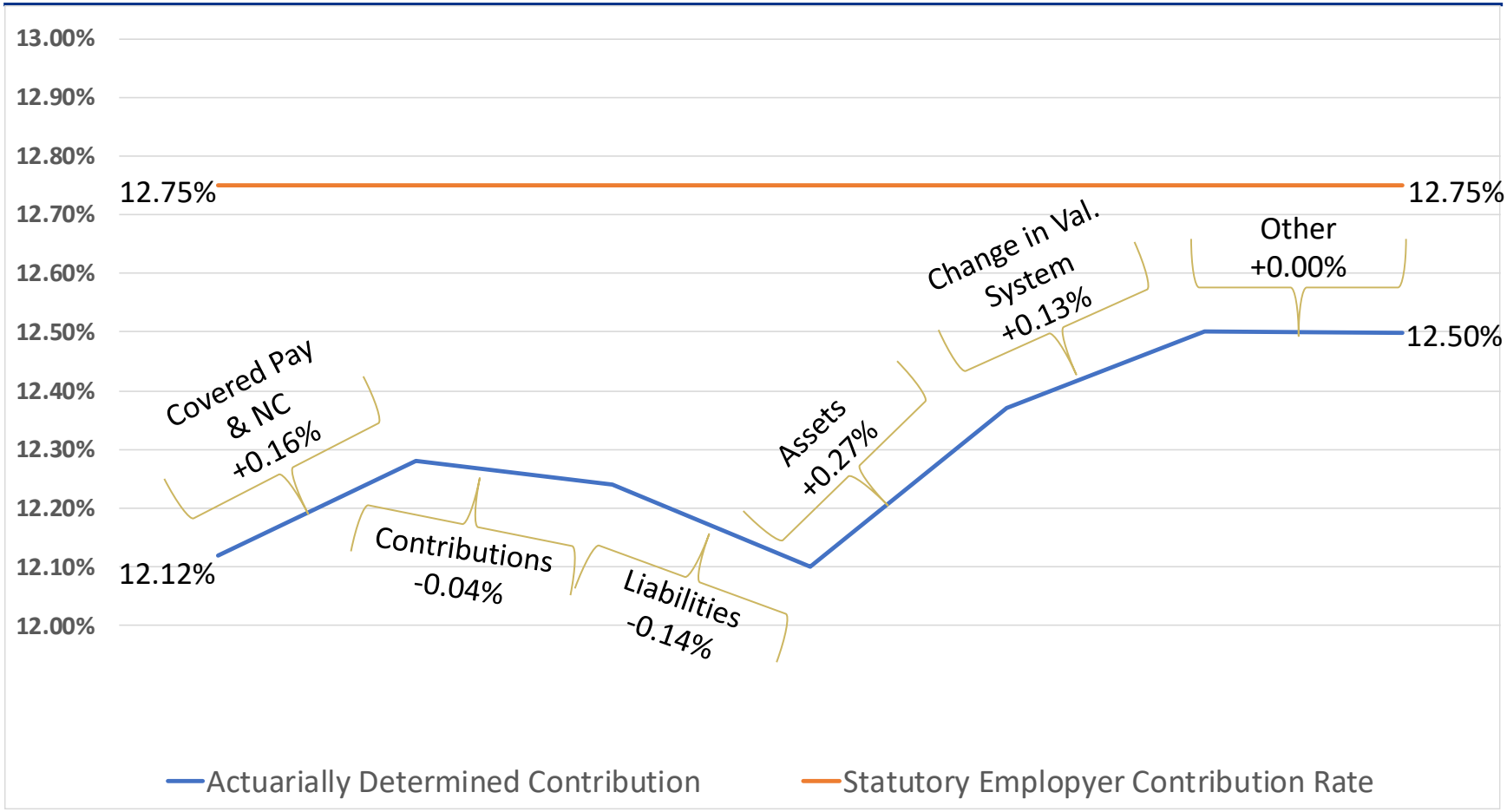


Liability Change Detail:
- Salary Increases: -$28 million
- Change in Valuation System: -$35 million
- New Members and Rehire: +$7 million
- Other: -$0.2 million

Change in Funded Ratio Since Prior Valuation



Change in ADC Since Prior Valuation



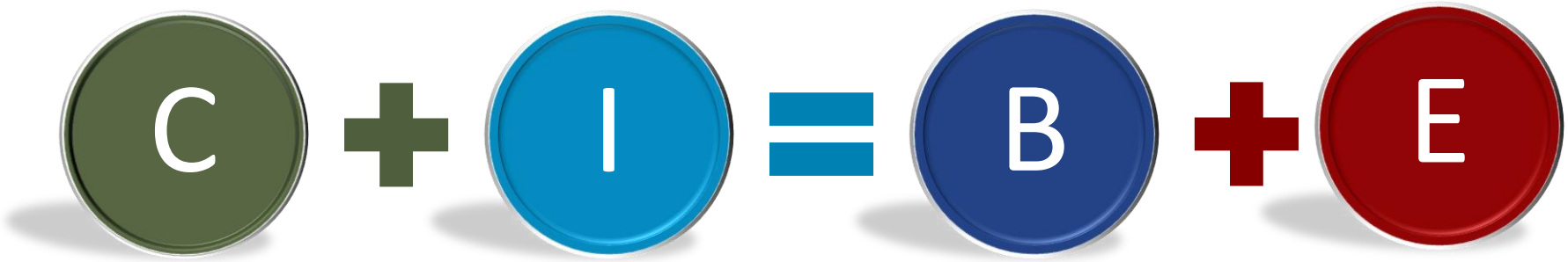
Actuarial Standards of Practice # 4

Low Default Risk Obligation Measure

- ASOPs = Actuarial Standard of Practices
  - Provide guidance to actuaries on appropriate practices
- New additions for ASOP 4 (Pensions) first effective for this valuation, including LDROM
  - LDROM = Low-Default-Risk Obligation Measure
  - By far most controversial
  - Actuaries must calculate and disclose a liability using a discount rate tied to a low-default-risk index
    - treasury yields, municipal bonds yields, or investment grade corporate bonds
  - Intended to show the liabilities for a plan without being exposed to investment risk

Actuarial Standards of Practice # 4

Low Default Risk Obligation Measure



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

"Net Money In = Money Out"

Actuarial Standards of Practice # 4

Low Default Risk Obligation Measure

- New Actuarial Standard of Practice Requirement
- Lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits
  - 4.90% discount rate
- Difference = Savings from diversified portfolio

Valuation Accrued Liabilities	LDROM
$4,577,220,667	$6,063,057,159

LOOKING FORWARD

If All Goes As Planned

Exhibit D.1
Deterministic Projection of the Unfunded Liability
$ in Millions

As of July 1, (a)	Payroll For Next FY (b)	Contribution as % of Payroll (c)	Normal Cost and Admin as % of Payroll (d)	Net Amortization [c - d] * b (e)	UAAL BOY (f)	Interest (g)	Net Principal Contribution e - g (h)	Funding Period (i)
2023	$823	24.50%	12.64%	$98	$1,318	$92	$6	20
2024	850	24.50%	12.62%	101	1,312	92	9	19
2025	877	24.50%	12.61%	104	1,303	91	14	18
2026	906	24.50%	12.60%	108	1,289	90	18	17
2027	935	24.50%	12.59%	111	1,271	88	23	16
2028	966	24.50%	12.58%	115	1,248	86	29	15
2029	997	24.50%	12.57%	119	1,219	84	35	14
2030	1,030	24.50%	12.57%	123	1,184	81	41	13
2031	1,063	24.50%	12.56%	127	1,143	78	49	12
2032	1,098	24.50%	12.56%	131	1,094	75	56	11
2033	1,133	24.50%	12.55%	135	1,038	70	65	10
2034	1,170	24.50%	12.55%	140	973	66	74	9
2035	1,208	24.50%	12.54%	144	898	60	84	8
2036	1,247	24.50%	12.54%	149	814	54	96	7
2037	1,288	24.50%	12.53%	154	718	47	108	6
2038	1,330	24.50%	12.53%	159	611	39	121	5
2039	1,373	24.50%	12.52%	164	490	30	135	4
2040	1,418	24.50%	12.52%	170	356	20	150	3
2041	1,464	24.50%	12.52%	175	205	9	167	2
2042	1,511	24.50%	12.51%	181	39	(4)	185	1
2043	1,560	15.50%	12.51%	47	(146)	(12)	59	-

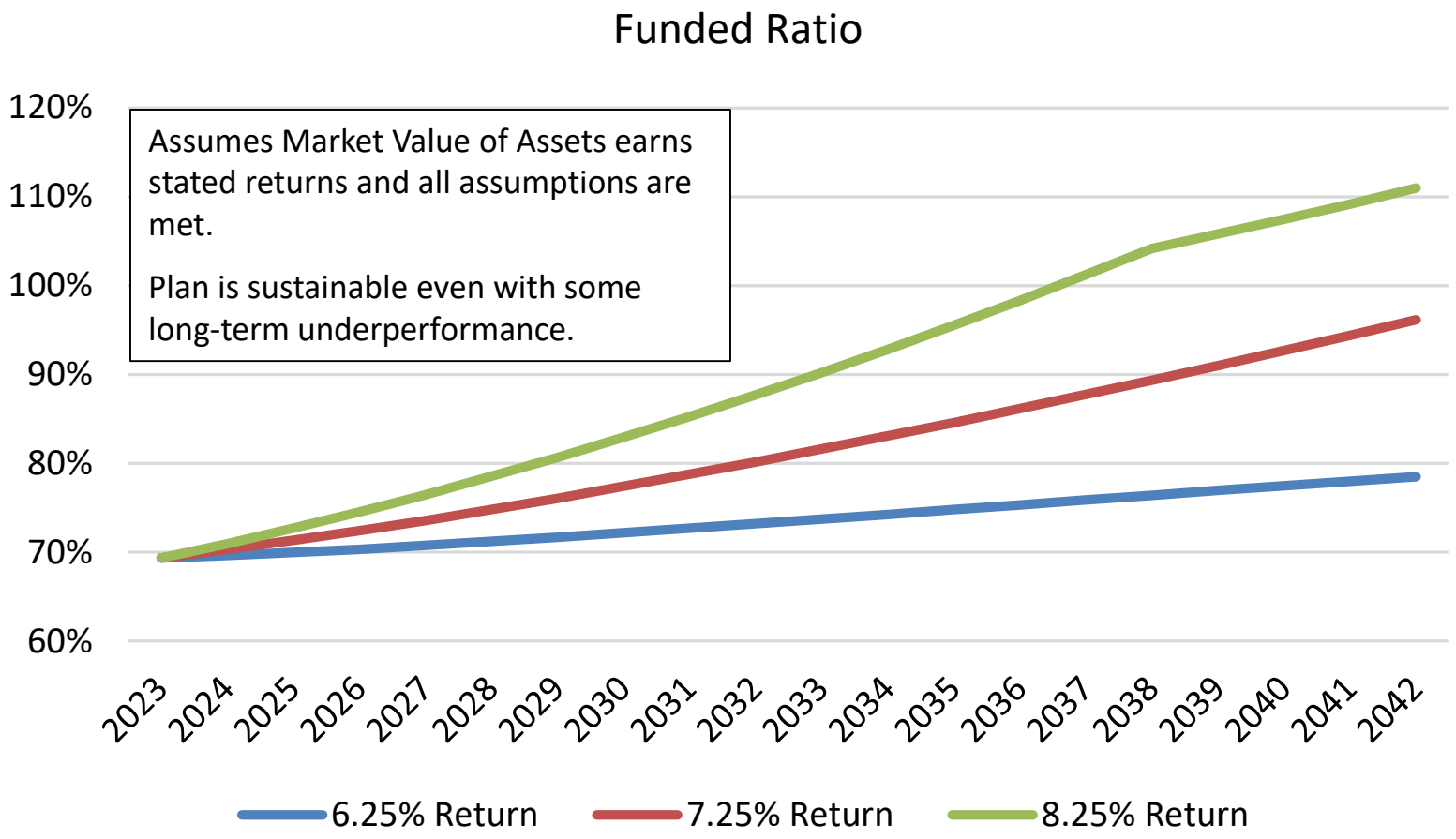
Assumes Actuarial Value of Assets earns 7.25% and all assumptions are met.

Short Term Sensitivity Analysis

FY 2024 Return	24%	16%	7.25%	0%	-7.25%	-16%	-24%
Employer ADC	11.69%	12.13%	12.62%	13.02%	13.42%	13.91%	14.35%

- There is an expectation that with a 7.25% return in FY 2024, the ADC would continue to be less than the current statutory contribution rate of 12.75%
- An approximate FY 2024 return lower than 5% may result in an ADC that is greater than the current statutory rate of 12.75%

Long Term Projections



Coming Soon…Other Actuarial Deliverables

- Plan Management Policy Score Update
- Experience Study
  - Start education next fall
  - Deliver spring 2025

Summary

- TFFR statutory contributions still meeting Board funding policy objectives
  - Full funding expected in 20 years
- Slim margins
- In addition to the usual (investment return), will be keeping close eye on active population (counts and payroll growth) to make sure reliance on future payroll remains reasonable
- May discuss plan design options to increase resiliency

Disclaimers

- This presentation is intended to be used in conjunction with the actuarial valuation report issued on October . This presentation should not be relied on for any purpose other than the purpose described in the valuation report.
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.

Strategic Communications Plan

Sarah Mudder, communications and outreach director

WHAT IS A STRATEGIC COMMUNICATIONS PLAN?

A communications strategy is a plan for communicating with your target audience. It includes who you are talking to, why you are talking to them, how and when you talk to them, what form your content takes, and what channels you use to share it.

In simpler terms: it's about getting information to the **right people** at the **right time** **in the** **right way**.

OVERVIEW: AGENCY

North Dakota's Retirement and Investment Office coordinates the activities of the State Investment Board and the Teacher's Fund for Retirement.

Mission Statement

To provide prudent and transparent investment services for our client funds and support North Dakota public school educators with responsible benefit administration.

Vision Statement

To be recognized as a trusted and innovative provider of investment and pension services.

Core Values

Integrity - We value honesty and are committed to doing what's best for our customers.
Accountability - We are responsible for our actions and work as a team to produce the desired outcomes.
Service - We care about the people we serve and take time to understand their unique needs.

OVERVIEW: COMMUNICATIONS STATEMENT

Communications Statement

RIO is committed to and actively pursues the timely dissemination of accurate information regarding agency and board activities and actions to our stakeholders.

The communications and outreach director works closely with the executive team and the agency's program managers to implement and maintain a regular and active flow of information of scheduled events, activities, and announcements.

The communications and outreach director also acts as the agency's public information officer, and understands this function, especially as it relates to the media, helps to build rapport and trust, and positions RIO as a thought leader, readily available to engage.

WHAT PURPOSE DOES THE PLAN SERVE?

Principles

1. The communication plan's goals should **support** the agency's goals.
2. A plan should be research-based, using **input** from stakeholders to develop messages and materials that demonstrate an understanding of the issues and audiences.
3. It should be intended primarily for the stakeholders who are most **affected** by the agency's actions.
4. **Relevant** stakeholder thoughts and expertise should be sought in a plan's development.
5. It should be expected to produce **results** for all the relevant stakeholders.
6. **Monitoring** should be used to improve the communications plan.

WHO IS OUR TARGET AUDIENCE?

Internal Stakeholders

- Closest tie to the agency, **the most influence** on its identity.
- Their messages **should be consistent** when interacting with external audiences.
- Who are they?
  - Employees
  - Board and committee members

WHO IS OUR TARGET AUDIENCE?

External Stakeholders

- **Shape opinions** of the agency and its programs.
- Sharing information through these groups **creates ambassadors** who market the agency.
- Who are they?
  - Agency - lawmakers, media, public and state agencies.
  - Investment - client funds, fund managers, state agencies, in-state banks, industry groups and peers
  - TFFR – members, employers, state agencies, industry groups and peers.

HOW IMPORTANT ARE THE AUDIENCES?

Division	Primary	Secondary	Other
Agency	Board/committee members Employees Lawmakers	Media	Peers Public State agencies
SIB	Board/committee members Client funds Employees Fund managers Lawmakers	Industry groups In-state banks Media Service providers	Peers Public State agencies
TFFR	Board/committee members Business partners Employees Lawmakers Members	Industry groups Media Service providers	Peers Public State agencies

WHAT KIND OF MESSAGES DO WE CONVEY?

Key messages: answers **WHAT**, **HOW**, and **WHY**

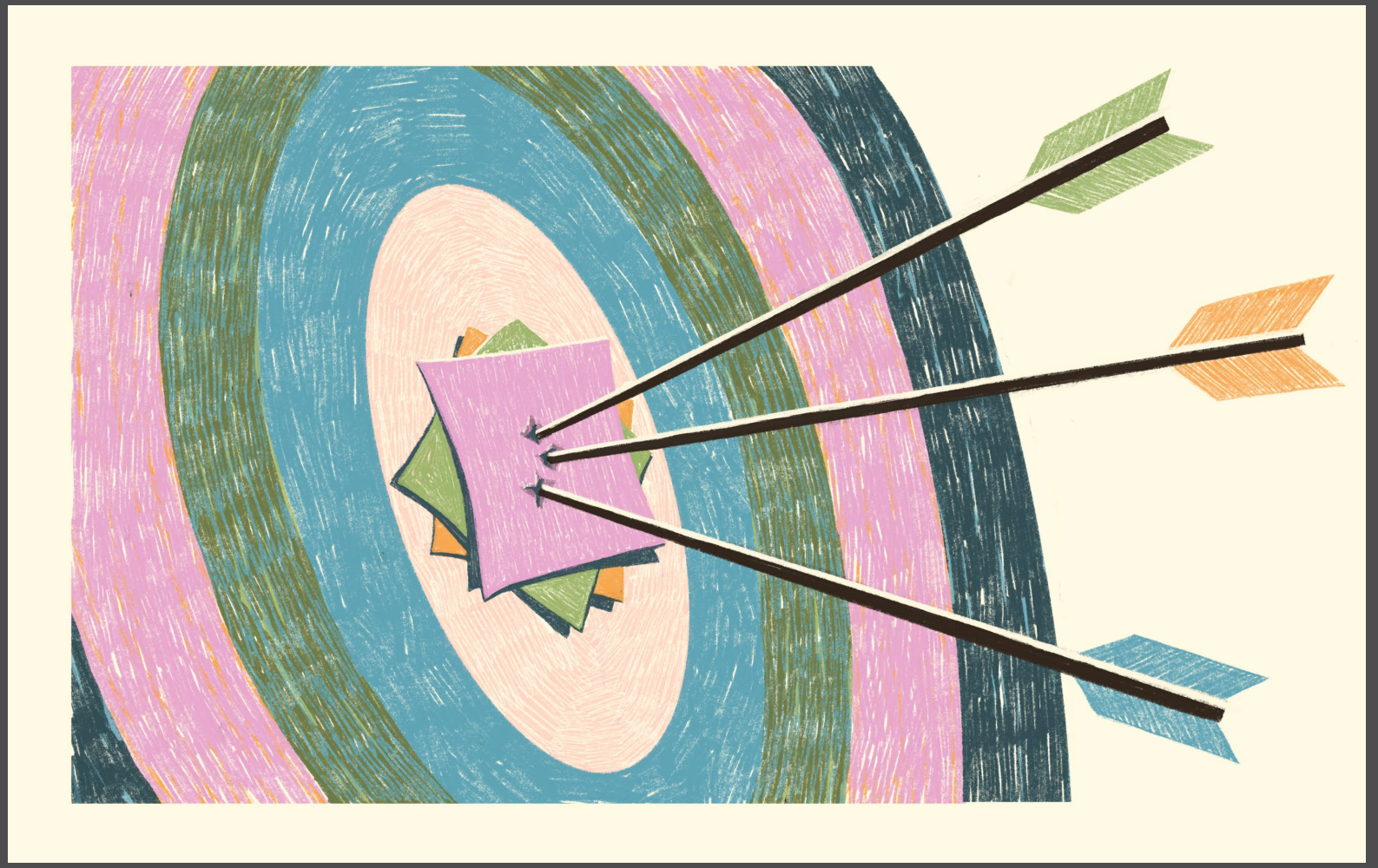
- What: a clear, comprehensive, and understandable narrative of the action that has taken or will take place.
- How: the way assistance and capacity building efforts are implemented and the value of the implementation.
- Why: why stakeholders should care, how they benefit.

Example: “In fall 2024, RIO will launch MyTFFR, a new self-service portal that allows members to manage a wider range of account transactions online. If you currently have access to TFFR’s online member service, your credentials will transfer to MyTFFR. If you don’t have access, you can create a login and access the existing system by visiting RIO’s website, www.rio.nd.gov, and selecting TFFR Member Login.”

WHAT KIND OF MESSAGES DO WE CONVEY?

General messages: increases the agency's **profile**, how it assists client funds and TFFR members.

Example: "The Teachers' Fund for Retirement (TFFR) is a qualified defined benefit public pension plan covered under Section 401(a) of the Internal Revenue Code. In simpler terms, TFFR is a tax-exempt pension plan where benefits are defined by state law."



GOALS: WHAT DO WE WANT TO ACHIEVE?

GOALS: WHAT DO WE WANT TO ACHIEVE?

Communications goals:

1. Build **brand awareness** – increase stakeholder knowledge of the agency and the services it provides to its investment and pension fund customers.
2. Evaluate and develop or improve the **communications tools** used to help stakeholders understand both RIO's day-to-day and strategic communications.
3. Develop and coordinate the delivery of messages to stakeholders regarding TFFR's new **pension administration system** in fall 2024.
4. Support the growth of the investment services division including the hiring and development of an **in-state investment team** in summer 2024.

GOALS: WHAT DO WE WANT TO ACHIEVE?

Goal 1: Build Brand Awareness

Objective 1: Improved awareness of agency's role as the SIB and TFFR program coordinator.

Tactics:

- Consistently identifying the agency's role in communications.
- Establishing communications standards.
- Improving website content.
- Increase board and employee knowledge of agency happenings.
- Educate lawmakers on the agency's role and its growth.
- Highlight agency accomplishments during board, committee and staff meetings.

GOALS: WHAT DO WE WANT TO ACHIEVE?

Goal 1: Build Brand Awareness

Objective 2: Increased member awareness of the TFFR program, how it works and who administers the program.

Tactics:

- Relaunch member newsletter.
- Improving website content.
- Developing a quick start guide.
- Redeveloping introductory presentation for new members.
- Reworking the enrollment letter.
- Developing a short introductory video.

GOALS: WHAT DO WE WANT TO ACHIEVE?

Goal 1: Build Brand Awareness

Objective 3: Improved employer awareness of TFFR program requirements.

Tactics:

- Improving website content.
- Updating format and promotion of Info Mixers.
- Updating format and promotion of new business manager workshop.
- Develop a communication that introduces new business managers to the program.
- Initiate and foster relationships with education associations.
- Evaluating employer handbook to improve the material.

GOALS: WHAT DO WE WANT TO ACHIEVE?

Goal 1: Build Brand Awareness

Objective 4: Increased awareness of investment program operations, how it works and who administers the program.

Tactics:

- Improving website content.
- Relaunch investment newsletter.
- Host an investment seminar.
- Develop a fact sheet about the program.
- Seek out speaking opportunities for the staff.
- Identify investment publications to target for news about the division.

GOALS: WHAT DO WE WANT TO ACHIEVE?

Goal 2: Evaluate and develop or improve communications tools

Objective 1: Understand and define opportunities for improvements.

Tactics:

- Using GovDelivery for widespread communications.
- Improving website content.
- Develop an intranet site.
- Using graphics and links in email signatures to promote events and communications.
- Evaluate social media options.

GOALS: WHAT DO WE WANT TO ACHIEVE?

Goal 2: Evaluate and develop or improve communications tools

Objective 2: Evaluate and update communications assets and bring them on brand, align with the state's standards.

Tactics:

- Improving website content.
- Update board materials.
- Evaluate existing print assets.
- Incorporate graphics and links into email signatures to promote events and communications.

GOALS: WHAT DO WE WANT TO ACHIEVE?

Goal 3: **Develop and coordinate the delivery of messages regarding TFFR's new pension administration system**

Objective 1: Create awareness and onboard employer partners.

Tactics:

- Plan and promote PAS project previews.
- Plan and promote user education.
- Develop message points to ensure staff are sharing the same information.
- Incorporate into employer communications.
- Encourage employers to sign up for ACH in preparation for the launch.

GOALS: WHAT DO WE WANT TO ACHIEVE?

Goal 3: **Develop and coordinate the delivery of messages regarding TFFR's new pension administration system**

Objective 2: Create awareness and onboard members.

Tactics:

- Encourage members to establish online accounts in preparation for the transition to the new system.
- Develop an onboarding plan for members that includes a MyTFFR quick start guide.
- Plan and promote user education.
- Develop message points to ensure staff are sharing the same information.
- Incorporate into member communications.
- Consider securing marketing/vanity URL, e.g., MyTFFR.nd.gov.

GOALS: WHAT DO WE WANT TO ACHIEVE?

Goal 4: Support the growth of the investment services division

Objective 1: Educate external stakeholders on the value of an internal investment team.

Tactics:

- Develop a communication and/or improve the agency's website to better describe the division's role.
- Host an investment seminar to educate policy makers and instill confidence in clients and add new cliental.
- Devise a method and structure for obtaining department news that can be shared with stakeholders
- Research and contract for a media tracking service.

GOALS: WHAT DO WE WANT TO ACHIEVE?

Goal 4: Support the growth of the investment services division

Objective 2: Support the growth and development of the team, the majority of whom are expected to live out of state.

Tactics:

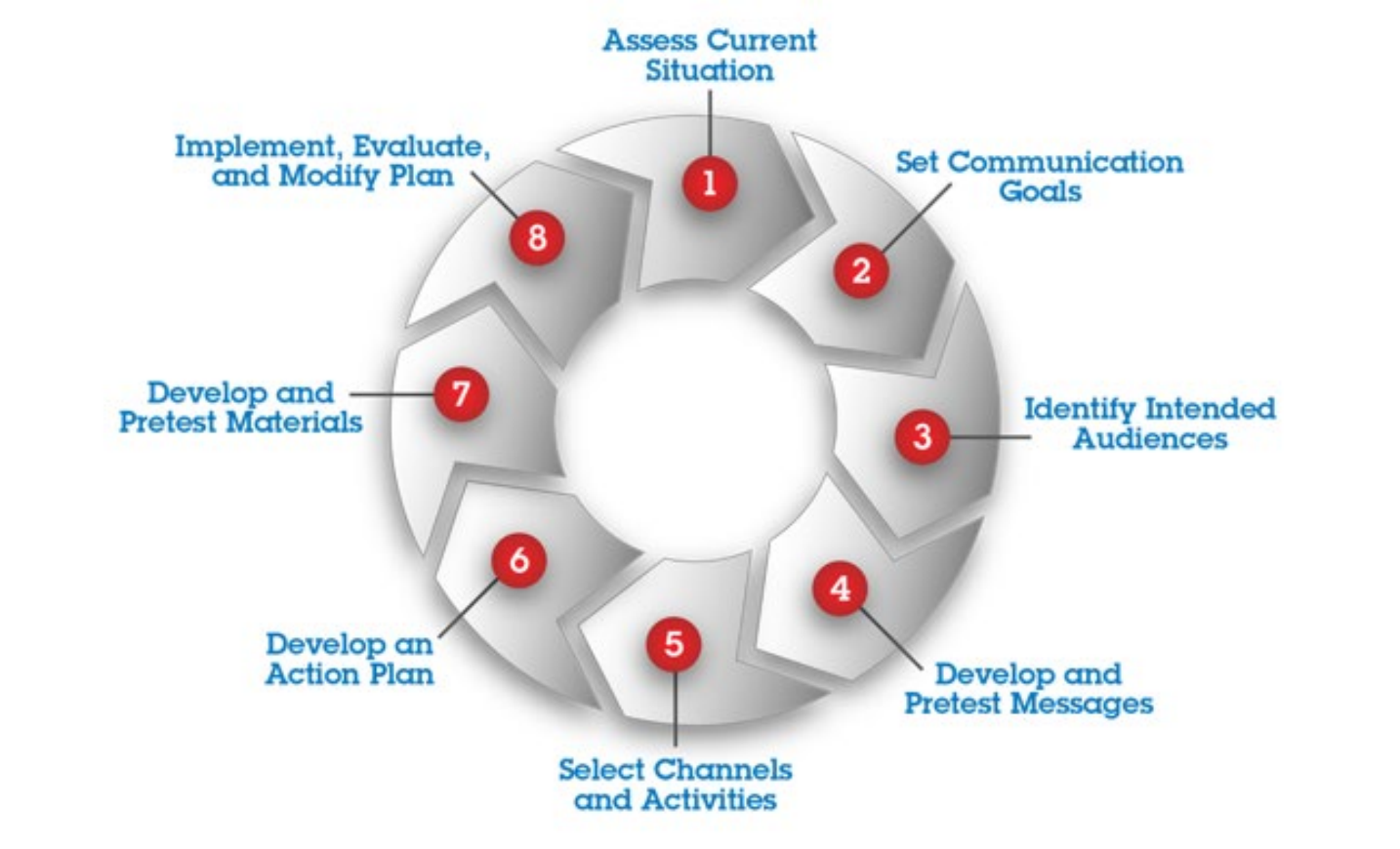
- Develop a communication and/or improve the agency's website to better describe the division's role.
- Develop an intranet that can be used to inform staff of agency activities
- Provide communications support for tracking and publishing/sharing program successes.

STAKEHOLDERS/CHANNELS MATRIX

Stakeholders/Channels	Direct Mail or Email	Education (hosted by RIO)	Evaluation	Events (hosted by others)	Intranet	Hearings, Public	Meetings	Mission, Vision & Values	Newsletter (invest)	Newsletter (pension)	News Releases	Pension Admin System	Promo Items	Reports	Social Media	Tradeshow	Website
Board and Committee Members	■	■	■				■	■	▫	■	■		■	■	▫		■
Employees	■	■	■		▫		■	■	▫	■	■		■		▫		■
Lawmakers	■						■	■	▫		■			■	▫		■
Media	■							■	▫		■				▫		■
Public	■					■		■			■				▫		■
State Agencies	■						■	■							▫		■
Client Funds	■	▫	■				■	■	▫		■		■	■	▫		■
Fund Managers	■	▫		■			■	■	▫		▫			■	▫		■
State Agencies	■	▫					■	■	▫		■				▫		■
In-state banks		▫						■	▫		▫				▫		■
Peers				■			■	■	▫						▫		■
Industry Groups				■				■	▫		▫				▫		■
Employers	■	■	■	■				■		■	■	■	■	■	▫	■	■
Members, active	■	■	■	■			■	■		■		■	■	■	▫	■	■
Members, inactive	■	■	■	■			■	■		▫		■	■	■	▫	■	■
Members, retirees	■	■	■	■			■	■		▫		■	■	■	▫	■	■
State Agencies		■		■				■			■				▫		■
Peers				■				■							▫		■
Industry Groups				■				■			■				▫		■

Legend: ■ active ▫ inactive, planned

8-STEP COMMUNICATION MODEL



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Any
Questions

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STRATEGIC COMMUNICATIONS PLAN

NORTH Dakota
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EXECUTIVE SUMMARY

The Retirement and Investment Office's (RIO) Strategic Communications Plan was developed by the communications and outreach director using feedback gathered from stakeholders and input from the executive team.

The plan is focused on four main goals.

1. Build brand awareness – increase stakeholder knowledge of the agency and the services it provides to its investment and pension fund customers.
2. Evaluate and develop or improve the communications tools used to help stakeholders understand both RIO's day-to-day and strategic communications.
3. Develop and coordinate the delivery of messages to stakeholders regarding TFFR's new pension administration system, set to launch in fall 2024.
4. Support the growth of the investment services division including the hiring and development of an in-state investment team in summer 2024.

The plan identifies RIO's target audiences, the form communications take, and the channels used. It also prioritizes communications projects and identifies how success will be measured.

The intention of the plan is to guide RIO's communications to ensure they are purposeful. It will be updated and refined as implementation details, stakeholder concerns and available resources are determined.

OVERVIEW

Agency Background

North Dakota's Retirement and Investment Office (RIO), as stated in NDCC § 54-52.5, coordinates the activities of the State Investment Board (SIB) and the Teachers' Fund for Retirement (TFFR).

In addition to being the oversight board for RIO, the SIB is responsible for the investment of the assets of the Legacy Fund, a sovereign wealth fund, and the pension and insurance funds listed in NDCC § 21-10-06. Subject to agreement with the North Dakota Industrial Commission, the SIB provides investment management services to and manages money for any agency, institution, or political subdivision of the state. Currently, the SIB is responsible for 28 client funds with assets under management of approximately $20 billion.

The TFFR board of trustees has statutory responsibility for a retirement program for more than 25,000 North Dakota educators of whom approximately 11,800 are active members employed by public schools and state institutions. NDCC § 15-39-1 contains the statutory language governing the fund. It is supplemented by ND Admin. Code Title 82.

Mission Statement

To provide prudent and transparent investment services for our client funds and support North Dakota public school educators with responsible benefit administration.

Vision Statement

To be recognized as a trusted and innovative provider of investment and pension services.

Core Values

Integrity - We value honesty and are committed to doing what's best for our customers.

Accountability - We are responsible for our actions and work as a team to produce the desired outcomes.

Service - We care about the people we serve and take time to understand their unique needs.

Communications Statement

RIO is committed to and actively pursues the timely dissemination of accurate information regarding agency and board activities and actions to our stakeholders.

The communications and outreach director works closely with the executive team and the agency's program managers to implement and maintain a regular and active flow of information of scheduled events, activities, and announcements.

The communications and outreach director also acts as the agency's public information officer, and understands this function, especially as it relates to the media, helps to build rapport and trust, and positions RIO as a thought leader, readily available to engage.

Plan Principles

1. A communication plan's goals should support the agency's goals.
2. A plan should be research-based, using input from stakeholders to develop messages and materials that demonstrate an understanding of the issues and audiences.

3. It should be intended primarily for the stakeholders who are most affected by the agency's actions.
4. Relevant stakeholder thoughts and expertise should be sought in a plan's development.
5. It should be expected to produce results for all the relevant stakeholders.
6. Monitoring should be used to improve the communications plan.

AUDIENCE(S)

Successful communication encourages growth and development. It helps the agency to retain existing and to attract new clients, employees, and supporters.

Internal Stakeholders

Internal stakeholders have the closest tie to the agency and the most influence on its identity. It is imperative that their messages are consistent when interacting with external audiences. These stakeholders include:

- Board and committee members.
- Employees.

External Stakeholders

External stakeholders shape opinions of the agency and its programs. By consistently sharing information through these groups, RIO creates ambassadors who market the agency. These stakeholders include:

- Agency
    - Lawmakers – state legislators and congressional delegation.
    - Media – local and industry.
    - Public.
    - State agencies (i.e., Governor's office and Office of Management and Budget).
- State Investment Board
    - Client funds.
    - Fund managers.
    - State agencies (i.e., Bank of North Dakota, Commerce, Treasurer, Securities, Trust Lands and Workforce Safety & Insurance).
    - In-state banks.
    - Peers (i.e., investment boards in other states).
    - Industry groups – associations.
- Teachers' Fund for Retirement
    - Employers – school administrators, business managers, human resources professionals and board members.
    - Members – active, inactive, retired and beneficiaries.
    - State agencies (i.e., Career and Technical Education, Dept. of Public Instruction).
    - Peers (i.e., retirement systems in other states).
    - Industry groups – associations and unions.

Audience Analysis

Audiences have different levels of importance. Primary audiences have the greatest need to receive and understand agency or division messages. Secondary audiences are important, but not primary. Other audiences are nice to have, but not essential.

Division	Primary	Secondary	Other
Agency	Board/committee members Employees Lawmakers	Media	Peers Public State agencies
SIB	Board/committee members Client funds Employees Fund managers Lawmakers	Industry groups In-state banks Media Service providers	Peers Public State agencies
TFFR	Board/committee members Business partners Employees Lawmakers Members	Industry groups Media Service providers	Peers Public State agencies

MESSAGES

Key messages include answers to WHAT, HOW, and WHY as described below:

- WHAT: A successful “what” statement delivers a clear, comprehensive, and understandable narrative of the action that has taken or will take place.
- HOW: Demonstrate the way assistance and capacity building efforts are implemented and the value of an activity’s implementation.
- WHY: The “why” message helps stakeholders understand why they should care, how they benefit.

General messages play a role in increasing the agency’s profile and how it assists client funds and TFFR members.

Agency

North Dakota's Retirement and Investment Office was established in 1989 to coordinate the activities of the State Investment Board and the Teacher's Fund for Retirement.

An agency of the State of North Dakota, the Retirement and Investment Office administers a pension program for public school educators and manages a sovereign wealth, and insurance and pension fund investments for other government agencies.

Investment

In 2010, State Investment Board’s assets under management were about $4 billion. As of June 30, 2023, the investment’s market value was approximately $20 billion. The growth has led the Retirement and Investment Office to add more investment strategies and issue more complex mandates, creating a need for more staff.

The State Investment Board (SIB) has statutory responsibility for the administration of the investment program of several funds including the Teachers' Fund for Retirement, the Public Employees Retirement System, and the Legacy Fund, a sovereign wealth fund supported by

petroleum tax revenues. The SIB also maintains contractual relationships for investment management with certain political subdivisions.

All funds invested under the direction of the State Investment Board (SIB) follow the 'Prudent Investor Rule.' Investments are managed exclusively in the interest of meeting the funds' individual objectives. Professional investment managers, consultants and custodians are retained to assist in the implementation of the investment program. The Retirement and Investment Office assists the SIB in carrying out its responsibilities for investment program administration.

The State Investment Board is responsible for administration of the Legacy Fund. The Legacy and Budget Stabilization Fund Advisory Board serves as the client board and determines the fund's asset allocation.

Known as the "people's fund," North Dakota's Legacy Fund was created by a constitutional amendment that was initiated by the state legislature and approved by voters in November 2010. It is funded with petroleum production and extraction taxes.

Thirty percent of the taxes on petroleum produced and extracted in North Dakota are transferred to the Legacy Fund monthly. At the end of each biennium, fund earnings are transferred to the state's general fund.

Retirement

In fall 2024, RIO will launch MyTFFR, a new self-service portal that allows members to manage a wider range of account transactions online. If you currently have access to TFFR's online member service, your credentials will transfer to MyTFFR. If you don't have access, you can create a login and access the existing system by visiting RIO's website, www.rio.nd.gov, and selecting TFFR Member Login.

The Teachers' Fund for Retirement board has statutory responsibility for a retirement program for North Dakota public school educators.

The Teachers' Fund for Retirement (TFFR) is a qualified defined benefit public pension plan covered under Section 401(a) of the Internal Revenue Code. In simpler terms, TFFR is a tax-exempt pension plan where benefits are defined by state law.

More than 25,000 educators participate in the Teachers' Fund for Retirement's pension program. Approximately 11,800 are active members employed by public schools and state institutions.

Teachers' Fund for Retirement benefit funding comes from three sources: member and employer contributions and investment earnings.

The Teachers' Fund for Retirement plan is funded on an actuarial reserve basis. That is, money is invested for future retirement benefits while members are actively teaching.

GOALS

Agency goals guide day-to-day and long-term decision making. By adhering to and supporting RIO's goals, board and committee members and employees help to ensure that agency resources are deployed strategically to meet its priorities.

RIO's communications goals for the coming year follow:

1. Build brand awareness – increase stakeholder knowledge of the agency and the services it provides to its investment and pension fund customers.

2. Evaluate and develop or improve the communications tools used to help stakeholders understand both RIO's day-to-day and strategic communications.
3. Develop and coordinate the delivery of messages to stakeholders regarding TFFR's new pension administration system in fall 2024.
4. Support the growth of the investment services division including the hiring and development of an in-state investment team in summer 2024.

OBJECTIVES, TACTICS, PRIORITIES AND METRICS

The tactics listed will guide RIO's communication efforts. Success will be measured on both outputs and behavior changes.

The communications and outreach director and the agency's staff retain the right to alter or eliminate tactics based on changing needs and an evolving landscape.

Goal 1: Build Brand Awareness.

Increase stakeholder knowledge of RIO and the services it provides to its investment and pension fund customers.

Objective 1: Improved awareness of agency's role as the SIB and TFFR program coordinator.

Tactic	Priority	Assigned	Metrics and/or Notes
Consistently identify the agency's role as the administrative office for the SIB and TFFR programs in agency communications (i.e., letters, brochures, reports, etc.).	High	Communications director and admin support	Officewide adoption and usage
Establish communication standards to address inconsistent branding, i.e., standardize email signatures, PowerPoint templates, etc.	High	Communications director	Officewide adoption and usage
Improve website content to better describe RIO and the programs coordinated (e.g., the about tab contains more information about boards than the agency).	High	Communications director and admin support	Google analytics, user feedback
Increase board member and employee knowledge of agency happenings by including them in communications distributions (i.e., press releases, newsletters, program updates).	High	Communications director	Feedback and metrics
Coordinate board education program, support the onboarding of new members.	Medium/high	Communications director	Feedback and metrics
Educating lawmakers about the agency's role and its growth in preparation for the 2025 legislative session.	Medium/high	Executive director and communications director	Feedback

Highlight employee accomplishments during board, committee, and staff meetings.	Medium	Executive director and communications director	Feedback

Objective 2: Increased member awareness of the TFFR program, how it works and who administers the program.

Tactic	Priority	Assigned	Metrics and/or Notes
Relaunch member (active and retired) newsletters to provide regular communications about program activity and events.	High	Communications director and retirement services staff.	Feedback and metrics
Update RIO's website content to identify the agency's role, improve TFFR's program descriptions, and balance its presence (e.g., TFFR dominates the website with most of the links and graphics on the home page directed to the program.)	High	Communications director and retirement services staff.	Google analytics, user feedback
Develop quick start guide directed to newer members. Include with enrollment letters and distributed during presentations and at tradeshows.	High	Communications director with support from retirement services staff	Feedback
Redevelop introductory presentation for newer members. Name presentation to better define content. Identify speaking opportunities (i.e., regional and large district in-service events). Also offer a virtual that is recorded and share online and in member communications.	Medium/high	Communications director with support from retirement staff	Feedback
Rework enrollment letter, breaking it down intro a series of shorter communication that introduce the pension program to new members in more easily digestible manner.	Medium/high	Communications director with support from retirement staff	Feedback
Develop a short video introducing the program that can be featured on the website and distributed to school districts for play at in-service events.	Medium	Communications director with support from retirement services staff	Feedback
Initiate and foster relationships with education associations and the teachers' union to ensure their program messaging is consistent with the agency's.	Medium	Communications director with support from retirement services staff	Feedback

Evaluate member handbook (i.e., review content and compare to peer publications) to improve the material provided to members	Medium/low	Communications director with support from retirement services staff	Feedback

Objective 3: Improved employer awareness of TFFR program requirements.

Tactic	Priority	Assigned	Metrics and/or Notes
Update RIO's website content to identify the agency's role and better describe program requirements.	High	Communications director with support from retirement services staff	Google analytics, user feedback
Update format and promotion of Info Mixers, educational webinar for TFFR employers.	Medium/High	Communications director with support from retirement services staff	Feedback and metrics
Update format and promotion of new business manager workshop, an educational webinar for new TFFR employer staff members.	Medium/High	Communications director with support from retirement services staff	Feedback and metrics
Develop a communication (i.e., a welcome letter) that introduces new business managers to the pension program.	Medium	Communications director with support from retirement services staff	Feedback
Initiate and foster relationships with education associations to ensure messaging is consistent and garner their support in educating about the program.	Medium	Communications director with support from retirement services staff	Feedback
Evaluate employer handbook (review content and compare to peer publications) to improve the materials provided to employers.	Medium/low	Communications director with support from retirement services program mgr.	Feedback

Objective 4: Increased awareness of investment program operations, how it works and who administers the program.

Tactic	Priority	Assigned	Metrics and/or Notes
Improve RIO's website content to identify the agency's role and better describe program activities (e.g., investment division lacks a landing page for the program that describes its work.)	High	Communications director and admin support	Google analytics, user feedback
Relaunch investment newsletter to provide regular	High	Communications director and	Feedback and metrics

communications. Determine audience, distribution, and frequency of publication.		investment division staff.	
Host an investment seminar to educate policy makers, instill confidence in client funds, and add new cliental.	Medium/high	Communications director and investment division staff	Feedback and metrics
Develop a fact sheet about the program.	Medium/high	Communications director and investment division staff	Feedback
Seek out speaking opportunities for staff in order to raise the profile of the program.	Medium	Communications director and investment division staff	Ongoing
Identify investment publications to target for news about division activities.	Medium	Communications director and investment division staff	Ongoing

Goal 2: Evaluate and develop or improve the communications tools used to help stakeholders understand both RIO's day-to-day and strategic communications.

Objective 1: Understand and define opportunities for improvements in both day-to-day and strategic communications. Improve communication processes.

Tactic	Priority	Assigned	Metrics and/or Notes
Send important, widespread communications via GovDelivery (i.e., an email service provider) to allow the office to track metrics that help to determine effectiveness.	High	Communications director and admin support	Feedback and metrics
Update RIO's website structure and improve branding.	High	Communications director and admin support	Successful completion
Develop an intranet site (SharePoint based) that can be used to inform staff of agency activities, host HR policies and other resources.	Medium/high	Executive team and comms director, will require input from NDIT	Feedback and metrics
Incorporate graphics and links into email signatures to promote events and communications.	Medium	Communications director and RIO staff.	Feedback
Evaluate social media options, determine if the office should have a presence. Select appropriate platforms and implement social media plan.	Medium	Communications director	Metrics

Objective 2: Evaluate and update current communications assets and bring them into alignment with the state of North Dakota's brand standard.

Tactic	Priority	Assigned	Metrics and/or Notes
Update RIO's website structure and improve branding.	High	Communications director and admin support	Successful completion
Update board materials and bring on brand.	Medium/high	Communications director and admin support	Successful completion
Evaluate existing print assets (i.e., letterhead, business cards, etc.) and bring on brand.	Medium/high	Communications director and admin support	Successful completion
Incorporate graphics and links into email signatures to promote events and communications.	Medium	Communications director and RIO staff.	Feedback

Goal 3: Develop and coordinate the delivery of messages to project stakeholders regarding TFFR's new pension administration system, aka the Pioneer Project, set to launch in fall 2024.

Objective 1: Create awareness of the new pension administration system (PAS) and onboard employer partners.

Tactic	Priority	Assigned	Metrics and/or Notes
Plan and promote PAS project previews.	High	Communications director	Successful completion
Plan and promote user education.	High	Communications director	Successful completion
Develop message points to ensure staff are sharing the same information.	High	Communications director	Successful completion
Incorporate into employer communications.	High	Communications director	Successful completion
Encourage employers to sign up for ACH in preparation for launch of new system.	High	Communications director with support from retirement services staff	Successful completion

Objective 2: Create awareness of the new pension administration system (PAS) and onboard members.

Tactic	Priority	Assigned	Metrics and/or Notes
Encourage members to establish online accounts in preparation for the transition to the new PAS.	High	Communications director with support from retirement services staff	Successful completion
Develop an onboarding plan for members that includes a MyTFFR quick start guide introducing the new PAS. Include with member enrollment letters, distribute at presentations and tradeshows.	High	Communications director with support from retirement services staff	Successful completion
Plan and promote user education.	High	Communications director	Successful completion
Develop message points to ensure that all staff are sharing the same message.	High	Communications director	Successful completion
Incorporate into member communications.	High	Communications director	Successful completion
Consider securing marketing/vanity URL, e.g., mytffr.nd.gov.	Medium	Communications director and NDIT	Successful completion

Goal 4: Support the growth of the investment services division including the hiring and development of an in-state investment team in summer 2024.

Objective 1: Educate external stakeholders on the value of an internal investment team.

Tactic	Priority	Assigned	Metrics and/or Notes
Develop a communication and/or improve the agency's website to better describe the division's role (i.e., review content and compare to peer organizations).	High	Communications director and investment division staff	Feedback
Host an investment seminar to educate policy makers, instill confidence in client funds, and add new cliental.	Medium/high	Communications director and investment division staff	Feedback and metrics
Devise a method and structure for obtaining department news that can be shared with stakeholders.	Medium/low	Communications director and investment division staff	Feedback
Research and contract for a media tracking service that can be used to monitor investment	Medium/low	Communications director	Successful completion and metrics

services news. (Currently the agency is using Google alerts.)			

Objective 2: Support the growth and development of the team, particularly those who working in a hybrid or remote environment. (This objective also aligns with Goal #2, evaluate and develop or improve communications tools.)

Tactic	Priority	Assigned	Metrics and/or Notes
Develop a communication and/or improve the agency's website to better describe the division's role (review content and compare to peer organizations).	High	Communications director and investment division staff	Feedback and metrics
Develop an intranet that can be used to inform staff of agency activities, host HR publications and other resources.	Medium/high	Communications director and admin support	Feedback and metrics
Provide communications support for tracking and publishing/sharing program successes.	Medium	Communications director and admin support	Feedback and metrics

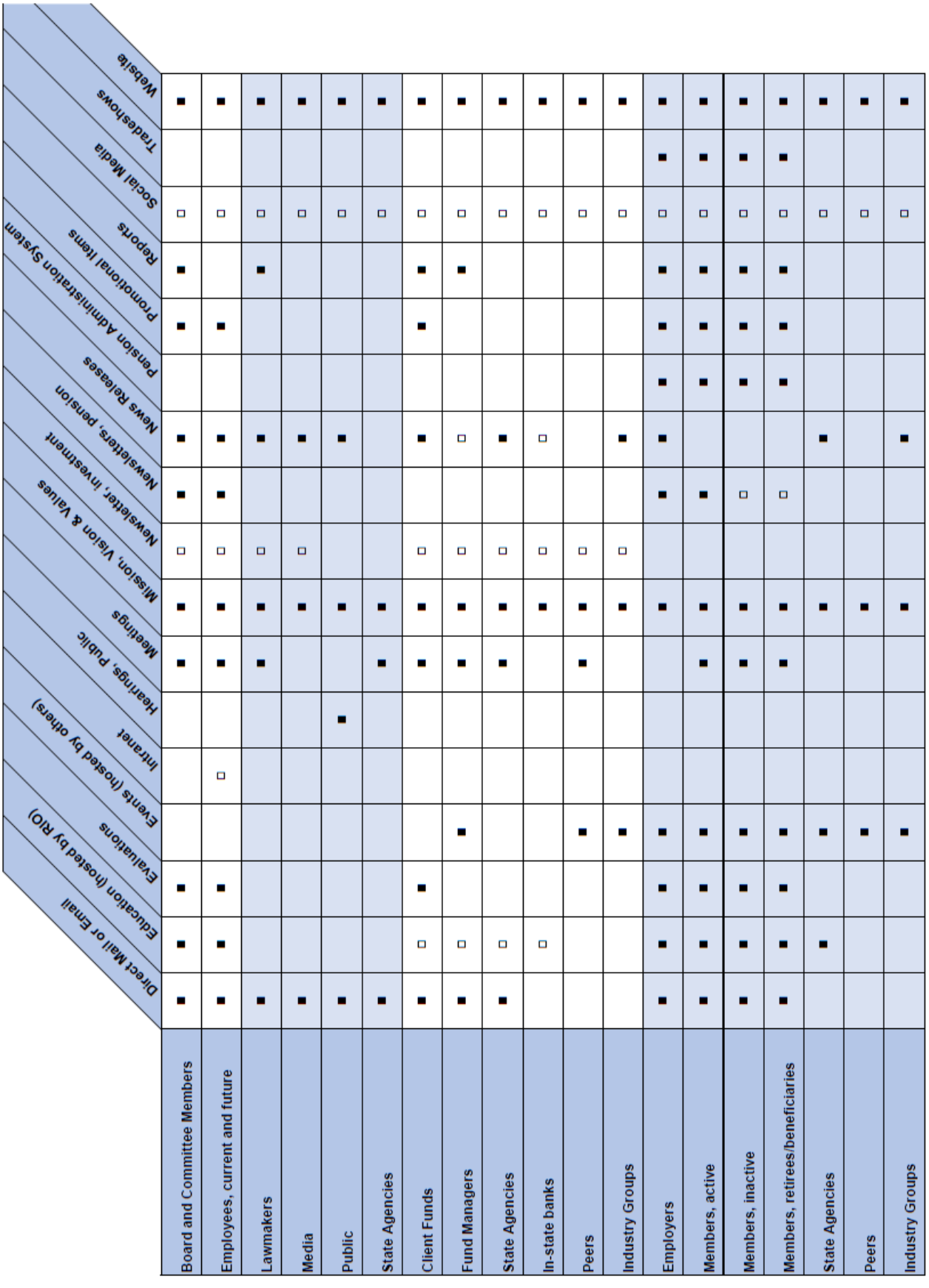
APPENDIX

Research summation

Evaluation tools and resources referenced in the development of the Retirement and Investment Office's Strategic Communications Plan includes the following:

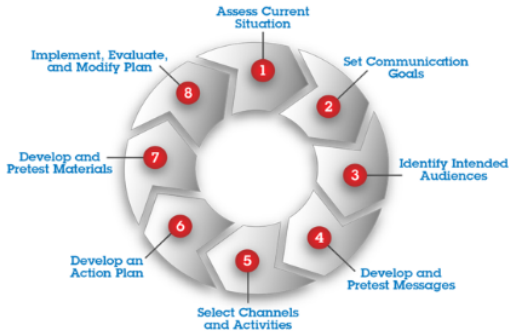
- Teachers' Fund for Retirement member survey conducted by Segal Benz in May 2023.
- Teachers' Fund for Retirement event evaluations, 2022-23.
- Teacher's Fund for Retirement customer surveys, 2022-23.
- State Investment Board client fund evaluations, 2021-23.
- Retirement and Investment Office strategic plan, September 2022.

