

Thursday, October 26, 2023, 1:00 p.m.  
WSI Board Room (In-Person)  
1600 E Century Ave, Bismarck, ND  
[Click here to join the meeting](#)

AGENDA

**I. CALL TO ORDER AND ACCEPTANCE OF AGENDA - (Board Action)**

- A. Pledge of Allegiance
- B. Executive Summary
- C. Welcome New Staff

**II. ACCEPTANCE OF MINUTES (September 22, 2023) – (Board Action)**

**III. EDUCATION (45 minutes) (Information)**

- A. Real Estate Market – Max Swango - Invesco

**IV. INVESTMENTS (45 minutes)**

- A. Quarterly & Annual Performance Review (6/30) (Board Action) – Mr. Anderson

(Break)

**V. GOVERNANCE (60 min)**

- A. PERS Board Decision & Special Legislative Session (Information) – Ms. Murtha
- B. Governance & Policy Review Committee Update (Information) – Dr. Lech, Ms. Murtha
- C. Investment Committee Update (Information) – Treasurer Beadle, Mr. Anderson
- D. Annual SIB Customer Satisfaction Survey Results (Board Action) – Ms. Seiler, Ms. Murtha

**VI. Quarterly Monitoring Reports (30 minutes) – (Board Action)**

- A. Annual Budget/Expense Report – Mr. Skor
- B. Investment Ends – Mr. Posch
- C. Executive Limitations/Staff Relations – Ms. Murtha

**VII. OTHER**

**Next Meetings:**

Investment Committee – November 7, 2023, at 9:00 a.m.

SIB GPR – November 9, 2023, at 2:00 p.m.

SIB ERCC – November 13, 2023, at 10:00 a.m.

Audit Committee – November 14, 2023, at 2:30 p.m.

TFFR Meeting – November 16, 2023, at 1:00 p.m.

SIB Meeting – November 17, 2023, at 8:30 a.m.

**VIII. ADJOURNMENT**

# EXECUTIVE SUMMARY

## SIB Regular Meeting

### October 26, 2023 – 1:00 p.m. CT

---

- I. **Agenda: Please note the date and time change for the October Board meeting.** The October Board Meeting will be held at the WSI Conference room to accommodate in person attendance; however, a link will also be provided so that Board members and other attendees may join via video conference. The board member video link is included in the email with the Board materials.
  - Attendees are invited to join the Board Chair in the Pledge of Allegiance.
  - Welcome new staff members.
- II. **Minutes (Board Action):** The September 22, 2023, Board meeting minutes are included for review and approval.
- III. **A. Board Education – Real Estate Market (Information):** Mr. Swango from Invesco will provide a presentation on the underlying fundamentals and secular trends impacting the Real Estate market.
- IV. **A. Quarterly and Annual Performance Review (Board Action):** Mr. Anderson will review the quarterly investment performance of funds under management.
- V. **A. PERS Board Decision & Special Legislative Session (Information):** Ms. Murtha will provide the Board with information regarding a recent decision from the ND Supreme Court on the PERS Board litigation and the resulting need for a special legislative session.
  - B. Governance & Policy Review Committee (Information):** The Committee Chair and Ms. Murtha will provide the Board with an update on recent committee activities.
  - C. Investment Committee (Information):** The Committee Chair and Mr. Anderson will provide the Board with an update on recent committee activities.
  - D. Annual Customer Satisfaction Survey Results and Staff Response (Board Action):** Ms. Seiler will provide the Board with the results of the annual customer service satisfaction survey and Ms. Murtha will provide the staff response.
- VI. **A-C. Reports (Board Action):** Staff will provide monitoring reports for annual budget and expense report, quarterly investment ends, and executive limitations/ staff relations.

**Adjournment.**

**NORTH DAKOTA STATE INVESTMENT BOARD  
MINUTES OF THE  
SEPTEMBER 22, 2023, BOARD MEETING (IN-PERSON)**

**MEMBERS PRESENT:** Tammy Miller, Lt. Governor, Chair  
Dr. Rob Lech, TFFR Board, Vice Chair  
Thomas Beadle, State Treasurer, Parliamentarian  
Rep. Glenn Bosch, LBSFAB  
Joseph Heringer, Commissioner of Univ. & School Lands  
Pete Jahner, Investment Professional  
Cody Mickelson, TFFR Board  
Adam Miller, PERS Board  
Dr. Prodosh Simlai, Investment Professional  
Susan Sisk, Director of OMB  
Art Thompson, Director of WSI  
Mona Tedford-Rindy, PERS Board

**MEMBER ABSENT:** Sen. Jerry Klein, LBSFAB

**STAFF PRESENT:** Scott Anderson, CIO  
Eric Chin, Deputy CIO  
Derek Dukart, Investment Officer  
Jennifer Ferderer, Fiscal/Investment Admin.  
Rachel Kmetz, Accounting Mgr.  
Missy Kopp, Exec. Assistant  
George Moss, Sr. Investment Officer  
Sarah Mudder, Communications/Outreach Dir.  
Jan Murtha, Exec. Dir.  
Matt Posch, Sr. Investment Officer  
Emmalee Riegler, Procurement/Records Coord.  
Chad Roberts, DED/CRO  
Mike Schmitcke, Sr. Investment Accountant  
Sara Seiler, Internal Audit Supvr.  
Ryan Skor, CFO/COO  
Dottie Thorsen, Internal Auditor  
Nitin Vaidya, Chief Risk Officer  
Tami Volkert, Compliance Spec.  
Susan Walcker, Sr. Financial Accountant  
Jason Yu, Risk Officer  
Lance Zietlow, Sr. Investment Officer

**GUESTS:** Michele Blumhagen, NDIT  
Alex Browning, Callan  
Craig Chaikin, Callan  
Dean DePountis, Attorney General's Office  
Jessica Newby, NDIT  
Members of the Public

**CALL TO ORDER:**

Lt. Gov. Miller, Chair, called the State Investment Board (SIB) regular meeting to order at 8:30 a.m. on Friday, September 22, 2023. The meeting was held in the Workforce Safety and Insurance Board Room, 1600 E Century Ave., Bismarck, ND.

The following members were present representing a quorum: Treasurer Beadle, Rep. Bosch, Commissioner Heringer, Mr. Jahner, Dr. Lech, Mr. Mickelson, Lt. Gov. Miller, Mr. Miller, Ms. Rindy, Dr. Simlai, Ms. Sisk, and Mr. Thompson.

**ACCEPTANCE OF AGENDA:**

The Board considered the agenda for the September 22, 2023, meeting.

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

**AYES: COMMISSIONER HERINGER, TREASURER BEADLE, MR. MILLER, MS. SISK, MR. THOMPSON, DR. SIMLAI, MR. MICKELSON, DR. LECH, MS. RINDY MR. JAHNER, AND LT. GOV. MILLER**

**NAYS: NONE**

**ABSENT: SEN. KLEIN**

**MOTION CARRIED**

Ms. Murtha introduced Jennifer Ferderer, the new Fiscal and Investment Administrative Assistant.

**MINUTES:**

The Board considered the minutes of the August 25, 2023, SIB meeting.

**IT WAS MOVED BY TREASURER BEADLE AND SECONDED BY REP. BOSCH AND CARRIED BY A VOICE VOTE TO APPROVE THE AUGUST 25, 2023, MINUTES AS DISTRIBUTED.**

**AYES: MR. MICKELSON, COMMISSIONER HERINGER, MS. RINDY, MR. THOMPSON, TREASURER BEADLE, DR. LECH, MR. JAHNER, MS. SISK, REP. BOSCH, MR. MILLER, DR. SIMLAI, AND LT. GOV. MILLER**

**NAYS: NONE**

**ABSENT: SEN. KLEIN**

**MOTION CARRIED**

**EDUCATION:**

Cybersecurity:

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

**INVESTMENTS:**

Market Trends & Quarterly Update:

Mr. Browning, Callan, provided a performance update as of June 30, 2023, including an overview of the economy and how that has affected performance. Each of the Trust's asset allocations were within policy ranges and cash flows were managed to rebalance towards strategic targets as of June 30, 2023. Most total fund returns have exceeded their respective static benchmarks on a net-of-fee basis for the trailing five-year period. TFFR trails an annualized 23 basis points. When applying the corridor benchmark methodology, both PERS and TFFR exceed their targets on a net-of-fee basis for the trailing five-year period. Mr. Browning provided an overview of corridor benchmarking which adjusts a portfolio's benchmark weights to reflect the

actual weights of private market and less liquid investments. Any increase or decrease from the strategic target weights to private, less liquid investments will be offset by an equal magnitude to the benchmark weight in public equity or fixed income. Performance attribution from asset allocation will more clearly reflect investment staff decisions. The weights will be adjusted by rebalancing private equity to public equity and real assets to 50% public fixed income and 50% public equity. Board discussion followed.

**IT WAS MOVED BY TREASURER BEADLE AND SECONDED BY DR. LECH AND CARRIED BY A ROLL CALL VOTE TO ACCEPT THE QUARTERLY PERFORMANCE REVIEW.**

**AYES: REP. BOSCH, COMMISSIONER HERINGER, DR. SIMLAI, MS. SISK, MS. RINDY, MR. MICKELSON, MR. MILLER, TREASURER BEADLE, MR. JAHNER, MR. THOMPSON, DR. LECH, AND LT. GOV. MILLER**  
**NAYS: NONE**  
**ABSENT: SEN. KLEIN**  
**MOTION CARRIED**

The Board recessed at 10:09 a.m. and reconvened at 10:31 a.m.

### **GOVERNANCE:**

#### **Governance & Policy Review (GPR) Committee Update:**

Dr. Lech provided an update from the September 11, 2023, GPR meeting. The Committee reviewed and discussed Section A of the SIB Governance Manual. The Committee will work through each section in accordance with the approved work plan to conduct a comprehensive review of the entire manual this fiscal year. Proposed changes will be brought to the Board in April 2024 for introduction and first reading. Board discussion followed.

#### **Investment Committee (IC) Update:**

Treasurer Beadle provided an update from the September 8, 2023, IC meeting. The IC heard a performance review update. There was a closed session discussion on a private market commitment and the Committee heard about staff research on proxy voting policies to aid in the development of a policy. Board discussion followed.

#### **Securities Litigation Committee (SLC) Update:**

Commissioner Heringer provided an update from the September 11, 2023, SLC meeting. The Committee received updates on pending litigation, a securities litigation monitoring report, and approved a Request for Proposals (RFP) to help develop a roster of law firms. Board discussion followed.

### **QUARTERLY MONITORING REPORTS:**

#### **Annual Technology Report:**

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

#### **Quarterly TFFR Ends:**

Mr. Roberts reviewed the TFFR Ends Report for the quarter ended June 30, 2023. The report highlights exceptions to the normal operating conditions of the TFFR program. During the quarter, an accounting intern joined RIO for the summer. Staff attended a conference, used a new communication platform to deliver email

messages, and conducted a TFFR member survey. The Pioneer project continued to progress, and legislation was passed that affects the TFFR program. Board discussion followed.

Executive Limitations/Staff Relations:

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

**IT WAS MOVED BY MS. SISK AND SECONDED BY TREASURER BEADLE AND CARRIED BY A ROLL CALL VOTE TO ACCEPT THE ANNUAL TECHNOLOGY, QUARTERLY TFFR ENDS, AND EXECUTIVE LIMITATIONS/STAFF RELATIONS REPORTS.**

**AYES: TREASURER BEADLE, MR. JAHNER, REP. BOSCH, MR. THOMPSON, COMMISSIONER HERINGER, MS. RINDY, DR. SIMLAI, DR. LECH, MR. MILLER, MS. SISK, AND LT. GOV. MILLER**

**NAYS: NONE**

**ABSENT: SEN. KLEIN AND MR. MICKELSON**

**MOTION CARRIED**

**ADJOURNMENT:**

With no further business to come before the SIB, Lt. Gov. Miller adjourned the meeting at 11:41 a.m.

Prepared by: Missy Kopp, Assistant to the Board



# Invesco Real Estate

Real Estate Fundamentals, Capital Markets  
& Opportunities

October 2023

FOR EXISTING INVESTOR USE WITH NORTH DAKOTA STATE INVESTMENT BOARD

Not a Deposit | Not FDIC Insured | Not Guaranteed by the Bank | May Lose Value | Not Insured by any Federal Government Agency

# Table of Contents

---

**1** Invesco Real Estate

---

**2** Fundamentals and Capital Markets

---

**3** Opportunities

---





# Invesco Real Estate (IRE)

## Global Perspective, Local Execution

Invesco Ltd. is a \$1.5 trillion global asset manager; IRE is the dedicated real estate business

### Top 15 real estate manager

**\$91.1bn**  
AUM

**586**  
Employees

**21**  
Cities

**\$49.9bn**

**Core**

**\$6.9bn**

**Core Plus**

**\$12.6bn**

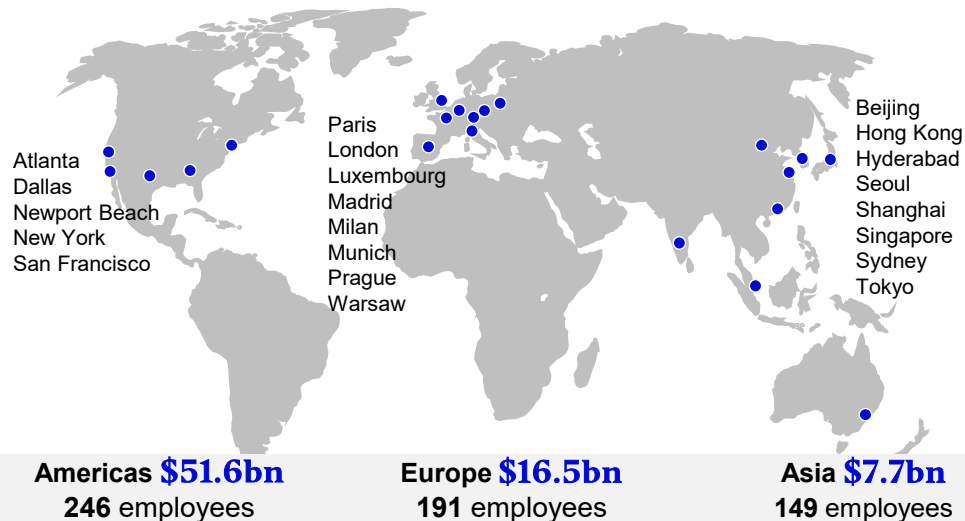
**Value-Add / Opportunistic**

**\$6.4bn**

**Credit**

**\$15.3bn**

**Listed Real Assets**

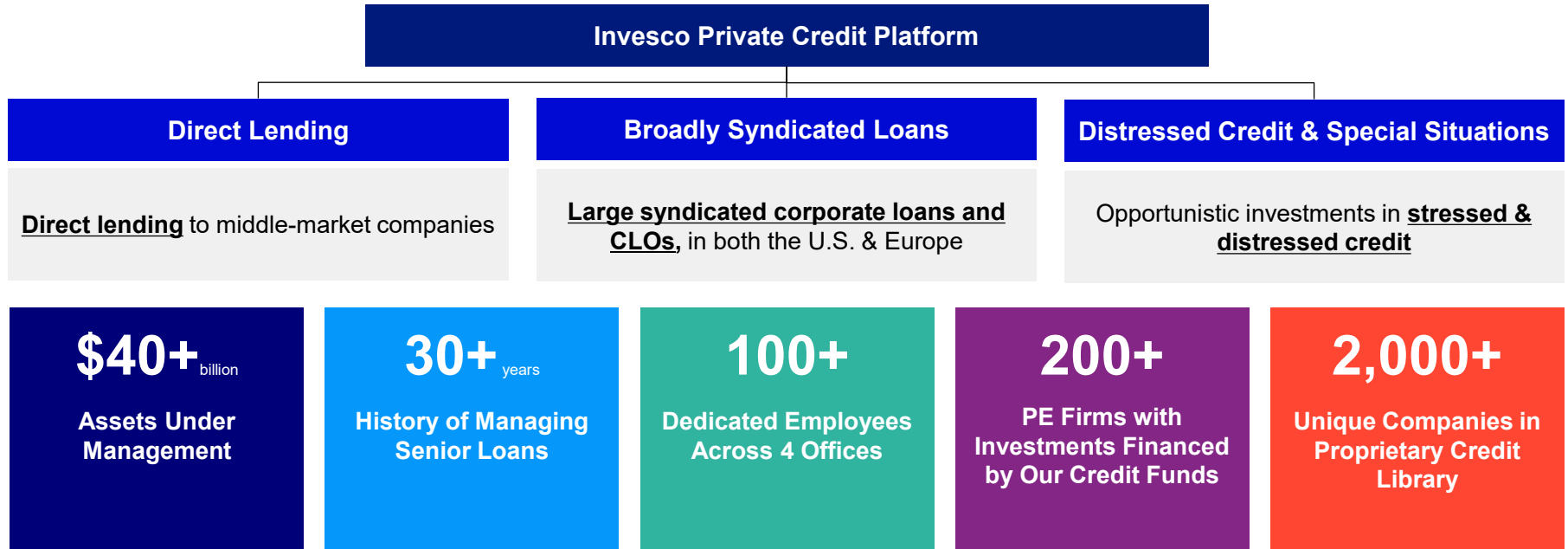


<sup>1</sup>Institutional Real Estate, Inc. Global Investment Managers 2022 report ranked IRE in the top 15 real estate managers by total gross value of real estate AUM, latest data available as of June 30, 2023. Any reference to a ranking provides no guarantee for future performance results and is not constant over time.

