

**ND TFFR BOARD MEETING**

**Thursday, November 18, 2021, 1:00 p.m.**

**Peace Garden Room – State Capitol**

**Teleconferencing – 701.328.0950 Participant Code – 533 522 943#**

**600 E Boulevard Ave, Bismarck, ND**

AGENDA

**I. CALL TO ORDER AND ACCEPTANCE OF AGENDA**

A. Executive Summary

**II. ACCEPTANCE OF MINUTES (September 23, 2021)**

**III. Education (45 minutes)**

A. Segal Mortality Tables Presentation – Matt Strom *Informational*

**IV. GOVERNANCE (90 minutes)**

A. Segal Actuarial Valuation 2021 Presentation – Matt Strom *Board Action*

B. Employee Benefits Programs Committee Update - Ms. Murtha *Informational*

C. Legislative Special Session – Ms. Murtha *Informational*

D. Outreach Update – Ms. Weeks *Informational*

E. PAS Project Update – Ms. Murtha *Informational*

**BREAK**

**V. REPORTS (60 minutes)**

A. Quarterly TFFR Investment Report - Mr. Chin, Matt Posch *Board Action*

B. Quarterly Monitoring Report on TFFR Ends – Ms. Weeks *Board Action*

C. Quarterly Audit Report – Ms. Sauter *Board Action*

D. Executive Limitations/Staff Relations – Ms. Murtha *Informational*

**VI. OTHER BUSINESS**

A. Board Reading Materials – *Material References Included*

B. Next Meeting:

1. TFFR Regular Board Meeting Thursday, January 27, 2021 at 1:00p.m.

**VII. ADJOURNMENT**

# EXECUTIVE SUMMARY

## TFFR Board Regular Meeting

November 18, 2021 – 1 pm CT

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- I. Agenda:** The November Board Meeting will be held in the Peace Garden room at the State Capitol 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 calendar invite. There will be a call in number for the public.
- II. Minutes:** The September 23, 2021 Board meeting minutes are included for review and approval.
- III. Board Education:** Matt Strom from Segal will present board education on mortality tables.
- IV. Governance:**
- A. Segal Actuarial Valuation Presentation:** Matt Strom from Segal will present the TFFR Actuarial Valuation to the Board.
  - B. Employee Benefits Programs Committee Update:** Ms. Murtha will discuss the presentation to the EBPC provided at its October 2021 meeting.
  - C. Legislative Special Session:** Ms. Murtha will provide information relating to bills affecting RIO during the Legislative Special Session that concluded on November 12, 2021. Including information related to H.B. 1506 and H.B. 1512.
  - D. through E.:** Ms. Weeks will provide the Board with a brief update regarding RIO team member activities related to member outreach, and Ms. Murtha will provide an update on the PAS project.
- V. Reports:** The Board will receive the following quarterly reports: quarterly investment update, quarterly TFFR Ends report, quarterly audit report, and executive limitations/staff relations report.

**Adjournment.**

**NORTH DAKOTA TEACHERS' FUND FOR RETIREMENT  
MINUTES OF THE  
SEPTEMBER 23, 2021, BOARD MEETING**

**BOARD MEMBERS PRESENT:** Rob Lech, President  
Mike Burton, Vice President  
Kirsten Baesler, State Supt. DPI  
Thomas Beadle, State Treasurer  
Cody Mickelson, Trustee  
Mel Olson, Trustee  
Jordan Willgohs, Trustee

**STAFF PRESENT:** Eric Chin, Interim CIO  
Jayme Heick, Retirement Programs Spec  
Missy Kopp, Executive Assistant  
Jan Murtha, Interim ED/CRO  
Sara Sauter, Supvr of Internal Audit  
Dottie Thorsen, Internal Auditor  
Denise Weeks, Retirement Program Mgr

**OTHERS PRESENT:** Dean DePountis, Atty. General's Office

**CALL TO ORDER:**

Mr. Mike Burton, Vice President of the Teachers' Fund for Retirement (TFFR) Board of Trustees, called the meeting to order at 1:10 p.m. on Thursday, September 23, 2021. The meeting was held at Workforce Safety and Insurance, Bismarck, ND.

**THE FOLLOWING MEMBERS WERE PRESENT REPRESENTING A QUORUM: SUPT. BAESLER, TREASURER BEADLE, MR. BURTON, MR. MICKELSON, AND MR. OLSON.**

**ACCEPTANCE OF AGENDA:**

The Board considered the agenda for the September 23, 2021, meeting.

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

**AYES: MR. MICKELSON, MR. OLSON, TREASURER BEADLE, MR. BURTON, SUPT. BAESLER, AND MR. WILLGOHS**

**NAYS: NONE**

**MOTION CARRIED**

**ABSENT: DR. LECH**

**MINUTES:**

The Board considered the minutes of the July 22, 2021 TFFR Board meeting.

**IT WAS MOVED BY TREASURER BEADLE AND SECONDED BY MR. MICKELSON AND CARRIED BY A VOICE VOTE TO APPROVE THE JULY 22, 2021, MINUTES AS DISTRIBUTED.**

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

Dr. Lech arrived at 1:20 p.m.

### **BOARD EDUCATION:**

#### **Trustee Fiduciary Responsibility:**

Mr. DePountis, Attorney General's office, presented board education on the fiduciary duties of TFFR Board members which are set forth in North Dakota Century Code. Fiduciary duties include loyalty, prudence and the duty to follow the law and plan documents. Mr. DePountis also discussed fiduciary liability, conflicts of interest, and ways to mitigate fiduciary risk. Board discussion followed.

### **GOVERNANCE:**

#### **Public Pension Mortality Study Participation:**

Ms. Murtha discussed a request for TFFR to participate in data collection for the next public sector plans mortality study conducted by the Society of Actuaries. Staff is requesting authorization for TFFR to participate and to request assistance from our actuarial consultant to assist with the data compilation and dissemination. Board discussion followed.

**IT WAS MOVED BY MR. OLSON AND SECONDED BY MR. BURTON AND CARRIED BY A ROLL CALL VOTE TO APPROVE PARTICIPATION IN THE MORTALITY STUDY AND TO AUTHORIZE STAFF TO CONTRACT WITH SEGAL TO ASSIST WITH THE FILE SUBMISSION.**

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

#### **Pension Administration System (PAS) Project Update:**

Ms. Murtha provided an update of activities related to the PAS project. The Request for Proposals (RFP) was issued and staff have reviewed proposals and took part in demonstrations from three vendors. The Executive Steering Committee (ESC) has reviewed the best and final offers from vendors and is engaged in negotiations. The vendor information is confidential at this point in the process. Staff hope to make an award in November with a kick-off meeting in December. The project is on schedule and within the budget. Board discussion followed.

#### **Administrative Rules Implementation Update:**

Ms. Murtha provided an update on the implementation of the new administrative rules which were changed because of updates to the actuarial assumption changes. Changes must be made in the pension system to process requests in accordance with the assumption changes. This process takes time due to the limited functionality of

our current system and staff resource limitations. TFFR active members were notified that staff cannot process purchase of service requests until after the system updates are completed and tested. The goal is to resume processing these requests by October 1, 2021. Board discussion followed.

#### Member Outreach Update:

Ms. Weeks provided an update on outreach activities. IT staff provided an online tool to allow members to schedule virtual individual counseling sessions with the Retirement Specialists. Staff attended the ND Career & Technical Education (CTE) Conference where TFFR had an informational booth and offered retirement benefit estimates and other TFFR information. Staff also provided model analysis and education to one employer. The Retirement Specialists are offering Group Counseling Sessions via Microsoft Teams for 15 school districts and two statewide events September through December. Staff will present at the ND School Board Association Conference on October 29, 2021. Board discussion followed.

#### Executive Limitations/Staff Relations:

Ms. Murtha provided an update on agency activities. RIO is still moving to the WSI building but to a different space within the building which does not require any remodeling and reduces the number of months RIO will pay rent at its current and future locations. The exact move date is not yet finalized. Current procurement activities include the PAS project, automated death audit services, executive search, temporary assistance for additional investment personnel, and automated conflict monitoring services. IT unification efforts continue to progress with staff participating in internal and external progress meetings. Ms. Murtha provided an update on staff and agency reorganization. Board discussion followed.

Treasurer Beadle left at 2:20 p.m.

### **REPORTS:**

#### Annual Investment Report:

Mr. Chin provided the annual investment report as of June 30, 2021. TFFR outperformed the policy benchmark in the 1 and 5-year periods ended June 30, 2021. Active management has enhanced net investment returns by roughly \$55 million for the 5-years ended June 30, 2021. TFFR's private equities allocation has increased from 5.2 percent in June 2020 to 7.6% in June 2021, and the infrastructure underweight has been addressed with recent commitments. Risk has increased as a result of the global pandemic. The increase in risk is driven by an increase in market risk, not by changes in the portfolio. Staff monitors portfolio allocations and rigorously rebalances to ensure exposures and allocations remain within targets. Board discussion followed.

#### Annual Budget and Expense Report:

Ms. Flanagan reviewed the annual TFFR budget and expense report for the fiscal year ending June 30, 2021. She explained that the largest portion of TFFR's expenditures are for member benefit claims with the second largest going to investment expenditures. The available budget for the PAS project was carried over into the current biennium. The RIO budget for the 2021-23 biennium is just over \$15 million, including the PAS project. Board discussion followed.

Supt. Baesler left the meeting at 3:43 p.m.

#### Annual Internal Audit (IA) Report:

Ms. Sauter reviewed the fiscal year end Audit Committee activities. One TFFR Employer Reporting review was completed. The review tested the accuracy of retirement salaries and contributions reported by the employer. IA worked with IT, Retirement Services, and ND Procurement to develop and review the RFP for a new death audit service. IT reviewed all one on one Direct Deposit Authorization form changes to ensure the new forms and procedures were followed by staff. The TFFR Salary Verification – Participant Data audit was completed on May 11, 2021. A TFFR Task List Project was completed to assist with the PAS project. The project tracked retirement program activities to document the flow of work and help find efficiencies. IA participated in meetings for the PAS project. Board discussion followed.

Treasurer Beadle returned to the meeting at 3:58 p.m.

Quarterly TFFR Ends:

Ms. Weeks shared the TFFR Ends monitoring report for the quarter ended June 30, 2021. The report highlights exceptions to normal business operations. The TFFR Board Retreat was held on June 17, 2021 to discuss recommendations from the PAS process, fund policies, and Board focus for 2023. Segal presented TFFR's updated plan management policy score to reflect recent assumption changes. Changes to Administrative Rules went into effect on July 1, 2021. Staff continued to work on retirement set up for TFFR members with over 200 in June and July. Board discussion followed.

**IT WAS MOVED BY MR. WILLGOHS AND SECONDED BY MR. MICKELSON AND CARRIED BY A VOICE VOTE TO ACCEPT THE ANNUAL INVESTMENT, BUDGET AND EXPENSE, AND INTERNAL AUDIT REPORTS AND THE QUARTERLY TFFR ENDS REPORT.**

**AYES: MR. OLSON, MR. MICKELSON, MR. WILLGOHS, TREASURER BEADLE, MR. BURTON, AND PRES. LECH**

**NAYS: NONE**

**MOTION CARRIED**

**ABSENT: SUPT. BAESLER**

**ADJOURNMENT:**

With no further business to come before the Board, Pres. Lech adjourned the meeting at 4:00 p.m.

Respectfully Submitted:

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

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Missy Kopp  
Reporting Secretary



## North Dakota Teachers' Fund for Retirement

# Board Education Presentation

**November 18, 2021**

**Kim Nicholl, FSA, MAAA, EA, Senior Vice President and Actuary**  
**Matt Strom, FSA, MAAA, EA, Senior Vice President and Actuary**

*This document has been prepared by Segal for the benefit of the Board of Trustees of the North Dakota Teachers' Fund for Retirement and is not complete without the presentation provided at the November 18, 2021, meeting of the Board of Trustees.*

# Discussion Topics

## Agenda

- Overview of Valuation Process
- SOA Public Sector Mortality Study
- Club Vita Longevity Modeling



# Overview of Valuation Process

# The Valuation Process

## Input

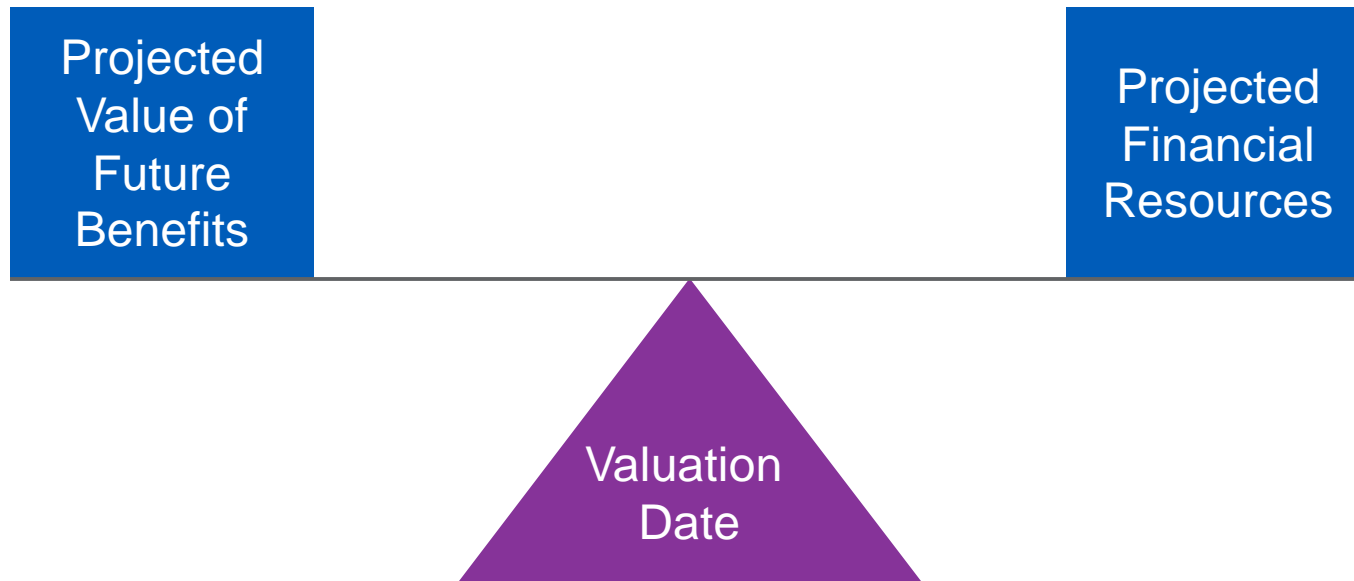
Member Data  
Asset Information  
Benefit Provisions  
Actuarial Assumptions  
Funding Methodology



## Results

Actuarial Value of Assets  
Normal Cost and Actuarial Liability  
Unfunded Liability and Funded Ratio  
Funding Period  
Actuarially Determined Employer Contribution  
Accounting Results

# Actuarial Balance



Over the life of a pension system,

$$\mathbf{Benefits + Expenses = Contributions + Investment Return}$$

Or:  $\text{Contributions} = \text{Benefits} + \text{Expenses} - \text{Investment Return}$

# Actuarially Determined Contribution vs. Funding Period

## Actuarially Determined Contribution (ADC)

- Equal to the normal cost plus amortization of the unfunded actuarial accrued liability (UAAL)
- The funding policy components:
  - Asset valuation method
  - Cost method
  - Amortization period

## Funding Period or Effective Amortization Period

- Number of years that the UAAL is expected to be amortized based upon the fixed member and employer contribution rates
- Funding period is compared to the ADC's amortization period to assess the progress toward amortizing the unfunded accrued liability

The employer contribution rate is compared to the ADC as a measure of the adequacy of the employer (and member) contribution rates.

# Actuarial Assumptions

Two types:

Demographic	Economic
<ul style="list-style-type: none"><li>• Retirement</li><li>• Disability</li><li>• Death in active service</li><li>• Withdrawal</li><li>• Death after retirement</li></ul>	<ul style="list-style-type: none"><li>• Inflation – 2.30%</li><li>• Investment return – 7.25%</li><li>• Salary increases – 14.80% for new members to 3.80% for members with 30+ years</li><li>• Payroll growth – 3.25%</li></ul>

Actuaries make assumptions as to when and why a member will leave active service, and estimate the amount and duration of the pension benefits paid.

# Actuarial Methods

## Asset Valuation Method (Actuarial Assets)

- Investment gains and losses recognized over a number of years
- TFFR uses a five-year smoothing method
- A 20% market value corridor is applied – actuarial value of assets must fall within 80% to 120% of market value

## Cost Method

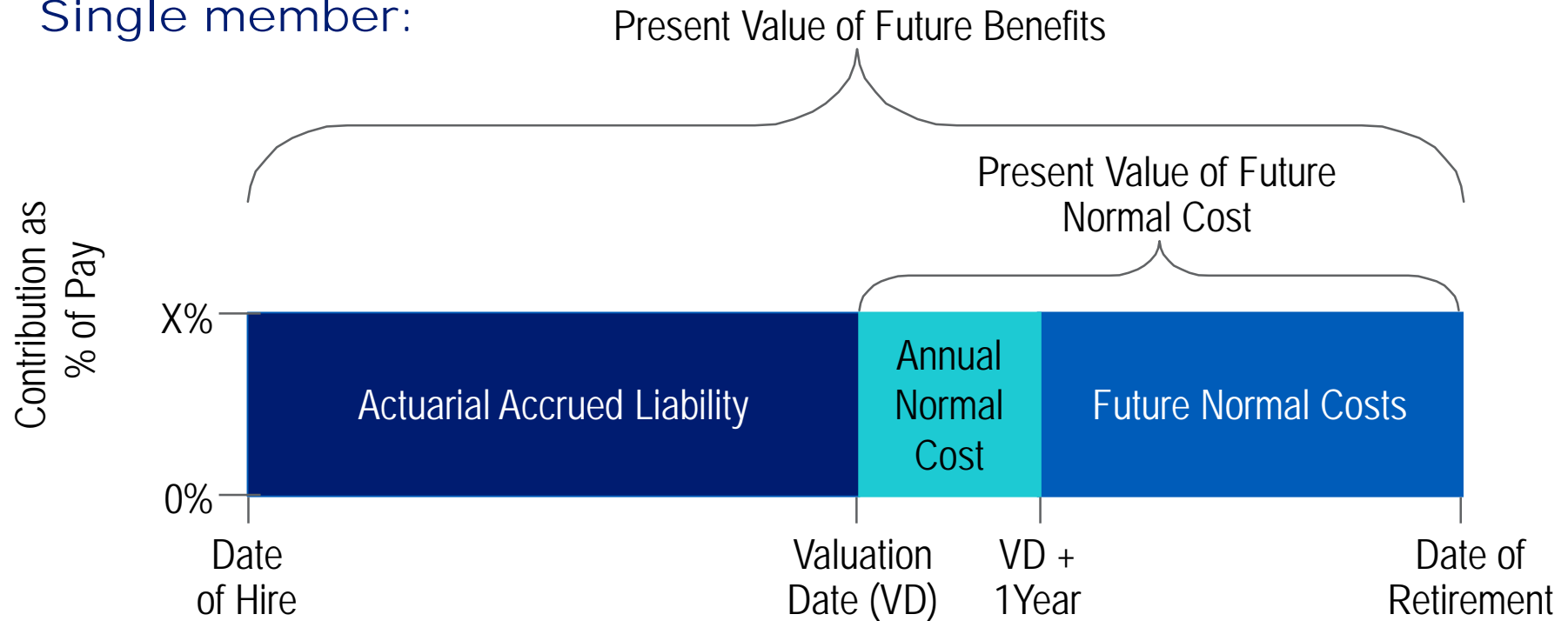
- Allocation of liability to past and future service
- TFFR uses the entry age normal cost method
  - Allocates cost of member's retirement benefit over expected career as a level % of salary
  - Most common cost method among public sector retirement systems
  - Required by GASB for financial statement reporting purposes

## Amortization Method

- Relies on two inputs:
  - Number of years to amortize the UAL
  - Level dollar or level percentage of payroll approach
- TFFR's amortization method:
  - 30-year closed period that began July 1, 2013
  - 22 years remaining
  - Level percentage of payroll

# Funding Process

Single member:



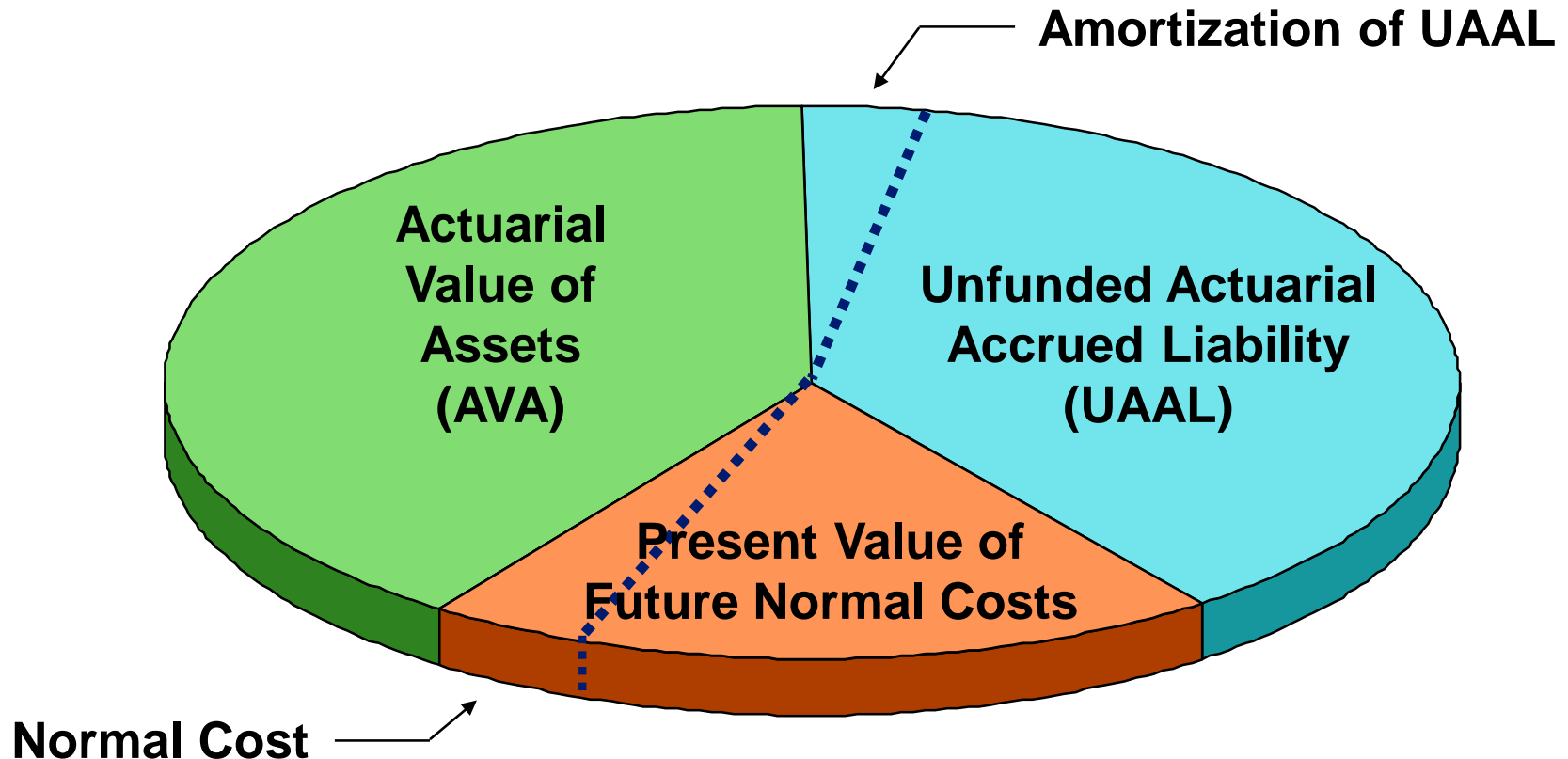
**Entry Age cost method:** Allocates cost between past and future service

- **Normal Cost:** Cost of annual benefit accrual as a level percent of salary
- **Actuarial Accrued Liability:** Represents accumulated value of past normal costs (or difference between total cost and present value of future normal costs)
- **Unfunded Actuarial Accrued Liability:** Actuarial accrued liability minus actuarial value of assets

# Actuarially Determined Contribution

Entire group:

**Present Value of Future Benefits**





# SOA Public Sector Mortality Study

# SOA/RPEC Public Plans Mortality Study

## **First public sector-specific tables released in 2019: Pub-2010**

- Mortality tables based exclusively on public sector plan experience
- Provided new insights into pension mortality by various factors:
  - Job category (e.g., Teachers, Public Safety, General)
  - Salary/benefit amount,
  - Health status (i.e., healthy or disabled)
- Built from 46 million life-years of exposure and 580,000 deaths
  - Data received from 35 public pension systems that collectively submitted information for 78 plans
  - TFFR participated in this previous study
- Experience collected from calendar years 2008-2013\*, with probabilities of death determined “as of” July 1, 2010

\* Contributors were asked to submit data for a five-year period ending in 2013. For TFFR, this was July 1, 2008, through June 30, 2013.

# SOA/RPEC Public Plans Mortality Study

## Data request recently issued for second study

- Data requested for calendar years 2014-2020
  - TFFR is participating and will submit data from July 1, 2013 - June 30, 2020
  - Originally, the study was planned for a year earlier, but the Covid pandemic delayed the SOA's activities by one year
- Goals of this update:
  - General update to the Pub-2010 process
  - Analyze how factors such as geographic location, postretirement medical coverage, and Social Security participation affect public pension mortality
  - Compare recent mortality experience to previously published mortality tables
- RPEC recognizes that some data for 2020 may be impacted by Covid
  - Data will be examined within this time period and will either be included or excluded from the study
    - RPEC intends to include commentary on this analysis in the final report

# Club Vita Longevity Modeling

# Background Information

## *Club Vita*

### Organizational overview

- International longevity analytics firm founded in the UK in 2008, expanded to Canada and the United States
- Facilitates the pooling and statistical analysis of demographic data from defined benefit pension plans
  - The “Big Data” approach reveals insights that would not otherwise be evident to plans acting alone
  - Produces models that are more accurate and predictive
  - Supports good governance, enhances decision making, and improves security of promised benefits

### Model underpinnings

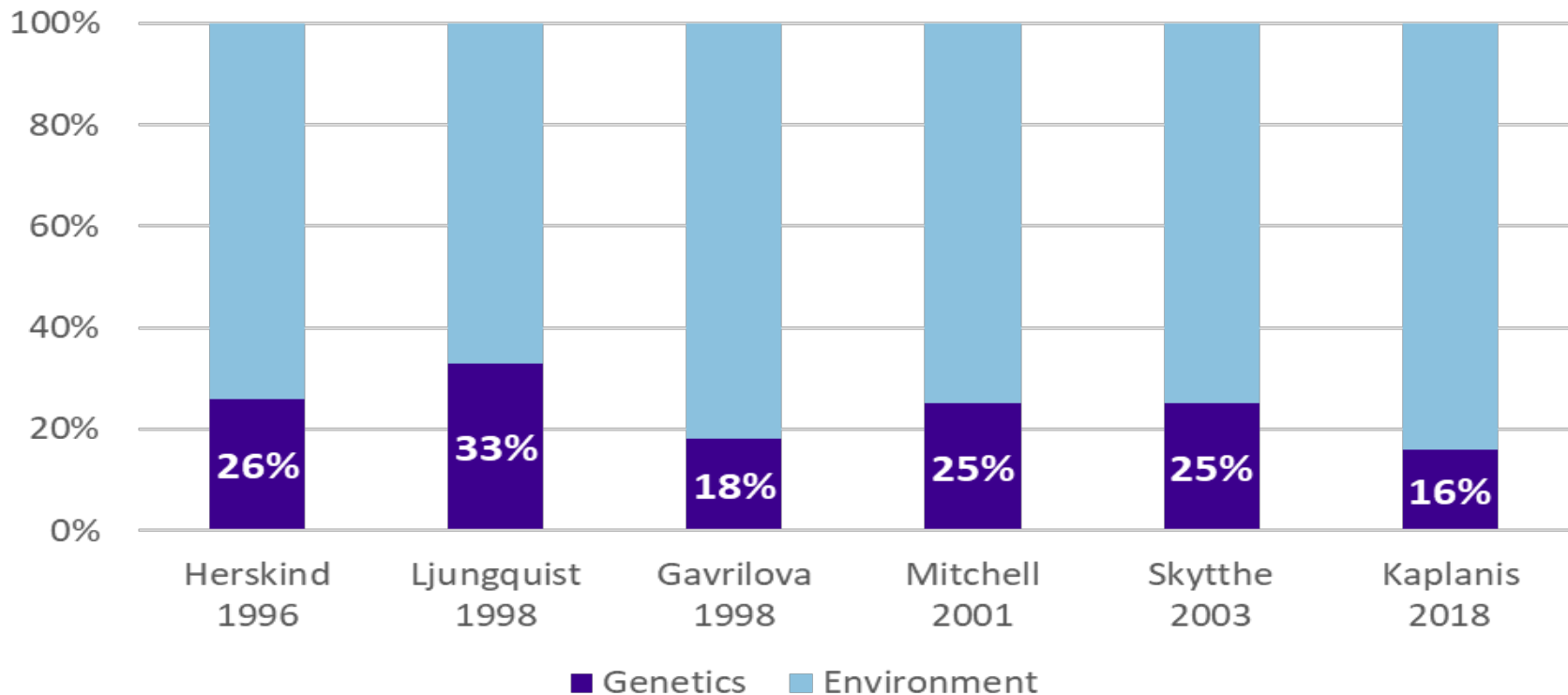
- Rate participants individually (rather than reviewing plan experience in aggregate)
- Socio-economic factors, such as lifestyle, are also predictors of longevity
- People’s neighborhoods are correlated to their lifestyle
  - Similar neighborhoods appear throughout the U.S.
- Club Vita focuses on nine-digit zip codes as proxy for capturing lifestyle-type indicators not readily available in plan data

# Modeling Approach

## *Longevity Follows Lifestyle*

- Research suggests lifespan is less than 30% genetics

### Research study results: Genetics vs. Environment

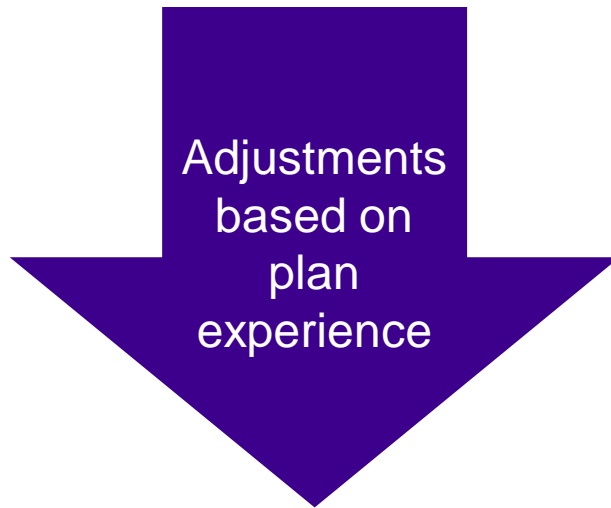


Lifespan driven more by nurture than nature

# Modeling Approach

*Shifting Focus From Plans to Participants*

## Traditional Approach



**Plan-specific average  
mortality tables**

## Club Vita Approach



**Mortality curves  
for each individual**

# Modeling Approach

## *Aggregating Nine-Digit Zip Codes*

### **Modeling principles**

- People living in the same neighborhood have similar characteristics
- Neighborhoods can serve as a proxy for the lifestyle of people living there
- Neighborhoods with the same characteristics appear all over the country

### **Modeling process**

- There are over 40 million nine-digit zip codes
- Club Vita aggregates pooled data and similar neighborhoods to achieve statistical credibility
- Zip codes are grouped according to similarity of housing, incomes, and lifestyle
- Zip codes are combined with traditional rating factors to capture more diversity among participants

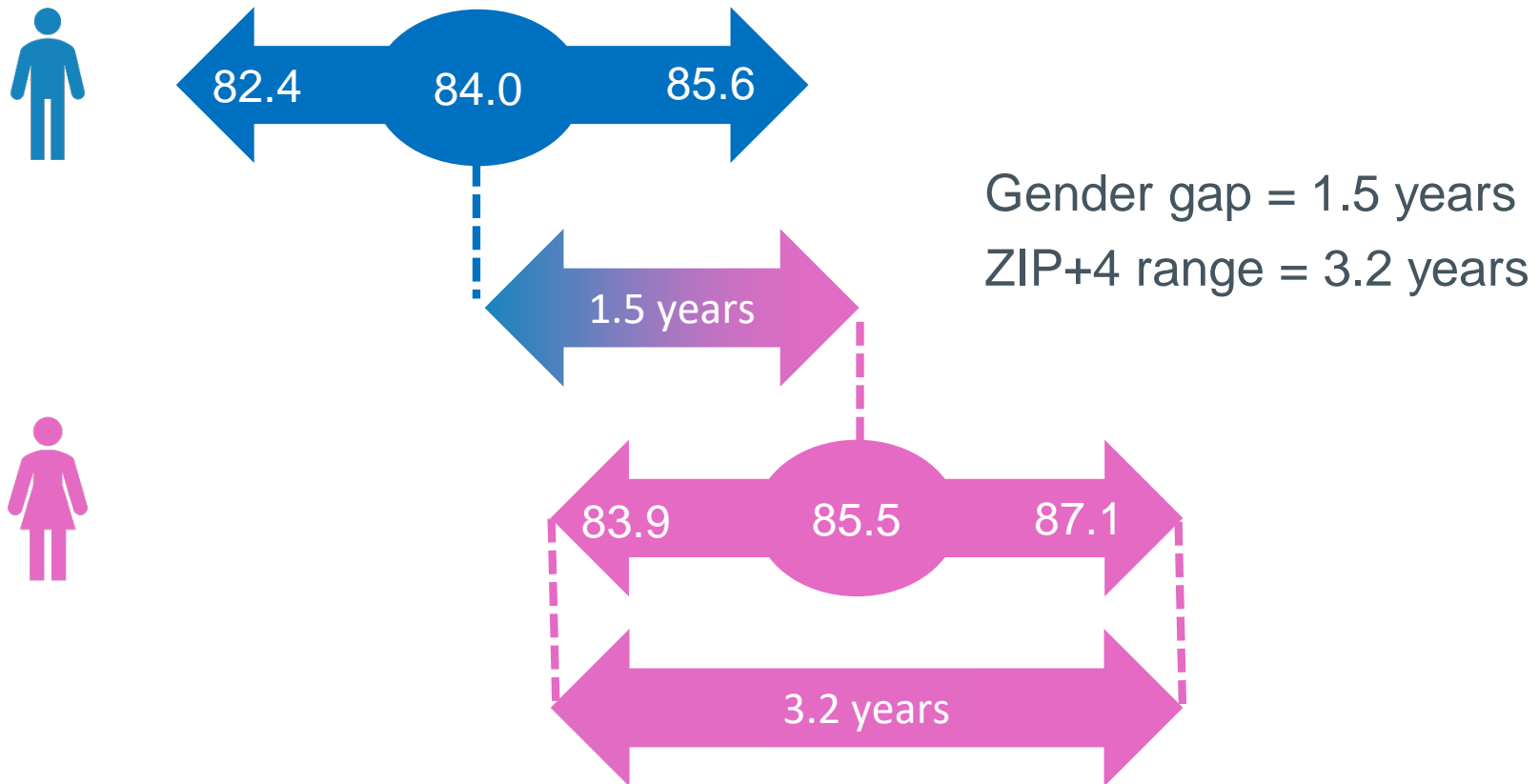
Club Vita's model generates hundreds of individual longevity curves



# Modeling Approach

## *Capturing The Diversity*

- Zip code predicts a wider range of life expectancy than traditional factors such as gender

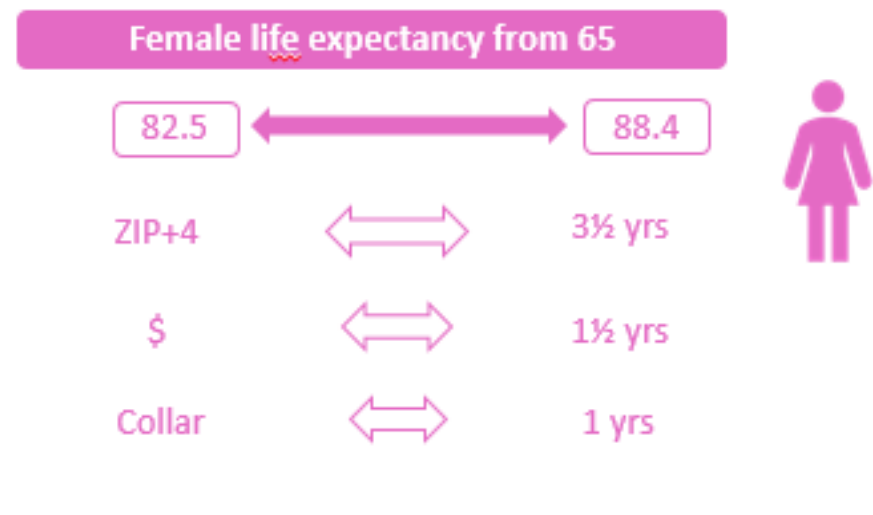
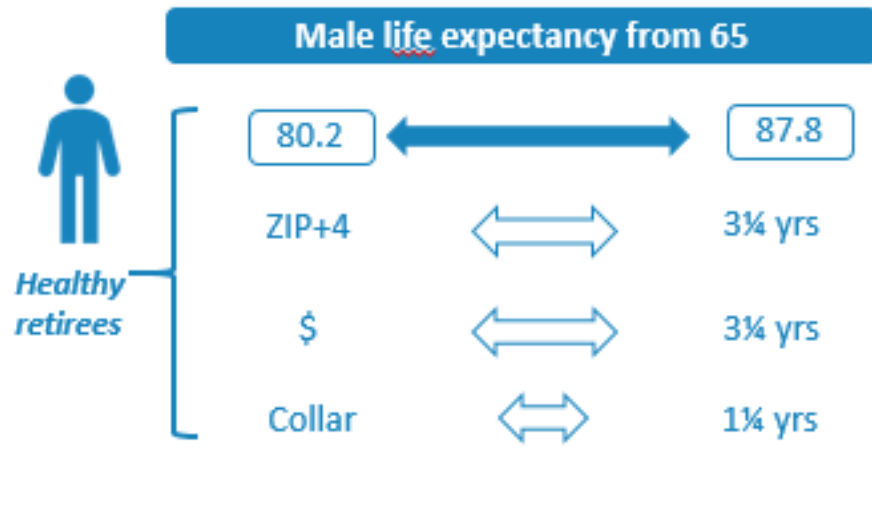


Life expectancy from age 65

# Modeling Approach

## *Capturing The Diversity*

- Incorporating zip code and pension amount with traditional rating factors such as gender and collar captures additional diversity on an individual level