STAKEHOLDERS/CHANNELS MATRIX



8-Step Communication Model

The visual displays a model for carrying out a strategic communications process based on the social marketing approach.



The eight steps are:

1. Assess Current Situation
    - Acquire a thorough understanding of the problem, the audience and the action you want the audience to take. Assessing the situation reduces the assumptions and lays a solid foundation to continue the process.
2. Set Communication Goals
    - Answer the question: what do you want to accomplish? Once you set your goals, develop specific, measurable, achievable, realistic and timely (SMART) objectives for implementing those goals.
3. Identify Intended Audiences
    - Identify the segments of the population you want to target. This will drive the messages, channels and activities you choose for maximum impact.
    - Once you identify your audience, go one step further and analyze the audience. When we segment down to a very specific audience, we learn what makes that particular group tick. And we can use that information to create messages and select channels that will align with the needs, beliefs, values, and priorities of our audiences.
4. Develop and Pretest Messages
    - Make sure your messages are: easy for your audience to understand; are direct and concise; don't use jargon; and communicate the benefits to your audience.
5. Select Channels and Activities
    - Research which communication channels are the most effective to reach your target audience. Remember to engage partners as force multipliers. Partnerships with key stakeholders are valuable elements in your ability to communicate with your audiences.
6. Develop an Action Plan
    - How will you implement communications strategy? Do you have alternatives (backups) in place to implement all steps of the strategy? Did you identify potential risks and contingency plans?
7. Develop and Pretest Materials
    - Conduct concept and positioning testing to determine which materials are relevant to the audience; test the materials for memorability, impact, image, persuasiveness and other key attributes; conduct readability testing; consider adding peer or professional review to the materials testing process; conduct test marketing with a small sample of the target audience.
8. Implement, Evaluate and Modify Plan
    - Review your action plan and modify as needed. Obtain any necessary or required approvals. Implement the approved plan.

Source: Federal Emergency Management Agency

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MEMORANDUM

TO: **TFFR Board**
FROM: **Jan Murtha, Executive Director**
DATE: **November 9, 2023**
RE: **PERS Board decision and Special Legislative Session**

The ND Supreme Court recently issued an opinion on the Bd. Of. Trustees of the N.D. Public Employees Retirement System v. N.D. Legislative Assembly. If you haven't followed this case, the PERS board filed a lawsuit against the Legislative Assembly relating to changes made to the member composition of the PERS Board that were added to the OMB appropriations bill. The opinion has declared the OMB appropriations bill (SB 2015) void due to the single subject rule in the state constitution. You can read the decision here: 2023ND185 (ndcourts.gov).

A special legislative session was held the week of October 23, 2023, to address the voided bill. RIO had its own appropriations bill (S.B. 2022) and much of the other legislation impacting RIO was set forth in other bills (such as the SIB Board Composition bill H.B. 1088) such that there was not a significant impact to agency operations.

Board Action Requested: Information only.

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MEMORANDUM

TO: **TFFR Board**
FROM: **Jan Murtha, Executive Director**
DATE: **November 15, 2023**
RE: **Administrative Rules**

At its August 31st Special TFFR Board meeting, the Board approved the proposed amendments to administrative rules and directed staff to proceed with the rules promulgation process. Pursuant to the Boards direction, staff:

- Prepared the proposed amendments to administrative rules, the regulatory analysis, takings assessment, small entity impact statement, and small entity regulatory analysis for distribution (attached).
- Submitted the Full Notice and proposed rules to Legislative Counsel and the legislative sponsors of the bills that the rules are implementing (attached).
- Requested the ND Newspaper Association publish an Abbreviated Notice (attached).
- Conducted a Public Hearing on Friday October 27, 2023, to receive comments on the proposed rule amendments (minutes attached).

In addition to the above actions, Staff also published the proposed amendments on our agency website. Staff received no written or oral comments, nor requests for copies of the proposed amendments to rules or any of the required assessments, during the comment period.

Regarding the publication of the abbreviated notice, staff observed that one of the publications occurred within 20 days from the date of the public hearing due to one newspaper missing the scheduled publication deadline. Staff referred to A.A.G. DePountis the question of whether and to what extent this publication impacted the validity of the process. A.A.G. DePountis opined that the notice was given in substantial compliance with the rule promulgation process and therefore the late publication of one newspaper was unlikely to have a material impact to the process.

Staff requests that the Board finalize and approve the proposed amendments to rules as presented; and authorize staff to submit the proposed amendments to the Office of Attorney General for an opinion of rule process compliance, and to Legislative Counsel contingent on the Attorney General opinion/approval.

Rule (amended unless otherwise noted)	Description/Reason for Change
82-01-01-01 & 103-01-01-01	Update Agency address – refer to website
82-02-01-01	Add definition of dual member. HB 1040 – closing PERS main plan.
82-03-01-01	Change medical “doctor” to “provider”
82-03-01-04	HB 1219 - TFFR Bill change to repurchase terms.
82-03-01-10 - Create	HB 1150 – Veterans Exception.
82-05-01-01	Adds clarity to sections referenced.
82-05-02-03 - Repeal	HB 1219 - Repeal level social security option.

82-05-03-01	Clarify process for system programming.
82-05-03-03	Clarify collection process.
82-05-03-04 - Create	Create – clarify system programming.
82-05-03-05 - Create	Create – clarify system programming.
82-05-03-06 - Create	Create – clarify system programming.
82-05-03-07 - Create	Create – clarify system programming.
82-05-04-02	HB 1219 – Remove level social security option.
82-05-06-01	HB 1219 – Update to reflect RTW change.
82-07-01-01	Clarify disability application process.
82-07-01-03	Clarify disability application process.
82-07-03-01	HB 1219 - Remove level social security option.
82-07-04-01	Clarify disability application process.
82-08-01-03	Clarify/Modify pre-retirement Model QDRO

Board Action Requested: Approve proposed amendments as Final and authorize staff to continue rule promulgation process as presented.

Section 82-01-01-01 is amended as follows:

82-01-01-01. Organization of the teachers' fund for retirement.

1. **Organization and administration.**

   a. History. The 1913 legislative assembly created the teachers' insurance and retirement fund by legislation codified as North Dakota Century Code chapter 15-39. This chapter provided a retirement program for public, nonpublic, and certain college teachers. In 1971, the legislative assembly repealed North Dakota Century Code chapter 15-39 and enacted North Dakota Century Code chapter 15-39.1 which created the present teachers' fund for retirement. The 1973 legislative assembly provided for teacher retirement options by enacting North Dakota Century Code chapter 15-39.2. The primary objective of the teachers' fund for retirement is to provide income security to retired teachers.

   b. Board of trustees. A seven-member board of trustees, as established by North Dakota Century Code section 15-39.1-05.1, is responsible for managing the fund.

   c. Qualified tax status of fund.

      (1) Qualified plan. The fund is a qualified employee pension plan under sections 401 and 501 of the Internal Revenue Code of 1986, as amended [U.S.C. title 26].

      (2) Exclusive benefit and purpose. As a qualified employee pension plan, all assets of the fund are held in trust for the exclusive benefit of members and their beneficiaries. Fund assets may not be diverted or used for any purpose other than to provide pension benefits and other incidental benefits allowed by law.

   d. Investment of the fund. The assets of the fund are invested and managed by the North Dakota state investment board. The state investment board invests the fund's assets in accordance with the "prudent investor" rule.

   e. Accrued benefits nonforfeitable. Upon plan termination or complete discontinuance of contributions under the fund, the rights of all participants to benefits accrued to the date of such termination or discontinuance will become nonforfeitable to the extent funded.

2. **Description of portion of organization and functions subject to North Dakota Century Code chapter 28-32.**

   a. Overview. The teachers' fund for retirement is an "administrative agency" within the definition of that term under subsection 1 of North Dakota Century Code section 28-32-01.

   b. Rulemaking. North Dakota Century Code section 15-39.1-07 authorizes the board of trustees to adopt rules as may be necessary to fulfill the responsibilities of the board. The board follows the procedures established in North Dakota Century Code chapter 28-32 in adopting rules. The rules adopted by the board implement various statutory provisions set forth in North Dakota Century Code chapter 15-39.1.

   c. Administration. Administration rules for the state retirement and investment office as they pertain to the teachers' fund for retirement are contained in North Dakota Administrative Code title 103.

3. **Inquiries.** General inquiries and questions relating to policies of the board may be ~~addressed~~ sent to the ~~executive director:~~ address listed on the funds website at www.rio.nd.gov.

~~Executive Director~~

~~1930 Burnt Boat Drive~~
~~P.O. Box 7100~~
~~Bismarck, ND 58502-7100~~

History: Amended effective August 1, 1983; November 1, 1985; September 1, 1990; November 1, 1994; January 1, 1998; May 1, 1998; May 1, 2000; _____.
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 28-32-02.1

Section 82-02-01-01 is amended as follows:

82-02-01-01. Definitions.

Unless made inappropriate by context, all words used in this title have the meanings given to them under North Dakota Century Code chapter 15-39.1. The following definitions are not established by statute and apply for the purpose of this title:

1. "Acceptance of benefit" means the benefit payment date that is the first calendar day of each month for benefits paid by paper check or electronic funds transfer to a financial institution.

2. "Account balance" or "value of account" means the member's accumulated contributions or assessments, plus the sum of any member purchase or repurchase payments, plus interest at an annual rate of six percent compounded monthly.

3. "Administrative" means to manage, direct, or superintend a program, service, or school district or other participating employer.

4. "Benefit payment date" means the date the member is paid a benefit which is the first day of the month. Benefits may be paid retroactive to a member's retirement date.

5. "Benefit service credit" means employment service used to determine benefits payable under the fund.

6. "Bonus" means an amount paid to a member in addition to regular contract salary which does not increase the member's base rate of pay, is not expected to recur or continue in future fiscal years, or is not expected to be a permanent salary increase. A bonus is not considered eligible retirement salary and is not subject to payment of member and employer contributions.

   Bonuses include the following:

   a. Recruitment or contract signing payments defined in North Dakota Century Code section 15.1-09-33.1.

   b. Retention, experience, or service-related payments.

   c. Early retirement incentive payments, severance payments, or other payments conditioned on or made in anticipation of a member's retirement or termination.

   d. Payments made to recognize or reward a member's accomplishments or service.

   e. Other special or irregular payments which the board determines to be bonuses using criteria and documentation described in section 82-04-02-01.

7. "Cessation of employment" means severance or termination of employment.

8. "Contributions" means the assessments or payments made to the fund.

9. "Covered employment" means employment as a teacher in a North Dakota state agency, state institution, school district, special education unit, regional education association, or other governing body of a school district.

10. "Covered payroll" means all amounts included in payroll, salary, or compensation paid to active members on which contributions to and benefits from the pension plan are based according to the definition of salary in subsection 10 of North Dakota Century Code section 15-39.1-04. Covered payroll may also be referred to as pensionable or eligible payroll, salary, compensation, or earnings.

11. "Dual member" is a member who is also a member of an alternative plan as defined in North

Dakota Century Code section 15-39.1-10.3.

~~11.~~12. "Eligibility service credit" means employment service used to determine vesting and benefit eligibility for dual members and qualified veterans under the Uniformed Services Employment and Reemployment Rights Act of 1994. Eligibility service credit is not used for benefit calculation purposes.

~~12.~~13. "Extracurricular services" means outside of the regular curriculum of a school district or other participating employer which includes advising, directing, monitoring, or coaching athletics, music, drama, journalism, and other supplemental programs.

~~13.~~14. "Member" is a teacher as defined in North Dakota Century Code section 15-39.1-04 who is a participant in the fund.

~~14.~~15. "Participating employer" means the employer of a teacher, including a North Dakota state agency, state institution, school district, special education unit, area career and technology center, regional education association, or other governing body of a school district who contributes to the teachers' fund for retirement.

~~15.~~16. "Performance or merit pay" means an amount paid to a member pursuant to a written compensation plan or policy that links a member's compensation to attainment of specific performance goals and duties. The specific goals, duties, and performance measures under which performance pay is expected to be made must be determined in advance of the performance period and documented in writing. Performance or merit pay may be in addition to regular salary or may replace regular salary increases. Performance or merit pay is considered eligible retirement salary and subject to payment of member and employer contributions, unless the teachers' fund for retirement board determines the payments are ineligible salary using criteria and documentation described in section 82-04-02-01.

~~16.~~17. "Plan year" means the twelve consecutive months commencing July first of the calendar year and ending June thirtieth of the subsequent year.

~~17.~~18. "Referee" means all sporting and nonsporting event judges and officials, including referees, umpires, line judges, scorekeepers, timekeepers, ticket takers, ushers, and other judges or officials.

~~18.~~19. "Retirement date" means the date selected by the member to begin retirement benefits. The benefit is calculated as of the retirement date and can be no earlier than the first ~~or fifteenth~~ day of the month following eligibility for retirement benefits or the first day of the month following eligibility for disability or death benefits. Notwithstanding the foregoing a member's retirement will not be effective until the member accepts the first benefit payment.

~~19.~~20. "Salary reduction or salary deferral amounts under 26 U.S.C. section 125, 132(f), 401(k), 403(b), or 457" means amounts deducted from a member's salary, at the member's option, to these plans. These reductions or deferrals are part of salary when calculating retirement contributions. Employer contributions to plans specified in 26 U.S.C. section 125, 132(f), 401(k), 403(b), or 457 which are made for the benefit of the member will not be counted as retirement salary when calculating retirement contributions. Member contributions paid by the

employer under IRC section 414(h) pursuant to a salary reduction agreement do not reduce salary when calculating retirement contributions.

~~20.~~21. "Special teachers" include licensed special education teachers, guidance and school counselors, speech and language pathologists, social workers, school psychologists, librarians, media specialists, technology coordinators, program coordinators, and other staff members licensed by the education standards and practices board provided they are under contract with a school district or other participating employer to provide teaching, supervisory, administrative, or extracurricular services.

~~21.~~22."Supervisory" means to have general oversight or authority over students or teachers, or both, of a school district or other participating employer.

~~22.~~23."Teaching" means to impart knowledge or skills to students or teachers, or both, by means of oral or written lessons, instructions, and information.

~~23.~~24."Vested" means the status attained by a teacher when the teacher has earned three years of service credit for a tier one member or five years of service credit for a tier two member for covered employment in this state.

~~24.~~25."Written agreement" means a teaching contract, school board minutes, or other official document evidencing a contractual relationship between a teacher and participating employer.

History: Effective September 1, 1990; amended effective May 1, 1992; May 1, 1998; May 1, 2000; May 1, 2004; July 1, 2008; July 1, 2012; April 1, 2016; _____.
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1

CHAPTER 82-03-01
MEMBERSHIP IN THE FUND

Section 82-03-01-01 is amended as follows:

82-03-01-01. Teachers' withdrawal from fund - Refund.

When a teacher terminates covered employment, the teacher may claim a refund of assessments paid to the fund during membership. A teacher wishing to claim a refund of assessments must request an application from the administrative office, complete the form, and return it for processing. Once the application has been processed, the refund will be paid the first day of the month following the expiration of one hundred twenty calendar days from the last date of covered employment.

The waiting period may be waived by the board if the teacher produces evidence that the teacher will not be returning to covered employment in North Dakota. The following written evidence is required before the board will grant a waiver:

1. Proof of resignation or nonrenewal of contract;
2. Proof that the teacher's employer has accepted the resignation, i.e., letter or copy of official school board minutes; and
3. Proof that the individual has either accepted noncovered employment or permanently relocated out of state, or a medical statement from a medical ~~doctor~~ provider attesting to nonemployment during the upcoming school year for medical reasons.

No refund can be issued to a teacher who has terminated a teaching position only for the summer months or for a leave of absence.

History: Effective September 1, 1990; amended effective April 1, 1994; May 1, 1998; May 1, 2000;_____.
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-20

Section 82-03-01-04 is amended as follows:

82-03-01-04. Repurchase of forfeited service credit.

An individual who has forfeited service credit under section 82-03-01-03 may

repurchase such service upon returning to teach or becoming an active dual member in accordance with the following:

1. An active teacher may immediately repurchase forfeited service credit upon returning to TFFR-covered employment. ~~If the repurchase payment is made within five years of returning to teach, the repurchase cost must be the amount withdrawn plus interest.~~

2. ~~An active~~ A dual member ~~of the public employees retirement system or the highway patrol retirement system~~ may repurchase withdrawn service credit from the fund. ~~If the repurchase is made within five years from the date of initial eligibility or July 1, 1987, the repurchase cost must be the amount withdrawn plus interest.~~

3. ~~If the repurchase payment is not made within five years, the~~ The cost of the ~~remaining~~ repurchased service credit will be calculated on an actuarial equivalent basis.

4. The cost may be paid in a lump sum or in installments. Installments may be made monthly, quarterly, semiannually, or annually for up to five years. Interest is charged on the unpaid balance based on the actuarially assumed investment return rate in effect at the time the member signs the installment agreement.

5. If a teacher retires prior to full payment of the repurchase amount, service credit will be granted in proportion to the actual principal payments made or the teacher may elect to make a lump sum payment to complete the purchase or elect to have the payments included in a refund of the account balance.

6. If a teacher passes away prior to full payment of the repurchase amount, service credit will be granted in proportion to the actual principal payments made or the designated beneficiary may elect to make a lump sum payment to complete the purchase or elect to have the payments included in a refund of the account balance.

History: Effective September 1, 1990; amended effective May 1, 1992; April 1, 1994; May 1, 1998;_____.

General Authority: NDCC 15-39.1-07

Law Implemented: NDCC 15-39.1-10.3, 15-39.1-15, 15-39.1-24

Section 82-03-01-10 is created as follows:

Section 82-03-01-10. Veteran's exemption – Proof of qualified military retirement.

A teacher applying for an exception to membership in the teachers' fund for retirement for retired military personnel must provide proof of at least twenty years of service in any branch of the armed forces of the United States on full-time active duty and proof of retirement with full military retirement benefits. The following documents will be accepted as proof of service and proof of military retirement benefits: military record of service, commonly referred to as DD214.

History: Effective _____,
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-19.3

Section 82-05-01-01 is amended as follows:

82-05-01-01. Application for benefits.

A member or beneficiary must make written application for benefits on enrollment forms provided by the fund before benefits can be paid. The enrollment form must be signed by the member or beneficiary and notarized or witnessed by a plan representative. The form of payment option selected may not be changed after the first benefit payment has been accepted by the member or beneficiary except as allowed under section 82-05-01-03 and section 82-05-02-02. If the member dies before accepting the first benefit payment, the member's beneficiary is eligible for death benefits the first day of the month following the member's death.

Retirement benefits may not be issued to a member who has terminated a teaching position only for the summer months or for a leave of absence.

History: Effective September 1, 1990; amended effective April 1, 1994; May 1, 2000; July 1, 2012;_____.
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-10, 15-39.1-17

CHAPTER 82-05-02
FORMS OF BENEFIT PAYMENTS

Section 82-05-02-03 is repealed:~~.~~

82-05-02-03. Level income option. ~~[repealed]~~

~~A teacher who retires prior to social security normal retirement age may elect the level income option. This choice of benefit option is irrevocable once the teacher has begun receiving benefits. Under the level income option, the teacher's monthly benefit is adjusted so that the combined benefits received from the fund and social security remain level before, and after, the date social security benefits begin. The adjusted benefit payable from the fund must be determined on an actuarial equivalent basis. A teacher is not eligible for the level income option if the reduced level income benefit is less than two hundred dollars per month.~~

History: ~~Effective September 1, 1990; amended effective May 1, 2000.~~
General Authority: ~~NDCC 15-39.1-07~~
Law Implemented: ~~NDCC 15-39.1-16~~

CHAPTER 82-05-03
PAYMENT OF BENEFITS

Section

Section 82-05-03-01 is amended as follows:

82-05-03-01. When benefit payments begin - Direct deposit.

If the teacher terminates covered employment ~~or~~ and becomes eligible for retirement benefits ~~within the first fifteen days of the month~~, retirement benefits are paid ~~beginning~~ on the ~~fifteenth~~ first day of the month following the official date of retirement. If a teacher terminates covered employment or becomes eligible for retirement benefits after the first fifteen days of the month, retirement benefits are paid beginning the first day of the following month.

Annuity payments will be directly deposited to a teacher's account in a bank, credit union, savings and loan, or other financial institution provided that the financial institution is an automated clearing house (ACH) financial participant. The teacher must complete the official direct deposit form provided by the fund.

History: Effective September 1, 1990; amended effective May 1, 1998; _____.
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-10

Section 82-05-03-03 is amended as follows:

82-05-03-03. Overpayment of retirement benefits - Write-offs.

All overpayments must be collected using the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with like gains. If the cost of recovering the amount of the overpayment of retirement benefits is estimated to exceed the overpayment, the teachers' fund for retirement ~~board~~ may consider the repayment to be unrecoverable and written off.

History: Effective April 1, 2016; amended effective _____.
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-29, 15-39.1-31

Section 82-05-03-04 is created as follows:

82-05-03-04. Interest payments – Interest accrual on account – P~~p~~re-retirement death.

The pre-retirement death benefit paid to any beneficiary shall be equal to the account value included accumulated interest up to the date of death. No interest shall continue to accrue to the account beyond the time of death of the member.

History: Effective _____

General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-17

Section 82-05-03-05 is created as follows:

82-05-03-05. Erroneous Payment of Benefits – Overpayments.

1. An "overpayment" means a payment of money by the teachers fund for retirement that results in a person receiving a higher payment than the person is entitled to under the provision of the retirement plan of membership.
2. A person who receives an overpayment is liable to refund those payments upon receiving a written explanation and request for the amount to be refunded.
3. If the overpayment of benefits was not the result of any wrongdoing, negligence, misrepresentation, or omission by the recipient, the recipient may make repayment arrangements subject to the executive director's approval within sixty days of the written notice of overpayment with the minimum repayment amount no less than fifty dollars per month. If repayment arrangements are not in place within sixty days of the date of the written notice of overpayment, the executive director shall offset the amount of the overpayment from the amount of future retirement benefit payments so that the actuarial equivalent of the overpayment is spread over the benefit payment period.
4. If the overpayment of benefits was the result, in whole or in part, of the wrongdoing, negligence, misrepresentation, or omission of the recipient, the recipient is liable to pay simple interest charges at the rate of six percent on the outstanding balance to compensate the fund for lost earnings, from the time the erroneous benefit was paid through the time it has been refunded in full. Recovered funds are first applied to interest and, if any amount is left over, that amount is applied to principal. The recipient may make repayment arrangements, subject to the executive director's approval, within sixty days of the written request for refund with the minimum repayment amount no less than fifty dollars per month. If repayment arrangements are not in place within sixty days of the date of the written notice of overpayment, the executive director shall offset the amount of the overpayment from the amount of future retirement benefit payments so that the actuarial equivalent of the overpayment is spread over the benefit payment period.
5. If an individual dies prior to fully refunding an erroneous overpayment of benefits, the teachers' fund for retirement may make application to the estate of the deceased to recover the remaining balance.

History: Effective
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-17

Section 82-05-03-06 is created as follows:

82-05-03-06. Erroneous Payment of Benefits – Underpayments.

1. An "underpayment" means a payment of money by the teachers' fund for retirement that results in a person receiving a lower payment than the person is entitled to under the provisions of the retirement plan of membership.
2. If an underpayment occurs, the amount of the lump sum payment must be paid within sixty days of the discovery of the error.
3. If the underpayment of benefits was not the result of any wrongdoing, negligence, misrepresentation, or omission by the employer or recipient, the underpayment of benefits is to include simple interest at the rate of six percent from the time the underpayment occurred.
4. If the underpayment of benefits was the result, in whole or in part, of the wrongdoing, negligence, misrepresentation, or omission of the employer or recipient, the underpayment of benefits will not include simple interest.
5. If an individual dies prior to receiving the underpayment of benefits, the teachers' fund for retirement must pay the designated beneficiary on record or, in the absence of a designation of beneficiary, to the

estate.

History: Effective
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-17

Section 82-05-03-07 is created as follows:

82-05-03-07. Erroneous Payment of Benefits – Appeals.

1. A person not satisfied with repayment arrangements made under section 82-05-03-05 may appeal the executive director's decision in writing to the board. The written request must explain the basis of the appeal and must be received in the office within sixty days of the executive director's written decision.
2. The board may release a person from liability to refund an overpayment, in whole or in part, if it determines: a. The receipt of overpayment is not the fault of the recipient. b. It would be contrary to equity and good conscience to collect the refund.

History: Effective
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-17

Section 82-05-04-02 is amended as follows:

82-05-04-02. Actuarial factors - Optional payment forms.

Under the optional joint and survivor, term certain and life, and partial lump sum ~~and level income~~ forms of annuity payment shall be based on the following actuarial assumptions:

1. Interest rate - 7.25 percent per year, compounded annually.

2. Member's mortality (used for nondisabled members) - A mortality table constructed by blending thirty percent of the mortality rates under a combination of PubT-2010 employee and PubT-2010 healthy retiree tables for males, adjusted by one hundred four percent for ages fifty-five and older, and projected to 2022 using projection scale MP-2019, with seventy percent of the mortality rates under a combination of PubT-2010 employee and PubT-2010 healthy retiree tables for females, adjusted by one hundred four percent for ages fifty-five and older, and projected to 2022 using projection scale MP-2019.

3. Beneficiary's mortality - A mortality table constructed by blending seventy percent of the mortality rates under a combination of PubT-2010 employee and Pub-2010 contingent survivor tables for males, adjusted by ninety-five percent for ages forty-five and older, and projected to 2022 using projection scale MP-2019, with thirty percent of the mortality rates under a combination of PubT-2010 employee and Pub-2010 contingent survivor tables for females, adjusted by ninety-five percent for ages forty-five and older and projected to 2022 using projection scale MP-2019. Mortality tables for survivors under age eighteen use the RP-2014 juvenile tables with fifty percent blending of the male/female rates and projected to 2022 using projection scale MP-2019.

4. Disabled member's mortality - A mortality table constructed by blending thirty percent of the mortality rates under the PubNS-2010 non-safety disabled mortality table for males, projected to 2022 using projection scale MP-2019, with seventy percent of the mortality rates under the PubNS-2010 non-safety disabled mortality table for females, projected to 2022 using projection scale MP-2019.

In addition, the above actuarial assumptions shall be used to determine actuarial equivalence for other purposes not covered by sections 82-05-04-01, 82-05-04-03, and 82-05-04-04, such as the determination of the reduction to a member's benefit because of the existence of a qualified domestic relations order.

History: Effective May 1, 2000; amended effective May 1, 2004; July 1, 2008; April 1, 2016; July 1, 2021; _____.
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-16, 15-39.1-24

Section 82-05-06-01 is amended as follows:

82-05-06-01. Retiree reemployment reporting requirements.

Participating employers and retirees must complete and submit a ~~"TFFR Retired Member Employment Notification"~~ form required by the fund and a copy of the employment contract within thirty days of the retired member's return to covered employment.

Time spent performing extracurricular duties and attending professional development sessions is excluded from the annual hour limit. ~~Extracurricular duties include those duties outlined in the extracurricular schedule of a participating employer's master agreement, unless the duty was part of the retiree's regular job duties and base salary prior to retirement. Employer and member contributions are required to be paid based on the employer payment plan model. Contributions are calculated on the retirement salary paid to the reemployed retiree, including salary for extracurricular duties and professional development.~~

~~Employer and member contributions are required to be paid on salary earned by retirees who perform in-staff subbing duties while under contract with a teachers' fund for retirement participating employer.~~

~~Retirees who perform regular substitute teaching duties and are not under contract with that teachers' fund for retirement participating employer are not subject to the annual hour limit and employer and member contributions are not required to be paid.~~

History: Effective July 1, 2008; amended effective July 1, 2012;_____.
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-19.1, 15-39.1-19.2

Section 82-07-01-01 is amended as follows:

82-07-01-01. Definitions.

The following definitions govern the determination of disability benefits under the fund:

1. "Medical examination" means an examination conducted by a licensed medical ~~doctor~~ provider or a psychologist that includes a diagnosis of the disability, the treatment being provided for the disability, the prognosis and classification of the disability, and a statement indicating how the disability prevents the individual from performing the duties of a teacher.

2. "Permanent ~~disability" means a condition of "~~ and total disability" ~~that is static or deteriorating and the prognosis does not indicate an anticipated recovery from the disability~~ means the inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or has lasted or can be expected to last for a continuous period of not less than twelve months and results in the individual's inability to perform the duties of a teacher.

3. "Temporary disability" means a condition of "total disability" that is expected to last at least twelve months, but is not considered permanent.

~~4. "Total disability" means any medically determinable physical or mental impairment that is expected to last for a continuous period of not less than twelve months and results in the individual's inability to perform the duties of a teacher. "Total disability" includes conditions of "temporary disability" and "permanent disability" as defined in this section.~~

History: Effective September 1, 1990; amended effective May 1, 1998; July 1, 2008; _____.
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-18

Section 82-07-01-03 is amended as follows:

82-07-01-03. Determination of disability - Procedures.

The following procedures govern the determination of disability benefits under the fund:

1. **Application process.**

   a. Application for disability benefits must be made within thirty-six months from the last date of covered employment on the form provided by the fund. On a case-by-case basis, the board may extend the thirty-six month period.

   b. If the fund member is unable or unwilling to file an application, the member's employer or legal representative may file the member's disability application.

   c. The application must describe the disability, explain the cause of the disability, the limitations caused by the disability, the treatment being followed, the efforts by the employer and the member to implement reasonable accommodations, and the effect of the disability on the individual's ability to perform as a teacher.

   ~~d. Applicants shall be provided information on potential services offered by the office of vocational rehabilitation.~~

   ~~e.~~d. The employer's statement of disability must provide information about the member's sick leave benefits, explain how the disability affects the performance of the teaching duties, include a detailed listing of job duties, and describe efforts to provide reasonable accommodation for the member.

2. **Medical examination process.**

   a. The applicant for disability retirement must provide the fund with medical examination reports.

   b. An initial medical examination should be completed by the member's ~~attending or family physician~~ medical provider on the medical examination form provided by the fund. If deemed necessary by the fund's medical consultant, an additional examination must be completed by a specialist in the disability involved. Available medical or hospital reports may be accepted in lieu of a medical examination report if deemed acceptable by the fund's medical consultant.

   c. The fund is not liable for any costs incurred by the applicant in undergoing medical examinations and completing and submitting the necessary medical examination reports, medical reports, and hospital reports.

   d. A medical examination report is not necessary if the applicant provides written proof documenting eligibility for disability benefits under the Social Security Act. In such cases, the applicant is eligible for disability benefits under North Dakota Century Code section 15-39.1-18 without submitting further medical information to the fund but is subject to recertification requirements specified in this chapter.

3. **Medical consultant review.**

   a. The fund shall retain a medical ~~doctor~~ provider to act as its consultant and evaluate and make recommendations on disability retirement applications.

   b. The medical consultant shall review all medical information provided by the applicant.

   c. The medical consultant shall advise the board regarding the medical diagnosis and whether the condition is a "permanent and total disability" or “temporary disability”.

4. **Decision.**

   a. The board shall consider applications for disability retirement at regularly scheduled board meetings. The discussion concerning disability applications must be confidential and closed to the general public.

   b. The applicant must be notified of the time and date of the meeting and may attend or be represented.

   c. The executive director or designee shall provide to the board for its consideration a case history brief that includes membership history, medical examination summary, and the medical consultant's conclusions and recommendations.

   d. The board shall make the determination for eligibility at the meeting unless additional evidence or information is needed.

   e. The executive director or designee may make an interim determination concerning eligibility for disability retirement benefits when the medical consultant's report verifies that a permanent and total or temporary disability exists. However, the board must review the interim determination and make a final determination at its next regularly scheduled board meeting unless additional evidence or information is needed.

   f. The applicant shall be notified in writing of the decision.

   g. If the applicant is determined to be eligible for disability benefits, the disability annuity is payable on, or retroactive to, the first day of the month following the member's last day of

paid employment.

h. If the applicant is determined not to be eligible for disability benefits, the executive director or designee shall advise the applicant of the appeal procedure.

5. **Redetermination and recertification.**

a. A disabled annuitant is subject to redetermination and recertification to maintain eligibility. The schedule for redetermination and recertification must be as follows:

(1) Temporary disability. ~~On July first, following~~ Following the first anniversary date of disability retirement, and every two years thereafter (unless normal retirement is reached). No further recertification is required after the fourth recertification of temporary disability has been filed and accepted. Basis recovery will begin when the member reaches normal retirement age.

(2) Permanent and total disability. ~~On July first, following~~ Following the second anniversary date of disability retirement, and five years thereafter unless normal retirement is reached. No further recertification is required after the second recertification of permanent disability has been filed and accepted. Basis recovery will begin when the member reaches normal retirement age.

b. The fund may require additional recertifications, or waive the necessity for a recertification, if the facts warrant this action.

When a member who is drawing disability benefits is also eligible for normal retirement benefits at the time disability benefits commence, recertification will cease according to the following schedule:

Before age 60	Age 65
At or after age 60, before age 65	5 years
At or after age 65, before age 69	Age 70
At or after age 69	1 year

Basis recovery will also begin according to the above schedule.

c. The fund will send a recertification form to the disabled annuitant to be completed and sent back to the fund.

d. The fund may require the disabled annuitant to be reexamined by a ~~doctor~~ medical provider at the annuitant's own expense. The submission of medical reports by the member, and the review of those reports by the fund's medical consultant, may satisfy the reexamination requirement.

e. The executive director must make the redetermination and recertification decision and bring the matter to the board only if warranted. The disability annuitant may appeal an adverse recertification decision to the board in the same manner as the initial determination.

f. If it is determined that the disability annuitant was not eligible for benefits during any time period when benefits were provided, the executive director may do all things necessary to recover the erroneously paid benefits.

History: Effective September 1, 1990; amended effective April 1, 1994; May 1, 1998; May 1, 2000; July 1, 2012;_____.
General Authority: NDCC 15-39.1-07

Law Implemented: NDCC 15-39.1-18

Section 82-07-03-01 is amended as follows:

82-07-03-01. Forms of disability benefits.

Except for the ~~level income with social security and~~ partial lump sum distribution ~~options~~ option, all optional forms of retirement benefits are available to members entitled to disability retirement annuities.

History: Effective September 1, 1990; amended effective May 1, 1998; July 1, 2012; _____.
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-18

Section 82-07-04-01 is amended as follows:

82-07-04-01. Suspension of disability benefits.

1. When a member receiving disability retirement benefits is not recertified as eligible for continued benefits, the board shall presume the member does not have a "total disability" and the disability benefits must cease on the first day of the month following the date the member is not recertified eligible for continued benefits.

2. When a member receiving disability retirement benefits returns to active teaching in North Dakota or out of state, the board shall do one of the following:

   a. Presume the member does not have a "total disability" and, pursuant to subsection 3 of North Dakota Century Code section 15-39.1-18, suspend the member's disability benefits on the first day of the month following the date the member returns to active teaching.

   b. If the member consents, allow continued payment of the disability benefit for up to six months to permit a member who has partially recovered from the disability to return to active teaching on a trial basis. If the member terminates employment prior to the end of the trial period as set by the board, the board shall not deem the member recovered under North Dakota Century Code section 15-39.1-18, and the member's benefits must continue as permitted under North Dakota Century Code chapter 15-39.1 and this title. If, at the end of the trial period, the member has not terminated employment, the board shall presume the member does not have a ~~"total disability"~~ qualified disability and shall suspend the member's disability benefits on the first day of the month following the date the member's trial period ends pursuant to North Dakota Century Code section 15-39.1-18. A member who has had their disability benefit terminated under this section must reaaply to receive any future disability benefit after the conclusion of any trial period.

History: Effective September 1, 1990; amended effective May 1, 1998; July 1, 2008; _____.
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-18, 15-39.1-19.1

Section 82-08-01-03 is amended as follows:

82-08-01-03. Format for a qualified domestic relations order.

A qualified domestic relations order must be substantially in the following form:

ACTIVE OR INACTIVE MEMBERS

STATE OF NORTH DAKOTA		IN DISTRICT COURT
COUNTY OF _____		_____ JUDICIAL DISTRICT
_____,	)	
	)	
Plaintiff,	)	
	)	QUALIFIED DOMESTIC
	)	RELATIONS ORDER
-vs-	)	
	)	Case No. _____
	)	
_____,	)	
Defendant.	)	

.....

This Order is intended to meet the requirements of a "Qualified Domestic Relations Order" relating to the North Dakota Teachers' Fund for Retirement, hereafter referred to as the "Plan". The Order is made pursuant to North Dakota Century Code section 15-39.1-12.2. The Order is an integral part of the judgment entered on [DATE OF DIVORCE] granting a divorce to the above-entitled parties. [This Order is also drawn pursuant to the laws of the state of North Dakota relating to the equitable distribution of marital property between spouses and former spouses in actions for dissolution of a marriage.] or [This Order is drawn pursuant to the laws of the state of North Dakota relating to the provision of child support to a minor child in actions for dissolution of a marriage.]

BACKGROUND INFORMATION

[MEMBER'S NAME AND SOCIAL SECURITY NUMBER] is the participating member whose last-known address is [MEMBER'S ADDRESS]. The member's date of birth is [MEMBER'S D.O.B.].

[ALTERNATE PAYEE'S NAME AND SOCIAL SECURITY NUMBER] is the alternate payee whose last-known address is [ALTERNATE PAYEE'S ADDRESS]. The alternate payee's date of birth is [ALTERNATE PAYEE'S D.O.B.].

The participating member and the alternate payee were married on [DATE OF MARRIAGE].

IT IS HEREBY ORDERED THAT:

I. BENEFITS

Benefits under the plan are distributed as follows: (Choose one)

1. The alternate payee is awarded [_____%] of the member's accrued monthly annuity benefit as of [DATE OF DIVORCE]; (OR)

2. The alternate payee is awarded [$ _____] of the member's accrued monthly annuity benefit as of [DATE OF DIVORCE].

If payments to the alternate payee begin prior to the member's sixty-fifth birthday, such benefits shall be reduced actuarially, except that if the member retires or dies prior to the member's sixty-fifth birthday, the alternate payee shall receive a commensurate share of any early retirement subsidy, beginning as of the date of the member's retirement or death. Such increase shall be determined actuarially.

II. TIME OF BENEFIT RECEIPT

Benefit payments to the alternate payee will begin: (Choose one)

1. When the participating member qualifies for normal retirement benefits under the plan. (OR)

2. When the participating member qualifies for early retirement. (OR)

3. When the alternate payee reaches [DATE OR EVENT]. The date or event must be after the date participating member would qualify for early retirement. (OR)

4. When the participating member retires and begins receiving retirement benefits from the plan.

Benefits to the alternate payee are payable even if the member has not separated from covered employment. In all cases, the payment will not begin later than when the participating member retires.

If the participating member begins receiving disability retirement benefits, the alternate payee will also begin receiving the benefits awarded in section I of this Order. The alternate payee's benefit will begin when the member's benefits begin and will be actuarially reduced to reflect the earlier disability payment start date.

III. DURATION OF PAYMENTS TO ALTERNATE PAYEE OVER THE LIFE OF THE ALTERNATE PAYEE (Choose one)

1. The payments shall be made to the alternate payee on a monthly basis over the life of the alternate payee and shall cease upon the alternate payee's death and will not revert back to the member. The payment shall be calculated on the basis of a single life annuity and will be actuarially adjusted based upon the plan's assumptions to reflect the life expectancy of the alternate payee.

(OR)

2. The payments shall be made to the alternate payee on a monthly basis over the life of the alternate payee and calculated on the basis of:

   (Choose one)

   (a) a 20-year term certain and life option; (OR)

   (b) a 10-year term certain and life option.

   The payment will be actuarially adjusted based upon the plan's assumptions to reflect the life expectancy of the alternate payee.

   Upon the alternate payee's death, payments will not revert back to the member, but will continue to the alternate payee's designated beneficiary under the term certain and life option identified above.

IV. MEMBER WITHDRAWS FROM RETIREMENT SYSTEM (Choose one)

A. If the participating member discontinues employment and withdraws the member account in a

lump sum, the alternate payee shall receive [___%] of the member's account balance as of [DATE OF DIVORCE] accumulated with interest as required by the Plan from the divorce date until the refund is paid; (OR)

B. If the participating member discontinues employment and withdraws the member account in a lump sum, the alternate payee shall receive [$__] from the member's account balance accumulated with interest as required by the Plan from [DATE OF DIVORCE] until the refund is paid. [Note: The dollar amount in this option cannot exceed the member's account balance.]

V. LIMITATIONS OF THIS ORDER (Order must reflect all provisions of this section.)

A. This Order recognizes the existence of the right of the alternate payee to receive all OR a portion of the benefits payable to the participating members as indicated above.

B. Nothing contained in this Order shall be construed to require any Plan or Plan administrator:

1. To provide to the alternate payee any type or form of benefit or any option not otherwise available to the participating member under the Plan.

2. To provide the alternate payee benefits, as determined on the basis of actuarial value, not available to the participating member.

3. To pay any benefits to the alternate payee which are required to be paid to another alternate payee under another order previously determined by the Plan administrator to be a qualified domestic relations order.

4. To provide to the alternate payee any increased benefit due to the participating member under the disability provisions of this plan.

C. If the alternate payee dies prior to beginning receipt of benefits under this Order, the entire amount that may be due to the alternate payee reverts to the participating member.

D. If the participating member dies prior to retirement and before the alternate payee begins benefits, the alternate payee will receive [___%] share of the member's survivor benefits based on service as of [DATE OF DIVORCE]. The alternate payee and any other beneficiaries will each select their own form of survivor benefit.

If the alternate payee is already in payment, the benefits will continue and the value of the benefits to the alternate payee will reduce any survivor payment to other beneficiaries.

E. The benefit enhancements provided by the North Dakota legislature for service during the marital relationship which are adopted after the end of the marital relationship apply to the alternate payee's portion of benefits under this Order.

F. If participant or alternate payee receives any distribution that should not have been paid per this Order, the participant or alternate payee is designated a constructive trustee for the amount received and shall immediately notify RIO and comply with written instructions as to the distribution of the amount received.

G. Alternate payee is ORDERED to report any payments received on any applicable income tax return in accordance with Internal Revenue Code provisions or regulations in effect at the time any payments are issued by RIO. The plan is authorized to issue Form 1099R, or other applicable form on any direct payment made to alternate payee. Plan participant and alternate payee must comply with Internal Revenue Code and any applicable regulations.

H. Alternate payee is ORDERED to provide the plan prompt written notification of any changes in alternate payee's mailing address. RIO shall not be liable for failing to make payments to alternate payee if RIO does not have current mailing address for alternate payee at time of

payment.

I. Alternate payee shall furnish a certified copy of this Order to RIO.

J. The Court retains jurisdiction to amend this Order so that it will constitute a qualified domestic relations order under the plan even though all other matters incident to this action or proceeding have been fully and finally adjudicated. If RIO determines at any time that changes in the law, the administration of the plan, or any other circumstances make it impossible to calculate the portion of a distribution awarded to alternate payee by this Order and so notifies the parties, either or both parties shall immediately petition the Court for reformation of the Order.

Signed this _____day of _____, 20_____.

_____

(Judge Presiding)

OR

RETIRED MEMBERS

This Order is intended to meet the requirements of a "Qualified Domestic Relations Order" relating to the North Dakota Teachers' Fund for Retirement, hereafter referred to as the "Plan". The Order is made pursuant to North Dakota Century Code section 15-39.1-12.2. The Order is an integral part of the judgment entered on [DATE OF DIVORCE] granting a divorce to the above-entitled parties. [This Order is also drawn pursuant to the laws of the state of North Dakota relating to the equitable distribution of marital property between spouses and former spouses in actions for dissolution of a marriage.] or [This Order is drawn pursuant to the laws of the state of North Dakota relating to the provision of child support to a minor child in actions for dissolution of a marriage.]

BACKGROUND INFORMATION

[MEMBER'S NAME AND SOCIAL SECURITY NUMBER] is the participating member whose last-known address is [MEMBER'S ADDRESS]. The member's date of birth is [MEMBER'S D.O.B.].

[ALTERNATE PAYEE'S NAME AND SOCIAL SECURITY NUMBER] is the alternate payee whose last-known address is [ALTERNATE PAYEE'S ADDRESS]. The alternate payee's date of birth is [ALTERNATE PAYEE'S D.O.B.].

The participating member and the alternate payee were married on [DATE OF MARRIAGE].

IT IS HEREBY ORDERED THAT:

I. BENEFITS

Benefits to the participating member under the plan are distributed as follows: (Choose one)

1. The alternate payee is awarded [__%] of the monthly retirement benefit as of [DATE OF DIVORCE]; (OR)

2. The alternate payee is awarded [$__] of the monthly retirement benefit as of [DATE OF DIVORCE].

II. TIME OF BENEFIT RECEIPT.

The benefits are payable to the alternate payee in the month following receipt of this signed Order by the plan or plan administrator as the participating member is currently retired and receiving benefits under the Plan.

III. DURATION OF BENEFITS TO ALTERNATE PAYEE OVER THE LIFE OF THE PARTICIPATING

MEMBER

The payments shall be made to the alternate payee on a monthly basis over the life of the participating member and, if applicable, a continuing monthly annuity will be payable to the surviving alternate payee after the member's death. The amount of the payments to the alternate payee will be calculated on the basis of: (Choose the annuity option in existence at the time of the divorce or legal separation.)

(1) Single life annuity option (OR)

(2) 100% joint and survivor option (OR)

(3) 50% joint and survivor option (OR)

(4) 20-year term certain and life option (OR)

(5) 10-year term certain and life option.

If the alternate payee is the designated beneficiary, the alternate payee must remain as the beneficiary under the joint and survivor options.

IV. LIMITATIONS OF THIS ORDER (Order must reflect all provisions of this section.)

A. This Order recognizes the existence of the right of the alternate payee to receive all OR a portion of the benefits payable to the participating members as indicated above.

B. Nothing contained in this Order shall be construed to require any Plan or Plan administrator:

1. To provide to the alternate payee any type or form of benefit or any option not otherwise available to the participating member under the Plan.

2. To provide the alternate payee benefits, as determined on the basis of actuarial value, not available to the participating member.

3. To pay any benefits to the alternate payee which are required to be paid to another alternate payee under another order previously determined by the Plan administrator to be a qualified domestic relations order.

C. If the provisions of this Order are applied to disability benefits, the benefits will cease to all parties upon the member's recovery. The parties will then need to submit a new order to allow for the equitable distribution of any future benefits payable from the plan.

D. Upon the alternate payee's death, if the member is still surviving, the entire amount that may be due to the alternate payee reverts to the participating member. Upon the member's death, if the alternate payee is still surviving, the entire benefit will cease under a single life option.

Under a joint and survivor option, the alternate payee will receive the one hundred percent or fifty percent survivor benefit for the remainder of the alternate payee's life, since the alternate payee is the joint annuitant. If a term certain option was selected, and the member passes away before the term certain period has expired while the alternate payee is still living, then the benefit to the alternate payee will continue and the member's portion will continue to the member's designated beneficiary to complete the term certain period. If in the last case, the alternate payee dies before all payments due under the certain period have been made, the alternate payee's share will continue to the alternate payee's designated beneficiary.

E. The benefit enhancements provided by the North Dakota legislature for service during the marital relationship which are adopted after the end of the marital relationship apply to the alternate payee's portion of benefits under this Order.

F. If the participant or alternate payee receives any distribution that should not have been paid per this Order, the participant or alternate payee is designated a constructive trustee for the amount received and shall immediately notify RIO and comply with written instructions as to the distribution of the amount received.

G. Alternate payee is ORDERED to report any payments received on any applicable income tax return in accordance with Internal Revenue Code provisions or regulations in effect at the time any payments are issued by RIO. The plan is authorized to issue Form 1099R, or other applicable form on any direct payment made to alternate payee. Plan participant and alternate payee must comply with the Internal Revenue Code and any applicable regulations.

H. Alternate payee is ORDERED to provide the plan prompt written notification of any changes in alternate payee's mailing address. RIO shall not be liable for failing to make payments to alternate payee if RIO does not have current mailing address for alternate payee at time of payment.

I. Alternate payee shall furnish a certified copy of this Order to RIO.

J. The Court retains jurisdiction to amend this Order so that it will constitute a qualified domestic relations order under the plan even though all other matters incident to this action or proceeding have been fully and finally adjudicated. If RIO determines at any time that changes in the law, the administration of the plan, or any other circumstances make it impossible to calculate the portion of a distribution awarded to alternate payee by this Order and so notifies the parties, either or both parties shall immediately petition the Court for reformation of the Order.

Signed this _____ day of _____, 20 _____.

_____

(Judge Presiding)

History: Effective April 1, 1994; amended effective January 1, 1998; May 1, 1998; May 1, 2002; May 1, 2004; _____.
General Authority: NDCC 15-39.1-07
Law Implemented: NDCC 15-39.1-12.2

Section 103-01-01-01 is amended as follows:

103-01-01-01. Organization of the state retirement and investment office.

1. **Organization and administration.**

   a. History. Chapter 667 of the 1989 Session Laws created the state retirement and investment office with the law expiring on June 30, 1991. Chapter 628 of the 1991 Session Laws extended the expiration date until June 30, 1993. In 1993, the legislative assembly repealed the expiration date creating North Dakota Century Code chapter 54-52.5. The office was created to coordinate the activities of the state investment board and the teachers' fund for retirement.

   b. Governing authority. The state investment board is the governing authority of the state retirement and investment office. This authority is established by North Dakota Century Code section 54-52.5-02. The board is responsible for overseeing and operating the agency to coordinate the activities of the state investment board and the teachers' fund for retirement.

2. **Description of portion of organization and functions subject to North Dakota Century Code chapter 28-32.** The state retirement and investment office is an administrative agency under subsection 1 of North Dakota Century Code section 28-32-01.

3. **Inquiries.** General inquiries and questions may be ~~addressed~~ sent to the address listed on the agency website at www.rio.nd.gov~~:~~ .

~~Retirement and Investment Office 1930 Burnt Boat Drive~~

~~P.O. Box 7100~~

~~Bismarck, ND 58507-7100~~

~~Telephone: 701-224-4885~~

~~800-952-2970~~

~~Fax: 701-224-4897~~

History: Effective September 1, 1994; amended effective _____.
General Authority: NDCC 28-32-02
Law Implemented: NDCC 28-32-02.1

Regulatory Analysis

1. Who are the classes of persons who will probably be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule?

   Employers, Members and Beneficiaries of the TFFR Program are the class of persons affected by the proposed rule.

2. What is the probable impact, including economic impact, of the proposed rule?

   To implement recent legislative requirements and comply with HB 1040, 1150 and 1219; to make administrative process changes necessary for the implementation of a new pension administration system; and to make the administrative code more germane, concise, and up to date. The changes to the existing code will result in compliance. The rules necessary to implement these changes should have a neutral economic impact.

3. What are the probable costs to the agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues?

   Incidental cost to the agency relating to rule promulgation and corresponding system updates. The system updates are associated with the pension system modernization project approved by the Board and appropriated by the legislature, the cost of which is assessed against the fund. No state revenues are impacted because the agency and the fund are considered "special fund" and do not draw from the state general fund.

4. What were the alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency/board and why was each method rejected in favor of the proposed rule?

   Many of the rule changes are required to maintain compliance with century code, while others are intended to allow the agency to run more effectively and efficiently. Some rule changes were made to enable the modernization of the pension administration system. Compliance with North Dakota law requires changes be made through amendments to current administrative rules.

5. Please explain the information and data assessment as well as how the amounts of impact were determined, to the extent practicable.

   The information and data assessment were determined through internal staff assessment of current administrative code review, corresponding new legislation, and new pension system programming requirements.

Takings Assessment

1. Assess the likelihood that the proposed rule may result in a taking or regulatory taking.

   Not Likely.

2. Clearly and specifically identify the purpose of the proposed rule.

   To implement recent legislative requirements and comply with HB 1040, 1150 and 1219; to make administrative process changes necessary for the implementation of a new pension administration system; and to make the administrative code more germane, concise, and up to date. The changes to the existing code will result in compliance. The rules necessary to implement these changes should have a neutral economic impact.