Source: Invesco Real Estate as of March 31, 2023, latest data available. \$=USD. Figures represent to Gross Asset Values of the invested assets under management. Invesco Ltd. AUM of \$1,538.2 billion USD as of June 30, 2023, latest data available. Locations shown indicate offices hosting Portfolio Manager, Analyst, Trader, Economist, Strategist and/or Distribution staff. AUM figure includes all assets under advisement, distributed and overseen by Invesco. Please consult your Invesco representative for more information.

# Invesco Private Credit

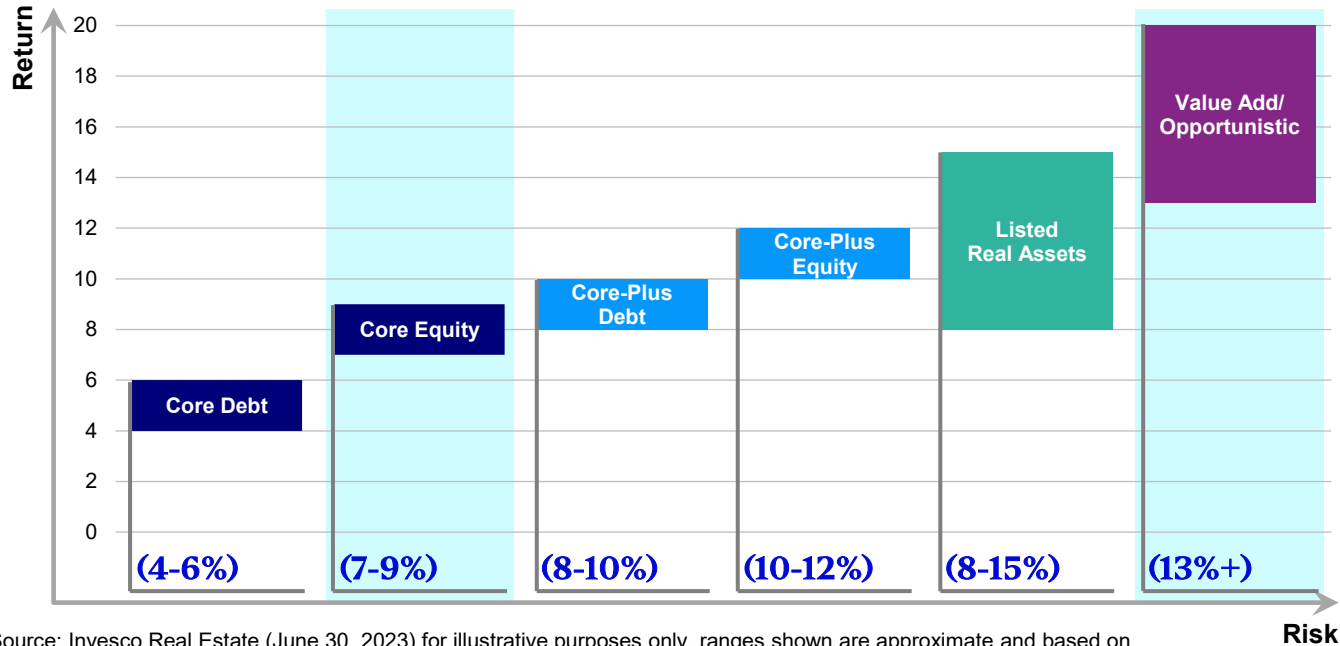
Invesco's Private Credit platform is one of the largest private-side senior loan managers in the world with \$40+ billion in AUM



Source: Invesco as of September 30, 2023. \$40+ billion indicates assets under management across Invesco's Private Credit Platform.

# Invesco Real Estate Risk/Return Spectrum for Real Estate Investment Strategies

Total Return Objectives (%)



Source: Invesco Real Estate (June 30, 2023) for illustrative purposes only, ranges shown are approximate and based on current market conditions which are subject to change. It is not known whether these return objectives will be realized.

**North Dakota State Investment Board (NDSIB) is invested in Core Equity and Value/Add / Opportunistic.**

# North Dakota State Investment Board Investment Objectives and Portfolio Construction

Strategy	Current NAV		Fund-Level	
	\$	%	Since Inception	
			Income Return (net)	Total Return (net)
<b>Pension Trust: NDSIB's 7.75% overall return target</b>				
US Core <sup>1</sup>	\$397.4	75.1%	3.9%	6.9%
US Value-Add IV <sup>2</sup>	\$1.4	0.3%	0%	10.5%
US Value-Add V <sup>3</sup>	\$71.5	13.5%	0%	9.2%
US Value-Add/Opportunistic Fund VI <sup>4</sup>	\$42.7	8.0%	N/A*	N/A*
Asia Value-Add/Opportunistic <sup>5</sup>	\$16.5	3.1%	0%	13.2%
<b>Total</b>	<b>\$529.5</b>	<b>100%</b>	<b>3.2%**</b>	<b>7.5%**</b>
<b>Legacy Fund: NDSIB's 6.4% overall return target</b>				
US Core <sup>1</sup>	\$210.1	83.1%	3.9%	6.9%
US Value-Add/Opportunistic VI <sup>4</sup>	\$42.7	16.9%	N/A*	N/A*
<b>Total</b>	<b>\$252.8</b>	<b>100%</b>	<b>3.9%</b>	<b>6.9%</b>
<b>Insurance Trust: NDSIB's 4-5% overall return target</b>				
US Core <sup>1</sup>	\$59.9	100%	3.9%	6.9%
<b>Total</b>	<b>\$59.9</b>	<b>100%</b>	<b>3.9%</b>	<b>6.9%</b>

<sup>1</sup> Fund Inception: 3Q 2004; <sup>2</sup> Fund Inception: 2Q 2015; <sup>3</sup> Fund Inception: 1Q 2019; <sup>4</sup> Fund Inception: 3Q 2022; <sup>5</sup> Fund Inception: 3Q 2015

\* First Fund VI Since Inception return will be published in 3Q2023

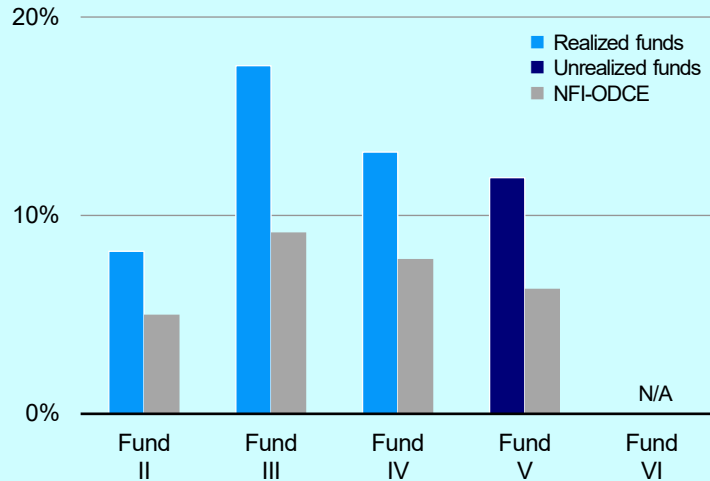
\*\* Please note totals for Pension Trust and Legacy Fund do not include NAV for US Value-Add/Opportunistic Fund VI as the since inception return is currently not available. Returns shown are not reflective North Dakota's since inception return, they are Fund-level returns.

Source: Invesco Real Estate as of June 30, 2023. The strategies presented on this slide represents current investments of the North Dakota State Investment Board.

Past performance is not a guarantee of future returns. Totals may not sum exactly due to rounding.

# IRE Value-Add/Oppportunistic Historical Performance

## Since Inception Gross IRR



	Metrics				Returns			
	Size (\$MM) <sup>1</sup>	Vintage Year <sup>2</sup>	Investment Period <sup>3</sup>	# Investments / Realized <sup>4,5</sup>	Since Inception Gross IRR <sup>6</sup>	Since Inception Net IRR <sup>7</sup>	Since Inception Gross EM <sup>6</sup>	Since Inception Net EM <sup>7</sup>
<b>Fund II</b>	\$457	2007	2007-2012	16 / 16	9.1%	6.8%	1.4x	1.3x
<b>Fund III</b>	\$344	2012	2012-2014	13 / 13	17.6%	13.6%	1.7x	1.5x
<b>Fund IV</b>	\$759	2015	2014-2017	22 / 21	13.2%	10.5%	1.4x	1.3x
<b>Fund V</b>	\$884	2019	2017-2021	21 / 4	11.9%	9.2%	1.3x	1.3x
<b>Fund VI</b>	\$1,783	2022	2020-2025	23 / 3	N/A*	N/A*	N/A*	N/A*

\*First Fund VI since inception return and equity multiple will be published in 3Q2023.

Source: Invesco Real Estate as of Q2 2023. Please see endnotes for further disclosures. **Past performance is not a guide to future results.**

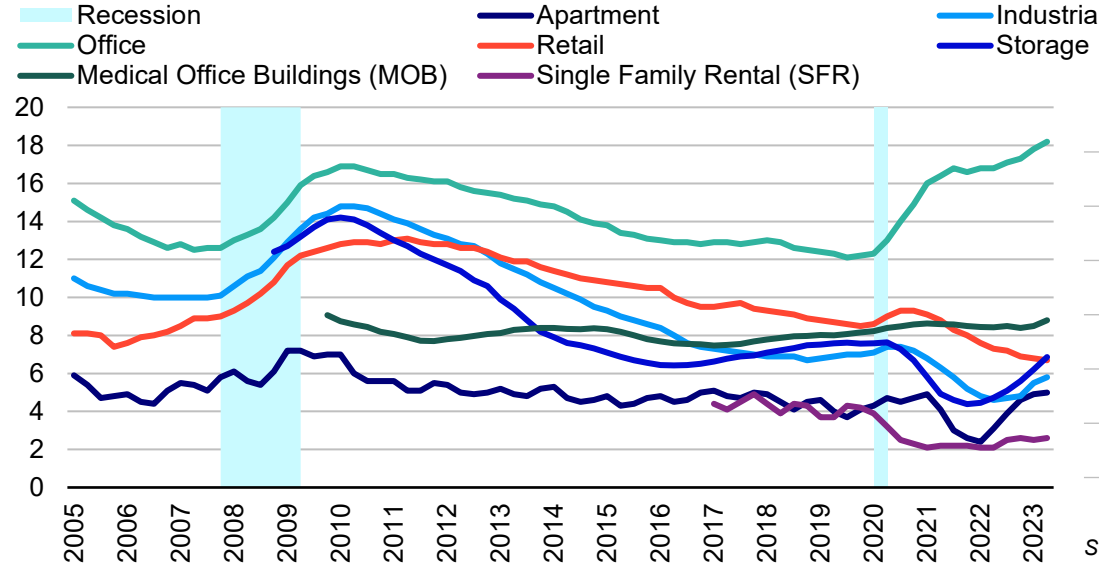
# Fundamentals and Capital Markets



# Sector fundamentals: Starting from a position of strength

## Moderation now occurring across most sectors; office remains the outlier

### Vacancy rate/Availability rate (%)



Based on CBRE Econometric Advisor's (EA) sum of markets series for primary sectors; data for industrial and retail strips represent availabilities; storage and SFR data represents aggregation of Real Estate Investment Trust (REIT) data; MOB data from Revista.  
 Source: Invesco Real Estate using data from CBRE-EA, Revista, and company financial reports as of September 2023.  
 Past performance is not indicative of future results.



# Secular trends



## Demographics

- ✓ Rise of seniors
- ✓ Millennials age into family years
- ✓ South and west lead growth
- ✓ Diversity expands
- ✓ Household formation shifts



## Technology

- ✓ Ecommerce
- ✓ Automation of service jobs
- ✓ Automation of logistics
- ✓ Medical advances
- ✓ Data generation and storage



## Other

- ✓ Climate: Physical and transition risk
- ✓ Deglobalization
- ✓ Regulatory risk

## Net impact by sector

Overall positive	Industrial
	Single-family rental
	Manufactured homes
	Medical office
	Data centers
Neutral/ Mixed	Apartments
	Self-storage
	Life science
	Senior housing
Overall negative	Retail
	Office

Source: Invesco Real Estate as of August 2023

# Sector Active Management

Increase				Maintain		Reduce
IND 28%	SS 6%	SFR 4%	LS 3%	APT 25%	RET 13%	OFF 20%

## Industrial



*Ports, population, major supply chain nodes*

# of Assets: 37  
SF: 23.3M

## Self Storage



*Core, infill metro and regional sub-portfolios*

# of Assets: 32  
Units: 27K

## SFR



*Sunbelt markets with strong future demand drivers*

# of markets: 19  
Homes: 2,022

## Life Science



*Purpose built properties in talent and healthcare clusters*

# of Assets: 2  
SF: 438.9K

## Apartments



*Diversified portfolio in walkable, live-work-play neighborhoods*

# of Assets: 26  
Units: 7,658

## Retail



*Bar-belled strategy: "need to shop" and "want to shop"*

# of Assets: 23  
SF: 2.2M

## Office



*Clusters of talent and innovation*

# of Assets: 19  
SF: 5.4M

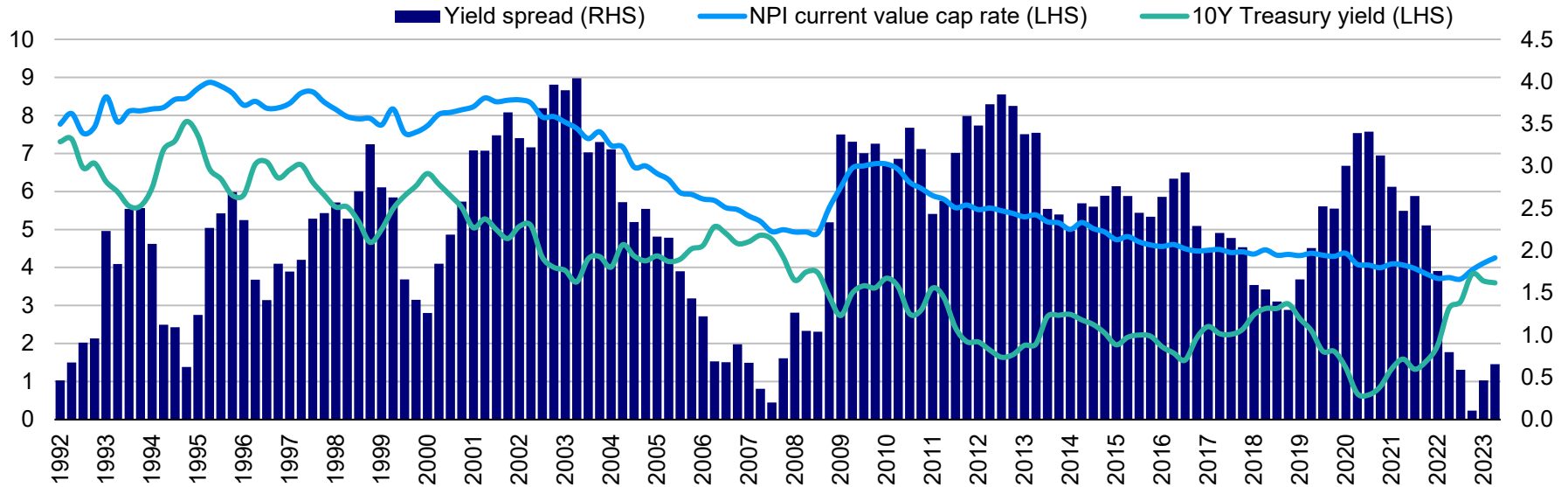
**Dynamic sector strategy focused on durable demand**

Note: # of Assets breaks up mixed use investments and counts each sector type individually. The properties shown in photographs are part of the Core Strategy in which North Dakota State Investment Board is invested. The photographs represent one example of a currently held asset in each sector held by the strategy. Performance was not a criteria for selection, and the photographs are provided for illustrative purposes only and do not constitute investment advice or a recommendation. Figures are presented at 100%. Sector allocation stats are based on current figures as of June 30, 2023, and only factors in known transactions (assumes no appreciation).