# Modeling Approach

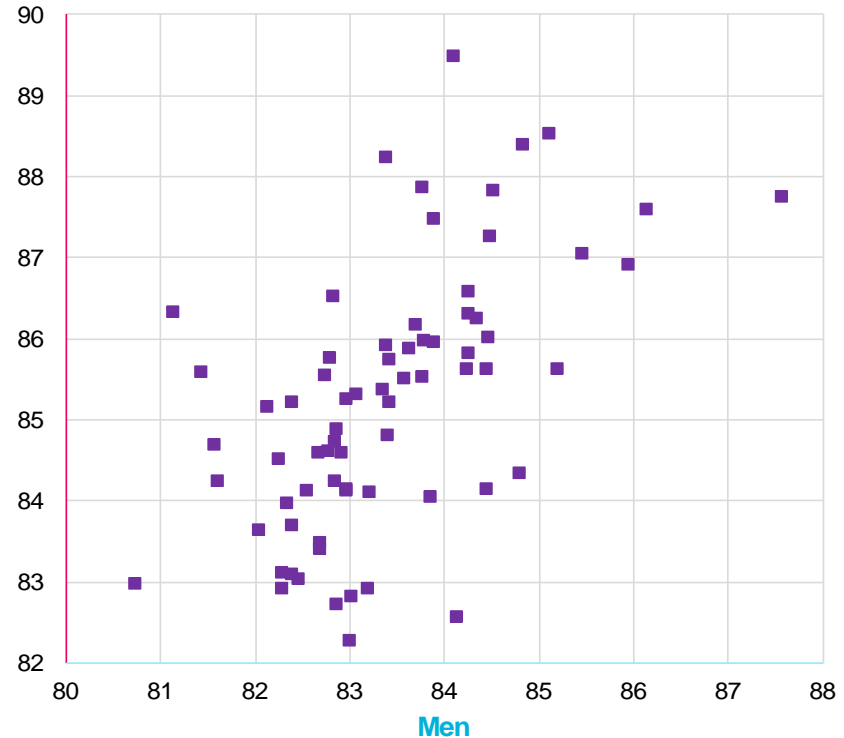
## *Diversity Between U.S. Pension Plans*

- Each purple dot shows the average life expectancy of participants in one pension plan in Club Vita's data set
- Longevity experience of defined benefit pension plans varies widely
- Standard mortality tables cannot adequately capture this diversity

7 years diversity

Women

Expectation of life of a 65 year old in each plan  
(2013-2017 data)



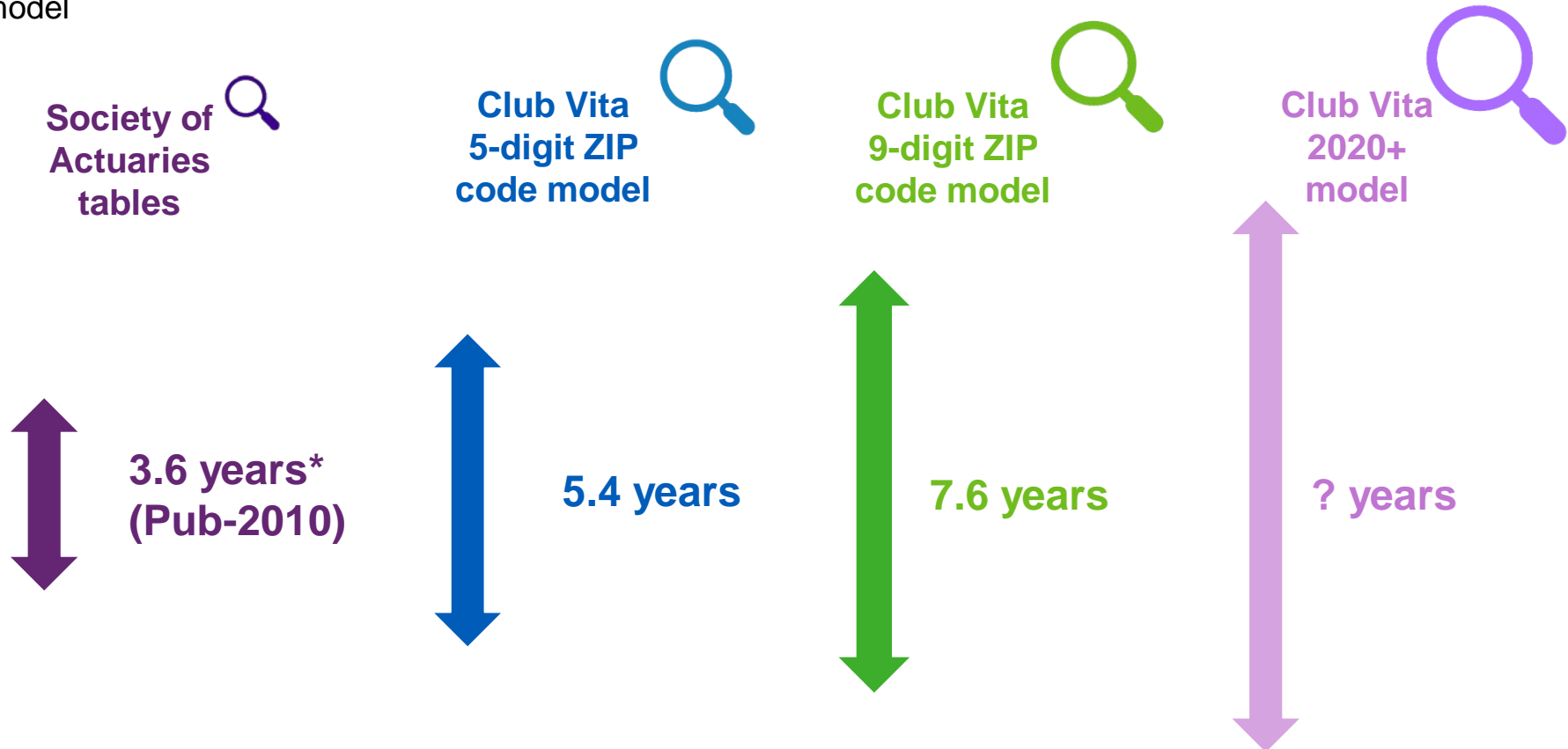
7 years diversity

U.S. pensioners are diverse, but traditional mortality assumptions assume all participants are the same

# Modeling Approach

## *Capturing More Diversity*

- Illustration of the range of healthy male life expectancy at age 65 in a “standard” table versus Club Vita’s model



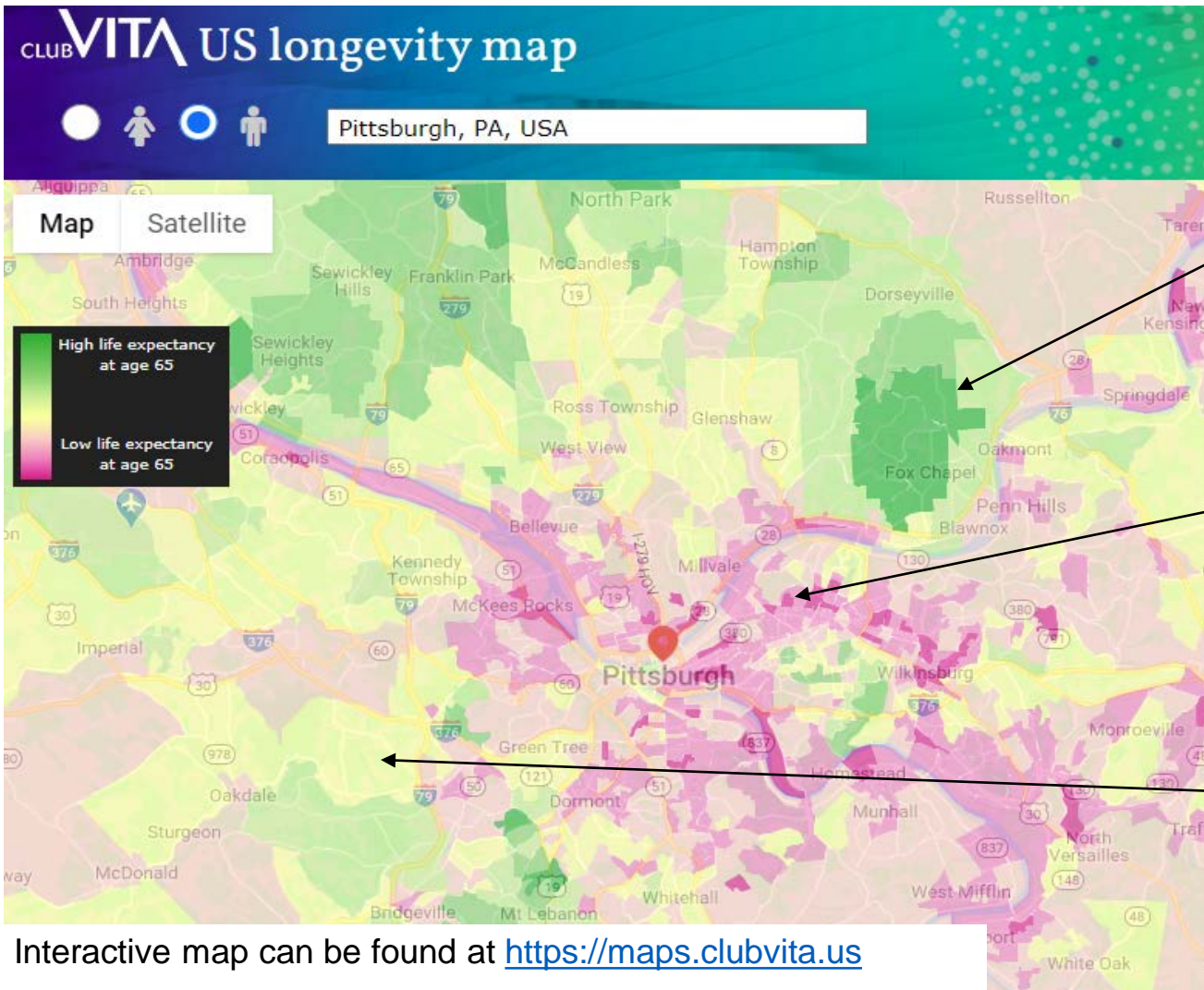
Granular assumptions help understand sub-populations and avoid over/under estimating liabilities using “average” assumptions

\* Difference between PubT above-median benefit and PubS below-median benefit life expectancy

# Modeling Approach

## *Club Vita Longevity Maps*

- Club Vita has overlaid their longevity model on a map of the U.S.
- Map below shows life expectancy for males in and around Pittsburgh



Patches of higher life expectancy (**green**)

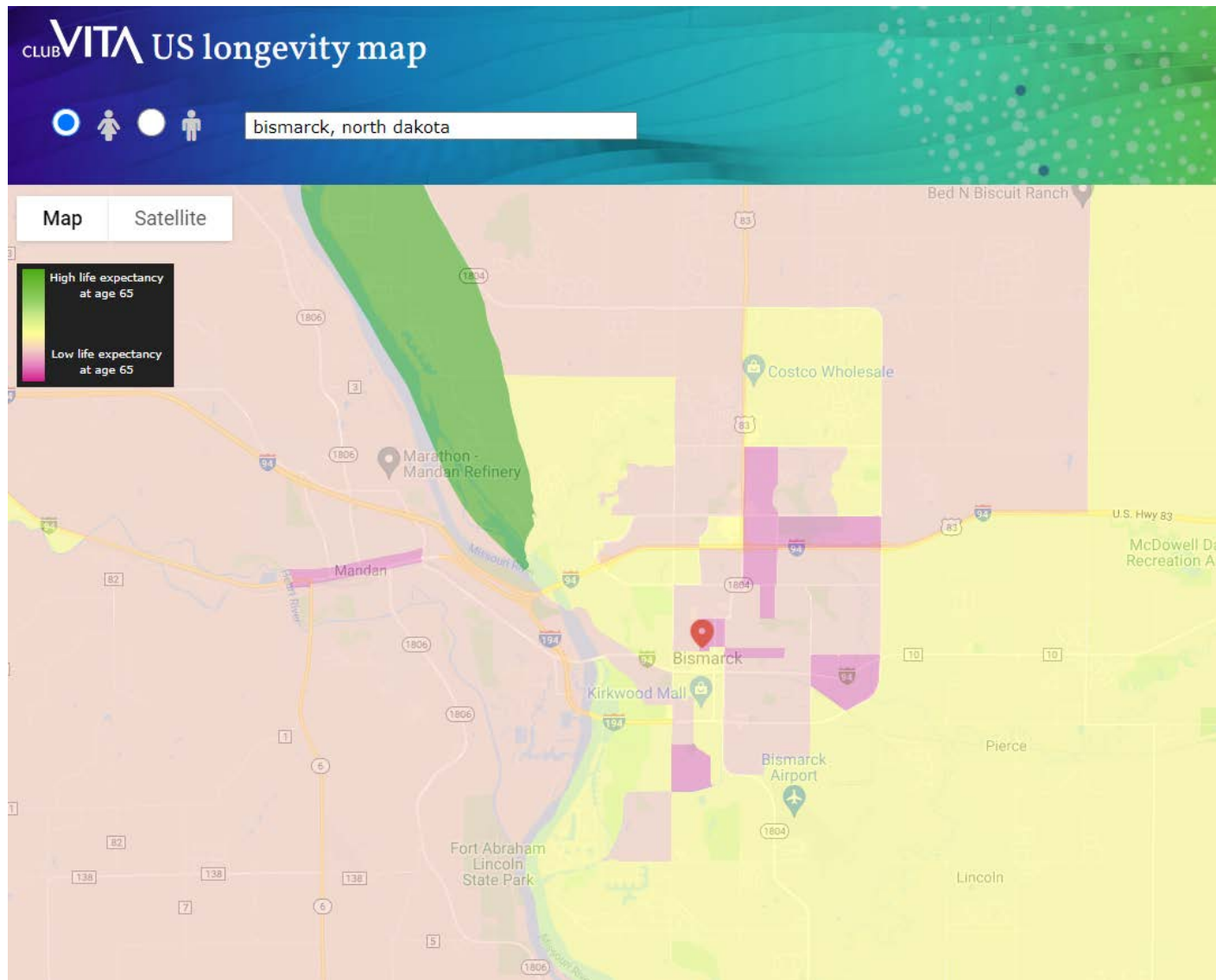
Areas of lower life expectancy (**red**)

Patches of average life expectancy (**yellow**)

Interactive map can be found at <https://maps.clubvita.us>

# Modeling Approach

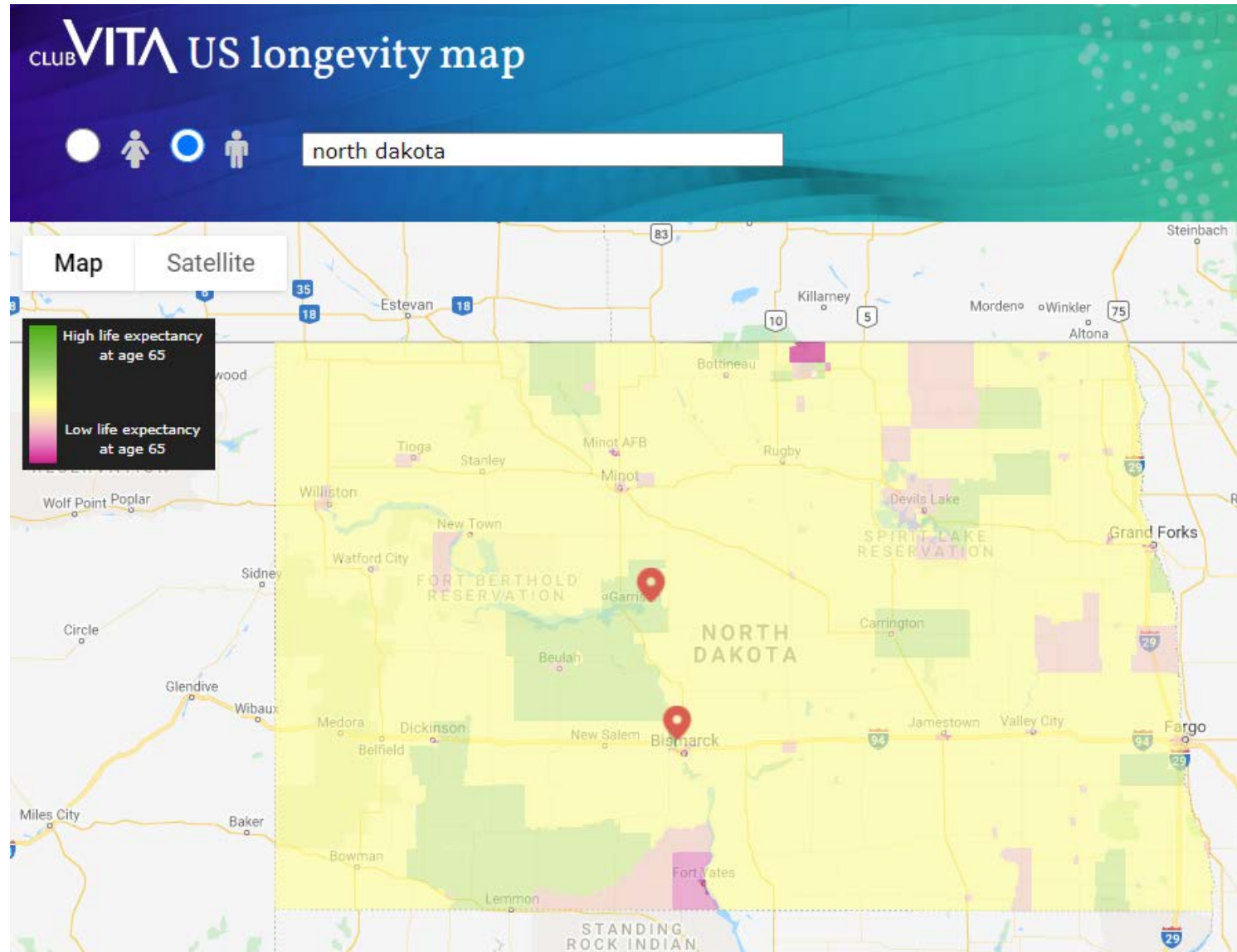
## *Club Vita Longevity Maps – Bismarck, females*





# Modeling Approach

## *Club Vita Longevity Maps – North Dakota, males*



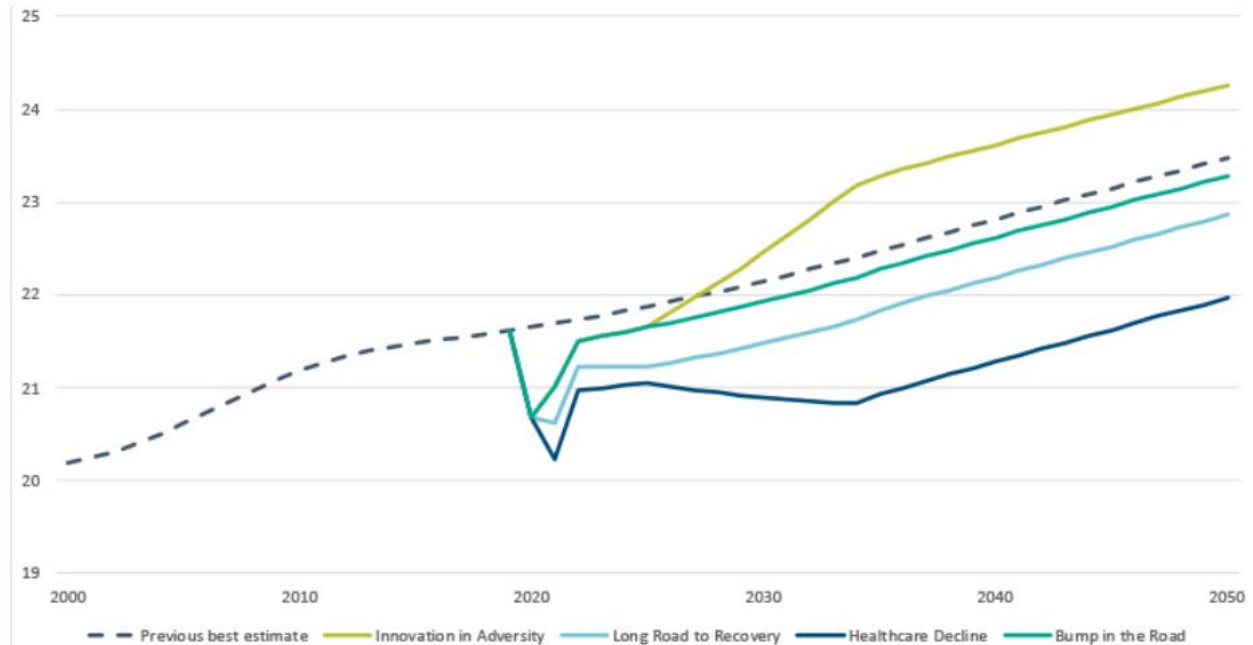
# Covid-19 Modeling

## *Assessing Long-term Risks Using Scenario Modeling*

CV scenarios capturing a range of outcomes from the pandemic:

- **Bump in the Road** – short and isolated effect (0.7-1.0% reduction in liability)
- **Innovation in Adversity** – swift recovery with “lessons learned” leading to longer term improvements in longevity (0.3-1.8% increase in liability)
- **Long Road to Recovery** – challenges lead to lingering effects for a prolonged period (1.6-2.7% reduction in liability)
- **Healthcare Decline** – Virus mutations, etc., cause downward spiral in healthcare as systems struggle to provide regular care (3.1-5.2% reduction in liability)

### Period Life Expectancy From Age 65 – Female



For a typical plan, the liability impact ranges from around +1% to -5%.



# Joining the “Club”

## *Club Vita Membership Overview*

- Club Vita’s model is developed and improved from the pooling of demographic data from defined benefit pension plans across the U.S.
- Joining Club Vita entails contributing your plan’s longevity experience data

### **Benefits**

- Custom reporting on participant characteristics and longevity risk measures (details on next slide)
- Research on emerging topics
- Support overall public plan community
  - Longevity research furthers discussions on the economic impact of public sector retirement plans
  - Especially important given ongoing discussions about public retirement system funding levels
  - Contributing participant data will help develop a diverse pool of retired teacher experience
    - Enables the development and calibration of a more predictive longevity model
    - Supports use of model for pension valuations and projections

Plans have the opportunity to join Club Vita

# Joining the “Club”

## *Custom Reports*

### **Participant Longevity (“Vita Index”) Report**

- Financial impact of the plan’s recent longevity experience versus Club Vita’s longevity model expectations
- Analysis of historical longevity experience
- Insight into the longevity characteristics of plan participants

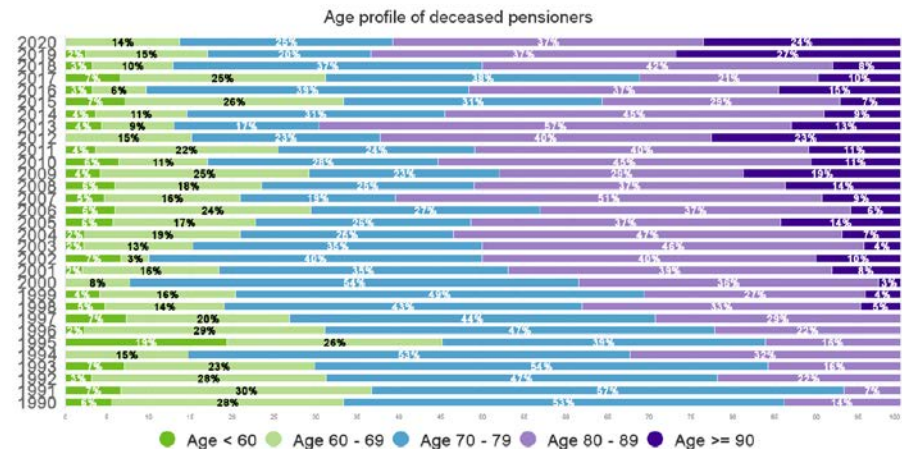
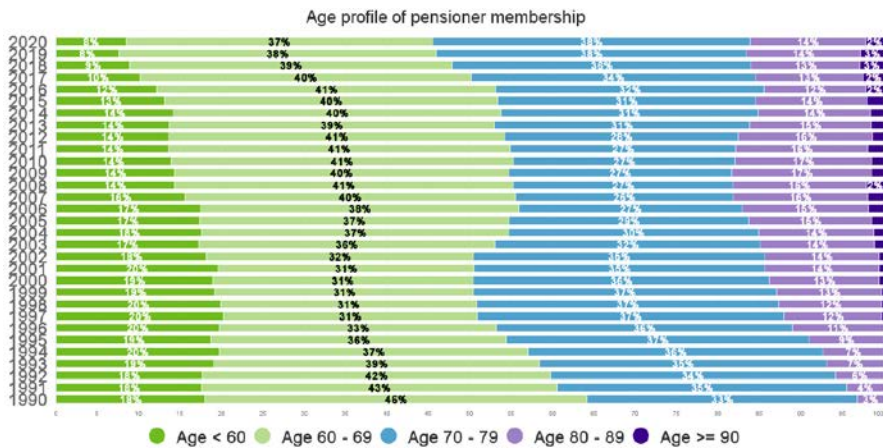
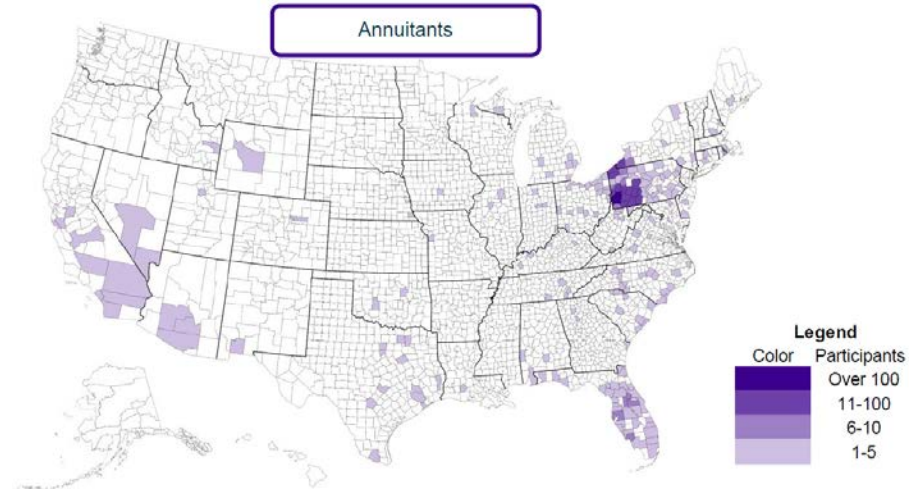
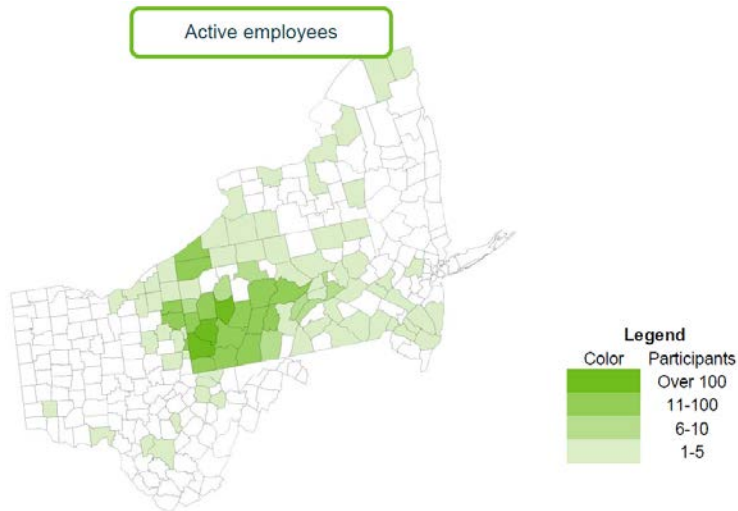
### **Data Quality (“Vita Cleansing”) Report**

- Current and historic membership profile of the Plan
- Historical pattern of deaths
- Comparative data quality (including general results of life existence checking)
- Patterns of birth and retirement
- Whether information supplied on participants (e.g., pension in payment) looks suspicious

Sample reports are available

# Joining the “Club”

## Custom Reports – Sample Illustrations





## North Dakota Teachers' Fund for Retirement

# Actuarial Valuation as of July 1, 2021

**November 18, 2021**

**Kim Nicholl, FSA, MAAA, EA, Senior Vice President and Actuary**  
**Tanya Dybal, FSA, MAAA, EA, Vice President and Actuary**  
**Matt Strom, FSA, MAAA, EA, Senior Vice President and Actuary**

*This document has been prepared by Segal for the benefit of the Board of Trustees of the North Dakota Teachers' Fund for Retirement and is not complete without the presentation provided at the November 18, 2021, meeting of the Board of Trustees.*

# Discussion Topics

## Agenda

- Valuation Results
- Projections
- Next Steps

# Summary of Valuation Highlights

## July 1, 2021 Actuarial Valuation

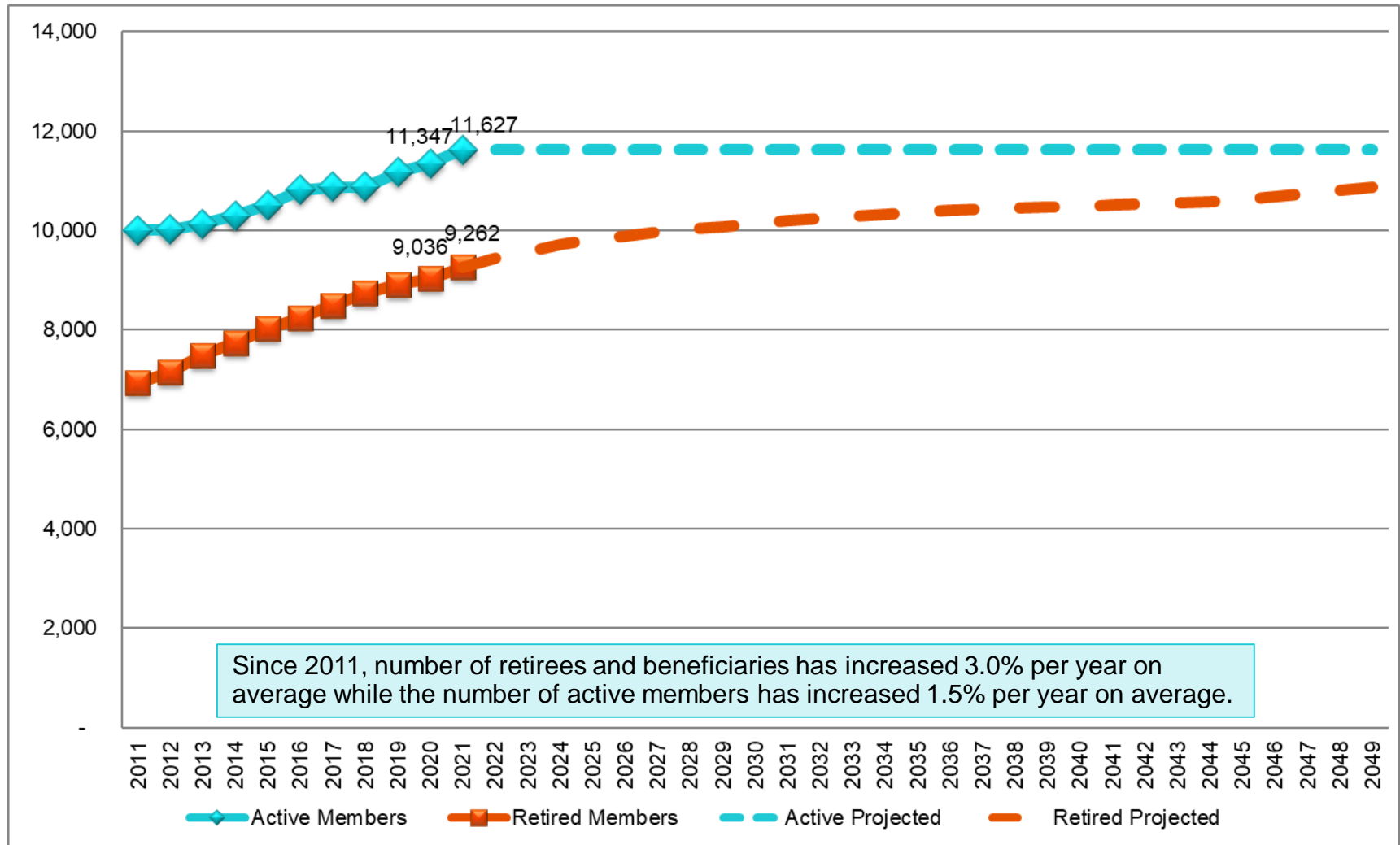
- The **return on the market value of assets** for the year ending June 30, 2021, was **26.1%\***
  - Gradual recognition of deferred losses resulted in **10.3% return on actuarial value of assets**
- **Funded ratio** increased from 65.7% (as of 7/1/2020) to **68.6%** (as of 7/1/2021)
- Effective amortization period decreased from 24 years to 21 years
- Net impact on **actuarially determined contribution** (ADC) was a decrease from 13.19% of payroll to **12.37%** of payroll
  - Based on the employer contribution rate of 12.75%, the contribution deficiency has decreased from 0.44% of payroll to a margin of 0.38% of payroll
- GASB Net Pension Liability decreased from \$1.53 billion as of 6/30/2020, to \$1.05 billion as of 6/30/2021

\* Based on Segal's calculation

# Membership

	2020	2021	Change
<b>Active</b>			
• Number	11,347	11,627	+2.5%
• Payroll (annualized)	\$711.0 mil	\$749.4 mil	+5.4%
• Average Age	41.8 years	41.4 years	-0.4 years
• Average Service	11.7 years	11.4 years	-0.3 years
<b>Retirees and Beneficiaries</b>			
• Number	9,036	9,262	+2.5%
• Total Annual Benefits	\$229.4 mil	\$241.4 mil	+5.2%
• Average Monthly Benefit	\$2,116	\$2,172	+2.6%

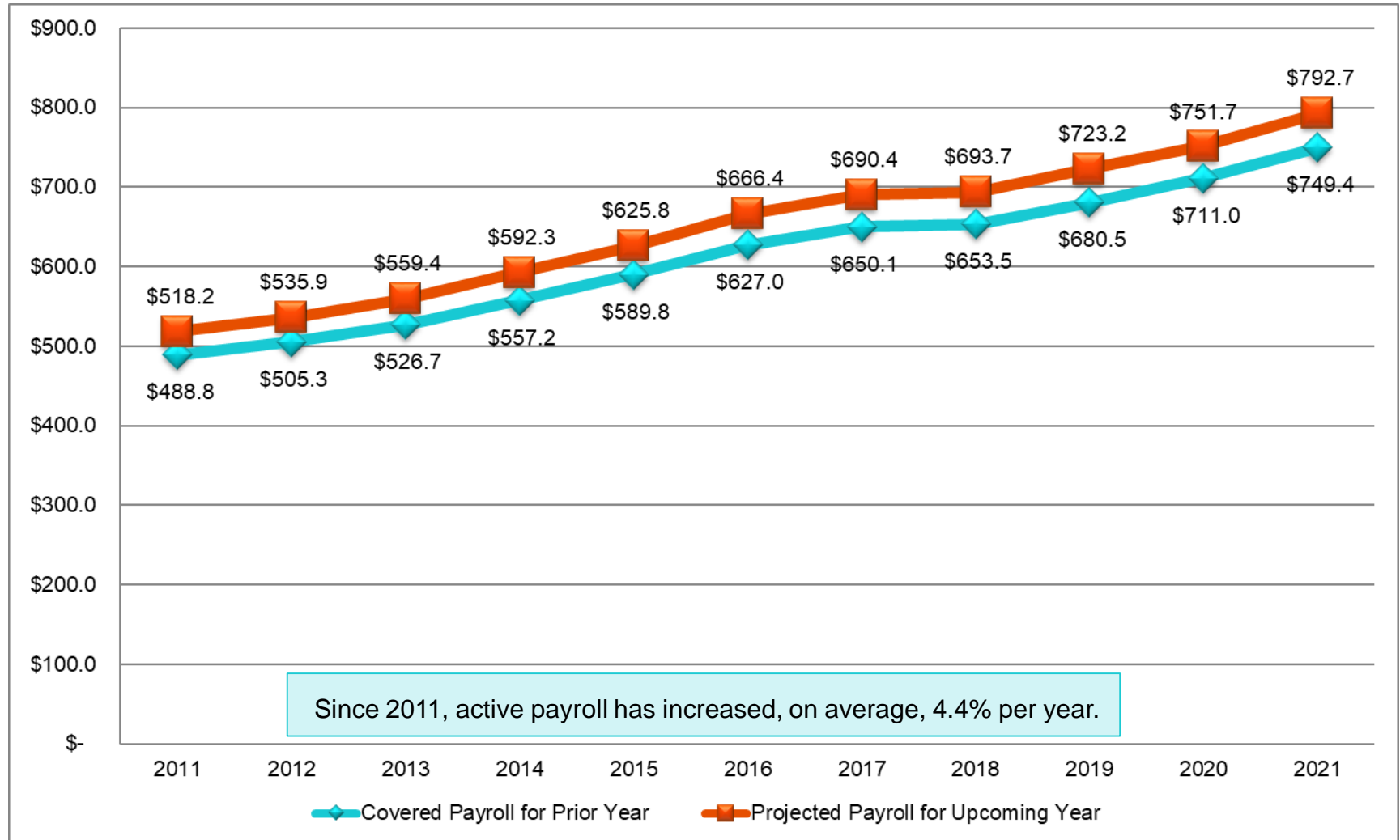
# Active and Retired Membership



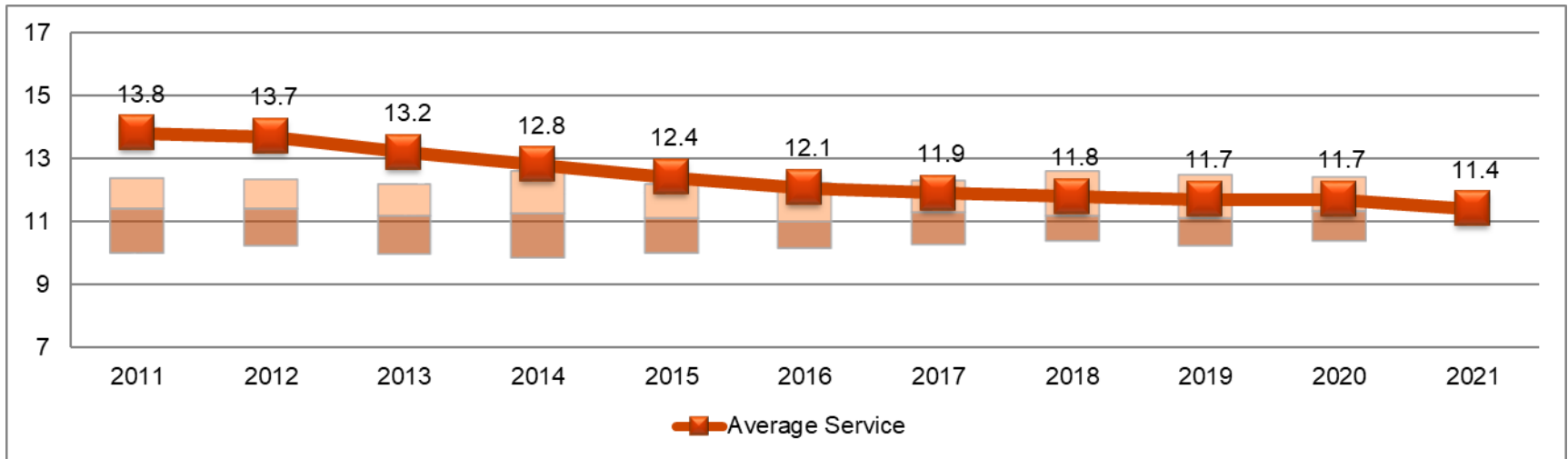
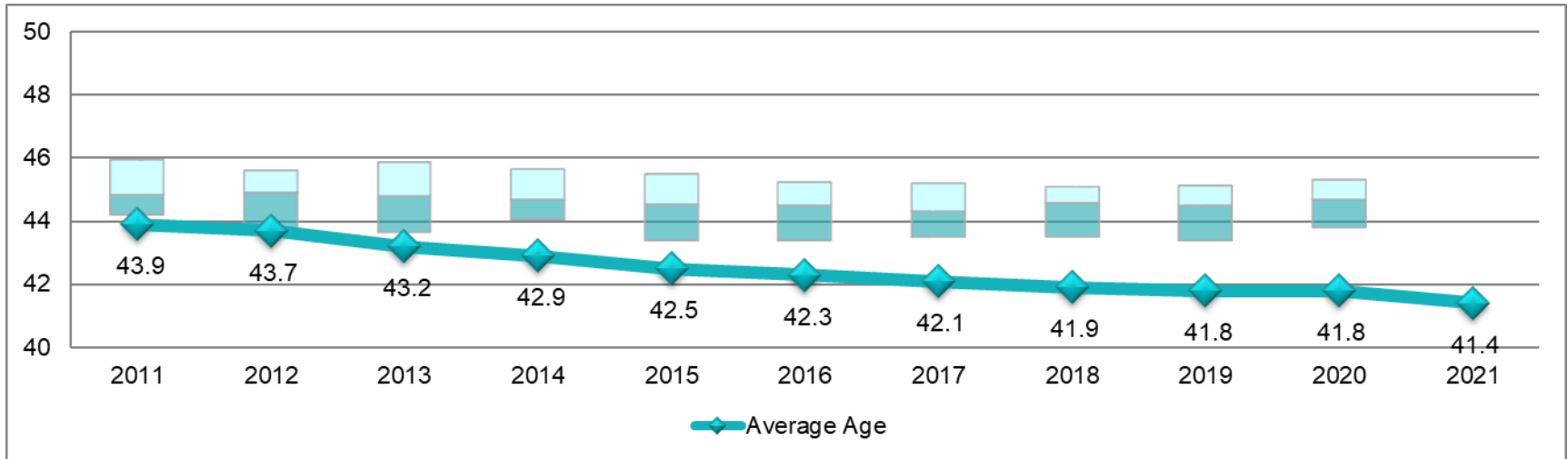