3. Explain why the proposed rule is necessary to substantially advance that purpose and why no alternative action is available that would achieve the agency's goals while reducing the impact on private property owners.

   Many of the rule changes are required to maintain compliance with century code, while others are intended to allow the agency to run more effectively and efficiently. Some rule changes were made to enable the modernization of the pension administration system. Compliance with North Dakota law requires changes be made through amendments to current administrative rules.

4. Estimate the potential cost to the government if a court determines that the proposed rule constitutes a taking or regulatory taking.

   Not applicable.

5. Identify the source of payment within the agency's budget for any compensation that may be ordered.

   Not applicable.

6. Certify that the benefits of the proposed rule exceed the estimated compensation costs.

   Compensation costs are not applicable given the responses to question #4 and #5, in addition the promulgation of these proposed rules is either required due to changes in the century code or to make changes necessary to implement the pension administration project or to make the administrative code more germane and concise.

Small Entity Economic Impact Statement

1. Which small entities are subject to the proposed rule?

   Generally, not applicable because only Fund employers, members and beneficiaries are affected.

2. What are the administrative and other costs required for compliance with the proposed rule?

   Incidental cost to the agency relating to rule promulgation and corresponding system updates. The system updates are associated with the pension system modernization project approved by the Board and appropriated by the legislature, the cost of which is assessed against the fund. No state revenues are impacted because the agency and the fund are considered "special fund" and do not draw from the state general fund.

3. What is the probable cost and benefit to private persons and consumers who are affected by the proposed rule?

   The proposed rule changes were necessary **to implement recent legislative requirements and comply with HB 1040, 1150 and 1219; to make administrative process changes necessary for the implementation of a new pension administration system; and to make the administrative code more germane, concise, and up to date. The changes to the existing code will result in compliance. The rules necessary to implement these changes should have a neutral economic impact while providing an improved customer experience for Fund employers, members and beneficiaries.**

4. What is the probable effect of the proposed rule on state revenues?

   No state revenues are impacted because the agency and the fund are considered "special fund" and do not draw from the state general fund.

5. Is there any less intrusive or less costly alternative methods of achieving the purpose of the proposed rule?

   No other less intrusive or less costly alternative methods to achieve the purpose of the proposed rule were identified. Many of the rule changes are

required to maintain compliance with century code, while others are intended to allow the agency to run more effectively and efficiently. Some rule changes were made to enable the modernization of the pension administration system. Compliance with North Dakota law requires changes be made through amendments to current administrative rules.

Small Entity Regulatory Analysis

1. Was establishment of less stringent compliance or reporting requirements for small entities considered?

   Generally, not applicable because only Fund employers, members and beneficiaries are affected. The least stringent compliance or reporting requirements were considered to effectuate the changes required by century code changes and to reflect modernization of the pension system and clarify existing processes.

   To what result?

   The proposed changes to administrative code will effectuate an improved fund experience for Fund employers, members, and beneficiaries and is the least stringent method for compliance.

2. Was establishment of less stringent schedules or deadlines for compliance or reporting requirements considered for small entities?

   Generally, not applicable because only Fund employers, members and beneficiaries are affected. The least stringent schedules and deadlines for compliance were considered to effectuate the changes required by century code changes and to reflect modernization of the pension system and clarify existing processes.

   To what result?

   The proposed changes to administrative code will effectuate an improved fund experience for Fund employers, members, and beneficiaries and is the least stringent method for compliance.

3. Was consolidation or simplification of compliance or reporting requirements for small entities considered?

   Generally, not applicable because only Fund employers, members and beneficiaries are affected. Simplification of compliance or reporting requirements was a primary goal in for all proposed changes that were needed to effectuate the changes required by century code changes and to reflect modernization of the pension system and clarify existing processes.

To what result?

The proposed changes to administrative code will effectuate an improved fund experience for Fund employers, members, and beneficiaries and is the least stringent method for compliance.

4. Were performance standards established for small entities for replacement design or operational standards required in the proposed rule?

   Not applicable because only Fund employers, members and beneficiaries are affected.

   To what result? **Not applicable.**

5. Was exemption of small entities from all or any part of the requirements in the proposed rule considered?

   Not applicable because only Fund employers, members and beneficiaries are affected.

   To what result? **Not applicable.**

NORTH Dakota | Retirement & Investment
Be Legendary.

September 26, 2023

Ms. Liz Fordahl
Assistant Code Revisor
North Dakota Legislative Council
State Capitol
600 East Boulevard, 2nd Floor
Bismarck, ND 58505-0360

Dear Ms. Fordahl:

The Full Notice of Intent to **Adopt, Amend, and Repeal** Administrative Rules and a copy of the proposed rules are enclosed as required by N.D.C.C. § 28-32-10(1). Please let me know if you have any questions or concerns.

Sincerely,

Jan Murtha
Executive Director

Enclosures

1600 E Century Avenue, Suite 3 | P.O. Box 7100 | Bismarck ND 58507-7100
PHONE: 701-328-9885 | TOLL-FREE: 800-952-2970 | FAX: 701-328-9897

FULL NOTICE OF INTENT TO ADOPT, AMEND, AND REPEAL ADMINISTRATIVE RULES

TAKE NOTICE that the ND Retirement and Investment Office, on behalf of the ND Teachers' Fund for Retirement Board will hold a public hearing to address proposed new N.D. Admin. Code 82-03-01-10, 82-05-03-04, 82-05-03-05, 82-05-03-06, 82-05-03-07, amendments to N.D. Admin. Code 82-01-01-01, 82-02-01-01, 82-03-01-01, 82-03-01-04, 82-05-01-01, 82-05-03-01, 82-05-03-03, 82-05-04-02, 82-05-06-01, 82-07-01-01, 82-07-01-03, 82-07-03-01, 82-07-04-01, 82-08-01-03, 103-01-01-01 and repeal of N.D. Admin. Code 82-05-02-03 at 9:00a.m. on Friday, October 27, 2023, at the ND Retirement and Investment Office located at 1600 E. Century Avenue, Suite 3, Bismarck, ND 58507 (mailing address is P.O. Box 7100, Bismarck, ND 58507-7100). The purpose of the proposed rules, amendments, and rule repeal is to implement statute, including changes made to statute as a result of the most recent legislative session, make administrative process changes necessary to modernize a pension administration system, and clarify existing code provisions as such provisions relate to the administration of the North Dakota Teachers' Fund For Retirement (TFFR) program. The proposed rules, amendments, and repeal addresses the following:

Rule (amended unless otherwise noted)	**Description/Reason for Change**
82-01-01-01 & 103-01-01-01 - Amend	Organization and Administration of the Fund and Agency -Amend agency address – refer to website.
82-02-01-01 - Amend	Definitions- Add definition of dual member. Needed for HB 1040 – closing PERS main plan. Clarify retirement date definition.
82-03-01-01 - Amend	Amend Fund refund process - Change medical "doctor" to "provider".
82-03-01-04 - Amend	Amend repurchase of forfeited service credit provisions – Needed for HB 1219.
82-03-01-10 - Create	Create a Veteran's exception – Needed for HB 1150.
82-05-01-01 - Amend	Amend application for benefits provisions.
82-05-02-03 - Repeal	Repeal level social security retirement benefit option – Needed for HB 1219.
82-05-03-01 - Amend	Amend to clarify timing of benefit payments.

82-05-03-03 - Amend	Amend to clarify overpayment of benefit and write off process.
82-05-03-04 - Create	Create – to clarify interest accrual on accounts for pre-retirement death benefits.
82-05-03-05 - Create	Create – to clarify overpayment of benefit process.
82-05-03-06 - Create	Create – to clarify underpayment of benefit process.
82-05-03-07 - Create	Create – to clarify appeals of actions relating to erroneous payment of benefits.
82-05-04-02 - Amend	Amend to remove level social security option – Needed for HB 1219.
82-05-06-01 - Amend	Amend to change retiree reemployment reporting requirements – Needed for HB 1219.
82-07-01-01 - Amend	Amend to clarify disability retirement eligibility definitions.
82-07-01-03 - Amend	Amend to clarify disability retirement determination process.
82-07-03-01 - Amend	Amend to remove level social security option – Needed for HB 1219.
82-07-04-01 – Amend	Amend to clarify suspension of disability benefit process.
82-08-01-03 – Amend	Amend to clarify pre-retirement Model Qualified Domestic Relations Order benefits.

The proposed rules, amendments, and repeal is not expected to have an impact on the regulated community in excess of $50,000.

The proposed rulemaking implements bill numbers 1040, 1150, and 1219, enacted during the most recent legislative session, concerning closing of the ND Public Employees Retirement System main plan as it relates to dual members of the NDPERS and NDTFFR plans, and changes made to North Dakota Century Code Chapter 15-39.1 relating to administration of the TFFR program, including creation of a veteran's exception.

The proposed rules may be reviewed at the Retirement and Investment Office on behalf of the ND Teachers' Fund for Retirement Board. A copy of the proposed rules and/or a regulatory analysis may be requested by writing the above address, viewed on

the agency website located at www.rio.nd.gov, emailing rio@nd.gov, or calling 701-328-9885. Written or oral comments on the proposed rules sent to the above address or telephone number and received by Wednesday, November 8, 2023, will be fully considered.

If you plan to attend the public hearing and will need special facilities or assistance relating to a disability, please contact the Retirement and Investment Office at the above telephone number or address at least one day prior to the public hearing.

Dated this 22nd day of September, 2023.

Janilyn Murtha
Executive Director
Retirement and Investment Office

NDNA
NORTH DAKOTA NEWSPAPER ASSOCIATION

Affidavit of Publication

Liz Prather, being duly sworn, states as follows:

1. I am the designated agent, under the provisions and for the purposes of, Section 31-04-06, NDCC, for the newspapers listed on the attached exhibits.

2. The newspapers listed on the exhibits published the advertisement of: **ND Retirement & Investment Office – Administrative rules, ND Retirement Investment Office, 1** time(s) as required by law or ordinance.

3. All of the listed newspapers are legal newspapers in the State of North Dakota and, under the provisions of Section 46-05-01, NDCC, are qualified to publish any public notice or any matter required by law or ordinance to be printed or published in a newspaper in North Dakota.

Signed: Liz Prather

State of North Dakota

County of Burleigh

Subscribed and sworn to before me this 23rd day of October, 2023.

Sharon L. Peterson

SHARON L. PETERSON
NOTARY PUBLIC
STATE OF NORTH DAKOTA
MY COMMISSION EXPIRES NOV. 08, 2025

Marketplace rates and deadlines
Classified ads: $8.50 for first 25 words. Every additional word 15¢. All classified ads are payable in advance.
Thank you: $5.00 per column inch.
Deadline is Noon Monday.

CLASSIFIED Marketplace

HELP WANTED

BEACH PUBLIC School District is seeking Junior High Boys Basketball coaching applications. Coaches will be subject to a background check. Applications can be picked up at Beach High School or found online at www.beach.k12.nd.us. Anyone with questions about the opening should contact Athletic Director - Mike Zier or Superintendent - Jessica Geis at 872-4161 or Jessica.Geis@k12.nd.us.
(8-31 & 9-7, 14, 21, 28-23)

GOLDEN VALLEY Manor Assisted Living Part-Time. Golden Valley Manor is looking to hire someone to work approximately 2 shifts a week in our Assisted Living department. If you enjoy the elderly and care about making a difference in someone's day WE NEED YOU! Must be compassionate, caring, self motivated and dependable. The tasks of the job can be acquired through on-the-job training. Starting at $13/hr. If you are interested in joining our Manor family please call Vicki at 701-872-4282. The Manor is an Equal Opportunity Employer. (TFN)

HELP WANTED

PEMBINA, ND BUSINESS OPPORTUNITY for a licensed DAYCARE PROVIDER to run a full-time day care business. To assist you, Pembina will provide: A rent-free facility for first year of business; All utilities; All mowing
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WESTERN VIEW Apartments, Beach, ND ; 2 bedrooms available, all utilities paid, income based, nonsmoking, $100 gift card with one-year lease, contact Ben Baker 406-989-0193 or Prairie Home Management at 701-356-9501; TTY:1-800-366-6888 EHO (tfn)

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HARVEST HELP WANTED, Schumacher Farms, Drayton ND. Sugar Beets: Truck Drivers; Potatoes: Truck Drivers; Warehouse workers. Very Competitive Wages!! Call: John-701-520-0028; Grant-701-520-3771.

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ANNOUNCEMENTS

DON'T MISS OUT on what is happening in your community! Subscribe Today! Call Golden Valley News at 701-872-3755 or stop in the office at the Mini Mall in Beach, 9 a.m. to 5 p.m. Mondays, Tuesdays or Fridays.

ABBREVIATED NOTICE OF INTENT TO ADOPT, AMEND, AND REPEAL ADMINISTRATIVE RULES

RELATING TO: Administration of the North Dakota teachers' fund for retirement program under title 82 and title 103 of the North Dakota administrative code including creating a veteran's exception, payment of interest accural on accounts, overpayment and underpayment of benefits process and related appeals; amend administrative rules relating to fund and agency organization and administration, definitions, refunds, repurchases, application for benefits, timing of benefit payments, overpayment write-off process, retirement benefit options, retiree reemployment reporting, disability retirement eligibility and determination and suspension of disability benefit process, and qualified domestic relations order benefits; and repeal administrative rules relating to a level social security income retirement benefit option.

The Retirement and Investment Office

on behalf of the ND Teachers' Fund for Retirement Board will hold a public hearing to address proposed changes to the N.D. Admin. Code at

9:00 a.m. on Friday, October 27, 2023, at the ND Retirement and Investment Office located at 1600 E. Century Avenue, Suite 3, Bismarck, ND 58507.

A copy of the proposed rules may be obtained by writing the Retirement & Investment Office at P.O. Box 7100, Bismarck, ND 58507-7100, viewed on the agency website located at www.rio.nd.gov, emailing rio@nd.gov, or calling 701-328-9885. Also, written or oral comments on the proposed rules may be sent to the above address or telephone number until Wednesday, November 8, 2023. If you plan to attend the public hearing and will need special facilities or assistance relating to a disability, please contact the Retirement and Investment Office at the above telephone number or address at least one day prior to the public hearing.

Dated this 22nd day of September, 2023.
Janilyn Murtha, Executive Director
Retirement and Investment Office

JOB OPENING
Full-time position

Golden Valley County has a job opening for a full-time **Tax/Zoning/GIS Director**.

Job description and applications may be picked up and returned to the County Auditor's Office or found on the website at www.goldenvalleycounty.org.

Contact the County Auditor by phone at 701-872-4331, email at tsperry@nd.gov or in person at the Golden Valley County Courthouse, 150 1st Avenue SE in Beach.

Applications or resumes must be returned ***no later*** than 9 a.m. on October 3, 2023.

Golden Valley County offers an excellent benefit package.

Golden Valley County is an Equal Opportunity Employer.

(Publish Sept. 14, 21 & 28, 2023)

USPS - 221-280

Golden Valley NEWS

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Official Newspaper for Beach and Golva School Districts.
Official Newspaper for Golden Valley County, ND.

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Tyanna Roux .....Office Manager/Reporter
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SUMMONS

SUMMONS
STATE OF NORTH DAKOTA
COUNTY OF GOLDEN VALLEY
IN DISTRICT COURT
SOUTHWEST JUDICIAL DISTRICT

In the Matter Concerning a 1971 Stidham Horse Trailer, Production # 1709,
Defendants.

THE STATE OF NORTH DAKOTA TO ALL PERSONS WITH AN INTEREST IN THE ABOVE-NAMED VEHICLE:

YOU ARE HEREBY SUMMONED and required to appear and defend against the Complaint in this action, which will be filed with the Clerk of Court, by serving upon the undersigned an Answer or other proper response within twenty-one (21) days after service of this Summons upon you, exclusive of the day of service. If you fail to do so, Judgment by default will be taken against you for relief demanded in the Complaint.

Dated this 21st day of September, 2023.

HAYNES MELBYE LAW OFFICE, PLLC
Attorneys for Plaintiff
2048 3rd Ave W, Suite A
Dickinson, ND 58601
(701) 483-1700
jhaynes@haynesmelbye.com
/s/ Jami L. Haynes
Jami L. Haynes, ND
ID #07850
(Published 9-28 & 10-5, 12-23)

BEACH CITY COUNCIL MEETING MINUTES

BEACH CITY COUNCIL
REGULAR MEETING
PROCEEDINGS
Published Subject to the Governing Body's Review and Revision
September 18, 2023

A regular meeting of the Beach City Council was called to order by Mayor Walter Losinski on September 18, 2023 at 7:00 p.m. Present when the meeting was called to order were City Council Nick Hegel, Tom Marman, Lynn Swanson-Puckett, Sarah Ross, Bev Wolff, Andy Zachmann, City Auditor Kimberly Gaugler, Administrative Assistant Lea Massado, Engineer Jasper Klein and guests Maria Marman, Carrie Marman, Dale and Corlene Olson, Carl Strum, Troy and Kara Finneman, Stacey Swanson, Scott Trotter, Gary Howard and AmeriCorps National Civilian Community Corps Team Maple 2 members Spencer Jamieson, Mark Immordino, Nadou Lawson, Cora Mondale, Christopher Rees, T Rich and Graham Smith.

The Pledge of Allegiance was recited.

Roll call was taken. All members were present.

Mayor Losinski called for any additions or corrections to the agenda. Wolff moved to approve the agenda as presented, second by Ross. Motion carried unanimously.

Minutes

Minutes of the meeting on September 5, 2023 were presented. Zachmann moved to approve the minutes, second by Hegel. Motion carried unanimously.

Sheriff's Report

Sheriff Muckle's written report was provided for the month of August consisting of 58 calls, 3 citations and 6 written warnings.

Public Works Report

PWS Dietz' written report was provided for review.

Auditor's Report

Gaugler reviewed her written report. Zachmann moved to approve the financial report for the month of August, second by Ross. Motion carried unanimously.

Engineer's Report

Engineer Klein reviewed his written report. 2024 Street &Utility Improvements – AE2S has estimated assessments based on direct benefit parcel footage. Engineer Klein recommends finalizing the Preliminary Engineering Report for both Project Areas 1 & 2 and the associated water, sewer, and streets. Ross moved to approve the engineer's recommendation, second by Marman. Roll call vote. Motion carried unanimously. FEMA Funding for 2nd Street Road Repair – FEMA requires a Hydrologic & Hydraulic (H&H) study be submitted to prove that changing the existing conditions won't have a negative impact on the flood plain. The H&H is being prepared and will be submitted to FEMA this week.

Committee Reports

Zoning Board

Guest Rick Marah joined by telephone. Ross declared a conflict of interest, she will only present information from the Zoning Board meeting, and will not vote on any action. Ross reported the Zoning Board held a Public Hearing this morning on a Request of Conditional Use for a non-conforming use for temporary housing in a Single Family Zoning submitted by property owners (Jared & Sarah Ross & potential property owner Rick Marah). Ross mentioned three adjoining property owners provided comment which did not support the request for Conditional Use. The Zoning Board recommended to deny the Request for Conditional Use as it was presented. Marman moved to approve the recommendation from Zoning Board to deny the request as it was presented, second by Swanson-Puckett. Ross abstained. Motion carried. Ross mentioned the Zoning Board approved an Application for Building an addition to an existing structure at 30 2nd Street SE.

New Business

A Public Hearing for comment on the Final Budget for the Year Ending December 31, 2024 was held at 7:30 p.m. Swanson-Puckett moved to open the Public Hearing, second by Hegel. Motion carried unanimously. Gaugler mentioned no changes have been made since approving the 2024 Preliminary Budget;

General Fund $175,000.00
City Specials $15,500.00
Special Assessment Deficiency $1,000.00
Emergency $3,000.00
Total Levied $195,000.00

No public comment or written comment was received. Swanson-Puckett moved to close the Public Hearing, second by Hegel. Motion carried unanimously. Marman moved to approve the Final Budget for the Year Ending December 31, 2024, second by Ross. Motion carried unanimously.

An Application for Local Permit submitted by Beach Post Prom Committee was reviewed. Swanson-Puckett moved to approve, second by Wolff. Motion carried unanimously.

No other business was brought forward. Swanson-Puckett moved to adjourn, second by Wolff. Meeting adjourned at 7:55 p.m.

Walter Losinski, Mayor
Kimberly Gaugler,
City Auditor
(Published 9-28-23)

ABBREVIATED NOTICE OF INTENT TO ADOPT AND AMEND ADMINISTRATIVE RULES

relating to licensure of Massage Therapists

The Board of Massage Therapy

will hold a public hearing to address proposed changes to the N.D. Admin. Code at

9:00 a.m. CT
Tuesday, November 7, 2023
By remote means at https://meet.goto.com/192753045 or by phone at 1-408-650-3123 access code 192-753-045.

A copy of the proposed rules may be obtained by writing the Board of Massage Therapy, 2900 E. Broadway Avenue, Suite 3, Bismarck, ND 58501 or calling 701-712-8624. Also, written comments may be submitted to 2900 E. Broadway Avenue, Suite 3, Bismarck, ND 58501 until November 17, 2023. If you plan to attend the public hearing and will need special facilities or assistance relating to a disability, please contact the Board of Massage Therapy at the above telephone number or address at least three days prior to the public hearing.

Dated this 21st day of September, 2023.
Nikki Owings, Administrator

DID YOU KNOW?
You can put a "Thank You" in the paper for $5/column inch?
A 1 x 5 "Happy Ad" for $25 or $35 for color?
An engagement/wedding announcement for $20 without photo or $30 with photo?
Call 701-872-3755 or email gvn@gspublishing.net for more information!

Golden Valley NEWS

From:	Murtha, Janilyn
To:	Lefor, Mike; Bosch, Glenn; Boschee, Joshua A.; Conmy, Liz; Kreidt, Gary; Dockter, Rep. Jason D.; Heinert, Patrick D.; Ista, Zachary M..; Johnson, Dennis E.; Kempenich, Keith A.; Koppelman, Ben; Louser, Scott C.; O"Brien, Emily; Pyle, Brandy L.; Richter, David W.; Ruby, Matthew; Schauer, Austen; Schreiber-Beck, Cynthia; Steiner, Vicky L.; Stemen, Rep. Greg; Thomas, Paul J.; Weisz, Rep. Robin; Hogue, David J.; Bekkedahl, Brad; Davison, Kyle; Hogan, Kathy L.; Klein, Jerry J.; Krebsbach, Karen K.; Larsen, Doug; Mathern, Tim; Meyer, Scott; Myrdal, Janne; Roers, Kristin; Schaible, Donald G.; Vedaa, Sen. Shawn
Cc:	Kopp, Missy R.; Mudder, Sarah L.
Subject:	TFFR Proposed Administrative Code Changes
Date:	Tuesday, September 26, 2023 7:56:59 PM
Attachments:	Legislative Sponsor Materials.pdf image001.png

Dear Representatives and Senators of the 68th Legislative Assembly:

I am writing on behalf of the North Dakota Teachers' Fund for Retirement (TFFR) regarding proposed changes to the administrative code prompted by H.B. 1040, 1150 and 1219 during the most recent legislative session.

Enclosed is a copy of the revised rules our TFFR Board is proposing and a copy of the Full Notice indicating the date, time, and place for the hearing on these proposed rule changes. The Full Notice also provides a table which indicates which of the above referenced bills prompted the specific proposed administrative code adoption, amendment, or repeal. The majority of the proposed changes were prompted by H.B. 1219, however, there were single rules changes prompted by both H.B. 1040 and H.B. 1150. These materials are also available on our website at www.rio.nd.gov. Please do not hesitate to contact me to offer any additional input or if you have questions. Thank you.

Jan Murtha
Executive Director
ND Retirement & Investment Office
1600 E. Century Avenue, Suite 3
P.O. Box 7100
Bismarck, ND 58507-7100

(701) 328-9895

Logo-Email Sign

From: Murtha, Janilyn
To: Larsen, Doug
Cc: Kopp, Missy R.; Mudder, Sarah L.
Subject: TFFR Proposed Administrative Code Changes
Date: Tuesday, September 26, 2023 8:07:53 PM
Attachments: Legislative Sponsor Materials.pdf
image001.png

Senator Larsen,

My apologies, I had initially sent this to you using an incorrect email address, and have since corrected the letter and address.

I am writing on behalf of the North Dakota Teachers' Fund for Retirement (TFFR) regarding proposed changes to the administrative code prompted by H.B. 1040, 1150 and 1219 during the most recent legislative session.

Enclosed is a copy of the revised rules our TFFR Board is proposing and a copy of the Full Notice indicating the date, time, and place for the hearing on these proposed rule changes. The Full Notice also provides a table which indicates which of the above referenced bills prompted the specific proposed administrative code adoption, amendment, or repeal. The majority of the proposed changes were prompted by H.B. 1219, however, there were single rules changes prompted by both H.B. 1040 and H.B. 1150. These materials are also available on our website at www.rio.nd.gov. Please do not hesitate to contact me to offer any additional input or if you have questions. Thank you.

Jan Murtha
Executive Director
ND Retirement & Investment Office
1600 E. Century Avenue, Suite 3
P.O. Box 7100
Bismarck, ND 58507-7100

(701) 328-9895

Logo-Email Sign

NORTH DAKOTA TEACHERS' FUND FOR RETIREMENT
ADMINISTRATIVE RULES PUBLIC HEARING MEETING MINUTES
OCTOBER 27, 2023
RETIREMENT AND INVESTMENT OFFICE CONFERENCE ROOM

STAFF PRESENT: Missy Kopp, Executive Assistant
Jan Murtha, Executive Director
Chad Roberts, Deputy Executive Director/Chief Retirement Officer
Denise Weeks, Retirement Program Manager

Ms. Jan Murtha, Executive Director/Chief Retirement Officer, acted as the hearing officer and opened the public hearing at 9:06 a.m. on Friday, October 27, 2023, at the Retirement and Investment Office (RIO) Conference Room, Bismarck, ND.

It was explained that the public hearing was called for the purpose of allowing all interested individuals an opportunity to submit information concerning proposed amendments to Title 82 of the ND Administrative Code, specifically:

82-01-01-01 & 103-01-01-01 **Organization and Administration of the Fund and Agency** – Proposed amendment updates the agency address with a reference to the agency website.

82-02-01-01 **Definitions** – Proposed amendment adds the definition of a dual member and clarifies the retirement date definition.

82-03-01-01 **Teachers' withdrawal from fund - Refund** – Proposed amendment changes medical "doctor" to "provider".

82-03-01-04 **Repurchase of forfeited service credit** - Amend repurchase of forfeited service credit provisions.

82-03-01-10 **Veteran's exemption – Proof of qualified military retirement** – Create a veteran's exception.

82-05-01-01 **Application for benefits** – Amend applications for benefits provisions.

82-05-02-03 **Level Income Option** – Repeal level social security retirement benefit option.

82-05-03-01 **When benefit payments begin – Direct deposit** – Amend to clarify timing of benefit payments.

82-05-03-03 **Overpayment of retirement benefits – Write-offs** – Amend to clarify overpayment of benefit and write-off process.

82-05-03-04 **Interest payments – Interest accrual on account – Preretirement death** – create to clarify interest accrual on accounts for preretirement death benefits.

82-05-03-05 **Erroneous payment of benefits – Overpayments** – Create to clarify overpayment of benefit process.

82-05-03-06 **Erroneous payment of benefits – Underpayments** – Create to clarify underpayment of benefit process.

82-05-03-07 **Erroneous payment of benefits – Appeals** – Create to clarify appeals of actions relating to erroneous payment of benefits.

82-05-04-02 **Actuarial factors – Optional payment forms** – Amend to remove level social security option.

82-05-06-01 **Retiree reemployment reporting requirements** – Amend to change retiree reemployment reporting requirements.

82-07-01-01 **Definitions** – Amend to clarify disability retirement eligibility definitions.

82-07-01-03 **Determination of disability – Procedures** – Amend to clarify disability retirement determination process.

82-07-03-01 **Forms of disability benefits** – Amend to remove level social security option.

82-07-04-01 **Suspension of disability benefits** – Amend to clarify suspension of disability benefit process.

82-08-01-03 **Format for a qualified domestic relations order** – Amend to clarify preretirement Model Qualified Domestic Relations Order benefits.

Ms. Murtha explained that the information gathered at this hearing will be transmitted to the TFFR Board for its deliberation and final decision at its November 16, 2023, meeting.

At this point, the hearing was opened for comments.

There were no others in attendance, and no other comments were received.

Ms. Murtha indicated that written and oral comments would be received until November 8, 2023.

Ms. Murtha closed the hearing at 9:25 a.m.

Respectfully Submitted:

Jan Murtha, Executive Director
Retirement & Investment Office

Missy Kopp
Assistant to the Board

North Dakota Newspaper Association

1435 Interstate Loop
Bismarck, North Dakota 58503
Phone: 1-701-223-6397 Fax: 1-701-223-8185

ADVERTISING ESTIMATE

September 22, 2023

Order: **23101NN1**

ATTN: Janilyn Murtha
ND Retirement & Investment Office
3442 E Century Ave.
Bismarck, North Dakota 58507-7100

V: F: Email: janilynmurtha@nd.gov

Document Number: **221561**

Advertiser: **ND Retirement & Investment Office**
P.O.#:
Client Order #:
Brand:
Campaign:
Position: **Public notice**
Copy: **Email**

Run Date	Ad Size	ROP Rate	ROP Type	Agency Commission	Color Rate	Color Type	Agency Commission	Net Total

Official County Newspapers

Ashley Tribune *(Ashley, ND)* (Wednesday) *6.00-1.5" / 3.125" / 5" / 6.5" / 8.25" / 10"-16.00*

Wed 09/27/23	Circ: 792	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Beach, Golden Valley News *(Beach, ND)* (Thursday) *6.00-1.667" / 3.458" / 5.25" / 7.042" / 8.833" / 10.625"-20.50*

Thu 09/28/23	Circ: 416	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Bismarck Tribune *(Bismarck, ND)* (Sun, Mon, Tue, Wed, Thu, Fri, Sat) *6.00-1.556" / 3.22" / 4.889" / 6.556" / 8.22" / 9.889"-19.75*

Wed 09/27/23	Circ: 16166	1.00 X 9.00	$14.24	Notice Display	0.0000%	$0.00	0.0000%	$128.16

Caption: Administrative rules, ND Retirement Investment Office

Bottineau Courant *(Bottineau, ND)* (Tuesday) *6.00-2" / 4.167" / 6.34" / 8.5" / 10.75" / 13"-21.00*

Tue 10/03/23	Circ: 2527	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Bowbells, Burke County Tribune *(Bowbells, ND)* (Wednesday) *6.00-2" / 4.25" / 6.375" / 8.625" / 10.75" / 13"-20.50*

Wed 09/27/23	Circ: 1018	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Bowman County Pioneer *(Bowman, ND)* (Friday) *6.00-1.913" / 3.993" / 6.073" / 8.153" / 10.233"-15.00*

Fri 09/29/23	Circ: 957	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Cando, Towner County Record Herald *(Cando, ND)* (Saturday) *6.00-2" / 4.167" / 6.333" / 8.5" / 10.66" / 13"-20.00*

Sat 09/30/23	Circ: 620	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Carrington, Foster County Independent *(Carrington, ND)* (Monday) *6.00-1.68" / 3.43" / 5.25" / 7" / 8.75" / 10.5"-21.25*

Mon 10/02/23	Circ: 1964	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Run Date	Ad Size	ROP Rate	ROP Type	Agency Commission	Color Rate	Color Type	Agency Commission	Net Total

Carson Press *(Elgin, ND)* (Thursday) *6.00-1.6" / 3.4" / 5.17" / 6.96" / 8.74" / 10.52"-15.00*

Thu 09/28/23	Circ: 554	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Cavalier Chronicle *(Cavalier, ND)* (Wednesday) *6.00-1.75" / 3.75" / 5.6875" / 6.625" / 9.5625" / 11.5625"-21.00*

Wed 09/27/23	Circ: 1622	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Center Republican *(Hazen, ND)* (Thursday) *5.00-2" / 4" / 6" / 8" / 10"-15.50*

Thu 09/28/23	Circ: 441	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Cooperstown, Griggs County Courier *(Cooperstown, ND)* (Friday) *6.00-1.604" / 3.33" / 5.062" / 6.792" / 8.521" / 10.25"-14.00*

Fri 09/29/23	Circ: 884	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Crosby, The Journal *(Crosby, ND)* (Wednesday) *6.00-2" / 4.19" / 6.38" / 8.57" / 10.76" / 13"-21.00*

Wed 09/27/23	Circ: 1803	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Devils Lake Journal *(Devils Lake, ND)* (Tue, Thu) *6.00-1.53" / 3.22" / 4.93" / 6.61" / 8.31" / 10"-21.00*

Thu 09/28/23	Circ: 2040	1.00 X 9.00	$9.67	Notice Display	0.0000%	$0.00	0.0000%	$87.03

Caption: Administrative rules, ND Retirement Investment Office

Dickinson Press *(Dickinson, ND)* (Wednesday) *6.00-1.54" / 3.19" / 4.84" / 6.49" / 8.14" / 9.806"-19.75*

Wed 09/27/23	Circ: 5369	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Elgin, Grant County News *(Elgin, ND)* (Thursday) *6.00-1.6" / 3.4" / 5.17" / 6.96" / 8.74" / 10.52"-15.00*

Thu 09/28/23	Circ: 768	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Ellendale, Dickey County Leader *(Ellendale, ND)* (Thursday) *6.00-2" / 4" / 6" / 8" / 10" / 12"-21.00*

Thu 09/28/23	Circ: 808	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Fargo, The Forum *(Fargo, ND)* (Wed, Sat) *6.00-1.57" / 3.26" / 4.97" / 6.66" / 8.35" / 10.05"-20.75*

Wed 10/04/23	Circ: 30516	1.00 X 9.00	$14.24	Notice Display	0.0000%	$0.00	0.0000%	$128.16

Caption: Administrative rules, ND Retirement Investment Office

Finley, Steele County Press *(Finley, ND)* (Friday) *6.00-1.604" / 3.333" / 5.062" / 6.792" / 8.521" / 10.25"-14.00*

Fri 09/29/23	Circ: 616	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Garrison, McLean County Independent *(Garrison, ND)* (Thursday) *5.00-2" / 4" / 6" / 8" / 10"-15.50*

Thu 09/28/23	Circ: 2171	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00	0.0000%	$62.82

Caption: Administrative rules, ND Retirement Investment Office

Grafton, Walsh County Record *(Grafton, ND)* (Wednesday) *6.00-1.75" / 3.75" / 5.6875" / 7.625" / 9.625" / 11.625"-21.44*

Run Date		Ad Size	ROP Rate	ROP Type	Agency Commission	Color Rate	Color Type	Agency Commission	Net Total
Wed 09/27/23	Circ: 2727	1.00 X 9.00	$6.71	Notice Display	0.0000%	$0.00		0.0000%	$60.39
	Caption: Administrative rules, ND Retirement Investment Office								

Grand Forks Herald *(Grand Forks, ND)* (Wed, Sat) *6.00-1.57" / 3.26" / 4.97" / 6.66" / 8.35" / 10.05"-20.50*

Wed 10/04/23	Circ: 17501	1.00 X 9.00	$14.24	Notice Display	0.0000%	$0.00		0.0000%	$128.16
	Caption: Administrative rules, ND Retirement Investment Office								

Harvey, The Herald-Press *(Harvey, ND)* (Saturday) *6.00-2" / 4.125" / 6.25" / 8.5" / 10.75" / 12.75"-21.00*

Sat 09/30/23	Circ: 1687	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
	Caption: Administrative rules, ND Retirement Investment Office								

Hazen Star *(Hazen, ND)* (Thursday) *5.00-2" / 4" / 6" / 8" / 10"-15.50*

Thu 09/28/23	Circ: 1502	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
	Caption: Administrative rules, ND Retirement Investment Office								

Hettinger, Adams County Record *(Hettinger, ND)* (Thursday) *6.00-1.667" / 3.458" / 5.25" / 7.042" / 8.833" / 10.625"-14.50*

Thu 09/28/23	Circ: 611	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
	Caption: Administrative rules, ND Retirement Investment Office								

Hillsboro Banner *(Hillsboro, ND)* (Friday) *6.00-1.8" / 3.8" / 5.8" / 7.7" / 9.7" / 11.6"-21.00*

Fri 09/29/23	Circ: 1123	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
	Caption: Administrative rules, ND Retirement Investment Office								

Jamestown Sun *(Jamestown, ND)* (Wed, Sat) *6.00-1.57" / 3.26" / 4.97" / 6.66" / 8.35" / 10.05"-20.25*

Wed 09/27/23	Circ: 3000	1.00 X 9.00	$9.67	Notice Display	0.0000%	$0.00		0.0000%	$87.03
	Caption: Administrative rules, ND Retirement Investment Office								

LaMoure Chronicle *(LaMoure, ND)* (Wednesday) *6.00-1.75" / 3.625" / 5.5" / 7.375" / 9.25" / 11.125"-20.00*

Wed 09/27/23	Circ: 931	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
	Caption: Administrative rules, ND Retirement Investment Office								

Lakota American *(Lakota, ND)* (Thursday) *6.00-1.7986" / 3.7639" / 5.7292" / 7.6944" / 9.6597" / 11.625"-21.50*

Thu 09/28/23	Circ: 910	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
	Caption: Administrative rules, ND Retirement Investment Office								

Linton, Emmons County Record *(Linton, ND)* (Thursday) *5.00-2.05" / 4.225" / 6.40" / 8.575" / 10.75"-16.00*

Thu 09/28/23	Circ: 2725	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
	Caption: Administrative rules, ND Retirement Investment Office								

Lisbon, Ransom County Gazette *(Lisbon, ND)* (Monday) *5.00-2.05 / 4.225 / 6.4 / 8.575 / 10.75-15.00*

Mon 10/02/23	Circ: 2577	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
	Caption: Administrative rules, ND Retirement Investment Office								

Mandan News *(Mandan, ND)* (Friday) *6.00-1.556" / 3.22" / 4.889" / 6.556" / 8.222" / 9.889"-19.75*

Fri 09/29/23	Circ: 873	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
	Caption: Administrative rules, ND Retirement Investment Office								

McClusky Gazette *(McClusky, ND)* (Thursday) *5.00-2" / 4" / 6" / 8" / 10"-15.50*

Thu 09/28/23	Circ: 564	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
	Caption: Administrative rules, ND Retirement Investment Office								

Run Date	Ad Size	ROP Rate	ROP Type	Agency Commission	Color Rate	Color Type	Agency Commission	Net Total
Medora, Billings County Pioneer *(Beach, ND)* (Thursday) *6.00-1.667" / 3.458" / 5.25" / 7.042" / 8.833" / 10.625"-20.50*								
Thu 09/28/23 Circ: 270	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
Caption: Administrative rules, ND Retirement Investment Office								
Milnor, The Sargent County Teller *(Milnor, ND)* (Friday) *5.00-2.05 / 4.225 / 6.4 / 8.575 / 10.75-15.00*								
Fri 09/29/23 Circ: 1660	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
Caption: Administrative rules, ND Retirement Investment Office								
Minnewaukan Benson County Farmers Press *(Minnewaukan, ND)* (Thursday) *6.00-1.7986" / 3.7639" / 5.7292" / 7.6944" / 9.6597" / 11.625"-21.50*								
Thu 09/28/23 Circ: 1810	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
Caption: Administrative rules, ND Retirement Investment Office								
Minot Daily News *(Minot, ND)* (Mon, Tue, Wed, Thu, Fri, Sat) *6.00-1.58" / 3.25" / 4.93" / 6.6" / 8.3" / 10"-21.50*								
Wed 09/27/23 Circ: 10672	1.00 X 9.00	$14.24	Notice Display	0.0000%	$0.00		0.0000%	$128.16
Caption: Administrative rules, ND Retirement Investment Office								
Mohall Renville County Farmer *(Mohall, ND)* (Wednesday) *6.00-2.0625" / 4.25" / 6.4375" / 8.5" / 10.75" / 13"-21.50*								
Wed 09/27/23 Circ: 881	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
Caption: Administrative rules, ND Retirement Investment Office								
Napoleon Homestead *(Napoleon, ND)* (Wednesday) *5.00-1.9375" / 4.1667" / 6.1875" / 8.1875" / 10.25"-15.75*								
Wed 09/27/23 Circ: 1395	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
Caption: Administrative rules, ND Retirement Investment Office								
New England, Hettinger County Herald *(New England, ND)* (Thursday) *6.00-1.667" / 3.458" / 5.25" / 7.042" / 8.833" / 10.625"-14.50*								
Thu 09/28/23 Circ: 639	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
Caption: Administrative rules, ND Retirement Investment Office								
New Rockford Transcript *(New Rockford, ND)* (Monday) *6.00-1.66" / 3.45" / 5.25" / 7.04" / 8.83" / 10.62"-21.00*								
Mon 10/02/23 Circ: 987	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
Caption: Administrative rules, ND Retirement Investment Office								
Rolla Turtle Mountain Star *(Rolla, ND)* (Monday) *6.00-2" / 4.25" / 6.5" / 8.5" / 10.75" / 13"-21.00*								
Mon 10/02/23 Circ: 1871	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
Caption: Administrative rules, ND Retirement Investment Office								
Rugby Pierce County Tribune *(Rugby, ND)* (Saturday) *6.00-1.58" / 3.25" / 4.93" / 6.6" / 8.3" / 10"-21.25*								
Sat 09/30/23 Circ: 1571	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
Caption: Administrative rules, ND Retirement Investment Office								
Stanley Mountrail County Promoter *(Stanley, ND)* (Wednesday) *6.00-2.01" / 4.19" / 6.37" / 8.55" / 10.73" / 13"-21.00*								
Wed 09/27/23 Circ: 1901	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
Caption: Administrative rules, ND Retirement Investment Office								
Steele Ozone & Kidder County Press *(Steele, ND)* (Wednesday) *5.00-1.875" / 4" / 6" / 8.125" / 10.25"-16.00*								
Wed 09/27/23 Circ: 1336	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82

Run Date	Ad Size	ROP Rate	ROP Type	Agency Commission	Color Rate	Color Type	Agency Commission	Net Total
	Caption: Administrative rules, ND Retirement Investment Office							
Towner Mouse River Journal *(Towner, ND)* (Wednesday) *6.00-2.0625" / 4.25" / 6.4375" / 8.625" / 10.8125" / 13"-21.25*								
Wed 09/27/23 Circ: 931	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
	Caption: Administrative rules, ND Retirement Investment Office							
Valley City Times-Record *(Valley City, ND)* (Tue, Wed, Thu, Fri) *6.00-1.667" / 3.4583" / 5.25" / 6.8889" / 8.8333" / 10.625"-21.00*								
Wed 09/27/23 Circ: 1517	1.00 X 9.00	$9.67	Notice Display	0.0000%	$0.00		0.0000%	$87.03
	Caption: Administrative rules, ND Retirement Investment Office							
Wahpeton, Daily News *(Wahpeton, ND)* (Sun, Tue, Thu) *6.00-1.556" / 3.222" / 4.889" / 6.556" / 8.222" / 9.889"-21.00*								
Thu 09/28/23 Circ: 1932	1.00 X 9.00	$9.67	Notice Display	0.0000%	$0.00		0.0000%	$87.03
	Caption: Administrative rules, ND Retirement Investment Office							
Watford City, McKenzie County Farmer *(Watford City, ND)* (Wednesday) *6.00-2.0625" / 4.25" / 6.4375" / 8.625" / 10.8125" / 13"-21.50*								
Wed 09/27/23 Circ: 2200	1.00 X 9.00	$6.98	Notice Display	0.0000%	$0.00		0.0000%	$62.82
	Caption: Administrative rules, ND Retirement Investment Office							
Williston Herald *(Williston, ND)* (Sun, Wed, Fri) *6.00-1.556" / 3.222" / 4.889" / 6.556" / 8.222 " / 9.889"-21.00*								
Wed 09/27/23 Circ: 2699	1.00 X 9.00	$9.67	Notice Display	0.0000%	$0.00		0.0000%	$87.03
	Caption: Administrative rules, ND Retirement Investment Office							

Total Insertions	50	**Total Advertising**	**$3,520.98**	**Total Net Estimate**
Total Lineage	450.0000	**Net**	$3,520.98	$3,520.98
		Total Misc.	$0.00	
Total Circulation	143055.0	**Tax**	$0.00	

For payment, we accept checks, ACH, and Visa/Mastercard. Contact accounting@ndna.com for ACH banking details. Invoices can be paid via credit card online at www.ndna.com/billpay. A 3% fee will automatically be added to all credit card transactions.

ABBREVIATED NOTICE OF INTENT TO ADOPT AND AMEND ADMINISTRATIVE RULES

relating to licensure of Massage Therapists

The Board of Massage Therapy

will hold a public hearing to address proposed changes to the N.D. Admin. Code at

9:00 a.m. CT Tuesday, November 7, 2023 By remote means at https://meet.goto.com/192753045 or by phone at 1-408-650-3123 access code 192-753-045.

A copy of the proposed rules may be obtained by writing the Board of Massage Therapy, 2900 E. Broadway Avenue, Suite 3, Bismarck, ND 58501 or calling 701-712-8624. Also, written comments may be submitted to 2900 E. Broadway Avenue, Suite 3, Bismarck, ND 58501 until November 17, 2023. If you plan to attend the public hearing and will need special facilities or assistance relating to a disability, please contact the Board of Massage Therapy at the above telephone number or address at least three days prior to the public hearing.

Dated this 21st day of September, 2023.

Nikki Owings, Administrator

ABBREVIATED NOTICE OF INTENT TO ADOPT, AMEND, AND REPEAL ADMINISTRATIVE RULES

RELATING TO: Administration of the North Dakota teachers' fund for retirement program under title 82 and title 103 of the North Dakota administrative code including creating a veteran's exception, payment of interest accural on accounts, overpayment and underpayment of benefits process and related appeals; amend administrative rules relating to fund and agency organization and administration, definitions, refunds, repurchases, application for benefits, timing of benefit payments, overpayment write-off process, retirement benefit options, retiree reemployment reporting, disability retirement eligibility and determination and suspension of disability benefit process, and qualified domestic relations order benefits; and repeal administrative rules relating to a level social security income retirement benefit option.

The Retirement and Investment Office

on behalf of the ND Teachers' Fund for Retirement Board will hold a public hearing to address proposed changes to the N.D. Admin. Code at

9:00 a.m. on Friday, October 27, 2023, at the ND Retirement and Investment Office located at 1600 E. Century Avenue, Suite 3, Bismarck, ND 58507.

A copy of the proposed rules may be obtained by writing the Retirement & Investment Office at P.O. Box 7100, Bismarck, ND 58507-7100, viewed on the agency website located at www.rio.nd.gov, emailing rio@nd.gov, or calling 701-328-9885. Also, written or oral comments on the proposed rules may be sent to the above address or telephone number until Wednesday, November 8, 2023. If you plan to attend the public hearing and will need special facilities or assistance relating to a disability, please contact the Retirement and Investment Office at the above telephone number or address at least one day prior to the public hearing.

Dated this 22nd day of September, 2023.

Janilyn Murtha, Executive Director
Retirement and Investment Office

Meeting Minutes

City of Lisbon
September 5th, 2023

The meeting was called to order by Mayor Tim Meyer. Council Members present Julie Cole, Ken Williams, Rob Waletzko, LyDell Mairs and Ben Gemar. Guests present were Eric King, Tim Jordan, Tracy Eslinger-Moore Engineering, Lynn Kaspari – Ransom County Gazette and Janna Miller.

MOTION – Waletzko SECOND – Williams
To approve the minutes from August 7,2023 meeting.
All Aye

Tracy Eslinger with Moore Engineering, update on the Improvement District 2023-1 was given to council. LeVee Core response documentation has been completed and we are awaiting an official letter. Well Exploration project is 99% completed. The Lift Station upgrades, final plans have been drafted, the bid process is taking place. The Riverbank project may need a no-rise permit based on the rocks in the channel. Moore can prepare a memo to Corp of Engineer's and report that they have done a no-rise permit in the past, cost approx. $12,000.00.

MOTION – Waletzko SECOND – Mairs
To instruct Moore Engineering to prepare a memo to the Corp of Engineer's about the no-rise permit, not to exceed $12,000.
All Aye
Gemar-Nay

No further updated on the condemnations.

MOTION – Williams SECOND – Waletzko
To approve the Police Report.
All Aye

MOTION – Waletzko SECOND - Gemar
To approve the Public Works' Report. Eric reported that we have 2 new hires.
All Aye

MOTION – Gemar SECOND – Mairs
To approve the Auditor's and Economic report.
All Aye

MOTION - Mairs SECOND – Waletzko
To approve Star's request:
- 30,000 – Holiday Star Bucks, with requesting 10,000 from LV& EB
All Aye

MOTION – Gemar SECOND – Cole
To approve the bills:

HEARTLAND PAYMENT SYSTEMS	233.95
DICKEY RURAL NETWORKS	119.96
DICKEY RURAL NETWORKS	702.20
DICKEY RURAL NETWORKS	75.81
CITY OF LISBON	124.81
MARCO TECHNOLOGIES LLC	147.21
FATMAN TRASH, LLC	27323.10
AFLAC - MONTHLY KiT25	554.32
CASS COUNTY ELECTRIC COOPERATIVE	100.84
CASS COUNTY ELECTRIC COOPERATIVE	277.27
VERIZON WIRELESS	167.15
VERIZON WIRELESS	369.61
CARDMEMBER SERVICE	9231.48
BANK OF NORTH DAKOTA	358440.00
WARREN JOHNSON	740.95
NORTH DAKOTA DEPT OF ENVIRONMENTAL QUALI	300.00
NORTH DAKOTA ATTORNEY GENERAL	30.00
MOORE ENGINEERING, INC.	12097.50
WALLNER DIRT & SNOW LLC	600.00
NORTH DAKOTA ONE CALL, INC.	21.55
CITY OF FARGO	28.00
HAWKINS, INC.	741.59
AQUA-PURE INC.	2608.38
OTTER TAIL POWER COMPANY	7625.70
NAPA AUTO PARTS	86.09
RECORD KEEPERS LLC	17.50
RANSOM COUNTY SHERRIFF'S OFFICE	45.00
OVERN ELECTRIC	18203.20
DAKOTA WATER SOLUTIONS	50.00
LOFFLER	212.60
RIVERSIDE BUILDING CENTER	101.40
BREMER TRUST NA	367.48
RANSOM COUNTY GAZETTE/ SARGENT COUNTY TE	164.00
LISBON BISSELL GOLF COURSE	1500.00
AMERICAN LEGION ND DEPT HEADQUARTERS	50.00
STURDEVANT'S AUTO PARTS	557.00
PRODUCTIVITY PLUS ACCOUNT	340.35
JOHN DEERE FINANCIAL	144.47
KOTACO	174.97
SARA ADAIR	29.00
SARA ADAIR	29.00
CITY VIEW FUEL	326.48
B & L PLUMBING & EXCAVATING	600.00
SOPP CONTROL SERVICES	1744.43
NORTH DAKOTA ONE CALL, INC.	40.30
CITY OF LISBON	19148.56
RED RIVER VALLEY & WESTERN RAILROAD COMP	50.00
DAKOTA WATER SOLUTIONS	46.00
JERRY GEMAR	532.51
DOLF ENTERPRISES LLC	5200.00
GRAYMONT WESTERN CANADA INC.	7550.75
CITY OF FARGO	188.00
PIZZA RANCH - LISBON-10536	844.71
THE WINDOW MAN	73.00
OVERN ELECTRIC	3182.32
ABBY LUX	200.00
ETHANOL PRODUCTS, LLC	1339.83
TEAL'S MARKET	106.89
MUNICIPAL SERVICE COMPANY	1850.00
OFFICE OF ADMINISTRATIVE HEARING	2601.50
SIMPLE WOLF	27.50
LORIE FINSTAD	120.35
KOTACO	254.83
LISBON FIRE DEPARTMENT	528.00
ANGIE WALETZKO	168.75
DEPARTMENT OF ENVIORNMENTAL QUALITY	18.54
SOPP CONTROL SERVICES	906.00
MICHAEL TODD & COMPANY, INC	305.00
RED RIVER VALLEY & WESTERN RAILROAD COMP	50.00
HENRICK'S HEATING AC	728.72
GORDY'S GRILL N FILL	165.26
WARREN JOHNSON	635.97
POSTMASTER	528.00
ETHANOL PRODUCTS, LLC	1310.61
RLNDAA C/O MATT DANUSER	500.00
NDSU EXTENSION SERVICES	44.10
LIQ'R PIGZ M/C	1532.10
POSTMASTER	239.90
JOHN & BETTY ANDERSON	325.00
WELTON'S TIRE SERVICE	212.00
INFORMATION TECHNOLOGY DEPT.	1245.00

All Aye

MOTION – Waletzko SECOND – Williams
To approve moving the Budget Public Hearing to the HS Commons.
All Aye

Meeting Adjourned
ATTEST:
TIM MEYER, MAYOR
KRISTINA L DICK - AUDITOR

Publish October 9, 2023.