# NCREIF Property Index (NPI) cap rate spread to 10Y Treasury

## Data as of Q2 2023

### Current value cap rate (%)/10Y Treasury (%)/spread (%)



Current value cap rate: Capitalization rates from properties that were revalued during the quarter. A capitalization rate is commonly defined as net operating income divided by the properties market value. (Source: National Council of Real Estate Investment Fiduciaries)

10 Year (10Y) Treasury yield: Average US 10Y treasury yield during the identified quarter (Source: Moody's Analytics)

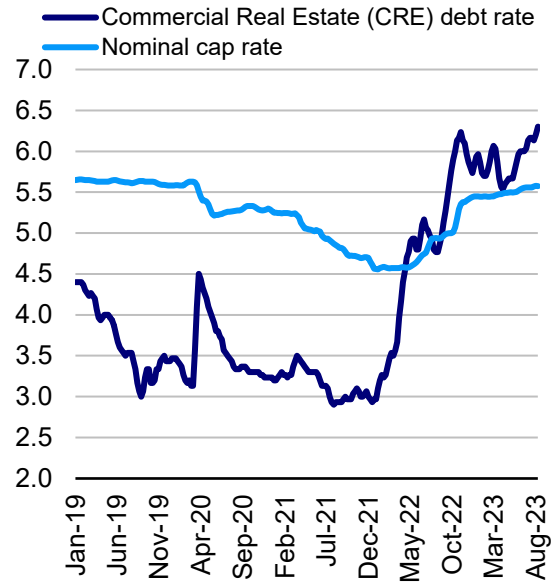
Yield spread: The difference in percentage points between the current value cap rate and the 10Y UST

Source: Invesco Real Estate using data from NCREIF, Q2 2023. An investment cannot be made directly into an index. Past performance is not indicative of future results.

# Real estate capital markets: Liquidity constrained

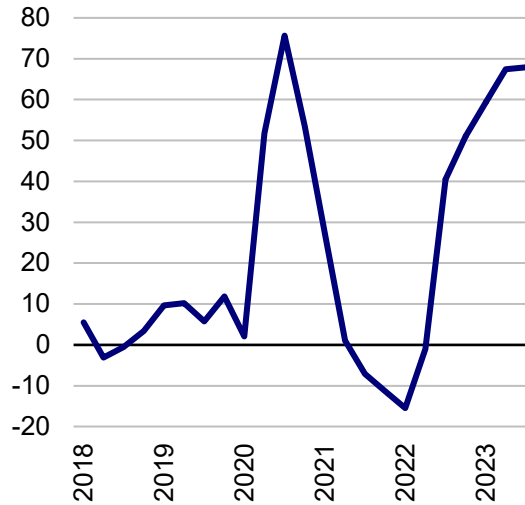
## Elevated cost of debt and tighter lending standards weigh on transaction volume

### Real estate debt costs (%)



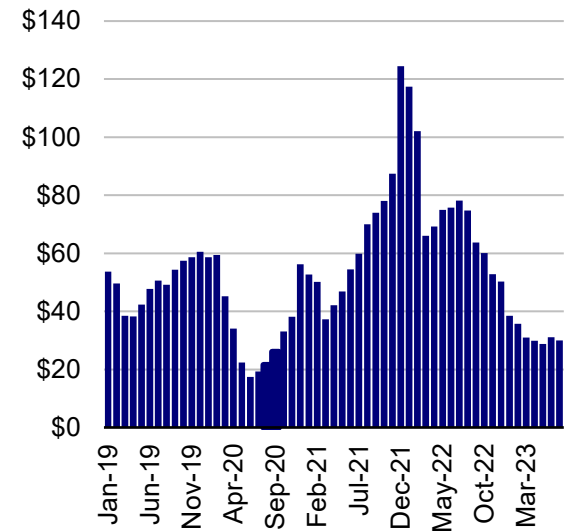
### Bank senior loan office survey

*Net percentage tightening loan standards*



### CRE transaction volume

*(3-month moving average, \$Bil)*

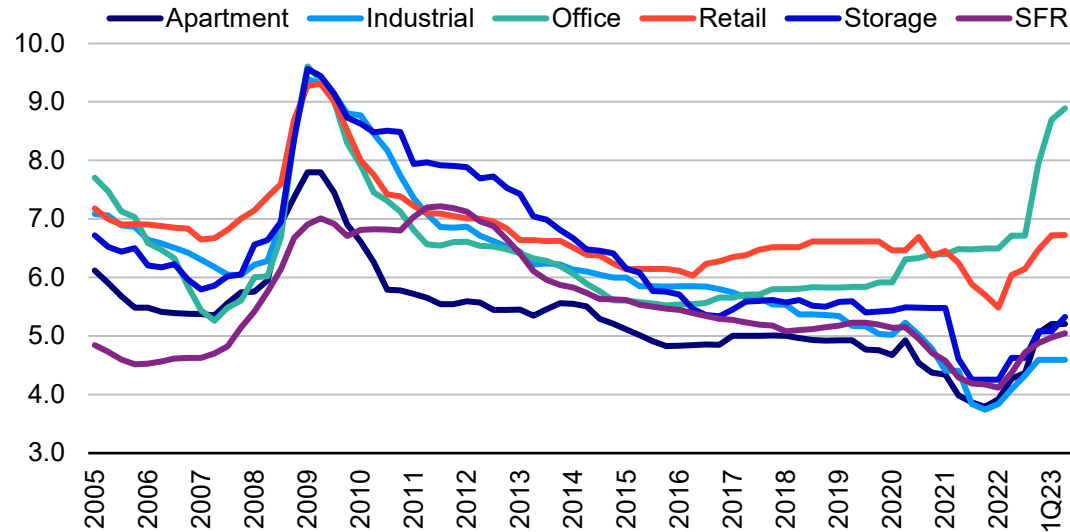


Nominal cap rate: The expected unleveraged first-year yield a property buyer expects to realize on its investment, defined as net operating income divided by property value (Source: Green Street)  
 Source: Invesco Real Estate using data from Green Street, Moody's Analytics, and MSCI as of September 2023

# Market cap rates: Increasing faster than valuation cap rates

## The transactions market is recognizing changes in capital markets

### Nominal cap rates (%)



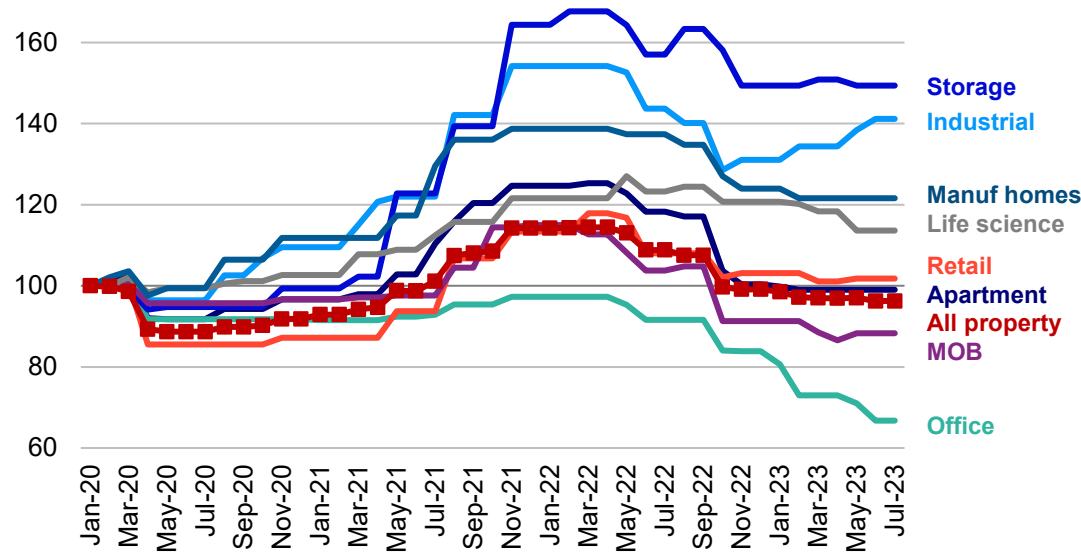
	Market	
	1Q-22	2Q-23
<b>Apartment</b>	3.9%	5.2%
<b>Industrial</b>	3.8%	4.6%
<b>Office</b>	6.5%	8.9%
<b>Retail</b>	5.5%	6.7%
<b>Storage</b>	4.3%	5.3%
<b>SFR</b>	4.6%	5.0%
<b>Other</b>	-	-
<b>AVERAGE*</b>	<b>4.8%</b>	<b>6.0%</b>

Nominal cap rate: The expected unleveraged first-year yield a property buyer expects to realize on its investment, defined as net operating income divided by property value (Source: Green Street). Data based on Green Street's estimate of market cap rates by market – weighted average for top 50 markets (top 25 markets for SFR)  
 Source: Invesco Real Estate using data from Green Street as of September 2023. Past performance is not indicative of future results.

# Pricing: Rising interest rates pushed debt costs up and CRE prices down

## Broad variation of adjustment across property sectors

**Green Street Commercial Property Price Index (CPPI)**  
Jan 2020 = 100



**Cumulative price gain/loss**

	Market	
	Since Jan-20	Since Jul-22
Storage	49%	-11%
Industrial	41%	-9%
Manuf homes	22%	-12%
Life science	14%	-7%
Retail	2%	-14%
Apartment	-1%	-21%
MOB	-12%	-22%
Office	-31%	-33%
SFR		+1%
Data centers		-13%
<b>All property</b>	<b>-3%</b>	<b>-16%</b>

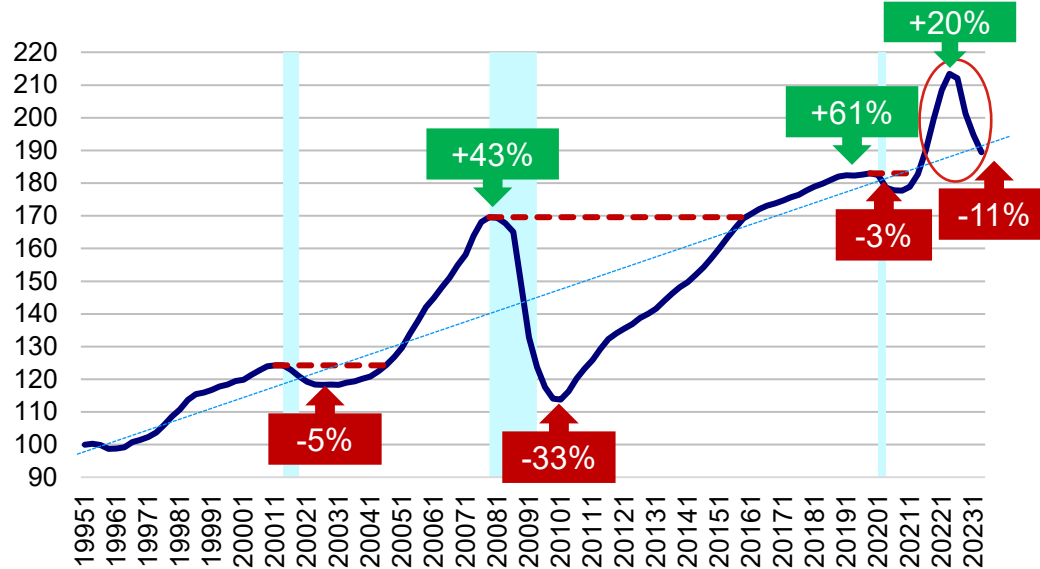
*For Market, CPPI data for SFR and data centers starts after Jan 2020; data as of August 14, 2023. For ICRE data as of June 30, 2023.*

Source: Invesco Real Estate using data from Green Street as of September 2023. Green Street's Commercial Property Price Index® is a time series of unleveraged U.S. commercial property values that captures the prices at which commercial real estate transactions are currently being negotiated and contracted. Past performance is not indicative of future results.

# NCREIF Fund Index – Open End Diversified Core Equity (NFI-ODCE) capital appreciation history

## Fed tightening started to push private real estate values lower in H2-2022

Capital appreciation index of unlevered returns (1995.1 = 100)



Capital loss	Tech bust	Global Financial Crisis (GFC)	COVID	Current
Peak-to-trough	-4.8%	-32.9%	-2.9%	-11.2
# quarters negative	7	9	4	4

Capital gain	Post-Tech Bust	Post-GFC	Post-COVID	Current
Trough-to-peak	43.4%	60.8%	20.1%	TBD
# quarters positive	19	39	6	TBD

Capital appreciation return measures the change in unlevered market value adjusted for any capital improvements or partial sales in a specific quarter. The index simply reflects the quarterly return series indexed to 100 as of first quarter 1995 (Source: NCREIF)

Peak-to-trough: change in capital appreciation index during following periods: Tech bust: 1Q-2001 to 1Q-2003; GFC: 4Q-2007 to 1Q-2010; Covid: 4Q-2019 to 4Q-2020.