# Active Payroll

\$ Millions



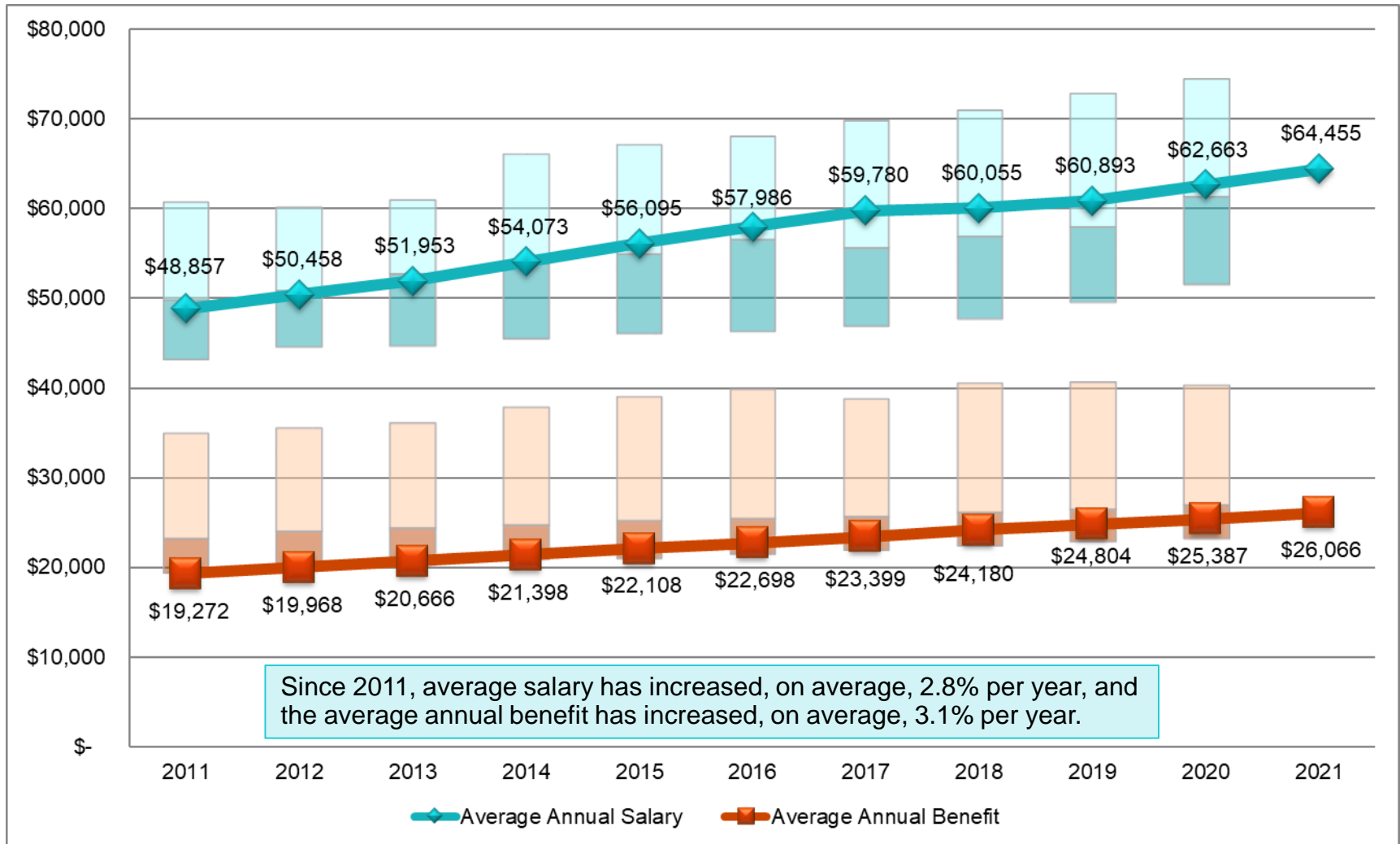
# Average Age and Service of Active Members



For context, historical data is compared to 38 systems in the Public Plans Data\* that primarily cover teachers. The top marker represents the 2<sup>nd</sup> quartile (50<sup>th</sup> to 75<sup>th</sup> percentile) and the lower marker represents the 3<sup>rd</sup> quartile (25<sup>th</sup> to 50<sup>th</sup> percentile), where the middle line indicates the median.

\* Public Plans Data. 2001-2020. Center for Retirement Research at Boston College, MissionSquare Research Institute, and National Association of State Retirement Administrators.

# Average Salary and Average Benefit



For context, historical data is compared to 38 systems in the Public Plans Data\* that primarily cover teachers. The top marker represents the 2<sup>nd</sup> quartile (50<sup>th</sup> to 75<sup>th</sup> percentile) and the lower marker represents the 3<sup>rd</sup> quartile (25<sup>th</sup> to 50<sup>th</sup> percentile), where the middle line indicates the median.

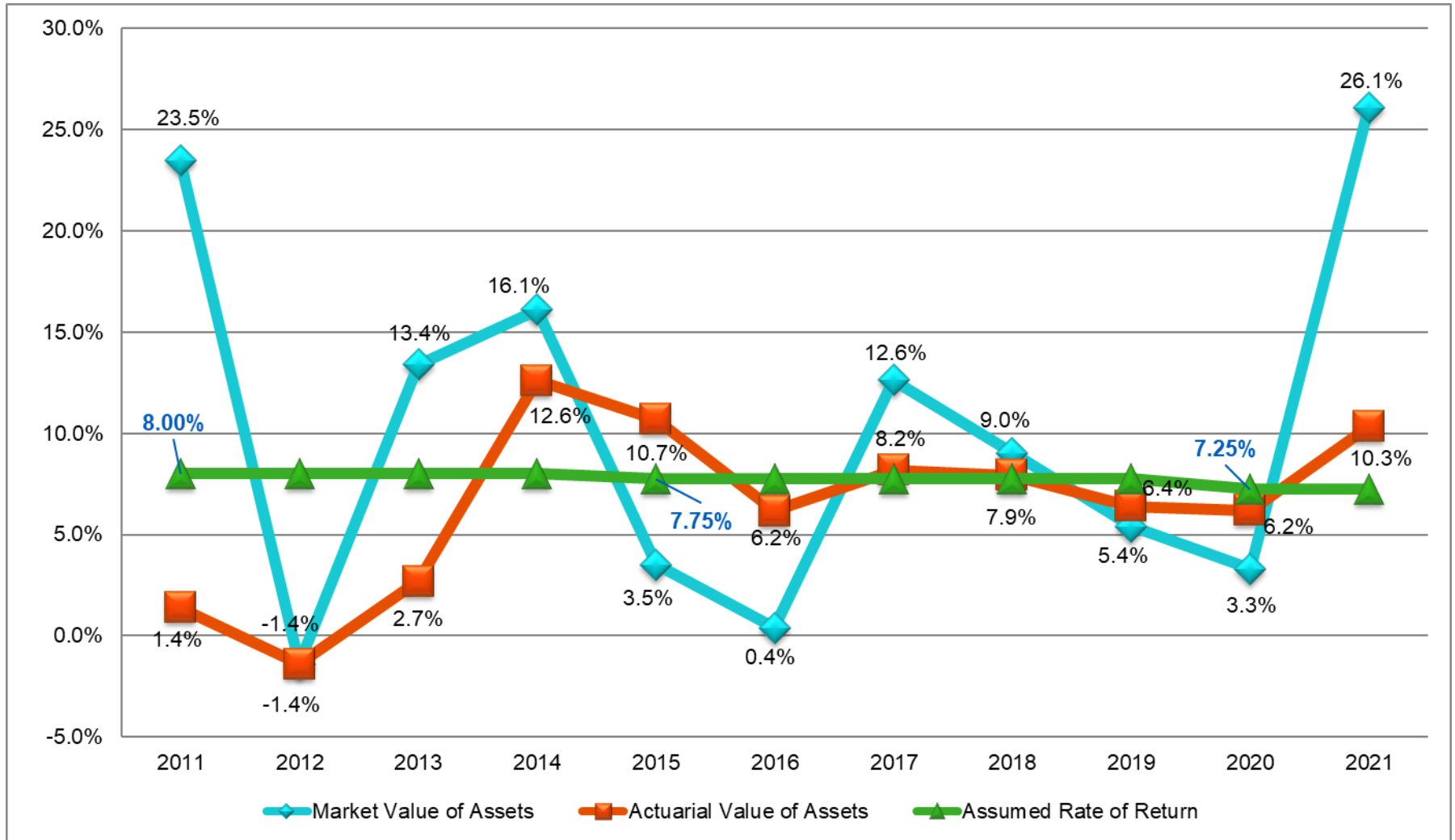
\* Public Plans Data. 2001-2020. Center for Retirement Research at Boston College, MissionSquare Research Institute, and National Association of State Retirement Administrators.

# Assets

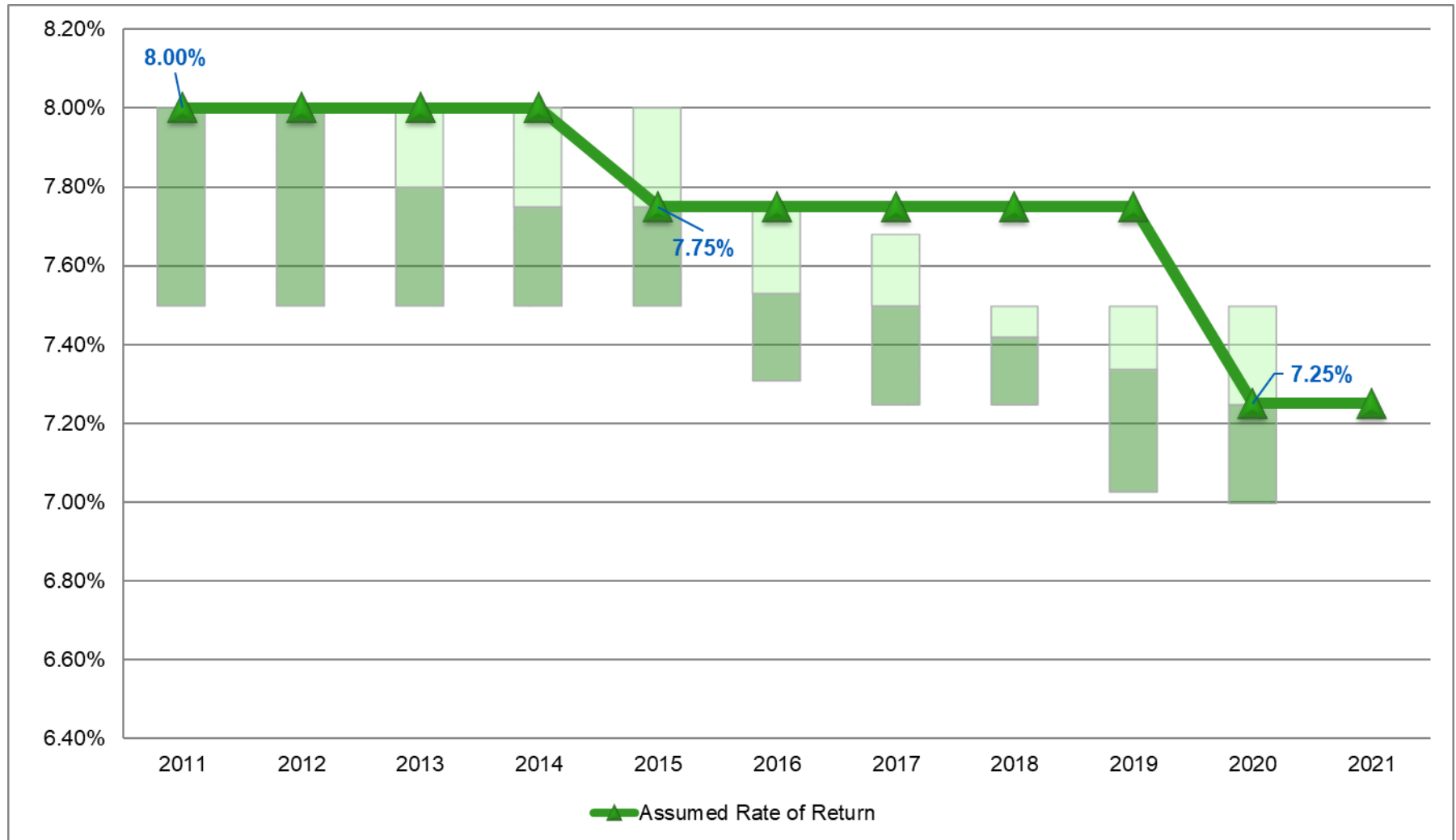
- The market value of assets increased from \$2.65 billion (as of 6/30/2020) to \$3.28 billion (as of 6/30/2021)
  - Segal estimated the investment return at 26.07%, net of investment expenses
- The actuarial value of assets increased from \$2.75 billion (as of 6/30/2020) to \$2.97 billion (as of 6/30/2021)
  - Investment return of 10.33%, net of investment expenses
  - Compared to the return assumption of 7.25%
  - Actuarial value is 90.6% of market
  - There is a total of \$308.7 million of deferred net investment gains that will be recognized in future years
- Average annual returns are:

	Market Value	Actuarial Value
10-year average	8.6%	6.9%
20-year average	6.9%	5.7%
30-year average	8.0%	7.2%

# Asset Returns



# Investment Return Assumption

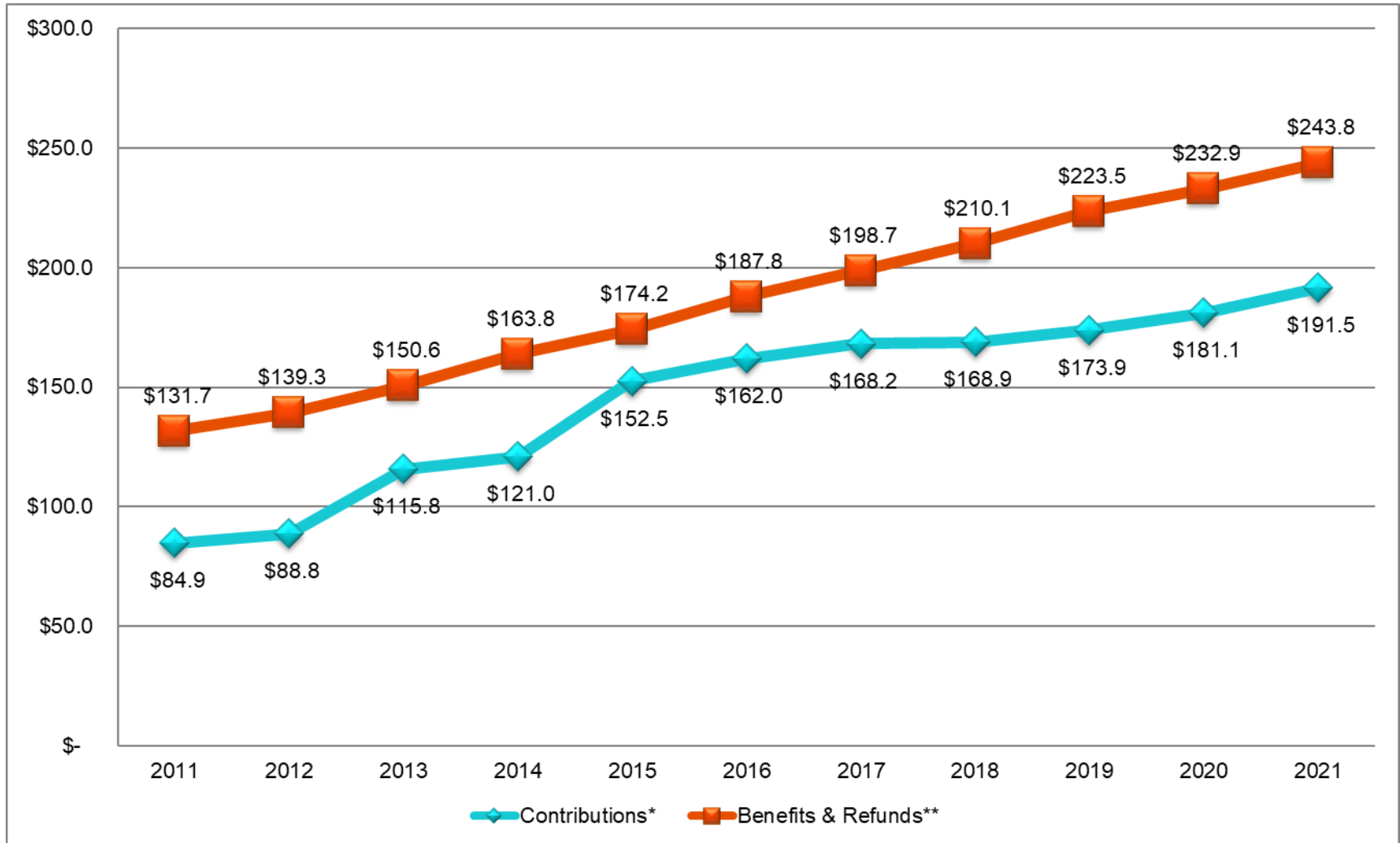


For context, historical data is compared to 38 systems in the Public Plans Data\* that primarily cover teachers. The top marker represents the 2<sup>nd</sup> quartile (50<sup>th</sup> to 75<sup>th</sup> percentile) and the lower marker represents the 3<sup>rd</sup> quartile (25<sup>th</sup> to 50<sup>th</sup> percentile), where the middle line indicates the median.

\* Public Plans Data. 2001-2020. Center for Retirement Research at Boston College, MissionSquare Research Institute, and National Association of State Retirement Administrators.

# Contributions vs. Benefits and Refunds

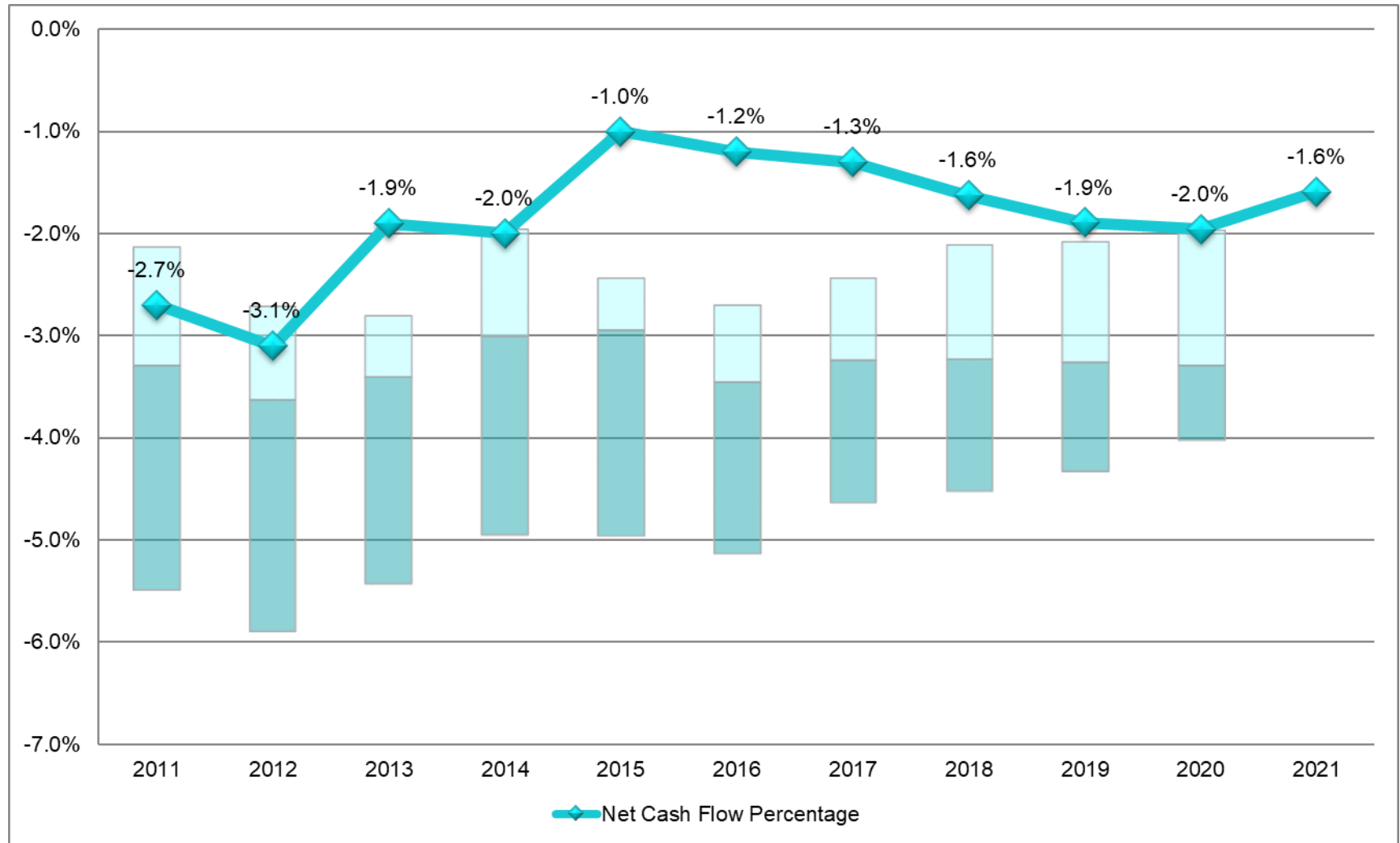
\$ Millions



\* Includes member and employer contributions, and service purchases

\*\* Includes administrative expenses

# Net Cash Flow as a % of Market Value



For context, historical data is compared to 38 systems in the Public Plans Data\* that primarily cover teachers. The top marker represents the 2<sup>nd</sup> quartile (50<sup>th</sup> to 75<sup>th</sup> percentile) and the lower marker represents the 3<sup>rd</sup> quartile (25<sup>th</sup> to 50<sup>th</sup> percentile), where the middle line indicates the median.

\* Public Plans Data. 2001-2020. Center for Retirement Research at Boston College, MissionSquare Research Institute, and National Association of State Retirement Administrators.



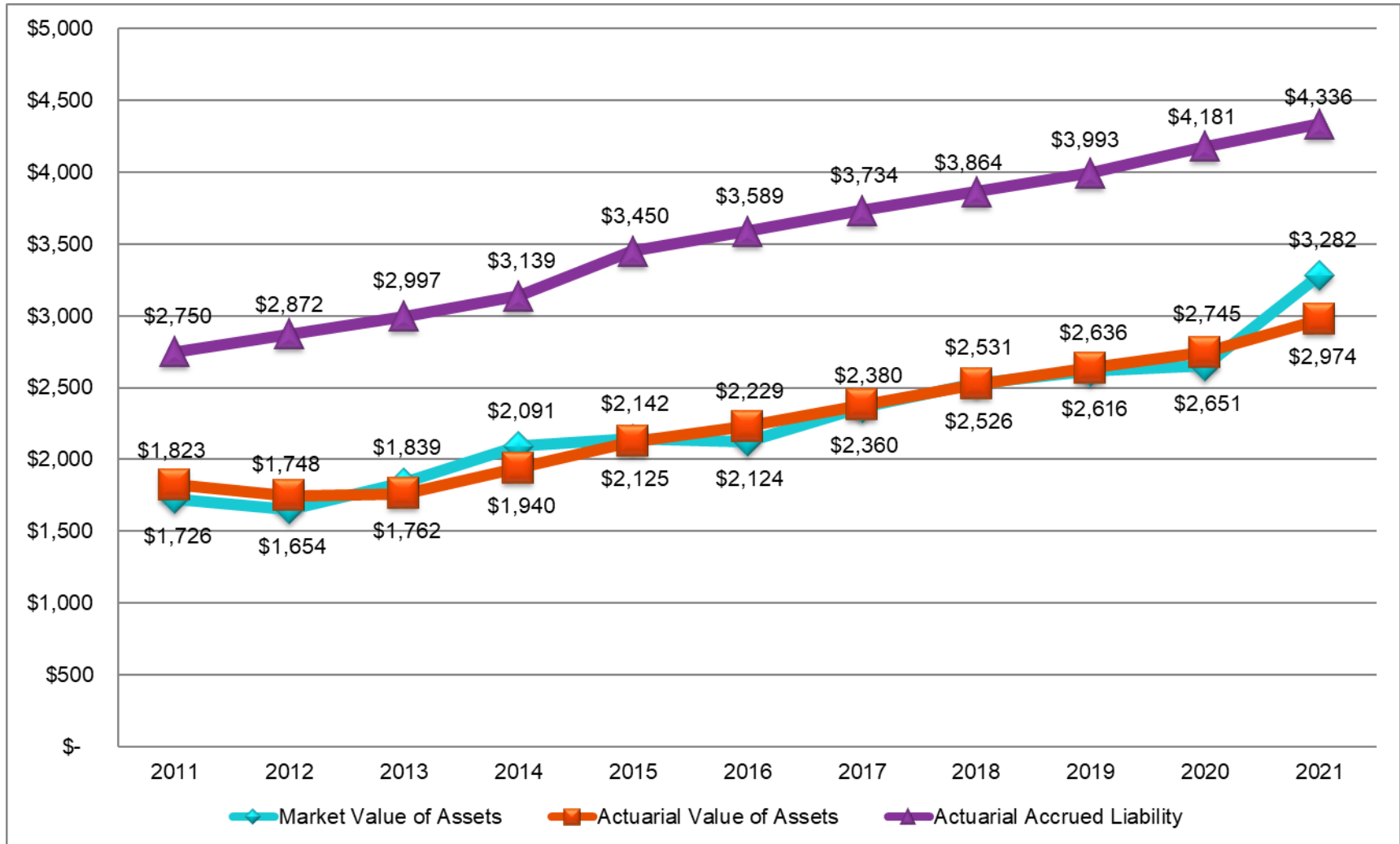
# Valuation Results (\$ in millions)

	July 1, 2020	July 1, 2021
Actuarial Accrued Liability:		
• Active Members	\$1,660	\$1,690
• Inactive Members	124	131
• Retirees and Beneficiaries	<u>2,398</u>	<u>2,515</u>
Total	\$4,181	\$4,336
Actuarial Value of Assets	<u>2,745</u>	<u>2,974</u>
Unfunded Accrued Liability	\$1,436	\$1,362
Funded Ratio	65.7%	68.6%
Market Value of Assets	2,651	3,282
Unfunded Liability, Market Basis	\$1,530	\$1,054
Funded Ratio, Market Basis	63.4%	75.7%

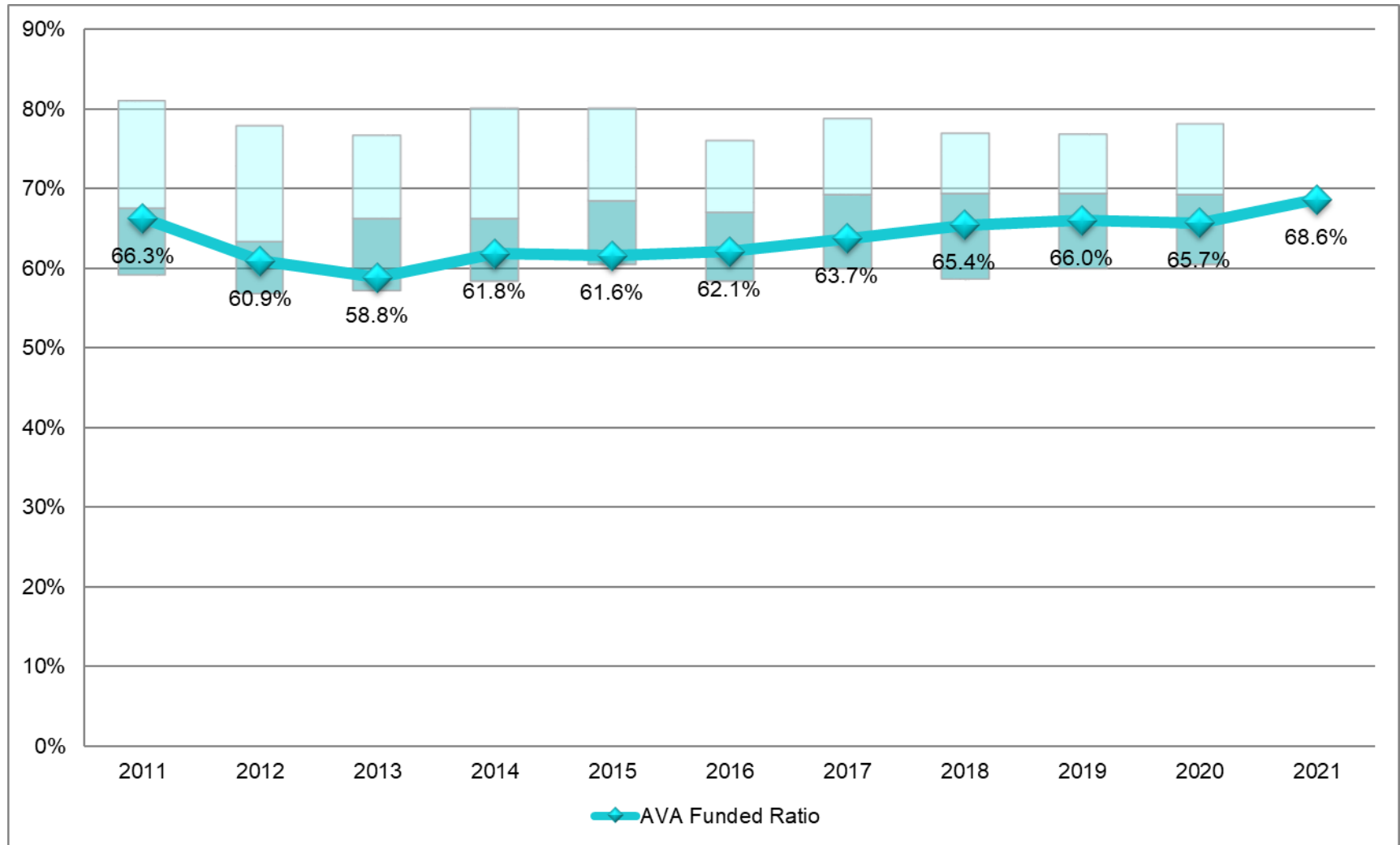
Note: numbers may not add due to rounding

# Market and Actuarial Values of Assets Compared to Actuarial Accrued Liability

\$ Millions



# Funded Ratio, AVA Basis



For context, historical data is compared to 38 systems in the Public Plans Data\* that primarily cover teachers. The top marker represents the 2<sup>nd</sup> quartile (50<sup>th</sup> to 75<sup>th</sup> percentile) and the lower marker represents the 3<sup>rd</sup> quartile (25<sup>th</sup> to 50<sup>th</sup> percentile), where the middle line indicates the median.

\* Public Plans Data. 2001-2020. Center for Retirement Research at Boston College, MissionSquare Research Institute, and National Association of State Retirement Administrators.

# Five-Year History of Gain/(Loss)

\$ in thousands	July 1, 2021	July 1, 2020	July 1, 2019	July 1, 2018	July 1, 2017
Investments	\$83,839	(\$40,947)	(\$34,821)	\$4,586	\$9,464
Admin expenses	(547)	233	(59)	116	(275)
Demographics					
• Turnover	(\$1,844)	(\$3,380)	(\$3,820)	(\$1,696)	(\$2,013)
• Retirement	(6,175)	(606)	(1,286)	(3,038)	(1,503)
• Mortality	5,879	9,680	9,738	6,945	9,358
• Salary/service	1,067	18,179	21,896	29,231	9,408
• New entrants	(6,123)	(6,932)	(7,394)	(4,463)	(4,865)
• Miscellaneous	<u>(513)</u>	<u>4,463</u>	<u>5,006</u>	<u>1,584</u>	<u>986</u>
• Subtotal	(\$7,709)	\$21,403	\$24,139	\$28,564	\$11,371
<b>Total</b>	<b>\$75,583</b>	<b>(\$19,311)</b>	<b>(\$10,742)</b>	<b>\$33,266</b>	<b>\$20,560</b>

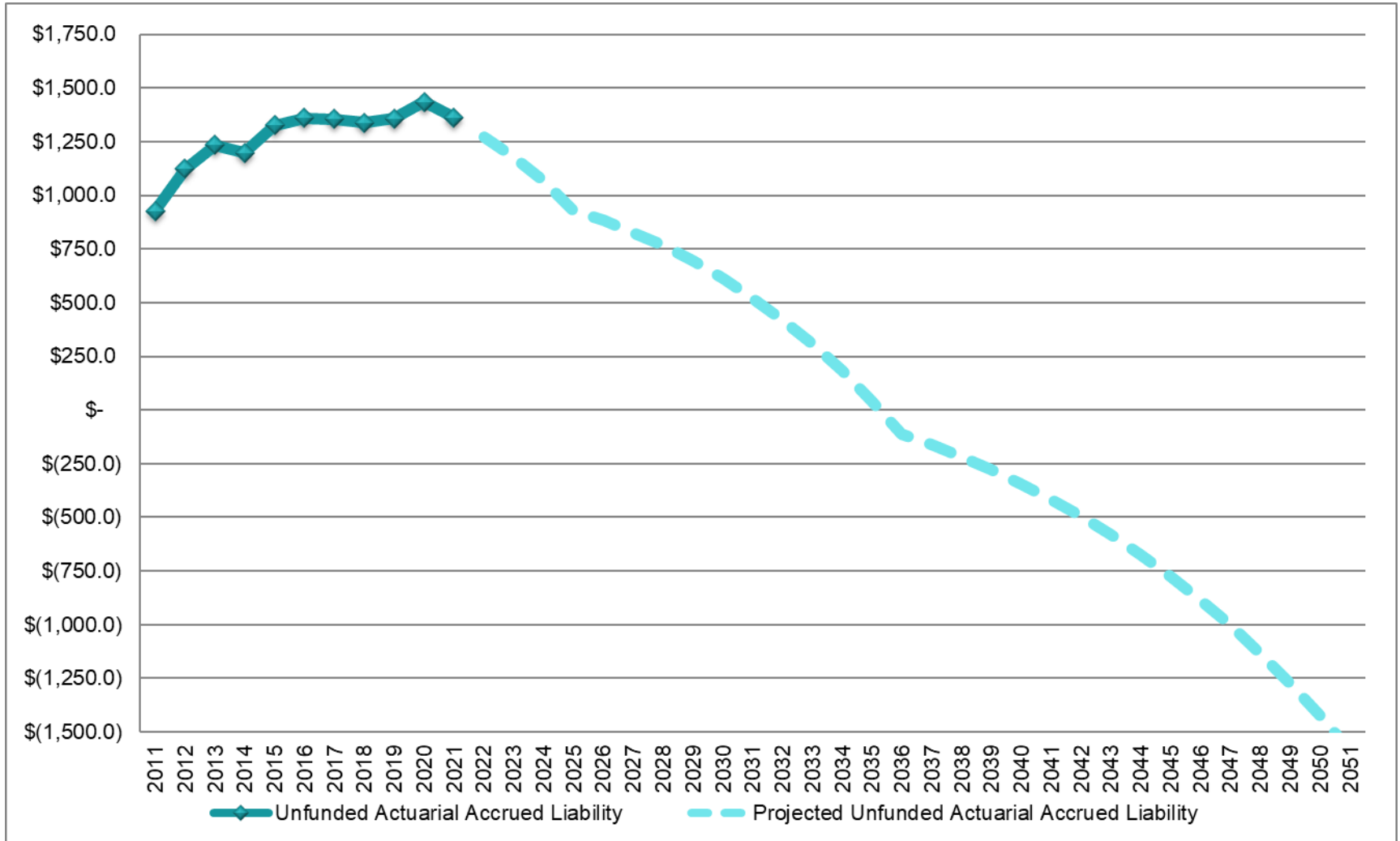
Note: numbers may not add due to rounding

# Actuarially Determined Contribution

	For the Year Beginning	
	July 1, 2020	July 1, 2021
Normal Cost Rate	12.28%	12.41%
Member Rate	<u>(11.75%)</u>	<u>(11.75%)</u>
Employer Normal Cost Rate	0.53%	0.66%
Amortization of UAAL	<u>12.66%</u>	<u>11.71%</u>
Actuarially Determined Contribution	13.19%	12.37%
Statutory Employer Rate	12.75%	12.75%
Contribution Sufficiency/(Deficiency)	(0.44%)	0.38%