ABBREVIATED NOTICE OF INTENT TO AMEND ADMINISTRATIVE RULES

RELATING TO Boiler Inspection.
Take notice that

The North Dakota Department of Environmental Quality ("Department")

will hold a public hearing to address proposed amendments to North Dakota Administrative Code ch. 33.1-14-01 at the following time and location:

2nd Floor Conference Room
North Dakota Department of Environmental Quality
4201 Normandy St, Bismarck, ND 58503-1324
November 29, 2023
11:00 am CST

A copy of the proposed rule amendments may be requested by writing the North Dakota Department of Environmental Quality, Boiler Inspection Program, 4201 Normandy St, Bismarck, ND 58503-1324, emailing tsseime@nd.gov, or calling (701) 328-5150. Written or oral comments on the proposed rule amendments may be submitted to the above mailing address, email address, or telephone number until December 11, 2023. If you plan to attend the public hearing and will need special facilities or assistance relating to a disability or need language interpretation for limited English proficiency, please contact the Department at the above address or telephone number at least two days prior to the public hearing. There will be real time public streaming of the public hearing through a Microsoft Teams meeting. No testimony will be accepted through the Microsoft Teams meeting. Information concerning listening access by telephone or through Microsoft Teams can be obtained by calling (701) 328-5150 or can be found on the Department's website at: https://deq.nd.gov/PublicNotice.aspx.

Dated this 25th day of September, 2023.

L. David Glatt, P. E.
Director
Department of Environmental Quality

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MEMORANDUM

TO: **TFFR Board of Trustees**
FROM: **Chad Roberts, DED/CRO**
DATE: **October 26, 2023**
RE: **November 2023 Pioneer Project Update**

Project Status

The fourth and final phase of the design sessions of the project concluded the week of October 9th, 2023. This is a significant milestone in the project and was completed on schedule. There are still likely to be a few sporadic design meetings to answer any further questions that are developed by the vendor as they create the product, but these will be minor resource draws from TFFR staff compared to the regular cadence of design sessions that have been conducted over the last six quarters.

The vendor has completed the design documents for all of pilots one and two and is anticipating the completion of pilot three design documents by the end of October. Pilot four design documents are being developed now that the pilot four design sessions are complete.

The data migration component of the project continues and has not run in to any hurdles now that the staffing issues experienced by the vendor during the 2nd quarter are resolved. NDIT staff, TFFR staff, and the vendor have a twice weekly cadence of meetings to resolve any data migration issues encountered by the vendor as they work through the transition.

The FileNet document migration to allow the new system to both utilize FileNet going forward and to retrieve existing documents from FileNet is expected to be completed by the end of November. This area of the project is a collaboration between NDIT and the vendor. TFFR staff has little role in this aspect of the project.

The user education element of the project began in October of 2023. As previously outlined, education for the business partners was scheduled to begin approximately one year from “go live” of the system. That “go live” remains targeted for late September of 2024. In October, TFFR staff provided overview presentations directed to the business partners at both the NDCEL and the NDSBA fall conferences in Bismarck. These presentations were a broad stroke overview of the system timeline, purpose and expected outcomes, user experience improvements, and operational changes that will be asked of the business partners. TFFR is partnering with NDCEL and the NDSBA to present virtual education sessions to business partners in mid-November on the new system. These presentations will include some more in-depth information on the system as well as a demo of the system by the vendor.
.

Budget Status

The project remains slightly under budget by approximately $60,000 due to the savings found through the elimination of the SharePoint licensing listed in the contract by using the existing State SharePoint licensing.

Unanticipated Issues

With the transition of the TFFR program to a new actuary, there was significant consultation with the new actuarial firm to ensure the system was meeting the expectations of the actuaries. These meetings and consultations too more design hours than planned but did not result in a delay of the design timeline. Additional design hours were programmed into the existing timeline and did not result in an increased project cost.

There was a delay in beginning the FileNet integration portion of the project due to the background process and security authorization of the vendors by NDIT. However, portions of the project were moved up to fill the time lapse in order to maintain the overall timeline.

Board Action Requested: Information only

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NOVEMBER 2023 TFFR BOARD PAS UPDATE

TFFR PENSION ADMINISTRATION SYSTEM (MyTFFR) PROGRESS UPDATE

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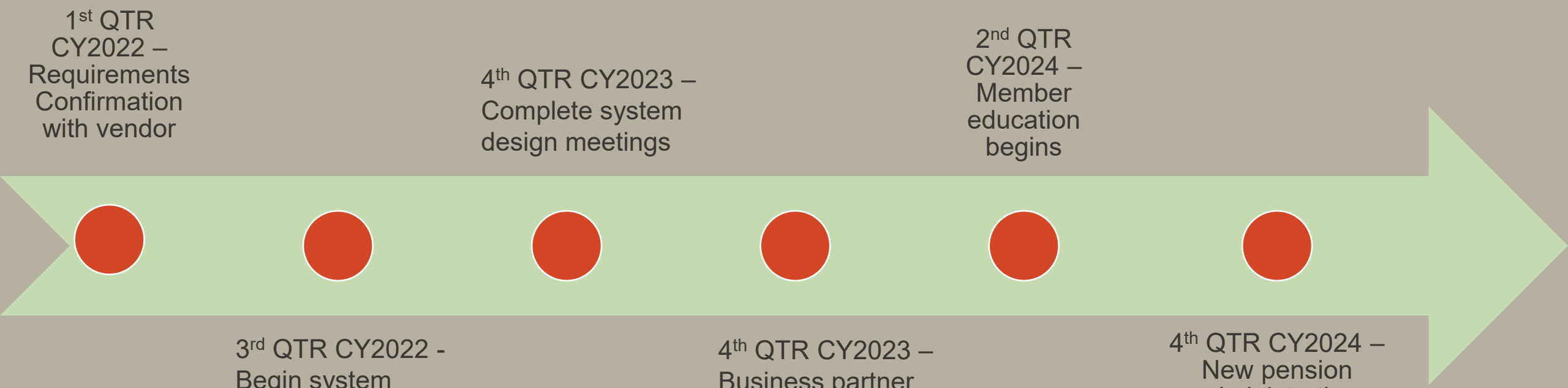
AGENDA

- Timeline of pension system project
- Current project status
- New system logo
- Technical aspects of new system
- Improvements and advantages for member and pensioners
- Improvements and advantages for business partners
- Required operational changes for business partners
- Training and educational plan for users

PENSION ADMINISTRATION SYSTEM TIMELINE



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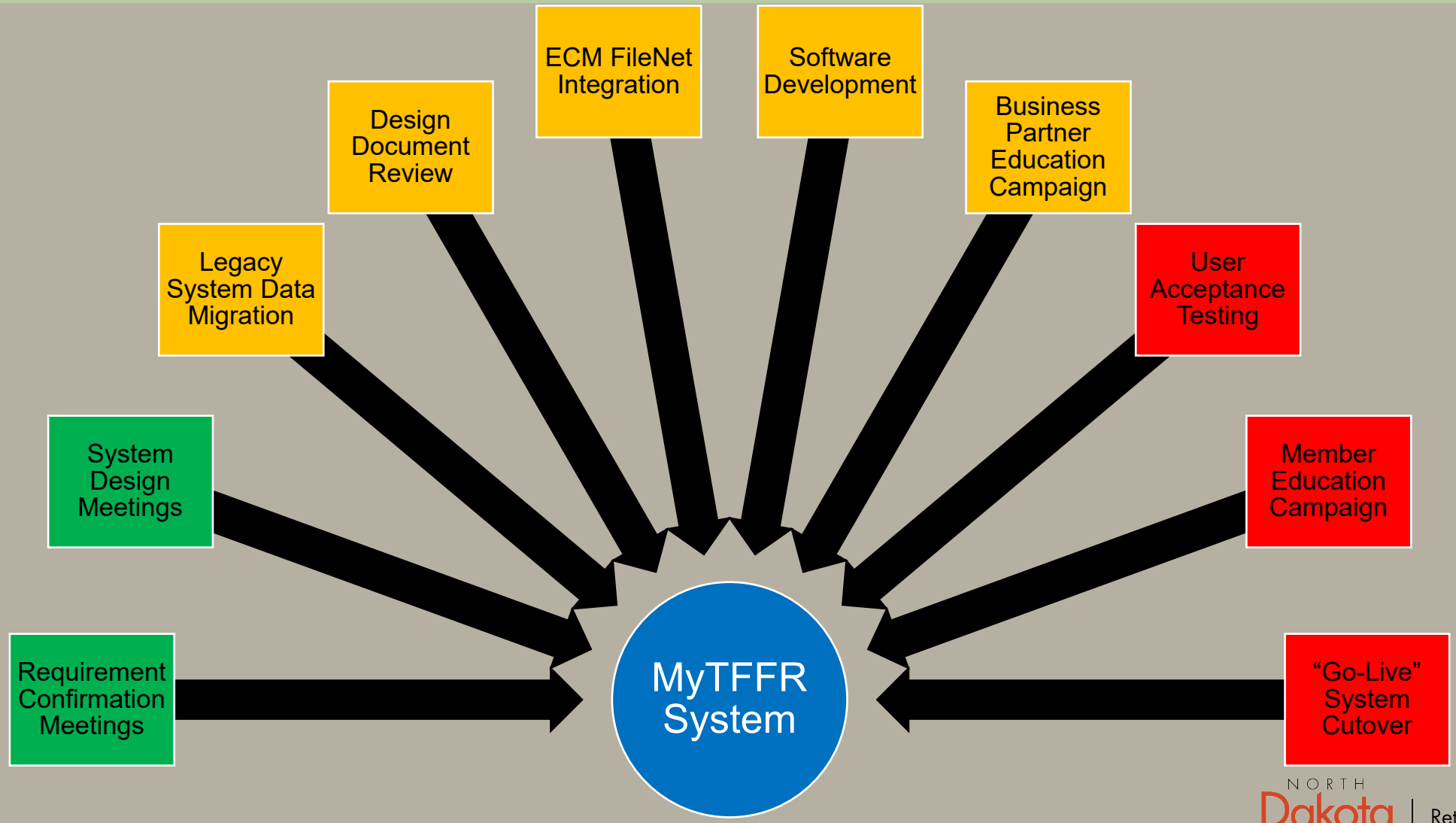
PENSION ADMINISTRATION SYSTEM PROJECT STATUS



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PENSION ADMINISTRATION SYSTEM LOGO

My TFFR SELF-SERVICE PORTAL

ND RETIREMENT & INVESTMENT OFFICE

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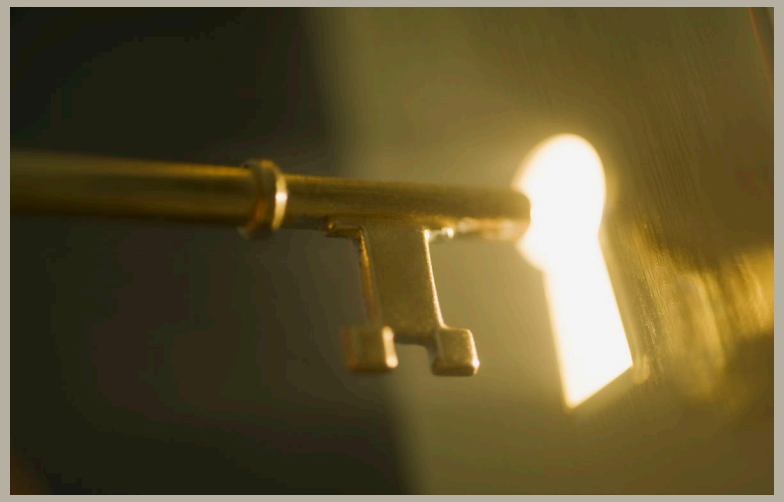
PENSION ADMINISTRATION SYSTEM TECHNICAL ASPECTS

- System is cloud based and mobile compliant, no software needed
- Updates are done without service interruption
- Can be accessed from anywhere there's internet

- Fast access using an existing ND.Gov login
- System has guaranteed up time of 99.6%
- Real time acknowledgement of transactions



- System is built on Microsoft Azure security platform, cutting edge security
- Multi-factor authorization for increased security
- All data is encrypted

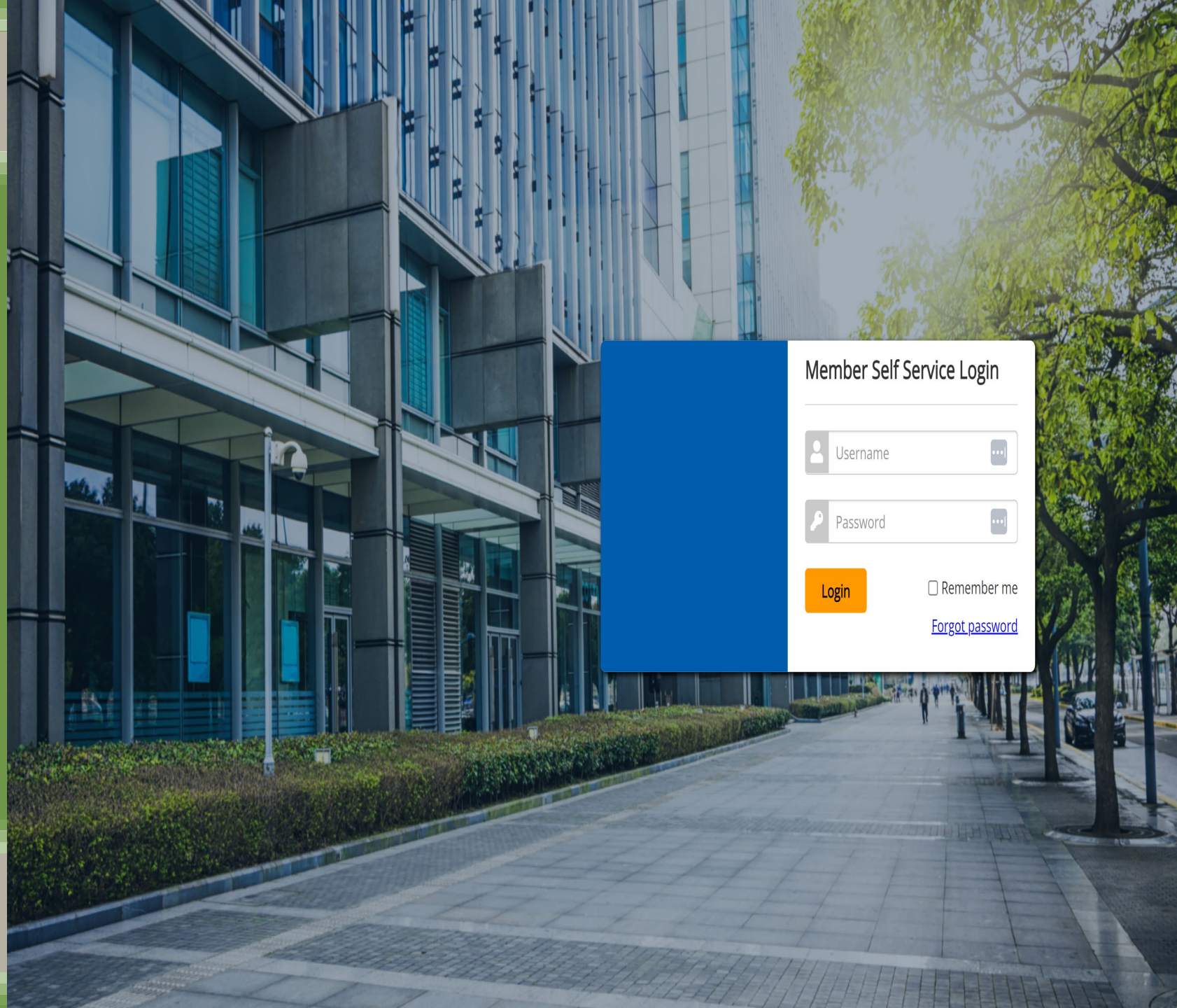
IMPROVED MEMBER EXPERIENCE

Think of it like a mobile banking app

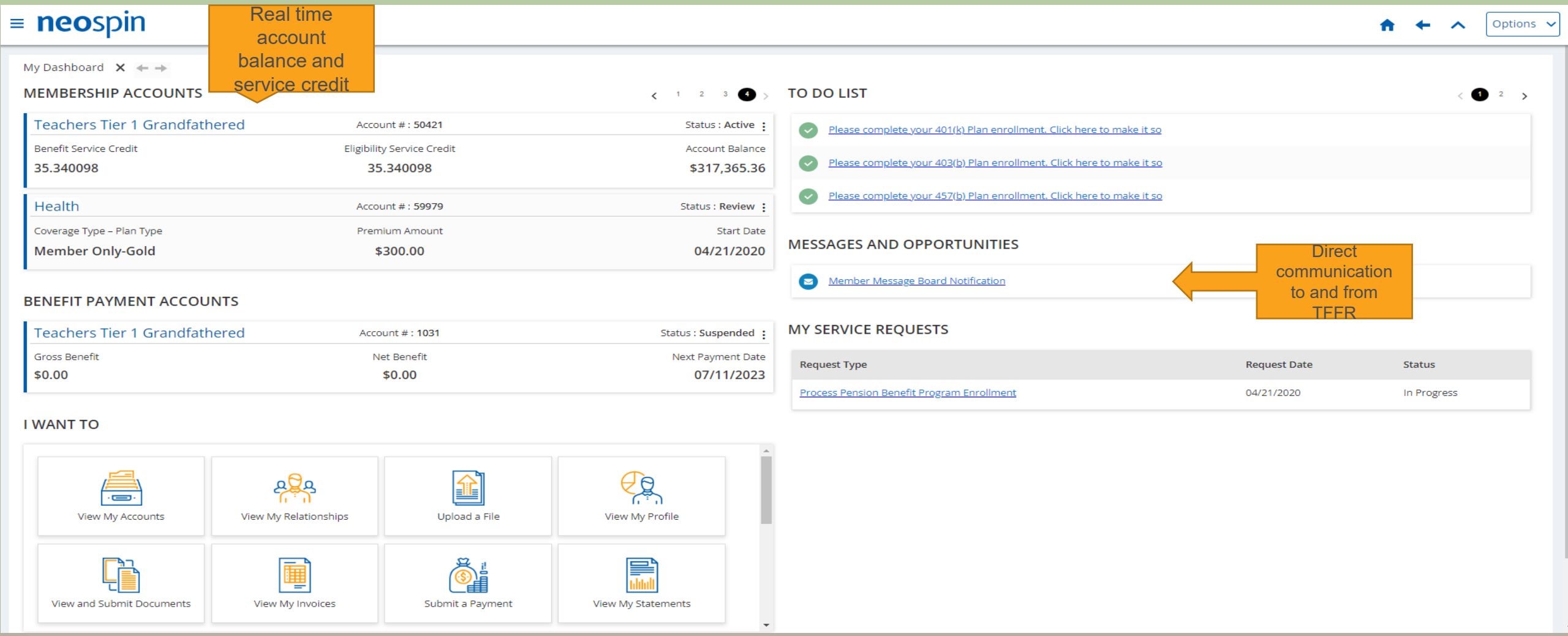
- **Customer focused build**
  - Uses existing nd.gov login
  - Simple to navigate
  - Streamlines communication with TFFR staff
  - Step-by-step process illustrations and status updates
  - Possible DB vs. 401k comparison tool
- **Complete account transparency**
  - Real time account balances
  - Detailed transaction info
  - Calculators to estimate benefits and payment options and RTT options
- **Elimination of paper-based processes**
  - Applying for retirement
  - Applying for disability
  - Updating account, bank, tax, and beneficiary information

MEMBER LOGIN SCREEN

- No need to create a new login
  - Users can use their existing ND.gov login to access the system.
  - Existing users will automatically be registered in the new system
- Easy to reset password



MEMBER DASHBOARD – VIEW 1



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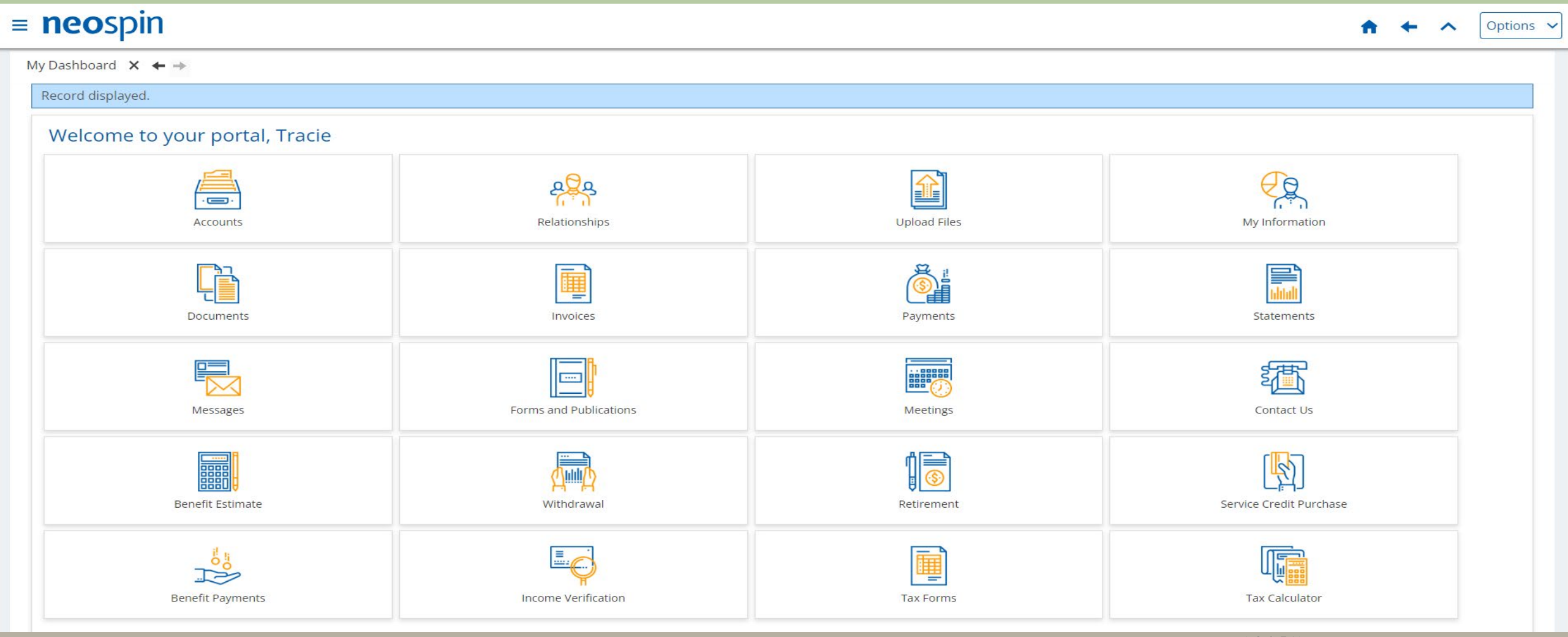
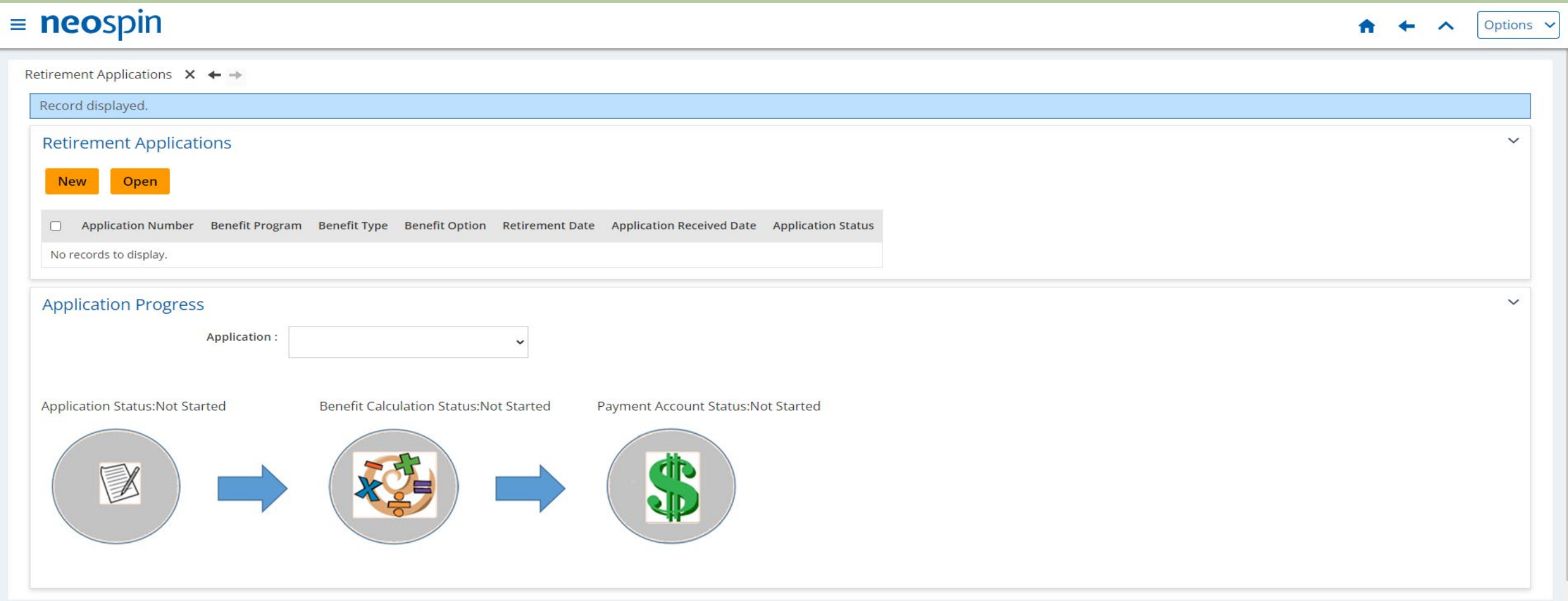
MEMBER DASHBOARD – VIEW 2



MEMBER RETIREMENT APPLICATION



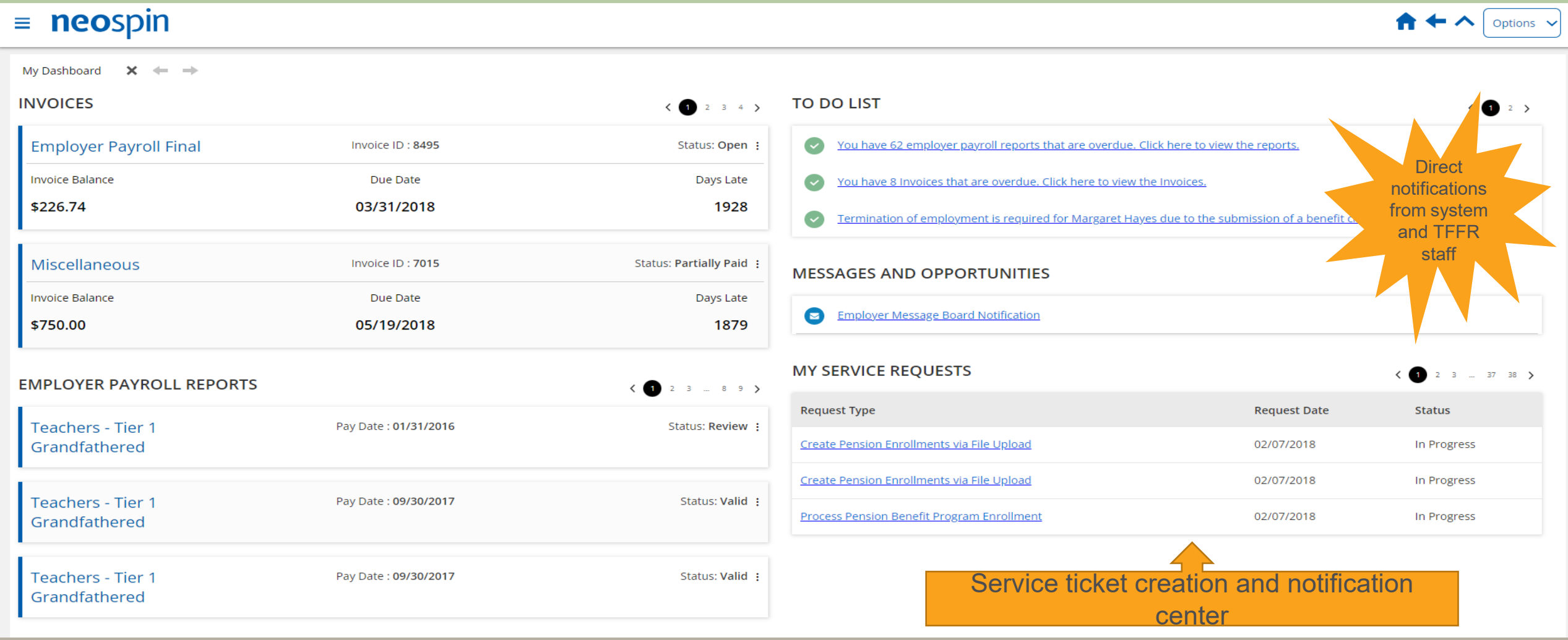
IMPROVED BUSINESS PARTNER EXPERIENCE

- **All reporting done through system**
  - New member enrollment
  - Monthly Contribution reporting
  - Monthly enrollment reporting
  - ACH payments through system
- **Reduced reporting errors equals less time spent on TFFR reporting**
  - Built-in error checking
  - Real-time alerts and corrections
  - Real-time report acceptance notification
- **Added features for business partners**
  - Account transactions detail
  - Messaging with TFFR through portal
  - Account notifications
  - Ad hoc report creation
  - Model change calculator…maybe

BUSINESS PARTNER LOGIN SCREEN

- No need to create a new login
  - Users can use their existing ND.gov login to access the system.
  - Existing users will automatically be registered in the new system
- Easy to reset password

BUSINESS PARTNER DASHBOARD – VIEW 1



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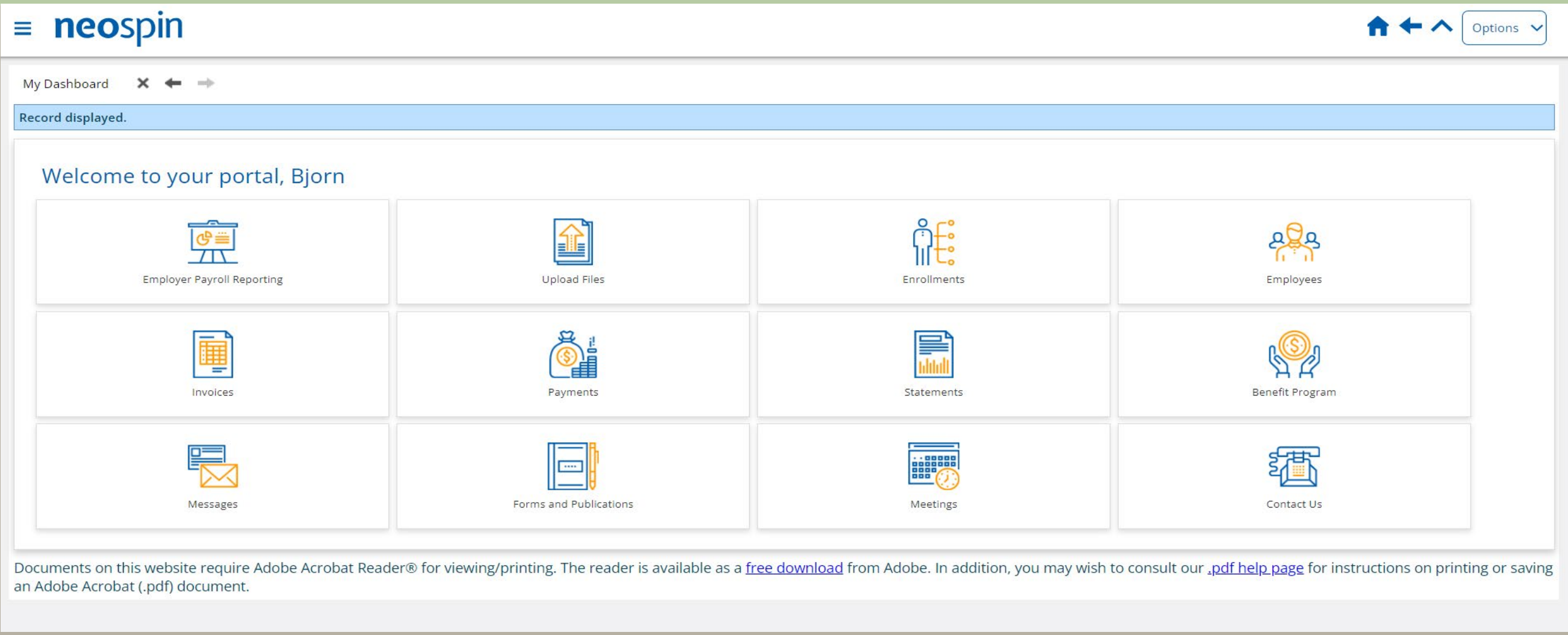
BUSINESS PARTNER DASHBOARD – VIEW 2



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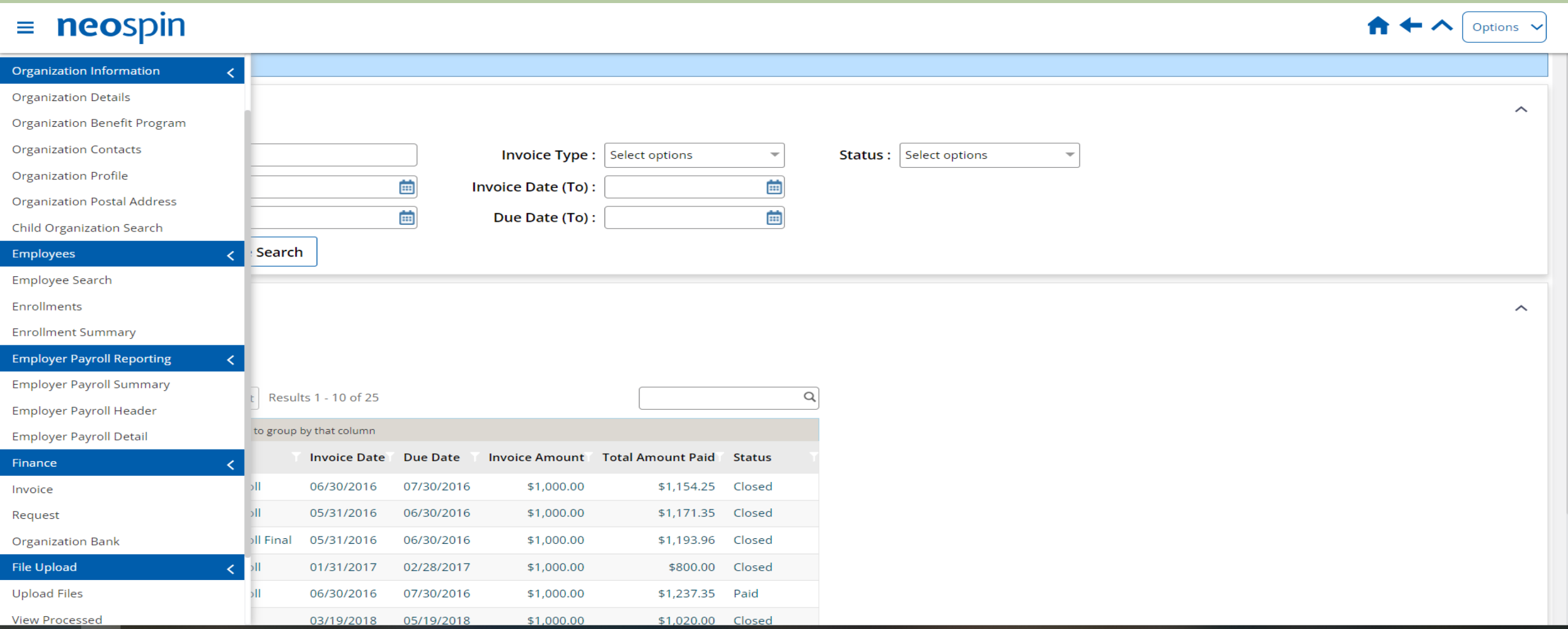
BUSINESS PARTNER DASHBOARD MENU



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OPERATIONAL CHANGES FOR BUSINESS PARTNERS

- **Prior to "Go-live"**
  - Format change for enrollment and contribution forms
  - All invoices due must be paid prior to switch-over
  - System training sessions
  - Transition to ACH payments

- **After "Go-live"**
  - All transactions and reporting must be done through the system
  - Contribution payment must be made with contribution reporting

- **After "Go-live"**
  - Communications related to reporting and contributions will be done through the system
  - Possible trainings for system improvements or additions

TRAINING PLAN FOR USERS

- Business partners
  - Overview presentations
    - NDCEL Fall Conference Presentation
    - NDSBA Fall Conference Presentation
    - NDCEL Virtual Event - Nov. 9th
      - Vendor will present demo of system
    - NDSBA Virtual Event - Nov. 15th
      - Vendor will present demo of system
  - Hands-on training – TBD
- Members
  - Education and training will begin in Spring of 2024
  - Training will be delivered virtually and on-demand

VIRTUAL EVENT REGISTRATION

In-depth look and/or second chance

- Nov. 15, 2023, 9:00-10:30 a.m., CT
- Co-hosted by RIO and NDSBA

Register: https://bit.ly/TFFRpreview

- The virtual event is free.

NDSBA
NORTH DAKOTA SCHOOL BOARDS ASSOCIATION

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MEMORANDUM

TO: **TFFR Board of Trustees**
FROM: **Chad Roberts. DED/CRO**
DATE: **November 7, 2023**
RE: **Update on TFFR GPR Committee**

The TFFR GPR Committee met on November 7, 2023. During the meeting the committee reviewed portions of the TFFR policy manual for recommended changes from staff. This review is part of the committees' annual work plan. The committee also discussed the need to incorporate retirement planning education into member communications. Staff will explore opportunities to address that and bring it back to the committee at a later date. The committee also heard a presentation from Executive Director Murtha regarding a proposed change to statute to be presented to the Employee Benefits Committee of the North Dakota Legislature. The proposed change addresses changes in the IRS code related to required minimum distributions.

Board Action Requested: Information only

PERFORMANCE REVIEW

INVESTMENT STAFF
NOVEMBER 16, 2023

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PERFORMANCE – BENCHMARK INDICES

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Summary of Returns September 30, 2023					
Benchmark Indices (% change, annualized)	**YTD**	**1 Yr**	**5 Yr**	**10 Yr**	**10 Yr Volatility**
Russell 1000	13.0%	21.2%	9.6%	11.6%	17.9%
Russell 2000	2.5%	8.9%	2.4%	6.6%	22.4%
S&P 500	13.1%	21.6%	9.9%	11.9%	17.7%
MSCI ACWI IMI Net	9.4%	20.2%	6.1%	7.4%	14.2%
MSCI World ex US	6.7%	24.0%	3.4%	3.8%	14.3%
MSCI Emerging Markets	1.8%	11.7%	0.6%	2.1%	15.6%
Bloomberg Aggregate	-1.2%	0.6%	0.1%	1.1%	4.4%
Bloomberg Gov/Credit	-0.9%	0.9%	0.4%	1.3%	4.8%
Bloomberg US High Yield	5.9%	10.3%	3.0%	4.2%	5.1%
NCREIF Property Index (09/30/2023)	-5.1%	-8.4%	5.3%	7.39%	3.7%

Source: Bloomberg

PERFORMANCE – BENCHMARK INDICES

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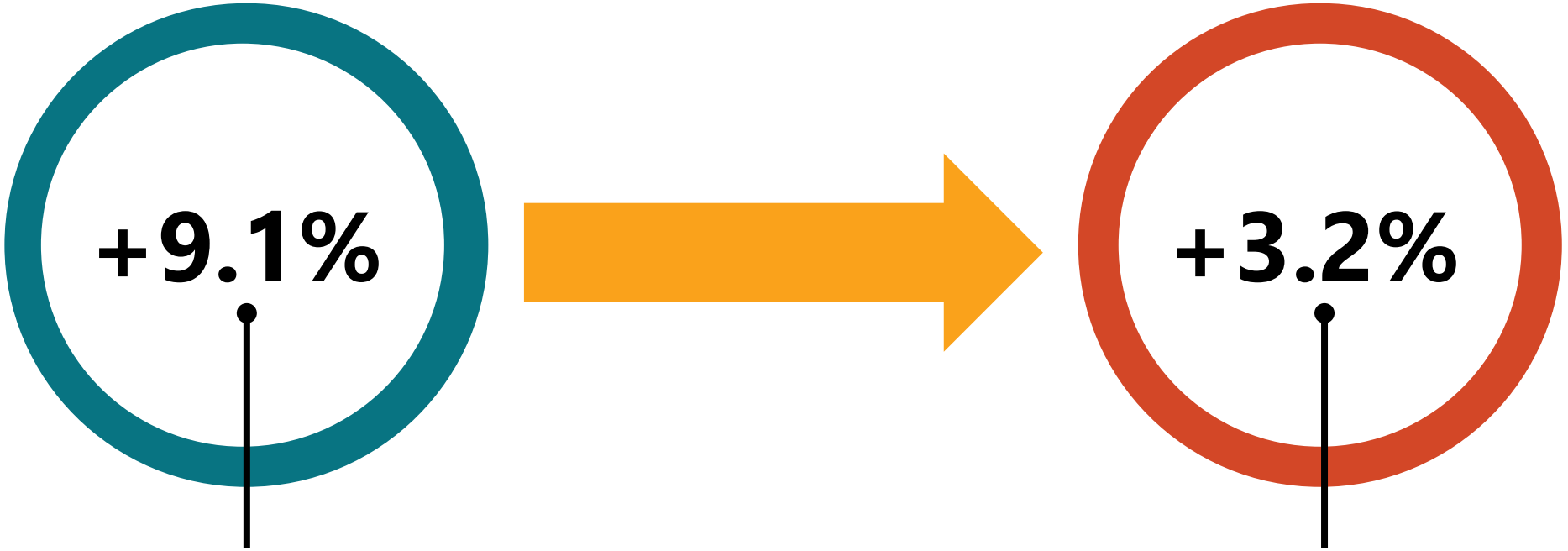
Summary of Returns November 15, 2023					
Benchmark Indices (% change, annualized)	**YTD**	**1 Yr**	**5 Yr**	**10 Yr**	**10 Yr Volatility**
Russell 1000	18.6%	14.0%	12.1%	11.4%	17.9%
Russell 2000	3.6%	-3.1%	4.8%	6.3%	22.5%
S&P 500	19.0%	14.7%	12.4%	11.7%	17.7%
MSCI ACWI IMI Net	13.8%	11.0%	8.6%	7.3%	14.3%
MSCI World ex US	9.8%	10.0%	5.8%	3.8%	14.3%
MSCI Emerging Markets	5.2%	5.1%	2.5%	2.2%	15.7%
Bloomberg Aggregate	-0.2%	0.6%	0.4%	1.2%	4.5%
Bloomberg Gov/Credit	0.2%	1.0%	0.8%	1.4%	4.8%
Bloomberg US High Yield	7.8%	8.0%	3.8%	4.2%	5.2%
NCREIF Property Index (09/30/2023)	-5.1%	-8.4%	5.3%	7.39%	3.7%

Source: Bloomberg

INFLATION



ANNUAL INFLATION RATE
(June 2021 thru June 2022)

ANNUAL INFLATION RATE
(October 2022 thru October 2023)
4.0% Ex Food & Energy

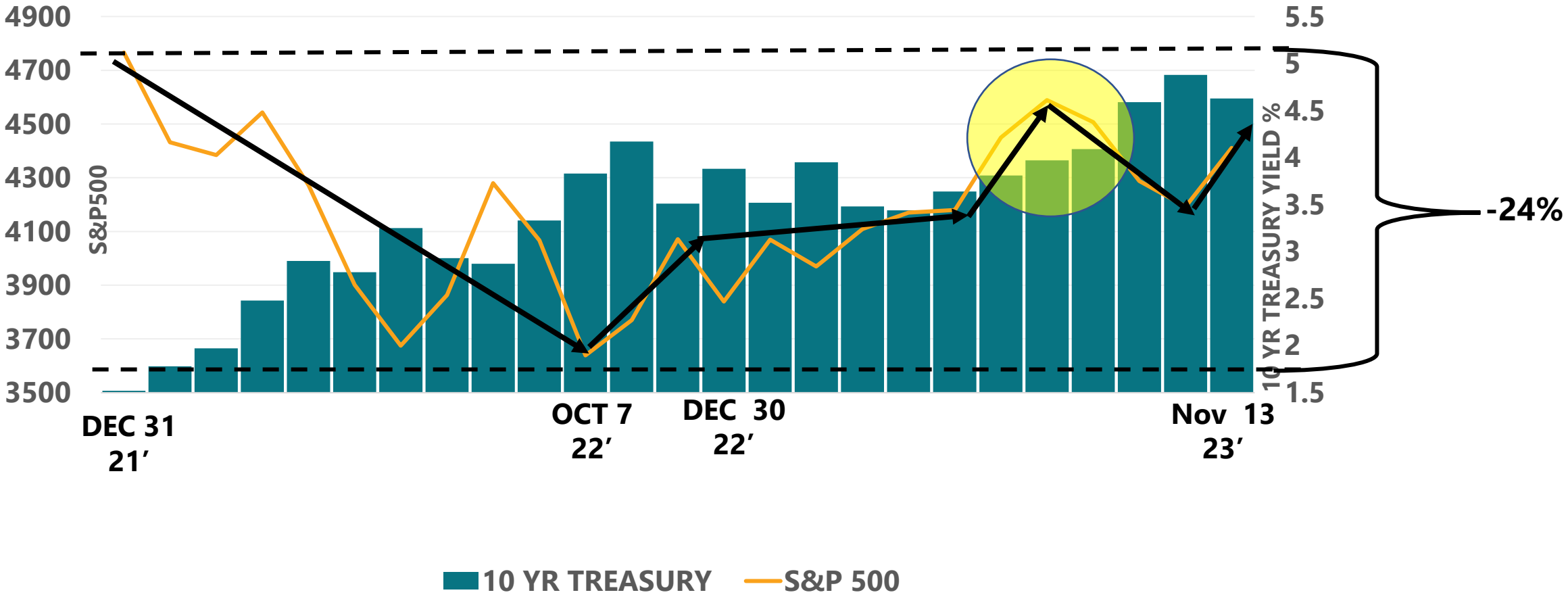
1. Bureau of Labor Statistics

INFLATION – LATEST REPORT[1]

- CPI unchanged from previous month
- CPI excluding food and energy was up 0.2% over previous month (4.0% for the year)
- Energy was -2.5% under previous month related to gasoline
- New vehicle prices -0.1% and used vehicle prices -0.8% from previous month
- Hotel prices down -2.9% and airline prices -0.9% from previous month
- **Rent up 0.5% (7.2% for year), owners equivalent rent 0.4% (6.8% for year) and accounts for 90% of 3.2% inflation rate: Zillow index at 1.2% annual rate for the past six months**
- **Auto Insurance 1.9% over month (19.2% for year)**
- **Super-Core Inflation 0.1% over month (2.0% per year)**

1. David Kelly – Chief Global Strategist at JP Morgan Asset Management

THE S&P500 HAS TRACKED INFLATION EXPECTATIONS[1]



1. FRED

COMPETING NARRATIVES

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	LOW GROWTH	HIGHER GROWTH
HIGH INFLATION	**(Hard Landing)** ▪ High levels of Debt – Higher Interest Rates ▪ Tight Labor Market/Labor Force Growth ▪ Consumer Savings Are Running Out ▪ Higher Energy Prices From Policy ▪ Restart of Easy Money ▪ Student Loan Payments Restart Reducing Retail Spending	**(No Landing)** ▪ Continued Government Spending ▪ Tight Labor Market/Labor Force Growth ▪ Inflation Psychology ▪ Higher Energy Prices From Policy ▪ Millennials in Peak Spending Years ▪ Housing Shortage/Higher Prices ▪ Continued Government Stimulus
LOW INFLATION	**(Soft Landing)** ▪ Housing Inflation Abates ▪ Lower Interest Rates ▪ Lower Growth/Lower Energy Prices ▪ Student Loan Payments Restart Reducing Retail Spending ▪ Reduced Government Spending ▪ Political Risk Diminish	**(Goldilocks)** ▪ Low Unemployment Buoys Economy ▪ Lower Interest Rates ▪ Millennials in Peak Spending Years ▪ Reduced Government Spending ▪ Global Political Risks Are Resolved/ Peace Dividend ▪ Productivity Boom From AI

RETURN CALCULATION

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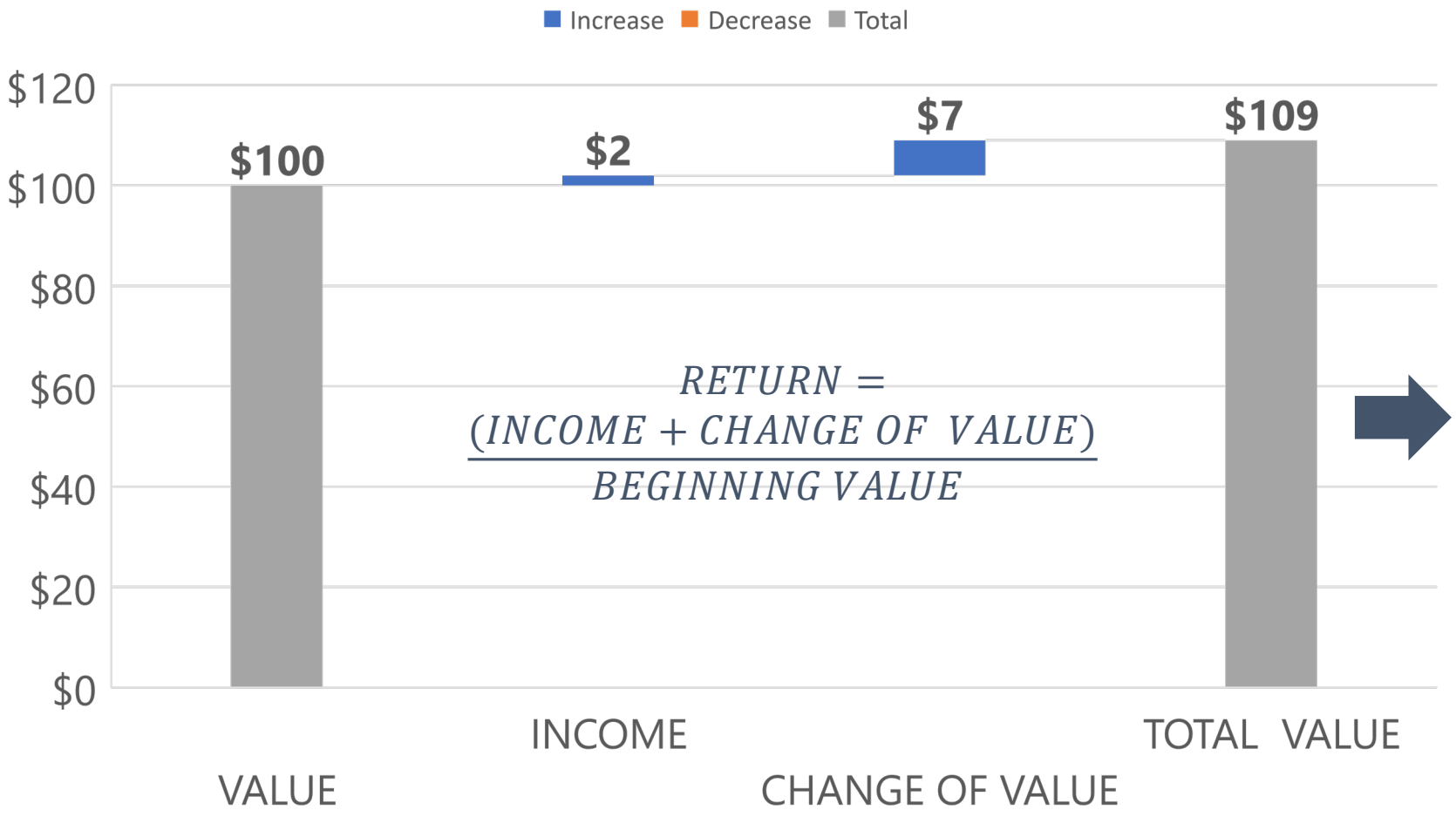
TOTAL VALUE CHANGE



$$RETURN = \frac{(INCOME + CHANGE\ OF\ VALUE)}{BEGINNING\ VALUE}$$

$$\frac{(\$2+\$7)}{\$100} = 9\%$$

PERFORMANCE

Total value of fund

Performance of the Fund

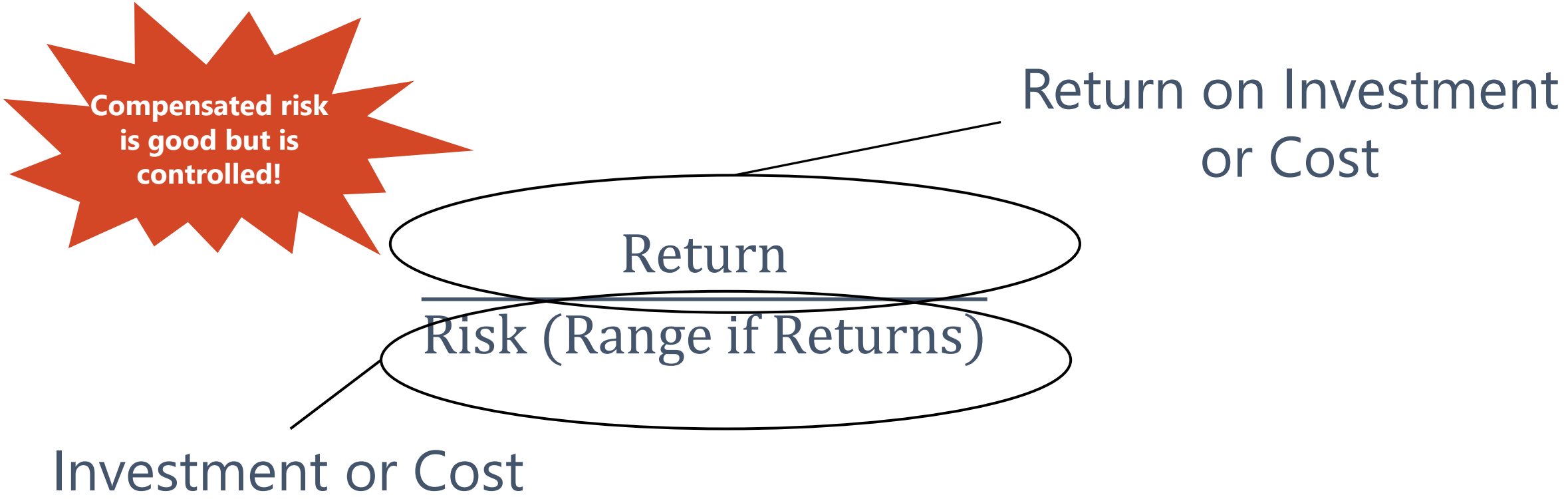
PERS $3.9 Billion	Year to Date	1 Year	3 year	5 Year	Risk (5 Year)
Total Fund Return - Net	7.1%	8.0%	8.6%	6.9%	10.2%
Policy Benchmark Return	7.1%	8.7%	8.3%	6.9%	10.4%
Total Relative Return	-0.0%	-0.7%	0.3%	0.0%	
Total Relative Return(Corridor)		0.0%	0.6%	0.3%	

Opportunity Cost Benchmark

- Unambiguous/Transparent
- Investable
- Priced Daily
- Available Historical Data
- Low Turnover
- Specified in Advance
- Risk Characteristics

Excess Return (Uncertainty of Excess Return is Tracking Error)

RISK IS AN INVESTMENT



RETURN EFFICIENCY

$$\text{Return Efficiency} = \frac{\text{Return}}{\text{Risk (Range if Returns)}}$$

$\frac{5\%}{10\%}$ is better than $\frac{5\%}{20\%}$

Example:

1 Year Expected Return	Risk	Return/Risk	Average Compound Return (Many Years)
5%	10%	.5	4.5%
5%	20%	.25	3.0%

33% lower long-term return because of the doubling of risk!