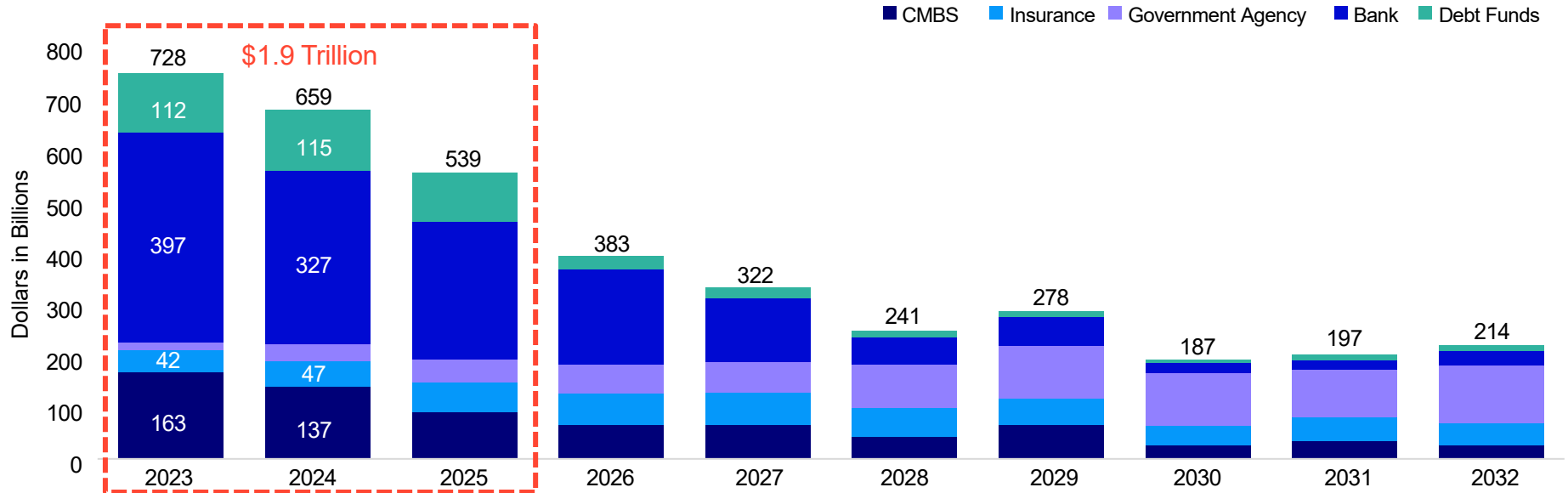
Trough-to-peak: change in capital appreciation index during following periods: Post tech bust: 1Q-2003 to 4Q-2007; Post GFC: 1Q-2010 to 4Q-2019; Post Covid: 4Q-2020 to 2Q-2022

Source: Invesco Real Estate using data from NCREIF as of September 2023. Past performance is not indicative of future results.

# The Market Faces Record Maturities

**Bank, Commercial Mortgage-Backed Securities (CMBS) / Commercial Real Estate Collateralized Loan Obligations (CRE CLO) and debt fund maturities are particularly heavily front-loaded over the next 18 months.**

## Commercial Mortgage Maturities



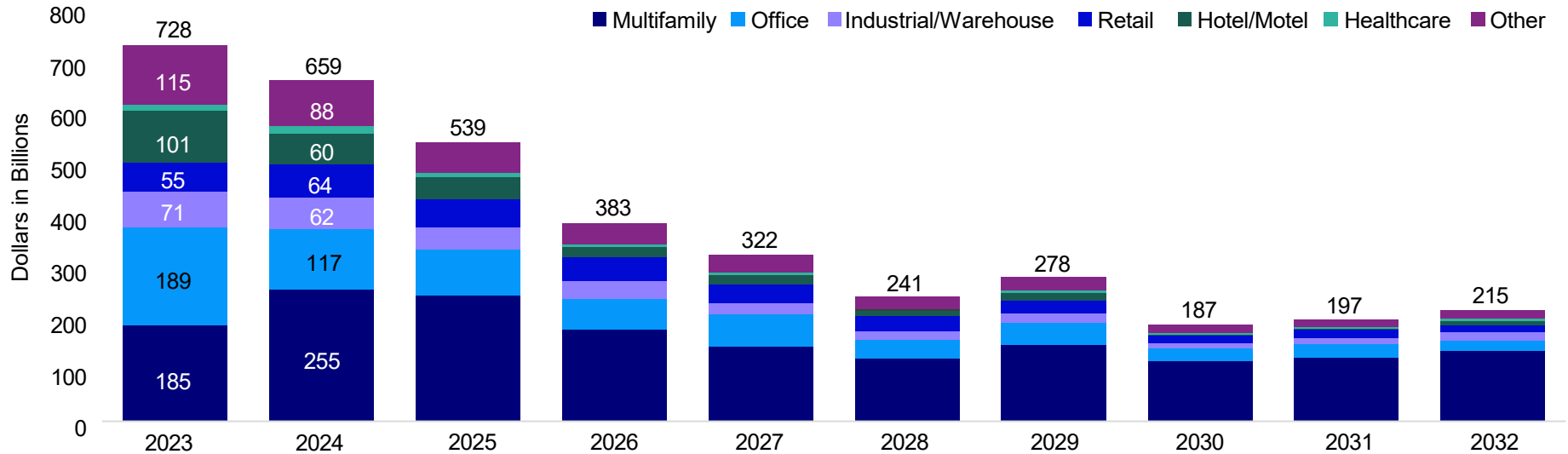
Source: MBA, Newmark Research as of July 2023. Forward-looking statements are not guarantees of future results. They involve risks, uncertainties and assumptions, there can be no assurance that actual results will not differ materially from expectations. The opinions expressed are those of the speaker, are based on current market conditions and are subject to change without notice. These opinions may differ from those of other Invesco investment professionals.



# Office and Multifamily Maturities Particularly Elevated in 2023 to 2024

Office and multifamily near-term maturities are heavily concentrated in bank and debt fund loans, which have a higher propensity to be transitional or otherwise higher risk in nature.

## Commercial Mortgage Maturities

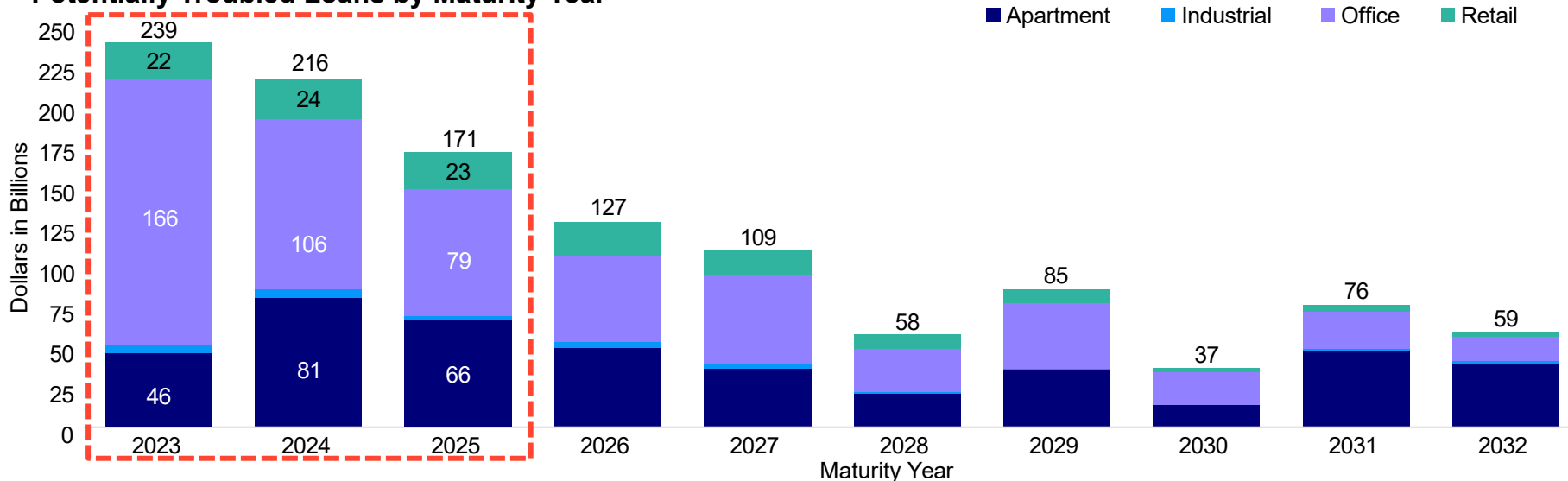


Source: MBA, Newmark Research as of July 2023. Forward-looking statements are not guarantees of future results. They involve risks, uncertainties and assumptions, there can be no assurance that actual results will not differ materially from expectations. The opinions expressed are those of the speaker, are based on current market conditions and are subject to change without notice. These opinions may differ from those of other Invesco investment professionals.

# \$1.2T of Outstanding CRE Debt is Potentially Troubled, \$626B Maturing in '23-'25

Combining our analysis of mark-to-market loan-to-value (LTV) with the structure of debt maturities, we estimate the volume of debt that currently is potentially troubled.\* Office and multifamily loans constitute most potentially troubled loans, particularly in the 2023 to 2025 period. The high office volume results from most loans being underwater. The distribution of LTV ratios for multifamily are more favorable overall, but the greater size of the multifamily market and the concentration of lending during the recent liquidity bubble drive high nominal exposure.

## Potentially Troubled Loans by Maturity Year\*



\*Loans with an estimated senior debt LTV of 80% or greater are potentially troubled. The loans are marked-to-market using an average of cumulative changes in the Dow Jones REIT sector price indices, REIT sector enterprise value indices and Green Street sector Commercial Property Price Index® (CPPI).

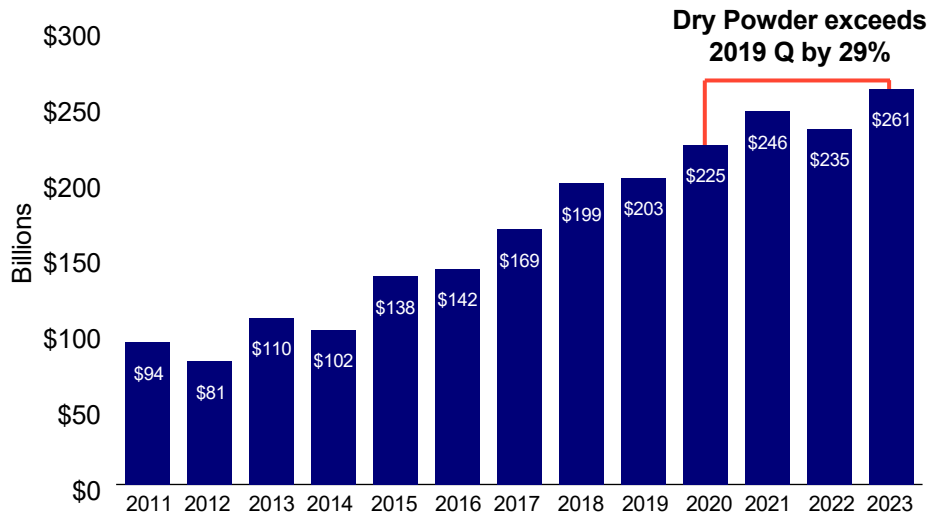
Loan-to-Value (LTV): A metric used in commercial real estate to compare the amount of money being borrowed to the market price of the asset being purchased.

Source: Green Street, NCREIF, RCA, Trepp, MBA, Newmark Research as of July 2023. Forward-looking statements are not guarantees of future results. They involve risks, uncertainties and assumptions, there can be no assurance that actual results will not differ materially from expectations. The opinions expressed are those of the speaker, are based on current market conditions and are subject to change without notice. These opinions may differ from those of other Invesco investment professionals.

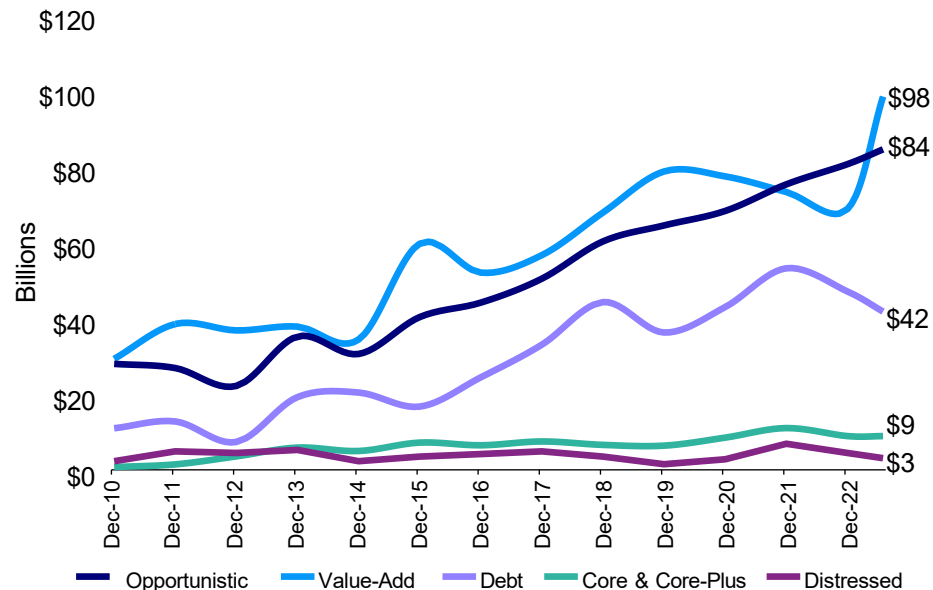
# Private Equity Dry Powder Set New Record in 2023

Dry powder at closed-end funds has increased by 11% since the start of the year. The increase is due to continued growth in value-add funds and a sharp increase in dry powder at opportunistic vehicles, reversing a multi-year decline. These were more than able to offset declines in dry powder at debt and distressed funds – off very low levels in the latter case. Record fundraising by opportunistic funds in the second quarter of 2023 appears to have driven the increase as investors gear up to take advantage of asset repricing.

## Dry Powder – Closed-End Funds



## Dry Powder by Strategy\*

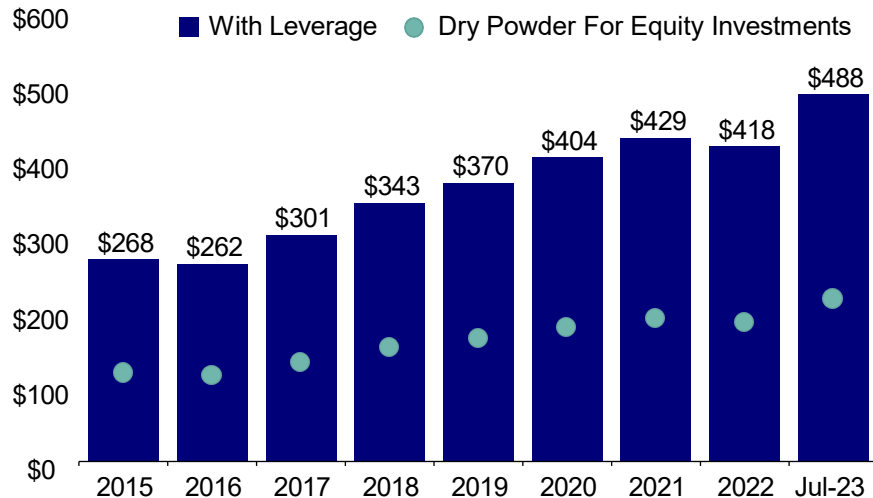


Source: Newmark Research, Preqin as of 7/26/2024. Dry powder refers to cash reserves or uncalled capital available to be used to purchase assets or make acquisitions. \*Not shown: Fund of funds, co-investments, and secondaries strategies. The opinions expressed are those of the speaker, are based on current market conditions and are subject to change without notice. These opinions may differ from those of other Invesco investment professionals.

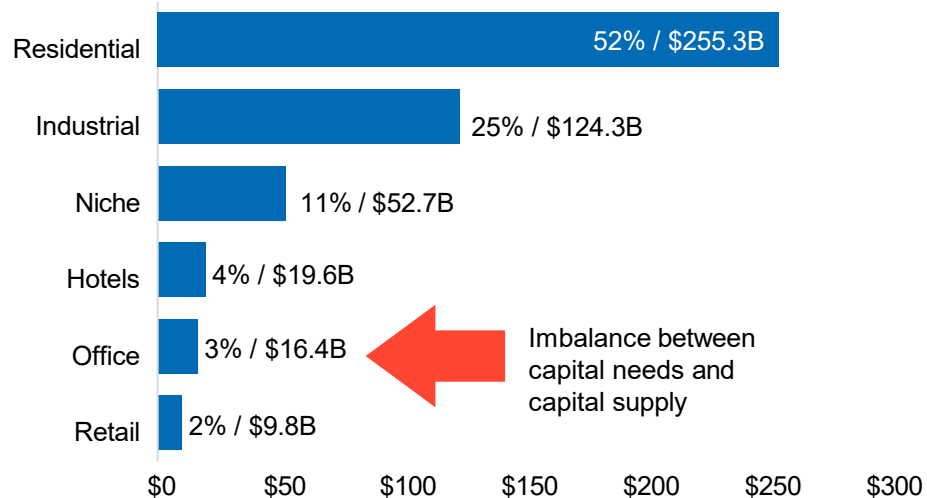
# Dry Powder Heavily Biased towards Residential, Industrial Investment

The \$219 billion in dry powder raised for equity investments, not including dry powder raised for debt strategies, equates to a leveraged purchasing power of \$488 billion, using a 55% loan-to-value ratio. We estimate that over half of this capital is targeted at multifamily assets, with most of the remainder focused on industrial assets. The capital targeting office and retail assets is quite small by comparison, which could ultimately represent a contrarian opportunity.