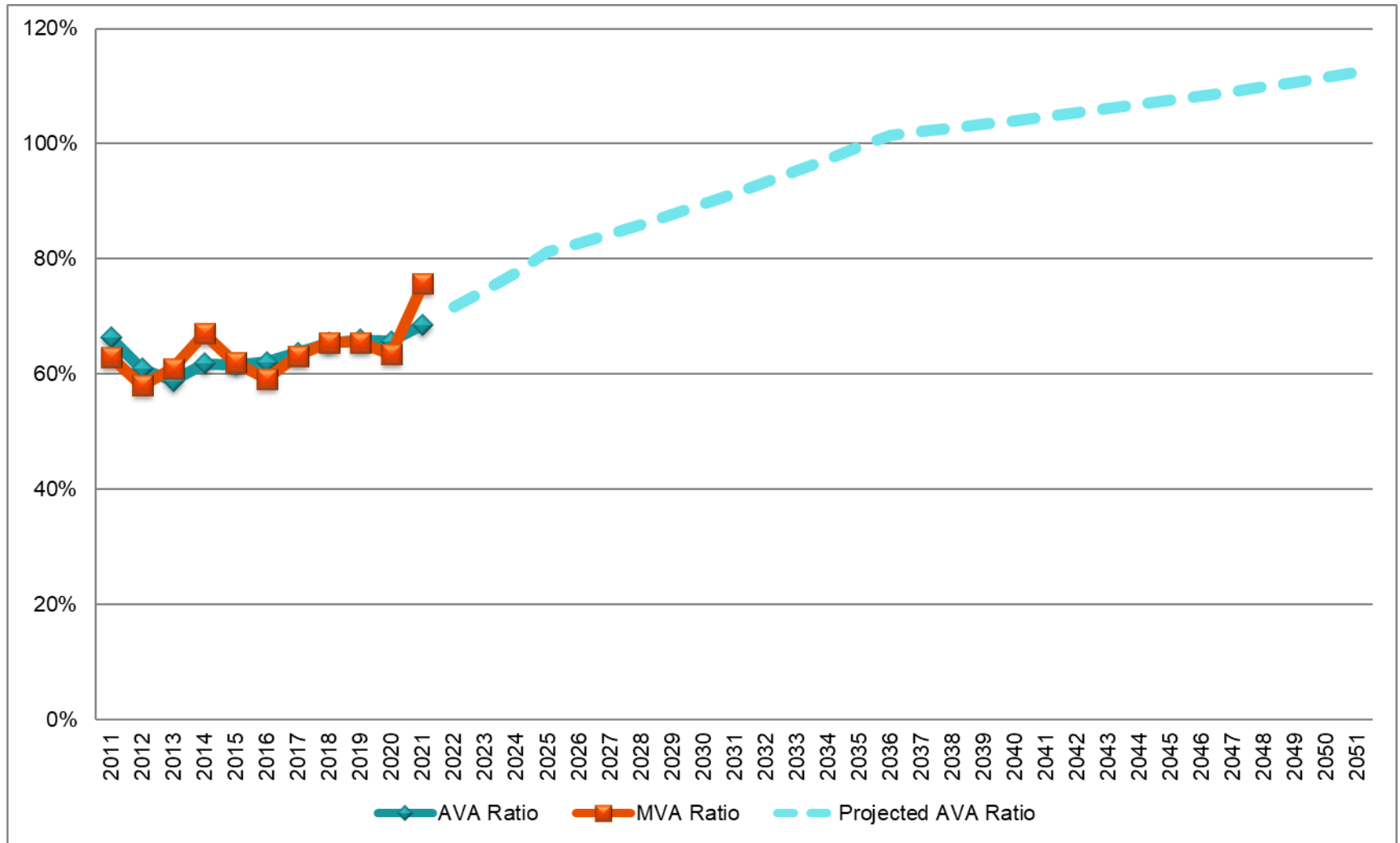
# Unfunded Actuarial Accrued Liability

\$ Millions



*Projection based on all assumptions, including 7.25% investment return, realized as expected*

# Funded Ratio



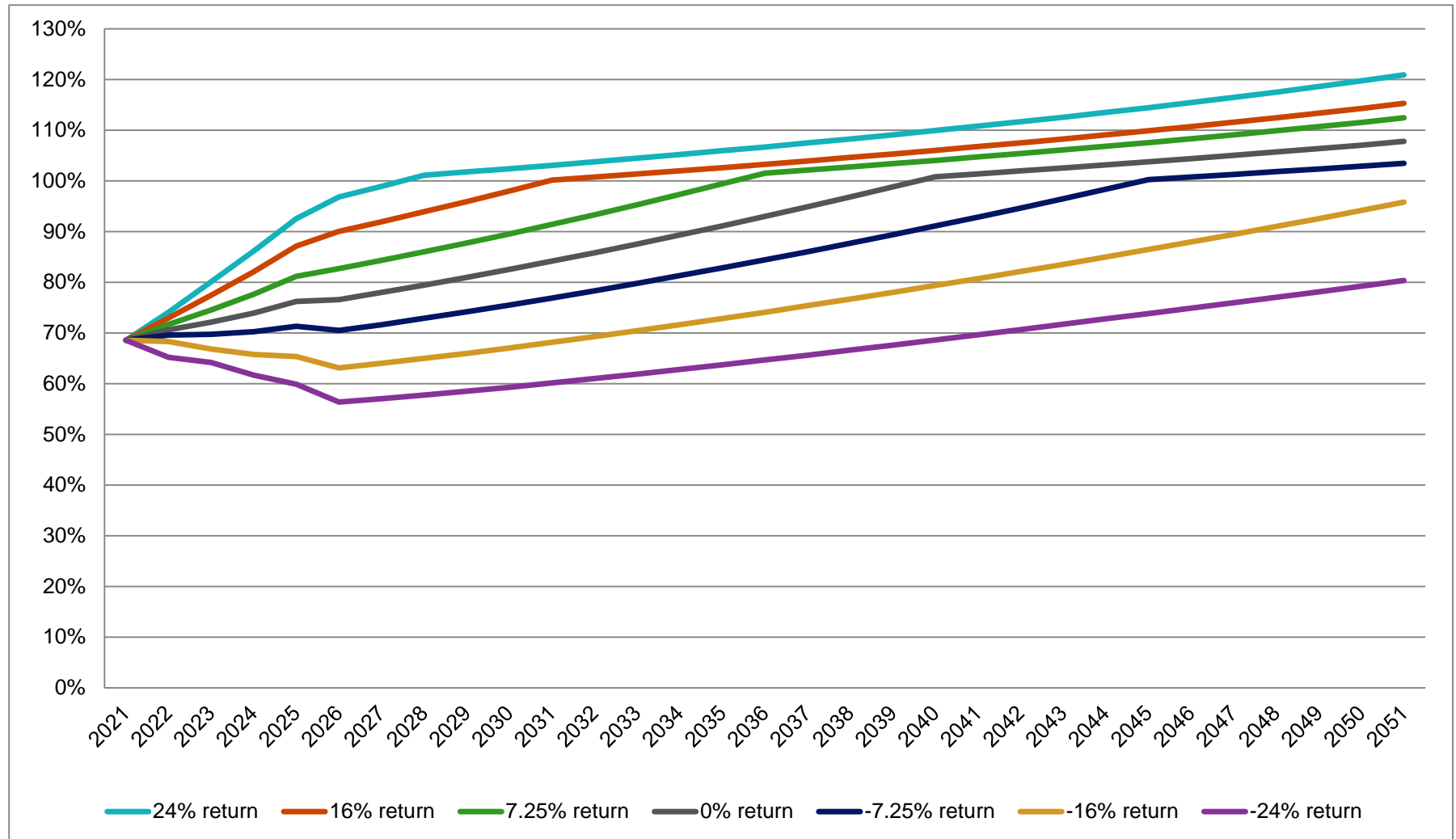
*Projection based on all assumptions, including 7.25% investment return, realized as expected*

# Sensitivity Projections

- Projections of estimated funded ratios for 30 years
  - Based on FY22 investment return scenarios ranging from -24% to +24%
  - Assumes Fund earns 7.25% per year in FY23 and each year thereafter
  - Additional projections assuming Fund earns 6.25% or 8.25% per year every year
  - Administrative expenses increase by 2.30% each year
  - All other experience is assumed to emerge as expected
- Includes contribution rates from HB 1134
  - Member rate is 11.75%
  - Employer rate is 12.75%
  - Member and Employer Contribution rates “sunset” back to 7.75% once the funded ratio reaches 100% (based on actuarial assets)

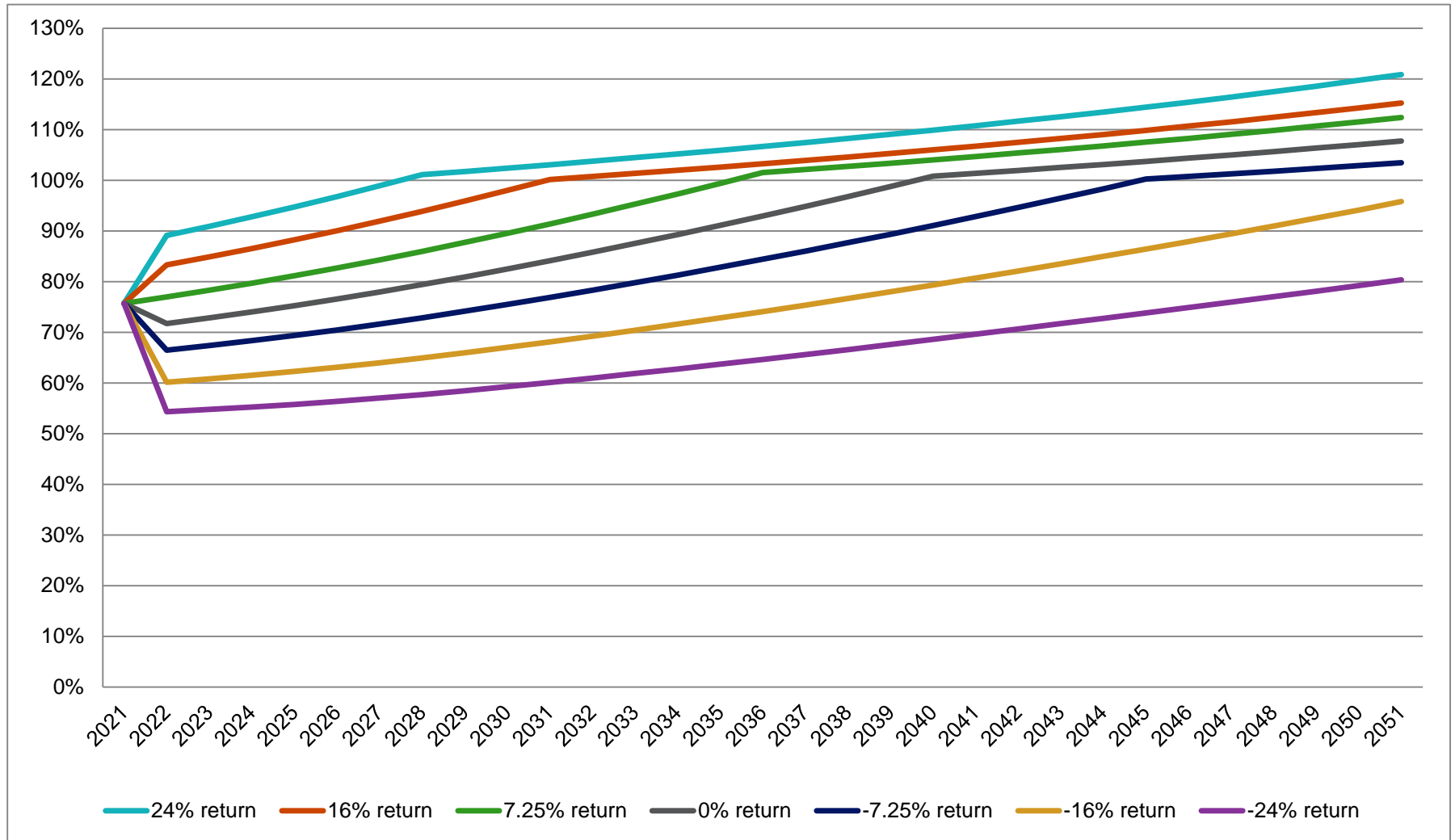


# Projected Funded Ratios (AVA Basis)



This sensitivity projection assumes one year (i.e., FY22) at each of the above returns, followed by assumed returns of 7.25% in each year thereafter.

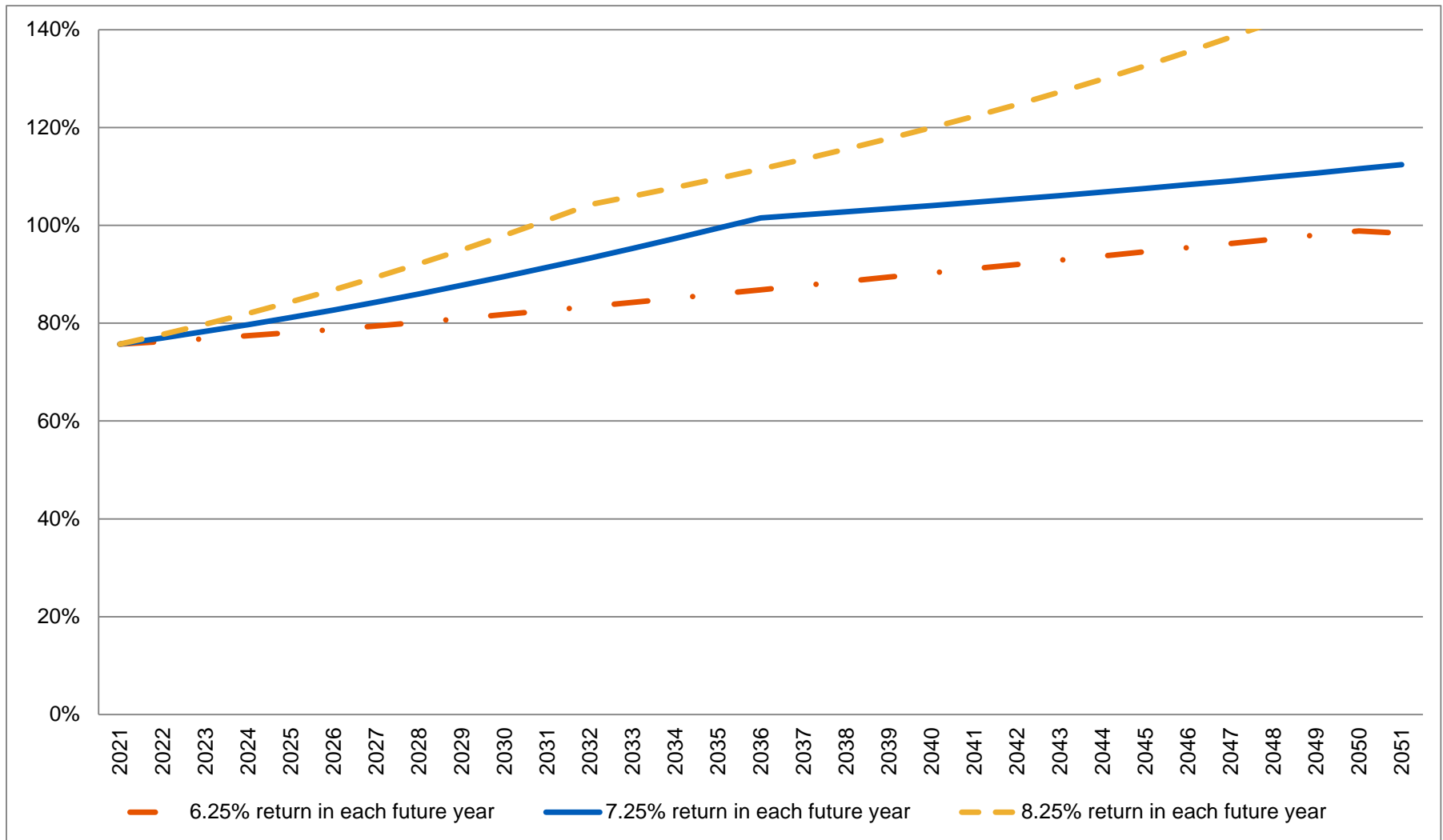
# Projected Funded Ratios (MVA Basis)



This sensitivity projection assumes one year (i.e., FY22) at each of the above returns, followed by assumed returns of 7.25% in each year thereafter.

# Projected Funded Ratios (MVA Basis)

## Actual Returns +1% or -1% of Assumed



This sensitivity projection assumes that the Fund will earn either 6.25%, 7.25%, or 8.25% per year, each year in the future, beginning with FY22.

# Next Steps

- Policy score based on 2020 valuation is +6
  - From March 3, 2021, presentation
  - Reflects impact of newly adopted actuarial assumptions
- Update Policy score based on 2021 valuation and updated capital market assumption basis
  - Present in Q1 2022

# Appendix

## Items

- Additional Asset Information
- Projection Results in Tabular Format
- GASB Accounting Information
- Glossary

# Market Value of Assets (\$ in millions)

	Fiscal Year Ending June 30, 2020	Fiscal Year Ending June 30, 2021
Beginning of Year	\$2,616	\$2,651
Contributions:		
• Employer	93	98
• Member	86	91
• Service Purchases	<u>2</u>	<u>3</u>
• Total	181	192
Benefits and Refunds	(233)	(244)
Investment Income (net)	86	684
End of Year	\$2,651	\$3,282
Rate of Return	3.33%	26.07%

Note: numbers may not add due to rounding

# Actuarial Value of Assets (\$ in millions)

1. Market Value of Assets as of June 30, 2020	\$2,651
2. Cash Flow Items for FYE June 30, 2021	(52)
3. Expected Return	<u>190</u>
4. Expected Market Value of Assets (1) + (2) + (3)	\$2,789
5. Actual Market Value of Assets on June 30, 2021	3,282
6. Excess/(Shortfall) for FYE June 30, 2021 (5) – (4)	494

<b>Excess/(Shortfall) Returns:</b>			
<b>Year</b>	<b>Initial Amount</b>	<b>Deferral %</b>	<b>Unrecognized Amount</b>
2021	\$494	80%	\$395
2020	(115)	60%	(69)
2019	(59)	40%	(24)
2018	30	20%	6
2017	103	0%	<u>0</u>
7. Total			\$309
8. Actuarial Value of Assets as of June 30, 2021 (5) – (7)			\$2,974
Actuarial Value of Assets as a % of Market Value of Assets			90.6%

Note: numbers may not add due to rounding

# Projected Funded Ratios (AVA Basis)

Valuation Year	24% for FY2022	16% for FY2022	7.25% for FY2022	0% for FY2022	-7.25% for FY2022	-16% for FY2022	-24% for FY2022
2021	69%	69%	69%	69%	69%	69%	69%
2022	74%	73%	72%	71%	70%	68%	65%
2023	80%	77%	75%	72%	70%	67%	64%
2024	86%	82%	78%	74%	70%	66%	62%
2025	93%	87%	81%	76%	71%	65%	60%
2030	102%	98%	90%	83%	76%	67%	59%
2035	106%	103%	99%	91%	83%	73%	64%
2040	110%	106%	104%	101%	91%	79%	69%
2045	114%	110%	108%	104%	100%	86%	74%
2050	120%	114%	112%	107%	103%	94%	79%



# Projected Funded Ratios (MVA Basis)

Valuation Year	24% for FY2022	16% for FY2022	7.25% for FY2022	0% for FY2022	-7.25% for FY2022	-16% for FY2022	-24% for FY2022
2021	76%	76%	76%	76%	76%	76%	76%
2022	89%	83%	77%	72%	66%	60%	54%
2023	91%	85%	78%	73%	67%	61%	55%
2024	93%	87%	80%	74%	68%	62%	55%
2025	95%	88%	81%	75%	69%	62%	56%
2030	102%	98%	90%	83%	76%	67%	59%
2035	106%	103%	99%	91%	83%	73%	64%
2040	110%	106%	104%	101%	91%	79%	69%
2045	114%	110%	108%	104%	100%	86%	74%
2050	120%	114%	112%	107%	103%	94%	79%

# Projected Funded Ratios (MVA Basis)

## Actual Returns +1% or -1% of Assumed

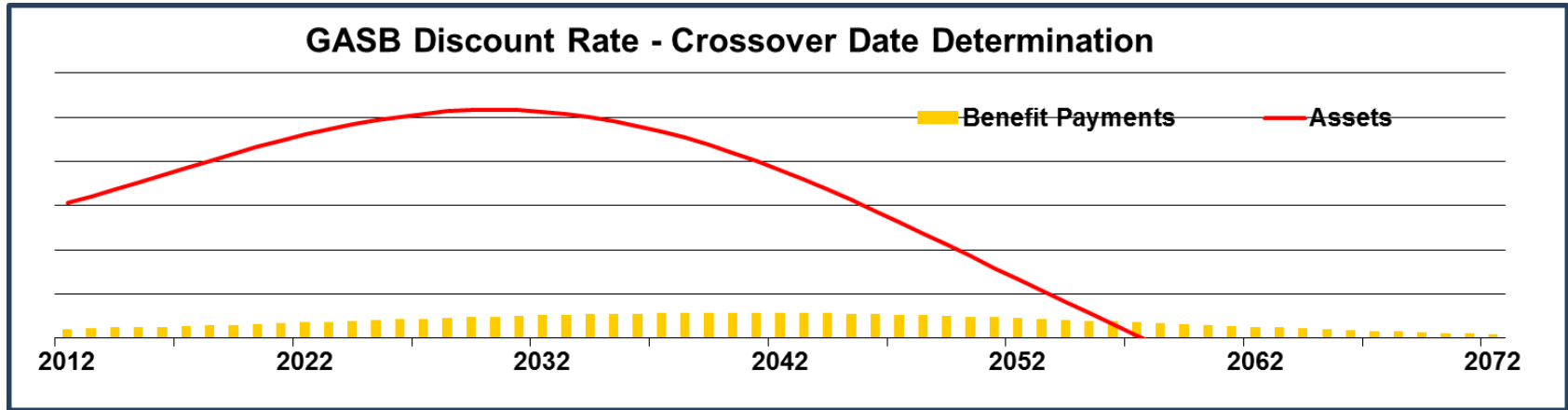
Valuation Year	6.25% Return in Each Future Year	7.25% Return in Each Future Year	8.25% Return in Each Future Year
2021	76%	76%	76%
2022	76%	77%	78%
2023	77%	78%	80%
2024	77%	80%	82%
2025	78%	81%	84%
2030	82%	90%	98%
2035	86%	99%	110%
2040	90%	104%	120%
2045	95%	108%	133%
2050	99%	112%	148%

# GASB Discount Rate

- Determined annually based on a projection of benefit payments and assets
  - Benefit payment projection is for current members
  - Asset projection is based on expected investment return assumption (7.25%) and contributions on behalf of current members
- If projected assets are always sufficient to pay projected benefit payments, the GASB discount rate is equal to the expected investment return assumption
- If not, a blended discount rate must be used
  - For projected benefit payments that are covered by projected assets, the expected return assumption is used
  - For projected benefit payments that are not covered by projected assets, the 2-year AA/Aa tax-exempt municipal bond index is used (2.16%).
    - The date at which projected assets are not sufficient to cover projected benefit payments is called the “crossover date”

# GASB Discount Rate

- As an example, the graph below shows the crossover occurring in 2058 for a hypothetical plan.



- Determination if a plan has a crossover date depends on
  - The Fund's current funded ratio
  - Projected future contributions and benefit payments
  - Expected investment return
- As of July 1, 2021, TFFR does not have a crossover date

# Net Pension Liability (\$ in millions)

Collective TFFR	June 30, 2020	June 30, 2021
Total Pension Liability at 7.25%	\$4,181	\$4,336
Fiduciary Net Plan Position (i.e., MVA)	2,651	3,282
Net Pension Liability (NPL)	1,531	1,054
<b>Sensitivity to changes in discount rate</b>		
• 1% decrease at 6.25%	\$2,039	\$1,582
• Current discount rate at 7.25%	1,531	1,054
• 1% increase at 8.25%	1,108	615

# Reconciliation of Collective Net Pension Liability

(\$ in millions)	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
<b>Balance as of June 30, 2020</b>	\$4,181	\$2,650	\$1,531
<b>Changes for the year</b>			
Service cost	87		87
Interest	301		301
Difference between expected and actual experience	8		8
Contributions – employer		98	(98)
Contributions – member		91	(91)
Contributions – purchased service credit and other		3	(3)
Net investment income		684	(684)
Benefit payments and refunds of contributions	(241)	(241)	-
Administrative expense		(3)	3
Changes of assumptions	-		-
Change of benefit terms	-		-
<b>Net changes</b>	<u>155</u>	<u>632</u>	<u>(477)</u>
<b>Balance as of June 30, 2021</b>	\$4,336	\$3,282	\$1,054

Note: numbers may not add due to rounding

# Collective Pension Expense (\$ in millions)

	Year ending June 30, 2020	Year ending June 30, 2021
Service cost	\$81	\$87
Interest on the total pension liability	307	301
Projected earning on plan investments	(201)	(190)
Contributions – member	(86)	(91)
Contributions – purchased service credit and other	(2)	(3)
Administrative expense	2	3
Current year of recognition of:		
• Change of assumptions	32	32
• Difference between expected and actual experience	(11)	(12)
• Difference between projected and actual earning on pension plan investments	39	(91)
• Change of benefit terms	0	0
<b>Total pension expense</b>	<b>\$161</b>	<b>\$37</b>

Note: numbers may not add due to rounding

# Glossary

**Actuarial Accrued Liability For Actives:** The equivalent of the accumulated Normal Costs allocated to the years before the valuation date.

**Actuarial Accrued Liability For Pensioners:** The single-sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

**Actuarial Cost Method:** A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the Actuarially Determined Contribution.

**Actuarial Gain or Actuarial Loss:** A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuation dates. Through the Actuarial Assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the plan's assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the Actuarial Assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield in actuarial liabilities that are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

**Actuarially Equivalent:** Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

**Actuarial Present Value (APV):** The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.), multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and discounted according to an assumed rate (or rates) of return to reflect the time value of money.



# Glossary

**Actuarial Present Value of Future Plan Benefits:** The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would be provide sufficient assets to pay all projected benefits and expenses when due.

**Actuarial Valuation:** The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB, such as the ADC and the NPL.

**Actuarial Value of Assets (AVA):** The value of the plan's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.

**Actuarially Determined:** Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

**Actuarially Determined Contribution (ADC):** The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The ADC consists of the Employer Normal Cost and the Amortization Payment.

**Amortization Method:** A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

# Glossary

**Amortization Payment:** The portion of the pension plan contribution, or ADC, that is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

**Assumptions or Actuarial Assumptions:** The estimates on which the cost of a plan is calculated including:

- (a) Investment return - the rate of investment yield that the plan will earn over the long-term future;
- (b) Mortality rates - the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) Retirement rates - the rate or probability of retirement at a given age;
- (d) Turnover rates - the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement;
- (e) Salary increase rates - the rates of salary increase due to inflation and productivity growth

**Closed Amortization Period:** A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

**Decrement:** Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

**Defined Benefit Plan:** A retirement plan in which benefits are defined by a formula applied to the member's compensation and/or years of service.

**Defined Contribution Plan:** A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

**Employer Normal Cost:** The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

# Glossary

**Experience Study:** A periodic review and analysis of the actual experience of a plan that may lead to a revision of one or more Actuarial Assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the actuary.

**Funded Ratio:** The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.

**Funding Period or Amortization Period:** The term “Funding Period” is used in two ways. First, it is the period used in calculating the Amortization Payment as a component of the ADC. Second, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

**GASB:** Governmental Accounting Standards Board.

**GASB 67 and GASB 68:** Governmental Accounting Standards Board Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.

**Investment Return:** The rate of earnings of a plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the plan’s assets. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

**Margin:** The difference, whether positive or negative, between the statutory employer contribution rate and the Actuarially Determined Contribution.

**Net Pension Liability (NPL):** The Net Pension Liability is equal to Total Pension Liability minus Plan Fiduciary Net Position.

# Glossary

**Normal Cost:** That portion of the Actuarial Present Value of pension plan benefits and expenses allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability, or retirement.

**Open Amortization Period:** An Open Amortization Period is one that is used to determine the Amortization Payment, but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period with level percentage of payroll is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never decrease, but will become smaller each year, in relation to covered payroll, if the Actuarial Assumptions are realized.

**Plan Fiduciary Net Position:** GASB term for the market value of assets.

**Total Pension Liability (TPL):** The actuarial accrued liability based on the blended discount rate as described in GASB 67/68.

**Unfunded Actuarial Accrued Liability (UAAL):** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

**Valuation Date or Actuarial Valuation Date:** The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.

# Caveats

*This presentation is based on the results of the July 1, 2021, actuarial valuation performed for the Board of Trustees of the North Dakota Teachers' Fund for Retirement. The actuarial valuation report has information on the plan provisions, data, methods and assumptions used in the valuation. Use of the information in this presentation is subject to the caveats described in that document. The measurements in this presentation may not be appropriate for purposes other than those described in the actuarial valuation report.*

*Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Deterministic cost projections are based on our proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models and reviews test lives and results, under the supervision of the responsible actuary.*

## MEMORANDUM

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**TO:** TFFR Board  
**FROM:** Jan Murtha, Interim Executive Director – Chief Retirement Officer  
**DATE:** November 17, 2021  
**RE:** Employee Benefits Programs Committee Update

The TFFR annual valuation report was presented by Segal at the Employee Benefits Programs Committee on October 27, 2021. In addition to the Segal presentation, Mr. Eric Chin, Interim Chief Investment Officer, and Jan Murtha Interim Executive Director provided presentations which are attached for your information. A link to the EBPC meeting may be found at:

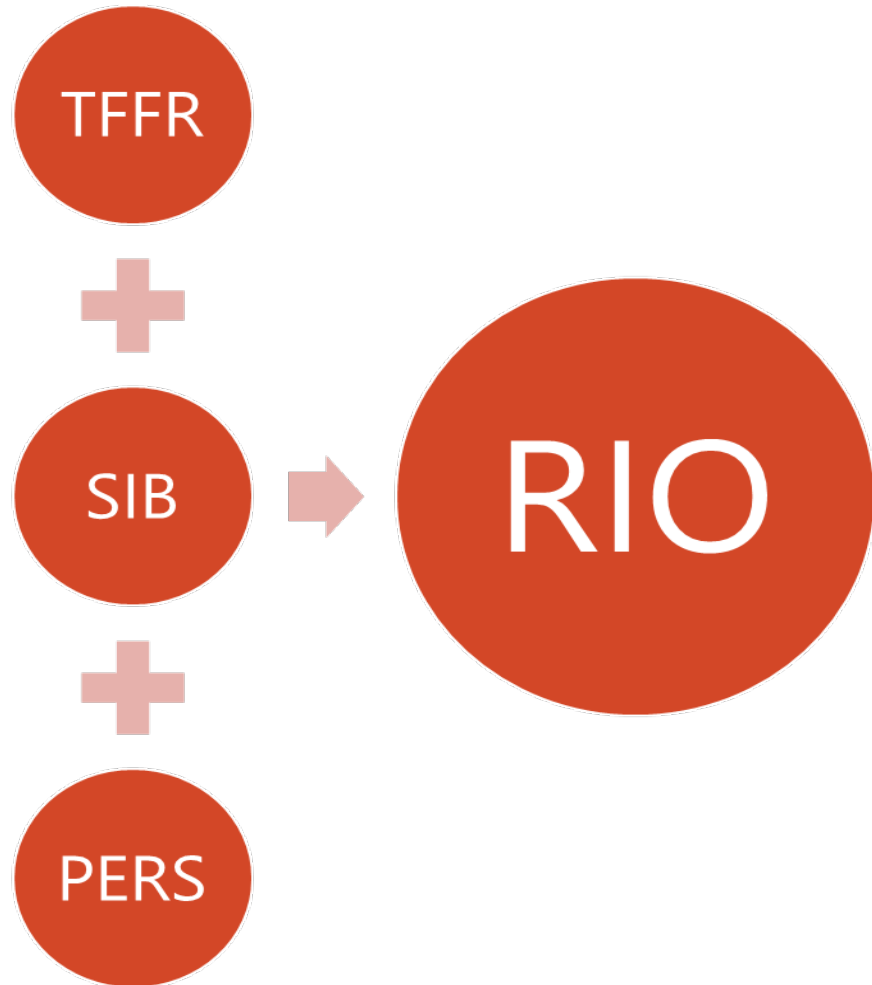
<https://video.legis.nd.gov/en/PowerBrowser/PowerBrowserV2/20211017/-1/22623>

**BOARD INFORMATION ONLY. No board action requested.**

# ND EMPLOYEE BENEFITS PROGRAMS COMMITTEE RETIREMENT & INVESTMENT OFFICE PROGRAM OVERVIEW



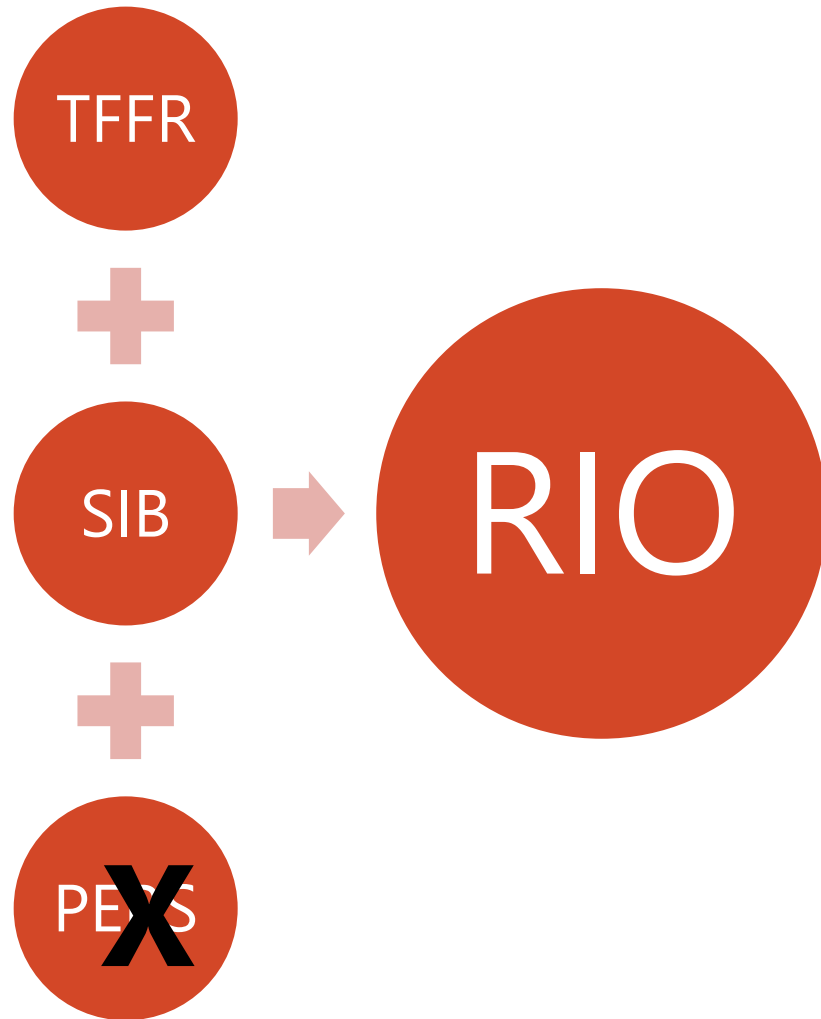
# RIO – WHERE WE STARTED



- RIO was created during the 1989 Legislative session to realize cost savings between multiple state retirement and investment agencies. Originally PERS was included in the proposed restructuring.



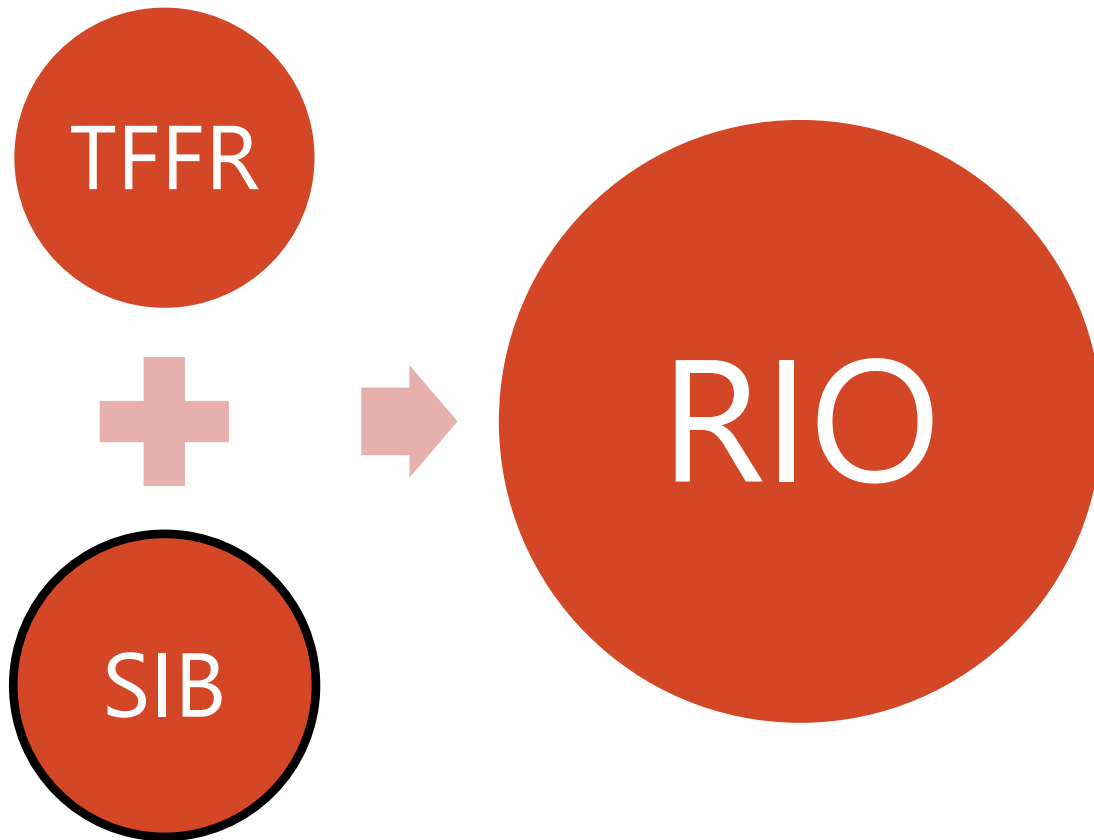
# RIO - WHERE WE ARRIVED



- PERS was removed from the Final Version.