CALLAN PERFORMANCE PANEL

Actual Return less Benchmark Return at Benchmark Weight

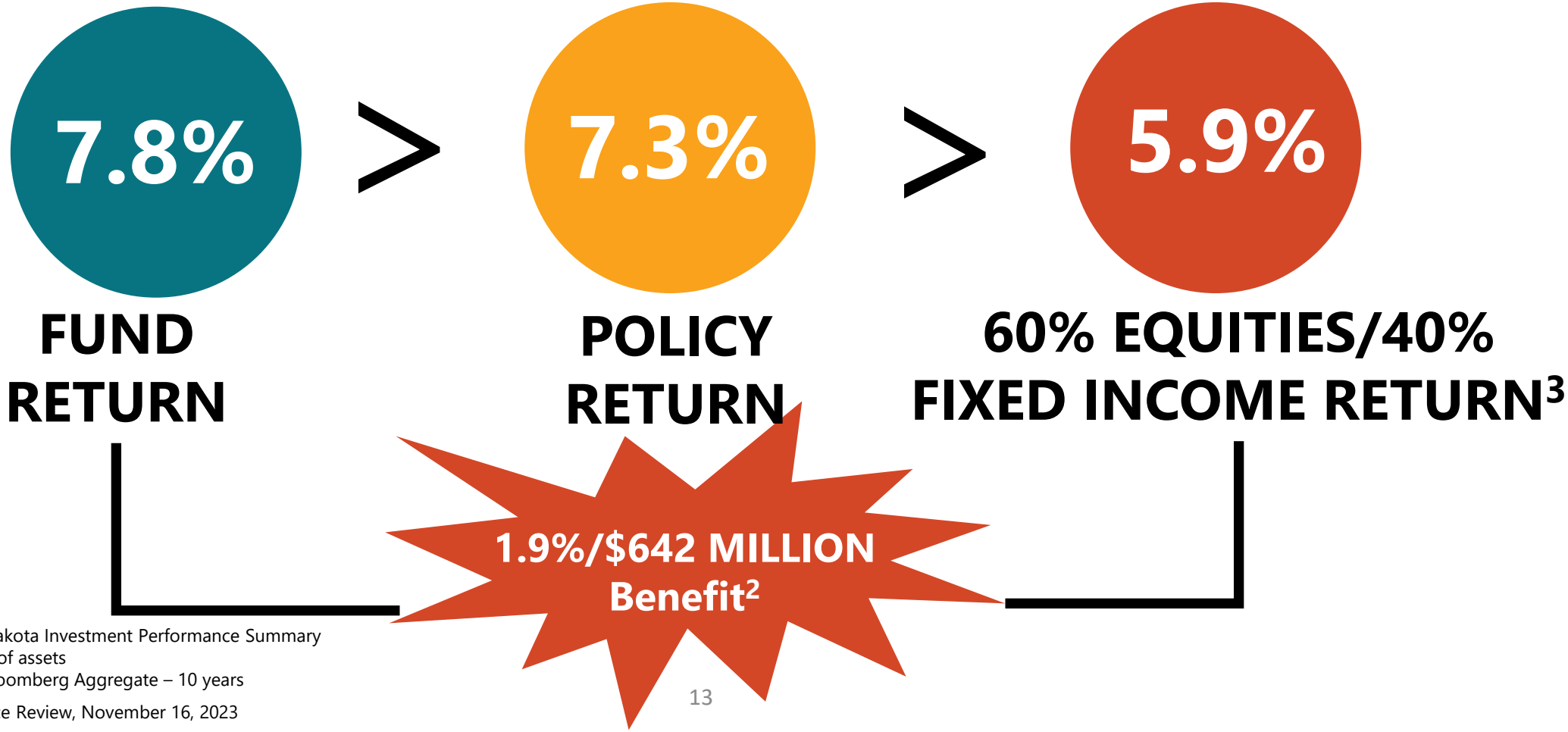
Actual Weight less Benchmark Weight at Benchmark Return

Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	23%	9.55%	8.25%	0.28%	(0.08%)	0.19%
International Equities	15%	15%	3.79%	2.57%	0.20%	0.00%	0.20%
World Equities	11%	11%	(4.61%)	(3.36%)	(0.23%)	0.01%	(0.22%)
Private Equities	8%	8%	14.71%	14.71%	0.00%	0.00%	0.00%
Domestic Fixed Income	25%	25%	2.02%	1.04%	0.27%	(0.01%)	0.26%
Real Estate	10%	10%	5.45%	5.26%	0.02%	0.00%	0.02%
Timber	2%	2%	4.34%	5.87%	(0.01%)	0.00%	(0.01%)
Infrastructure	5%	5%	8.42%	4.58%	0.22%	0.00%	0.22%
Cash & Equivalents	1%	1%	1.75%	1.72%	0.00%	(0.01%)	(0.01%)
Residual Holdings	0%	0%	-	-	0.00%	0.00%	0.00%
Total			**6.08%**	**= 5.41%**	**+ 0.75%**	**+ (0.09%)**	**0.67%**

INVESTMENT MANAGEMENT BENEFITS

TFFR TEN YEAR AVERAGE RETURN[1]



1. Thru June 2023; North Dakota Investment Performance Summary
2. Starting with $3.1 Billion of assets
3. 60% MSCI World/40% Bloomberg Aggregate – 10 years

Investment Team, Performance Review, November 16, 2023

PERFORMANCE – TFFR[1]

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AS OF SEPTEMBER 30, 2023

TFFR ($3.0 BILLION)	YEAR TO DATE	1 YEAR	3 YEAR	5 YEAR	RISK (5 YEAR)
Total Fund Return	4.4%	8.9%	5.9%	5.8%	10.0%
Policy Benchmark	3.8%	8.5%	5.5%	5.4%	10.2%
Total Relative Return (Corridor)	0.6%	0.4%	0.4%	0.4%	

1. After fees performance

PERFORMANCE – TFFR[1]

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One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	25%	24%	20.92%	19.36%	0.35%	(0.03%)	0.33%
International Equities	16%	18%	22.34%	20.19%	0.25%	(0.22%)	0.03%
World Equities	0%	0%	(27.57%)	(27.57%)	0.00%	0.11%	0.11%
Private Equities	13%	13%	5.67%	5.67%	0.00%	0.00%	0.00%
Domestic Fixed Income	25%	26%	3.17%	3.55%	(0.09%)	(0.05%)	(0.14%)
Real Estate	11%	11%	(11.98%)	(8.39%)	(0.45%)	0.00%	(0.45%)
Timber	1%	1%	(0.72%)	10.03%	(0.16%)	0.00%	(0.16%)
Infrastructure	6%	6%	10.01%	(5.36%)	0.95%	0.00%	0.95%
Cash & Equivalents	1%	1%	4.66%	4.47%	0.00%	(0.02%)	(0.02%)
Residual Holdings	0%	0%	18.60%	18.60%	0.00%	0.02%	0.02%
Total			**9.12%**	**= 8.45%**	**+ 0.86%**	**+ (0.19%)**	**0.67%**

Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	23%	9.55%	8.25%	0.28%	(0.08%)	0.19%
International Equities	15%	15%	3.79%	2.57%	0.20%	0.00%	0.20%
World Equities	11%	11%	(4.61%)	(3.36%)	(0.23%)	0.01%	(0.22%)
Private Equities	8%	8%	14.71%	14.71%	0.00%	0.00%	0.00%
Domestic Fixed Income	25%	25%	2.02%	1.04%	0.27%	(0.01%)	0.26%
Real Estate	10%	10%	5.45%	5.26%	0.02%	0.00%	0.02%
Timber	2%	2%	4.34%	5.87%	(0.01%)	0.00%	(0.01%)
Infrastructure	5%	5%	8.42%	4.58%	0.22%	0.00%	0.22%
Cash & Equivalents	1%	1%	1.75%	1.72%	0.00%	(0.01%)	(0.01%)
Residual Holdings	0%	0%	-	-	0.00%	0.00%	0.00%
Total			**6.08%**	**= 5.41%**	**+ 0.75%**	**+ (0.09%)**	**0.67%**

1. After fees performance corridor benchmark, Callan Investment Team, Performance Review, November 16, 2023

PERFORMANCE – TFFR[1]

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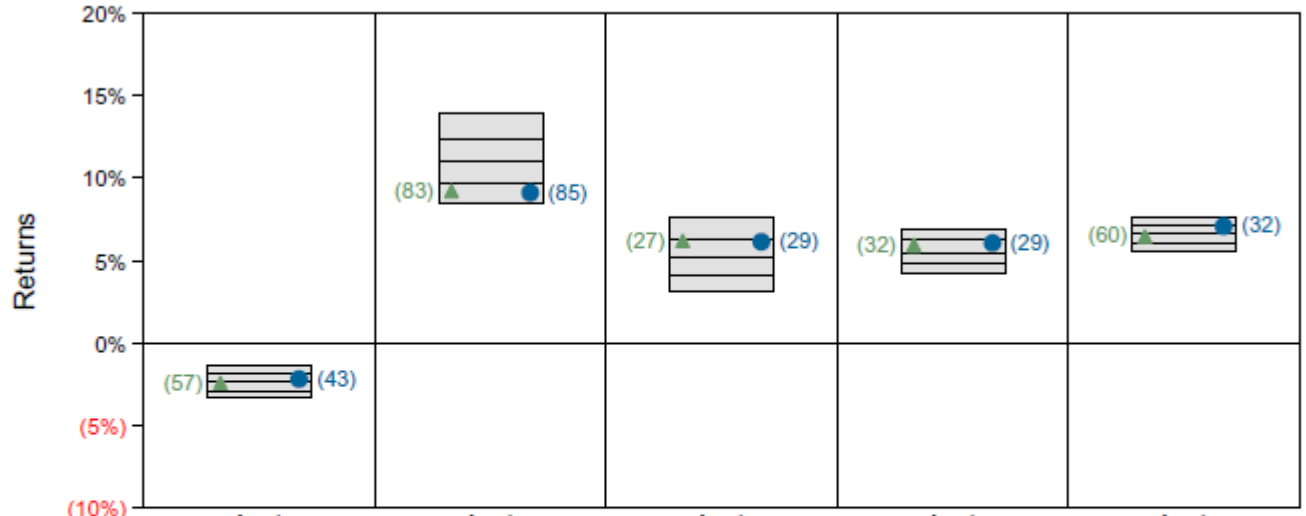
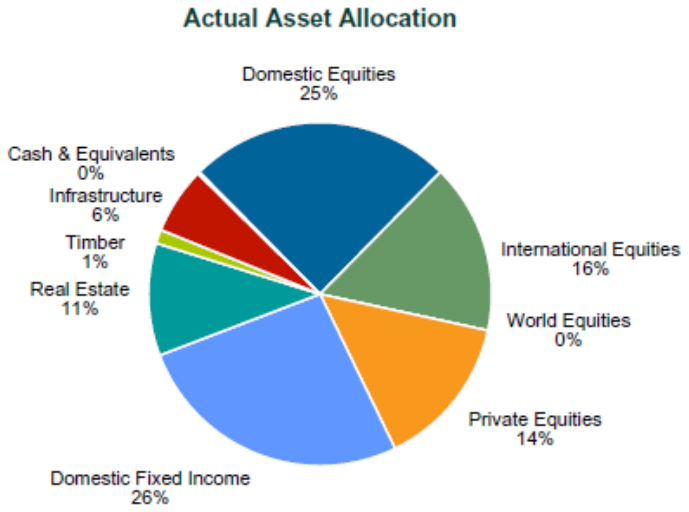
Callan Public Fund Sponsor Database

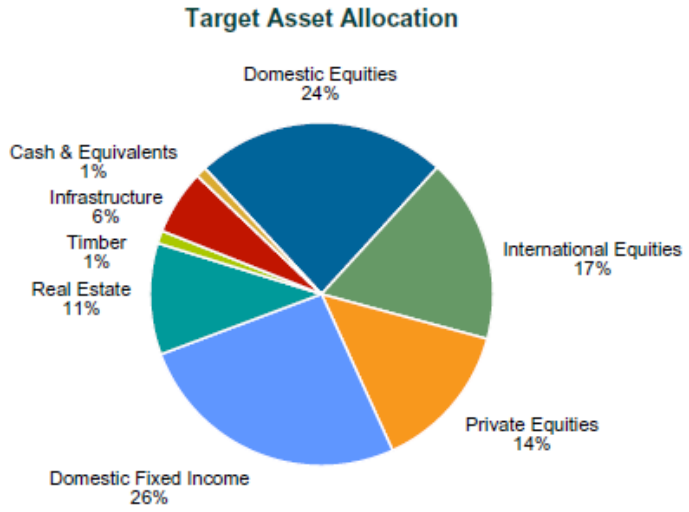


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	(1.32)	13.96	7.58	6.86	7.61
25th Percentile	(1.80)	12.42	6.31	6.25	7.18
Median	(2.30)	11.09	5.25	5.48	6.68
75th Percentile	(2.92)	9.75	4.16	4.81	6.12
90th Percentile	(3.33)	8.49	3.13	4.28	5.55
Total Fund ●	(2.16)	9.12	6.15	6.08	7.08
Policy Target ▲	(2.40)	9.23	6.21	5.96	6.48

1. Callan

TFFR ASSET ALLOCATION





Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equities	752,182	24.9%	23.7%	1.2%	36,245
International Equities	482,795	16.0%	17.4%	(1.4%)	(41,363)
World Equities	226	0.0%	0.0%	0.0%	226
Private Equities	433,885	14.4%	14.0%	0.4%	11,097
Domestic Fixed Income	797,363	26.4%	26.1%	0.3%	9,866
Real Estate	320,220	10.6%	10.5%	0.1%	2,641
Timber	38,209	1.3%	1.2%	0.1%	2,702
Infrastructure	189,069	6.3%	6.1%	0.1%	4,144
Cash & Equivalents	4,628	0.2%	1.0%	(0.8%)	(25,558)
Total	3,018,576	100.0%	100.0%		

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TFFR BOARD MEETING 11/16/23

FY2023 Retiree Reemployment Report

Chad Roberts, M.Acc.

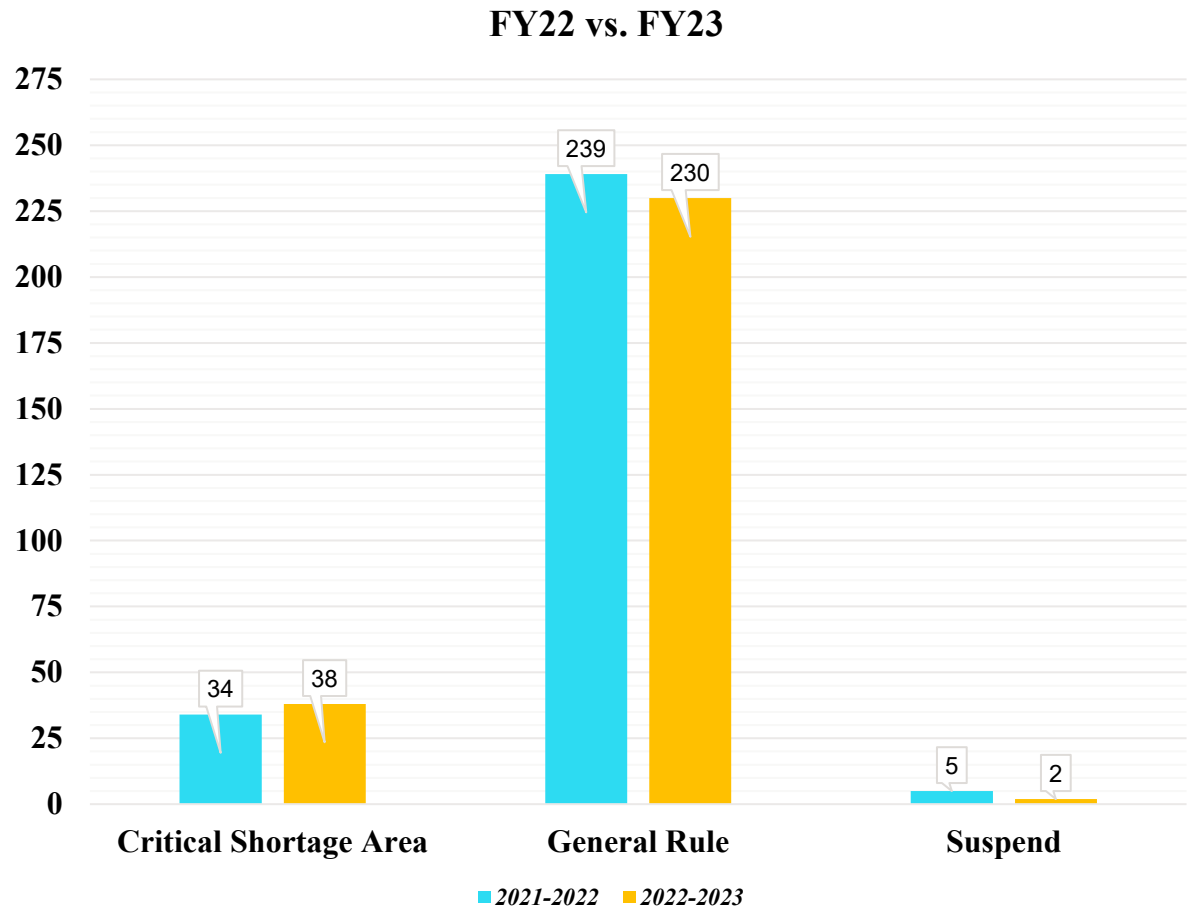
REPORT TOPICS

- Critical shortage area trends
  - FY22 vs. FY23
  - Long term trends – FY13 to FY23
- General rule trends
  - FY22 vs. FY23
  - Long term trends – FY13 to FY23
- Suspend and recalc trends
  - FY22 vs. FY23
  - Long term trends – FY13 to FY23
- Salary ranges and contract lengths
- Reemployment by job category and subject

Comparison of all RTT rules FY22 vs. FY23

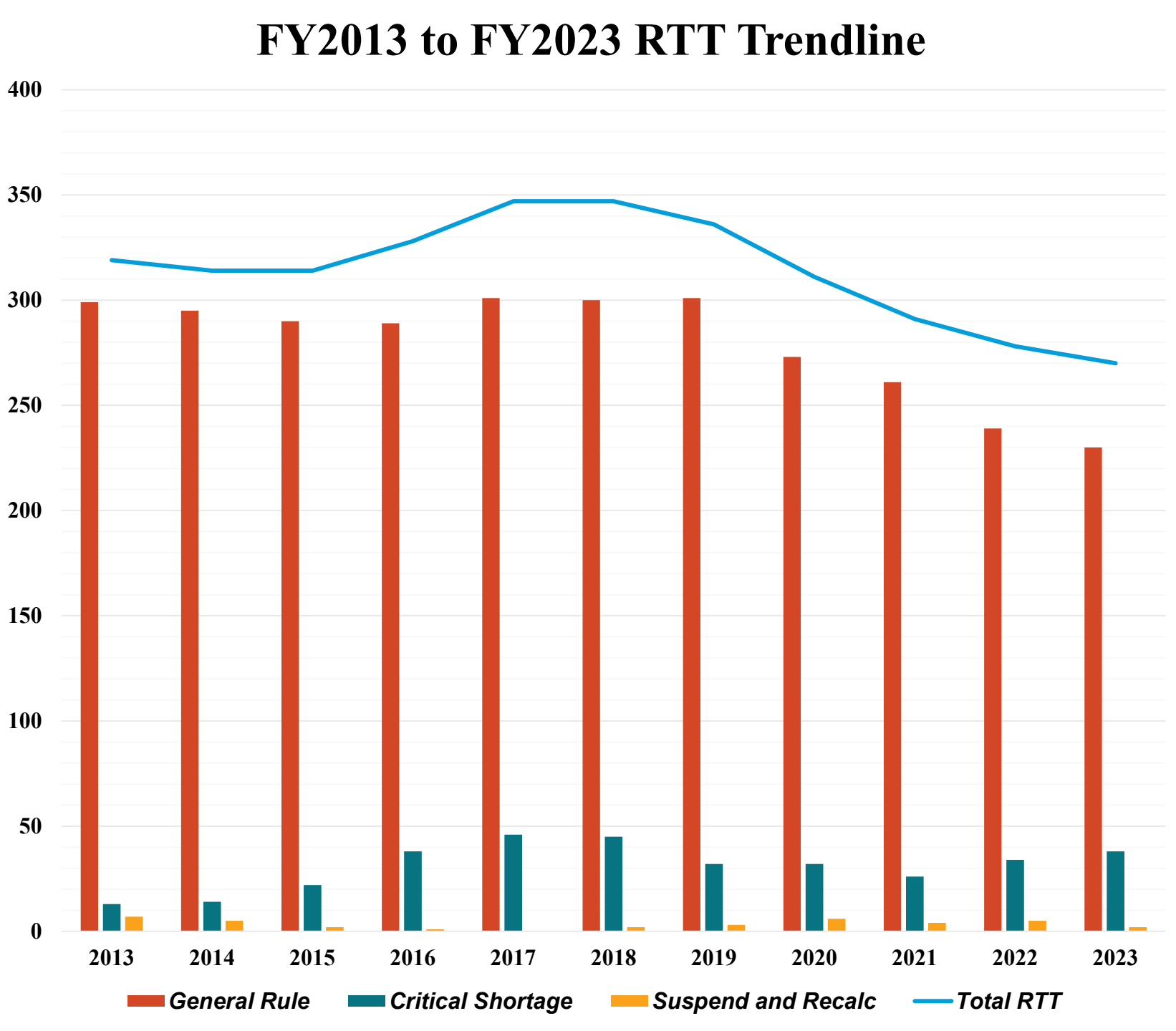
Trends

- Slight increase in critical shortage areas
- Slight decrease in general rule
- 60% drop in suspend and recalculate
- Total number of RTT remained consistent

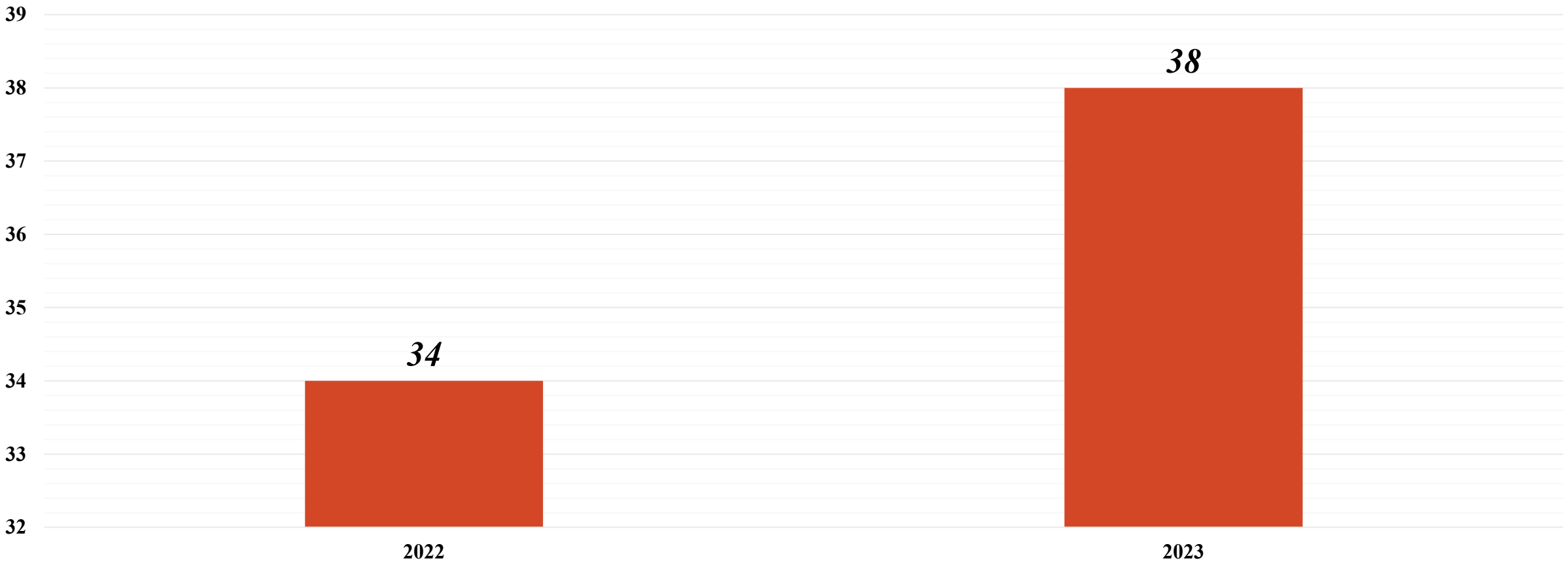


LONG TERM RTT TREND

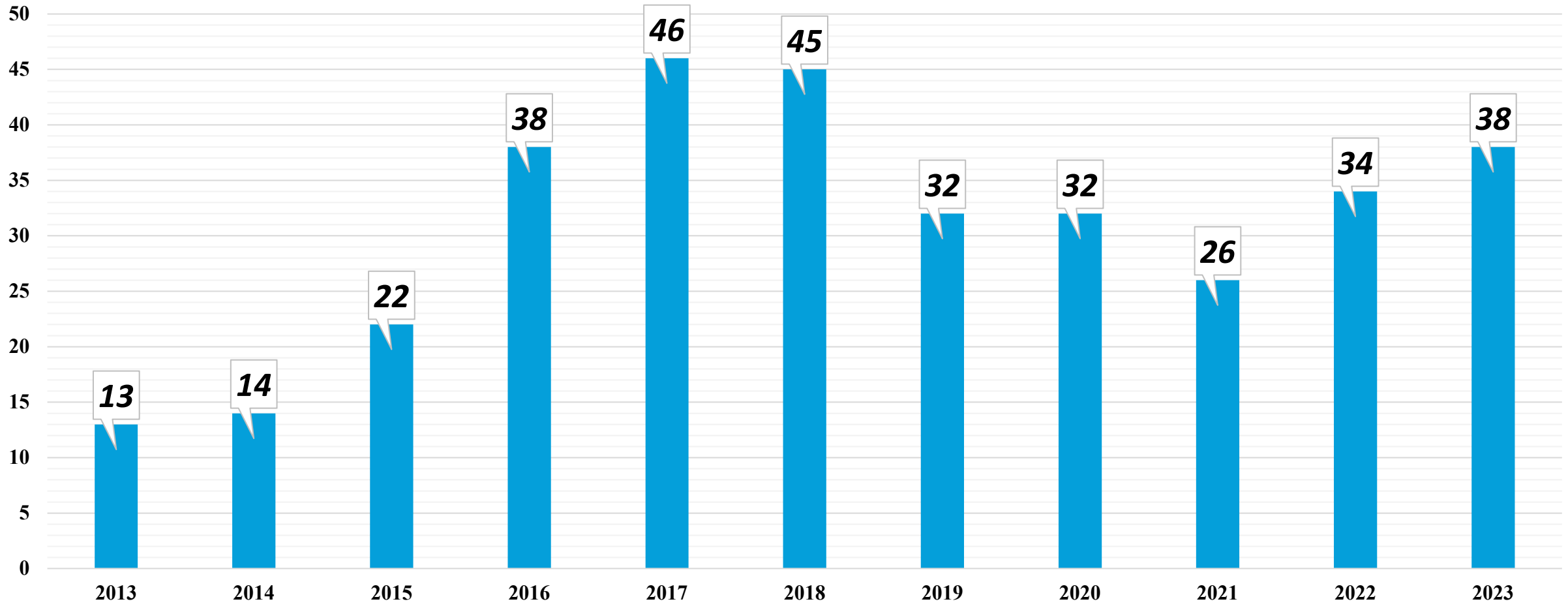
- Critical shortage areas dipped between 2019 and 2021 but are on the rise
- Suspend and recalcs are dropping
- General rule has been noticeably trending downward
- Overall return to teach is on the decline over a 5-year period



Comparison of CSA RTT rule FY22 vs. FY23

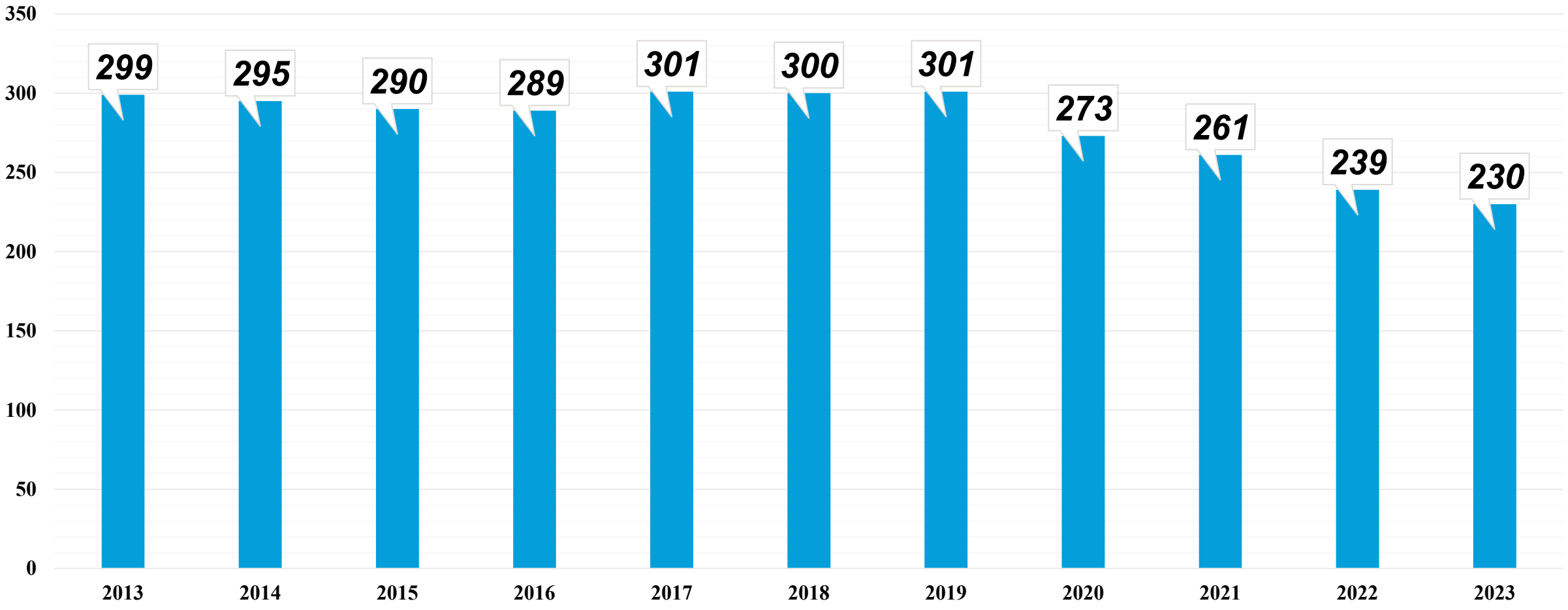


Comparison of CSA RTT rule FY13 to FY23

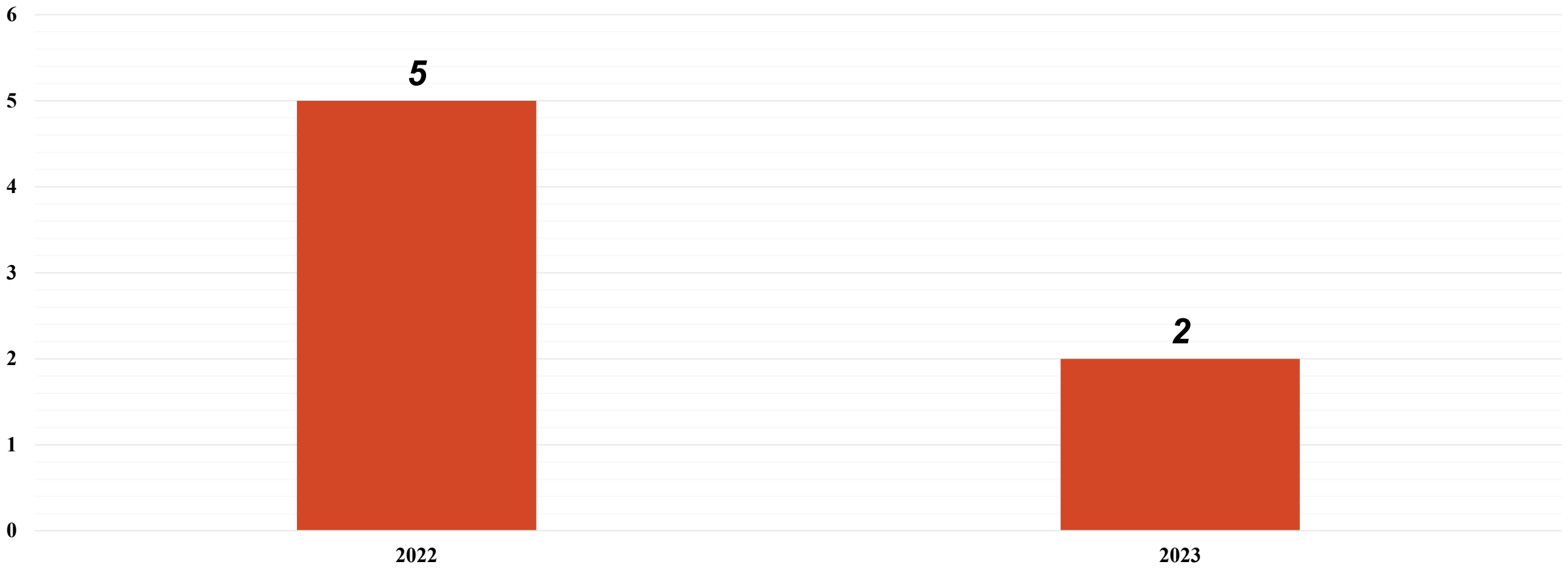


Comparison of General RTT rule FY22 vs. FY23

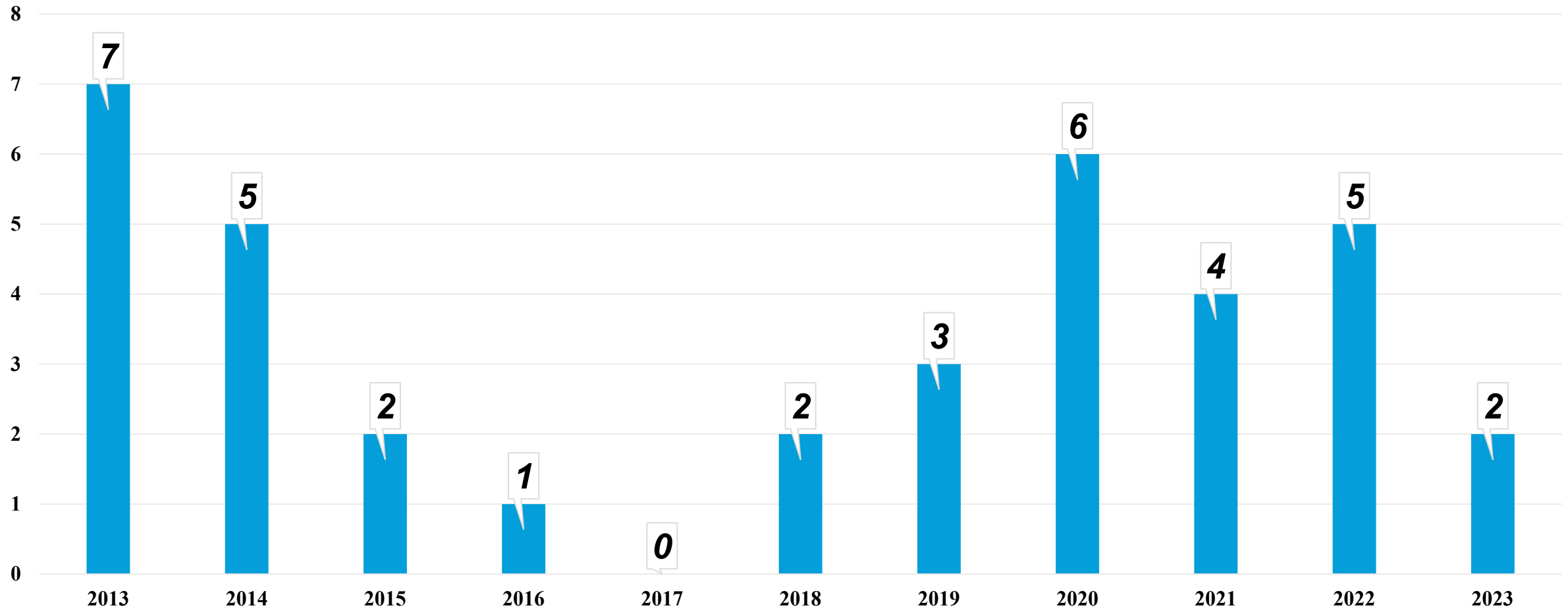
Comparison of General RTT rule FY13 to FY23



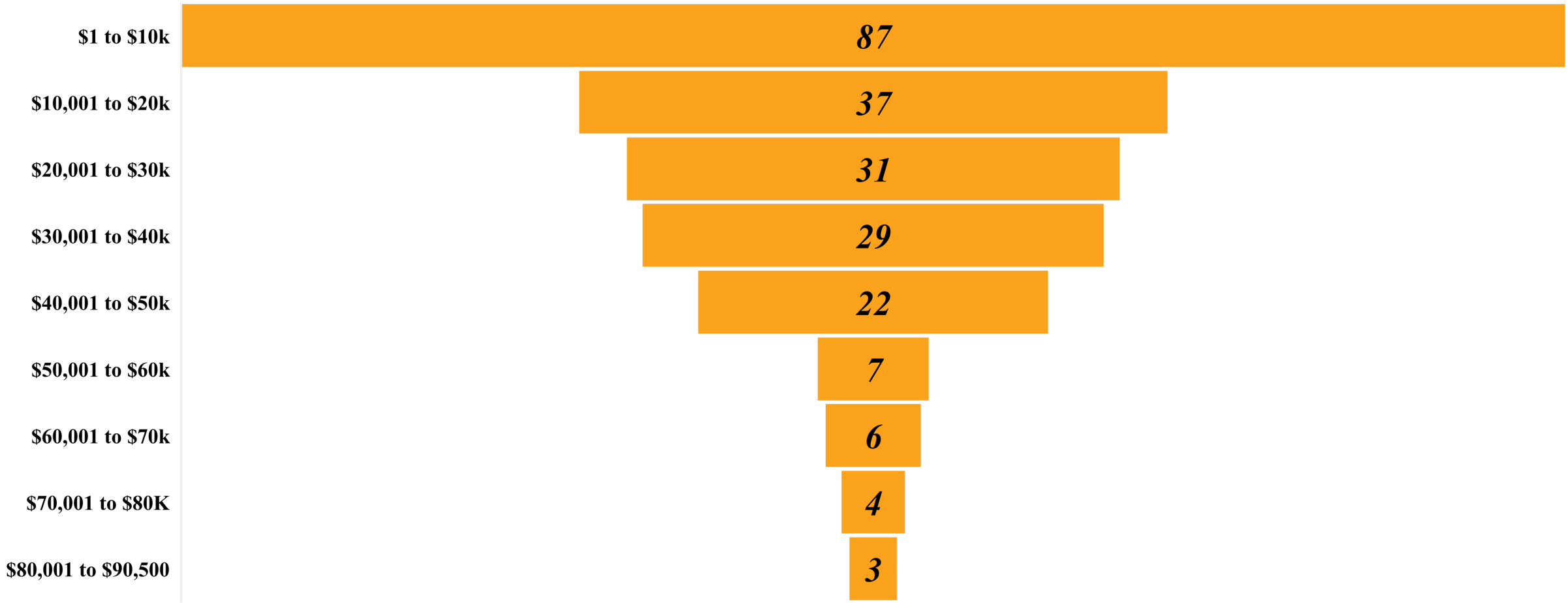
Comparison of Suspend RTT rule FY22 vs. FY23



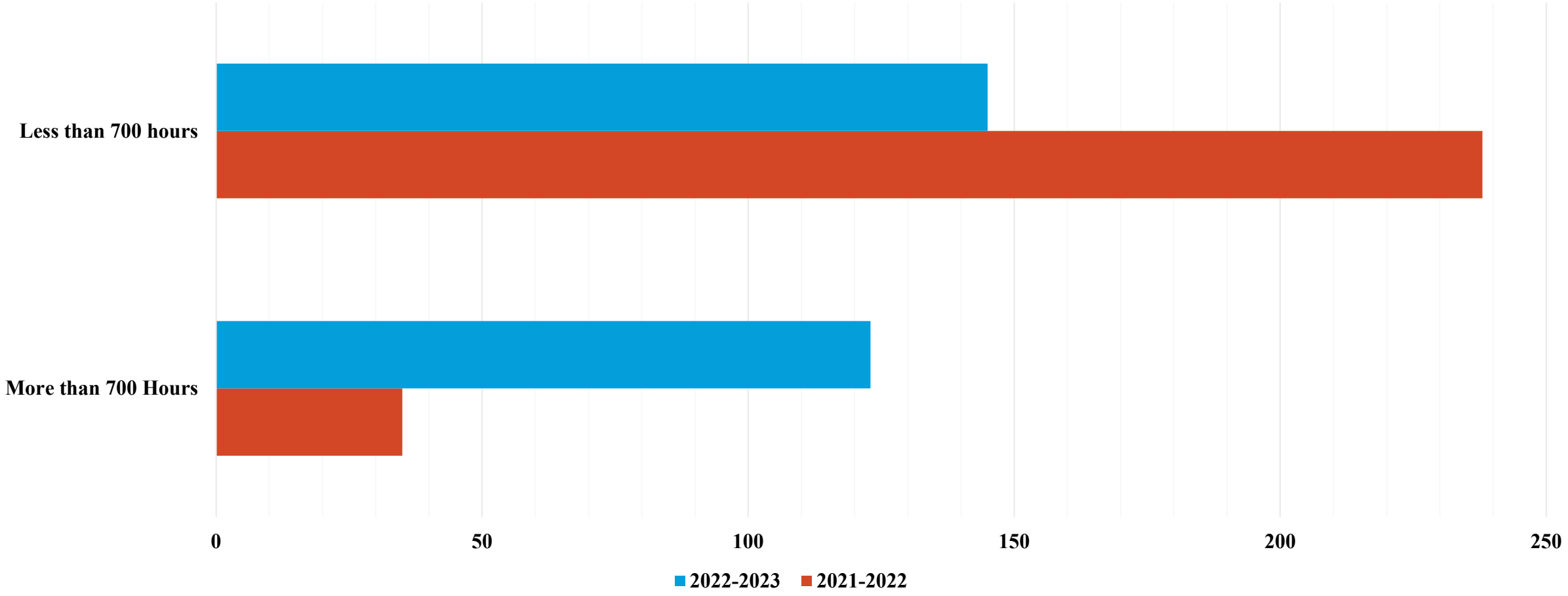
Comparison of Suspend RTT rule FY13 to FY23



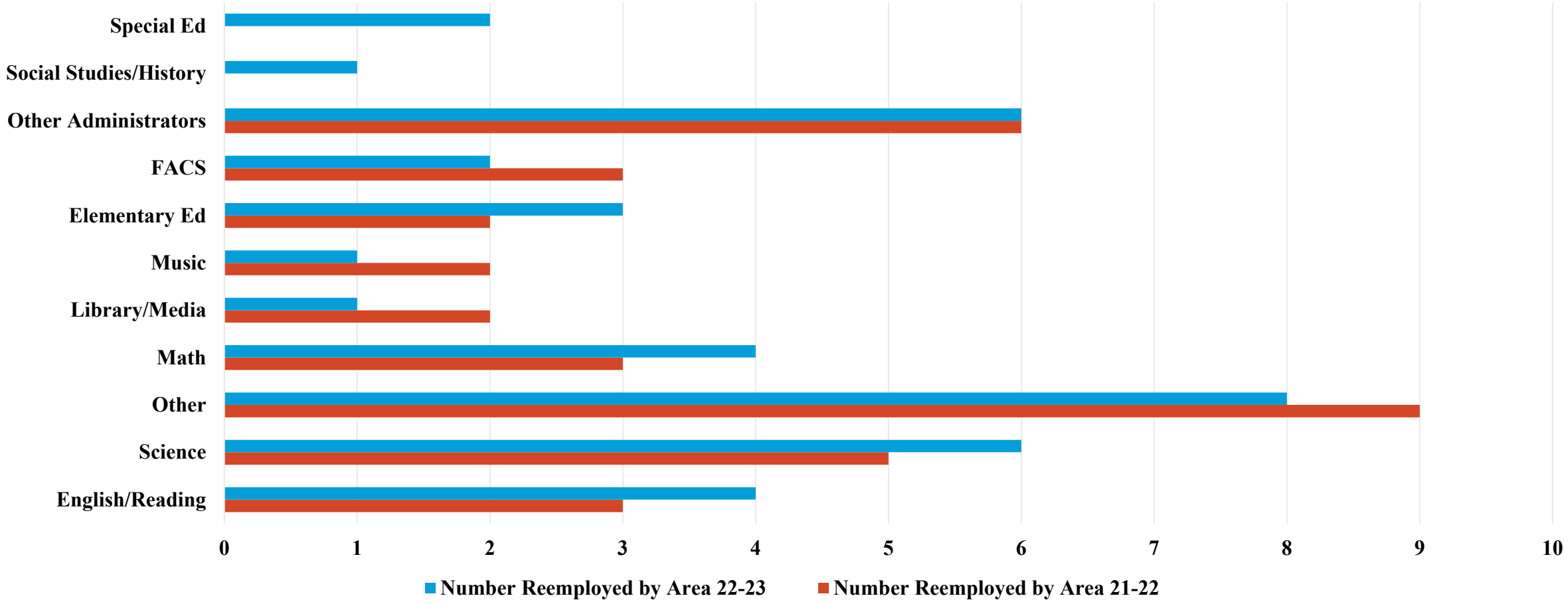
RTT Contracted Salary Ranges FY2023



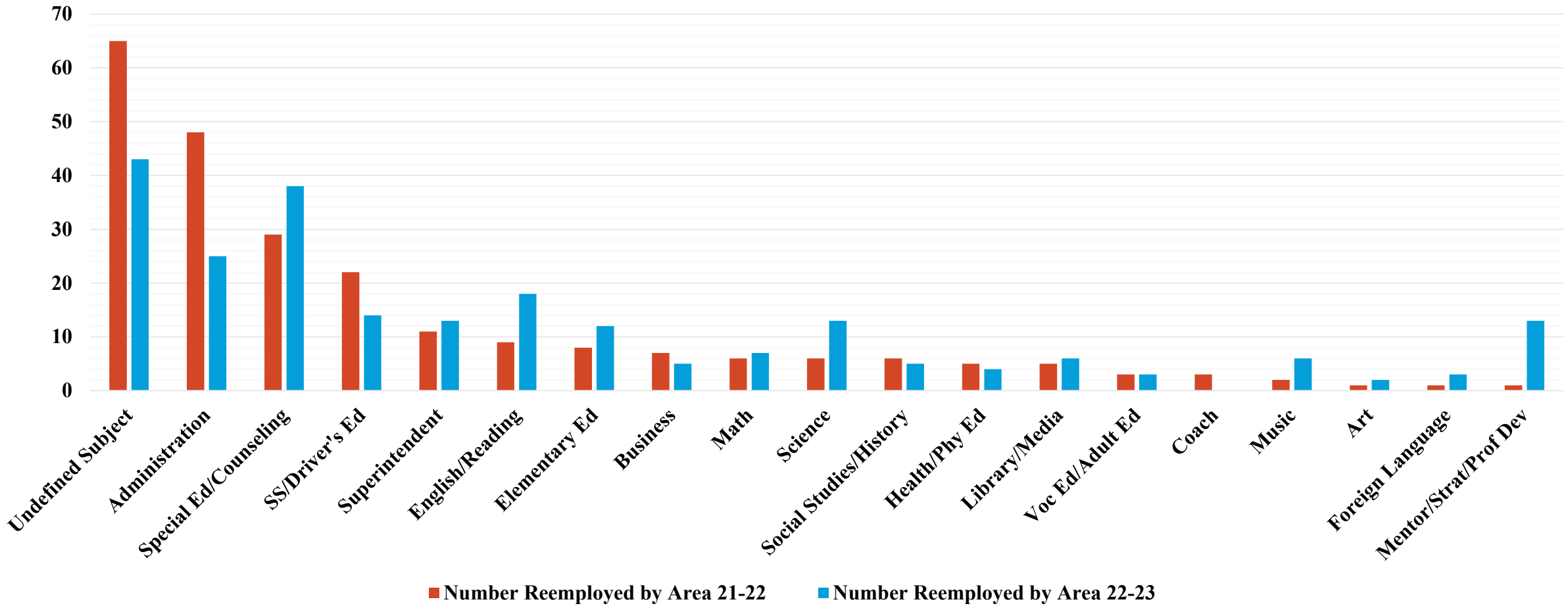
RTT Contracted Hours FY2022 vs. FY2023



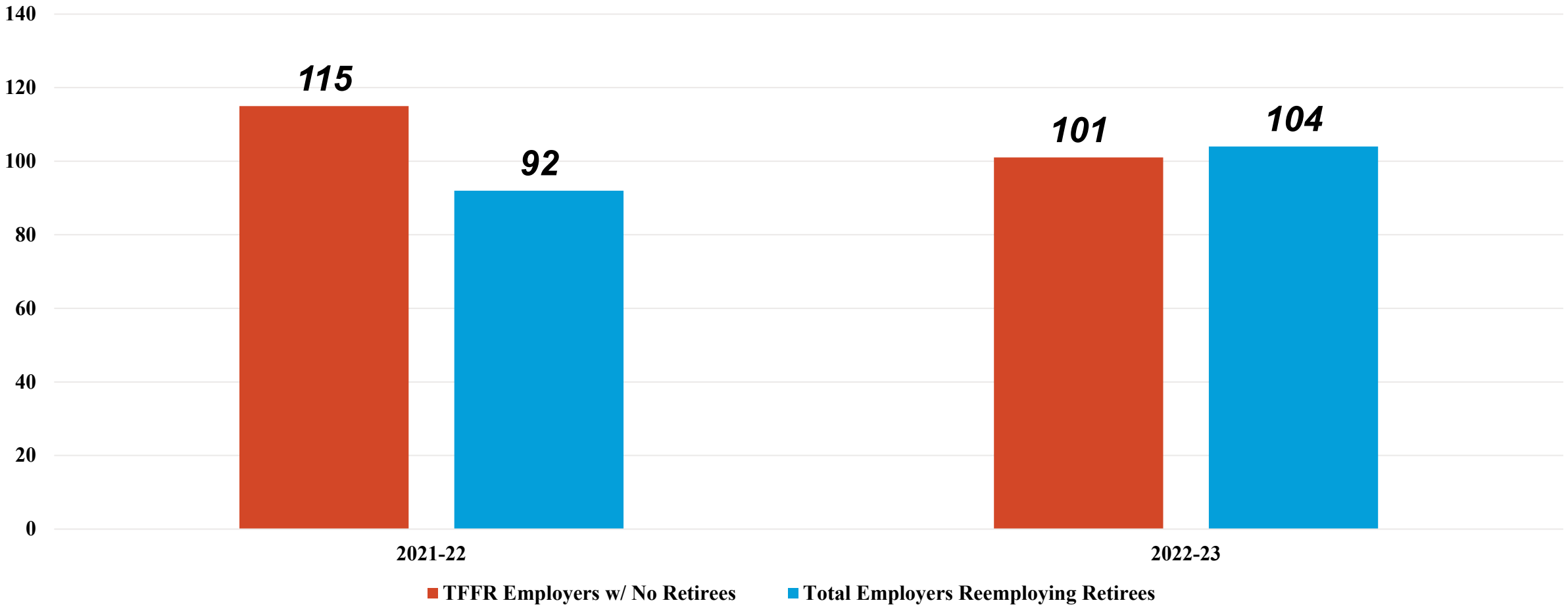
RTT CSA by Subject Area FY2022 vs. FY2023



RTT General by Subject Area FY2022 vs. FY2023

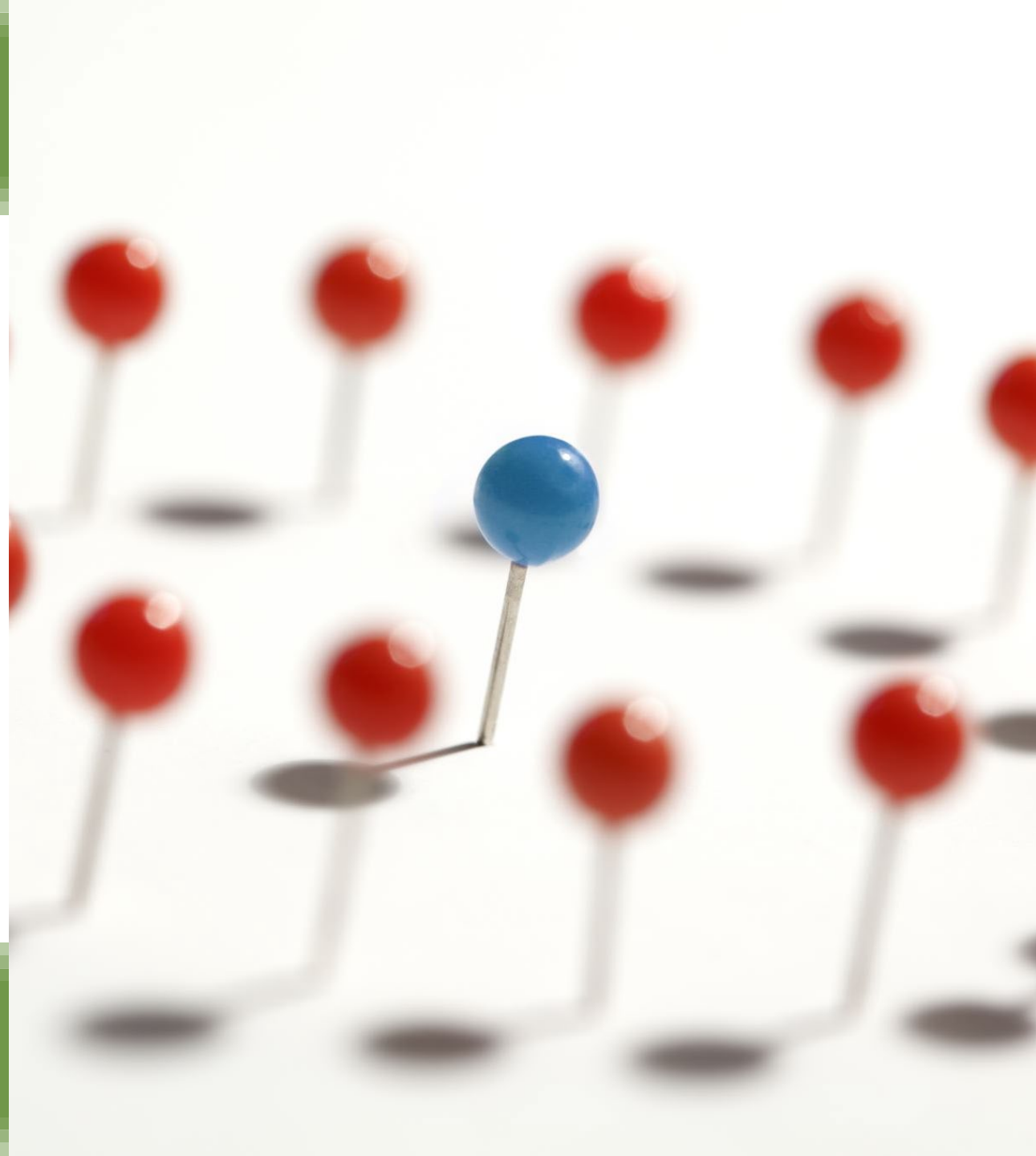


Employer Participation in RTT FY2022 vs. FY2023



REPORT TAKEAWAYS

- Overall, fewer retirees are returning to the classroom since peaking in 2019
- Those opting for suspend and recalc are declining, time will tell if HB1219 can help reverse that
- RTT in critical shortage areas is improving, while still below highs of 2017
- RTT under general rule continues declines started in 2020
- Most RTT teachers are earning less than $30k per year under contracts
- Contracts of more than 700 hours increased significantly from FY2022 to FY2023
- Sizable decline in administration RTT from FY2022 to FY2023



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MEMORANDUM

TO: **TFFR Board**
FROM: **Sara Seiler, Supervisor of Internal Audit**
DATE: **November 15, 2023**
RE: **Internal Audit Activities Quarterly Update**

The SIB Audit Committee met on November 14, 2023. The SIB Audit Committee reviewed the first quarter audit activities and update on current audit activities.