## Dry Powder at 55% Leverage



## Leveraged Dry Powder By Property Type\*



Source: Newmark Research, Prequin as of 7/26/2023

\*We looked at the percent called by vintage year and applied this to the total amount fundraised in each year to calculate the amount of uncalled capital (i.e. dry powder), broken out by main property type. Roughly half the dry powder was at diversified funds. This was allocated to the various property types in proportion to their share of total dry powder, excluding diversified funds. Finally, we grossed up the dry powder assuming 55% leverage would be used. The opinions expressed are those of the speaker, are based on current market conditions and are subject to change without notice. These opinions may differ from those of other Invesco investment professionals.

# Loan Maturity Resolutions

1



**Restructure & extend → often with paydown**

2



**Sell and pay-off → above or below loan amount**

3



**Refinance with new capital → debt and equity**

4



**Foreclose → hold or sell**

5



**Bank failure → government loan sales**

# Opportunities

# 3

# Real Estate Credit

- \$6 Trillion Market
- \$500 Billion of maturities annually
- Increasing market share for non-bank, non-insurance company lenders
- Lower historical volatility than public markets<sup>1</sup>
- Low correlations to public markets and to equity real estate<sup>2</sup>



Source: Invesco Real Estate. For illustrative purposes only as of March 31, 2023. Past performance is not indicative of future results. An investment cannot be made into an index.

<sup>1</sup> See page 23. Based on trailing 5 years of data 2018Q1-2022Q4, Real Estate Credit represented by Giliberto-Levy High-Yield Real Estate Debt Index (G-L 2) had a lower annualized standard deviation compared to public US Equity represented by S&P 500 Index.

<sup>2</sup> See page 23. Based on trailing 5 years of data 2018Q1-2022Q4, Real Estate Credit represented by Giliberto-Levy High-Yield Real Estate Debt Index (G-L 2) had a correlation of 0.12 to US Equity represented by S&P 500 Index, and -0.04 to Equity Real Estate represented by NCREIF Fund Index – Open End Diversified Core Equity (NFI-ODCE).

# Why Commercial Real Estate Debt?

## Attractive Fixed Income Alternative

**Commercial Mortgage Loans have been a top three (3) performer in eight (8) of the last 10 years against other fixed income asset classes.**

### Total returns for major US fixed income asset classes (%)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Highest Return</b>	12.68 Direct Lending	10.98 Com. Mort. Loans	6.17 Com. Mort. Loans	17.13 High Yield	10.46 Com. Mort. Loans	10.26 Com. Mort. Loans	14.54 Corp. Bonds	9.89 Corp. Bonds	12.78 Direct Lending	7.50 Com. Mort. Loans
	9.86 Com. Mort. Loans	9.57 Direct Lending	5.54 Direct Lending	11.24 Direct Lending	8.62 Direct Lending	8.07 Direct Lending	14.32 High Yield	8.00 Treasuries	7.81 Com. Mort. Loans	6.29 Direct Lending
	7.44 High Yield	7.46 Corp. Bonds	0.94 CMBS	10.26 Com. Mort. Loans	7.50 High Yield	1.01 CMBS	9.00 Direct Lending	7.61 CMBS	5.28 High Yield	-0.60 Senior Loans
	5.29 Senior Loans	5.97 Inv. Grade Bonds	0.84 Treasuries	10.16 Senior Loans	6.42 Corp. Bonds	0.86 Treasuries	8.72 Inv. Grade Bonds	7.51 Inv. Grade Bonds	5.20 Senior Loans	-10.94 CMBS
	0.18 CMBS	5.05 Treasuries	0.55 Inv. Grade Bonds	6.11 Corp. Bonds	4.12 Senior Loans	0.44 Senior Loans	8.64 Senior Loans	7.11 High Yield	-0.90 CMBS	-11.28 High Yield
	-1.53 Corp. Bonds	4.21 CMBS	-0.68 Corp. Bonds	3.51 CMBS	3.54 Inv. Grade Bonds	0.01 Inv. Grade Bonds	8.27 CMBS	5.96 Com. Mort. Loans	-1.04 Corp. Bonds	-12.46 Treasuries
	-2.02 Inv. Grade Bonds	2.45 High Yield	-0.69 Senior Loans	2.65 Inv. Grade Bonds	3.51 CMBS	-2.08 High Yield	7.37 Com. Mort. Loans	5.45 Direct Lending	-1.54 Inv. Grade Bonds	-13.01 Inv. Grade Bonds
	-2.75 Treasuries	1.60 Senior Loans	-4.47 High Yield	1.04 Treasuries	2.31 Treasuries	-2.51 Corp. Bonds	6.86 Treasuries	3.12 Senior Loans	-2.32 Treasuries	-15.76 Corp. Bonds
<b>Lowest Return</b>										
<b>Private RE Equity</b>	10.99	11.81	13.33	7.97	6.98	6.71	6.42	1.61	17.70	5.52

Trailing 10-years of data, last 10 years of quarterly returns annualized 2012Q4-2022Q4. Past performance is not indicative of future results. An investment cannot be made directly into an index. Diversification does not guarantee a profit or eliminate the risk of loss. Source: Invesco Real Estate using data from the following indexes: Direct Lending– Cliffwater Direct Lending Index, Commercial Mortgage Loans (Com. Mort. Loans) – Giliberto-Levy Commercial Mortgage Index, High Yield – Bloomberg US Corporate High Yield Index, Senior Loans – Morningstar LSTA Leveraged Loan Index TR, CMBS – Bloomberg CMBS IG Total Return Index Value, Corporate Bonds (Corp. Bonds) – Bloomberg U.S. Corporate Total Return Value Unhedged USD Index, Investment Grade Bonds (Inv. Grade Bonds) – Bloomberg U.S. Aggregate Bond Index, Treasuries – Bloomberg U.S. Treasury Total Return Unhedged Index, Private RE Equity – NCREIF Property Index. The indexes noted below represent investments with material differences including but not limited to investment objectives and restrictions, risks, fluctuation of principal, safety, guarantees or insurance, fees, and expenses, liquidity and tax treatment. For more information about the indexes, please see “Important Index Information” at the end of this presentation.

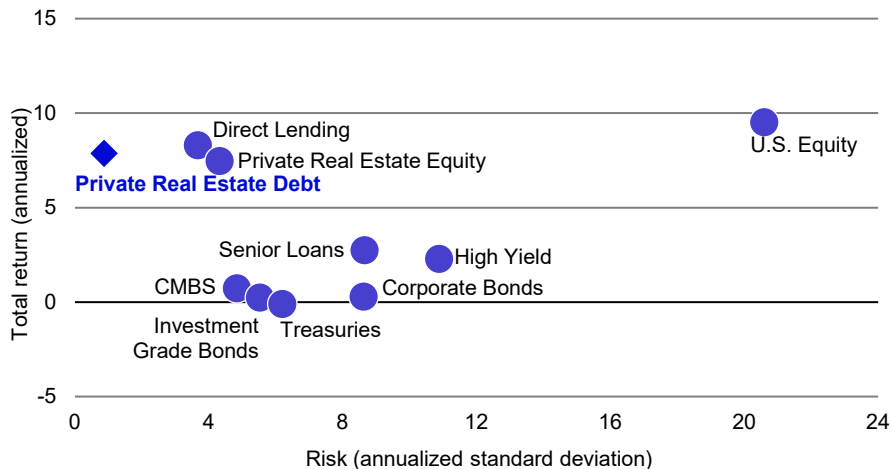


# Why Commercial Real Estate Debt?

## Risk-Adjusted Returns & Diversification

Attractive Sharpe Ratio and limited correlation with other fixed income investment capabilities, including Private Real Estate (RE).

Risk-adjusted returns by asset class (%)



Correlations: Limited Correlations with Other Fixed Income and Complementary Exposure to Private Direct Real Estate

	1	2	3	4	5	6	7	8	9	10
Private Real Estate Debt (1)	1.00									
High Yield (2)	0.17	1.00								
Senior Loans (3)	0.15	0.91	1.00							
Private Real Estate Equity (4)	-0.04	-0.29	-0.20	1.00						
Corporate Bonds (5)	0.16	0.74	0.55	-0.33	1.00					
CMBS (6)	0.12	0.51	0.29	-0.30	0.91	1.00				
Investment Grade Bonds (7)	0.08	0.37	0.09	-0.29	0.86	0.95	1.00			
Treasuries (8)	-0.01	-0.02	-0.31	-0.18	0.57	0.78	0.90	1.00		
Direct Lending (9)	0.27	0.78	0.86	0.06	0.35	0.15	-0.06	-0.40	1.00	
U.S. Equity (10)	0.12	0.87	0.82	-0.14	0.62	0.35	0.25	-0.12	0.69	1.00

The indexes noted below represent investments with material differences, including but not limited to vehicle structure, investment objectives and restrictions, risks, fluctuation of principal, safety, guarantees or insurance, fees, and expenses, liquidity and tax treatment. For more information about the indexes, please see "Important Index Information" at the end of this presentation.

Trailing 5-years of data, last 5 years of quarterly returns annualized 2018Q1-2022Q4, latest data available, updated annually.

Source: Invesco Real Estate using data from the following indices: Private Real Estate Debt – Giliberto-Levy High-Yield Real Estate Debt Index (G-L 2), High Yield – Bloomberg US Corporate High Yield Index, Senior Loans – Morningstar LSTA Leverage Loan 100 Index, Private Real Estate Equity – NCREIF Property Index, Corporate Bonds – Bloomberg U.S. Corporate Total Return Value Unhedged USD Index, CMBS – Bloomberg US CMBS Investment Grade Index, Investment Grade Bonds – Bloomberg U.S. Aggregate Total Return Index, Treasuries – Bloomberg U.S. Treasury Total Return Unhedged Index, U.S. Equity – S&P 500 Index, Direct Lending – Cliffwater Direct Lending Index. Past performance is not indicative of future results. Diversification does not guarantee a profit or eliminate the risk of loss. There is no guarantee that INCREF will provide diversification.

# Last year's..... opportunities:

---



## Last year's opportunities:

### Specialty Sectors Equity

- Single Family Rentals
  - Self-Storage
  - Life Science
- 



## This year:

### Real Estate Credit

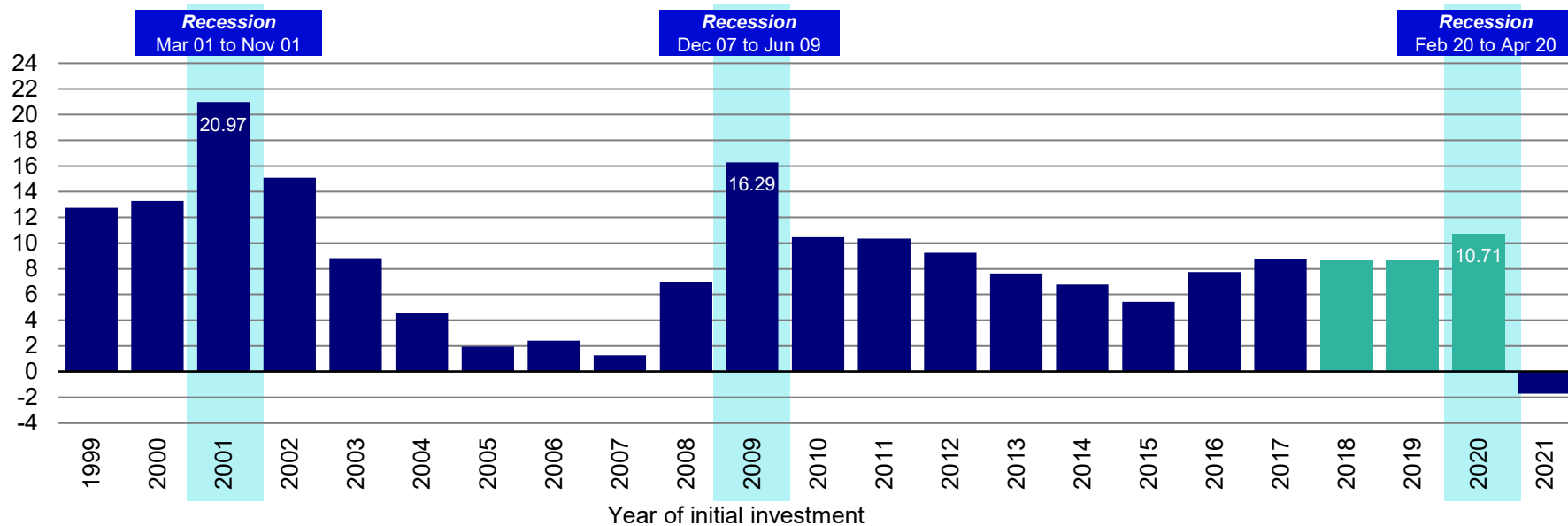
---

Source: Invesco Real Estate. This does not constitute a recommendation of any investment strategy or product for a particular investor. Investors should consult a financial professional before making any investment decisions.



# Vintage Year: Downturns can provide for attractive entry points

NCREIF Fund Index – Open End Diversified Core Equity (NFI-ODCE) five-year forward unlevered total returns (%)<sup>1</sup>



<sup>1</sup>Based on data from NCREIF-ODCE, all property types, investment returns calculated from Q1 following the calendar year of investment.

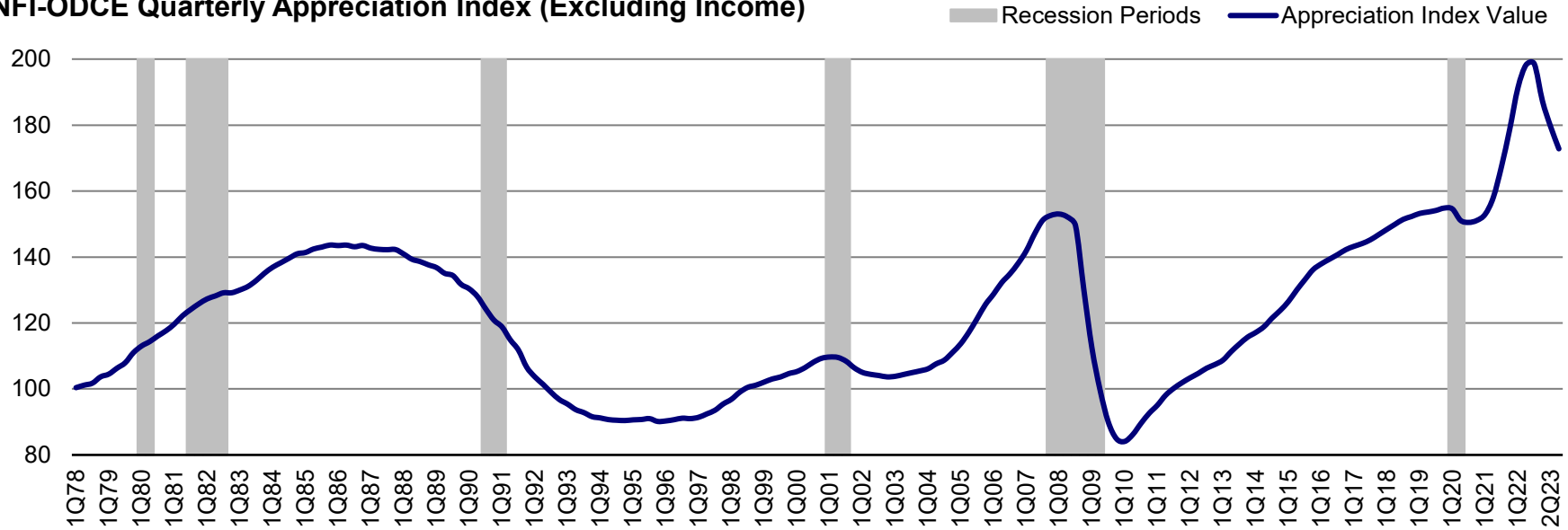
Green bars: 2018 data reflects annualized returns for acquisitions in 2018 (1Q-2019 to 2Q-2023); 2019 data reflects annualized returns for acquisitions in 2019 (1Q-2020 to 2Q-2023); 2020 data reflects annualized returns for acquisitions in 2020 (1Q-2021 to 2Q-2023); 2021 data reflects annualized returns for acquisitions in 2021 (1Q-2022 to 2Q-2023).