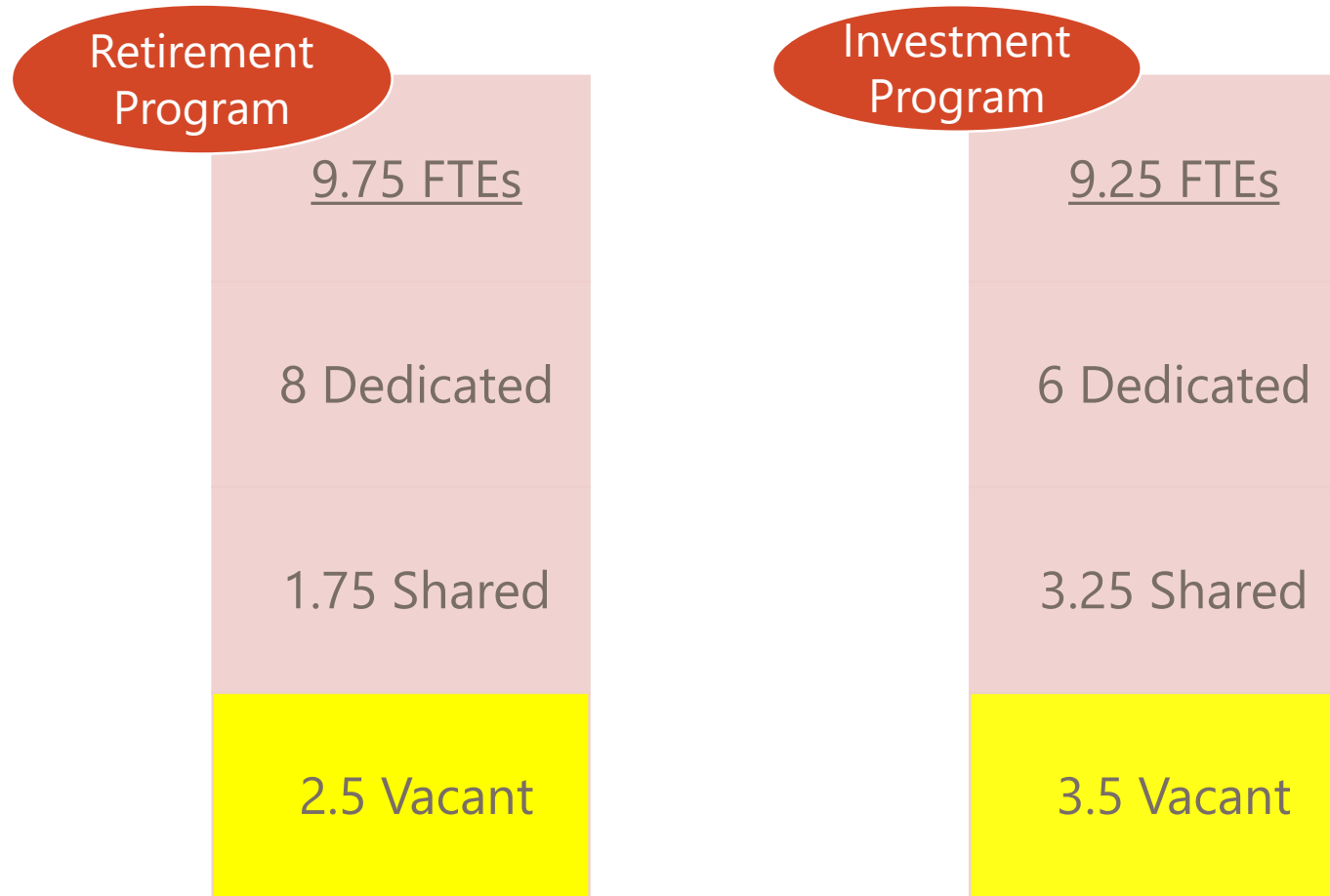
# RIO – WHERE WE ARE TODAY

- The State Investment Board is the governing board for the agency (NDCC 54-52.2-02)



# RIO – WHO WE ARE

- RIO Team currently has 19 FTE's



- Shared positions include Exec Director, Admin, Fiscal and Internal Audit support
- 2 temporary part-time employees and 1-2 interns to support the full-time staff during this period of transition

# RIO – WHO WE ARE

- Investment Program

Manage assets of 26  
Funds (13 statutory)

Safeguard assets

Implement/monitor  
asset allocations

Research/monitor  
investment managers

Evaluate/report  
results

# RIO – WHO WE ARE

## ■ Retirement Program

Collecting contributions from participating employers (206 employers/11,000+ members)

Payment of benefits to participating members (9,000+ retirees and beneficiaries)

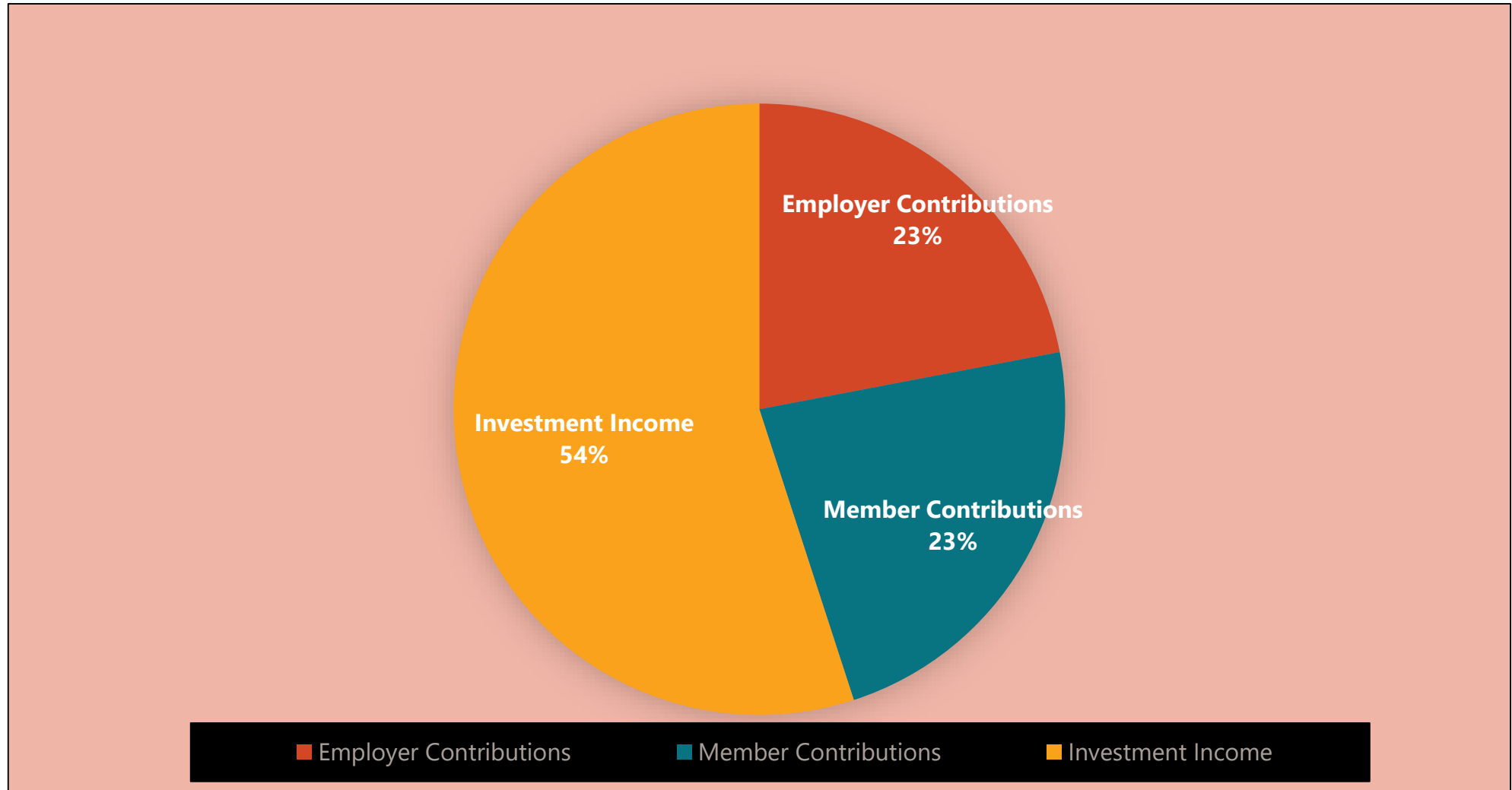
Providing retirement planning education and outreach to membership

Ensuring the plan is sustainable for future generations of ND teachers and administrators

Report to the TFFR Board who is ultimately responsible for strategic planning & administration

# HOW ARE BENEFITS FUNDED?

ND TFFR FY END 6/30/2020



# PENSION ADMINISTRATION MODERNIZATION

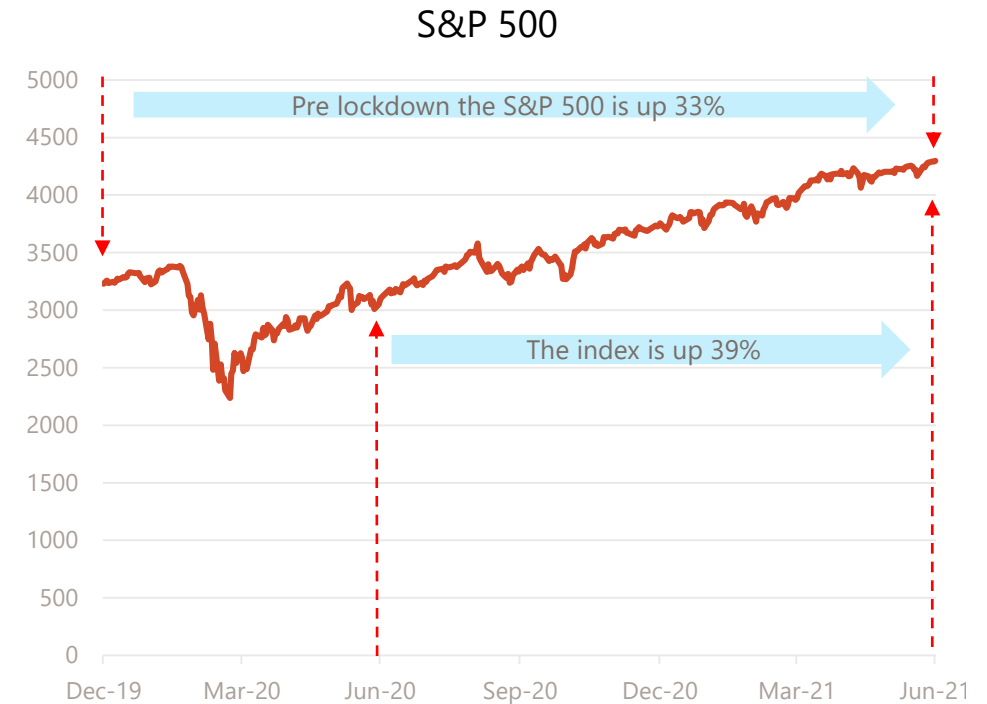
- TFFR has undertaken a multi-year Pension Administration System (PAS) Modernization Project.
- The Goal of the PAS Project is to drastically improve the TFFR Member and Employer experience.
- Improving the efficiency and effectiveness of the System supports Fund Management and stakeholder Communication.
- Upgrades to the Member and Employer online portal experience are a priority.
- Implementation period estimated to occur 2022 through 2025.

ND EMPLOYEE BENEFITS PROGRAMS  
COMMITTEE  
INVESTMENT AND PERFORMANCE UPDATE  
AS OF JUNE 30, 2021



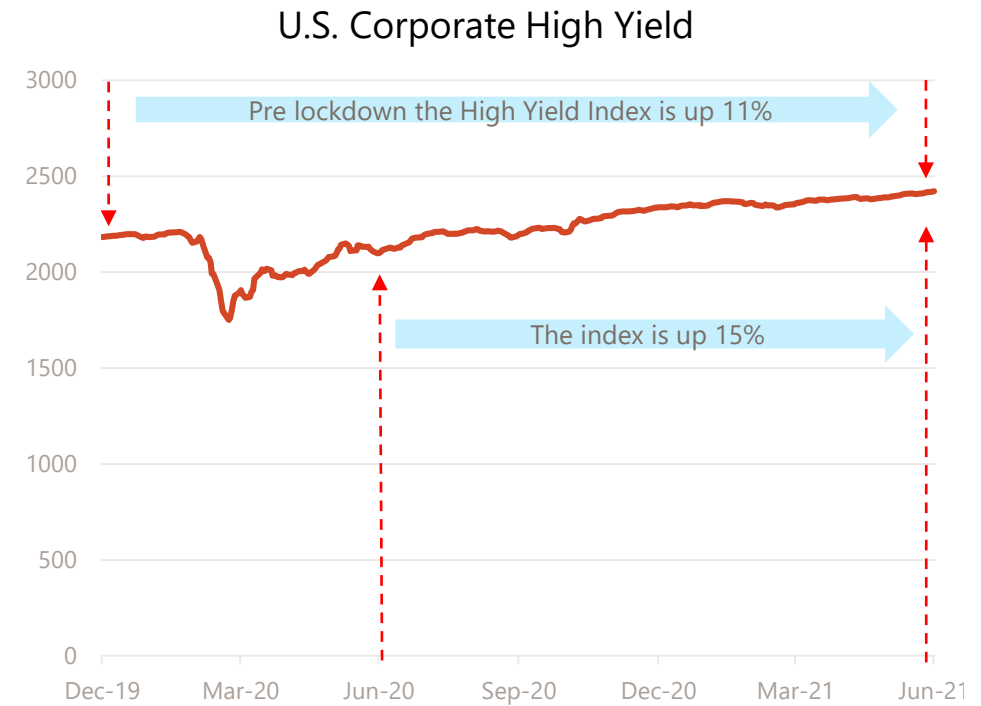
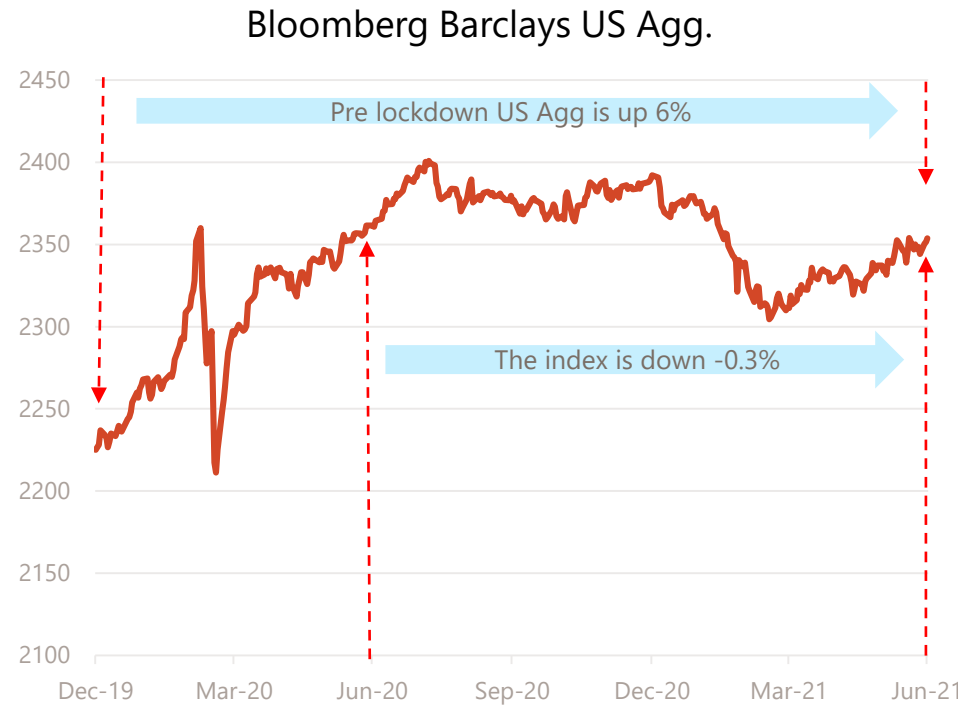


# STRONG PERFORMANCE ACROSS EQUITIES



- Pandemic drawdown for both the MSCI World Index and the S&P 500 was -34%
- Despite the correction, equities have been strong reaching new highs
- From the low point of the correction, from March 23, 2020 to June 30, 2021 the S&P 500 is up 92%

# FIXED INCOME PERFORMANCE



Surprisingly both equities and fixed income have generated positive returns despite the pandemic

# PERFORMANCE UPDATE – PERS

AS OF JUNE 30, 2021

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

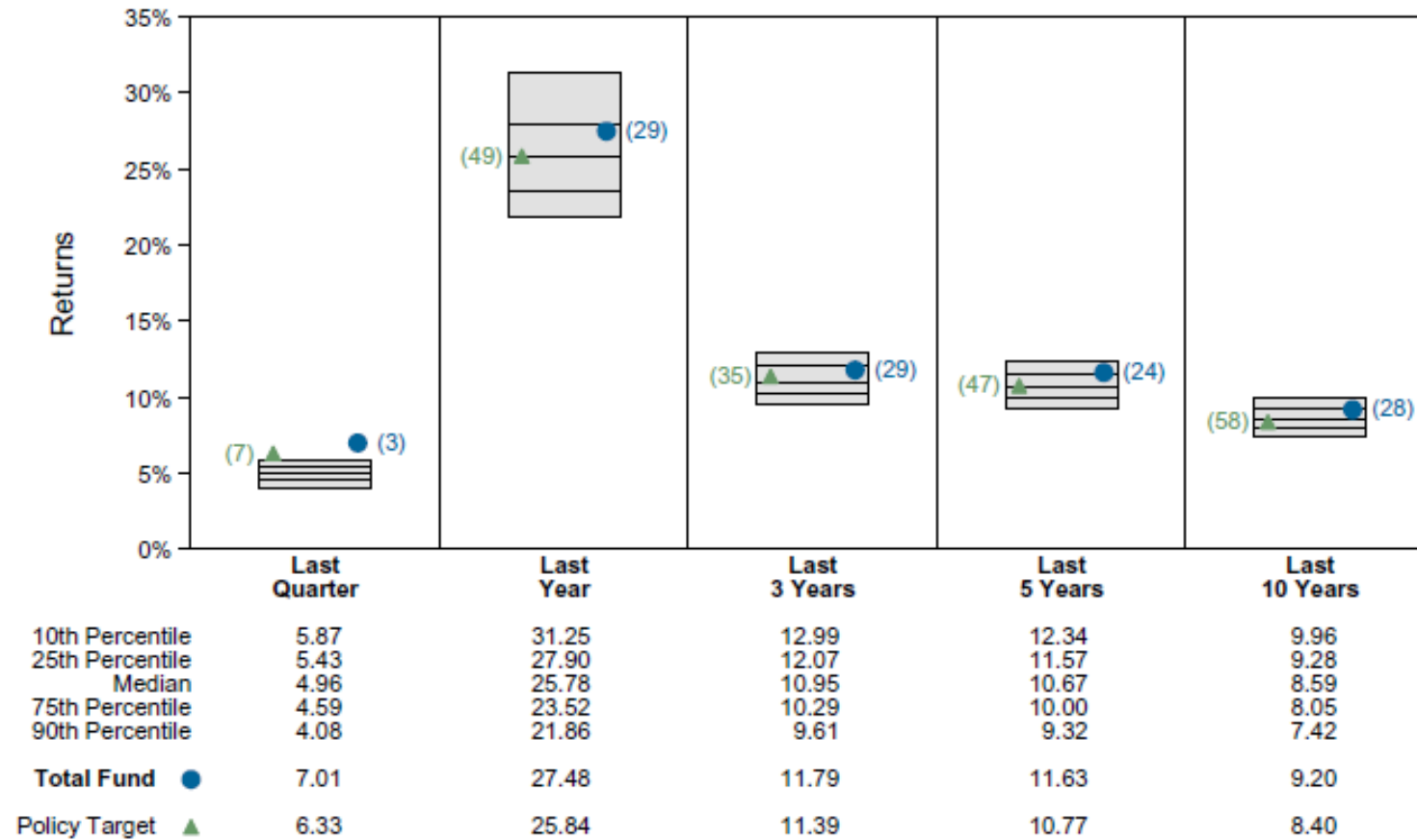
	1 Yr Ended 6/30/2021	3 Yrs Ended 6/30/2021	5 Yrs Ended 6/30/2021	Risk 5 Yrs Ended 6/30/2021	Risk Adj Excess Return 5 Yrs Ended 6/30/2021
<b>PERS \$4.0 billion</b>					
<b>Total Fund Return - Net</b>	<b>27.15%</b>	<b>11.53%</b>	<b>11.36%</b>	<b>10.4%</b>	<b>0.24%</b>
<b>Policy Benchmark Return</b>	<b>25.84%</b>	<b>11.39%</b>	<b>10.77%</b>	<b>10.1%</b>	
<b>Total Relative Return</b>	<b>1.31%</b>	<b>0.15%</b>	<b>0.59%</b>	<b>104%</b>	

- PERS outperformed the policy benchmark in each of the 1, 3, and 5 year periods ended June 30, 2021
- Active management has enhanced net investment returns by roughly \$88.5 million for the 5-years ended June 30, 2021 *(PERS investments averaged over \$3.0 billion the last 5-years and Excess Return has averaged 0.59% per annum: \$3.0 billion x 0.59% = \$17.7 million x 5 years = \$88.5 million. These returns were achieved while adhering to prescribed risk limits: 104% versus a policy limit of 115%)*

# PERS FUND RANKING

AS OF JUNE 30, 2021

Callan Public Fund Sponsor Database

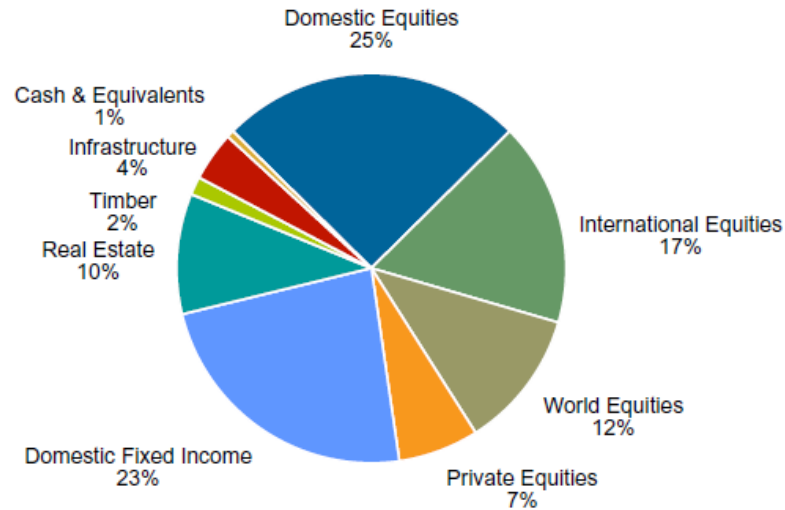


Solid performance across multiple time frames relative to peers

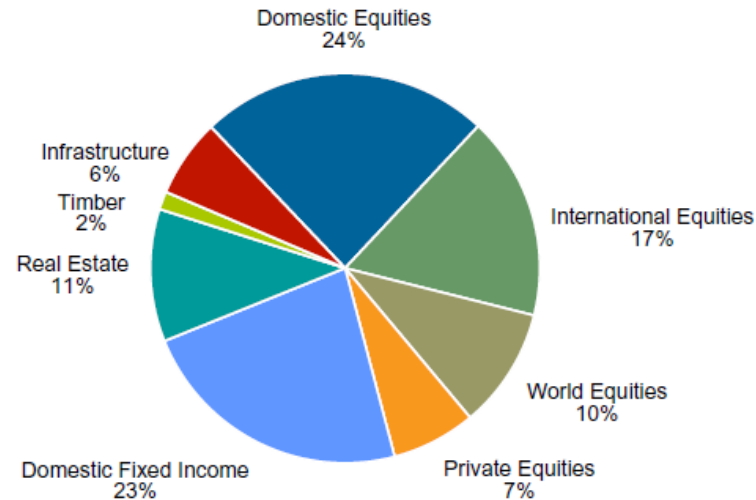
# PERS ASSET ALLOCATION

AS OF JUNE 30, 2021

Actual Asset Allocation



Target Asset Allocation



- Private Equities underweight has narrowed. The allocation to Private Equities was 4.5% in June 2020 and is 6.7% in June 2021
- Infrastructure underweight has been addressed with recent commitments to Macquarie Fund V, I Squared Fund III, and GCM III

Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	1,014,356	25.2%	24.1%	1.1%	43,499
International Equities	681,167	16.9%	16.9%	0.0%	1,571
World Equities	464,163	11.5%	10.0%	1.5%	61,611
Private Equities	267,988	6.7%	7.0%	(0.3%)	(13,798)
Domestic Fixed Income	944,360	23.5%	23.0%	0.5%	18,492
Real Estate	402,937	10.0%	11.0%	(1.0%)	(39,869)
Timber	61,213	1.5%	1.5%	(0.0%)	0
Infrastructure	164,602	4.1%	6.5%	(2.4%)	(96,227)
Cash & Equivalents	24,727	0.6%	0.0%	0.6%	24,727
Total	4,025,513	100.0%	100.0%		

# PERS ATTRIBUTION

AS OF JUNE 30, 2021

## 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%	23%	42.65%	47.15%	(0.89%)	0.40%	(0.49%)
International Equities	16%	16%	40.14%	35.51%	0.64%	0.05%	0.69%
World Equities	14%	12%	43.85%	39.04%	0.60%	0.01%	0.61%
Private Equities	5%	7%	48.81%	48.81%	0.00%	(0.34%)	(0.34%)
Domestic Fixed Income	23%	23%	5.20%	4.23%	0.27%	(0.10%)	0.16%
Real Estate	11%	11%	9.56%	7.37%	0.25%	0.02%	0.27%
Timber	2%	2%	4.87%	3.10%	0.03%	(0.02%)	0.01%
Infrastructure	5%	6%	14.96%	5.27%	0.49%	0.35%	0.84%
Cash & Equivalents	1%	0%	0.11%	0.11%	0.00%	(0.11%)	(0.11%)
<b>Total</b>			<b>27.48%</b>	<b>= 25.84%</b>	<b>+ 1.39%</b>	<b>+ 0.25%</b>	<b>1.64%</b>

- Small cap managers in Domestic Equities were a significant contributor to the negative manager effect
- Relative underperformance in small caps is a result of the strength of lower quality companies, highlighted by the meme stock phenomenon (GME, AMC, PLUG)

# PERS ATTRIBUTION

AS OF JUNE 30, 2021

## Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	18.21%	17.68%	0.09%	0.10%	0.19%
International Equities	16%	15%	13.35%	11.07%	0.35%	(0.01%)	0.34%
World Equities	16%	15%	13.22%	14.83%	(0.24%)	(0.01%)	(0.25%)
Private Equities	4%	7%	14.27%	14.27%	0.00%	(0.11%)	(0.11%)
Domestic Fixed Income	21%	21%	5.98%	4.35%	0.35%	(0.04%)	0.31%
International Fixed Incom	2%	2%	-	-	0.05%	0.01%	0.06%
Real Estate	11%	11%	7.30%	6.13%	0.13%	(0.05%)	0.08%
Timber	2%	2%	0.48%	2.65%	(0.08%)	0.00%	(0.07%)
Infrastructure	5%	6%	8.54%	3.07%	0.26%	0.07%	0.33%
Cash & Equivalents	1%	0%	1.22%	1.22%	0.00%	(0.03%)	(0.03%)
Total			11.63% = 10.77% + 0.93% + (0.06%)				0.86%

Staff is evaluating the long-term underperformance of the World Equities allocation

# PERS ATTRIBUTION

AS OF JUNE 30, 2021

## Ten 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	24%	23%	15.08%	14.41%	0.12%	0.12%	0.23%
International Equities	16%	15%	7.68%	5.58%	0.32%	(0.04%)	0.28%
World Equities	14%	14%	-	-	(0.14%)	(0.03%)	(0.17%)
Private Equities	4%	6%	7.15%	7.15%	0.00%	(0.07%)	(0.07%)
Domestic Fixed Income	20%	19%	5.89%	4.51%	0.24%	(0.01%)	0.22%
International Fixed Incom	3%	3%	-	-	0.08%	(0.00%)	0.08%
Real Estate	10%	10%	10.44%	8.79%	0.17%	(0.01%)	0.15%
Timber	3%	4%	-	-	(0.18%)	(0.03%)	(0.21%)
Infrastructure	4%	5%	-	-	0.22%	0.08%	0.30%
Cash & Equivalents	1%	1%	0.66%	0.65%	0.00%	(0.02%)	(0.02%)
<b>Total</b>			<b>9.20% = 8.40% + 0.83% + (0.02%)</b>				<b>0.80%</b>

Staff is evaluating the long-term underperformance of the World Equities allocation



# PERFORMANCE UPDATE – TFFR

AS OF JUNE 30, 2021

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

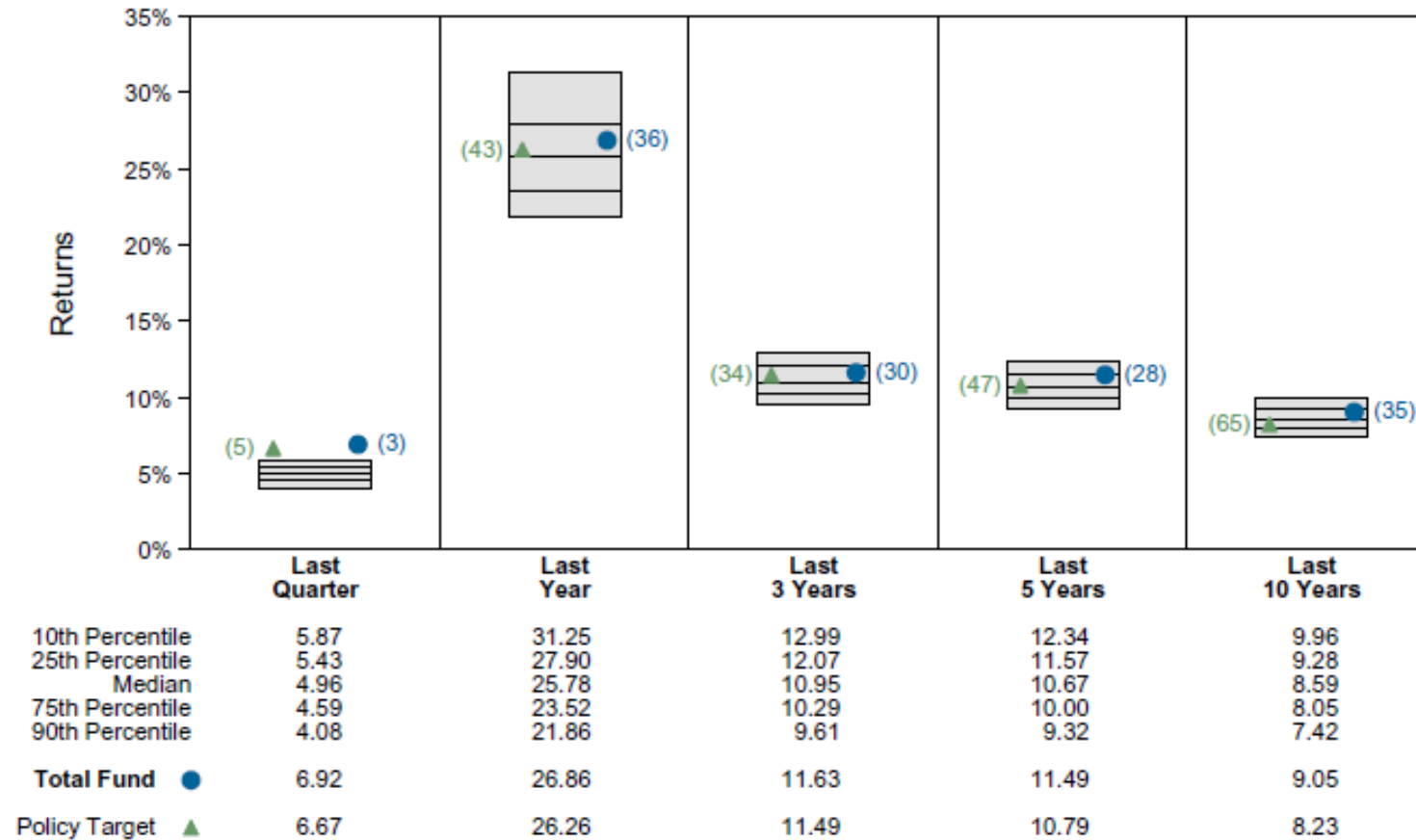
	1 Yr Ended 6/30/2021	3 Yrs Ended 6/30/2021	5 Yrs Ended 6/30/2021	Risk 5 Yrs Ended 6/30/2021	Risk Adj Excess Return 5 Yrs Ended 6/30/2021
<b>TFFR \$3.2 billion</b>					
<b>Total Fund Return - Net</b>	<b>26.55%</b>	<b>11.38%</b>	<b>11.23%</b>	<b>10.4%</b>	<b>0.37%</b>
<b>Policy Benchmark Return</b>	<b>26.26%</b>	<b>11.49%</b>	<b>10.79%</b>	<b>10.3%</b>	
<b>Total Relative Return</b>	<b>0.28%</b>	<b>-0.10%</b>	<b>0.44%</b>		

- TFFR outperformed the policy benchmark in the 1 and 5 year periods ended June 30, 2021
- Active management has enhanced net investment returns by roughly \$55 million for the 5-years ended June 30, 2021 *(TFFR investments averaged over \$2.5 billion the last 5-years and Excess Return has averaged 0.44% per annum: \$2.5 billion x 0.44% = \$11 million x 5 years = \$55 million. These returns were achieved while adhering to prescribed risk limits: 104% versus a policy limit of 115%)*

# TFFR FUND RANKING

AS OF JUNE 30, 2021

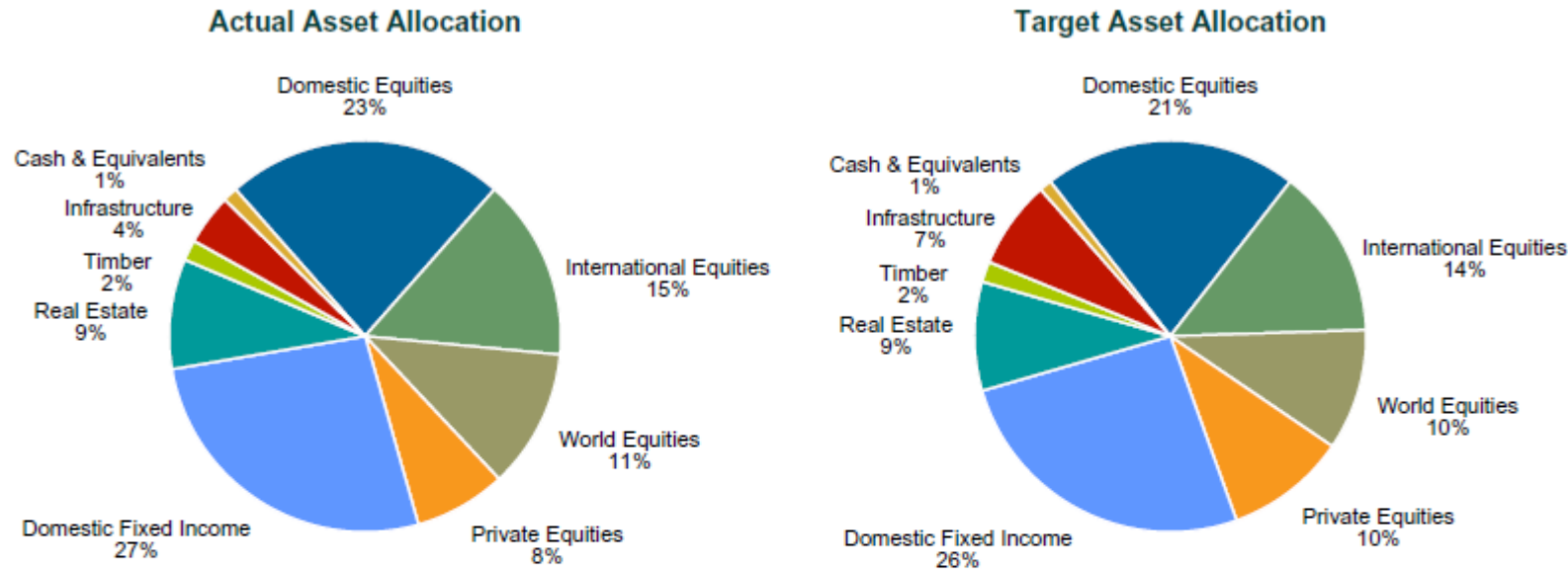
Callan Public Fund Sponsor Database



Solid performance across multiple time frames relative to peers

# TFFR ASSET ALLOCATION

AS OF JUNE 30, 2021



- Private Equities allocation has increased from 5.2% in June 2020 to 7.6% in June 2021
- Infrastructure underweight has been addressed with recent commitments to Macquarie Fund V, I Squared Fund III, and GCM III

Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	743,518	23.0%	21.0%	2.0%	64,371
International Equities	485,838	15.0%	14.0%	1.0%	33,073
World Equities	371,558	11.5%	10.0%	1.5%	48,155
Private Equities	246,731	7.6%	10.0%	(2.4%)	(76,673)
Domestic Fixed Income	864,769	26.7%	26.0%	0.7%	23,921
Real Estate	294,455	9.1%	9.0%	0.1%	3,392
Timber	54,641	1.7%	1.7%	(0.0%)	(4)
Infrastructure	134,474	4.2%	7.3%	(3.2%)	(101,945)
Cash & Equivalents	38,051	1.2%	1.0%	0.2%	5,710
Total	3,234,033	100.0%	100.0%		

# TFFR ATTRIBUTION

AS OF JUNE 30, 2021

## One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	42.62%	47.08%	(0.86%)	0.31%	(0.55%)
International Equities	16%	14%	39.64%	35.17%	0.61%	0.07%	0.68%
World Equities	14%	12%	43.87%	39.04%	0.61%	0.04%	0.65%
Private Equities	5%	8%	48.82%	48.82%	0.00%	(1.35%)	(1.35%)
Domestic Fixed Income	25%	25%	4.77%	4.26%	0.17%	(0.12%)	0.05%
Real Estate	10%	9%	9.55%	7.37%	0.23%	(0.06%)	0.17%
Timber	2%	2%	4.87%	3.10%	0.03%	(0.02%)	0.01%
Infrastructure	5%	7%	14.96%	5.27%	0.50%	0.43%	0.93%
Cash & Equivalents	1%	1%	0.11%	0.09%	0.00%	0.02%	0.02%
Total			26.86%	= 26.26%	+ 1.29%	+ (0.70%)	0.60%

- Small cap managers in Domestic Equities were a significant contributor to the negative manager effect
- Relative underperformance in small caps is a result of the strength of lower quality companies, highlighted by the meme stock phenomenon (GME, AMC, PLUG)

# TFFR ATTRIBUTION

AS OF JUNE 30, 2021

## Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	18.25%	17.70%	0.10%	0.05%	0.15%
International Equities	16%	15%	13.24%	10.94%	0.35%	0.01%	0.36%
World Equities	16%	15%	13.22%	14.83%	(0.23%)	(0.01%)	(0.24%)
Private Equities	4%	6%	14.27%	14.27%	0.00%	(0.27%)	(0.27%)
Domestic Fixed Income	22%	21%	5.78%	4.21%	0.33%	(0.06%)	0.28%
International Fixed Income	2%	2%	-	-	0.06%	0.03%	0.09%
Real Estate	10%	10%	7.30%	6.13%	0.12%	(0.05%)	0.07%
Timber	2%	2%	0.48%	2.65%	(0.08%)	(0.01%)	(0.10%)
Infrastructure	5%	6%	8.54%	3.07%	0.27%	0.08%	0.35%
Cash & Equivalents	1%	1%	1.22%	1.17%	0.00%	0.01%	0.01%
Total	11.49% = 10.79% + 0.93% + (0.22%)						0.70%

Staff is evaluating the long-term underperformance of the World Equities allocation