The following was presented:

1. June 30, 2023 Fiscal Year Financial Statement Audit
    a. 2023 Financial Statement Audit Results
        i. Unmodified "clean" opinion
        ii. No material weaknesses were identified.
        iii. No significant deficiencies were identified.
    b. GASB 68 Schedule Audit
        i. Tested 12 separate employers, 125 total employees tested – no findings.
        ii. Expected to issue final report by December 2023.
2. Charters
    a. Reviewed Internal Audit and Audit Committee charter, recommendations will be coming to the SIB in February 2024.
3. Internal Audit Maturity Development
    a. Reviewed and approved RFP to be issued.
        i. A special Audit Committee meeting will be held in January 2024 for presentation from finalists.
        ii. Tentative start date is February 2024
    b. Approved proposed workplan for IA development.

The following link has the committee materials that were presented for your reference:

https://www.rio.nd.gov/sites/www/files/documents/PDFs/SIB%20Audit/Board/Materials/sibauditmat20231114.pdf

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MEMORANDUM

TO: **TFFR Board of Trustees**
FROM: **Chad Roberts, DED/CRO**
DATE: **October 26, 2023**
RE: **TFFR Ends Report – 1st Quarter ending September 30, 2023**

This report highlights exceptions to the normal operating conditions of the TFFR program for the period spanning July 1, 2023, through September 30, 2023.

TFFR staff and the PAS vendor completed pilot 3 of the pension system design phase in July of 2023. Pilot 4, the last phase of design was begun in July and is expected to be complete in October of 2023.

Madelynn Nelson, TFFR accounting and business intern for the summer, completed her internship on August 18, 2023.

The TFFR program transitioned from the former actuary, Segal, to the newly selected actuary, GRS, in July. A replication of the FY2022 actuarial report was completed by GRS and the valuation for FY2023 has begun.

The TFFR Retirement Programs Manager and the Communications and Outreach Director staffed a booth at the Governor's Summit on Innovative Education in West Fargo on August 7, 2023.

The TFFR program resumed the publication of an active member newsletter for the first time in three years. The newsletter was sent out electronically using the GovDelivery system in late September. The newsletter will be produced semi-annually.

A Retirement Specialist left the agency in September of 2023 for another opportunity. An internal candidate was promoted into the position from a temporary support position.

Scott Evanoff, a retired teacher from Minot, was appointed by Governor Burgum to fill the TFFR Trustee seat vacated by Mel Olson who stepped down effective June 30, 2023.

Board Action Requested: Board acceptance

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MEMORANDUM

TO: **SIB**
FROM: **Jan Murtha, Executive Director**
DATE: **November 9, 2023**
RE: **Executive Limitations**

Ms. Murtha will provide a verbal update at the meeting on staff relations and strategic planning. Including updates on the following topics:

I. Strategic Planning

RIO executive team members attended the Judicial, Executive, and Legislative (JEL) meeting on October 31, 2023. Information relating to the Governor's expectations regarding the content of strategy review sessions and timeline was provided. RIO staff will begin the strategic planning process in December with the intent to share an updated strategic plan with the Governance and Policy Review committees of both the SIB and TFFR Board in February and the full boards in March. To facilitate the strategic planning process, board and committee members will be sent a brief survey following the November board meetings.

II. New Board & Committee Member Update

Staff proposes that the next in person onboarding meeting be scheduled for Friday, December 15, 2023, at 9:00am in the WSI Board room. A Teams link will be provided for those unable to attend in person. This training would occur at the time normally reserved for the SIB meeting, however, historically the SIB has only met in December when an unanticipated issue has arisen. At this time there is not a need for a regular December meeting, therefore staff proposes the time be utilized for training. Staff has created a survey tool for onboarding sessions that will be sent out after each future session.

III. Retirements/Resignations/FTE's/Temporary Assistance:

Position Title*	**Status**
Retirement Membership Specialist (temporary)	Re-posted. Unable to fill the position.

*Remaining new FTEs related to the Internal Investment program are expected to be posted in 2024.

IV. Current Project Activities/Initiatives:

- **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 continues to vary 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 continues to coordinate with Northern Trust for additional functionality/capabilities.

- **Audit Consultant Report:** Staff has created an Executive Steering committee comprised of the ED, CFO/COO, and IA Supervisor to oversee a project to implement recommendations from Weaver Consulting. A project plan for implementing the recommendations will be provided to the Audit Committee in November.

- **Compensation Study RFP:** An RFP for a Compensation Study was issued for consultant services necessary to prepare and present an incentive compensation plan for approval to the Board and develop compensation goals for agency positions. Staff finalized the contract and conducted a kick-off meeting. A final presentation will be made to both the ERCC and full SIB in February.

- **Investment Program Software Solutions:** NDIT has determined that the investment software solution to provide the necessary infrastructure for internal investment management qualifies as a large IT project. State procurement has determined that RIO's exemption from procurement processes does not apply to this project. RIO staff is working with NDIT and procurement through their process, including the creation of an executive steering committee (ESC), and project charter. The ESC is tentatively scheduled to meet for the first time by the end of November.

V. Board & Committee Presentations October 28, 2023 through November 17, 2023.

Staff attended/provided or is scheduled to attend/provide the following presentations to Boards and Committees during the above referenced time period:

- **Board/committee education session – 10/30/23**
- **JEL Leadership meeting – 10/31/23**
- **BND Interim Study Workgroup Discussion – 11/1/23**
- **SIB Investment Committee – 11/7/23**
- **TFFR GPR Committee – 11/7/23**
- **BND Interim Study Steering Committee Discussion – 11/9/23**
- **SIB GPR Committee – 11/9/23**
- **Cash Management Study – 11/13/23**
- **SIB Audit Committee – 11/14/23**
- **Retirement Committee (Legislature) – 11/15/23**
- **Employee Benefits Programs Committee (Legislature) – 11/16/23**
- **TFFR Board meeting – 11/16/23**
- **SIB meeting – 11/17/23**

VI. Awards and 2023 Engagement Survey Results

RIO has received the Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association for fiscal year ended 2022. In addition, the TFFR program has received the Public Pension Standards Award for Funding and Administration from the Public Pension Coordinating Council for fiscal year ended 2023. The awards are included for your reference.

Further, please find following a preview of the 2023 Engagement Survey results for RIO. RIO saw statistically significant increases in five areas with a mean of 4.55 on a 5-point scale.

Board Action Requested: Board acceptance.

Public Pension Coordinating Council

Public Pension Standards Award For Funding and Administration 2023

Presented to

North Dakota Teachers' Fund for Retirement

In recognition of meeting professional standards for
plan funding and administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle
Program Administrator

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

North Dakota Retirement and Investment Office

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

June 30, 2022

Christopher P. Morrill

Executive Director/CEO

Employee Engagement

Q12+ Engagement Survey - trending - Regular staff - October 2023

Oct 16, 2023 - Nov 06, 2023

Reporting Group: Direct | Agency - 19000

GALLUP

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.

ENGAGEMENT MEAN

TRENDED MEAN

Change From Last Mean: 0.13

4.06 | 4.22 | 4.42 | 4.55

MEAN PERCENTILE RANK

83

Database: Gallup Overall

RESPONDENTS

22

ENGAGEMENT INDEX

*

Gallup Q¹² Items

Questions	Respondents	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q00: Overall Satisfaction	22	4.59	4.17	▲+0.42	82	3.88
Q01: Know What's Expected	22	4.55	4.25	▲+0.30	55	4.30
Q02: Materials and Equipment	22	4.64	4.33	▲+0.31	80	4.15
Q03: Opportunity to do Best	21	4.29	4.17	0.12	57	4.04
Q04: Recognition	22	4.41	4.42	-0.01	79	3.52
Q05: Cares About Me	22	4.82	4.92	-0.10	85	4.22
Q06: Development	22	4.64	4.42	▲+0.22	83	3.94
Q07: Opinions Count	21	4.48	4.00	▲+0.48	79	3.69
Q08: Mission/Purpose	22	4.50	4.58	-0.08	73	4.07
Q09: Committed to Quality	22	4.73	4.67	0.06	85	4.06
Q10: Best Friend	21	3.95	3.91	0.04	61	3.33
Q11: Progress	21	4.71	4.58	0.13	83	3.84
Q12: Learn and Grow	22	4.95	4.83	0.12	93	4.06

Gallup Q¹² Items – Trended Details

Questions	Trended Mean	Past Report 3		Past Report 2		Past Report 1		Current Report	
Q00: Overall Satisfaction	3.69 | 4.00 | 4.17 | 4.59	3.69	16	4.00	12	4.17	12	4.59	22
Q01: Know What's Expected	4.06 | 4.08 | 4.25 | 4.55	4.06	16	4.08	12	4.25	12	4.55	22
Q02: Materials and Equipment	4.31 | 4.33 | 4.33 | 4.64	4.31	16	4.33	12	4.33	12	4.64	22
Q03: Opportunity to do Best	4.00 | 3.92 | 4.17 | 4.29	4.00	16	3.92	12	4.17	12	4.29	21
Q04: Recognition	4.06 | 4.17 | 4.42 | 4.41	4.06	16	4.17	12	4.42	12	4.41	22
Q05: Cares About Me	4.19 | 4.58 | 4.92 | 4.82	4.19	16	4.58	12	4.92	12	4.82	22
Q06: Development	4.00 | 4.17 | 4.42 | 4.64	4.00	16	4.17	12	4.42	12	4.64	22
Q07: Opinions Count	3.69 | 4.00 | 4.00 | 4.48	3.69	16	4.00	12	4.00	12	4.48	21
Q08: Mission/Purpose	4.19 | 4.92 | 4.58 | 4.50	4.19	16	4.92	12	4.58	12	4.50	22
Q09: Committed to Quality	4.50 | 4.42 | 4.67 | 4.73	4.50	16	4.42	12	4.67	12	4.73	22
Q10: Best Friend	3.63 | 3.55 | 3.91 | 3.95	3.63	16	3.55	11	3.91	11	3.95	21
Q11: Progress	3.94 | 4.08 | 4.58 | 4.71	3.94	16	4.08	12	4.58	12	4.71	21
Q12: Learn and Grow	4.13 | 4.42 | 4.83 | 4.95	4.13	16	4.42	12	4.83	12	4.95	22

Q¹² Plus - Workplace Demands

Q¹² Plus - Workplace Demands

ENGAGEMENT MEAN

*

TRENDED MEAN

*

MEAN PERCENTILE RANK

*

Database: Gallup Overall

RESPONDENTS

*

Questions	Respondents	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
At work, I am treated with respect.	22	4.68	*	*	73	4.10
My agency cares about my overall wellbeing.	22	4.77	*	*	88	3.81
I have received meaningful feedback in the last week.	22	4.32	*	*	64	3.50

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 MEAN

TRENDED MEAN

Change From Last Mean: +0.30

4.19 | 4.21 | 4.29 | 4.59

MEAN PERCENTILE RANK

68

Database: Gallup Overall

RESPONDENTS

22

Questions	Respondents	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q01: Know What's Expected	22	4.55	4.25	▲+0.30	55	4.30
Q02: Materials and Equipment	22	4.64	4.33	▲+0.31	80	4.15

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.

ENGAGEMENT MEAN

TRENDED MEAN

Change From Last Mean: 0.06

4.06 | 4.21 | 4.48 | 4.54

MEAN PERCENTILE RANK

77

Database: Gallup Overall

RESPONDENTS

22

Questions	Respondents	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q03: Opportunity to do Best	21	4.29	4.17	0.12	57	4.04
Q04: Recognition	22	4.41	4.42	-0.01	79	3.52
Q05: Cares About Me	22	4.82	4.92	-0.10	85	4.22
Q06: Development	22	4.64	4.42	▲+0.22	83	3.94

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.

ENGAGEMENT MEAN

TRENDED MEAN

Change From Last Mean: 0.12

4.00 | 4.22 | 4.29 | 4.41

MEAN PERCENTILE RANK

73

Database: Gallup Overall

RESPONDENTS

22

Questions	Respondents	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q07: Opinions Count	21	4.48	4.00	▲+0.48	79	3.69
Q08: Mission/Purpose	22	4.50	4.58	-0.08	73	4.07
Q09: Committed to Quality	22	4.73	4.67	0.06	85	4.06
Q10: Best Friend	21	3.95	3.91	0.04	61	3.33

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.

ENGAGEMENT MEAN

TRENDED MEAN

Change From Last Mean: 0.12

4.03 | 4.25 | 4.71 | 4.83

MEAN PERCENTILE RANK

91

Database: Gallup Overall

RESPONDENTS

22

Questions	Respondents	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q11: Progress	21	4.71	4.58	0.13	83	3.84
Q12: Learn and Grow	22	4.95	4.83	0.12	93	4.06

Engagement Index

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

ENGAGEMENT INDEX RATIO

*

ENGAGEMENT INDEX

*

Engaged

Employees are highly involved in and enthusiastic about their work and workplace. They are psychological "owners", drive performance, innovation, and move the organization forward.

Not Engaged

Employees are essentially psychologically unattached to their work and company. Because their engagement needs are not being fully met, they're putting time – but not energy or passion – into their work.

Actively Disengaged

Employees aren't just unhappy at work – they are resentful that their needs are not being met and are busy acting out their unhappiness. Every day, these workers potentially undermine what their engaged coworkers accomplish.

Footnotes

Trended Report Details

	Report Name	Date
Current Report	Q12+ Engagement Survey - trending - Regular staff - October 2023	Oct 16, 2023 - Nov 06, 2023
Past Report 1	Q12 Engagement Survey - trending - Regular staff - October 2022	Oct 17, 2022 - Nov 07, 2022
Past Report 2	ND State EE Engagement Survey - trending - Oct. 2021	Oct 18, 2021 - Oct 31, 2021
Past Report 3	North Dakota State Employee Engagement Survey 2020	Nov 30, 2020 - Dec 15, 2020

* - Scores are not available due to data suppression.
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.
Mean Percentile Rank is being calculated against other workgroup scores in the Gallup Overall database.
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

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

*Percent Engaged available when n ≥ 30. All categories available when n ≥ 100.
* - Scores are not available due to data suppression. Respondents can select multiple responses for multi-select questions.

Thank You

NORTH Dakota | Retirement & Investment
Be Legendary.

MEMORANDUM

TO: **TFFR Board**
FROM: **Chad Roberts, DED/CRO**
DATE: **October 24, 2023**
RE: **November 2023 Board Reading Materials**

Submitted for the Board's reading materials for the November 2023 meeting are three articles related to teacher retirement.

Fuchsman, McGee, J. B., & Zamarro, G. (2023). Teachers' willingness to pay for retirement benefits: A national stated preferences experiment. Economics of Education Review, 92, 102349–.

Abstract:
Many states in the U.S. have recently made or are considering changes to their teacher retirement systems. However, little is known about how teachers value various elements of their retirement benefits versus other aspects of their jobs and compensation. To help alleviate this gap, we use a discrete choice stated preferences experiment embedded in a nationally representative survey of teachers to estimate their willingness-to-pay for various retirement plan characteristics and other non-salary job components. We find that, on average, early-career teachers are indifferent between a traditional pension and alternative retirement plan designs. In addition, we find that teachers have stronger preferences around their expected salary replacement in retirement and retirement age than plan type. We also find that teachers' willingness-to-pay for traditional pension plans is less than their willingness-to-pay for many other elements of their compensation, including salary growth, health insurance coverage, and Social Security enrollment.

Winters, M.A. (2017). For teachers, a better kind of pension plan. Phi Delta Kappan, 99(2), 32-36.

Abstract:
Public school teachers deserve a compensation system that puts them on a secure path toward retirement. The severely backloaded structure of today's public school teacher pension systems benefit only a small proportion of entering teachers while putting the rest on an insecure retirement path. But there is a cost-neutral solution to this problem that would benefit most teachers entering public school classrooms today without removing any of the protections from the stock market with which teachers have become accustomed. Teacher pensions could be restructured so that teachers earn retirement wealth in relatively equal intervals throughout their careers. The author calls these Smooth Accrual Defined Benefit plans.

Aldeman, C. (2022). Peaks, cliffs, and valleys: The peculiar incentives of teacher pensions. *Phi Delta Kappan*, *103*(7), 69.

Abstract:
This article helps the reader see the peculiar structures lurking beneath the surface. In Ohio, for example, they found that a typical teacher would need to stay for 25 years to qualify for retirement benefits that were

worth more than what had been contributed on their behalf. If they continued teaching, their benefits would increase rapidly until they reached the state's normal retirement age. After that, their pension wealth would actually start to decline, because every year they continued teaching would be a year they were not collecting a pension.

The authors turned these results into dramatic charts showing the "peaks" and "cliffs" in pension benefits in Ohio, Arkansas, California, and Massachusetts. (Since their original piece came out, I and other researchers have produced similar graphs for many more states).

These graphs helped spur work exploring how well pensions work as an incentive to retain teachers. It turns out that, because the benefits are so back-loaded, they have little effect on the behavior of early- and mid-career teachers, where the majority of turnover happens. Pensions do seem to help retain teachers who are approaching their pension "peak," but few teachers make it to that point.

Debates about pensions may seem wonky or technical, but Costrell and Podgursky's article shows why more people should care about the topic, and why we need to get beyond a gauzy understanding of teacher pensions to understand how well they do — and do not — work for teachers.

Economics of Education Review 92 (2023) 102349

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Teachers' willingness to pay for retirement benefits: A national stated preferences experiment

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ARTICLE INFO

JEL codes:
I20
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Keywords:
Teacher pensions
Stated preferences
Discrete choice experiment

ABSTRACT

Many states in the U.S. have recently made or are considering changes to their teacher retirement systems. However, little is known about how teachers value various elements of their retirement benefits versus other aspects of their jobs and compensation. To help alleviate this gap, we use a discrete choice stated preferences experiment embedded in a nationally representative survey of teachers to estimate their willingness-to-pay for various retirement plan characteristics and other non-salary job components. We find that, on average, early-career teachers are indifferent between a traditional pension and alternative retirement plan designs. In addition, we find that teachers have stronger preferences around their expected salary replacement in retirement and retirement age than plan type. We also find that teachers' willingness-to-pay for traditional pension plans is less than their willingness-to-pay for many other elements of their compensation, including salary growth, health insurance coverage, and Social Security enrollment.

1. Introduction

Retirement benefits are an important part of teachers' compensation packages and millions of retired teachers rely on government-sponsored pension plans for their livelihood. Unfortunately, states and school districts across the United States have not set enough money aside to fully cover the benefits teachers have already earned. Teachers' pensions in the United States are only 72% funded on average and have total unfunded liabilities exceeding $600 billion, a sum that is likely to increase in the coming years as plans adopt more conservative assumptions and grapple with a challenging investment environment (McGee, 2019; Novy-Marx & Rauh, 2011; Public Plans Data, 2020).

Teachers' pension funding shortfalls have resulted in large cost increases and potentially reduced investment in other important areas. Annual per-pupil teacher retirement costs have nearly tripled since 2004, rising from $599 to $1763, and now account for 11.6% of the total per-pupil education expenditures (Costrell, 2022a). Soaring pension costs crowd out other expenditures, leaving less money to pay today's teachers, affecting both take-home salary and benefits (Aldeman, 2016; Anzia, 2020; Backes et al., 2016; Kim et al., 2020; McGee, 2016; Nation, 2018). Unfortunately, pension costs may increase further. Adequate state and local government pension funding would require expenditures to roughly double (Rauh, 2017).

In recent years, many states have changed teachers' retirement benefits in response to rising costs. Most changes to teachers' retirement plans maintain the traditional final-average-salary defined benefit (FAS) design but alter parameters like retirement age, how much teachers earn for each year of work, and how much teachers contribute to the plan. Several states have considered, but relatively few have adopted (e.g., Kansas, Washington, etc.), alternative pension plan designs like defined contribution (DC), cash balance (CB), and hybrid plans that combine elements of two or more models.[2] Benefit changes have disproportionately affected new teachers, sometimes substantially reducing the value of retirement benefits for the next generation of educators.

These changes to teachers' retirement plans have the potential to substantially alter teacher labor markets (e.g., Brown, 2013; Costrell & McGee, 2010). Advocates for traditional FAS pensions contend that benefit reductions and/or plan design changes will harm states' ability to recruit and retain talented teachers (Boivie, 2011, 2017; Bond, 2017). They argue that teachers prefer FAS plans to alternative plans and that traditional pensions are effective workforce management tools that incentivize retention and orderly turnover at known retirement ages.

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[1] These authors contributed equally to this work.
[2] The various plan designs are described more fully in Section 3.

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Available online 5 January 2023

However, when offered alternative plans, a substantial percentage of teachers choose the alternatives, and the evidence on traditional pensions' effectiveness as a workforce management tool is limited and mixed at best (Chingos & West, 2015; Friedberg & Webb, 2005; Goldhaber et al., 2017; Ni et al., 2020b). Additionally, teachers must be aware of and value specific plan features for retirement plans to affect teacher labor markets, but evidence suggests that teachers exhibit limited retirement knowledge (Brown & Weisbenner, 2014; Chan & Stevens, 2008; DeArmond & Goldhaber, 2010; Fuchsman et al., 2021; Gustman & Steinmeier, 1999) and that they have a difficult time accurately valuing retirement benefits (Brown et al., 2017, 2021; Kim, 2020).

Of course, teachers care more broadly about their overall compensation package and job conditions. As a result, policymakers and school leaders must weigh important tradeoffs when making changes. Unfortunately, relatively little is known about how teachers value various features of their retirement plans versus other aspects of their jobs and compensation.

Over the coming years, pension reform will almost certainly continue to be a topic of conversation in state legislatures due to ongoing funding challenges. To inform the tradeoffs that policymakers are likely to face, we designed an experiment to quantify how teachers value various job attributes, including retirement plan design and characteristics. We administered a survey to a nationally representative sample of teachers from the RAND's American Teacher Panel. We embedded a discrete choice stated preferences experiment in this survey.

The design of our experiment closely follows work by Maestas et al. (2018) and Mas & Pallais (2017). We repeatedly asked respondents to choose between two jobs that are the same in every way except they have different randomly assigned salaries and vary on one non-salary characteristic (e.g., retirement plan type, retirement age, Social Security enrollment, etc.). We use respondents' choices to estimate their willingness-to-pay for specific job characteristics. We explore potential heterogeneity in preferences based on respondents' teaching experience, cognitive ability, conscientiousness, financial literacy, risk tolerance, and teachers' self-reported probability of leaving the profession within five years.[3]

Our results indicate that early-career teachers do not have a strong preference for a specific retirement plan type, but that teachers' willingness-to-pay for traditional pensions over alternative plans might increase with experience. However, we also find that, on average, teachers have stronger preferences around their expected salary replacement in retirement and retirement age than plan type. Respondents also valued participation in traditional pension plans less than many other elements of their compensation, including salary growth, health insurance coverage, and Social Security enrollment. Additionally, we find that teachers with higher cognitive ability, higher financial literacy, and lower levels of risk tolerance are willing to pay more for FAS plans.

These findings make three key contributions to the literature. First, our nationally representative stated preferences experiment allows us to quantify teachers' preferences for various job characteristics, including retirement plan design, in dollar terms. While others have asked teachers about their preferences around retirement plans (DeArmond & Goldhaber, 2010; Johnston, 2021), we are not aware of any prior research that estimates willingness to pay using a nationally representative sample. Second, we are the first to estimate teachers' preferences around CB plans, which several states have considered and Kansas recently adopted for new hires (Costrell, 2022b).

Finally, we estimate preferences for a variety of job conditions across several potential values. While others infer preferences for deferred versus current compensation given a real-world policy change (Biasi, 2019; Fitzpatrick, 2015; Goldhaber & Holden, 2020), their estimates are limited by the specifics of the choice offered to workers, which constrains their utility for informing new retirement policy. Our design is more flexible, allowing us to compare a wider variety of retirement plan features and other job characteristics. We cannot, however, test if teachers' stated preferences from our experiment would match their revealed preferences.

The rest of this paper is organized into six sections. The next section provides background on teacher retirement plans and teachers' preferences around retirement benefits. Section 3 characterizes our survey and RAND's American Teacher Panel. In Section 4, we develop our stated preferences experiment. Section 5 describes our econometric approach to estimating teachers' willingness-to-pay for job conditions. The results of our stated preferences experiment are in Section 6. We conclude with policy implications in Section 7.

2. Background

Our experiment aims to compare teachers' relative valuation of different retirement plan types and features to their valuation of other aspects of their jobs and compensation. Given that the plan type choice features prominently both in our experiment and in public policy, this section discusses the common retirement plan types that teachers participate in and that we offer a choice between in our survey, highlighting the fundamental differences between designs. We then summarize the existing evidence on teachers' preferences around retirement.

2.1. Teacher retirement plan overview

Teachers participate in three common retirement plan types: FAS, DC, and CB.[4] Each of these plan types can be designed to be cost equivalent and can incorporate many similar features (e.g., annuities, guarantees, risk sharing, withdrawal rules, etc.). The primary differences between plan types are (1) how investment risk is distributed and (2) how teachers earn benefits across their careers.[5] We try to isolate these primary plan type differences in our experiment. The remainder of this section describes the fundamental features of each plan type in more detail.

The vast majority of teachers participate in FAS retirement plans that base benefits on years of service and end-of-career salary (U.S. Bureau of Labor Statistics, 2019).[6] As noted above, these plans have proven challenging to manage in a fiscally sustainable way, leading to rising costs and multiple rounds of benefit changes for teachers. However, they may still be valuable if they offer positive labor market effects.

Under FAS systems, teachers are eligible to receive a set annual benefit for the remainder of their life once they reach the plan's retirement eligibility thresholds, which are generally defined in terms of age and years of service. A teacher's annual retirement benefit is determined by first multiplying their years of service in the system at retirement by the plan's benefit multiplier to get their *replacement rate* (i.e., the percentage of their pre-retirement salary that their benefit will replace). To calculate a teacher's annual benefit, their replacement rate is multiplied by their average salary over their last few years in the classroom.

Benefits under FAS plans are typically backloaded, meaning teachers

[3] Both cognitive ability and conscientiousness serve as proxies for teacher quality (Cheng & Zamarro, 2018; Hanushek et al., 2018).

[4] Some states offer choices between plan types and/or hybrids of these plan types.

[5] These primary plan type differences are reflected in the definitions promulgated by the United States Internal Revenue Service and Department of Labor. For a more detailed discussion of cash balance plans see Elliott and Moore (2000) and Pew (2014). For an analysis of the only CB plan to be the primary state retirement plan for teachers see Costrell (2022b).

[6] Teachers' end-of-career salaries, or final average salaries, are typically the teachers' average salary over the last 3 to 5 years of teachers' careers.

earn relatively meager benefits throughout much of their careers, and then the value of those benefits increases dramatically as they approach retirement eligibility. As a result of backloading, pension accruals make up a large share of highly-experienced teachers' total annual compensation (McGee & Winters, 2017). While FAS plans work well for teachers who spend a full career in a single retirement system (e.g. in a single state), because of their backloaded nature, they often leave teachers in a retirement insecure position for much of their careers (Aldeman & Johnson, 2015). FAS plans also create strong incentives to work until retirement eligibility and then to leave the classroom. These incentives are blunt and are not always aligned with schools' labor market needs or individual teachers' desire to leave before or work after retirement eligibility (Costrell & Podgursky, 2009).

DC and CB plans are often considered as alternatives to FAS plans. DC plans, such as private sector 401(k) plans, base benefits on how much money has accrued in individual accounts from employer and employee contributions and investment returns. CB plans are a type of defined benefit plan where benefits accrue like a DC plan but that offers a minimum guaranteed retirement benefit.

Both alternatives place more direct investment risk on participating teachers. DC plans generally place the most investment risk on employees, while CB plans often offer a middle ground by providing a minimum guarantee. FAS plans have similar investment risks, but their associated costs are only born by teachers indirectly through crowd-out effects on salary and job conditions and reduced retirement benefits for young and new teachers. The alternative plans, because they tie benefits more closely to investment returns, generally reduce government cost uncertainty even when they include a minimum investment return guarantee (Costrell, 2019; Costrell & Podgursky, 2009).

Both DC and CB plans offer more even benefit accrual across teachers' careers, albeit with somewhat lower maximum benefit levels for full-career teachers if the plans are cost-equivalent. The backloaded nature of FAS plans is risky for teachers because, if they do not work a full career under a single system, they are often left with meager savings, placing them in a retirement insecure position. Theoretical evidence suggests that teachers, especially early-career teachers, may prefer earning benefits more evenly across their careers to limit the risks associated with moving between systems or leaving the profession before reaching retirement age (McGee & Winters, 2019).

2.2. Preferences around retirement benefits

Although we are not the first to estimate retirement preferences using survey methodology (e.g., DeArmond & Goldhaber, 2010; Horng, 2009; Johnson et al., 2012; Johnston, 2021; Ladd, 2011; Viano et al., 2019), the literature on teachers' preferences around retirement benefits is more limited. Studies on the topic have investigated preferences around different retirement plan types, teachers' relative valuation of retirement benefits versus other aspects of their jobs and compensation, and teachers' valuation of deferred compensation versus current compensation.

Two studies evaluate teachers' revealed preferences when given a choice between retirement plan types in Florida and Washington (Chingos & West, 2015; Goldhaber & Grout, 2016). Florida offers teachers a choice between a FAS plan and a DC plan, while Washington offers a choice between a FAS plan and a hybrid FAS/DC plan. Both studies found that a substantial proportion of teachers chose the alternative plan designs, and they also provide evidence that choosing an alternative plan design is positively related to teacher effectiveness.

Two additional studies used surveys to investigate teachers' preferences around retirement plan design, finding that teachers, particularly younger teachers, may prefer DC plans to FAS plans. Using a survey in Washington, DeArmond & Goldhaber (2010) find that teachers would prefer to invest an extra 10% of their current pay into DC plans rather than FAS plans and that this preference was larger for teachers with more experience.

Johnston (2021) estimates teachers' willingness-to-pay in a single school district outside of Houston, TX, using a discrete choice experiment similar to the one employed in this paper. He finds that teachers are willing to pay more for DC plans, higher replacement rates, lower health insurance premiums, and smaller class sizes. Willingness-to-pay estimates for this Houston-area school district indicate that teachers would equate switching from a FAS plan to a DC plan with a $900 raise. Johnston does not find that experience mediates this preference.

Recent research has also found that teachers, similar to other workers, value current pay more than deferred retirement compensation (Biasi, 2019; Fitzpatrick, 2015; Goldhaber & Holden, 2020; Ni et al., 2020a).[7] That is, teachers do not value deferred retirement compensation on par with its present value. This raises the prospect that there could be misalignment between the compensation package offered to teachers and their preferences, which has implications for teacher quality. This line of research, however, is limited by the specifics of the real-world choices and policy changes used to estimate teacher preferences and does not speak to the broader tradeoffs policymakers face around other job characteristics (e.g., healthcare coverage, class size, etc.). Regardless, these findings motivate the structure of our experiment which allows us to estimate teachers' valuation of various job characteristics, including retirement plan design, in terms of current compensation via a willingness-to-pay measure.

3. Data

We developed an approximately 15 min survey focusing on teachers' knowledge of, preparation for, and preferences around retirement. We adapted questions from two of the 2018 Health and Retirement Study survey modules: The Retirement and Pension Plan module and the Retirement and Social Security module. The survey also included previously validated scales designed to measure financial literacy, personality, numeracy, and risk tolerance (Frederick, 2005; John et al., 1991; Kimball et al., 2008; Lipkus et al., 2001; Lusardi & Mitchell, 2011; Toplak et al., 2014). The next section will describe our stated preferences experiment in greater detail.

We collected data from RAND's nationally representative American Teacher Panel (ATP); survey administration was between February 10 and March 16, 2020 (RAND American Educator Panels, 2020). The ATP includes an estimated 29,000 active respondents teaching in public K-12 schools.[8] For our study, we invited a total of 9904 teachers and obtained a response rate of 55%.[9] Our data include both a nationally representative sample of teachers as well as samples representative of the following seven jurisdictions: Arkansas, California, Florida, Georgia, New York State, New York City, and Texas. The national sample was selected using probability sampling to facilitate the construction of a representative sample. The final sample included 5464 completed surveys. From these, we excluded respondents from our analytical sample if they reported extreme values for earnings, birth years, or age when entering the teaching workforce. Additionally, we exclude teachers with

[7] How much teacher value current compensation over deferred retirement compensation remains a point of contention in the literature (see Ni et al., 2020a for a discussion).

[8] Teachers are recruited to the ATP using probabilistic sampling methods. The ATP drew a random sample of schools and purchased schools' rosters of teachers from a vendor before randomly sampling teachers within those schools to invite to participate in the panel (Robbins et al., 2018; Robbins & Grant, 2020). The panel changes over time as members are replaced because they leave the profession or are otherwise unreachable.

[9] Respondents were compensated for their time at a rate of $1 per minute of the expected time to complete the survey for a total of $15. The response rate for our survey did not vary substantially from other RAND surveys administered one year prior (e.g., W. R. Johnston et al., 2019; Prado Tuma et al., 2020). The response rate among current teachers is likely higher than 55 percent as many of the non-respondents may have previously left the profession.

Table 1
Sample descriptive statistics.

	Mean	Std. Dev.	Min.	Max.	NCES Mean [a]
Female	0.77				0.76
Hispanic	0.08				0.09
White	0.83				0.79
Black	0.08				0.07
Asian	0.03				0.02
Age	42.93	9.63	24	65	
Under 30	0.07				0.15
30 to 39	0.33				0.28
40 to 49	0.33				0.29
50 to 59	0.21				0.21
60 and over	0.06				0.03
Total Experience	14.69	7.46	2	43	
Less than 3	0.00				0.09
3 to 9	0.30				0.28
10 to 20	0.47				0.30
Over 20	0.22				0.30
Experience in State	13.71	7.15	0	30	
Salary	62,911	22,122	0	157,000	57,900
Elementary School	0.44				0.50
Secondary School	0.56				0.50
Numerical Ability Score	4.49	1.77	0	8	
Cognitive Reflection Test Score	1.76	1.53	0	5	
Conscientiousness	4.13	0.55	1.78	5	
Financial Literacy Questions Correct					
0	0.03				
1	0.14				
2	0.31				
3	0.52				
Risk Tolerance					
Potential Cut < 0.10	0.33				
0.10 < Potential Cut < 0.20	0.33				
0.20 < Potential Cut < 0.33	0.24				
0.33 < Potential Cut < 0.50	0.05				
0.50 < Potential Cut < 0.75	0.03				
Potential Cut > 0.75	0.02				
Self-Reported 5-Year Exit Probability	22.04	33.74	0	100	
P(Exit) = 0	0.54				
0 < P(Exit) < 0.5	0.20				
P(Exit) = 0.5	0.10				
0.5 < P(Exit) < 1	0.08				
P(Exit) = 1	0.08				

[a] Source: Hussar et al., (2020). *The Condition of Education 2020* (NCES 2020-144). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

greater than 30 years of in-state experience or who were older than age 65 since these teachers are likely already retirement eligible.[10] With these restrictions in place and accounting for non-response to the discrete choice experiment questions, our analytic sample consisted of 4817 respondents.

While the ATP is representative of the current teaching population, it may not necessarily be representative of all those who have ever entered the teaching profession because of early- and mid-career attrition patterns. Some teachers leave teaching and fall out of the ATP because of factors related to their current job and compensation, and those remaining in teaching for longer likely have preferences that are tilted toward existing job conditions. Our willingness-to-pay estimates should be interpreted with this "survivorship" phenomenon in mind.[11] For this reason, we emphasize results for early-career teachers.

3.1. Mediator scales

Our survey includes several previously validated scales that we use to explore potential heterogeneity in respondents' willingness-to-pay for different job characteristics. Those measures include cognitive ability, conscientiousness, financial literacy, and risk tolerance, which are all associated with retirement planning (Bajtelsmit & VanDerhei, 1997; Banks & Oldfield, 2007; Horneff et al., 2006; Letkiewicz & Fox, 2014; Lusardi & Mitchell, 2007; Zamarro, 2019). Based on this previous literature, we expect that the strength and direction of respondents' preferences may vary based on their scores on these measures.

Both cognitive ability and conscientiousness serve as proxies for teacher quality (Cheng & Zamarro, 2018; Hanushek et al., 2018) and are also associated with retirement saving (e.g. Banks & Oldfield, 2007; Letkiewicz & Fox, 2014; Zamarro, 2019). We expect higher cognitive ability teachers to remain in teaching longer and more accurately predict their career paths (Goldhaber et al., 2011), allowing these teachers to better know what type of retirement plan would work well for them. Additionally, conscientiousness is associated with lower degrees of burnout (Kim et al., 2019), meaning that highly conscientious teachers could be less likely to exit at earlier ages when FAS plans are disadvantageous (Aldeman & Johnson, 2015).

Given that both cognitive ability and conscientiousness are related to the expected length of a teacher's tenure, we ask respondents to report the probability that they would exit the teaching profession within the next five years. Respondents that know they will be exiting soon might have different preferences across retirement plan types depending on how long they have worked already.

To measure teachers' cognitive ability, we include the 8-item Lipkus Numeracy Scale (Lipkus et al., 2001) and the 5-item Cognitive Reflection Test (Frederick, 2005; Toplak et al., 2014). Correct responses are counted to construct two measures of cognitive ability, which we combine using factor analysis with a varimax (orthogonal) rotation. We retain a single factor where both measures load equally.

Conscientiousness is measured using questions from the 44-item Big 5 inventory for personality traits (John et al., 1991).[12] Responses to the Big 5 questions are on a 5-point Likert scale. We average responses to the 9 questions that capture conscientiousness to generate a single measure. Larger values indicate higher levels of cognitive ability or conscientiousness.

We measure financial literacy using a 3-question battery from Lusardi & Mitchell (2011). The 3 questions are related to the financial concepts of compounding interest rates, inflation, and "risk diversification." The questions are multiple-choice, and all include an option for "don't know." We consider "don't know" to be an incorrect response and simply count the number of correct responses for each respondent to construct our financial literacy measure. Correctly responding to these

[10] We excluded 0.35 percent of respondents for reporting earnings over $200,000, 0.37 percent that had potential ages when entering the teaching workforce (age minus total experience) under age 20, 0.04 percent if they reported more experience within their current state of residence than they reported in total, 4.25 percent with in-state experience greater than 30, and 2.25 percent over age 65. Additionally, 4.63 percent of respondents were excluded for non-response to the in-state experience question, 5.31 percent were excluded for non-response to the birthyear question, and 0.02 percent were excluded for non-response to the total experience question. Given that many respondents met more than one exclusion criterion, we removed a total of 11.84 percent of the potential sample. Results that relax the age over 65 and in-state experience over 30 restriction, are not substantively different from the results presented in Section 6 and are available upon request.

[11] We also acknowledge that changes to teachers' compensation packages and/or job conditions may change the composition of the workforce by impacting both who is attracted to teaching and attrition patterns.

[12] The Big 5 inventory has been validated in a number of samples (e.g. John et al., 2008; John & Srivastava, 1999).

questions is associated with a higher likelihood of planning for retirement (Lusardi & Mitchell, 2007). Teachers with higher levels of financial literacy are likely to be able to identify which retirement plan type would work best for them.

We also construct a measure of risk tolerance following the work of Kimball et al. (2008). Respondents answer 2 or 3 questions with the same prompt. Respondents are first asked to pick between two jobs: the first job guarantees lifetime income for the family and the second job would have a 50% chance of doubling lifetime income and a 50% chance of cutting it by a *third*. Respondents picking the job with a guaranteed lifetime income are then asked if they would take the job guaranteeing lifetime income again or a job where the potential cut to lifetime income is 20%. Those that choose the guaranteed lifetime income a second time are asked to pick between the job with the guaranteed income and a job where the potential cut is 10%.

Conversely, respondents initially indicating that they would prefer the job with a potential income cut of one-third are offered the same guaranteed income as previously, but the second job could result in lifetime income cut by *half*. Those respondents still willing to take the job with a risky lifetime income are then asked to pick between guaranteed income and an uncertain income where the potential cut is 75%.

Based on their responses to this series of questions, respondents fall into one of six categories of risk tolerance. These categories correspond with the highest potential lifetime pay cut that they would risk having the chance of doubling lifetime income: less than 10%, 10%, 20%, 33%, 50%, and 75% or greater.

Given that expected tenure is a likely mediator of teachers' retirement plan preferences, we included a question asking respondents to report the probability that they would exit the teaching profession within the next five years. Respondents that know they will be exiting soon are likely to have different preferences across retirement plan types. For example, those in the early and middle portions of their careers who believe that they will leave within five years may value the additional flexibility provided by alternative plan types, while those who expect to stay longer may prefer the FAS plan.

3.2. Sample descriptive statistics

Table 1 contains descriptive statistics for our analytic sample compared to the overall teacher population.[13] Over 77% of respondents are female. White teachers make up 83% of the sample, while black and Hispanic teachers each comprise 8% of the sample. The average age of our respondents is 43 with a standard deviation of 9.6 years. The age range of our sample is 24 to 65. On average, teachers had a total of 14.7 years of experience and 13.7 years of experience within their current state of residence. Using the average age and average total experience as benchmarks, the average teacher in our sample would have started teaching at age 28. Our sample includes only 11 teachers who report less than three years of experience. The average reported salary is approximately $63,000 with a standard deviation of roughly $22,000. We classify 44% of teachers as teaching in elementary schools and 56% in secondary schools.

Our sample is quite similar to the general teacher population when it comes to sex, race, and age. There are, however, some minor differences. Our sample includes more teachers than the general teacher population who self-identify as white. Young and inexperienced teachers are underrepresented in our sample relative to the general population.[14] Respondents report salaries approximately $5000 greater than the average teacher salary, likely due to the absence of very early-career teachers. Our sample has a greater share of secondary school teachers than the general teaching population. We use probability weights in our analyses to make up for these differences, thus ensuring that our sample remains nationally representative.

Our analytic sample scored in the middle of the cognitive ability measures, frequently reported high levels of conscientiousness, answered 2 or more of the financial literacy questions correctly, and appear relatively risk averse. On average, respondents answered 4.5 of the 8 Lipkus Numeracy questions correctly. Respondents fared worse on the Cognitive Reflections Test answering only 1.8 questions correctly out of 5 on average.

On the 1 to 5 conscientiousness scale, respondents rated themselves as quite conscientious with an average value of 4.13 with a standard deviation of 0.55. Over half of the sample correctly answered all three financial literacy questions, and another 31% of the sample answered only one question incorrectly. One-third of respondents were unwilling to risk even a 10% pay cut to double their lifetime income, while another third of the sample would risk a 10% but not a 20% pay cut. Only a combined 10% of the sample would be willing to risk having their lifetime income reduced by a third or higher.

Teachers in our sample appear quite confident that they will remain in teaching for the next five years. On average, teachers report a 22% chance that they will exit teaching within the next five years with a standard deviation of 33.7 percentage points. However, over half of respondents reported a zero chance that they will exit in the next five years. An additional 20% of respondents reported exit probabilities between 1% and 50%. Approximately 8% of respondents report a 100% chance that they will exit the profession within five years.[15]

4. Stated preferences experiment

We use a discrete choice stated preferences experiment following Maestas et al. (2018) and Mas & Pallais (2017) to understand teachers' preferences concerning various job conditions. Stated preferences experiments, also sometimes called conjoint analysis, originated in marketing but have spread to several other fields (Johnston, 2021). Part of the reason for their growing popularity is their success in predicting actual behavior (for example, see Hainmueller et al., 2015; Wiswall & Zafar, 2018; Wlömert & Eggers, 2016).

In our experiment, we repeatedly provide teachers with two hypothetical job offers and ask them to indicate which job they prefer. Each job has eight conditions that can vary: salary, type of retirement plan, the retirement plan's expected salary replacement rate[16], retirement eligibility age, annual salary growth, class size, health insurance coverage, and Social Security participation[17]. For each hypothetical job offer pair, salary and one other characteristic varies. Respondents are instructed to assume all other job conditions, whether explicitly listed in the job offers or not, are the same.