Source: Invesco Real Estate using data from NCREIF as of June 30, 2023. Past performance is not indicative of future results.

# Five market peaks since 1990

## US analysis

NFI-ODCE Quarterly Appreciation Index (Excluding Income)



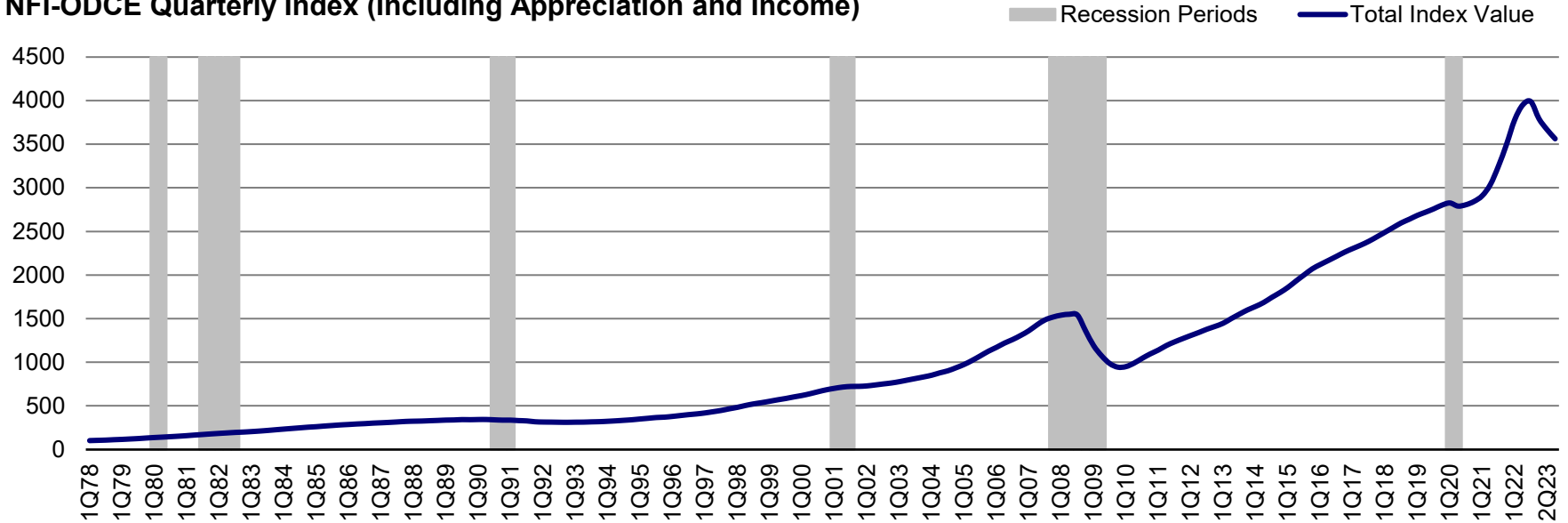
Source: NFI-ODCE Equal Weight and Invesco Real Estate as of Q2 2023. Index January 1978=100. Past performance is not indicative of future results.

The NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE), is an index of investment returns of the largest private real estate funds pursuing lower risk investment strategies utilizing low leverage and generally represented by equity ownership positions in stable U.S. operating properties diversified across regions and property types. The NFI-ODCE has been widely used since 1978 to track institutional core private real estate returns.

# Market peaks with income included

## US analysis

NFI-ODCE Quarterly Index (Including Appreciation and Income)



Source: NFI-ODCE Equal Weight and Invesco Real Estate as of Q2 2023. Index January 1978=100. Past performance is not indicative of future results.

The NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE), is an index of investment returns of the largest private real estate funds pursuing lower risk investment strategies utilizing low leverage and generally represented by equity ownership positions in stable U.S. operating properties diversified across regions and property types. The NFI-ODCE has been widely used since 1978 to track institutional core private real estate returns.

# The case for long term investing in the US

## Private real estate returns since previous market peaks

Returns to date, beginning...



Source: NFI-ODCE Equally-Weighted Index and Invesco Real Estate as of June 30, 2023.

Start of quarter of each peak based on appreciation was <sup>1</sup> October 1, 2019, <sup>2</sup> January 1, 2008, <sup>3</sup> January 1, 2001.

Hypothetical \$100M investment into the NFI-ODCE Equally-Weighted Index not including the re-investment of dividends.

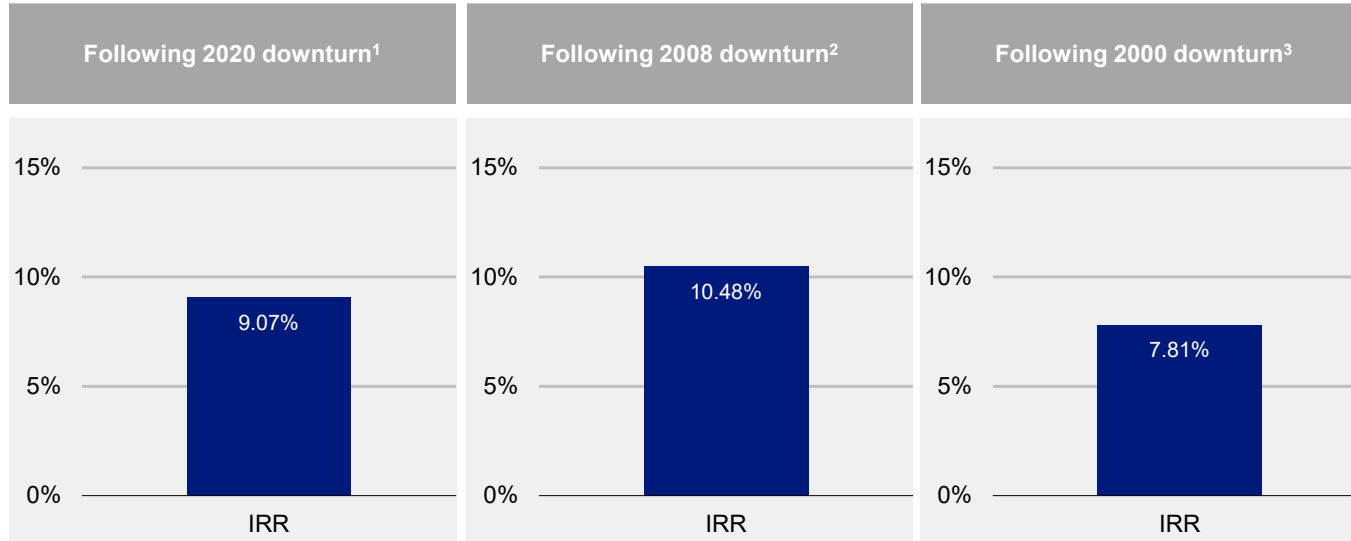
An investment cannot be made directly into an index. Please note that past performance is not a guide for future returns.

The NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE), is an index of investment returns of the largest private real estate funds pursuing lower risk investment strategies utilizing low leverage and generally represented by equity ownership positions in stable U.S. operating properties diversified across regions and property types. The NFI-ODCE has been widely used since 1978 to track institutional core private real estate returns. The performance results shown are hypothetical (not real) and were achieved by means of the retroactive application of the statistical model. It may not be possible to replicate the hypothetical results.

# The case for long term investing in the US

## Private real estate returns after a downturn

Returns to date, beginning after the first positive quarter following a downturn...



Source: NFI-ODCE Equally-Weighted Index and Invesco Real Estate as of June 30, 2023.

Start of first positive quarter following each downturn based on appreciation was <sup>1</sup> October 1, 2020, <sup>2</sup> April 1, 2010, <sup>3</sup> January 1, 2003.

Hypothetical \$100M investment into the NFI-ODCE Equally-Weighted Index not including the re-investment of dividends.

An investment cannot be made directly into an index. Please note that past performance is not a guide for future returns.

The NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE), is an index of investment returns of the largest private real estate funds pursuing lower risk investment strategies utilizing low leverage and generally represented by equity ownership positions in stable U.S. operating properties diversified across regions and property types. The NFI-ODCE has been widely used since 1978 to track institutional core private real estate returns.

# Endnotes

## Referenced on slide 8 – Historical Performance (Funds II-VI):

- 1) Size: Consists of all sponsor and limited partner capital commitments to each fund and its related parallel funds.
- 2) Vintage Year: Invesco Real Estate utilizes the Global Investment Performance Standards' definition of vintage year, which is the first year in which capital was called from investors.
- 3) Investment Period: The stated investment period in the governing agreement of each fund, as extended if applicable.
- 4) # Investments: Represents the total number of investments since inception for each fund, whether realized or unrealized.
- 5) # Investments (Realized): Represents the total number of investments since inception for each fund that have been realized.
- 6) Since Inception Gross IRR and Gross Equity Multiple ("EM"):
  - Since Inception Gross IRR returns are internal rates of return and Gross EM returns are equity multiples based on the total value to paid-in capital ("TVPI") methodology derived by dividing total distributions by total contributions. Such returns represent pre-tax returns, compounded annually on the first day of each calendar year, based on (i) actual quarterly fund cash flows (contributions and distributions) and (ii) the fund's net asset value as of the most recently reported quarter-end, and assume a liquidation and final distribution of an amount equal to such net asset value. Such returns exclude (are gross of) management fees and carried interest paid or to be paid to the applicable fund general partner and fund-level expenses, including, but not limited to, subscription line of credit interest and financing costs, organizational costs, audit and tax costs, dead deal costs and other general and administrative costs (which consist primarily of accounting payroll and travel and entertainment).
- 7) Since Inception Net IRR and Net EM:
  - Since Inception Net IRR returns are internal rates of return and Net EM returns are equity multiples based on the TVPI methodology derived by dividing total distributions by total contributions. Such returns represent pre-tax returns, compounded annually on the first day of each calendar year, based on (i) actual quarterly fund cash flows

(contributions and distributions) and (ii) the fund's net asset value as of the most recently reported quarter-end, and assume a liquidation and final distribution of an amount equal to such net asset value. Such returns include (are net of) management fees and carried interest paid or to be paid to the applicable fund general partner and fund-level expenses, including, but not limited to, subscription line of credit interest and financing costs, organizational costs, audit and tax costs, dead deal costs and other general and administrative costs (which consist primarily of accounting payroll and travel and entertainment). The management fees and carried interest paid or to be paid to the applicable fund general partner reflect the actual management fees and carried interest paid or to be paid by each investor in such fund and therefore include any management fee or carried interest reductions or alternative fee arrangements, resulting in a blended rate.



# Important Information

## About Risk

Investments in real estate related instruments may be affected by economic, legal, or environmental factors that affect property values, rents or occupancies of real estate. Real estate companies, including REITs or similar structures, tend to be small and mid-cap companies and their shares may be more volatile and less liquid.

REITs are pooled investment vehicles that trade like stocks and invest substantially all of their assets in real estate and may qualify for special tax considerations. REITs are subject to risks inherent in the direct ownership of real estate. A company's failure to qualify as a REIT under federal tax law may have adverse consequences to the REIT's shareholders. REITs may have expenses, including advisory and administration, and REIT shareholders will incur a proportionate share of the underlying expenses.

Investments focused in a particular industry or sector are subject to greater risk, and are more greatly impacted by market volatility, than more diversified investments.

Mortgage-backed securities are subject to prepayment or call risk, which is the risk that the borrower's payments may be received earlier than expected due to changes in prepayment rates on underlying loans. Securities may be prepaid at a price less than the original purchase value.

Alternative products typically hold more non-traditional investments and employ more complex trading strategies, including hedging and leveraging through derivatives, short selling and opportunistic strategies that change with market conditions. Investors considering alternatives should be aware of their unique characteristics and additional risks from the strategies they use. Like all investments, performance will fluctuate. You can lose money.

Shares of closed-end funds frequently trade at a discount to their net asset value in the secondary market and the net asset value of closed-end fund shares may decrease.

There is a risk that the value of the collateral required on investments in senior secured floating rate loans and debt securities may not be sufficient to cover the amount owed, may be found invalid, may be used to pay other outstanding obligations of the borrower or may be difficult to liquidate.

Fixed-income investments are subject to credit risk of the issuer and the effects of changing interest rates. Interest rate risk refers to the risk that bond prices generally fall as interest rates rise and vice versa. An issuer may be unable to meet interest and/or principal payments, thereby causing its instruments to decrease in value and lowering the issuer's credit rating.

Treasury securities are backed by the full faith and credit of the US government as to the timely payment of principal and interest.

All material presented is compiled from sources believed to be reliable and current, but accuracy cannot be guaranteed. This is being provided for informational purposes only, is not to be construed as an offer to buy or sell any financial instruments and should not be relied upon as the sole factor in any investment making decision. This should not be considered a recommendation to purchase any investment product. As with all investments, there are associated inherent risks.

This does not constitute a recommendation of any investment strategy for a particular investor. Investors should consult a financial professional before making any investment decisions if they are uncertain whether an investment is suitable for them. Please read all financial material carefully before investing. The opinions expressed herein are based on current market conditions and are subject to change without notice. These opinions may differ from those of other Invesco investment professionals.

# Important Information

All material presented is compiled from sources believed to be reliable and current, but accuracy cannot be guaranteed. This is being provided for informational purposes only, is not to be construed as an offer to buy or sell any financial instruments and should not be relied upon as the sole factor in any investment making decision. This should not be considered a recommendation to purchase any investment product. As with all investments, there are associated inherent risks.

This does not constitute a recommendation of any investment strategy for a particular investor. Investors should consult a financial professional before making any investment decisions if they are uncertain whether an investment is suitable for them. Please read all financial material carefully before investing. The opinions expressed herein are based on current market conditions and are subject to change without notice. These opinions may differ from those of other Invesco investment professionals.

Invesco Advisers, Inc. is an investment adviser; it provides investment advisory services to individual and institutional clients and does not sell securities. Invesco Distributors, Inc. is the US distributor for Invesco's retail products and private placements. Each entity is an indirect, wholly owned subsidiary of Invesco Ltd.

# PERFORMANCE & STRATEGY UPDATE

Scott M Anderson, CFA – Chief Investment Officer

October 26, 2023

NORTH  
**Dakota**  
Be Legendary.

Retirement & Investment

# THE MARKET

NORTH  
**Dakota**  
Be Legendary.