# TFFR ATTRIBUTION

AS OF JUNE 30, 2021

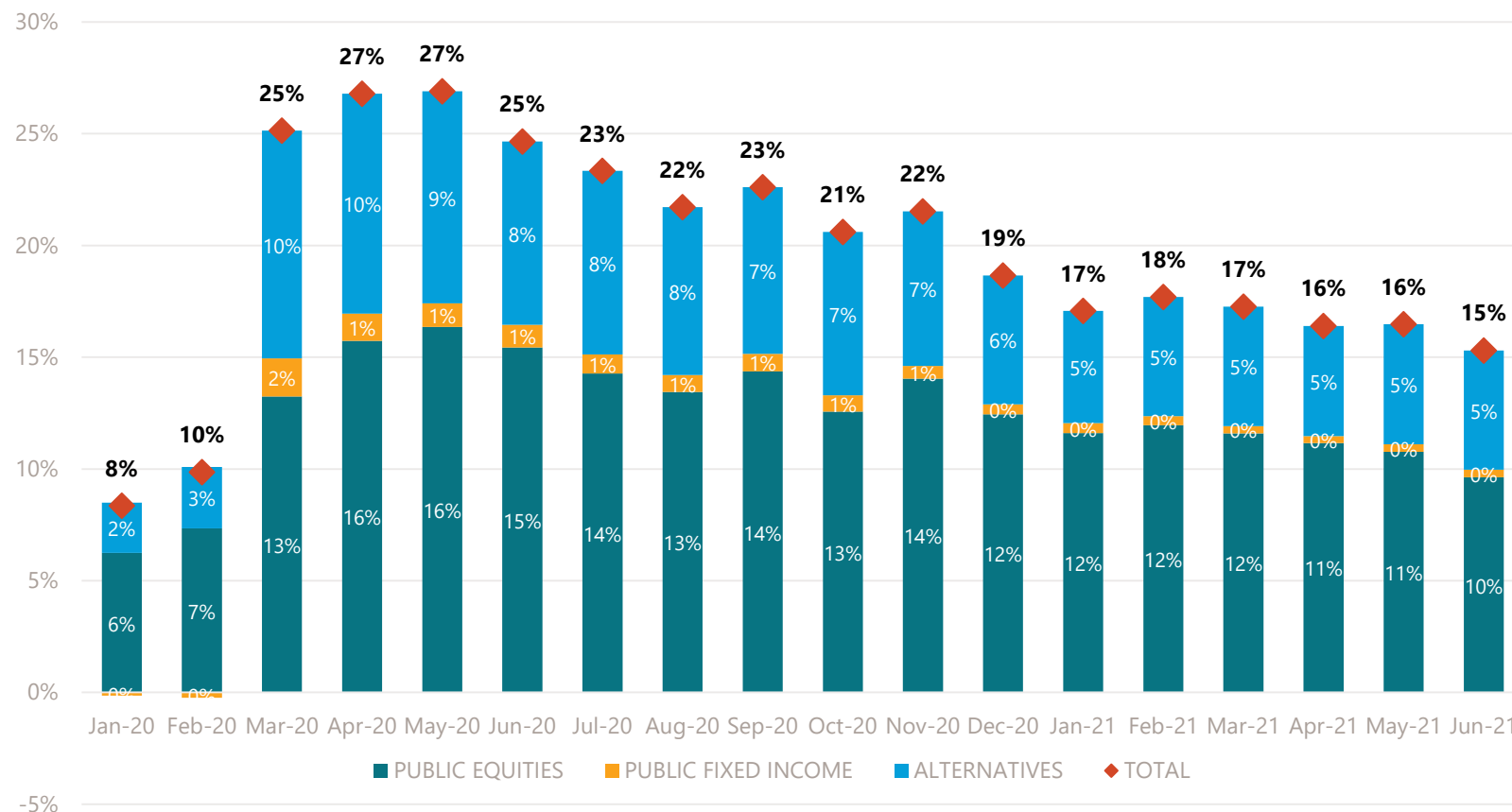
## Ten Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	24%	23%	15.09%	14.41%	0.12%	0.08%	0.21%
International Equities	16%	15%	7.72%	5.68%	0.32%	(0.01%)	0.32%
World Equities	14%	14%	10.77%	11.86%	(0.13%)	(0.03%)	(0.16%)
Private Equities	4%	6%	7.15%	7.15%	0.00%	(0.15%)	(0.15%)
Domestic Fixed Income	20%	19%	5.56%	4.24%	0.25%	(0.03%)	0.22%
International Fixed Income	3%	3%	-	-	0.08%	0.00%	0.09%
Real Estate	10%	10%	10.44%	8.79%	0.16%	(0.00%)	0.16%
Timber	3%	4%	0.92%	4.69%	(0.18%)	(0.01%)	(0.19%)
Infrastructure	4%	5%	7.07%	2.04%	0.22%	0.10%	0.32%
Cash & Equivalents	1%	1%	0.67%	0.63%	0.00%	0.00%	0.00%
Total			9.05% = 8.23% + 0.86% + (0.04%)				0.82%

Staff is evaluating the long-term underperformance of the World Equities allocation

# RISK CONTRIBUTION OVER TIME

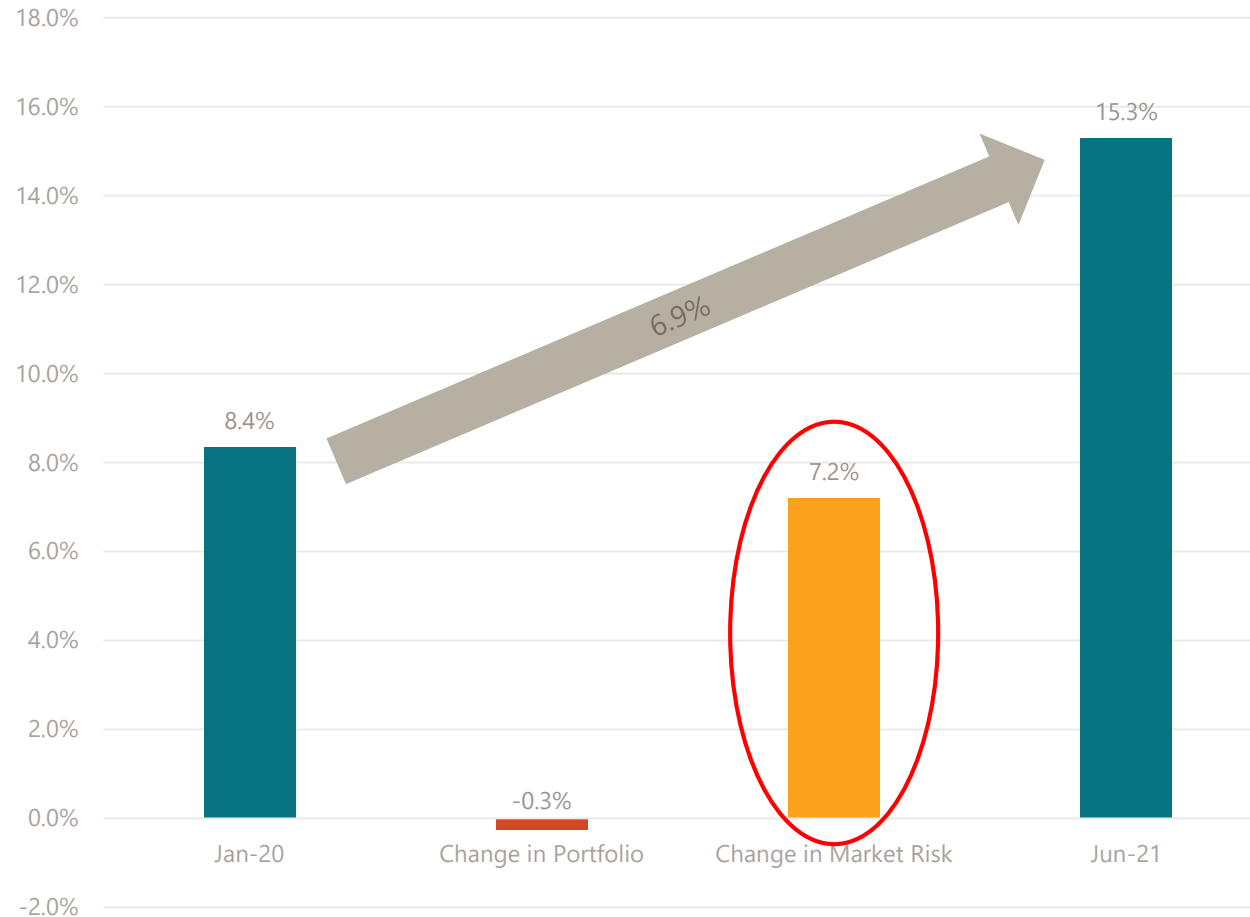
PENSION POOL AS OF JUNE 30, 2021



- Risk has increased as a result of the global pandemic
- Risk is defined as the worst expected loss under normal market conditions (1 Year, 84% confidence)

# RISK ATTRIBUTION

PENSION POOL AS OF JUNE 30, 2021

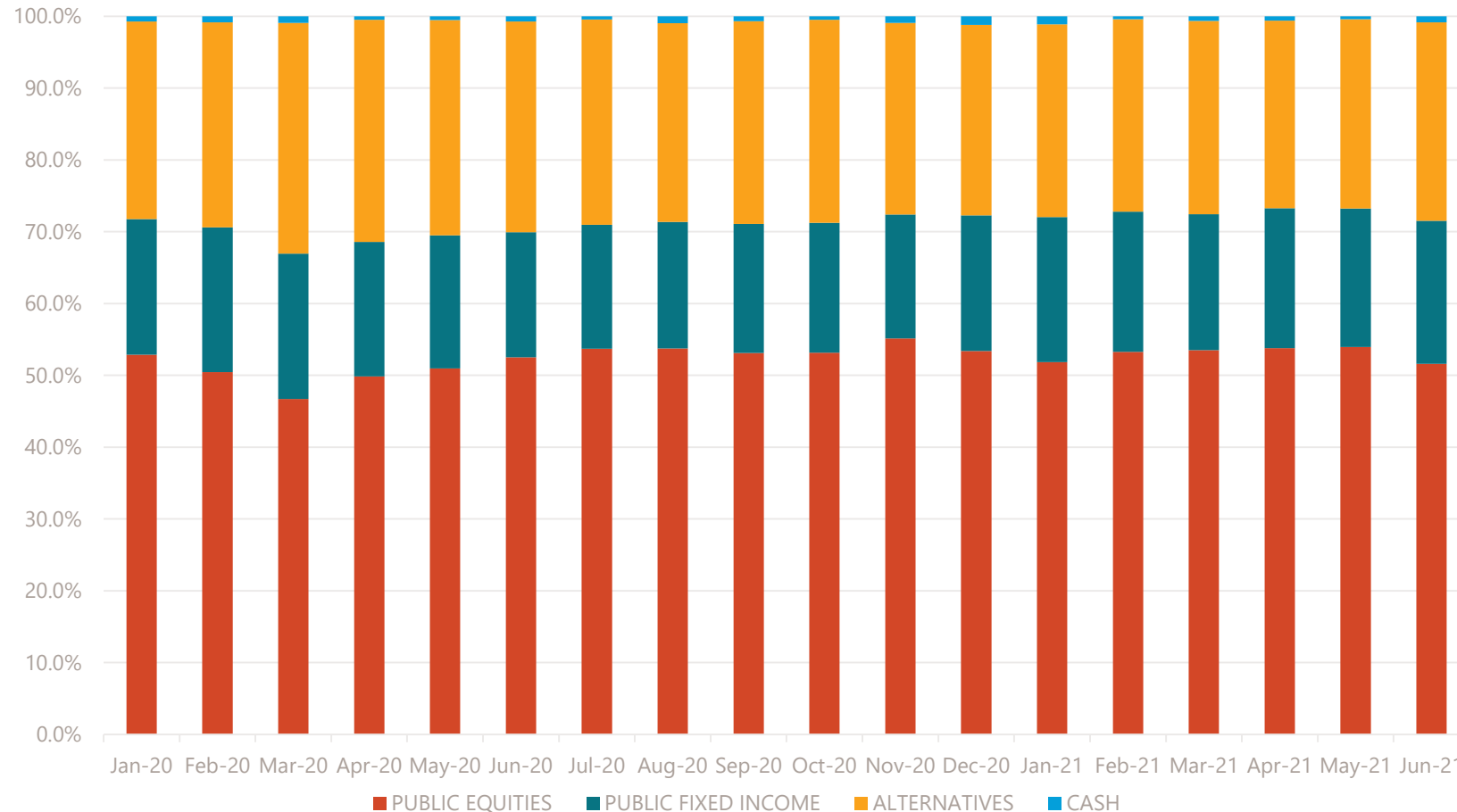


- The increase in risk is driven by an increase in market risk
- Changes in the portfolio are NOT contributing to the increase in risk



# ASSET ALLOCATION OVER TIME

PENSION POOL AS OF JUNE 30, 2021



- Staff monitors portfolio allocations and rigorously rebalances to ensure exposures and allocations remain within targets

# PERFORMANCE UPDATE – LEGACY FUND

AS OF JUNE 30, 2021

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

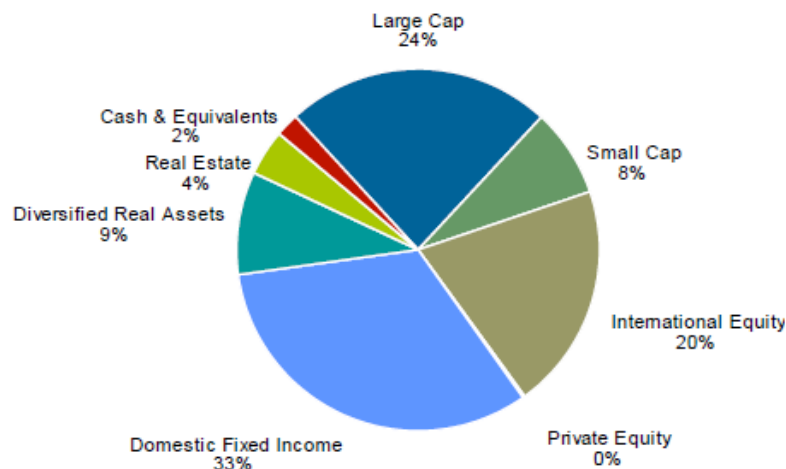
	1 Yr Ended 6/30/2021	3 Yrs Ended 6/30/2021	5 Yrs Ended 6/30/2021	Risk 5 Yrs Ended 6/30/2021
Legacy Fund \$9.0 billion				
Total Fund Return - Net	22.68%	10.31%	10.10%	10.7%
Policy Benchmark Return	20.64%	10.15%	9.36%	9.6%
Total Relative Return	2.04%	0.17%	0.74%	

- Legacy Fund outperformed the policy benchmark in each of the 1, 3, and 5 year periods ended June 30, 2021
- Active management has enhanced net investment returns by roughly \$222 million for the 5-years ended June 30, 2021 *(Legacy investments averaged over \$6 billion the last 5-years and Excess Return has averaged 0.74% per annum: \$6 billion 0.74% = \$44.4 million x 5 years = \$222 million.)*

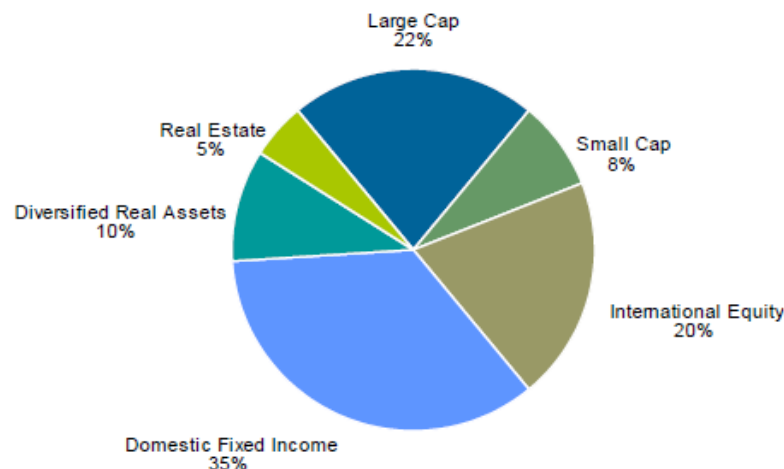
# LEGACY FUND ASSET ALLOCATION

AS OF JUNE 30, 2021

Actual Asset Allocation



Target Asset Allocation



Underweight to domestic fixed income and the higher allocation to cash was necessary to transfer earnings to the General Fund

Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	2,136,414	23.8%	22.0%	1.8%	157,891
Small Cap	710,115	7.9%	8.0%	(0.1%)	(9,347)
International Equity	1,814,730	20.2%	20.0%	0.2%	16,073
Private Equity	21,813	0.2%	0.0%	0.2%	21,813
Domestic Fixed Income	2,927,872	32.6%	35.0%	(2.4%)	(219,778)
Diversified Real Assets	829,376	9.2%	10.0%	(0.8%)	(69,953)
Real Estate	364,524	4.1%	5.0%	(0.9%)	(85,140)
Cash & Equivalents	188,441	2.1%	0.0%	2.1%	188,441
Total	8,993,285	100.0%	100.0%		

# LEGACY FUND ATTRIBUTION

AS OF JUNE 30, 2021

## One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	23%	22%	46.02%	43.07%	0.57%	0.07%	0.63%
Small Cap	8%	8%	42.89%	62.03%	(1.30%)	0.08%	(1.23%)
International Equity	20%	20%	38.84%	33.60%	0.93%	0.01%	0.93%
Private Equity	0%	0%	13.53%	13.53%	0.00%	0.00%	0.00%
Domestic Fixed Income	34%	35%	3.40%	(0.33%)	1.48%	0.12%	1.61%
Diversified Real Assets	10%	10%	10.81%	5.95%	0.51%	0.03%	0.55%
Real Estate	4%	5%	6.23%	7.37%	(0.06%)	0.08%	0.02%
Cash Equivalents	1%	0%	0.04%	0.04%	0.00%	(0.21%)	(0.21%)
<b>Total</b>			<b>22.95% = 20.65% + 2.12% + 0.18%</b>				<b>2.30%</b>

- Active strategies in small caps underperformed
- Relative underperformance in small caps is a result of the strength of lower quality companies highlighted by the meme stock phenomenon (GME, AMC, PLUG)

# LEGACY FUND ATTRIBUTION

AS OF JUNE 30, 2021

## 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
Large Cap	22%	22%	17.80%	17.99%	(0.03%)	(0.02%)	(0.05%)
Small Cap	8%	8%	12.80%	16.47%	(0.30%)	(0.03%)	(0.32%)
International Equity	20%	20%	12.89%	10.36%	0.51%	0.00%	0.51%
Private Equity	0%	0%	-	-	0.00%	0.00%	0.00%
Domestic Fixed Income	35%	35%	5.01%	3.03%	0.66%	0.02%	0.69%
Diversified Real Assets	10%	10%	6.16%	4.08%	0.20%	0.01%	0.21%
Real Estate	5%	5%	5.93%	6.13%	(0.01%)	(0.00%)	(0.01%)
Cash & Equivalents	1%	0%	1.04%	1.04%	0.00%	(0.07%)	(0.07%)
Total			10.32%	= 9.36%	+ 1.05%	+ (0.09%)	0.96%

Staff has addressed longer term underperformance of the small cap asset class with recent manager changes

**ND Legacy Fund**  
**Summary of Deposits, Earnings and Net Position**  
**As of June 30, 2021**

	Deposits	Withdrawals	Total Net Earnings	Net Increase/ (Decrease)	Ending Net Position	Earnings as defined in NDCC 21-10-12
FY2012	396,585,658	-	2,300,225	398,885,883	398,885,883	2,571,475
FY2013	791,126,479	-	4,216,026	795,342,505	1,194,228,388	15,949,089
FY2014	907,214,971	-	113,153,662	1,020,368,633	2,214,597,021	50,033,655
FY2015	1,011,343,040	-	99,895,650	1,111,238,690	3,325,835,711	95,143,905
FY2016	434,853,950	-	45,851,680	480,705,630	3,806,541,341	65,326,673
FY2017	399,501,134	-	479,595,256	879,096,390	4,685,637,731	207,814,875
Totals	3,940,625,232	-	745,012,499	4,685,637,731	4,685,637,731	436,839,672

All earnings prior to 7/1/2017 became part of principal.

- Legacy Fund net investment income exceeded \$3.5 billion

FY2018	529,870,755		360,575,532	890,446,287	5,576,084,018	242,859,840
FY2019 *	628,610,681		53,186,743	681,797,424	6,257,881,442	212,403,376

<b>Earnings transferred for 2017-19 biennium</b>	<b>455,263,216</b>
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- Total earnings transferred to date are over \$1.3 billion

June, 2019	63,958,262	(455,263,216)	255,651,383	(135,653,571)	6,122,227,871	46,980,140
FY2020	596,589,041	-	276,492,158	873,081,199	6,995,309,070	253,723,766
FY2021	334,989,929	-	1,509,391,835	1,844,381,764	8,839,690,834	570,983,478

<b>Earnings transferred for 2019-21 biennium</b>	<b>871,687,384</b>
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June, 2021	45,568,041	(871,687,384)	101,630,690	(724,488,653)	8,115,202,181	127,181,503
FY2022	101,405,599	-	214,860,861	316,266,460	8,431,468,641	156,146,990

<b>Earnings to be transferred at end of 2021-23 biennium</b>	<b>283,328,493</b>
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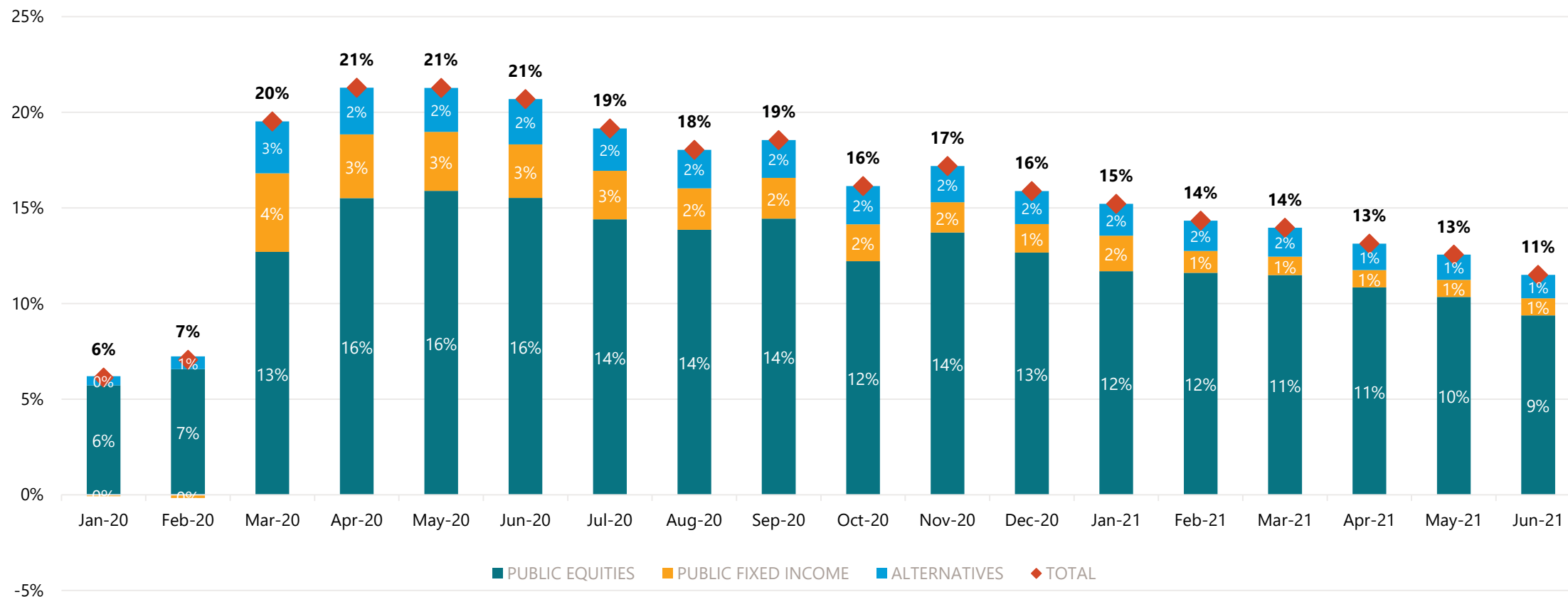
<b>Life-to-date Totals</b>	<b>6,241,617,540</b>	<b>(1,326,950,600)</b>	<b>3,516,801,701</b>	<b>8,431,468,641</b>	<b>8,431,468,641</b>	<b>2,047,118,765</b>
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\* FY2019 amounts reflect 11 months ended 5/31/19 as 2019-21 transfer was based on 23 months.

\*\* FY2022 amounts are preliminary and unaudited.

# RISK CONTRIBUTION OVER TIME

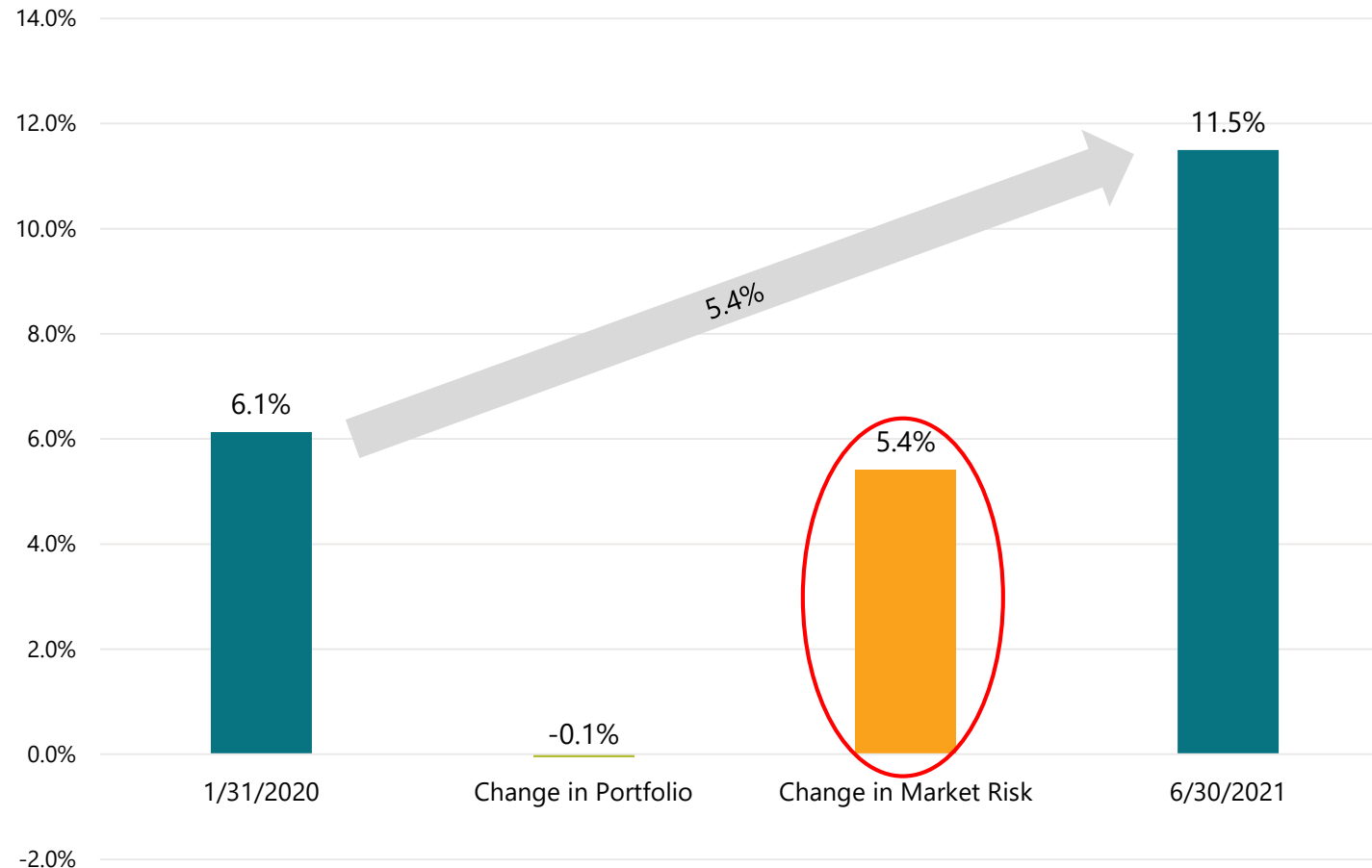
LEGACY FUND AS OF JUNE 30, 2021



- Risk has increased as a result of the global pandemic
- Risk is defined as the worst expected loss under normal market conditions (1 Year, 84% confidence)

# RISK ATTRIBUTION

LEGACY FUND AS OF JUNE 30, 2021

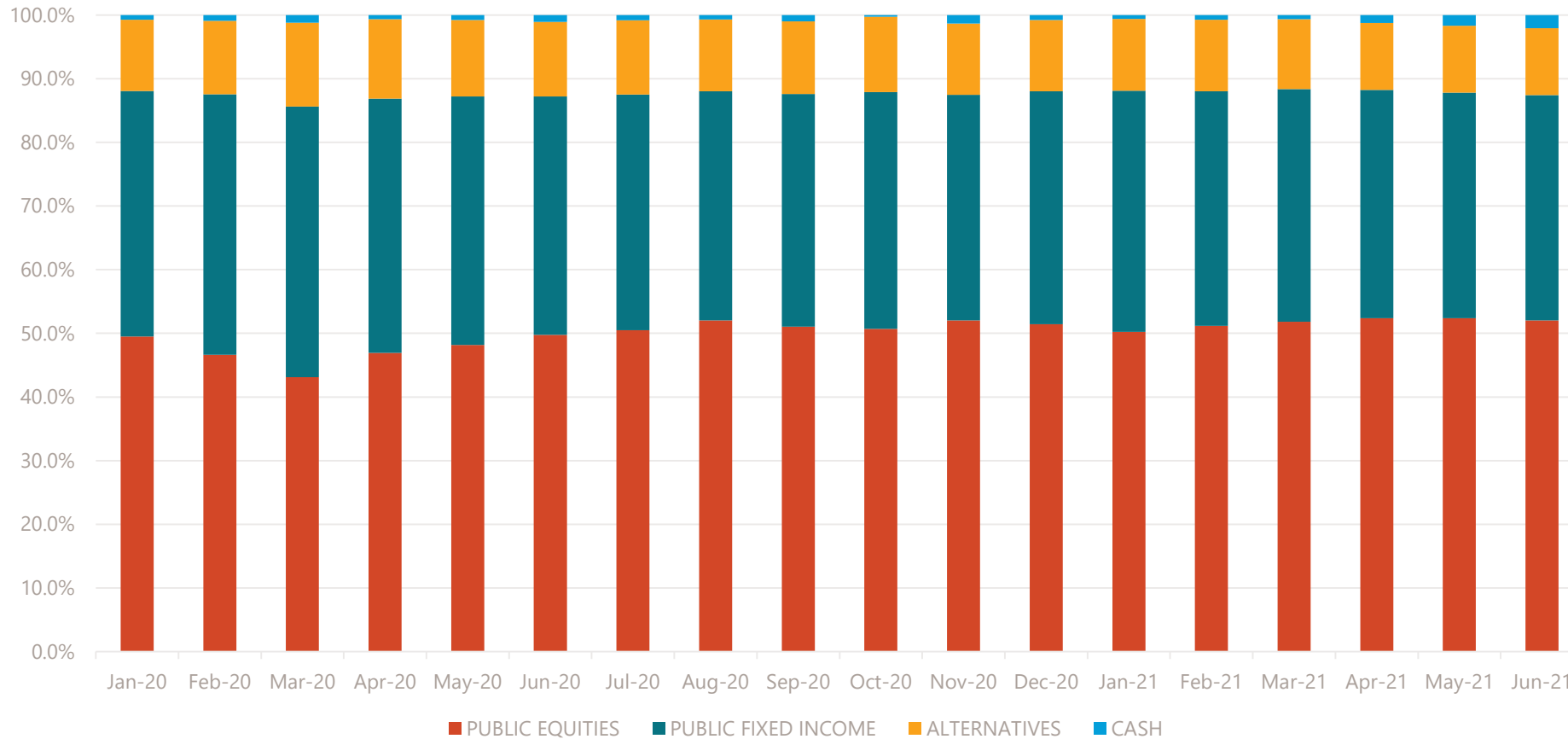


- The increase in risk is driven by an increase in market risk
- Changes in the portfolio are NOT contributing to the increase in risk



# ASSET ALLOCATION OVER TIME

LEGACY FUND AS OF JUNE 30, 2021



Staff monitors portfolio allocations and rigorously rebalances to ensure exposures and allocations remain within targets

## MEMORANDUM

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**TO:** SIB  
**FROM:** Jan Murtha, Interim Executive Director  
**DATE:** November 17, 2021  
**RE:** Legislative Special Session Update

The 2021 Special Legislative Session concluded last Friday, November 12, 2021. Following are descriptions of three bills related to RIO operations and the investment program.

**H.B. 1506 (Section 16)** passed both House and Senate and is pending signature of the Governor. This bill authorized RIO's 6 FTE request and additional budget adjustments. Testimony submitted in support of HB 1506 is attached. The bill may be found at:

<https://www.legis.nd.gov/assembly/67-2021/special-session/documents/21-1130-07000.pdf>

**H.B. 1512** passed both House and Senate and is pending signature of the Governor. This bill expanded the number of Advisory Board members from 7 to 10; increasing legislators from 4 to 6, removing the Director of OMB, and adding the Insurance Commissioner, and State Treasurer. It also added enabling language regarding the development of investment guidelines. The bill may found at:

<https://www.legis.nd.gov/assembly/67-2021/special-session/documents/21-1117-03000.pdf>

**S.B. 2345** passed both House and Senate and is pending signature of the Governor. This bill expanded the list of funds that the SIB is required to invest by statute to include the Water Projects Stabilization Fund. The bill may found at:

<https://www.legis.nd.gov/assembly/67-2021/special-session/documents/21-1123-04000.pdf>

**BOARD INFORMATION ONLY. No board action requested.**

## MEMORANDUM

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**TO:** Rep. Jeff Delzer, Chairman House Appropriations Committee  
**FROM:** Jan Murtha, Interim Executive Director  
**DATE:** November 8, 2021  
**RE:** Testimony in Support of H.B. 1506 Section 15 regarding RIO resource needs.

Thank you for the opportunity to appear before you with this appropriation request. The Retirement and Investment Office is responsible for the administration of two programs. The State Investment Board program, which is the focus of this request and which serves 26 government client funds, and the Teachers' Fund for Retirement Program which serves over 20,000 members. The State Investment Board program currently has approximately 19.7 billion dollars in assets under management (AUM) as of August 31, 2021; compared with 4.8 billion AUM in fiscal year 2010. RIO's investment program, has more than quadrupled in just over a decade.

In order to prudently manage, monitor, and rebalance complex investment programs for our clients, in an increasingly risk prone market, and based on comparisons with other public sector investment programs, we seek to dedicate 1 investment professional per 2 to 2.5 billion dollars in AUM. Currently we have 19 allotted FTE's across these two programs, in 2010 we had 17 allotted FTE's. Only 4 of our 19 FTE's are dedicated investment professionals. Of the 4 dedicated investment professionals only 2 of the investment professional positions are filled. The two unfilled investment positions are the Chief Risk Officer and Chief Investment Officer. Initial interviews have been conducted for the Chief Risk Officer, and RIO hopes to complete final interviews in November, 2021 for this position. The SIB is scheduled to conduct final interviews for the Chief Investment Officer(CIO) in December 2021. The final position to fill is that of the Executive Director (ED), and the SIB will undertake filling the ED position subsequent to filling the CIO position. Approval of the agency request during the upcoming special legislative session would provide the new CIO the opportunity to build their investment team at the same time they are asked to build the in-state program.

As the assets under management have increased so too has the complexity of the program, and the need for additional resources will continue to increase so long as the AUM and program complexity increase. Additional investment professionals will be invaluable for managing the larger asset base and navigating the ever challenging markets, which in turn is key to generating excess returns net of fees above the benchmark. The benchmark rate is the returns you expect to receive; excess returns represent the additional dollars earned over what you expected. The 5-year excess returns, so returns above and beyond what was expected from client investments and net of fees, exceeded 500 million dollars.

The implementation of H.B. 1425 introduced substantial additional complexity and demands on resources to the investment program. H.B. 1425 contained three major mandates, developing a

preference program for in-state managers and directing the in state investment of 10% fixed income and 10% equity. The majority if not all of the 10% will be invested in private markets which requires far greater due diligence and monitoring than public equities because of the private long term nature of the investment. To develop the manager preference program, we have reached out and received feedback from our state financial institution associations on how to effectively incorporate in-state managers into the search process. For this preference program to be implemented by the agency and not contracted out to a consultant we require additional resources to dedicate to outreach efforts with stakeholders and staff to perform the review. The positions being requested and how they would be used are outlined in the attached Exhibit. The agency is seeking an appropriation to spend special fund dollars equal to approximately 1% of the average excess returns generated on an annual basis.

Without the ability to add additional staff members to assist with developing the in-state investment program and maintain and grow the current investment portfolios prior to the next biennium, the agency and the State Investment Board will be in the unenviable position of: determining what realistically can be accomplished now, what priorities must wait, what must be simplified, and what can be contracted out to consultants. Staff will endeavor to continue to provide excellent service and diligent care for government client investments, however, without additional resources to support this growing program we are concerned that the agency will fall short of meeting the expectations of our clients, our stakeholders, and the people of North Dakota.

Thank you in advance for your support of this important state program and for your service to the people of North Dakota.

# MEMORANDUM

**TO:** TFFR Board

**FROM:** Denise Weeks

**DATE:** November 18, 2021

**SUBJECT:** Outreach Programs Update

- NDCEL Conference – In-Person
  - October 22, 2021 - Bismarck
  - Informational booth – Jayme Heick and Stephanie Starr
  - Presentation on *TFFR Benefits: Past, Present, and Future* by Jan Murtha and Denise Weeks
- NDSBA Conference – In-Person
  - October 29, 2021 - Bismarck
  - Informational booth – Denise Weeks and Tami Volkert
  - Presentation on *TFFR Benefits: Past, Present, and Future* by Jan Murtha, Denise Weeks and Tami Volkert
- TFFR Individual Counseling Sessions – Virtual (Jayme Heick and Stephanie Starr)
  - Continue through December
- TFFR Group Counseling Sessions – Virtual (Jayme Heick and Stephanie Starr)
  - Sessions scheduled with the 15 biggest school districts through December
- NDRIO has updated the phone system to allow for:
  - More effective and efficient voicemail options.
  - Proper staff member selection when staff is unavailable.
  - Quicker response time.
- Tentative events in the near future – Virtual
  - 30-minute educational session on Purchasing Service Credit.
  - 60-minute Business Manager training sessions on Employer Reporting issues.
  - 60-minute session on retirement education topics such as Social Security, NDPERS Health Insurance, Estate and Financial Planning. Experts in these areas will be invited as guest speakers.

## MEMORANDUM

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**TO:** TFFR Board  
**FROM:** Jan Murtha, Interim Executive Director – Chief Retirement Officer  
**DATE:** November 16, 2021  
**RE:** PAS Project Update

The following summarizes the efforts of RIO agency staff to complete Phase 1 and initiate Phase 2 of the PAS project from July 2021 through the current date:

- All Phase 1 Deliverables have been accepted by Staff.
- Phase 2 has been initiated (Procurement of Solution).
- The ESC approved contracting with Segal for assistance through Phase 3 of the PAS Project.
- Due to the need to prioritize resources for succession planning and all agency communication, Retirement Services staff reduced the frequency of meetings to discuss operation items and PAS related topic review from bi-monthly to monthly. Issue specific trainings to identify areas of improvement for both applicable processes and recommendations for changes to the law will resume once vacancies in the division have been filled.
- NDIT, RIO staff, and Segal meet weekly to discuss PAS project status and review progress on interim recommendations.
- The vendor solution RFP was issued June 1, 2021; responses were due July 21, 2021.
- Vendor responses were received, reviewed, and an initial analysis was conducted.
- We are currently in the contract negotiating phase of the procurement process prior to award.