For each job condition except salary, we chose a baseline value that is either the midpoint of the potential values or the most common real-world value. For example, the baseline value of retirement plan type is FAS, the most common teacher retirement plan type. We do this to ensure that jobs look somewhat similar to what teachers could expect if they were searching for a new job. One of the job offers presented to respondents is always comprised of the baseline values for each non-salary job condition. For the other job offer, we randomly select and vary one of the seven non-salary job conditions and set the remaining six

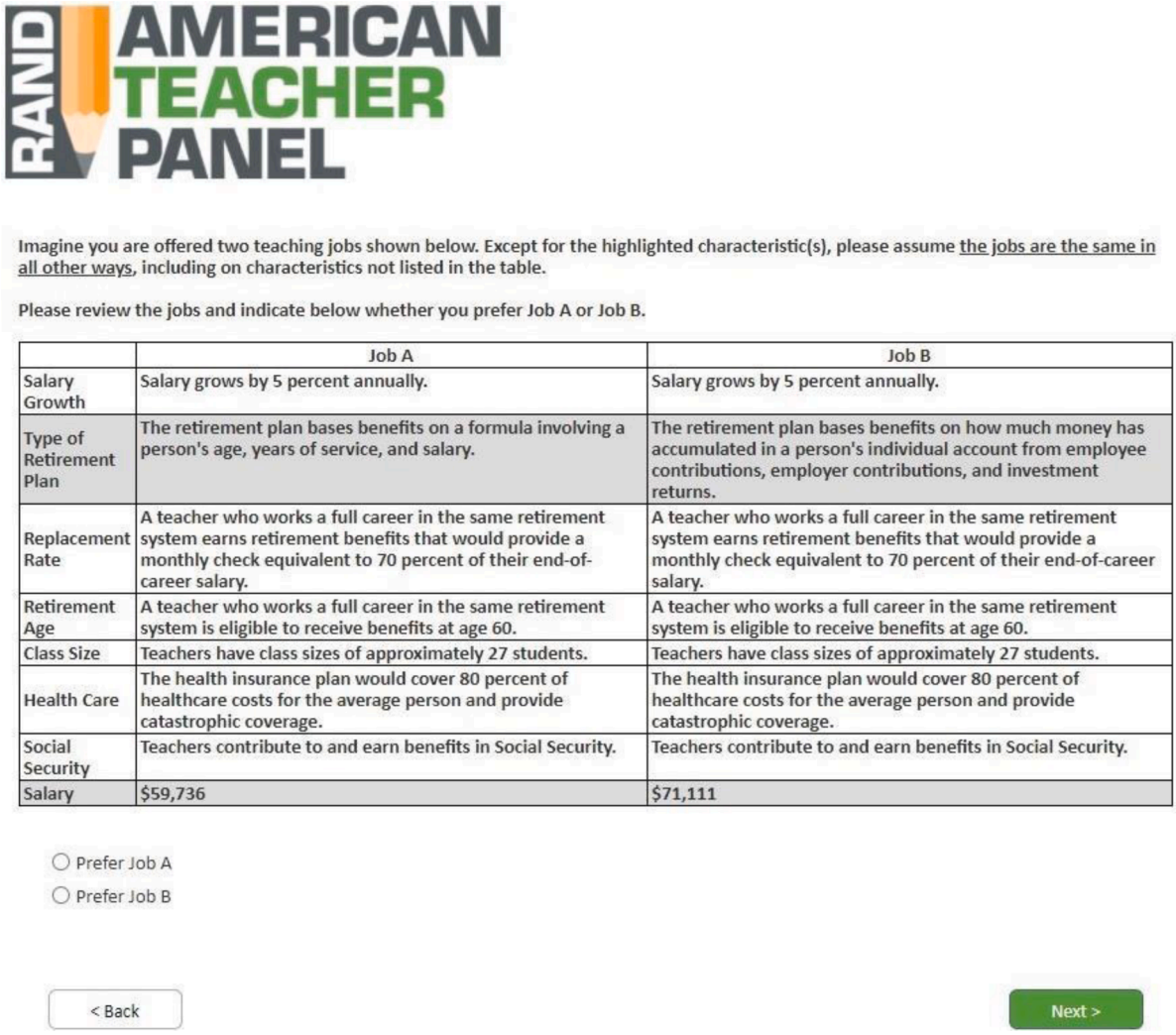
[13] Data for general population statistics come from the National Center for Education Statistics (Hussar et al., 2020).

[14] This difference is likely due to attrition from the profession and the challenges of attracting young and inexperienced teachers to the panel.

[15] On average, respondents reporting 100 percent chance that they will exit within 5 years have 16.43 years of in-state experience.

[16] As explained above, a retiree's replacement rate is the ratio of the retiree's benefit to salary. It is the proportion of salary that benefits "replace." If a retiree earned $75,000 as a teacher, a 70 percent replacement rate would yield annual benefits of $52,500 (75,000*0.70).

[17] Approximately 60 percent of teachers participate in Social Security (Kan & Aldeman, 2014).



	Job A	Job B
Salary Growth	Salary grows by 5 percent annually.	Salary grows by 5 percent annually.
Type of Retirement Plan	The retirement plan bases benefits on a formula involving a person's age, years of service, and salary.	The retirement plan bases benefits on how much money has accumulated in a person's individual account from employee contributions, employer contributions, and investment returns.
Replacement Rate	A teacher who works a full career in the same retirement system earns retirement benefits that would provide a monthly check equivalent to 70 percent of their end-of-career salary.	A teacher who works a full career in the same retirement system earns retirement benefits that would provide a monthly check equivalent to 70 percent of their end-of-career salary.
Retirement Age	A teacher who works a full career in the same retirement system is eligible to receive benefits at age 60.	A teacher who works a full career in the same retirement system is eligible to receive benefits at age 60.
Class Size	Teachers have class sizes of approximately 27 students.	Teachers have class sizes of approximately 27 students.
Health Care	The health insurance plan would cover 80 percent of healthcare costs for the average person and provide catastrophic coverage.	The health insurance plan would cover 80 percent of healthcare costs for the average person and provide catastrophic coverage.
Social Security	Teachers contribute to and earn benefits in Social Security.	Teachers contribute to and earn benefits in Social Security.
Salary	$59,736	$71,111

Fig. 1. Example of two job offers.

conditions equal to their baseline value. Salaries for both jobs are randomly generated deviations from the respondent's reported current salary. Fig. 1 provides an example of how the two hypothetical job offers would have appeared to respondents.

Each respondent was asked to choose between two randomly selected jobs eight times. To supply job offers for the survey, we created a database of 108,000 hypothetical job offer pairs.[18] Job offers presented to respondents are randomly chosen from our database with replacement, which allows for offers to potentially be repeated in the sample. Individual respondents may be asked to choose among job pairs varying the same job condition more than once and may not see offers varying some of the conditions at all.

Offers are calibrated to prevent one job from strictly dominating the other. For example, a job that offers a 73% replacement rate and a $70,000 annual salary would strictly dominate another job with a 70% replacement rate and a $68,000 salary. We assume, other things held equal, that teachers would always choose a job with a higher salary if it also had a higher replacement rate, earlier retirement age, higher salary growth rate, smaller average class size, and additional health insurance. See Appendix A for additional information regarding hypothetical job comparison construction.

For each job condition, Table 2 contains the wording used to present it in the survey, its potential and baseline values, and information about how often it varied in the survey as well as how often each value was selected. Baseline values for each job condition are noted in the potential values column. The number of times that each job condition was randomly selected to be the one that varies in a job offer is provided in parentheses in the job condition column. Each job condition was selected to vary in a job offer between 5727 and 5980 times. The frequency that each job condition value is displayed is in the fourth column. Within each job condition, there is an approximately uniform distribution of display frequencies across condition values.

The final column of Table 2 shows the probability that respondents choose a job with a given job condition value. The most substantial threat to the validity of our experimental design is if certain job characteristics dominate (i.e., are always chosen). For example, if respondents always choose jobs with higher salaries, it will imply that the random deviations applied to reported salaries were too large, and we would get very little information from our experiment. However, we saw substantial variation in respondent choices across condition values, indicating that our survey values were well calibrated to yield useful information.

Respondents' patterns of choosing across various condition values

[18] We arrived at 108,000 hypothetical job comparisons by multiplying the 8 times a respondent would indicate a job preference times the 13,500 potential respondents. Since we sample from the database with replacement, we increased the number of potential respondents beyond the number of teachers we sent the survey to in order to reduce the incidence of repeated hypothetical job comparisons.

Table 2
Job conditions and values.

Job Condition	Condition Wording	Potential Values	Frequency Value Appears	Probability of Choosing Value
Retirement Plan Type (5727)	The retirement plan bases benefits on **[value]**.	a formula involving a person's age, years of service, and salary	baseline	29%
		how much money has accumulated in a person's individual account from employee contributions, employer contributions, and investment returns	2857	72%
		employee contributions, employer contributions, and investment returns with a minimum guarantee	2870	70%
Replacement Rate (5817)	A teacher who works a full career in the same retirement system earns retirement benefits that would provide a monthly check equivalent to **[X] percent** of their end-of-career salary.	60	775	64%
		62	744	64%
		65	755	71%
		67	765	73%
		70	baseline	26%
		73	658	73%
		75	668	78%
		78	691	85%
		80	761	83%
Retirement Age (5743)	A teacher who works a full career in the same retirement system is eligible to receive benefits at **age [X]**.	55	989	78%
		57	934	73%
		60	baseline	33%
		63	963	72%
		65	1002	65%
		67	955	59%
		69	900	52%
Salary Growth (5809)	Salary grows by **[X] percent** annually.	2	1458	62%
		3.5	1450	66%
		5	baseline	26%
		6.5	1433	82%
		8	1467	85%
Class Size (5917)	Teachers have class sizes of approximately **[X] students**.	−3	2912	65%
		0	baseline	28%
		+3	3005	78%
Health Insurance (5885)	The health insurance plan would cover **[X]** percent of healthcare costs for the average person and provide **[Y]**.	X = 60, Y = catastrophic coverage	2947	62%
		X = 80, Y = catastrophic coverage	baseline	28%
		X = 80, Y = catastrophic coverage, dental, and optical	2938	82%
Social Security (5980)	Teachers **[value]** Social Security.	contribute to and earn benefits in	baseline	38%
		do not contribute to or earn benefits in	5980	62%

Notes: Bolded text in the condition wording column is also bolded in the survey to emphasize key elements.

also matched our expectations. For job conditions with ordered condition values, we expected respondents to be more likely to choose jobs with more favorable values, and that was the observed choosing pattern. For example, respondents chose higher annual salary growth more often as the values increased. Teachers chose job offers with a 2% annual salary growth 62% of the time and jobs with 8% annual salary growth 85% of the time.

4.1. Retirement plan choice

Given the complexity of retirement plans, it is useful to describe in more detail the plan type choice we present to respondents and provide justification for the presentation choices we made. As noted above, we selected baseline job characteristics to be the most commonly available to teachers. Eighty percent of teachers in the U.S. participate in DB plans, and the vast majority of those teachers are in FAS plans (U.S. Bureau of Labor Statistics, 2020). Therefore, in our experiment, the baseline retirement plan is a FAS plan.[19]

Our stated preferences experiment offered respondents a choice between the baseline FAS plan and one of two alternative plan designs, DC and CB. It is impossible to describe all potential differences in plan design in a survey, so we chose to focus on the two primary differences between the three plan types: (1) how investment risk is distributed and (2) how teachers earn benefits across their careers. We sought to make the survey language as clear as possible to isolate these primary plan type differences.

As a result, we chose to describe the three retirement plan types without using common labels (e.g., defined benefit or defined contribution). We made this choice for two reasons. First, we wanted to isolate teachers' preferences around how these retirement plans work without any bias due to perceptions attached to plan labels.[20]

Second, teachers may not be familiar with customary plan labels, especially DC and CB, or their implications for retirement benefits because these are not commonly used in their state's plan literature and educational materials. Retirement systems often refer to FAS plans as "pensions" or "defined benefit" plans and systems use a variety of terms to refer to DC and CB plans including "investment plan" and "guaranteed return plan," respectively.[21] The lack of consistency in plan type terminology could lead to respondent confusion and noisy results that do not necessarily reflect teachers' plan type preferences.

Instead, we described how retirement benefits are determined under each plan type as simply as possible to focus respondents on the key features of each design. Below are how the different retirement plan types were presented to respondents. We indicate the plan type in brackets, but this term was not shown to respondents.

"The retirement plan bases benefits on:

[19] The present value of benefits varies with salary, which results in different levels of retirement benefits between offers even when the plan type, retirement age, and replacement rate are all the same. The baseline job offer should still be comparable across questions since we anchor salary offers to respondents' reported salaries.

[20] For example, messaging by advocacy organizations and trade groups like the National Public Pension Coalition and National Conference on Public Employee Retirement Systems has the potential to bias teachers for or against certain retirement plan labels.

[21] For example, in Florida, teachers are given the choice between a FAS plan and a DC plan, but these plans are called "pension" and "investment" plans, respectively, in the accompanying materials. Kansas refers to its CB plan as "KPERS 3." The same is true in Washington state where TRS2 is a FAS plan and TRS3 is a hybrid plan that offers both a FAS and DC plan.

- [FAS] a formula involving a person's age, years of service, and salary.
- [DC] how much money has accumulated in a person's individual account from employee contributions, employer contributions, and investment returns.
- [CB] employee contributions, employer contributions, and investment returns with a minimum guarantee."

As noted above, the baseline job offer included an expected replacement rate of 70% and a retirement age of 60, which is representative of the typical teachers' retirement plan. When plan type varies across hypothetical job offers, the replacement rate and retirement age were held constant. The result is that respondents expect to be eligible to retire at the same age and at that point in their career, expect to have earned retirement benefits that replace the same amount of salary regardless of which plan type they choose.

By holding expected replacement rates and retirement ages constant across plan types, we eliminate potential contamination of our estimates from these features. Our goal is to isolate the primary differences in the way the retirement plans function, namely how benefits accrue and how they distribute risk (Aldeman & Johnson, 2015; Costrell & Podgursky, 2009).

Given that respondents are current teachers who have already accrued retirement benefits, it is useful to consider how they might interpret the choice between retirement plans. A long history of legal rulings makes it practically impossible to make changes to accrued benefits and, in some states, future benefit accruals for current teachers (Biggs et al., 2022; Monahan, 2010). It is, therefore, unlikely that respondents believe that they must give up their accrued benefits to switch to an alternative plan type. It is much more likely that they understand the choice of retirement plan type only applies to future benefit accruals.[22] In this context, our willingness to pay estimates can be thought of as the raises that would be necessary to persuade teachers to opt into an alternative retirement plan.

5. Econometric approach

The raw proportions of respondents choosing specific job conditions, presented above, give us an overall idea of which job attributes teachers prefer, but it does not tell us how much teachers prefer those job attributes. Even though we force respondents to choose jobs at the expense of higher salaries, the simple proportions mask heterogeneity in the gap between the two salary offers. Following the approach of Maestas et al. (2018), we estimate teachers' willingness-to-pay for the seven job conditions previously described.

We assume that teachers choose between a set of jobs based on a latent utility model where unobserved utility is a linear and additively separable function of the jobs' non-salary conditions, the jobs' corresponding salary, and individual characteristics:

$$U_{ijt} = \alpha + X'_{ijt}\beta + \delta \ln w_{ijt} + \lambda_i + \varepsilon_{ijt} \quad (1)$$

where U_{ijt} is individual i's latent utility for job choice j in the individual's job choice from set t. While teachers may weigh several job offers in job choice set t, our experiment restricts the set to only two jobs. Within choice sets, only salary and one other job condition vary. Non-salary job conditions are X'_{ijt} and w_{ijt} is the salary. We use the natural logarithm of salary to facilitate interpretation of our effects as percent changes and since the salary offers in our experiment are tied to teachers' reported salaries and there is substantial heterogeneity in salaries across our national sample and within states due to salary schedules. The vector λ_i contains an individual's observable characteristics that impact the latent utility. We assume that ε_{ijt} is an Extreme Value Type I random variable.

We model the probability that an individual chooses job choice j over job choice k in choice set t as:

$$P(U_{ijt} > U_{ikt}) = \Lambda\left[\left(X'_{ijt} - X'_{ikt}\right)\beta + \delta\left(\ln w_{ijt} - \ln w_{ikt}\right)\right] \quad (2)$$

where $\Lambda[\cdot]$ denotes the cumulative logistic distribution.[23] In practice, the dependent variable takes value 1 if individual i selected job j in job choice set t (i.e., latent utility for job j is greater than latent utility for job k) and takes value 0 if otherwise. The independent variables in Eq. (2) represent the differences in job offers.[24] We identify β and δ in Eq. (2) since each non-salary job condition and salary is randomly selected.[25]

Consistent estimation of β and δ requires that differences in job conditions and salaries across job pairs are unrelated to omitted variables. Despite our randomization, there could be other state-level unobserved differences that are associated with the jobs that our respondents select because retirement plans are not uniform across states. For example, most states use FAS plans, which may lead teachers to develop a preference for these plans owing to their familiarity with how these plans function. Additionally, replacement rates, retirement ages, and many other pension factors vary across states. For example, some states may allow teachers to retire at age 55 while other states may defer retirement to age 60. A teacher in the state with retirement eligibility at age 55 would likely value an increase in the retirement age from 60 to 63 differently than a teacher in the age 60 retirement eligibility age state. To ensure that state-level differences do not affect our estimates of β and δ, we include state fixed effects.

Preferences may also be dynamic based on how many job choices respondents have already made. It is possible that it took respondents a question or two before becoming comfortable with the module's design and that attention waned toward the end of the module. Additionally, preferences may vary based on which characteristics have varied in previous job offers. For example, respondents may be willing to pay to retire at age 57, but the strength of that preference may differ if respondents have seen a previous job offer with a retirement age of 55. To address these types of potential bias, we also include question fixed effects.

Consider a non-salary job condition c and the marginal utilities for this job condition, β^c, and salary, δ, identified in Eq. (2). For individual i, job offer j in choice set t that included job condition c has expected utility $E(U_{ijt}) = \beta^c + \delta \ln w_{ijt}$ and job offer k in the same choice set that does not have the job condition has expected utility $E(U_{ikt}) = \delta \ln w_{ikt}$. An individual is indifferent between the two jobs when we fix the salary at w and subtract the individual's willingness-to-pay for the job condition:

[22] The magnitude of the willingness-to-pay estimates presented in Table 4 provides evidence for this interpretation. It is unlikely that late-career teachers would be willing to give up substantial accrued benefits, often equal to hundreds of thousands of dollars, for a 5.7 percent pay increase.

[23] We suppress individual characteristics in Eq. (2) since they do not vary across jobs within a job choice set. In practice, this means that the individual characteristics that would impact the latent utility for one job in the job choice set would also have to impact the latent utility for the other job in the choice set.

[24] Note that the explanatory variables are differences in job conditions and not the levels. As we explain when describing the stated preferences experiment, we chose job condition values to be in a realistic range if not the most common job conditions. The relevant variable for policy and our analysis is the difference in job conditions within the choice set. For example, it is irrelevant to us if a respondent chose a job offering a replacement rate of 75 percent instead of 70 percent or chose 70 percent over 65 percent: the relevant factor is that the respondent desired the additional 5 percentage points of replacement rate.

[25] Preferences are assumed to be linear in terms of job characteristics. Given the range of values for the job characteristics, we do not believe this is a very restrictive assumption. Moreover, the range of potential job offers for a potential job characteristic is smaller than the full range for each job characteristic.

Table 3
Mean willingness-to-pay for different retirement plan types.

	WTP (1)	WTP (2)	WTP (3)	WTP (4)
DC rather than FAS	−0.032***	−0.027***	−0.025***	−0.025***
	(0.005)	(0.005)	(0.005)	(0.005)
CB rather than FAS	−0.026***	−0.020***	−0.019***	−0.019***
	(0.005)	(0.005)	(0.005)	(0.005)
Question FE		X		X
State FE			X	X
N Teachers	4817	4817	4817	4817
N	38,531	38,531	38,531	38,531

Notes: Willingness-to-pay estimates from Eq. (4) based on results from logistic regression of the model in Eq. (2). Models include all job conditions. Probability weights included. Standard errors calculated using delta method with clustering by sampling state in parenthesis; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

$$\delta \ln w = \beta^c + \delta \ln(w - WTP^c) \tag{3}$$

where the WTP^c is the willingness-to-pay for job condition c. We solve for WTP^c in Eq. (3) to derive our willingness-to-pay measure:

$$WTP^c = w\left[1 - \exp\left(-\frac{\beta^c}{\delta}\right)\right]. \tag{4}$$

We report willingness-to-pay estimates as $1 - \exp\left(-\frac{\beta^c}{\delta}\right)$ and interpret these effects as $100\left[1 - \exp\left(-\frac{\beta^c}{\delta}\right)\right]$ percent salary increases a respondent is willing to forgo to receive job attribute c. We use the delta method to calculate standard errors in Eq. (4).[26] We include probability weights to ensure our sample is nationally representative. Statistical inference tests the null hypothesis that the willingness-to-pay estimates are equal to zero; under this null hypothesis, respondents are indifferent to a change in the job condition.

As discussed in Section 4, we predefine the relationships between salary and several job conditions to avoid dominant offers. By construction, willingness-to-pay estimates for increasing replacement rate, increasing salary growth, and adding dental and optical coverage to health insurance plans will be positive. Likewise, estimates for increasing the retirement age, increasing class size, and reducing the share of costs covered by a healthcare plan will be negative. The magnitudes and statistical significance of the willingness-to-pay estimates for these job conditions are still policy relevant despite the predefined signs on estimates.

5.1. Preference heterogeneity

The mean willingness-to-pay estimates described above are informative for most job conditions, but teachers' preferences likely evolve both as they gain experience and over time as some teachers leave the workforce. To understand how preferences among the current teaching workforce change along this dimension, we examine heterogeneity based on respondents' years of experience in their current states. We do this by estimating Eq. (2) interacting the differences in job conditions for a choice set with experience quartiles. We use the middle two quartiles (i.e., second and third) as the comparison group.

Respondents in the first experience quartile (termed "early-career") have 7 or fewer years of experience, respondents in the second and third quartiles (termed "mid-career") have between 8 and 20 years of experience, and fourth quartile respondents (termed "late-career") have 21 or more years of experience. The interaction terms represent the difference in preferences for early- and late-career teachers relative to mid-career teachers.

To translate this differential into a willingness-to-pay estimate, we add the interaction terms to the mid-career teachers' preference in the numerator of the exponential in Eq. (4). For example, the willingness-to-pay for an early-career teacher, denoted by the superscript e, for job condition c is $WTP^{ce} = w\left[1 - \exp\left(-\frac{\beta^c + \beta^{ce}}{\delta}\right)\right]$ where β^{ce} is early-career teachers' differential preference for the job condition. We interpret this effect similarly to the overall effect.

In addition to experience, we also investigate heterogeneity in willingness-to-pay for job conditions based on respondents' cognitive ability, levels of conscientiousness, financial literacy, risk tolerance, and teachers' self-reported 5-year exit probabilities. Our approach is similar across each of these dimensions.

5.2. Equivalent valuations of retirement plan types and other job characteristics

Policymakers could also choose to compensate teachers for changes to one job condition with changes to another condition instead of salary. In an attempt to capture this policy option, we construct a measure of non-salary willingness-to-pay for the different retirement plan types included in our experiment.

Let WTP^{PT} represent the willingness-to-pay for either alternative plan design. A respondent is indifferent between taking a job with an alternative retirement plan if the job also includes a change to another job condition c, $WTP^{PT} + \gamma^c WTP^c = 0$, where γ^c represents how much the corresponding job condition changes. The change to another job condition required to make the offers equivalent is then:

$$\gamma^c = -\left(\frac{WTP^{PT}}{WTP^c}\right). \tag{5}$$

To compensate teachers for enrolling in non-FAS plans with changes in non-salary job attributes, willingness-to-pay estimates for non-salary job attributes are inversely related to how much the non-salary job attribute would have to change. In other words, the less respondents value a job characteristic, the more it would have to change to offset enrolling in an alternative retirement plan.[27]

6. Results

We begin with the results from our stated preferences experiment that compare teachers' willingness-to-pay for different retirement plan types. Table 3 contains mean willingness-to-pay estimates for DC and CB plans relative to FAS plans. These values are calculated using the non-linear transformation in Eq. (4) based on the estimates from the logit model in Eq. (2).

The first column is our base specification while the second column includes question fixed effects to control for changes in willingness-to-pay as respondents answer more questions. In column 3, we include state fixed effects to control for any residual variation in preferences that

[26] As described in the data section, several areas were oversampled in our survey. Oversampling those areas resulted in different probabilities that each teacher in the sample would have been surveyed. We clustered standard errors by the oversampled areas (there is one cluster per area and one cluster for all non-oversampled states) to account for differences in the probability that each teacher would have been sampled.

[27] Since we do not vary retirement plan type, salary, and other non-salary job components at the same time, we cannot be certain that teachers truly value changes in plan type and non-salary job components equivalently when compensated with γ^c. There may be some interaction effects between plan types and non-salary job components that are not captured by our experiment. Despite this limitation, we believe that presenting these tradeoffs is informative.

Table 4
Willingness-to-pay for different retirement plan types mediated by experience.

Panel A: Willingness-to-Pay Estimates	Early-Career (1)	Mid-Career (2)	Late-Career (3)
DC rather than FAS	−0.001	−0.021***	−0.057***
	(0.010)	(0.006)	(0.010)
CB rather than FAS	0.017*	−0.021***	−0.044***
	(0.010)	(0.006)	(0.010)
Experience Range	Exp ≤ 6	6 < Exp < 20	Exp ≥ 20
Panel B: Differences in WTP Estimates	**Mid – Early** (4)	**Late – Early** (5)	**Late – Mid** (6)
DC rather than FAS	−0.020*	−0.056***	−0.035***
	(0.012)	(0.014)	(0.012)
CB rather than FAS	−0.037***	−0.061***	−0.024**
	(0.012)	(0.014)	(0.012)

Notes: Willingness-to-pay estimates from Eq. (4) based on results from logistic regression of the model in Eq. (2). Models include all job conditions and state and question fixed effects. *N Teachers* = 4,817; *N Job Offers* = 38,531. Experience range determined using experience in state quartiles: early-career respondents are in the first experience quartile, mid-career respondents are in the second or third experience quartiles, late-career respondents are in the fourth experience quartile. Probability weights included. Standard errors calculated using delta method with clustering by sampling state in parenthesis; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

could be correlated with respondents' state of residence. Column 4 includes both state and question fixed effects.[28] We prefer the model in column 4 since we expect heterogeneity across states and questions.[29]

Our results indicate that, on average, respondents would need to be compensated with a 2.5% pay increase to be indifferent between being enrolled in a plan matching the description of a DC plan versus a plan matching the description of a FAS plan (for brevity, we will say "DC plan" rather than "matching the description of a DC plan", etc.). Similarly, we estimate that respondents would be indifferent between a CB plan and a FAS plan if the CB plan were paired with a 1.9% salary increase. All estimates are statistically different from zero at the 99% confidence level.

Willingness-to-pay for FAS plans likely increases with experience because, as teachers gain experience, each additional year of work under a FAS plan is increasingly valuable (McGee & Winters, 2017) and because of the survivorship phenomenon discussed in Section 3. To better understand this relationship, we examine heterogeneity in willingness-to-pay for retirement plan types based on experience. Panel A of Table 4 presents willingness-to-pay estimates for enrolling in alternative retirement plan types mediated by experience.[30] Panel B provides the differences in willingness-to-pay estimates between each group of teachers from Panel A. The model displayed in Table 4 includes state and question fixed effects.[31]

We find that teachers' willingness-to-pay for a FAS plan relative to either alternative retirement plan increases with experience. Respondents designated as early-career (low-experience) are indifferent between DC and FAS plans. Early-career teachers are willing to pay 1.7% of salary to enroll in a CB plan rather than a traditional FAS plan, but this result was only marginally significant. Mid-career respondents would need to be compensated with a 2.1% pay increase to be indifferent between enrolling in either alternative plan type instead of a FAS plan. Matching our expectation, late-career respondents had the strongest preference for FAS plans. Our results indicate that late-career teachers would equate enrolling in a DC plan with a 5.7% pay cut, while enrolling in a CB plan is equivalent to a 4.4% pay cut.

All differences in willingness-to-pay estimates between groups are statistically significant at the 99% confidence level except for the difference between mid- and early-career teachers for DC, which is significant at the 90% confidence level, and the difference between late- and mid-career teachers for CB, which is significant at the 95% confidence level.

This observed pattern of heterogeneity in willingness-to-pay coincides with the backloaded nature of FAS plans, which results in increasing returns to experience. Teachers often do not earn substantial benefits under a FAS plan until they approach retirement eligibility. Late-career respondents who have accrued the most benefits and for whom additional years of work under a FAS plan are the most valuable would have the strongest preferences for FAS plans. New and early-career teachers, who have not yet earned valuable pension benefits and who are not close to the steep part of the benefit accrual curve, are indifferent among the plan types.

Our experimental design sought to minimize bias or confusion related to common plan type labels as well as differences in plan generosity in two ways. First, we did not identify the retirement plan types by their common names (e.g., defined contribution). Instead, we described how teachers would earn benefits under each type of plan and asked them to choose based on the description.

Second, respondents were told that the plans were expected to deliver similar benefits at retirement. Specifically, they were instructed that, for both the FAS and alternative plans, retirement benefits would be expected to replace 70% of their end-of-career salary, that they would be eligible to retire with full benefits at age 60, and that they would be enrolled in Social Security. The only differences between retirement plan types were how respondents earn benefits and the investment and other risks respondents perceive were associated with each type of plan based solely on the plan's description, both of which are addressed in our plan descriptions.

In contrast to some of the previous literature (DeArmond & Goldhaber, 2010; Johnston, 2021), our results indicate that respondents place some value on, or have more comfort with, the way benefits accrue under a FAS plan and/or perceive alternative plans as being somewhat riskier. While we find that, on average, current teachers prefer FAS plans to alternative plan types, our results suggest that teachers may be open to plan design changes if paired with modest salary increases.

[28] We also estimate a model that includes teachers characteristics as well as a model that includes teacher characteristics and information about teachers' levels of retirement planning. Our estimates of plan type willingness-to-pay are unaffected by the inclusion of either set of variables. This occurs since, as we explained in the econometric approach section, individual characteristics do not vary across the two job offers.

[29] As noted in the econometric approach section, we include state fixed effects in the event that preferences are related to what states actually offer teachers. We test for heterogeneity in retirement plan type offering by states in Appendix B. We compare states offering only FAS plans to states that offer any alternative plan and FAS only states to either states that offer FAS plans along with an alternative or states that only offer alternative plan designs. We do not find any significant evidence that plan type preferences differ.

[30] Experience in the state would most closely resemble years of service in a pension system. We provide willingness-to-pay estimates mediated by age and total experience in Appendix C. Results when using experience in state as the mediator are similar to results when mediating with age or total experience.

[31] Experience may be related to other unobserved teacher characteristics, leading to bias in willingness-to-pay estimates that allow for heterogeneity by experience. We also estimate a model that includes teacher characteristics and teachers' levels of retirement planning as control variables. The results are similar and are available upon request.

Table 5
Willingness-to-pay for job conditions and equivalent valuations with willingness-to-pay for retirement plan type.

	WTP (1)	DC Equivalent Valuation (2)	CB Equivalent Valuation (3)
Replacement Rate	0.016***	1.551***	1.173***
	(0.000)	(0.304)	(0.307)
Retirement Age	−0.025***	−0.997***	−0.754***
	(0.001)	(0.194)	(0.196)
Salary Growth	0.058***	0.427***	0.323***
	(0.002)	(0.084)	(0.084)
Class Size	−0.005***	−5.204***	−3.935***
	(0.001)	(1.499)	(1.326)
Health Insurance: 60% rather than 80%	−0.167***	-	-
	(0.006)		
Health Insurance: add in Dental & Optical	0.107***	-	-
	(0.004)		
Do not Enroll in Social Security	−0.107***	-	-
	(0.005)		

Notes: Willingness-to-pay estimates in Column 1 from Eq. (4) based on results from logistic regression of the model in Eq. (2). Model includes retirement plan type and question and state fixed effects. *N Teachers* = 4,817; *N Job Offers* = 38,531. Estimates of willingness-to-pay for retirement plan type are available in Column 4 of Table 3. Probability weights included. Standard errors calculated using delta method with clustering by sampling state in parenthesis; *** $p < 0.01$, ** $p < 0.05$, *$p < 0.1$. Equivalent valuation estimates in Columns 2 and 3 are based on Eq. (5).

Potentially even more relevant for public policy, we find that younger teachers are indifferent between plan designs, indicating that changes can be made for early-career and new teachers without providing additional compensation.

6.1. *Willingness-to-pay for other job characteristics and equivalent valuations of retirement plan types*

Policymakers face numerous tradeoffs when designing teachers' compensation packages, and no element exists in a vacuum. When weighing these various tradeoffs, it is important to understand teachers' relative preferences across job characteristics. This section provides willingness-to-pay estimates for the other 7 job attributes in our experiment and relates those preferences to our estimates for retirement plan type.

There are at least two reasons why the relative willingness-to-pay estimates provided in this section are important. First, our main results provide estimates for the required raises to compensate teachers for enrolling in alternative retirement plans instead of FAS plans. However, states or school districts could choose to compensate teachers via changes to other retirement plan features or job characteristics (e.g., the retirement age or class size).

Second, policymakers facing budget shortfalls may have to consider making changes to teacher compensation without giving anything to teachers in exchange. Proponents of FAS plans argue that policymakers should protect FAS plans and make budget cuts elsewhere. When faced with such decisions, comparing willingness-to-pay estimates for retirement plans versus other job characteristics gives policymakers helpful information about teachers' relative valuations of various elements of teachers' compensation packages.

Table 5 provides willingness-to-pay estimates for the other 7 job attributes from our experiment (column 1). The table also includes estimates for how much each job characteristic would need to change to make teachers indifferent between alternative plan types and a FAS plan (columns 2 and 3) using the equivalent valuation measure in Eq. (5). All estimates in this table come from our preferred model that includes state and question fixed effects.

Since states that may undertake retirement reform are likely to enroll all new hires and may enroll early-career teachers in an alternative plan design, we evaluate willingness-to-pay heterogeneity based on experience for the other job conditions in our experiment and report results in Table 6, which is analogous to Table 5. The panels correspond to the different job conditions from the experiment. Column 4 in Table 6 includes estimates of the differences in each coefficient for each job condition.

In Table 5, we estimate that a one percentage point replacement rate increase is equivalent to a 1.6% salary increase. This estimate implies that respondents would be indifferent between enrolling in a DC plan if they are compensated with a replacement rate that is 1.6 percentage points higher than the replacement rate in a corresponding FAS plan. Within our experiment's context, the DC plan would replace 71.6% of salary whereas the FAS plan would replace 70%. The corresponding compensating differential for a CB plan would be a 1.2 percentage point replacement rate increase. Respondents' valuation of replacement rate increased with experience, though the differences in willingness-to-pay estimates are not large.

We estimate that teachers would be indifferent between lowering the retirement age by one year and a 2.5% salary increase. This estimate implies that teachers would be indifferent between enrolling in a DC or CB plan instead of a FAS plan if they were able to retire one year or 0.75 years earlier, respectively. In other words, teachers would be willing to enroll in an alternative plan if that plan reduces their expected retirement age by roughly one year relative to a FAS plan. Given our experiment's parameters, this means teachers enrolled in DC or CB plans would expect to retire at age 59 rather than our baseline FAS plan's retirement age of 60.[32] More experienced respondents are willing to pay more to reduce their retirement ages than less experienced respondents.

To estimate the cost of increasing replacement rates or reducing retirement ages within the FAS context, we calculated the difference in the present value of pension wealth (i.e., the present discounted value of the future stream of pension benefits) using respondents' experimental job parameters and reported salaries.[33] At the median, it would cost $1797 or 3.3% of salary to raise replacement rates by one percentage point and $15,876 or 26.2% of salary to lower retirement age by one year. Comparing these cost estimates to our willingness-to-pay estimates

[32] In practice, teachers would earn benefits more evenly under DC and CB plans compared to FAS plans, which ameliorates financial penalties for retiring earlier or later than a specified eligibility age. Prior literature has shown that in many cases FAS eligibility requirements have reduced retirement ages, and that moving to alternative plan designs would provide additional retirement age flexibility and potentially lengthen careers on average (Costrell & McGee, 2010; Friedberg & Webb, 2005; Ni et al., 2020b).

[33] To calculate present value, we use a four percent discount rate and the 2013 static mortality table based on the RP-2000 Mortality Tables Report adjusted for mortality improvement using Projection Scale AA. The mortality table can be found at http://www.irs.gov/pub/irs-drop/n-08-85.pdf.

Table 6
Willingness-to-pay for retirement job conditions mediated by experience.

	WTP (1)	DC Equivalent Valuation (2)	CB Equivalent Valuation (3)		WTP Difference (4)
Panel A: Replacement Rate					
Early-Career	0.014***	0.068	−1.226	Mid — Early	0.003***
	(0.001)	(0.742)	(0.748)		(0.001)
Mid-Career	0.017***	1.289***	1.259***	Late — Early	0.003**
	(0.001)	(0.375)	(0.380)		(0.001)
Late-Career	0.017***	3.354***	2.628***	Late — Mid	0.000
	(0.001)	(0.636)	(0.635)		(0.001)
Panel B: Retirement Age					
Early-Career	−0.021***	−0.044	0.789	Mid — Early	−0.004**
	(0.001)	(0.477)	(0.482)		(0.002)
Mid-Career	−0.025***	−0.866***	−0.845***	Late — Early	−0.008***
	(0.001)	(0.251)	(0.255)		(0.002)
Late-Career	−0.029***	−1.944***	−1.523***	Late — Mid	−0.005***
	(0.002)	(0.367)	(0.366)		(0.002)
Panel C: Salary Growth					
Early-Career	0.062***	0.015	−0.269	Mid — Early	−0.003
	(0.003)	(0.163)	(0.164)		(0.004)
Mid-Career	0.058***	0.365***	0.356***	Late — Early	−0.007*
	(0.002)	(0.106)	(0.108)		(0.004)
Late-Career	0.054***	1.044***	0.818***	Late — Mid	−0.004
	(0.003)	(0.198)	(0.197)		(0.003)
Panel D: Class Size					
Early-Career	−0.007***	−0.137	2.458	Mid — Early	0.003
	(0.002)	(1.487)	(1.684)		(0.002)
Mid-Career	−0.004***	−5.291**	−5.166**	Late — Early	0.002
	(0.001)	(2.304)	(2.293)		(0.003)
Late-Career	−0.005***	−10.873**	−8.519**	Late — Mid	−0.001
	(0.002)	(4.609)	(3.830)		(0.002)
	WTP (1)	**DC Equivalent Valuation** (2)	**CB Equivalent Valuation** (3)		**WTP Difference** (4)
Panel E: Health Insurance – 60% rather than 80%					
Early-Career	−0.127***	-	-	Mid — Early	−0.049***
	(0.012)				(0.014)
Mid-Career	−0.176***	-	-	Late — Early	−0.055***
	(0.008)				(0.016)
Late-Career	−0.182***	-	-	Late — Mid	−0.006
	(0.012)				(0.014)
Panel F: Health Insurance – add in Dental & Optical					
Early-Career	0.112***	-	-	Mid — Early	−0.006
	(0.009)				(0.010)
Mid-Career	0.106***	-	-	Late — Early	−0.010
	(0.005)				(0.012)
Late-Career	0.102***	-	-	Late — Mid	−0.004
	(0.008)				(0.009)
Panel G: Do Not Enroll in Social Security					
Early-Career	−0.102***	-	-	Mid — Early	−0.002
	(0.009)				(0.010)
Mid-Career	−0.103***	-	-	Late — Early	−0.018
	(0.006)				(0.012)
Late-Career	−0.120***	-	-	Late — Mid	−0.017*
	(0.008)				(0.009)

Notes: Willingness-to-pay estimates from Eq. (4) based on results from logistic regression of the model in Eq. (2). Models include all job characteristics and question and state fixed effects. *N Teachers* = 4,817; *N Job Offers* = 38,531. Low experience teachers have 7 years or fewer; Medium experience teachers have between 8 and 20 years; High experience teachers have 20 years or more. Probability weights included. Standard errors calculated using delta method with clustering by sampling state in parenthesis; *** $p < 0.01$, ** $p < 0.05$, *$p < 0.1$. Equivalent valuation estimates in Columns 2 and 3 are based on Eq. (5).

above implies that, consistent with prior literature on deferred versus current compensation, teachers value these retirement benefits less than the cost to provide them (Biasi, 2019; Fitzpatrick, 2015).

Policy propositions to switch retirement plan types could also compensate teachers with higher rates of salary growth or with reduced class sizes, both of which teachers and teachers' unions commonly call on state and local policymakers to do (e.g., Weingarten, 2019a, 2019b). Our respondents are willing to pay 5.8% of salary for a one percentage point increase in their annual salary growth rate and 0.5% of salary to decrease average class sizes by one student.

As shown in column 2, teachers would be indifferent between enrolling in a DC plan instead of a FAS plan if the DC plan was coupled with a 0.43 percentage point increase in their salary growth rate or a 5.2 student reduction in their average class size. The CB equivalent valuations are increasing the rate of salary growth by 0.3 percentage points or reducing class sizes by 3.9 students.

Table 7
Willingness-to-pay for different retirement plan types with mediators.

	DC rather than FAS			*CB rather than FAS*		
Panel A: Willingness-to-Pay Estimates						
	Low	Medium	High	Low	Medium	High
	(1)	(2)	(3)	(4)	(5)	(6)
Cognitive Ability	−0.003	−0.027***	−0.041***	−0.016	−0.016**	−0.029***
	(0.010)	(0.006)	(0.009)	(0.010)	(0.006)	(0.009)
Conscientiousness	−0.017*	−0.027***	−0.028***	−0.010	−0.023***	−0.021**
	(0.009)	(0.006)	(0.010)	(0.009)	(0.007)	(0.010)
Financial Literacy	−0.001	−0.022***	−0.035***	0.002	−0.008	−0.033***
	(0.011)	(0.008)	(0.007)	(0.011)	(0.008)	(0.007)
Risk tolerance	−0.027***	−0.029***	−0.020***	−0.020**	−0.026***	−0.011
	(0.008)	(0.008)	(0.007)	(0.009)	(0.008)	(0.008)
Panel B: Differences in WTP Estimates						
	Med-Low	**High-Low**	**High-Med**	**Med-Low**	**High-Low**	**High-Med**
	(7)	(8)	(9)	(10)	(11)	(12)
Cognitive Ability	−0.025**	−0.038***	−0.014	0.001	−0.012	−0.013
	(0.012)	(0.014)	(0.011)	(0.012)	(0.014)	(0.011)
Conscientiousness	−0.010	−0.011	−0.001	−0.013	−0.011	0.002
	(0.011)	(0.013)	(0.012)	(0.011)	(0.014)	(0.012)
Financial Literacy	−0.021	−0.034***	−0.013	−0.011	−0.035***	−0.025**
	(0.013)	(0.013)	(0.010)	(0.014)	(0.013)	(0.010)
Risk tolerance	−0.003	0.007	0.010	−0.006	0.009	0.015
	(0.012)	(0.011)	(0.011)	(0.012)	(0.012)	(0.011)

Notes: Willingness-to-pay estimates from Eq. (4) based on results from logistic regression of the model in Eq. (2). Models include all job conditions and state and question fixed effects. *N Teachers* = 4,817; *N Job Offers* = 38,531. Low-cognitive ability and conscientiousness teachers are in the first quartile; Medium-cognitive ability and conscientiousness teachers are in the second and third quartiles High-cognitive ability and conscientiousness teachers are in the fourth quartile. Low-financial literacy teachers answer 0 or 1 of 3 questions correctly; Medium-financial literacy teachers answer 2 of 3 questions correctly; High-financial literacy teachers answer all questions correctly. Low-risk tolerance teachers are unwilling to take the job when the potential pay cut is less than 10%; Medium-risk tolerance teachers are willing to take the job when the potential pay cut is between 10 and 20%; High-risk tolerance teachers are willing to take the job when the potential pay cut is greater than 20%. Probability weights included. Standard errors calculated using delta method with clustering by sampling state in parenthesis; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Our estimates in panel C of Table 6 indicate that respondents' willingness-to-pay for salary growth decreases with experience but required compensating differentials in terms of salary growth continue to increase with experience. Mid-career respondents would be indifferent between enrolling in a FAS-alternative retirement plan if it was associated with between a 0.36 and 0.37 percentage point higher salary growth rate than the salary growth rate associated with a FAS plan. These compensating differentials rise to over 1 percentage point of salary growth for DC plans and 0.8 percentage points for CB plans for late-career respondents.

Estimates in Table 5 show that the teachers in our sample place a higher value on the proportion of expected healthcare costs covered by their insurance plan and whether they have optical and dental coverage than they place on the type of retirement plan in which they enroll. We estimate that teachers would require a 16.7% salary increase to offset a healthcare plan that covers 60% of expected costs instead of a plan that covers 80% of costs. Respondents are also indifferent between a 10.7% raise and enrolling in a plan with dental and optical coverage.[34]

Table 6 presents heterogeneity in willingness-to-pay for health insurance. Respondents with more experience are willing to pay more for a health insurance plan that covers a larger share of health care costs, but early-career teachers are willing to pay the most for dental and optical coverage. Regardless of experience, willingness-to-pay estimates for health insurance are greater than 10% of salary.

We estimate that it would cost $4031 or 6.8% of salary to provide a health insurance plan that covers 80% of total medical care costs versus 60% of total costs, which is significantly lower than our estimates of teachers' willingness to pay for those benefits.[35] Comparing these estimates to the replacement rate and retirement age estimates above, our results imply that teachers value healthcare coverage more than retirement benefits, at least across the parameter values tested in our experiment.

Finally, teachers in our sample place a larger value on enrolling in Social Security than they do on which type of other retirement plan they are enrolled in. Column 1 of Table 5 shows that respondents are willing to pay 10.7% of salary to be enrolled in Social Security. This willingness-to-pay estimate is especially noteworthy since it exceeds the employer contribution rate to Social Security of 6.2%. In other words, we estimate that teachers value Social Security by 4.5% of pay more than it costs employers to provide.

We estimated models that test for heterogeneity in the preference for

[34] We do not report the DC and CB relative valuations in Tables 5 and 6 for health insurance and Social Security since these job attributes are not defined continuously in our experiment. The relative valuations would be the willingness-to-pay for retirement plan type as a proportion of willingness-to-pay for health insurance or Social Security, which is not all that informative of a measure.

[35] To estimate the total cost of health insurance benefits, we use average monthly employee and employer premiums paid for medical care benefits for teachers with family coverage from the National Compensation Survey (NCS) (U.S. Bureau of Labor Statistics, 2020). We take the difference between 80 percent of the total and 60 percent of the total to estimate how much it would cost an employer to cover more of the total cost. We multiply the monthly figure by 12 to obtain the $4,031 annual difference. Unfortunately, NCS does not collect data on dental and optical insurance costs or premiums, but we do not expect the premiums for these coverages to exceed the average premium for medical care. The percent of salary for medical care (6.8 percent) can therefore be viewed as an upper bound for the additional cost of dental and optical coverage.

Social Security and plan type based on whether teachers are enrolled in Social Security; results are available in Appendix E.[36] Teachers who participate in Social Security value it at 13.7% of salary, while those who do not participate value it at 5.4% of salary. The 8.3 percentage point gap in willingness-to-pay for Social Security is statistically significant. However, the willingness-to-pay estimate for teachers not participating in Social Security is not statistically different than the 6.2% employer contribution to Social Security.

6.2. *Willingness-to-pay for different retirement plan types mediated by cognitive ability, conscientiousness, financial literacy, risk tolerance, and self-reported 5-year exit probability*

We estimate the retirement plan type willingness-to-pay distributions for respondents with differing levels of cognitive ability, conscientiousness, financial literacy, and risk tolerance. These results are in Table 7. We report estimates from our preferred specification that include state and question fixed effects in Panel A and the differences in willingness-to-pay estimates in Panel B. Columns 1 and 4 show the estimates for respondents in the "low" category for each mediator. Columns 2 and 5 contain estimates for respondents in the "medium" category for each mediator. Columns 3 and 6 provide estimates of willingness-to-pay for respondents in the "high" category for each mediator.

Using cognitive ability to proxy for teacher quality, we find significant heterogeneity in willingness-to-pay for retirement plan type. We group respondents by cognitive ability based on respondents' quartile in the cognitive ability distribution. As cognitive ability increases, teachers' value FAS plans more. Teachers in the bottom cognitive ability quartile are indifferent between switching from FAS plans to either DC or CB plans, while teachers in the top quartile value these plans at a 4.1 and 2.9% pay cut, respectively. Even though willingness-to-pay estimates mediated by experience and cognitive ability appear similar in both magnitude and direction, there does not appear to be any relationship between these mediators in our sample – the correlation between experience and cognitive ability is negative 0.02.[37]

Our second proxy for teacher quality, self-reported conscientiousness, does not account for much heterogeneity in plan type willingness-to-pay. Apart from low-conscientiousness respondents' willingness-to-pay for CB plans, respondents value enrolling in DC and CB plans instead of FAS plans at between a 1.7 and 2.8% pay reduction.

We also group respondents based on the number of financial literacy questions they answer correctly. Low-financial literacy respondents answer 0 or 1 of the 3 financial literacy questions correctly. Medium-financial literacy respondents correctly answer 2 of the 3 financial literacy questions, and high-financial literacy respondents answer all 3 financial literacy questions correctly.[38]

The most financially literate teachers in our sample are willing to pay more for traditional pension plans. Respondents answering all 3 financial literacy questions correctly are willing to pay 3.5% and 3.3% of salary for a FAS plan rather than switch to DC or CB plans, respectively. Teachers displaying the lowest levels of financial literacy are indifferent between retirement plans. Moderately financially literate teachers are indifferent between FAS and CB plans but are willing to pay 2.2% of salary for FAS over DC plans.

We group respondents based on which potential lifetime pay cut they would be willing to accept from our risk tolerance questions. The questions making up our risk tolerance scale asked respondents if they would risk taking a job with a varying pay cut to lifetime income in exchange for the potential to double their lifetime income. Low-risk tolerance respondents are unwilling to accept the job if the potential cut to respondents' lifetime income is less than 10%, while medium-risk tolerance respondents are willing to accept the job if the potential lifetime income cut is between 10 and 20%. High-risk tolerance respondents are willing to accept the job even if the potential cut to respondents' lifetime income is greater than 20%.[39]

We do not find evidence of heterogeneity based on risk tolerance in willingness-to-pay retirement plan types. Respondents with higher levels of risk tolerance are willing to pay less for traditional FAS plans than respondents with lower levels of risk tolerance, though the difference was not statistically significant. Medium risk tolerance respondents have the highest willingness-to-pay estimates for both alternative plan types.

Table 8 includes our willingness-to-pay estimates for retirement plan types when including respondent's self-reported five-year exit probabilities as a mediating condition.[40] As shown in Column (1), respondents reporting that they will not exit the profession within 5 years value FAS plans over DC plans at 3.4% of salary. Respondents reporting exit probabilities between 0 and 50% value FAS plans over DC plans at 2.1% of salary. These results suggest that respondents who are either certain that they will stay or are leaning towards staying value FAS plans the most, but respondents who expect or are likely to leave are indifferent concerning DC plans.

Teachers who are certain they will stay in the profession value FAS plans more than CB plans, but all other teachers are indifferent. Respondents reporting 5-year exit probabilities of 0 value CB plans as a 2.4% pay cut relative to FAS plans.

Table 8
Willingness-to-pay estimates for different retirement plan types mediated by self-reported 5-year exit probability.

	DC rather than FAS (1)	CB rather than FAS (2)	N Teachers (3)	N (4)
P(Exit) = 0	−0.034***	−0.024***	2612	20,992
	(0.007)	(0.006)		
0 < P(Exit) < 0.5	−0.021**	−0.017	978	7839
	(0.010)	(0.011)		
P(Exit) = 0.5	0.009	0.008	467	3758
	(0.014)	(0.014)		
0.5 < P(Exit) < 1	−0.019	−0.022	378	3040
	(0.016)	(0.017)		
P(Exit) = 1	−0.022	−0.021	382	3068
	(0.016)	(0.017)		

Notes: Willingness-to-pay estimates from Eq. (4) based on results from logistic regression of the model in Eq. (2). Models include all job conditions and state and question fixed effects. *N Teachers* = 4817; *N Job Offers* = 38,531; N in column (3) refers to the number of observations reporting 5-year exit probabilities within each rows range. Probability weights included. Standard errors calculated using delta method with clustering by sampling state in parenthesis; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

[36] Willingness-to-pay for retirement plan type was not related to Social Security participation.

[37] We also conduct Pearson's chi-squared test of independence to assess if there is a relationship between experience and cognitive ability within our low, medium, and high groupings of experience and cognitive ability based on quartiles. The p-value from this test is 0.064.

[38] Per the descriptive statistics in Table 1, approximately 17 percent of respondents would fall in the low-financial literacy group, 31 percent would fall into the medium-financial literacy group, and the remaining 53 percent would be high-financial literacy.

[39] Based on the descriptive statistics in Table 1, we consider one third of respondents to have low-risk tolerance, another third to be medium risk-tolerance, and the remaining third to be high-risk tolerance.

[40] Differences in willingness-to-pay estimates mediated by self-reported 5-year exit probability are available in Appendix F.

7. Conclusion

Teacher pensions are underfunded by more than $600 billion in the aggregate (McGee, 2019; Novy-Marx & Rauh, 2011). More resources than ever before are being devoted to paying down pension debt (Costrell, 2022a), squeezing state and local education budgets (McGee, 2016; Nation, 2018). What's more, there is mounting evidence that traditional pension plans do not work well for all teachers (Aldeman & Johnson, 2015; Backes et al., 2016; Costrell & Podgursky, 2009; McGee & Winters, 2019). As a result, policymakers are exploring alternative retirement plan designs. However, advocates for traditional pensions often stymie consideration of alternative plans citing teachers' strong preferences for final average salary pensions. Unfortunately, until now little was known about teachers' preferences around retirement or the strength of those preferences relative to other aspects of their jobs and compensation.