Retirement & Investment

# PERFORMANCE – BENCHMARK INDICES

<b>Summary of Returns</b>					
<b>June 30, 2023</b>					
<b>Benchmark Indices</b>					<b>10 Yr</b>
<b>(% change, annualized)</b>	<b>YTD</b>	<b>1 Yr</b>	<b>5 Yr</b>	<b>10 Yr</b>	<b>Volatility</b>
Russell 1000	16.7%	19.4%	11.9%	12.6%	17.8%
Russell 2000	8.1%	12.3%	4.2%	8.3%	22.3%
S&P 500	16.9%	19.6%	12.3%	12.9%	17.7%
MSCI ACWI IMI Net	13.2%	16.1%	7.6%	8.6%	14.2%
MSCI World ex US	11.3%	17.4%	4.6%	5.4%	14.2%
MSCI Emerging Markets	4.9%	1.7%	0.9%	2.9%	15.7%
Bloomberg Aggregate	2.1%	-0.9%	0.8%	1.5%	4.3%
Bloomberg Gov/Credit	2.2%	-0.7%	1.0%	1.7%	4.7%
Bloomberg US High Yield	5.4%	9.1%	3.4%	4.4%	5.1%
NCREIF Property Index (06/30/2023)	-3.8%	-6.6%	5.9%	7.82%	3.6%

Source: Bloomberg

# PERFORMANCE – BENCHMARK INDICES

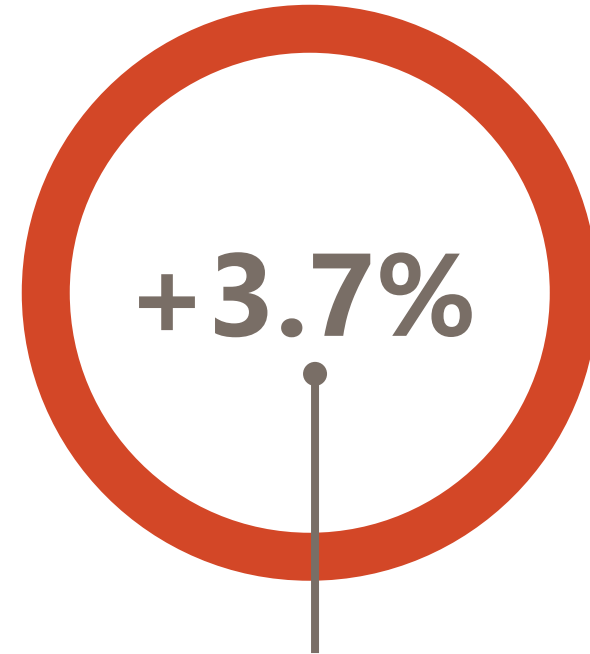
<b>Summary of Returns</b>					
<b>October 16, 2023</b>					
<b>Benchmark Indices</b> <b>(% change, annualized)</b>	<b>YTD</b>	<b>1 Yr</b>	<b>5 Yr</b>	<b>10 Yr</b>	<b>10 Yr Volatility</b>
Russell 1000	13.8%	22.2%	10.6%	11.4%	17.9%
Russell 2000	-1.2%	3.8%	2.9%	6.1%	22.4%
S&P 500	14.2%	22.8%	10.9%	11.7%	17.7%
MSCI ACWI IMI Net	9.3%	20.2%	7.1%	7.2%	14.2%
MSCI World ex US	5.7%	22.4%	4.3%	3.6%	14.3%
MSCI Emerging Markets	1.7%	13.1%	1.8%	1.6%	15.6%
Bloomberg Aggregate	-1.4%	1.9%	0.2%	1.1%	4.4%
Bloomberg Gov/Credit	-1.0%	2.1%	0.5%	1.3%	4.8%
Bloomberg US High Yield	5.1%	9.2%	3.0%	4.1%	5.2%
NCREIF Property Index (06/30/2023)	-3.8%	-6.6%	5.9%	7.82%	3.6%

Source: Bloomberg

# HAS INFLATION PEAKED?<sup>1</sup>



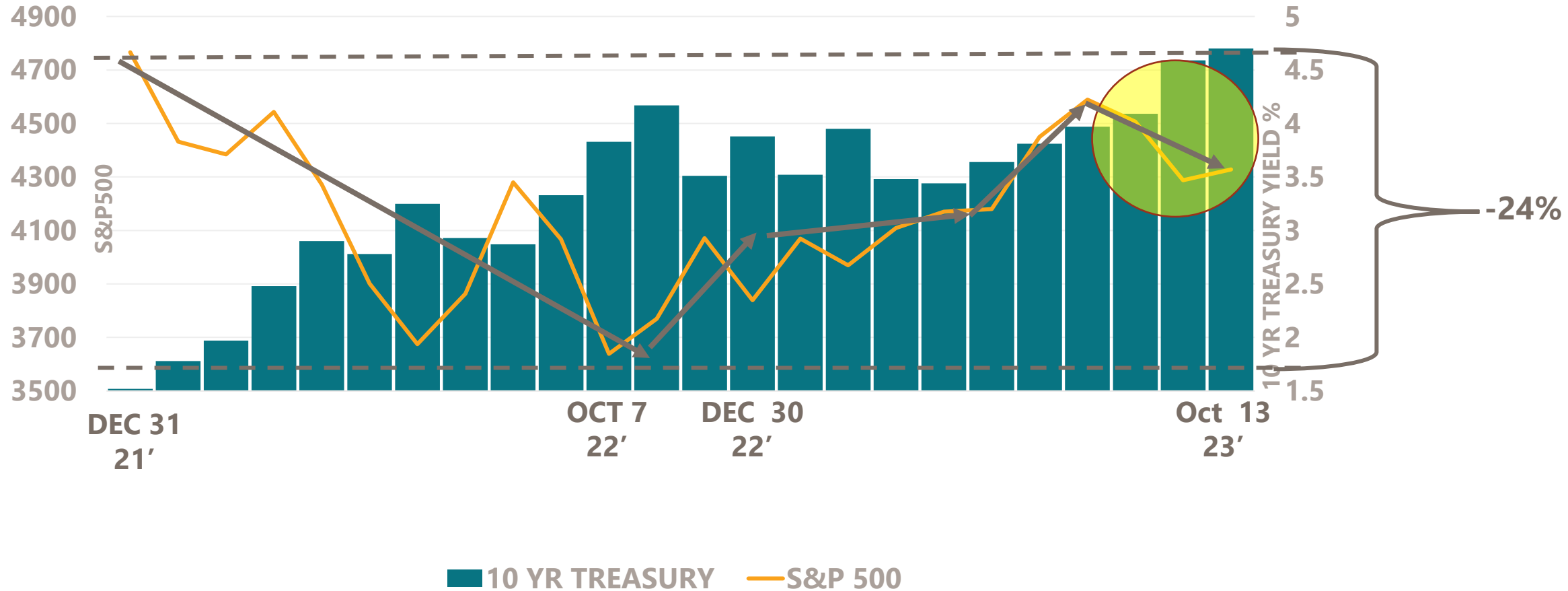
**ANNUAL INFLATION RATE  
(June 2021 thru June 2022)**



**ANNUAL INFLATION RATE  
(September 2022 thru September 2023)  
4.1% Ex Food & Energy**

1. Bureau of Labor Statistics  
Scott M Anderson, CFA – October 26, 2023

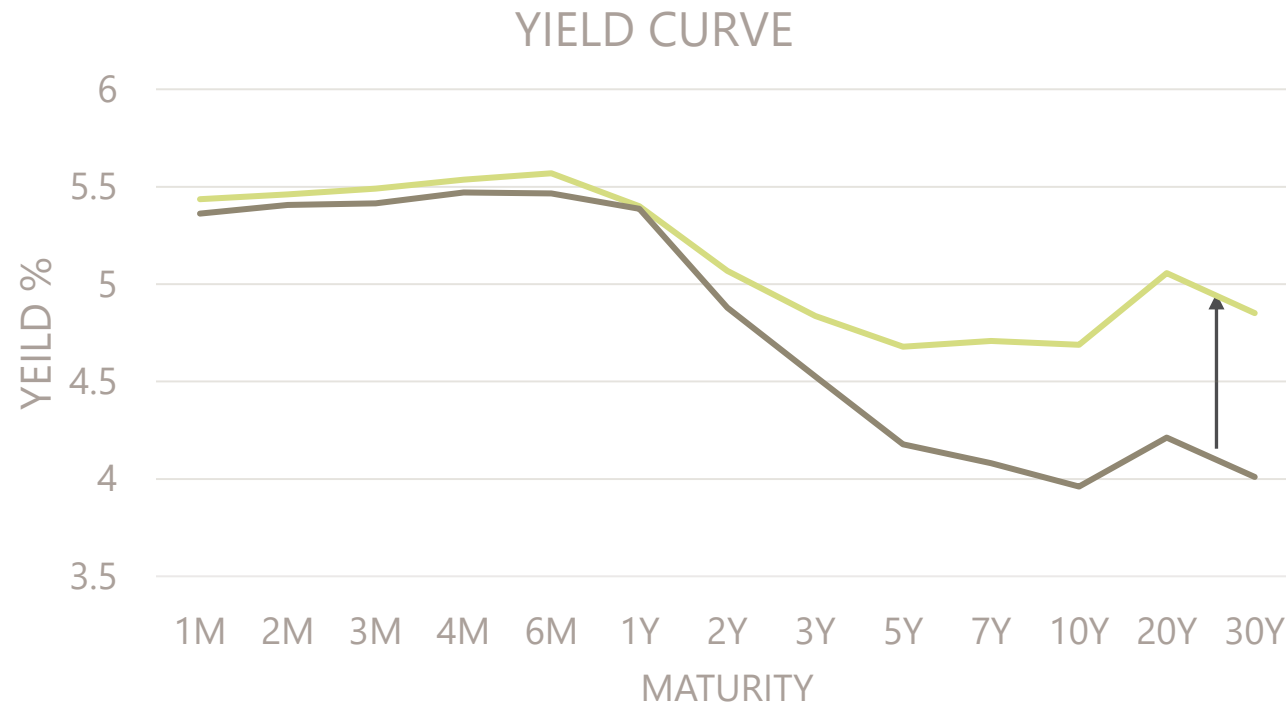
# THE S&P500 HAS TRACKED INFLATION EXPECTATIONS<sup>1</sup>



1. FRED

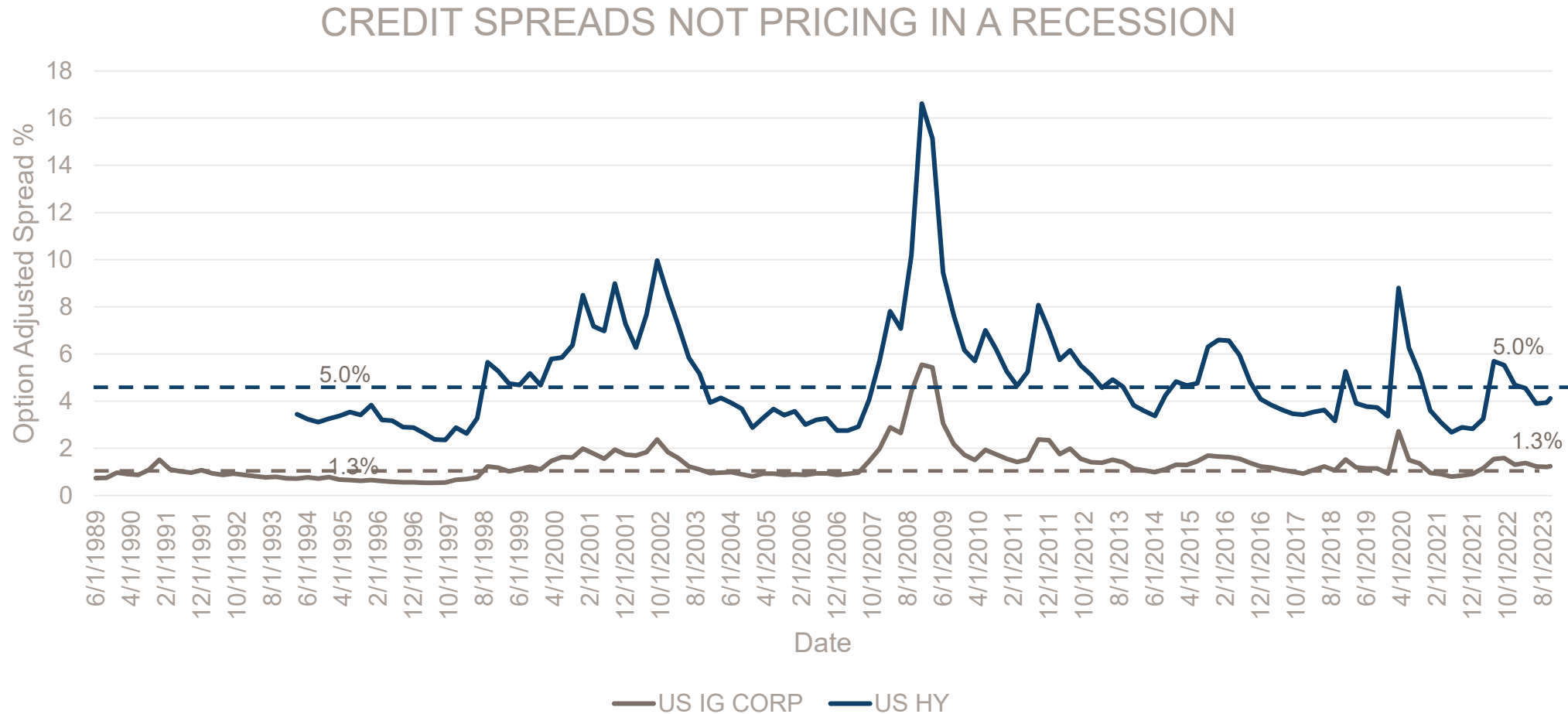


# FITCH DOWNGRADE<sup>1</sup>



1. Bloomberg US Treasuries Active Curve

# CREDIT SPREADS NOT PRICING IN A RECESSION<sup>1</sup>



1. Bloomberg Aggregate IG Corporate and HY Average Credit Spread

# GOOD NEWS <sup>1</sup>

BLOOMBERG AGG YIELD<sup>1</sup>: 5.4%



**BEST GUESS FOR  
FUTURE BOND  
RETURN!**

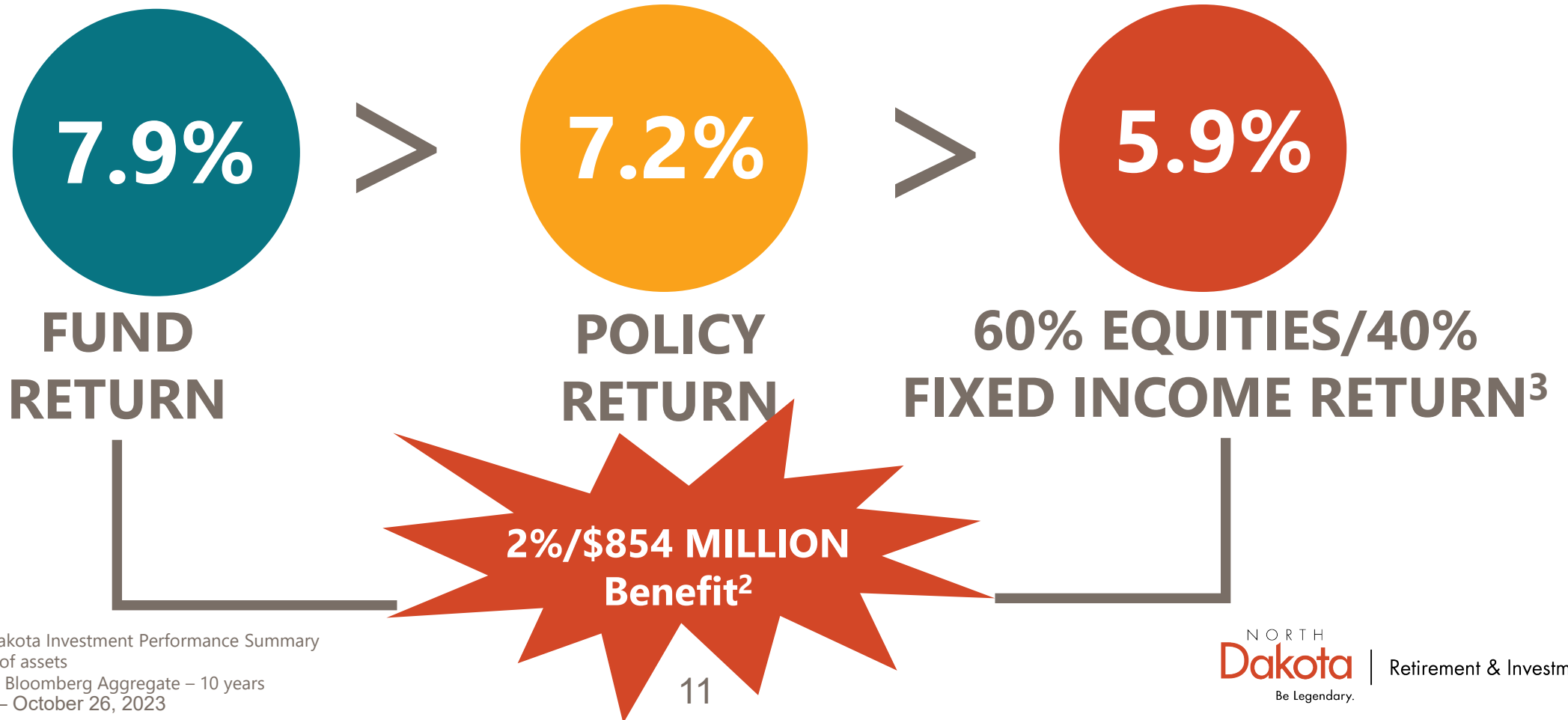
# PERFORMANCE

NORTH  
**Dakota**  
Be Legendary.