**BOARD INFORMATION ONLY. No board action requested.**

# TFFR INVESTMENT AND PERFORMANCE UPDATE

AS OF SEPTEMBER 30, 2021



# PERFORMANCE UPDATE – TFFR

AS OF SEPTEMBER 30, 2021

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

	Current FYTD 9/30/2021	1 Yr Ended 9/30/2021	3 Yrs Ended 9/30/2021	5 Yrs Ended 9/30/2021	Risk 5 Yrs Ended 9/30/2021	Risk Adj Excess Return 5 Yrs Ended 9/30/2021
TFFR \$3.2 billion						
Total Fund Return - Net	0.37%	21.09%	10.62%	10.51%	10.4%	0.18%
Policy Benchmark Return	0.95%	22.08%	10.82%	10.24%	10.3%	
Total Relative Return	-0.58%	-0.99%	-0.20%	0.27%		

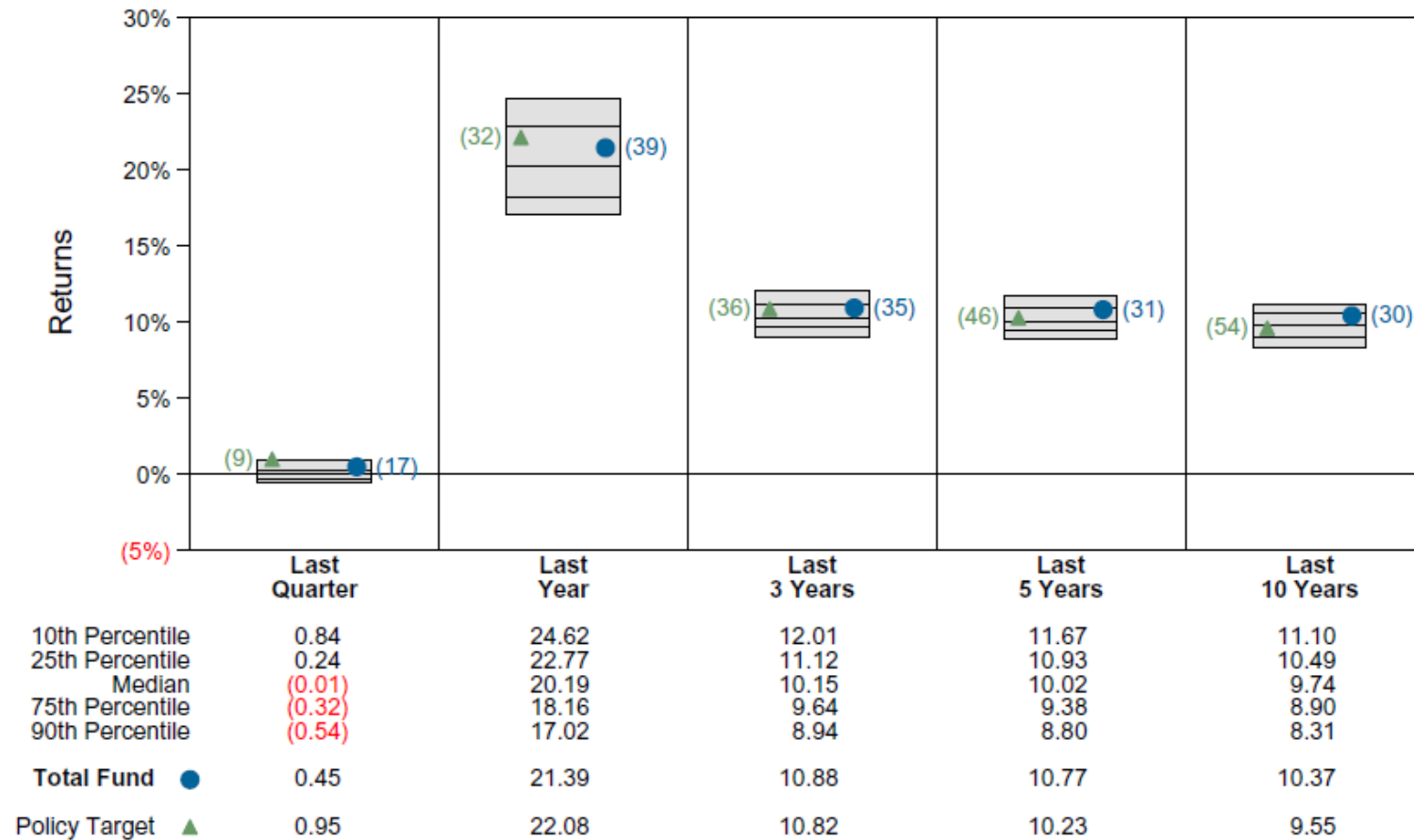
- TFFR outperformed the policy benchmark in the 5 year period ended September 30, 2021
- Underperformance for the quarter was driven by the strong performance of the real asset benchmarks. Reporting for private markets funds (including real assets) lag—some funds’ performance for the quarter is held at 0.
- Active management has enhanced net investment returns by roughly \$25 million for the 5-years ended September 30, 2021 *(Excess dollar returns are calculated as the sum of the monthly excess net returns x beginning market value for each month of the five year period)*



# TFFR FUND RANKING

AS OF SEPTEMBER 30, 2021

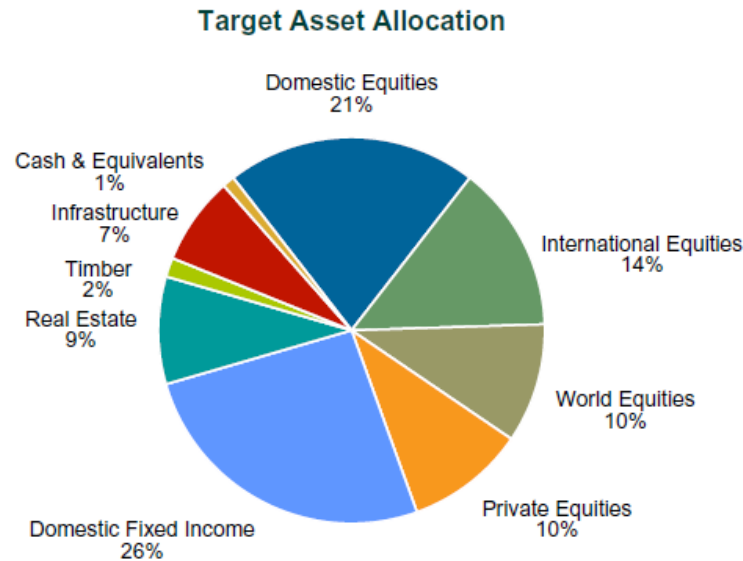
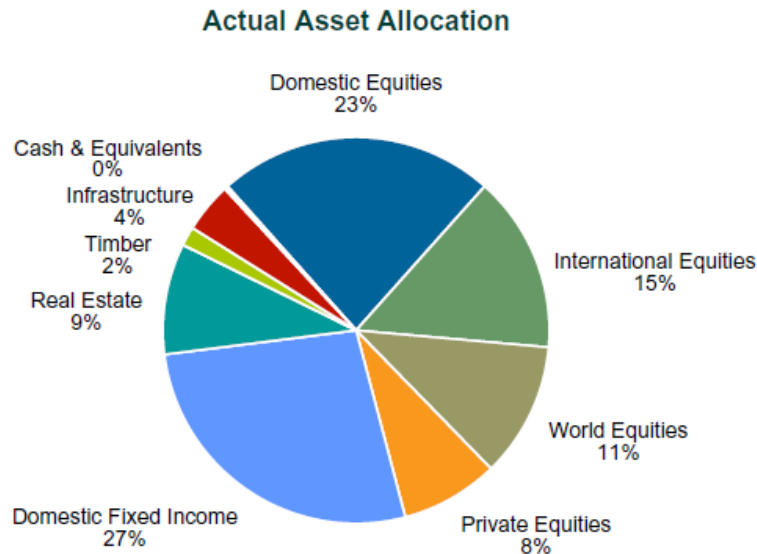
Callan Public Fund Sponsor Database



Solid performance across multiple time frames relative to peers

# TFFR ASSET ALLOCATION

AS OF SEPTEMBER 30, 2021



- Private Equities allocation has increased from 7.6% in June 2021 to 8.2% in Sept. 2021
- During the quarter, a new commitment to Adams Street's 2021 Global Fund was made
- Infrastructure underweight has been addressed with recent commitments to Macquarie Fund V, I Squared Fund III, and GCM III

Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	747,360	23.2%	21.0%	2.2%	70,222
International Equities	477,042	14.8%	14.0%	0.8%	25,617
World Equities	365,048	11.3%	10.0%	1.3%	42,602
Private Equities	264,073	8.2%	10.0%	(1.8%)	(58,374)
Domestic Fixed Income	874,469	27.1%	26.0%	1.1%	36,109
Real Estate	298,599	9.3%	9.0%	0.3%	8,397
Timber	52,611	1.6%	1.6%	(0.0%)	(0)
Infrastructure	136,426	4.2%	7.4%	(3.1%)	(101,165)
Cash & Equivalents	8,836	0.3%	1.0%	(0.7%)	(23,409)
Total	3,224,464	100.0%	100.0%		

# TFFR ATTRIBUTION

AS OF SEPTEMBER 30, 2021

## One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	31.75%	34.69%	(0.60%)	0.13%	(0.47%)
World Equities	13%	11%	31.96%	28.82%	0.48%	0.08%	0.56%
International Equities	15%	14%	25.91%	24.51%	0.19%	0.02%	0.21%
Private Equities	6%	9%	57.44%	57.44%	0.00%	(1.48%)	(1.48%)
Domestic Fixed Income	26%	25%	3.26%	2.71%	0.18%	(0.11%)	0.07%
Real Estate	9%	9%	12.40%	12.15%	0.03%	(0.04%)	(0.01%)
Timber	2%	2%	4.87%	5.01%	(0.00%)	(0.02%)	(0.02%)
Infrastructure	4%	7%	14.20%	10.02%	0.23%	0.25%	0.48%
Cash & Equivalents	1%	1%	0.08%	0.07%	0.00%	(0.02%)	(0.02%)
<b>Total</b>			<b>21.39%</b>	<b>= 22.08%</b>	<b>+ 0.50%</b>	<b>+ (1.18%)</b>	<b>(0.69%)</b>

- Small cap managers in Domestic Equities were a significant contributor to the negative manager effect
- Relative underperformance in small caps is a result of the strength of lower quality companies, highlighted by the meme stock phenomenon (GME, AMC, PLUG)
- During the last quarter, the small cap funds outperformed their target index by 3.7%

# TFFR ATTRIBUTION

AS OF SEPTEMBER 30, 2021

## Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	17.40%	16.37%	0.21%	0.04%	0.25%
World Equities	16%	15%	11.73%	13.74%	(0.28%)	(0.01%)	(0.29%)
International Equities	15%	14%	11.13%	8.93%	0.34%	(0.00%)	0.34%
Private Equities	4%	7%	15.00%	15.00%	0.00%	(0.30%)	(0.30%)
Domestic Fixed Income	22%	22%	5.39%	3.93%	0.31%	(0.06%)	0.26%
International Fixed Inc.	1%	2%	-	-	0.05%	0.03%	0.08%
Real Estate	10%	10%	7.55%	6.84%	0.08%	(0.05%)	0.02%
Timber	2%	2%	0.48%	2.90%	(0.08%)	(0.01%)	(0.09%)
Infrastructure	5%	6%	8.40%	3.99%	0.22%	0.05%	0.27%
Cash & Equivalents	1%	1%	1.20%	1.16%	0.00%	0.00%	0.01%
Total			10.77% = 10.23% + 0.86% + (0.32%)				0.53%

Staff is evaluating the long-term underperformance of the World Equities allocation

# TFFR ATTRIBUTION

AS OF SEPTEMBER 30, 2021

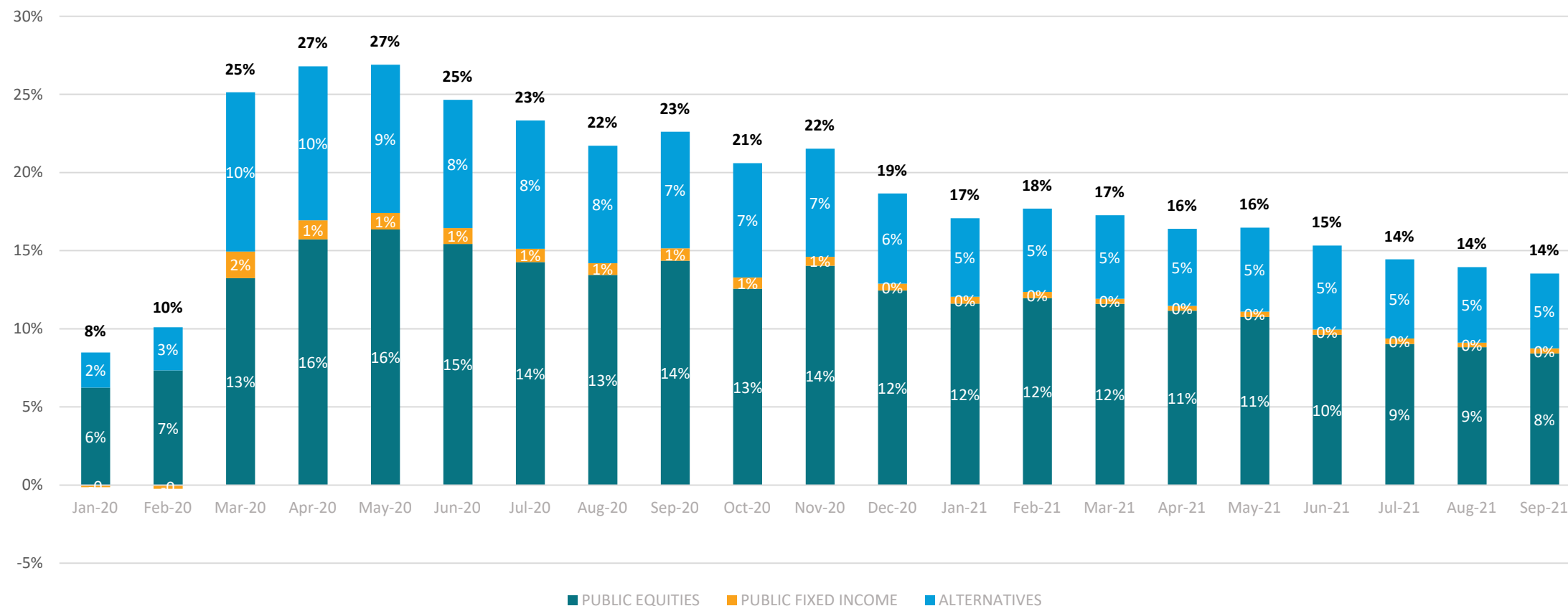
## Ten Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	22%	17.32%	16.35%	0.20%	0.07%	0.28%
World Equities	14%	14%	-	-	(0.15%)	(0.03%)	(0.18%)
International Equities	16%	15%	9.83%	7.76%	0.32%	(0.01%)	0.31%
Private Equities	5%	6%	7.63%	7.63%	0.00%	(0.15%)	(0.15%)
Domestic Fixed Income	20%	19%	5.82%	4.26%	0.30%	(0.03%)	0.27%
International Fixed Inc.	3%	3%	-	-	0.08%	0.00%	0.08%
Real Estate	10%	10%	10.51%	8.99%	0.15%	(0.04%)	0.12%
Timber	3%	4%	0.92%	4.89%	(0.18%)	(0.01%)	(0.19%)
Infrastructure	4%	5%	6.99%	2.50%	0.20%	0.09%	0.29%
Cash & Equivalents	1%	1%	0.66%	0.63%	0.00%	0.01%	0.01%
Total			10.37% = 9.55% + 0.92% + (0.10%)				0.82%

Staff is evaluating the long-term underperformance of the World Equities allocation

# RISK CONTRIBUTION OVER TIME

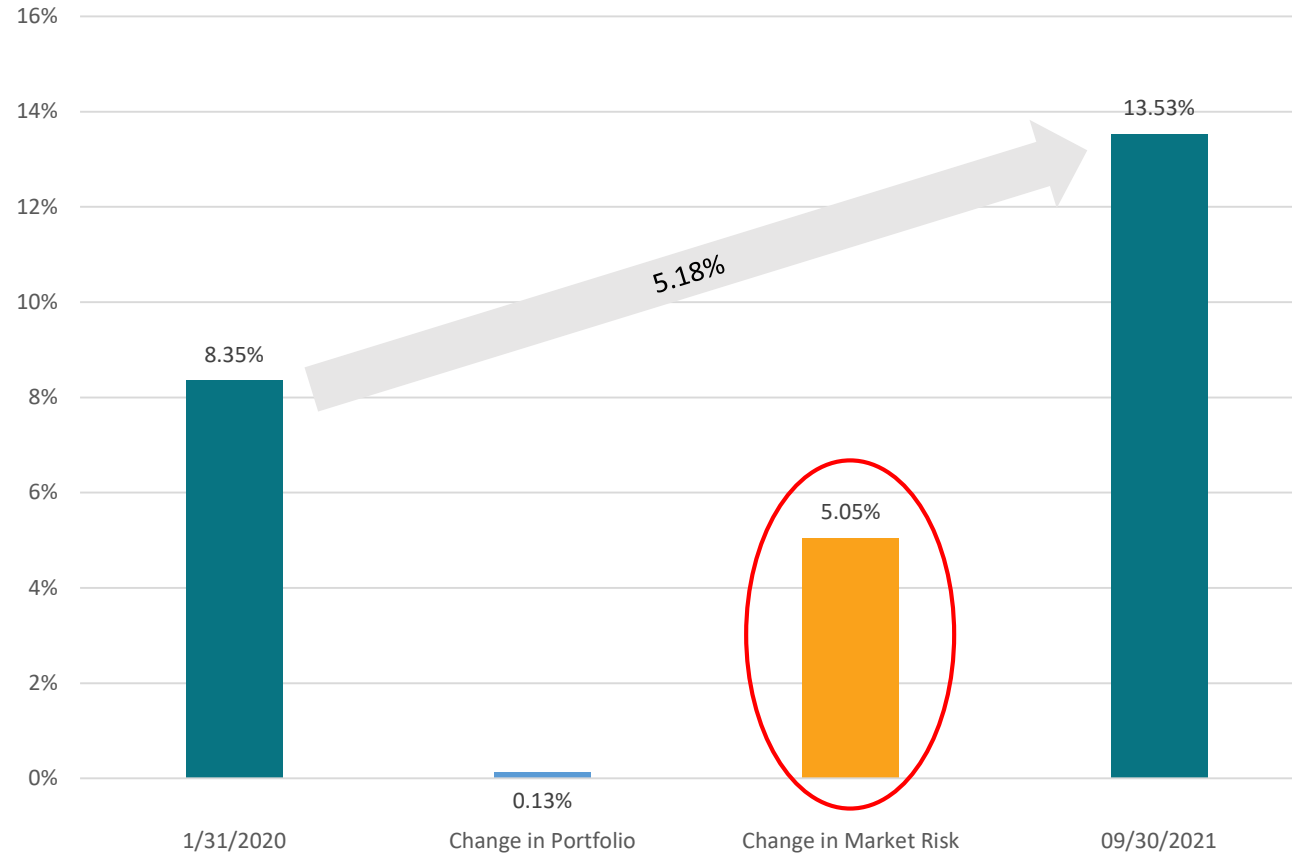
PENSION POOL AS OF SEPTEMBER 30, 2021



- Risk has increased as a result of the global pandemic
- Risk is defined as the worst expected loss under normal market conditions (1 Year, 84% confidence)

# RISK ATTRIBUTION

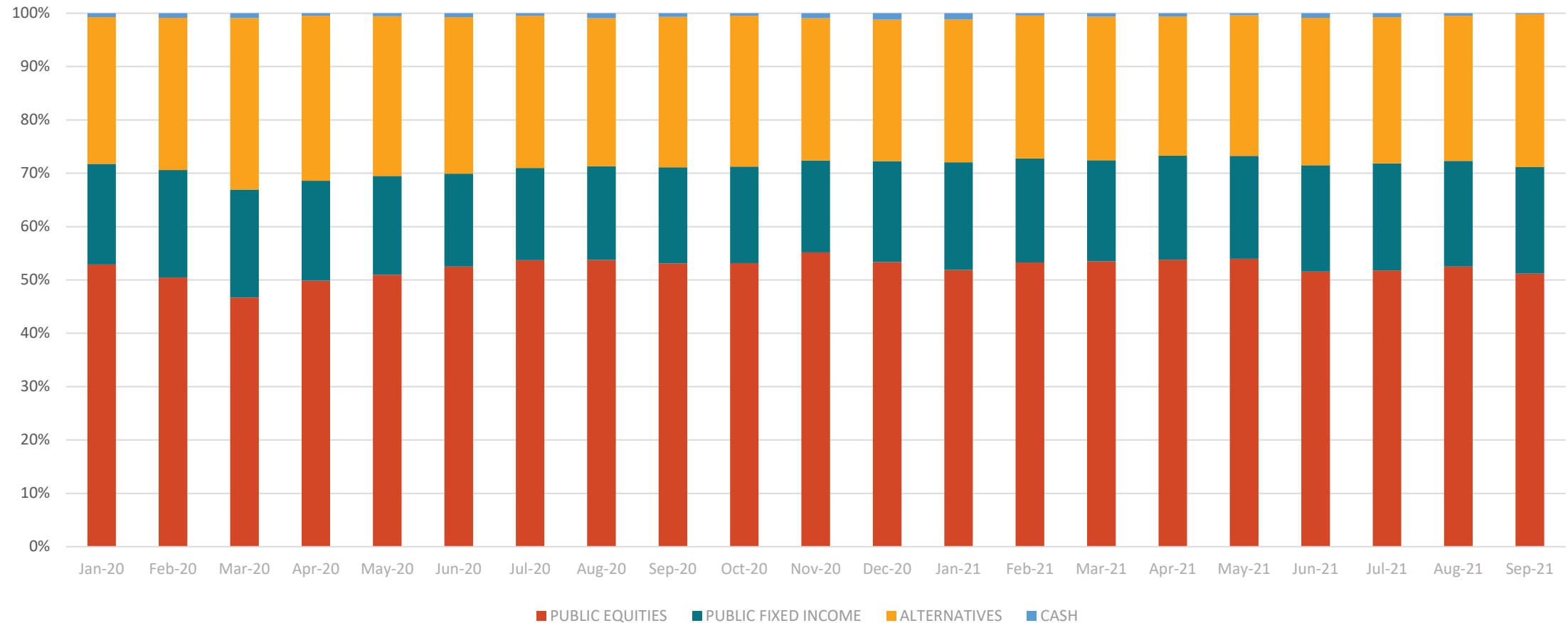
PENSION POOL AS OF SEPTEMBER 30, 2021



- The increase in risk is driven by an increase in market risk
- Changes in the portfolio are NOT driving the significant increase in risk

# ASSET ALLOCATION OVER TIME

PENSION POOL AS OF SEPTEMBER 30, 2021



- Staff monitors portfolio allocations and rigorously rebalances to ensure exposures and allocations remain within targets



# Quarterly Monitoring Report on TFFR Ends Quarter Ended September 30, 2021

## Retirement Program

This report highlights **exceptions** to normal business operations.

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- Trustee appointments – Mr. Cody Mickelson was reappointment for another term and Mr. Jordan Willgohe was appointed to fill the vacancy due to Ms. Gumeringer's retirement.
- Election of Officers
  - Dr. Lech - President
  - Mr. Burton – Vice President
  - President Lech, Mr. Mickelson, and Mr. Olson – TFFR Representatives to the State Investment Board
  - President Lech – SIB Audit Committee
  - Mr. Burton – Alternate Representative to the State Investment Board
- RIO lost 3 longtime staff members due to retirements – Bonnie Heit, Ruby Benning, and Estelle Kirchoffner leaving a void in the Retirement Services division until those positions can be filled. We have since then filled Ruby's position with part-time, temporary staff. Mensah Anyide-Ocloo joined RIO on October 18, 2021.
- The in-staff subbing policy as it relates to TFFR retirees was waived again effective July 2021 until further notice.
- Effective July 1, 2022, RIO joined NDIT unification. RIO's two IT staff members transitioned under NDIT but will continue to support RIO functions and have offices in the same location as RIO.
- The Governance and Policy Review Committee recommended moving the Investment Policy Statement and Plan Management Policy to the TFFR Board Program Manual. This change was approved.
- Staff continues to work on the Salary Verification Audit that was issued this spring by Internal Audit. Follow up with employers was needed on 19 out of 65 accounts that were looked at. Errors noted include:
  - Not reporting extra-curricular and other eligible salary
  - Reporting salary in the wrong fiscal year
  - Reporting of leave payouts
  - Model incompliance
- As of July 31, 2021, there were 6,651 members who have logged in to their TFFR online accounts; as of October 31, 2021, that number jumped to over 7,000.

**RETIREMENT AND INVESTMENT OFFICE**  
**Internal Audit**  
**2021-2022 1<sup>st</sup> Quarter Audit Activities Report**  
**July 1, 2021 – September 30, 2021**

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

Audit coverage is based on the July 1, 2021 through June 30, 2022 work plan approved by the SIB Audit Committee. The audit activities undertaken are consistent with the Internal Audit charter and goals, and the goals of RIO. To the extent possible, our audits are being carried out in accordance with the International Standards for the Professional Practice of Internal Auditing. Audit effort is being directed to the needs of RIO and the concerns of management and the SIB Audit Committee.

There were several events that occurred during the first quarter of 2021-22 that altered the original work plan. The events were as follows: The Executive Director/Chief Investment Officer and the Deputy Chief Investment Officer resigned from their positions. Also, three Retirement Service/Administrative Services staff members retired - the Supervisor of Administrative Services, the Office Assistant, and the Membership Specialist. These staff members represent over one hundred years of service to RIO.

**Investment and Agency Audit Activities**

- **Executive Limitation Audit**

Each year the SIB conducts a customer satisfaction survey. The purpose of this annual survey is to determine how well the SIB, through the staff of the RIO, is meeting the expectations of its clients. This survey is part of the SIB's ongoing effort to be more responsive to the needs of their clients and to continually improve the services that are provided. IA facilitated the survey in August and September 2021 and results were provided to the SIB at their October 22, 2021 meeting.

Due to the SIB separating the role of the Executive Director/Chief Investment Officer into two positions, the Executive Director and the Chief Investment Officer, the Supervisor of IA is having to review, evaluate, and make revisions to the audit program for Executive Limitations.

- **External Audit Support**

IA provided support to our external audit partners, CliftonLarsonAllen (CLA), during the GASB 68 Census Data Audit. In July 2021, IA sent out twelve employer confirmations as part of the financial statement audit. This task required more administrative time due to one employer not responding in a timely manner. CLA completed the GASB 68 Census Data Audit work would conclude in October. The June 30, 2021 Financial Statement Audit and GASB 68 Census Data Audit was completed in November 2021.

- **SIB Board Governance Review**

At the May 21, 2021 SIB meeting, the Board requested that the SIB Audit Committee review SIB Governance Policy B-2, governing style, in Section B governance process. The SIB Audit Committee was to clearly define inquiry and to review the Board's structure and how it operates, and bring a recommendation back to the full Board. The SIB operates under the Carver Board Governance Model.

The SIB Board structure and membership is established in statute and would require statute to amend. IA researched and reviewed board governance and presented a report to the SIB Audit Committee. In the report, there were questions to be discussed/answered and possible recommendations for the SIB Audit Committee to consider at the August 11, 2021 Audit Committee meeting.

After discussion at the August meeting, the SIB Audit Committee requested IA to develop a comprehensive on-boarding process for new SIB members, to develop a plan for annual Board education, and to establish a standing Governance and Policy Committee for the SIB. The draft report was reviewed at a special SIB Audit Committee meeting held October 2021 and then was presented to the SIB Board the October 2021 meeting.

- **SIB Executive Search Committee**

The Executive Director/Chief Investment Officer of RIO (ED/CIO) resigned from his position effective June 22, 2021.

The SIB Board selected and approved Board members to serve on the Executive Search Committee (ESC) at the August 2021 meeting. EFL, an executive recruitment service, was selected for the search at the end of July 2021. At the August 27, 2021, SIB meeting, the SIB voted to divide the combined Executive Director/Chief Investment Officer (ED/CIO) position into two separate positions to better serve RIO's needs for current and future operations. The ESC proceeded with filling the CIO role first. EFL felt that the applicant pool would increase by dividing the position as the two positions require different skill sets. The Supervisor of IA assisted the ESC with scoring the RFPs for the executive recruitment service and attended meetings in the search for Executive Recruitment Services.

- **Succession Planning**

Due to five staff members resigning/retiring during the first quarter, RIO Management has reorganized the agency structure and job duties to better fit the current and future needs of the agency. During the first quarter, IA reviewed and analyzed the responsibilities for three of the vacant positions. IA wanted to ensure that current requirements and deadlines continued to be met. The responsibilities were classified by function – Executive Boards, Continuity of Operations (Business Continuity), Human Resources, Procurement, Records Management, Risk Management (Risk Management/Workforce Safety programs), Investment Services, Fiscal Services, and Retirement Services (TFFR Administrative Assistant/Office Assistant). The duties were forwarded to RIO Management to assign to the newly organized positions.

### **Retirement Program Audit Activities**

- **Annual Employer Participant Data/Salary Verification Review**

On an annual basis, IA verifies retirement salaries and contributions reported to TFFR for the prior fiscal year for 65 randomly selected member accounts. TFFR eligibility and service hours were also verified. The project increases the number of participating employers included in the overall audit activities and reinforces to our participating employers the importance of accurate reporting.

The Annual Participant Data/Salary Verification Review report on fiscal year 2018-19 was issued May 11, 2021 and was presented to the SIB Audit Committee at the May 2021 meeting. IA had three recommendations in the report. IA has been working with Retirement Services on their response during the first quarter. The report will be presented to the TFFR Board at the November 2021 meeting.

- **TFFR File Maintenance Audit**

On an annual basis, IA will review system generated (CPAS) audit tables to ensure transactions initiated by staff are expected and appropriate given an individual's role with the organization. Member account information from Member Action Forms, Address Change Forms, Direct Deposit Authorization

Forms, and Point of Contact Forms are reviewed to verify that contact and demographic information has been updated correctly. The Records Management review was moved to Succession Planning.

Audit fieldwork started the end of June 2021 and continued during the months of July and August 2021. IA was reviewing information for the month of May 2020 during the fourth quarter of 2020 (new procedures due to COVID) and the month of October 2020 during the second quarter of 2021.

Due to the Succession Planning review, the fieldwork was suspended and the audit has not been completed.

- **TFFR Pension Administration Software Assistance (PAS Project)**

TFFR was approved spending for a pension system upgrade in fiscal year 2020-21. IA can help significantly reduce risk by playing a role that is educational, consultative or audit in nature, and by bringing independent subject-matter expertise to the most common risk areas. IA's ability to operate across the agency and across all individual work streams in a program provides visibility of risks that might otherwise be lost between silos. IA also went to training on project management for auditors to help with the upgrade process.

RIO was on schedule and completed Stage 1 of the PAS project at the close of fiscal year 2020-21. In Stage 2 of the project, RIO planned procurement, developed the RFP, and issued the RFP on June 1, 2021. During the month of July, RIO management (including IA) reviewed the responses received to the issued RFP. RIO staff (including IA) also attended scheduled software demonstrations during the month of August. RIO is now in the negotiation process of procurement procedures.

#### **Administrative Activities**

The IA staff attended the monthly RIO staff meetings, monthly RIO manager's meetings, divisional meetings, one Audit Committee meeting, three SIB meetings, and two TFFR meetings.

#### **Professional Development/CE/General Education**

The Supervisor of IA participated in training with the rest of the management team of RIO on change management. The Internal Auditor attending training on DOL standards for cashing checks and IT quarterly training on phishing.

# Salary Verification- Participant Data Review

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FOR FISCAL YEAR 2018/19

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# Audit Workplan

## Employer Reviews

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- Salary Reviews for the ten largest employers in a five-year period (employ over one-half of the TFFR Participants) - completed: Dickinson, West Fargo – 2016, Fargo – 2017, Jamestown – 2020, Minot – 2021, Bismarck and Mandan – scheduled for 2022
- Salary Verification Review – **Participant Data Review (new name)** – random review of sixty-five salaries from sixty employers (exclude ten largest employers, GASB/External sample)
- GASB Audit and external audit completed by external auditors

# Salary Verification/Participant Data Review

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Purpose of the review:

Verify eligibility

Verify eligible salary reported

Verify service hours reported (if unreasonable)

Verify Model Compliance

# Audit Planning and Notification Phase I

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- Request data analytics file from IT - all salary increases from one year to the next - \$5,000.00 or over
- Analyze information and select 65 sample members
- Request contract, payroll records, and explanation of salary increase from employer



# Fieldwork and Communication with Employer and Staff – Phase 2 and 3

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- Reconcile the information received from employer
- Request additional information from employer if needed
- Communication with Employer if there are questions
- Communicate with Retirement Services staff if there are questions

# Phase 4 and 5 - Write and Issue Report to Retirement Services

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- Issue report
- Provide electronic workbooks for Model 1, Model 2, and Model 2 Partial
- Workbooks contain IA worksheets, salary reconciliations, and Primary Tests (used for corrections)
- Provide supporting documentation for errors (emails and documents from employer)
- Salary reconciliations and supporting documentation is scanned to 65 member accounts

# There were nineteen errors found. IA recommends corrections to 16 accounts.

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- Eligible Salary not reported – after-school, administrative duties, contract, IT Coordinator, school improvement, supervision at sporting events, travel between schools, playground/hockey supervision, pool assistant (swimming lessons), and thespians
- Reported ineligible salary – busing, reimbursed leave, vacation buyout
- Salary reported in the wrong fiscal
- Programming of deductions caused salary errors
- One service hour error due to the part-time nature of the position
- Model compliance issues with Model 2 Partial – employer pick-up, member percentage which equals the 11.75 member contribution

# Total Amount of Errors Found

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	<u>Member Contributions</u>	<u>Employer Contributions</u>	<u>Salary</u>	
■ Model 1	\$678.81	\$736.73	\$5,777.80	Shortage
■ Model 2 Partial	\$615.46	\$667.80	\$5,237.59	Shortage
■ Model 2 All	<b>\$1,556.43</b>	<b>\$1,688.96</b>	<b>\$13,246.04</b>	Overpaid

# Internal Audit Recommendations

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1. There are sixteen member accounts recommended for corrections due to the material amount of the error – includes the one service hours correction.
2. IA recommends that Retirement Services request master payroll files from various employers or contact the business managers to ensure that the errors found are not systemic affecting other members. If errors are systemic, verify that the error did not occur in the most current three-year period.
3. It is TFFR's responsibility to determine that Employers are reporting in compliance with the specifications set by the Employer Payment Plan submitted. IA recommends that Retirement Services validate the employer pick-up% and the member % the first or second quarter of the year for one member to ensure correct amounts are deducted from the member salary. **This would be an interim procedure.** The new pension administrative software would automatically validate during the employer upload.

# NDAC 82-04-01-02

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The participating employer's plan to pay member contributions must comply with the fund's "plan for payment of member contributions to the fund" or other instructions prepared by the fund.

The Administrative Code does not list the models. The TFFR Board established the employer payment plans. TFFR staff should ensure that employers are following model compliance with the Employer Payment Plan they submitted.

# Findings in Past Salary Verification/ Participant Data Reviews

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	Errors	Sample	Percentage
■ 2015/16	14	50	28% of sample reviewed
■ 2016/17	3	50	6% of sample reviewed
■ 2017/18	11	64	17% of sample reviewed
■ 2018/19	19	65	29% of sample reviewed

# Questions?

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Internal Audit  
North Dakota Retirement and Investment Office  
**2018-2019 Salary Verification – Participant Data Review**  
**Final Report**  
MAY 11, 2021

### **Background**

The accurate reporting of retirement salaries along with member contributions, employer contributions, and service hours is vital to the administration of retirement benefits. It is the responsibility of the Teachers' Fund for Retirement (TFFR) to ensure that retirement salaries reported by participating employers on behalf of members are in compliance with the definition of salary as it appears in the North Dakota Century Code (NDCC) 15-39.1-04(10). Each year, Internal Audit (IA) randomly selects a group of member accounts and requests additional information from participating employers for the purpose of verifying reported retirement salaries. There are 211 employers reporting to TFFR under five models: Model 0– 4 employers, Model 1 – 81 employers, Model 2 All – 77 employers, Model 2 Partial - 44 employers, and Model 4 – 5 employers.

### **Results Summary**

The retirement salaries reported to TFFR in 2018-2019 for the sixty-five member accounts were reviewed. The sample consisted of the following: twenty-one members from Model 1, thirty-one members from Model 2 All, and thirteen members from Model 2 Partial. Reporting errors were identified on nineteen member accounts (approximately 29% of the sample). IA has three recommendations.

(1) There are sixteen member accounts recommended for corrections due to the material dollar amount of the error. Three additional members had errors, but were not material amounts needing corrections. This error is an **elevated risk**.

(2) IA recommends that Retirement Services (RS's) request master payroll files from various employers or contact the business manager to ensure that the errors found are not systemic affecting other members. If RS's determines the error to be systemic, IA recommends reviewing the most current three years of salary (if applicable) using the master payroll files. This error is an **elevated risk**.

(3) It is TFFR's responsibility to determine that Employers are reporting in compliance with the specifications set by the Employer Payment Plan submitted. For Model 2 Partial, the employer picks-up a portion of the member contribution of 11.75%. The percentage of the member contributions designated as paid by the member should show as a deduction from salary paid on the payroll records. TFFR's current pension accounting system does not validate the pick-up percentage and the member percentage (only validates 11.75%). The two percentage amounts should equal the 11.75 % member contribution. Thirteen of the sample members were reported to TFFR under Model 2 Partial.

IA found that two of the thirteen sample member's payroll records appeared to be not in compliance with the reporting under this model. The percentage of designated member contributions paid by the member as required for the employer payment plan submitted was not deducted from salary earned. IA recommends that RS's validate these percentages on an annual basis for one member from the employer during first or second quarter of the fiscal year to ensure model compliance with the employer payment plan submitted to TFFR. This recommendation is **an interim procedure** until TFFR selects and institutes a new pension administrative software. The new system would be programmed to validate the percentages in the employer upload process. This error is an **elevated risk**.

In conclusion, RS's should notify IA with their responses to the errors found in this review by June 30, 2021.

### **Scope**

The accuracy of retirement salaries, member contributions, model compliance, and employer contributions reported to TFFR for the 2018-2019 fiscal year were verified. Service hours reported in 2018-2019 were reviewed for reasonableness and eligibility was confirmed via an ESPB search.

### **Observations, Conclusions and Recommendations**

IA provided the following information to RS's at the close of this review: a report, three electronic workbooks (one for each Model) that contains the salary reconciliations for the 65 sample members, the IA worksheets, and the Primary Test for all recommended corrections. IA will also provide all of the supporting documentation for the salary reconciliations where errors were noted. All of the documentation that supports the sixty-five salary reconciliations will be scanned to the member accounts.

IA reviewed a total of sixty-five member accounts. There were sixteen member accounts with errors that are recommended for corrections due to the material dollar amounts which are detailed below. Three-member accounts were noted with a reporting error, but no correction will be recommended due to the amount of the adjustment being immaterial. Individual identifying information has been eliminated by IA. The participating employers with errors are identified.

#### **Apple Creek (08-039) – Model 2 Partial**

The following two errors were noted: A portion of the eligible after-school salary paid was not reported to TFFR. This error resulted in a shortage of contributions. Secondly, the employer submitted payroll records that did not meet Model 2 Partial reporting compliance. The amount of the TFFR contribution deducted from the member's salary did not meet the 9.75% required by the employer payment plan submitted to TFFR. RS's should request the master payroll file to ensure that the errors were not systemic issues affecting other members, or contact the business manager to verify that the errors are not systemic. IA recommends correcting the account and has attached details of the corrections on the salary reconciliations and Primary Test.