This paper addresses this knowledge gap by developing willingness-to-pay estimates based on a stated preferences experiment that models the tradeoffs policymakers are likely to face when redesigning teacher retirement plans. We find that early-career teachers are indifferent between traditional pensions and alternative plans, and that willingness-to-pay for FAS plans may increase with experience. This finding differs somewhat from two recent papers on teachers' retirement preferences that find teachers may prefer 401(k)-style plans (DeArmond & Goldhaber, 2010; Johnston, 2021). However, those studies only consider the more localized context of a single state or school district, and differences in teacher characteristics (e.g., experience, familiarity with alternative plans, etc.) between samples and survey design may explain any differences in estimated preferences for DC plans. Our finding that experience mediates retirement plan preferences corroborates both the previous literature and is consistent with increasing returns to experience under FAS plans.

Previous literature provides evidence that teachers are more responsive to changes in their salaries than they are to changes in their deferred retirement compensation (Biasi, 2019; Fitzpatrick, 2015; Goldhaber & Holden, 2020; Ni et al., 2020a). Our experiment provides some evidence to corroborate this finding. Teachers' willingness-to-pay for FAS plans relative to alternative retirement plan types were modest even for mid- and late-career teachers for whom an additional year of work under a FAS plan is most valuable. In addition, teachers were willing to pay significantly more for a one percentage point increase in salary growth than they were for a one percentage point increase in their replacement rate or to be able to retire one-year earlier. In future research, we will use the responses to the questions involving replacement rate and retirement age to estimate teachers' valuations of deferred retirement compensation versus current salary.

In addition, we show that teachers place sizable values on other job conditions. Teachers are willing to trade salary today if it means that their expected retirement benefits will be larger or if they can retire at a younger age. We found that teachers highly value their health care benefits, including supplementary coverages for optical and dental. They also place a substantial value on being enrolled in Social Security, valuing it more than its cost to employers. In fact, we estimate that teachers have stronger preferences around their expected retirement benefits, retirement age, health care, and Social Security enrollment than they do for various retirement plan types.[41]

While our results have the potential to inform policy decisions, there are two key limitations. First, teachers' stated preferences on a 15 min survey may differ from their true or revealed preferences; the difference between hypothetical preferences and real preferences is sometimes called "hypothetical bias" (Cummings & Taylor, 1999). Furthermore, experiments to elicit willingness-to-pay for goods tend to over-value true willingness-to-pay (List & Gallet, 2001; Murphy et al., 2005). However, there is literature that finds that stated preferences experiments of the type that we execute tend to match revealed preferences (e.g., Hainmueller et al., 2015; Wiswall & Zafar, 2018; Wlömert & Eggers, 2016), but none of this previous literature specifically involves teachers or retirement plan types. Future research could provide validation for stated preferences for teachers specifically.

While responses to our survey are not directly tied to changes in teachers' compensation packages or job conditions, respondents may view their answers as having policy relevance because policy discussions around pension reform and teacher pay have been quite frequent in recent years, routinely making state and national headlines.[42] Teachers were also compensated for their time answering the survey (see footnote 8), thus there were some incentives to provide their best answers.

A second important limitation of our experiment is that we only surveyed active teachers, and as discussed in Section 3, preferences are likely related to experience due to changing workforce composition over time (i.e., survivorship). In many cases, the drawbacks of FAS plans are more pronounced for teachers that have exited the profession, and it is well-documented that FAS plans disadvantage teachers that leave early in their careers (e.g., Aldeman & Johnson, 2015; Aldeman & Rotherham, 2014; Costrell & Podgursky, 2009). Inexperienced teachers, who demonstrate higher levels of attrition from the profession, are likely underrepresented in the panel. The effect is that more experienced teachers, who have the most career certainty and who benefit more from additional years of work under a FAS plan, likely disproportionally influence our willingness-to-pay estimates relative to the overall teacher population, making our average willingness-to-pay estimates conservative. We emphasize the results are mediated by in-state experience and focus on results for early-career teachers.

With these limitations in mind, our estimates provide some insights that may be valuable to policymakers as they grapple with current budgetary challenges. For example, states could reduce future budgetary risk by placing new teachers in alternative retirement plans and at the same time offer modest pay raises to mid- and late-career teachers to opt into the alternative plans.

In addition, changes to the retirement age, expected retirement benefits, and healthcare coverage are likely to result in larger negative labor market consequences than retirement plan design changes. Our results also indicate that states whose teachers are not currently covered by Social Security could reap significant benefits from enrolling them in the program because teachers appear to value those benefits more than their cost.

States and school districts that face challenging budget situations may have to make difficult decisions that affect teachers' job conditions, pay, and benefits. Understanding how teachers value various aspects of their jobs and compensation can help inform these policy decisions and minimize potential negative consequences.

[41] Future research could explore these preferences more deeply by investigating the impact of information interventions on preferences, estimating preferences around a different or more detailed set of job conditions, performing stated preferences experiments with different populations (e.g., groups of pre-service teachers), and estimating the impact of real-world choices offered to teachers.

[42] For example, teachers in several states walked out of the classroom to advocate for higher pay as part of the Red for Ed movement, and Kentucky and Puerto Rico have recently seen strikes or protests against potential pension plan changes.

Data availability statement

The data used in this article can be obtained online from the RAND American Educator Panel Data Portal (https://www.rand.org/education-and-labor/projects/aep/data-portal.html).

CRediT authorship contribution statement

Dillon Fuchsman: Conceptualization, Methodology, Software, Formal analysis, Investigation, Data curation, Writing – review & editing, Visualization, Funding acquisition. **Josh B. McGee:** Conceptualization, Methodology, Software, Formal analysis, Investigation, Data curation, Writing – review & editing, Visualization, Funding acquisition. **Gema Zamarro:** Conceptualization, Methodology, Software, Formal analysis, Investigation, Data curation, Writing – review & editing, Visualization, Funding acquisition.

Disclosure statement

The survey used as the basis for this study was approved by the University of Arkansas IRB. The Walton Family Foundation and the Equable Institute provided financial support for the project. Josh McGee is a member of the Equable Institute board of directors. Dillon Fuchsman and Gema Zamarro have nothing to disclose.

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Appendix A. Hypothetical job comparison construction

We use a four-step procedure to construct the hypothetical job offers presented to respondents by randomizing salary offers and one non-salary job conditions. We start by randomly generating two salary perturbations from a normal distribution with mean 1 and standard deviation 0.05. These perturbations are multiplied by the respondents' reported salaries to create the salary offers in our hypothetical job scenarios. Next, we randomly choose one of the seven possible non-salary job conditions where each job condition has the same likelihood of being selected. Then, we randomly pick one value corresponding with the selected job condition to vary from the job condition's baseline value. We then randomly pick whether the baseline job is offered as Job A or Job B and assign the relevant job condition values and salary perturbations. In the final step, salaries are assigned to teachers to prevent strictly dominating job offers. We assume that teachers would always select a job that corresponds with a higher salary and a larger replacement rate, earlier retirement, higher salary growth, smaller class sizes, or additional health insurance. For example, we would always expect respondents to choose the job that offers 8% annual salary growth and a $50,000 salary instead of the job that offers 5% annual salary growth and a $49,000 salary. Switching the salary offer forces a meaningful comparison about a respondent's willingness to pay for the extra 3 percentage points of salary growth. We have no prior expectation for one value for retirement plan type or for Social Security eligibility to strictly dominate in the same way that our other job condition values dominate.

Next, we create a table for the job offers and place the salaries in the corresponding job columns. Next, we fill in the baseline job offer column with the set of unvaried baseline job conditions. The randomly selected job condition is filled in next with the randomly chosen condition value. The rows corresponding with the randomly selected job condition and salaries are shaded to increase visibility to respondents about how the job offers are different. Key differing text in the randomly selected job condition and the salary are bolded. The rest of the table is filled in with the baseline job offer. Fig. 1 is an example of two job offers where both jobs are exactly the same other than the retirement ages and salaries.

When teachers in the sample do not provide their salary information, we use their state average teacher salary rounded to the nearest $10,000. State average teacher salaries are also used when respondents' reported salaries are under $10,000. If respondents do not indicate which state they teach in, we use the national average teacher salary instead.

If class size is the job condition randomly selected, we either add or subtract 3 students from the state average school-level class size rounded to the nearest integer. We consider elementary teachers to be those who teach grades K-6 and secondary teachers to be those who teach grades 7–12. Again, the national average school-level class size is imputed if respondents do not indicate which state they teach in. Respondents leaving our question for the grades they teach blank or who indicate they teach elementary and secondary grades are assigned the average values corresponding to secondary schools. We obtain average teacher salaries and average class sizes information from the Digest of Education Statistics (Snyder et al., 2019).[43]

Appendix B. Willingness-to-pay heterogeneity by state retirement plans

Table B1

Appendix Table B.1
Willingness-to-pay for different retirement plan types by state-offered retirement plan types.

	DC rather than FAS		CB rather than FAS	
	WTP	Alt. Plan – FAS Only	WTP	Alt. Plan – FAS Only
	(1)	(2)	(3)	(4)
Panel A: FAS Only and Any Alternative Grouping				
FAS Only	−0.028***		−0.020***	
	(0.006)		(0.006)	
Any Alternative Plan	−0.018*	0.010	−0.016*	0.004
	(0.009)	(0.011)	(0.009)	(0.011)
Panel B: FAS Only, FAS & Alternative, & Only Alternative Grouping				
FAS Only	−0.027***		−0.020***	
	(0.006)		(0.006)	
FAS & Alternative Plan	−0.013	0.015	−0.009	0.011
	(0.010)	(0.012)	(0.010)	(0.012)
Only Alternative Plan	−0.036*	−0.009	−0.040*	−0.020
	(0.021)	(0.022)	(0.022)	(0.023)

Notes: Willingness-to-pay estimates from Eq. (4) based on results from logistic regression of the model in Eq. (2). Models include all job conditions. *N Teachers* = 4,817; *N Job Offers* = 38,531. Probability weights included. Standard errors calculated using delta method with clustering by sampling state in parenthesis; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

[43] State average class sizes for the District of Columbia, Florida, Hawaii, Maryland, and Rhode Island are not reported due to a failure of reporting standards to be met. See Table 209.30 of the Digest of Education Statistics for additional information (Snyder et al., 2019).

Appendix C. Willingness-to-pay heterogeneity by age and total experience

Table C1, Table C2

Appendix Table C.1
Willingness-to-pay for different retirement plan types mediated by age.

Panel A: Willingness-to-Pay Estimates			
	Young	Mid-Age	Oldest
	(1)	(2)	(3)
DC rather than FAS	−0.007	−0.029***	−0.035***
	(0.009)	(0.006)	(0.010)
CB rather than FAS	−0.001	−0.014**	−0.050***
	(0.010)	(0.006)	(0.011)
Age Range	Age ≤ 34	34 < Age < 51	Age ≥ 51
Panel B: Differences in WTP Estimates			
	Mid – Young	**Old – Young**	**Old – Mid**
	(4)	(5)	(6)
DC rather than FAS	−0.023**	−0.029**	−0.006
	(0.011)	(0.013)	(0.012)
CB rather than FAS	−0.013	−0.049***	−0.036***
	(0.011)	(0.014)	(0.012)

Notes: Willingness-to-pay estimates from Eq. (4) based on results from logistic regression of the model in Eq. (2). Models include all job conditions and state and question fixed effects. *N Teachers* = 4817; *N Job Offers* = 38,531. Age range determined using age quartiles: young respondents are in the first experience quartile, mid-age respondents are in the second or third experience quartiles, oldest respondents are in the fourth experience quartile. Probability weights included. Standard errors calculated using delta method with clustering by sampling state in parenthesis; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Appendix Table C.2
Willingness-to-pay for different retirement plan types mediated by total experience.

Panel A: Willingness-to-Pay Estimates			
	Early-Career	Mid-Career	Late-Career
	(1)	(2)	(3)
DC rather than FAS	−0.011	−0.021***	−0.049***
	(0.010)	(0.006)	(0.011)
CB rather than FAS	0.011	−0.018***	−0.050***
	(0.010)	(0.006)	(0.011)
Experience Range	Exp ≤ 7	7 < Exp < 21	Exp ≥ 21
Panel B: Differences in WTP Estimates			
	Mid – Early	**Late – Early**	**Late – Mid**
	(4)	(5)	(6)
DC rather than FAS	−0.010	−0.038***	−0.028**
	(0.012)	(0.014)	(0.012)
CB rather than FAS	−0.029**	−0.060***	−0.031**
	(0.011)	(0.015)	(0.013)

Notes: Willingness-to-pay estimates from Eq. (4) based on results from logistic regression of the model in Eq. (2). Models include all job conditions and state and question fixed effects. *N Teachers* = 4817; *N Job Offers* = 38,531. Age range determined using age quartiles: young respondents are in the first experience quartile, mid-age respondents are in the second or third experience quartiles, oldest respondents are in the fourth experience quartile. Probability weights included. Standard errors calculated using delta method with clustering by sampling state in parenthesis; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Appendix D. Willingness-to-pay heterogeneity by retirement planning

Table D1,

Appendix Table D.1
Willingness-to-pay for different retirement plans by ever having developed a retirement plan.

	No Planning	Planning	Difference
	(1)	(2)	(3)
DC rather than FAS	−0.024***	−0.026***	−0.001
	(0.007)	(0.007)	(0.009)
CB rather than FAS	−0.006	−0.031***	−0.025***
	(0.007)	(0.007)	(0.009)

Notes: Willingness-to-pay estimates from Eq. (4) based on results from logistic regression of the model in Eq. (2). Models include all job conditions. *N Teachers* = 4817; *N Job Offers* = 38,531. Probability weights included. Standard errors calculated using delta method with clustering by sampling state in parenthesis; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Appendix E. Willingness-to-pay heterogeneity by social security enrollment

Table E1

Appendix Table E.1
Willingness-to-pay for different retirement plans and social security by social security enrollment.

Panel A: Willingness-to-Pay Estimates			
	Participates	Does Not Participate	Varies
	(1)	(2)	(3)
DC rather than FAS	−0.029***	−0.016**	0.013
	(0.006)	(0.008)	(0.044)
CB rather than FAS	−0.019***	−0.020**	0.043
	(0.006)	(0.008)	(0.050)
Social Security	−0.137***	−0.054***	−0.112***
	(0.006)	(0.006)	(0.043)
Panel B: Differences in WTP Estimates			
	Participates – Does Not	**Participates – Varies**	**Does Not - Varies**
	(4)	(5)	(6)
DC rather than FAS	−0.013	−0.042	−0.029
	(0.010)	(0.045)	(0.045)
CB rather than FAS	0.001	−0.062	−0.063
	(0.010)	(0.050)	(0.050)
Social Security	−0.083***	−0.025	0.058
	(0.008)	(0.044)	(0.044)

Notes: Willingness-to-pay estimates from Eq. (4) based on results from logistic regression of the model in Eq. (2). Models include all job conditions. *N Teachers* = 4817; *N Job Offers* = 38,531. Probability weights included. Standard errors calculated using delta method with clustering by sampling state in parenthesis; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Appendix F. Willingness-to-pay differences by self-reported 5-year exit probability

Table F1

Appendix Table. F.1

Differences in willingness-to-pay estimates for different retirement plan types mediated by self-reported 5-year exit probability.

	0 < P(Exit) < 0.5 (1)	P(Exit) = 0.5 (2)	0.5 < P(Exit) < 1 (3)	P(Exit) = 1 (4)
Panel A: DC Rather than FAS				
P(Exit) = 0	−0.013			
	(0.012)			
0 < P(Exit) < 0.5	−0.043***	−0.030*		
	(0.016)	(0.017)		
P(Exit) = 0.5	−0.015	−0.002	0.028	
	(0.017)	(0.019)	(0.022)	
0.5 < P(Exit) < 1	−0.013	0.001	0.030	0.002
	(0.017)	(0.019)	(0.021)	(0.022)
Panel B: CB Rather than FAS				
P(Exit) = 0	−0.007			
	(0.012)			
0 < P(Exit) < 0.5	−0.032**	−0.025		
	(0.015)	(0.017)		
P(Exit) = 0.5	−0.002	0.005	0.030	
	(0.018)	(0.020)	(0.022)	
0.5 < P(Exit) < 1	−0.003	0.005	0.029	−0.001
	(0.018)	(0.020)	(0.022)	(0.024)

Notes: Differences based on willingness-to-pay estimates in Table 8. *N Teachers* = 4817; *N Job Offers* = 38,531. Each cell row's corresponding WTP estimate from Table 8 minus the column's corresponding WTP estimate from Table 8. Probability weights included. Standard errors calculated using delta method with clustering by sampling state in parenthesis; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

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For teachers, a better kind of pension plan

Public school teachers deserve a compensation system that puts them on a secure path toward retirement. Right now, that's not what they have.

By Marcus A. Winters

Teachers unions often defend defined benefit (DB) retirement plans on the grounds that they ensure retirement security. For teachers, it might be comforting to know that upon retirement you will receive a fixed (and generous) check each month for the rest of your life regardless of what the stock market does between now and then. But the security from investment risk inherent in DB plans masks another sort of risk to which teachers are greatly exposed because of how their DB plans are designed. We might call it attrition risk — the chance (likelihood) that an entering teacher is not employed within a school covered by the same pension plan for her entire working career.

I suspect that many teachers don't realize that how much they benefit from their pension plan depends on how long they work for a particular employer. Those who stay employed by public schools covered by the same plan (most often that includes all public schools within a state) for their entire career make out great. Teachers who leave participating public schools earlier (i.e. most entering teachers) do not. Of course, at the time they're hired, no one knows which type of teacher they'll turn out to be.

In this article, based largely on several studies conducted with Joshua McGee (McGee & Winters 2013a, 2013b, 2016; Winters & McGee, 2014), I illustrate how the severely backloaded structure of today's public school teacher pension systems benefit only a small proportion of entering teachers while

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Image: iStock

putting the rest on an insecure retirement path. But there is a cost-neutral solution to this problem that would benefit most teachers entering public school classrooms today without removing any of the protections from the stock market with which teachers have become accustomed.

Retirement (in)security

According to the Bureau of Labor Statistics (2009), about 89% of public school teachers participate in DB plans that provide them with fixed payment for life at the time of retirement (often adjusted for inflation). Many people prefer the traditional DB model because their guaranteed retirement amount suggests a far safer — though potentially less lucrative — retirement wealth than offered by 401(k)-style defined contribution systems that are subject to the whims of the stock market over time.

But the DB structure of teacher pensions has produced a common misperception that today's teacher pensions ensure a safe retirement path for all. They don't. These pension plans are structured such that teachers earn very little retirement benefit for their first several years of teaching and then rapidly accrue pension wealth as they near the "normal" retirement age. Unfortunately, the large majority of teachers who begin their working lives teaching in a particular state's public school system won't last there long enough to accrue their pension reward.

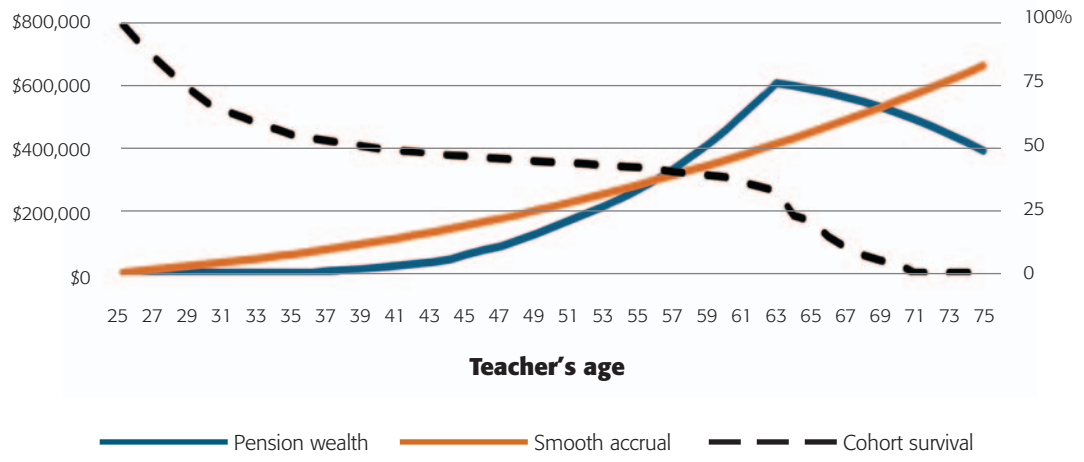
This problem is common but not inherent to DB retirement plans. It is driven by the fact that the benefit is a function of their final average salary. A retired teacher's monthly pension payment is based on a calculation that takes into account the number of years that the teacher worked within a school covered by the plan (usually all public schools in the state) and the teacher's final average salary (often the average salary over the last three years of employment). For each year of service within a covered school, the plan increases the fixed payment by an additional percentage (often about 2%) of their final average salary. A penalty is imposed for each year a teacher exits before what is known as the time of "normal" retirement. Once the teacher no longer works within a school covered by the plan, he stops accruing years of service and thus does not increase pension wealth within the plan.

Because it comes in the form of a fixed payment for life, the total amount of a teacher's pension benefit depends both on the amount of the monthly payment and also how long the teacher lives past retirement age. Nonetheless, we can use conventional actuarial techniques to put a dollar value on the teacher's annuity. We calculate the present value of the teacher's annuity, net of the teacher's contributions, under the

FIGURE 1.

Employer-sponsored retirement wealth over time under alternate systems

A hypothetical New York City teacher enters the profession at age 25. The chart demonstrates the value of the teacher's accumulated pension wealth (excluding the teacher's contribution) under the traditional defined benefit system and under the proposed smooth accrual system. The dashed black line indicates the departures from the profession for this teacher's entering cohort.



Source: Adapted from data reported in McGee, J. & Winters, M. (2013). *Better pay, fairer pensions: Reforming teacher compensation.* New York, NY: The Manhattan Institute.

Allowing teachers to acquire retirement wealth smoothly throughout their careers would lessen the blow of layoffs considerably.

rules of her pension plan were she to exit after any number of years after being hired.

The design of teacher pension programs is such that the value of a teacher's retirement wealth (present value of the lifetime annuity) can change suddenly at various points across a career. The annuity's value increases linearly as a teacher earns more service, but it also increases in big jumps at particular points as a teacher approaches specified retirement thresholds. Conversely, a teacher's annuity generally loses value each year after reaching the plan's normal retirement eligibility threshold because, with each additional year of work, that teacher is foregoing a year of retirement in which a payment would have been received.

To illustrate, the blue line in Figure 1 shows the accumulation of pension wealth across the career of a 25-year-old entrant into the New York City teaching workforce. The line represents the present value of the teacher's accumulated employer-provided pension wealth (that is, excluding the teacher's contribution) at any given age.

As is typical in other systems, New York's teachers earn very little employer-provided retirement wealth in the early and middle portions of their careers, followed by steep accrual during each year of service in late career, and negative accrual each year after reaching the plan's normal retirement age. A teacher who began working in the New York City public school system at age 25 and exited the system 38 years later would retire with an employer-funded lifetime annuity worth about $610,250 — an average of $16,059 per year of service (McGee & Winters, 2013a, 2013b). However, had that same teacher exited the state's public school system after 20 years of service (perhaps, as pointed out by Goldhaber, Grout, & Holden in a February 2017 *Kappan* article, to take a teaching job in another state), the employer contribution to her retirement would be a lifetime annuity worth only about $59,572 — an average of $2,979 per year of service.

Winners and losers under the current system

Teachers can't take home their retirement money until they retire. The backloaded nature of the pension plan, then, is not particularly concerning for entering teachers who are certain to remain employed by a public school covered by their plan until retiring at or around age 63 — to the extent that such people actually exist. But for those who don't fit that profile, the backloaded structure of today's pension plans has serious consequences. Unfortunately, most teachers leave well before they might benefit from the structure of the retirement plan.

The dashed black line in Figure 1 illustrates, at each age, the percentage of an entering cohort of 25-year-old teachers whom the pension plan assumes will remain in the system, using the scale at the right of the figure. Only one-third of teachers from the cohort in New York City are expected to remain long enough to receive the maximum pension payout at age 63. It's worth noting that this result from New York's plan likely downplays problems faced by those teaching under other public teacher pension plans across the nation because New York's assumed turnover is far lower, and thus more conservative, than those used by most other pension plans. According to our calculations, based on figures reported by the Institute for Educational Sciences, only about 28% of American public school teachers nationwide remain in the profession for even 20 years.

Consider three hypothetical teachers — Emily, Julie, and Sarah — all of whom were 25 when they began teaching during the same school year. Each remained in teaching for their entire career until retiring 40 years later. Emily taught her entire career in New York City and then retired with an employer-sponsored annuity worth about $592,158. Julie worked in the Philadelphia school system for her entire career and retired with an employer-sponsored annuity which we calculate to be worth $404,433.

Sarah, on the other hand, worked in the New York City school system for the first 15 years. Then, when her partner was transferred to another job, Sarah moved to Philly and worked in the public school system for the remaining 20 years of her career. Sarah taught in the same school systems for the same amount of time as did Emily and Julie. But she didn't remain in either system long enough to benefit from the pension backloading. Consequently, Sarah retired with employer-sponsored pension wealth worth only about $62,089.

It could be worse. According to a report from Bellwether Education Partners, teachers covered by 17

statewide pension plans don't fully vest for 10 years (Aldeman & Rotherham, 2014). So, someone who teaches nine years in Illinois, nine years in Indiana, and nine years in Michigan before leaving the profession would have earned zero employer-sponsored pension wealth for her 27 years of service to students.

It's perverse, but today's pension systems don't just anticipate that most teachers won't last long enough to collect meaningful pension wealth; they count on it. The relatively high pension payoffs provided to those who leave the plan at or near the age of normal retirement (Emily and Julie in our example above) are funded by redistributing dollars away from the pension wealth of those teachers who exit earlier in their careers (our unfortunate Sarah).

A smooth accrual pension plan

There is nothing inherent in the market protections of DB plans that requires retirement wealth to be accrued so late in a teacher's career. Teacher pensions could be restructured in such a way that teachers earn retirement wealth in relatively equal intervals throughout their careers. Simply moving compensation around in this way would cost taxpayers nothing and would not expose teachers to any additional market investment risk.

We call our alternative structure a Smooth Accrual Defined Benefit plan (SA DB). By smooth we mean that the benefits earned by teachers are a constant percentage of their cumulative earnings. Like other DB plans, the SA DB would offer teachers a lifetime annuity at retirement.

To be clear, this plan is in every way a DB plan. I am not describing a 401(k) or other defined contribution plan. Further, the plan is structured to have the same expected value as existing plans, and thus does not represent an aggregate benefit reduction. Consequently, this proposed change would not itself address the pressing issue of large unfunded liabilities tied to pension plans that is pressuring many state budgets. The only difference between a current plan and its respective cost-equivalent SA DB plan is the rate at which teachers accrue pension wealth during each year of employment. The SA DB plan pays meaningful retirement benefits for each year of a teacher's service.

The red line in the figure represents the wealth acquired at each period for our 25-year-old entrant in New York City under a plan that allows teachers to smoothly accrue retirement compensation across their careers. The line is calculated to represent a cost-neutral plan for taxpayers relative to the current plan (Costrell & Podgursky, 2010).

Teachers acquire significantly more retirement wealth early in their careers under the smooth accrual plan than under the current plan. For example, a teacher who exits the district at age 45 with 20 years in the classroom receives the equivalent of $59,572 in retirement wealth under the current plan but would leave with $151,120 under a smooth accrual plan. Because the current pension plans redistribute foregone retirement wealth from those who exit earlier to them, those teachers who remain employed in the New York City plan from age 25 until the normal retirement age do better under the current backloaded system. A teacher who retires at 63 would receive the equivalent of $610,250 in an annuity under the DB but would have earned $415,107 under the smooth accrual plan.

In short, the new smooth-accrual plan would benefit some teachers while offering lower retirement wealth to others. The question is, what proportion of entering teachers would benefit from each plan?

We can see from the figure the age of retirement at which teachers would benefit most from each of the two plans, along with the percentage of teachers who are actually still teaching at that age. Those who leave early in their careers would receive more from the smooth-accrual plan, as represented by the red line, which lies above the (blue) line representing wealth under the current plan. The advantage shifts to the current plan at the point at which the lines cross, which in the case of New York City happens at age 56. At present, only about 42% remain employed in the schools past this age, which is to say that fewer than half of teachers benefit from the current plan.

Again, New York's plan is a conservative representation of the backloading phenomenon facing public school teachers across the nation. In Philadelphia, for instance, only about 18% of entering teachers are expected to remain employed in the state system long enough to benefit from the current plan relative to how they would fare under a cost-equivalent SA DB plan.

Today's pension systems don't just anticipate that most teachers won't last long enough to collect meaningful pension wealth – they count on it.

Teacher pensions could be restructured in such a way that teachers earn retirement wealth in relatively equal intervals throughout their careers. We call these Smooth Accrual Defined Benefit plans.

A more fair system

Proponents of the current plan structure sometimes argue that its design incentivizes teachers to remain teaching in their schools for a sustained period of time, thus limiting turnover. In fact, it can be seen from the figures and from empirical research (Costrell & McGee, 2010) that teacher exit decisions are sensitive to the incentives produced by the accrual pattern of their pension plans.

In recent research (McGee & Winters, 2016; Winters & Cowen, 2013), we have presented simulations showing that given what research shows about teacher experience and classroom effectiveness, moving from the current system to a SA DB plan would be expected to have minimal effect on teacher quality. But even if we were to concede that keeping teachers in their school is a desirable goal, is it right to do so by jeopardizing the retirement security of the majority of entering teachers? There has to be a better way.

Perhaps backloaded pension plans were justifiable in the age in which they were developed, when populations were less mobile. But few young people today enter any job or career knowing for certain that they will remain there for their entire working life. Further, if implemented with fidelity, policies recently enacted across the nation that weaken the employment protection offered to public school teachers might add considerable additional attrition risk. Several districts and states now strip tenure protections from teachers who receive below-standard performance evaluations over a period of time. Experienced teachers who were once protected from termination by their tenure status now might face the real possibility of losing their jobs. This prospect is particularly chilling for a teacher with about 20 years in the classroom. Were such a teacher to lose her job due to poor performance she would not only lose her salary but also leave with very little retirement wealth for the first two decades of her working life. Allowing teachers to acquire retirement wealth smoothly throughout their careers would lessen the blow of such layoffs considerably.

Public school teachers deserve a compensation system that puts them on a secure path toward retirement. Many teachers have been lulled by the defined benefit structure of their pension plan to believe that their futures have been cared for. Unfortunately, for most of those entering classrooms today, that is just not the case. Unless states move to a more smoothly accruing plan, the situation will only worsen in the future as teachers, like other professionals, become more mobile. ◼

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Peaks, Cliffs, and Valleys

The peculiar incentives of teacher pensions

Robert M. Costrell Michael Podgursky

Ms. Baker is a hypothetical Ohio school teacher, age 49 with 24 years of service. She's had a good run, but is ready for a change; her heart's not in it anymore, and she wants to go out on a high note. But she has a dilemma regarding her pension. She and her school district have contributed $422,000 to Ohio's pension trust fund (with interest), yet her pension is worth only $315,000. If she hangs on for another six years, the pension picture changes dramatically: her pension will be worth close to $1 million, hundreds of thousands of dollars *more* than the contributions.

Ms. Brooks has the opposite dilemma. She's been teaching in Arkansas since age 25, and at age 53, in light of her exemplary career and continuing enthusiasm, she's just been chosen to be a mentor teacher. The problem is her pension. Every year of additional service *reduces* her pension wealth, despite the fact that she and her district continue to contribute 20 percent of her pay into the fund.

Welcome to the world of teacher pensions.

Pensions have long been an important part of compensation for teachers in public schools. However, the incentive structures of teacher pension systems are not widely understood, even though they can have powerful effects on the composition of our teaching force and on public finance.

In our research, we have found that teacher pension systems have two strong incentives—a pull and a push. Teachers typically earn relatively little in the way of pension benefits until they reach their early fifties, when much larger benefits start to accrue. The system therefore pulls teachers to "put in their time" until then, whether or not they are well suited to the profession. Beyond that point, the pension system quickly begins to punish teachers for staying on the job too long, pushing them out the door at a relatively young age, often in their mid-fifties, even if they are still effective teachers. These "pull-push" incentives are embedded in the patterns of pension wealth accumulation over teachers' careers, patterns that feature dramatic peaks, cliffs, and valleys that can greatly distort work decisions for no compelling public-policy purpose.

Teacher pension systems can also have important implications for recruitment. Pension benefits may seem distant and uncertain for prospective young teachers, who often change jobs. The costs, however, are incurred from the start in contributions from employer and employee that can exceed 20 percent of the teacher's pay. Many young teachers, who are paying off student loans, starting families, and buying homes, might prefer more of their compensation paid up front rather than diverted into a system from which they may well never benefit.

Finally, the teacher retirement benefit system has major effects on K–12 school finance. Teachers who retire in their mid-fifties are likely to draw pension benefits for at least as many years as they taught. This can be expensive. A teacher retiring at age 55 with a $50,000 inflation-indexed annual pension has received an annuity valued at over $1 million. Retiree health insurance can add much more to the bill. To fund these benefits requires large contributions from employees and employers. In Ohio, for example, contributions currently stand at 24 percent of salary (10 percent from the teacher and 14 percent from the district). But even this falls well short of what is needed and pension officials are recommending an increase to 29 percent, to shore up funding for pensions and retiree health benefits.

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There is a surprising disconnect between discussions of state teacher pension systems and the larger discussion of retiree benefits in an era of longer life spans and the impending bulge of baby-boom retirees. The retirement age for Social Security is being raised, but there is little discussion of the incentives to retire early from teaching. Just as the benefit overhang of GM, Chrysler, and Ford finally forced changes in their plans, the growing share of K–12 spending consumed by these retirement benefit systems may force similar changes.

As teacher retiree benefit costs spiral upward, it is important to begin asking what effect these systems have on recruitment and retention. In this article, we analyze the incentives embedded in teacher pension systems by examining the pattern of pension wealth accumulation over a teacher's career.

PENSION PLAN BASICS

Public school teachers are almost universally covered by traditional defined benefit (DB) pension systems. The employer has an obligation to provide a regular retirement check to employees upon their retirement, based on a legislatively determined formula (see sidebar). The key characteristic of DB systems is that the benefit is not tied to the contributions that individual teachers and employers make to the pension fund. That is what distinguishes DB from defined contribution (DC) plans, known more popularly as 401(k)-type systems.

DB plans were once the norm in both the public and private sectors. In recent decades, private sector employers have shifted in large numbers to DC systems (or closely related systems known as cash balance, discussed below). In DC systems, the employer contributes annually to a retirement account for an employee, and the employee contributes as well. For example, a common arrangement in the private sector is for the employer to match employee contributions up to a certain percentage of the employee's salary. If the employee quits, he takes the retirement funds with him. The employer is under no obligation to provide a given payment to the employee at the time of retirement. The employee, however, can always choose at retirement to convert the accumulated funds into a stream of payments for life by buying an annuity.

Conversely, when a teacher retires under a DB plan, she is entitled to a stream of payments that has a lump-sum value (or present value) that can be readily determined using standard actuarial methods. In principle, this pension wealth represents the market value of the associated annuity: it is the size of the 401(k) that would be required to generate the same stream of payments.

HOW TEACHER PENSIONS WORK Once a teacher is vested in a defined benefit system (has worked and contributed for usually five or ten years), she becomes eligible to receive a full pension upon reaching a certain age and/or length of service. Eligibility rules typically allow a teacher to draw a full pension well before age 65, especially if she has been teaching since her midtwenties. Benefits at retirement are usually determined by a formula such as the following: Annual Benefit = (years of service) x (*r*) x (final average salary).

Typically, the final average salary is calculated over the last three years, and *r* is a percentage that we will call the "replacement factor." In Missouri, teachers earn 2.5 percent for each of the first 30 years of teaching service. For example, Ms. Howard, a Missouri teacher with 30 years' service, would earn 75 percent of the final average salary. So if the final average salary were $60,000, she would receive:

Annual Benefit = 30 x .025 x $60,000 = $45,000, payable for life.

For teachers who separate from service prior to being eligible to receive the pension, the first draw is deferred and the amount of the pension is frozen until that time. Once the pension draw begins, there is typically some form of inflation adjustment.

Typically, a DB teacher pension plan requires that both teachers and employers make a contribution each year to a pension trust fund, much as in DC plans, but the funding characteristics are very different. Under DC plans, the pension benefits are always fully funded,

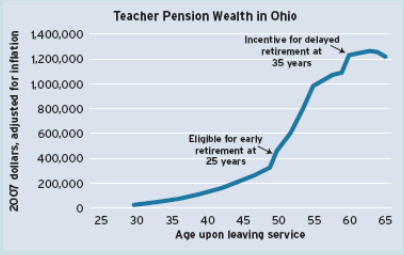
since the benefit is generated directly by the contributions. Under DB plans, individual benefits are not tied to contributions, so the pension fund as a whole is supposed to accumulate enough money to pay for the accrued liabilities. But this is rarely the case. Many teacher pension systems have large unfunded liabilities (e.g., California $19.6 billion, Missouri $5.2b, Ohio $19.4b, Oklahoma $7.7b, New Jersey $10.0b, all in 2006). Matters are made worse by legislatures that juice up the benefit formula when the stock market is up and the value of pension funds is high, only to find the systems saddled with even larger unfunded liabilities when the market turns sour. And as large as these liabilities are, they do not include future costs for retiree health insurance, an issue that is now beginning to appear on education-finance radar screens.

INCENTIVES TO TEACH OR RETIRE

The decision to teach or to retire at any given age can have profound financial consequences for the individual teacher. Small, and arbitrary, differences in the timing of retirement can be worth hundreds of thousands of dollars. Teachers cannot afford to be indifferent to these consequences, and many of them surely respond to the incentives embedded in the system. To appreciate these incentives, it is necessary to understand the pattern of a teacher's pension wealth accumulation over the course of her career.

Scramble to Retirement (Figure 1)

An Ohio teacher who begins work at age 25 would, after 24 years, have a pension worth $315,000, but over the next six years it would grow to a total value of $971,000.



Note: Age at entry into teaching is 25. Age of first pension draw is 60, until 25th year of service, when it drops to 55. Calculations use the 2006-07 Columbus, Ohio, salary grid and the unisex 2003 mortality table from IRS Revenue Ruling 2002-62 Appendix B. All cells in the salary grid are assumed to grow at 2.5% inflation, the pension cost of living adjustment (COLA) equals 3% (uncompounded), and the interest rate equals 5%.

SOURCE: authors' calculations

Figure 1 depicts the pension wealth, in inflation-adjusted dollars, at various ages of separation for a 25-year-old entrant to the Ohio teaching force, the profile of our hypothetical Ms. Baker. Clearly, the accumulation of pension wealth is not smooth and steady, but rises with fits and starts after age 50, due to rules of eligibility for early retirement and the like. During her first 24 years in the classroom, she accumulates $315,000 in pension wealth. However, over the next six years she accumulates more than $100,000 *per year* and crosses the million-dollar mark at age 56. Pension wealth reaches a peak by her early sixties and then starts to decline.

In this system, those teachers who retire after 25 years or more (age 50 in our example) receive more in benefits than has been contributed to the system on their behalf, while those who leave teaching earlier do not. The inequities here can be quite substantial. If Ms. Baker retires at age 56, her million dollars of pension wealth exceeds the cumulative contributions (with interest) of herself and of her employer by over $370,000; if she leaves at age 49, she will receive benefits worth $100,000 *less* than the contributions.

The next set of figures answers the question that is critical for understanding the system's incentives: how much does a teacher's pension wealth change if she works an additional year? This is a measure of *deferred* income received from employment. If, for example, a year of work raises a teacher's pension wealth by $50,000 (net of interest on the prior year's pension wealth), it is as if she had a 401(k) account that received $50,000 in contributions that year. Figures 2a through 2e illustrate graphically the peaks, cliffs, and valleys in pension wealth accrual from each additional year of work over the course of a teacher's career in five state systems.

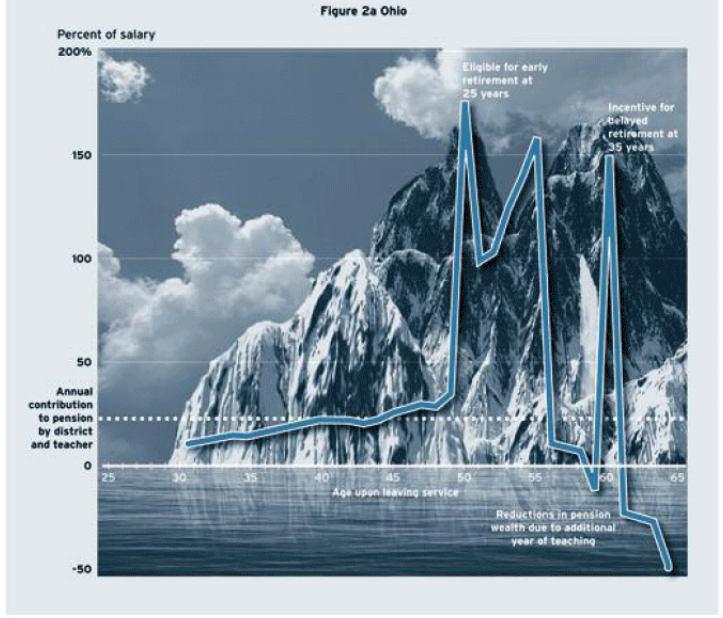
Consider Ohio, depicted in Figure 2a (which is derived from Figure 1). A teacher who enters service at age 25 (such as Ms. Baker) accrues pension wealth during her early years on the job starting at roughly 10 percent of annual earnings and gradually rising to 34 percent in her 24th year (age 49). Her 25th year of experience yields quite a bonanza: her pension wealth jumps by about 176 percent of her annual earnings. Each of the next five years also yields deferred income

that equals or exceeds her current income. Pension wealth accrual drops off dramatically over the years following, with another sharp spike at age 60 (35 years' experience). Beyond age 60, while both she and her employer are continuing to make large contributions to the retirement fund, Ms. Baker's pension wealth actually shrinks, and at an accelerating rate.

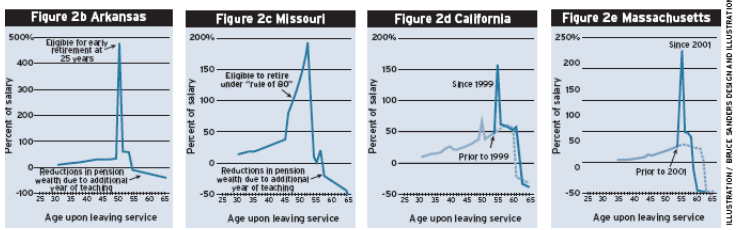
All five states display sharp pension spikes. In Arkansas, a particularly sharp spike occurs at age 50 (see Figure 2b). In that year, a teacher's pension wealth increases by almost five times her salary. For a teacher with a $50,000 salary, it is as if she received a $250,000 contribution to her 401(k) account. Her pension wealth accrual drops off precipitously the next year, and turns negative by age 54, creating the dilemma of our would-be mentor teacher Ms. Brooks. Similarly, teachers in Missouri, California, and Massachusetts experience pension spikes in their early to mid-fifties, followed by much slower growth and ultimately shrinking pension wealth at various ages (see Figures 2c–2e).

The dotted lines on Figures 2d and 2e indicate the pattern of accrual prior to benefit enhancements enacted by the legislatures in California and Massachusetts. These legislated changes created spikes where none existed. In Arkansas, benefit enhancements over the years have shifted the spike to the left, to earlier retirement. Ohio's multiple-spiked system also reflects its history of benefit enhancements; it used to have a single spike at age 60.

Increase in Pension Wealth from an Additional Year of Teaching (Various States)



Note: Addition to pension wealth is net of interest on prior wealth. Age of entry into teaching is 25. Age of first pension draw for separation at first major spike is 55 (OH), 50 (AR), 53 (MO), 56 (CA) and 55 (MA). Calculations use salary grid for each state's capital city. Pension COLAs are state-specific. Other assumptions as in Figure 1.



WHAT CAUSES PENSION PEAKS, CLIFFS, AND VALLEYS?

What features of the benefit formula give rise to such sharp spikes in pension wealth accrual? One might expect that the growth in pension wealth would be fairly steady, as it is in a DC plan. After all, both the teacher and employer are making the same contributions year after year. But in a DB plan, pension wealth is not tied to contributions. The primary drivers of pension wealth accrual are changes in the annual annuity payment (determined by the benefit formula) and the number of years the teacher can expect to collect. It is the latter that is often the wild card in these systems.

Spikes in several of these states occur because teachers can start collecting their pension at an earlier age once they have worked a certain number of years. For example, during the first 24 years of teaching (to age 49), Ohio's Ms. Baker had to wait until age 60 to collect her pension. However, her 25th year of teaching (at age 50) allows her to begin collecting pension checks five years earlier, producing a sharp spike in wealth accrual.

Another example is Missouri's "rule of eighty," under which a teacher is eligible to receive a full pension once the sum of age and service equals eighty, rather than the normal retirement age of 60. When our 25-year-old entrant passes age 45, each successive year of service allows her to start receiving her pension one year earlier, resulting in rapid growth in pension wealth for several years (see Figure 2c).

Once a teacher gets past the spike (or spikes), pension wealth accrual turns negative. This is not because her monthly pension check shrinks. In fact, it is growing. Rather, pension wealth falls because once she is at an age to begin collecting without deferral, each year of work requires her to forgo a year of pension, which is never recouped. The monthly payment is not enhanced sufficiently to offset this loss.

At this point in her career, the pension system serves as a twofold tax on earnings, first by the required employee contribution and second by the negative deferred income. Together, these can easily offset much or even all of her salary, in which case her total compensation is little or nothing. If the reduction in pension wealth from working an additional year exceeds the teacher's take-home pay, her total compensation is negative and she is paying for the privilege of teaching.

DO TEACHERS RESPOND TO PENSION INCENTIVES?

The peaks and valleys of pension wealth accrual create large pull-push incentives. Teachers are pulled to stay on the job until they reap the benefit of the spikes: a few more years of "putting in time" can mean a difference of several hundred thousand dollars. Once a teacher is beyond the spike and pension wealth starts shrinking, the system is effectively pushing her into retirement.

There is ample evidence that such incentives affect behavior. Anecdotal evidence is commonplace of teachers (and others) timing their retirement decisions to the parameters of the benefit formula; pension systems routinely provide online pension calculators to help their members do so. Labor economists have developed more systematic statistical evidence on the incentive effects of retirement benefit systems, particularly those in the Social Security system. There has been much less research specifically on teacher pensions, but that which is available indicates strong incentive effects. In Missouri, for example, teacher labor-force data show that retirement rates spike when the sum of age and experience is around 80—consistent with the incentives embedded in that state's "rule of eighty" eligibility formula.

UNINTENDED CONSEQUENCES: EMPLOYMENT AFTER "RETIREMENT"

Teacher pension systems typically have strong incentives for early retirement built in. Given concerns about teacher shortages and pressures from the No Child Left Behind Act to staff classrooms with qualified teachers, it makes little sense for districts to nudge experienced, credentialed, and effective teachers out the door at such early ages. Not surprisingly, all of these teacher pension systems have provisions that allow educators to continue to teach and collect

their pension in certain circumstances (a practice called “double dipping”). These provisions seem to be expanding. Here are examples.

1. Part-time employment. All of the pension systems considered here allow retired teachers who are receiving pension payments to continue to work in covered employment on a part-time basis (without accruing additional benefits).

2. Employment in shortage areas. Many states permit retired educators to teach full time for a specified period of time in “shortage” fields.

3. Break in employment. Some states allow teachers to return to full-time employment and collect their pension after a specified break in service. In California the required break is 12 months. In Ohio, a retired teacher can return to work the next day, but must wait two months before receiving pension benefits.

4. DROP plans. Many states have implemented Deferred Retirement Option Plans (DROPs). These permit teachers to continue working full time for a specified period of time (up to ten years in Arkansas), during which all or most of their pension check goes into what amounts to an individual retirement account.

Of course, retired educators can resume teaching by crossing a state line or a district boundary to work in a different pension system. For example, Missouri teachers in the state pension system can retire and work full time in the St. Louis or Kansas City systems, or they can cross the border and work in Kansas.

The result of all of these postretirement options is that the decision to “retire” (i.e., collect a retirement check) is not necessarily the same as a decision to quit teaching. Unfortunately, we are aware of no comprehensive national data on this topic. Limited data from a national survey conducted by the U.S. Department of Education suggest that at least 5 percent of the public school teaching workforce is also collecting a teacher pension. A longitudinal study of Missouri teachers found that 12 percent of teachers worked at least one year part time or full time following retirement.

Reemployment provisions such as these are not found in the private sector, where early retirement incentives are usually part of a downsizing effort. In teaching, by contrast, early retirement incentives have a completely different origin, namely legislatively enacted benefit enhancements, typically under heavy union lobbying. Reemployment provisions are often a delayed response to the unintended (if often predictable) problems created by these incentives. In other words, these provisions are ad hoc fixes to enhanced pension spikes.

Postretirement employment blurs the distinction between current and deferred compensation. At the very least, this calls into question the meaning of published data on teacher compensation. In addition, as reemployment becomes easier, the incentive to “retire” at or near a pension spike becomes more pronounced, as there is no downside if employment can continue. It might also be in the district’s interest, if the pension costs are borne by the state. One might expect, therefore, that “retirements” would become even further concentrated at the spikes.

MORE UNINTENDED CONSEQUENCES: HEALTH INSURANCE

Another consequence of early teacher retirement is a linked demand for retiree health insurance coverage. Since regular Medicare eligibility does not begin until age 65, teachers who retire in their fifties have a gap of many years in coverage. In light of this, many school districts and states have extended health insurance coverage to retirees. Unlike the teacher pension system, payments for retiree health insurance are typically pay-as-you-go (i.e., no employer fund is created to pay for these future liabilities). Under new government accounting rules (GASB 43 and 45), benefit plans and employers will need to begin providing annual estimates of these liabilities in their financial statements. First hints at the figures are staggering. Los Angeles Unified, which provides complete health insurance coverage for all retirees, has an estimated $5 billion unfunded liability. A recent report by the Cato Institute estimates that the unfunded liabilities of

state and local governments under GASB 45 could total $1.5 trillion. These unfunded liabilities create pressures for higher contribution rates, local tax increases, and spending cuts in other areas.

OPTIONS FOR REFORM

The underlying problem with DB systems is their distortion of retirement incentives, stemming from the broken link between benefits and contributions. DC systems and cash balance (CB) plans restore that link. Many large corporations have switched to DC and CB plans over the last 20 years. Some public entities, including a few teacher pension systems (Ohio's is one), have also started to offer DC or CB-type options in their plans.

CB plans are similar to DC plans in that both systems tie benefits closely to contributions. The main difference is that in a CB plan, the return is guaranteed by the employer (typically at a rate comparable to risk-free Treasury bonds), so the market risk is not borne by the employee. Often the debate over DB vs. DC plans focuses on the issue of risk, rather than the retirement incentives. Since our subject here is retirement incentives, we focus on CB plans, where the issue of market risk does not arise.

The neutrality of CB plans with regard to age of separation can be simply depicted. In the pension wealth accrual graphs, the lines would be horizontal at a percentage given by the sum of employee and employer contributions (see Figure 2a). The system does not drive teachers to stay to their mid-fifties and then leave. Pension wealth never declines: if a teacher wants to work another year, the account grows by the contributions, plus the investment return. This can then be converted to an annuity. If a teacher works another year, the starting annuity is increased in an actuarially fair manner, since there is one less year of retirement to cover.

Such a retirement-neutral plan leaves the employee much more latitude to decide when to retire or switch careers based on individual preferences (such as Ms. Baker). It also makes it easier for schools to retain effective teachers (such as Ms. Brooks), who might otherwise be driven by the pull-push incentives of pension spikes. This is preferable to the heavy-handed DB formulas, supplemented by makeshift DROP formulas or other reemployment provisions. Finally, it is fiscally more stable when benefits are tied closely to contributions. Unfunded liabilities do not arise so readily, and legislatures have less opportunity to enhance benefits by shifting costs to future generations of taxpayers and teachers.

PRINCIPLES FOR REFORM

The time is ripe to consider teacher pension reform, with an eye both to teacher quality and fiscal stability. A new or reworked retirement system should embody several key features:

Neutrality. Each additional year of work should increase pension wealth in a fairly uniform way. There should be no spikes or cliffs at any particular years of service. Longevity decisions by individuals and their employers should be based on personal priorities and education needs.

Transparency. The accrual of benefits should be simple and clear. There should be no opportunities for "gaming" the system.

Portability. The private sector has moved toward systems that do not penalize young professionals for changing jobs. Portability may also help attract to teaching an energetic, talented portion of the labor pool, as well as midcareer switchers, such as engineers and other technical workers, who could make valuable math and science teachers.

Sustainability. The pension system should be self-funding. Individual benefits should be tied to contributions made by and for the individual teacher.

DC and CB systems satisfy all these conditions far better than the traditional and outdated DB systems. To build and maintain a qualified teacher workforce in today's labor market, states should fundamentally reform their retirement benefit systems.

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