#### **Belcourt (40-027) Model 2 All – two sample members**

The following two errors were noted. First, the employer reported grant salary in the wrong fiscal year to TFFR. Secondly, comp-time was issued to a member for eligible administrative duties. At fiscal year-end, salary was paid for comp-time not taken. The eligible salary (comp-time) for the administrative duties was not reported to TFFR. IA recommends that the grant salary be moved to the correct year and also correct the member account for the shortage of salary not reported. RS should request the master payroll file to ensure that the errors were not systemic issues affecting other members, or contact the business manager to verify that the errors are not systemic. IA has recommended correcting the two accounts and has attached details of the corrections on the salary reconciliations and Primary Test for the members affected.

#### **Bottineau (05-001) Model 1**

The employer had an error in reporting leave to TFFR. This caused an overpayment of salary and contributions. The amount was immaterial (less than \$300.00) and appeared to be an isolated error. IA does not recommend any correction to the account. IA has attached details of the corrections on the salary reconciliation and Primary Test.

#### **Bowbells (07-014) Model 1**

The employer did not report eligible school improvement salary to TFFR. This caused a shortage of salary and contributions. RS's should request the master payroll file to ensure that the error was not a systemic issue affecting other members, or contact the business manager to verify that the errors are not systemic. IA recommends correcting the account and has attached details of the corrections on the salary reconciliation and Primary Test.

#### **Center-Stanton (33-001) Model 2 All**

The employer reported salary and contributions that exceeded the eligible amount. IA could not tie the overpayment to a single salary code. The member was paid cash in lieu of a health benefit, but the amount overpaid was not the same as the cash in lieu amount paid. RS should request the master payroll file to ensure that the error was not a systemic issue affecting other members, or contact the business manager to verify that the error did not affect other members. IA recommends correcting the account and has attached details of the corrections on the salary reconciliations and Primary Test.

#### **Devil's Lake (36-001) Model 2 All - 2 sample members**

The following two errors were noted. The travel time paid for moving between schools is eligible salary that was not reported to TFFR for one member. As part of the member's teaching position, the member travels between multiple schools throughout the days of the week. This caused a shortage of salary and contributions to be reported. For the second error, extra-curricular hockey supervision was not reported (immaterial amount). For errors' one and two, RS's should request the master payroll file or contact the business manager to ensure the

error did not affect other members. IA recommends correcting the account for error one and has attached details of the corrections on the salary reconciliation and Primary Test. The second error was an immaterial amount that IA does not recommend correcting.

Drayton (34-019) Model 1

The employer reported student council salary in the wrong fiscal year. The salary must be reported in the fiscal year in which it was earned, regardless of when it is paid. The salary should be moved to the correct fiscal year. RS's should contact the business manager to ensure that the error is not a systemic issue affecting other members. IA recommends correcting the account and has attached details of the corrections on the salary reconciliation and Primary Test.

Dunseith (10-001) Model 2 All

The employer reported an incorrect amount of contract salary. The error caused an overpayment of salary and contributions. RS's should contact the business manager to ensure that the error is not a systemic issue affecting other members. IA recommends correcting the account and has attached details of the corrections on the salary reconciliation and Primary Test.

Elgin (19-049) Model 2 Partial

The employer reported 2017-18 sixth period salary in the wrong fiscal year. The salary must be reported in the fiscal year in which it was earned, regardless of when it is paid. The salary should be moved to the correct fiscal year. IA recommends correcting the account and has attached details of the corrections on the salary reconciliations and Primary Test.

Glenburn (38-026) Model 2 All

The employer reported ineligible bus driving salary and a leave payout amount. This caused an overpayment of salary and contributions. RS should request the master payroll file or contact the business manager to ensure these errors did not affect other members. IA recommends correcting the account and has attached details of the corrections on the salary reconciliation and Primary Test.

Halliday (13-019) Model 1 and Model 2 Partial

The employer did not report eligible IT Coordinator and contract salary that resulted in a shortage of contributions for one member. The error also caused the wrong number of service hours to be reported (part-time position). RS's should contact the business manager to ensure that these errors did not affect any other members. IA recommends correcting the account and has attached details of the corrections on the salary reconciliations, Schedule 5- Service hours' correction, and Primary Test.

Hettinger (01-013) Model 2 All

The employer did not report eligible extra-curricular salary to TFFR: playground supervision and pool assistant salary (swimming lessons). The error caused a shortage in contributions. RS's should request the master payroll file or contact the business manager to ensure that these errors are not systemic issues affecting other members. IA recommends correcting the account and has attached details of the corrections on the salary reconciliations and Primary Test.

James River Multi-District Special Education Unit (09-001) Model 1

The employer programming of deductions caused an error in reporting salary to TFFR. The error caused a shortage in contributions. RS should request the master payroll file or contact the business manager to ensure that this deduction is not a systemic issue affecting other members. IA recommends correcting the account and has attached details of the corrections on the salary reconciliations and Primary Test.

Maple Valley (09-004) Model 2 All

The employer did not report eligible subbing salary. The employer sent the 2017-18 and 2018-19 salary records. The error was isolated: subbing was reported one year and not the next year. Since the amount of salary not reported was immaterial (less than \$300.00), IA is not recommending a correction to the member's account. RS's should ask the business manager to ensure that error is not a systemic issue affecting other members. IA has attached details of the corrections on the salary reconciliation and Primary Test.

#### Nesson (53-002) Model 1

The employer corrected a deduction error and reported the ineligible adjustment to TFFR. The error caused an overpayment of contributions. IA recommends correcting the account and has attached details of the corrections on the salary reconciliations and Primary Test.

#### Sheyenne Valley Special Education (02-001) Model 2 Partial

The employer submitted payroll records that did not meet Model 2 Partial reporting compliance. The amount of the TFFR contribution deducted from the member's salary did not meet the 2.0 percent required by the employer payment plan submitted to TFFR. RS's should request the master payroll file to ensure that the error is not a systemic issue affecting other members, or contact the business manager to verify that the error does not affect other members. IA has attached details of the corrections on the salary reconciliations and Primary Test.

#### Wahpeton (39-037) Model 2 All

The employer did not report eligible extra-curricular salary (thespians) to TFFR. There was also an error with the programming of deductions. These errors caused a shortage of contributions. The error with the thespian salary had already occurred with another member (correction was found in the Employer's FileNet account). RS's should request the master payroll file or contact the business manager to ensure that these errors do not affect other members. IA recommends correcting the account for fiscal years 2017-18 and 2018-19 and has attached details of the corrections on the salary reconciliations and Primary Test.

## **TFFR 2018-19 Salary Verification Review**

**Internal Audit (IA) Report issued:** May 11, 2021  
**Retirement Services (RS) Response issued:** June 30, 2021  
**Retirement Services (RS) Amended Response:** November 8, 2021

### **Audit Recommendation for Apple Creek (08-039) – Model 2 Partial**

The following errors were noted: (1) A portion of the eligible after-school salary paid was not reported to TFFR; (2) the employer submitted payroll records that did not meet Model 2 Partial reporting compliance. RS's should request the master payroll file to ensure that the errors were not systemic issues affecting other members, or contact the business manager to verify that the errors are not systemic. IA recommends correcting the account.

#### ***Retirement Services Response:***

*Retirement Services will:*

- *Correct the salary and contributions for the missing after-school salary.*
- *Contact the business manager to determine if this member or other members were impacted by errors 1 in PFY20 and CFY21.*
- *Request the Master Payroll file to ensure the errors were not systemic affecting others.*

### **Audit Recommendation for Belcourt (40-027) – Model 2 All – two sample members**

The following two errors were noted: (1) the employer reported grant salary in the wrong fiscal year to TFFR; (2) comp- time was issued to a member for eligible administrative duties. At fiscal year-end, salary was paid for comp-time not taken. IA recommends that the grant salary be moved to the correct year and also correct the member account for the shortage of salary not reported.

#### ***Retirement Services Response:***

*Retirement Services will:*

- *Move the salary and contributions to the correct year for the first noted Belcourt TFFR member.*
- *Correct the salary not reported for the administrative duties by adding that salary to the member's account.*
- *Contact the business manager to determine if this member or other members were impacted by errors 1 and 2 in PFY20 and CFY21.*

### **Bottineau (05-001) - Model 2 All**

The employer had an error in reporting leave to TFFR. This caused an overpayment of salary and contributions. The amount was immaterial (less than \$300.00) and appeared to be an isolated error. IA does not recommend any correction to the account.

#### ***Retirement Services Response:***

*No Audit recommendation.*

### **Audit Recommendation for Bowbells (07-014) - Model 1**

The employer did not report eligible school improvement salary to TFFR. This caused a shortage of salary and contributions. RS's should request the master payroll file to ensure that the error was not a systemic issue affecting other members, or contact the business manager to verify that the errors are not systemic. IA recommends correcting the account.

#### ***Retirement Services Response:***

*Retirement Services will:*

- *Correct the salary and contributions for the missing school improvement duties.*
- *Contact the business manager to determine if this member or other members were impacted by this error in PFY20 and CFY21.*

### **Audit Recommendation for Center-Stanton (33-001) - Model 2 All**

The employer reported salary and contributions that exceeded the eligible amount. IA could not tie the overpayment to a single salary code. The member was paid cash in lieu of a health benefit, but the amount overpaid was not the same as the cash in lieu amount paid. RS should request the master payroll file to ensure that the error was not a systemic issue affecting other members, or contact the business manager to verify that the error did not affect other members. IA recommends correcting the account.

#### ***Retirement Services Response:***

*Retirement Services will:*

- *Correct the salary and contributions for the ineligible conversion of health insurance.*
- *Contact the business manager to determine if this member or other members were impacted by this error in PFY20 and CFY21.*

### **Audit Recommendation for Devil's Lake (36-001) - Model 2 All - 2 sample members**

Two errors were noted. 1) Travel time paid for moving between schools is eligible salary that was not reported to TFFR for one member. As part of the member's teaching position, the member travels between multiple schools throughout the days of the week. This caused a shortage of salary and contributions to be reported. 2) Extra-curricular hockey supervision was not reported (immaterial amount). For errors' one and two, RS's should request the master payroll file or contact the business manager to ensure the error did not affect other members. IA recommends correcting the account for error one but not the second error.

#### ***Retirement Services Response:***

*Retirement Services will:*

- *Correct the salary and contributions for the missing travel time paid for moving between schools (first error).*
- *Contact the business manager to determine if this member or other members were impacted by errors 1 and 2 in PFY20 and CFY21.*

### **Audit Recommendation for Drayton (34-019) - Model 1**

The employer reported student council salary in the wrong fiscal year. The salary must be reported in the fiscal year in which it was earned, regardless of when it is paid. The salary should be moved to the correct fiscal year. RS's should contact the business manager to ensure that the error is not a systemic issue affecting other members. IA recommends correcting the account.

**Retirement Services Response:**

*Retirement Services will:*

- *Move the salary and contributions for the student council duties to the correct fiscal year.*
- *Contact the business manager to determine if this member or other members were impacted by this error in PFY20 and CFY21.*

**Audit Recommendation for Dunseith (10-001) - Model 2 All**

The employer reported an incorrect amount of contract salary. The error caused an overpayment of salary and contributions. RS's should contact the business manager to ensure that the error is not a systemic issue affecting other members. IA recommends correcting the account.

**Retirement Services Response:**

*Retirement Services will:*

- *Correct the salary and contributions for the overpayment.*
- *Contact the business manager to determine if this member or other members were impacted by this error PFY20 and CFY21.*

**Audit Recommendation for Elgin (19-049) - Model 2 Partial**

The employer reported 2017-18 sixth period salary in the wrong fiscal year. The salary must be reported in the fiscal year in which it was earned, regardless of when it is paid. The salary should be moved to the correct fiscal year. IA recommends correcting the account.

**Retirement Services Response:**

*Retirement Services will:*

- *Move the salary and contributions for the six period to the correct fiscal year.*
- *Contact the business manager to determine if this member or other members were impacted by this error in PFY20 and CFY21.*

**Audit Recommendation for Glenburn (38-026) - Model 2 All**

The employer reported ineligible bus driving salary and a leave payout amount. This caused an overpayment of salary and contributions. RS should request the master payroll file or contact the business manager to ensure these errors did not affect other members. IA recommends correcting the account.

**Retirement Services Response:**

*Retirement Services will:*

- *Correct the salary and contributions for the payment of bus driving duties.*
- *Correct the salary and contributions for the leave payout amount.*
- *Contact the business manager to determine if this member or other members were impacted by errors 1 and 2 in PFY20 and CFY21.*

**Audit Recommendation for Halliday (13-019) - Model 1 and Model 2 Partial**

The employer did not report eligible IT Coordinator and contract salary that resulted in a shortage of contributions for one member. The error also caused the wrong number of service hours to be reported (part-time position). RS's should contact the business manager to ensure that these errors did not affect any other members. IA recommends correcting the account.

**Retirement Services Response:**

*Retirement Services will:*

- *Correct the salary and contributions for the missing eligible IT Coordinator duties.*
- *Correct the number of service hours for the missing hours.*
- *Contact the business manager to determine if this member or other members were impacted by errors 1 and 2 in PFY20 and CFY21.*

**Audit Recommendation for Hettinger (01-013) - Model 2 All**

The employer did not report eligible extra-curricular salary to TFFR: 1) playground supervision and, 2) pool assistant salary (swimming lessons). The error caused a shortage in contributions. RS's should request the master payroll file or contact the business manager to ensure that these errors are not systemic issues affecting other members. IA recommends correcting the account.

**Retirement Services Response:**

*Retirement Services will:*

- *Correct the salary and contributions for the missing playground supervision duties.*
- *Correct the salary and contributions for the missing pool assistant (swimming lesson) duties.*
- *Contact the business manager to determine if this member or other members were impacted by errors 1 and 2 in PFY20 and CFY21.*

**Audit Recommendation for James River Multi-District Spec Edu Unit (09-001) - Model 1**

The employer programming of deductions caused an error in reporting salary to TFFR. The error caused a shortage in contributions. RS should request the master payroll file or contact the business manager to ensure that this deduction is not a systemic issue affecting other members. IA recommends correcting the account.

**Retirement Services Response:**

*Retirement Services will:*

- *Correct the salary and contributions for the deduction(s).*
- *Contact the business manager to determine if this member or other members were impacted by this error in PFY20 and CFY21.*

**Audit Recommendation for Maple Valley (09-004) - Model 2 All**

The employer did not report eligible subbing salary. The employer sent the 2017-18 and 2018-19 salary records. The error was isolated: subbing was reported one year and not the next year. Since the amount of salary not reported was immaterial (less than \$300.00), IA is not recommending a correction to the member's account. RS's should ask the business manager to ensure that error is not a systemic issue affecting other members.

**Retirement Services Response:**

*Retirement Services will:*

- *Contact the Business Manager to determine if this member or other members were impacted by this error in PFY20 and CFY21.*



**Audit Recommendation for Nesson (53-002) - Model 1**

The employer corrected a deduction error and reported the ineligible adjustment to TFFR. The error caused an overpayment of contributions. IA recommends correcting the account.

***Retirement Services Response:***

*Retirement Services will:*

- *Correct the salary and contributions for the deduction(s) error.*

**Sheyenne Valley Special Education (02-001) - Model 2 Partial**

The employer submitted payroll records that did not meet Model 2 Partial reporting compliance. The amount of the TFFR contribution deducted from the member's salary did not meet the 2.0 percent required by the employer payment plan submitted to TFFR. RS's should request the master payroll file to ensure that the error is not a systemic issue affecting other members, or contact the business manager to verify that the error does not affect other members.

***Retirement Services Response:***

*Retirement Services will:*

- *TFFR's Contact the Business Manager to determine if this member or other members were impacted by this error in PFY20 and CFY21.*

**Audit Recommendation for Wahpeton (39-037) - Model 2 All**

The employer did not report eligible extra-curricular salary (thespians) to TFFR. There was also an error with the programming of deductions. These errors caused a shortage of contributions. The error with the thespian salary had already occurred with another member (correction was found in the Employer's FileNet account). RS's should request the master payroll file or contact the business manager to ensure that these errors do not affect other members. IA recommends correcting the account for fiscal years 2017-18 and 2018-19.

***Retirement Services Response:***

*Retirement Services will:*

- *Correct the salary and contributions for the missing extra-curricular duties.*
- *Correct the salary and contributions for the deductions.*
- *Contact the business manager to determine if this member or other members were impacted by errors 1 and 2 in PFY20 and CFY21.*

**Conclusion** – It is imperative for TFFR to have the correct contributions paid by the Employers. As a result of this Audit finding two employers not in model compliance, TFFR staff will send a survey to all employers on an annual basis requesting: 1) their Employer Payment Plan (Model); 2) amount of the employer pickup if their plan is a Model 2; and 3) a copy of an employee's paystub to ensure accuracy of the TFFR deduction.

## MEMORANDUM

**TO:** State Investment Board  
**FROM:** Jan Murtha  
**DATE:** November 17, 2021  
**RE:** Executive Limitations/Staff Relations

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

1. **Facility Move:** RIO is confirmed to move to the WSI space the week of November 22, 2021. Notice of the move has been added to the RIO website and all staff email signatures.
2. **Staff Engagement:** Attached for your reference is the results of the State Engagement Survey conducted in October of this year. Survey results indicated statistically significant increases in 5 of 12 areas of engagement compared with 2020 survey results; and results exceed the State mean in 11 of 12 categories. These results help to inform future agency team trainings and workshops. WSI has offered to assist RIO with training efforts. One such training facilitated by WSI will be on Crucial Conversations which we hope to schedule in early 2022.
3. **Retirements/Resignations/FTE's/Temporary Assistance:**

Employee Title	Status
Executive Director	Discussion scheduled 11/21 (CIO search first priority)
Chief Investment Officer	Finalist Interviews Scheduled 12/21
Chief Risk Officer	Finalist Interviews Scheduled 11/21
Contracts/Records Admin	Offer accepted, scheduled to start 11/29/21
Retirement Program Admin	Started 11/15/21
Front Desk Temp	Started 10/18/21
Membership Specialist Temp	Started 10/18/21; reposted 11/16/21
Employer Reporting Intern	Posted in Fall 2021, reposted for Spring of 2022.
Investment #1	Authorized by HB 1506 in 2021 Legislative Special Session: staff is creating JDQ's
Investment #2	Authorized by HB 1506 in 2021 Legislative Special Session: staff is creating JDQ's
Investment #3	Authorized by HB 1506 in 2021 Legislative Special Session: staff is creating JDQ's
Investment #4	Authorized by HB 1506 in 2021 Legislative Special Session: staff is creating JDQ's
Accounting #1	Authorized by HB 1506 in 2021 Legislative Special Session: staff is creating JDQ's
Programs Coordinator	Authorized by HB 1506 in 2021 Legislative Special Session: staff is creating JDQ's

**Item #3 Continued from Page 1:** Staff has been diligently attempting to fill vacancies and plan for future positions. As part of this effort Staff requested the State Personnel Board approve declassifying the Chief Risk Officer Position and maintaining the unclassified status of the Deputy Chief Investment Officer Position. The testimony submitted to the State Personnel Board is attached. The State Personnel Board voted to grant RIO's request at its meeting on November 3, 2021.

**4. Current Procurement Activities including:**

- **PAS Project** – The project is in the pre-award contract negotiation stage. The November 2021 PAS Project Update is attached.
- **Temporary Assistance for specialized services** – The agency issued an RFP for temporary assistance firms that can provide contract services for additional investment personnel. An award was made to two firms.

**5. IT Unification:** Unification efforts continue to progress, with both internal and external progress meetings. RIO accepted an invitation to participate in a strategic planning project with ITD, meetings to be scheduled. The agency summary document created for the Kick-Off of this process is attached.

**BOARD ACTION REQUESTED: Board Acceptance.**

Employee Engagement

# ND State EE Engagement Survey - trending - Oct. 2021

Oct 18, 2021 - Oct 31, 2021

Reporting Group: Direct | Agency - 19000

# Q<sup>12</sup> Mean

The Gallup Q<sup>12</sup> score represents the average, combined score of the 12 elements that measure employee engagement. Each element has consistently been linked to better business outcomes.

TOTAL RESPONDENTS

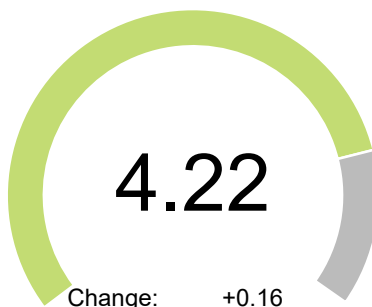
12

MEAN PERCENTILE RANK

60

Database: Gallup Overall

ENGAGEMENT MEAN



ENGAGEMENT INDEX

\*

\*Sentiment Distribution is not available when n<50

\*No topics available when n < 250. 5 topics available when n ≥ 250. 10 topics available when n ≥ 1000.

\*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.

Percentile Rank in Gallup Overall Database

■ < 25th Percentile    ■ 25-49th Percentile    ■ 50-74th Percentile    ■ 75-89th Percentile    ■ ≥ 90th Percentile

# Gallup Q<sup>12</sup> Items


Questions	Total N	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
<b>Q00:</b> Overall Satisfaction	12	4.00	3.69	▲+0.31	46 	3.69
<b>Q01:</b> Know What's Expected	12	4.08	4.06	+0.02	18 	4.19
<b>Q02:</b> Materials and Equipment	12	4.33	4.31	+0.02	58 	4.03
<b>Q03:</b> Opportunity to do Best	12	3.92	4.00	-0.08	31 	3.89
<b>Q04:</b> Recognition	12	4.17	4.06	+0.11	68 	3.41
<b>Q05:</b> Cares About Me	12	4.58	4.19	▲+0.39	68 	4.07
<b>Q06:</b> Development	12	4.17	4.00	+0.17	55 	3.75
<b>Q07:</b> Opinions Count	12	4.00	3.69	▲+0.31	54 	3.52
<b>Q08:</b> Mission/Purpose	12	4.92	4.19	▲+0.73	93 	3.91
<b>Q09:</b> Committed to Quality	12	4.42	4.50	-0.08	66 	3.95
<b>Q10:</b> Best Friend	11	3.55	3.63	-0.08	39 	3.28
<b>Q11:</b> Progress	12	4.08	3.94	+0.14	49 	3.69
<b>Q12:</b> Learn and Grow	12	4.42	4.13	▲+0.29	65 	3.88


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


\* - Scores are not available due to data suppression.

Respondents can select multiple responses for multi-select questions.

Percentile Rank in Gallup Overall Database

 < 25th Percentile

 25-49th Percentile

 50-74th Percentile

 75-89th Percentile

 >= 90th Percentile

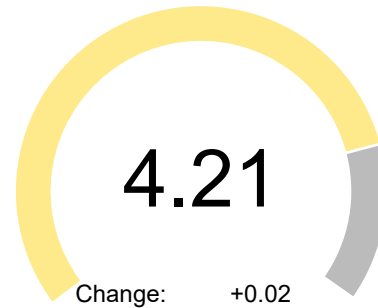
# Basic Needs - What do I get?

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.

TOTAL RESPONDENTS

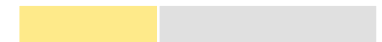
12

CURRENT MEAN



MEAN PERCENTILE RANK

39



Database: Gallup Overall

Questions	Total N	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q01: Know What's Expected	12	4.08	4.06	+0.02	18	4.19
Q02: Materials and Equipment	12	4.33	4.31	+0.02	58	4.03

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

\* - Scores are not available due to data suppression.

Respondents can select multiple responses for multi-select questions.

Percentile Rank in Gallup Overall Database

< 25th Percentile

25-49th Percentile

50-74th Percentile

75-89th Percentile

>= 90th Percentile

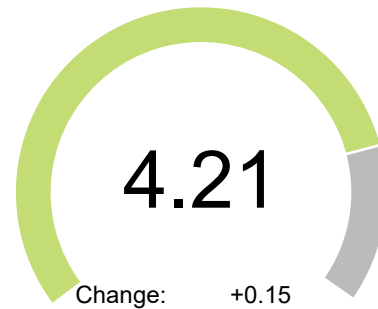
# Individual - What do I give?

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.

TOTAL RESPONDENTS

12

CURRENT MEAN



MEAN PERCENTILE RANK

57



Database: Gallup Overall

Questions	Total N	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q03: Opportunity to do Best	12	3.92	4.00	-0.08	31	3.89
Q04: Recognition	12	4.17	4.06	+0.11	68	3.41
Q05: Cares About Me	12	4.58	4.19	▲+0.39	68	4.07
Q06: Development	12	4.17	4.00	+0.17	55	3.75

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

\* - Scores are not available due to data suppression.

Respondents can select multiple responses for multi-select questions.

Percentile Rank in Gallup Overall Database

■ < 25th Percentile

■ 25-49th Percentile

■ 50-74th Percentile

■ 75-89th Percentile

■ >= 90th Percentile



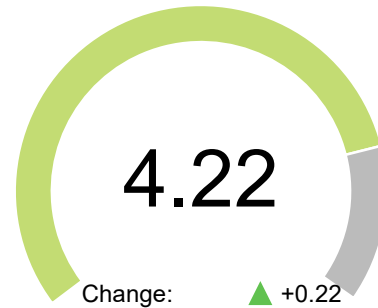
# Teamwork - Do I belong here?

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.

TOTAL RESPONDENTS

12

CURRENT MEAN



MEAN PERCENTILE RANK

61



Database: Gallup Overall

Questions	Total N	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q07: Opinions Count	12	4.00	3.69	▲ +0.31	54	3.52
Q08: Mission/Purpose	12	4.92	4.19	▲ +0.73	93	3.91
Q09: Committed to Quality	12	4.42	4.50	-0.08	66	3.95
Q10: Best Friend	11	3.55	3.63	-0.08	39	3.28

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

\* - Scores are not available due to data suppression.

Respondents can select multiple responses for multi-select questions.

Percentile Rank in Gallup Overall Database

■ < 25th Percentile

■ 25-49th Percentile

■ 50-74th Percentile

■ 75-89th Percentile

■ >= 90th Percentile

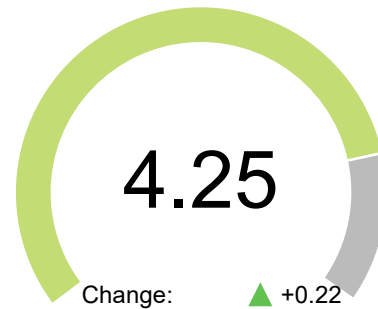
# Growth - How can I grow?

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.

TOTAL RESPONDENTS

12

CURRENT MEAN



MEAN PERCENTILE RANK

56



Database: Gallup Overall

Questions	Total N	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q11: Progress	12	4.08	3.94	+0.14	49	3.69
Q12: Learn and Grow	12	4.42	4.13	▲ +0.29	65	3.88

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

\* - Scores are not available due to data suppression.

Respondents can select multiple responses for multi-select questions.

Percentile Rank in Gallup Overall Database

■ < 25th Percentile

■ 25-49th Percentile

■ 50-74th Percentile

■ 75-89th Percentile

■ >= 90th Percentile

# 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.

\*Percent Engaged available when  $n \geq 30$ . All categories available when  $n \geq 100$ .

\* - Scores are not available due to data suppression.

Respondents can select multiple responses for multi-select questions.

# Thank You

## MEMORANDUM

---

**TO:** Stacey Breuer, Chief People Officer, Human Resource Management Services  
**FROM:** Jan Murtha, Interim Executive Director, RIO  
**DATE:** October 25, 2021  
**RE:** Testimony regarding RIO resource needs.

Thank you for the opportunity to present this request. The purpose of this memorandum is to request that the Deputy Chief Investment Officer position retain its unclassified status subsequent to the split of the Executive Director and Chief Investment Officer position, and to request that the Chief Risk Officer position be removed from the state's classified services because of the special nature of this position's duties. N.D.C.C. 54-44.3-20(7) states that a position can be excluded from the classified service if deemed inappropriate for the classified service due to the special nature of the position as determined by the HRMS division and approved by the State Personnel Board.

### **I. Agency Background**

The Retirement and Investment Office is responsible for the administration of two programs. The State Investment Board program, which is the focus of this request and which serves 26 government client funds, and the Teachers' Fund for Retirement Program which serves over 20,000 members. The State Investment Board program currently has approximately 19.7 billion dollars in assets under management (AUM) as of August 31, 2021; compared with 4.8 billion AUM in fiscal year 2010. RIO's investment program, has more than quadrupled in just over a decade.

As the assets under management have increased so too has the complexity of the program, and the need for additional resources will continue to increase as long as the AUM and program complexity increase. The implementation of H.B. 1425, passed in the 2021 regular legislative session, introduced substantial additional complexity and demands on resources to the investment program. H.B. 1425 contained three major mandates, developing a preference program for in-state managers and directing the in state investment of 10% fixed income and 10% equity. The majority if not all of the 10% equity will be invested in private markets which requires far greater due diligence and monitoring than public equities because of the private long term nature of the investment.

The Retirement and Investment Office currently has a request for an additional 6 FTEs pending before the legislature for consideration in the 2021 special legislative session. In order to prudently manage, monitor, and rebalance complex investment programs for our clients, in an increasingly risk prone market, and based on comparisons with other public sector investment programs, we seek to dedicate 1 investment professional per 2 to 2.5 billion dollars in AUM. Currently we have 19 allotted FTEs across these two programs., In 2010 we had 17 allotted FTEs. Only 4 of our 19 FTEs are dedicated investment professionals. Of the 4 dedicated investment professionals only 2 of the investment professional positions are filled. The two unfilled investment positions are the Chief Risk

Officer and Chief Investment Officer. Initial interviews have been conducted for the Chief Risk Officer and the SIB hopes to conduct final interviews for the Chief Investment Officer (CIO) in November and fill the position in December 2021 or January 2022. The final position to fill is that of the Executive Director (ED), and the SIB will undertake filling the ED position subsequent to filling the CIO position. Approval of the agency request during the upcoming special legislative session would provide the new CIO the opportunity to build their investment team at the same time they are asked to build the in-state program.

## **II. Unclassified Position Request**

Subsequent to the vacancy of the combined Executive Director/Chief Investment Officer position in June, the SIB made the decision to split the position. A search is currently underway for a dedicated Chief Investment Officer (CIO). RIO will use the salary funding from the previously combined position, and the investment FTE authorized in the 2021 regular session, to staff the CIO position. It is expected that the Executive Director salary will be within a range of similar director positions within the state, and thus less than the CIO position. All other positions will be compensated at rates below the ED salary.

The Deputy CIO position was also vacated in August, 2021. That position was filled with an internal promotion, leaving the position of Chief Risk Officer (CRO) vacant. The CRO position has been posted and received a large number of applicants. Upon reviewing the applicant pool and conducting first round interviews, it became clear that the position salary range, as currently classified within the state system, falls well below the market rate for similar positions in peer public funds, even with a pay-grade exception up to grade 108 granted by Human Resource Management Services (HRMS).

Prior to the splitting of the ED/CIO position, RIO had three approved non-classified positions (ED/CIO, Deputy ED/Chief Retirement Officer, and Deputy CIO). As a result of the ED/CIO split, the three unclassified positions are now filled by the Executive Director, Deputy Executive Director/Chief Retirement Officer, and the Chief Investment Officer. The duties of the Deputy Chief Investment Officer did not change as a result of the ED/CIO split, rather, the State Investment Board recognized that the investment program had grown such that it has become imperative for the Chief Investment Officer to dedicate the entirety of his or her focus to the investment program.

**RIO is requesting the State Personnel Board to approve both the Deputy CIO and Chief Risk Officer positions as non-classified positions.**

As previously indicated, as AUM in the SIB investment program has grown, so has program complexity; and the expertise needed to successfully manage these funds on behalf of the State of North Dakota and its client funds has increased. RIO must not only compete with private sector opportunities in filling its vacant positions, but the pay in similar public sector positions far outpace that which RIO can currently offer under the classification system.

RIO staff has provided HRMS with confidential public sector compensation survey data that is protected from disclosure pursuant to N.D.C.C. 44-04-18.4(1)&(2)(a)(b). The survey data indicates that the cap on the Chief Risk Officer position, even with a salary exception to grade 108, falls below the 25<sup>th</sup> percentile for similar positions in other public sector employment. In fact, many of the highly qualified applicants which have applied for the Chief Risk Officer position currently make \$100K to \$150K more than what the salary cap of the Chief Risk Officer position could pay even with the grade exception. Should the Deputy Chief Investment Officer position not be approved for continued unclassified status, the salary disparity between other public sector programs and what RIO could

offer becomes even greater. RIO's current dilemma in being able to successfully recruit and retain qualified individuals to staff this growing program is similar to that faced by the Bank of North Dakota in 2019 when it requested that its employees be unclassified. As indicated in the testimony offered in support of H.B. 1141 offered during the 2019 legislative session, RIO, like BND, has and will continue to lose qualified personnel to private market opportunities, and has and will continue to be hampered in recruitment efforts in comparison to other public sector programs, if it continues to offer bottom quartile salaries.

During the testimony offered in support of H.B. 1141(2019), and the need to attract and retain qualified staff, BND indicated that its assets had grown to approximately 7 billion. The Land Department, another agency responsible for investing state money, currently manages just under 6 billion. The RIO investment program surpassed this level of assets under management almost 10 years prior, and currently manages \$19.7 billion. Over the five years ended June 30, 2021, the SIB Investment Program generated an average excess return over its passive market benchmark of over \$100 million per year (over \$500 million for the five-years). This amount is after the payment of all fees and expenses. The additional amount of appropriation requested for the remainder of the 2021-23 biennium during the upcoming special legislative session, includes reasonable, though still low, salary assumptions for the currently open and newly requested positions, and equates to less than 1.2% per year of that net annual excess return amount.

### **III. Summary**

Without the ability to recruit qualified staff members to assist with developing the in-state investment program and maintain and grow the current investment portfolios prior to the next biennium, the agency and the State Investment Board will be in the unenviable position of: determining what realistically can be accomplished now, what priorities must wait, what must be simplified, and what can be contracted out to consultants. More specifically, the rollout of the In-State Investment Program mandated by H.B. 1425 would be negatively impacted and significantly delayed. Staff will endeavor to continue to provide excellent service and diligent care for government client investments, however, without additional resources to support this growing program we are concerned that the agency will fall short of meeting the expectations of our clients, our stakeholders, and the people of North Dakota.

We therefore, respectfully request that the State Personnel Board approve both the Deputy CIO and Chief Risk Officer positions as non-classified positions. The position descriptions are included for your review and consideration. Thank you in advance for your support of this important state program and for your service to the people of North Dakota.

## MEMORANDUM

---

**TO: TFFR Board**  
**FROM: Jan Murtha, Interim Executive Director – Chief Retirement Officer**  
**DATE: November 16, 2021**  
**RE: PAS Project Update**

The following summarizes the efforts of RIO agency staff to complete Phase 1 and initiate Phase 2 of the PAS project from July 2021 through the current date:

- All Phase 1 Deliverables have been accepted by Staff.
- Phase 2 has been initiated (Procurement of Solution).
- The ESC approved contracting with Segal for assistance through Phase 3 of the PAS Project.
- Due to the need to prioritize resources for succession planning and all agency communication, Retirement Services staff reduced the frequency of meetings to discuss operation items and PAS related topic review from bi-monthly to monthly. Issue specific trainings to identify areas of improvement for both applicable processes and recommendations for changes to the law will resume once vacancies in the division have been filled.
- NDIT, RIO staff, and Segal meet weekly to discuss PAS project status and review progress on interim recommendations.
- The vendor solution RFP was issued June 1, 2021; responses were due July 21, 2021.
- Vendor responses were received, reviewed, and an initial analysis was conducted.
- We are currently in the contract negotiating phase of the procurement process prior to award.

**BOARD INFORMATION ONLY. No board action requested.**





# Retirement & Investment Office

## WHO WE ARE

15 of 25

Full-time Team Members  
Filled \*6 new FTE HB 1506

2 of 3

Temporary Team Members  
Filled

55

Major Consultants &  
Professional Services

## WHAT WE'RE ABOUT

**Mission:** Provide the Best Possible Customer Service to our Clients & Members.

**Vision:** Innovate our Business Model, Develop our Team members, & Educate our Stakeholders.

**Values:** Integrity, Transparency, and Responsiveness in fulfillment of our Fiduciary Responsibilities.

**Goals/Objectives:** Develop a Strategic Plan to staff to needs and improve business operations, support a permanent hybrid workforce model, increase scope and effectiveness of outreach efforts with clients, members, and stakeholders.

## WHO WE SERVE

### Citizen Focus 1

Over 11,000 Active TFFR members



### Citizen Focus 2

Over 9,000 TFFR Retirees



### Citizen Focus 2

Over 200 School Employers



### Citizen Focus 4

25 Investment Client Funds



### Citizen Focus 5

State of North Dakota through Management of Legacy Fund.



### Citizen Focus 6

Boards & Beneficiaries of Client Funds.

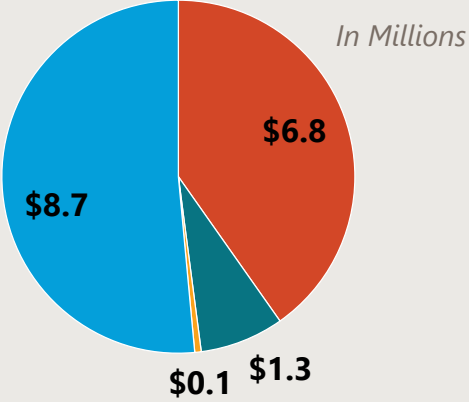


## HOW WE DO IT

Total Agency Budget:  
\$16.9 million

- All Special: Total For 21/23 biennium including HB 1506.

- Salary
- Operating
- Cont
- PAS



# Retirement & Investment Office

## WHAT WE'RE PROUD OF

### Agency Accomplishment

30+ Years of Unmodified Audit Opinions.

### Agency Accomplishment

Investment Program more than Quadrupled since 2010.  
Now 19.8 Billion as of 10/2021.

### Agency Accomplishment

TFFR Plan projected to achieve 100% Funded Status by 2036.

5 yr. Excess  
Return

**\$150<sub>m</sub>**

Pension  
Pool

5 yr. Excess  
Return

**\$155<sub>m</sub>**

Insurance  
Pool

5 yr. Excess  
Return

**\$225<sub>m</sub>**

Legacy  
Fund

FY 2021  
Retirements

**481**

TFFR

## WHAT WE DO



### Investment Program – SIB

The SIB insures rigorous attention to all aspects of the investment program by following an established investment process that includes: Investment policy development/modification, implementation/monitoring, and evaluation.



### Retirement Program – TFFR

The TFFR Program provides ND educators with a financial foundation for the future that includes a secure and stable retirement.

## HOW WE MEASURE SUCCESS

### Measure of Success

Client & Member  
Satisfaction Surveys.

### Measure of Success

Excess Returns  
Net of Fees.

### Measure of Success

Attendance at  
Outreach Activities.

### Measure of Success

Awards & Recognition  
for Transparency &  
Excellence in  
Administration and  
Financial Reporting.

## **ND TFFR Board Education Materials November 2021**

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The theme for November Education materials is projecting mortality. You will receive substantial education and information from Segal, TFFR's contracted actuary. You are also being provided links to some documentaries that explore factors affecting health and mortality in the United States and the correlation of health with socio-economic status.

1. "ZipCode: Your Neighborhood, Your Health" available on PBS:  
<https://www.pbs.org/video/scetv-specials-zipcode-your-neighborhood-your-health-full-program/>
2. A link to a series entitled "Unnatural Causes", specifically the first episode "In Sickness and in Wealth", also broadcasted by PBS:  
[https://unnaturalcauses.org/about\\_the\\_series.php](https://unnaturalcauses.org/about_the_series.php)