Retirement & Investment

# INVESTMENT MANAGEMENT BENEFITS

## PERS TEN YEAR AVERAGE RETURN<sup>1</sup>

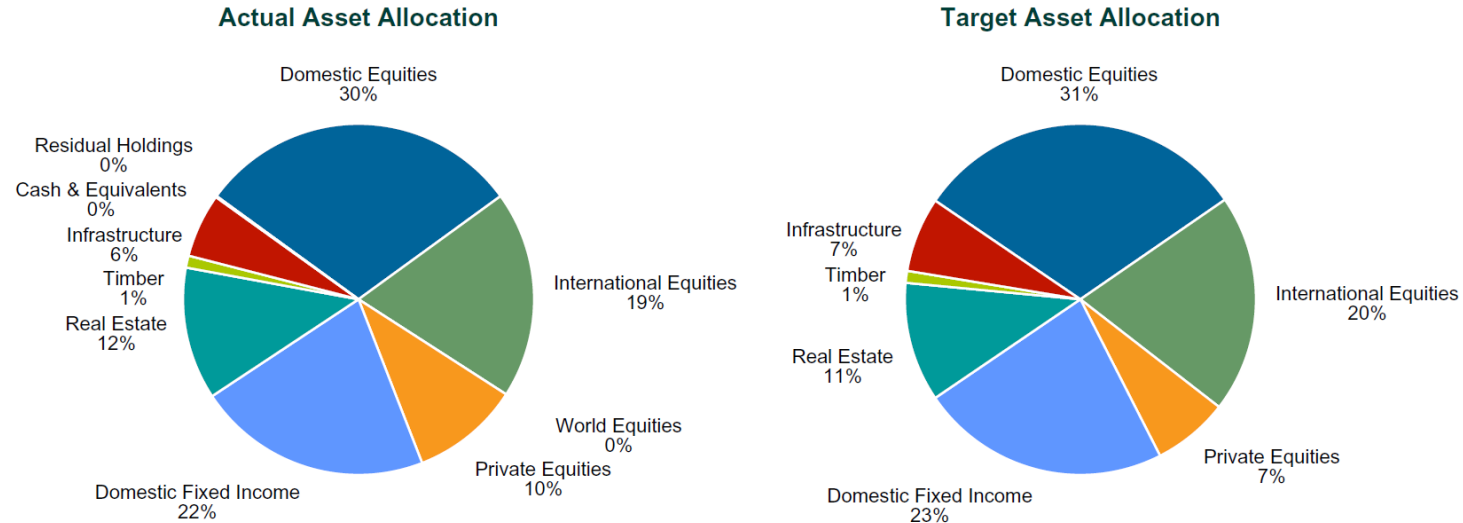


1. Thru June 2023; North Dakota Investment Performance Summary

2. Starting with \$3.8 Billion of assets

3. 60% MSCI ACW IMI/40% Bloomberg Aggregate – 10 years  
Scott M Anderson, CFA – October 26, 2023

# ASSET ALLOCATION



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	1,171,857	30.0%	30.9%	(1.0%)	(38,782)
International Equities	748,197	19.1%	20.1%	(0.9%)	(36,560)
World Equities	27	0.0%	0.0%	0.0%	27
Private Equities	391,541	10.0%	7.0%	3.0%	117,663
Domestic Fixed Income	846,003	21.6%	23.0%	(1.4%)	(53,882)
Real Estate	476,507	12.2%	11.0%	1.2%	46,127
Timber	42,065	1.1%	1.1%	0.0%	0
Infrastructure	231,361	5.9%	6.9%	(1.0%)	(39,577)
Cash & Equivalents	4,597	0.1%	0.0%	0.1%	4,597
Residual Holdings	386	0.0%	0.0%	0.0%	386
<b>Total</b>	<b>3,912,541</b>	<b>100.0%</b>	<b>100.0%</b>		

# PERS PERFORMANCE

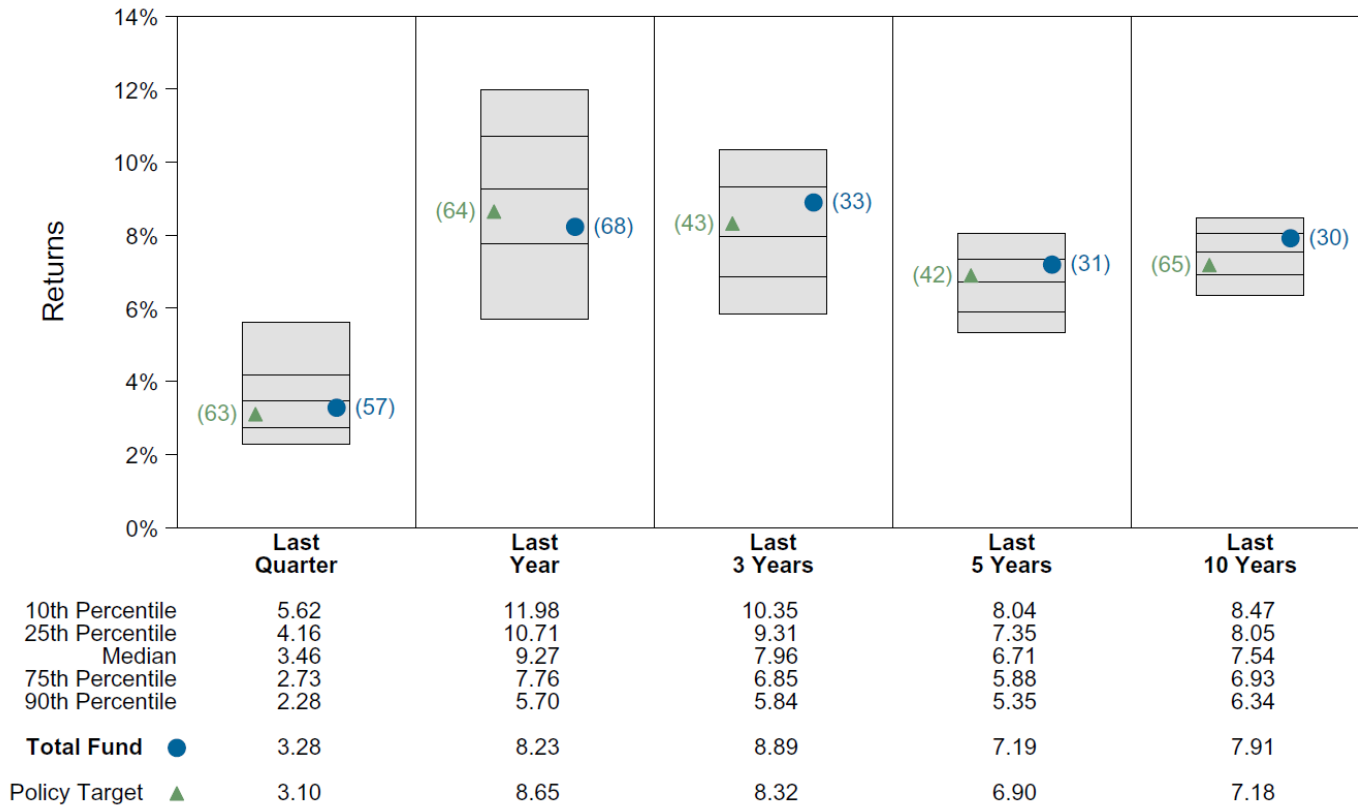
**AS OF JUNE 30, 2023**

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

1. Median performance in Callan Public Fund Sponsor Database is 5.3% thru Q1 2023

# PERS PERFORMANCE

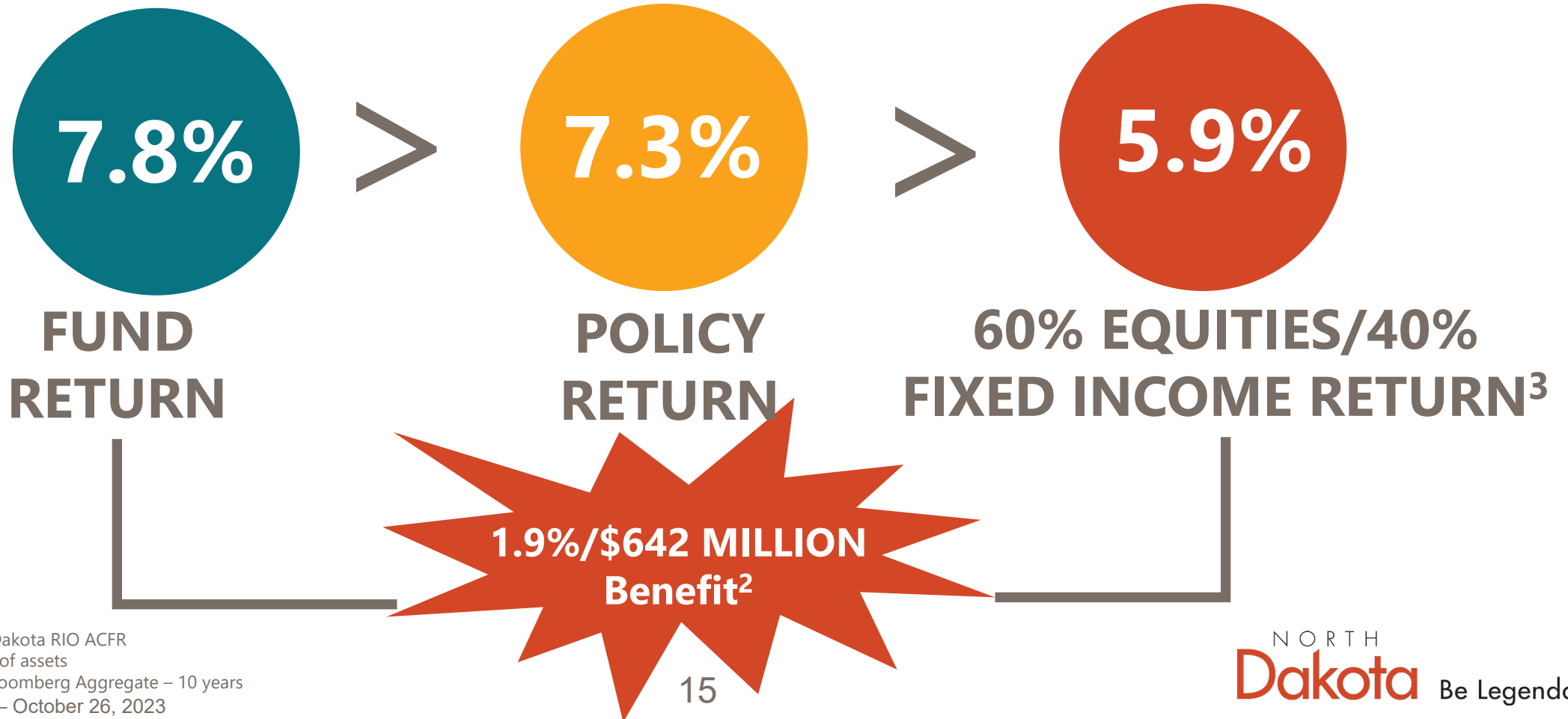
## Callan Public Fund Sponsor Database





# INVESTMENT MANAGEMENT BENEFITS

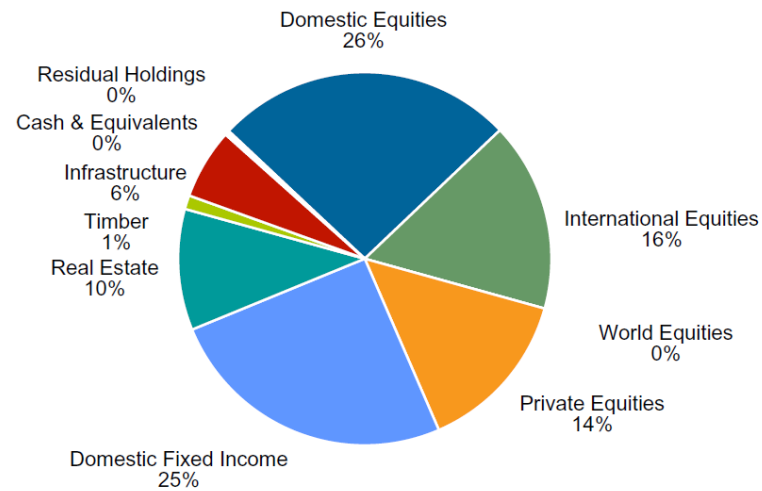
## TFFR TEN YEAR AVERAGE RETURN<sup>1</sup>



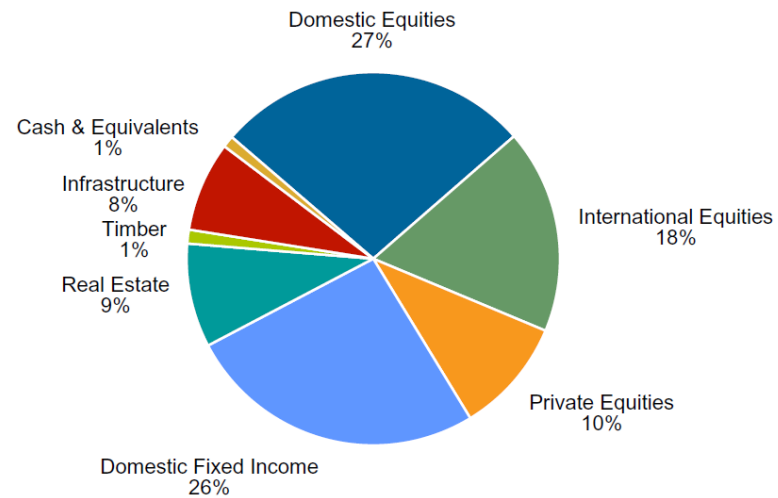
1. Thru JUNE 2023; North Dakota RIO ACFR  
2. Starting with \$3.1 Billion of assets  
3. 60% MSCI World/40% Bloomberg Aggregate – 10 years  
Scott M Anderson, CFA – October 26, 2023

# ASSET ALLOCATION

**Actual Asset Allocation**



**Target Asset Allocation**



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	808,928	25.9%	27.3%	(1.4%)	(43,857)
International Equities	512,966	16.4%	17.7%	(1.3%)	(39,823)
World Equities	246	0.0%	0.0%	0.0%	246
Private Equities	444,163	14.2%	10.0%	4.2%	131,814
Domestic Fixed Income	790,640	25.3%	26.0%	(0.7%)	(21,469)
Real Estate	326,766	10.5%	9.0%	1.5%	45,651
Timber	37,549	1.2%	1.2%	(0.0%)	(0)
Infrastructure	189,439	6.1%	7.8%	(1.7%)	(54,127)
Cash & Equivalents	9,288	0.3%	1.0%	(0.7%)	(21,947)
Residual Holdings	3,513	0.1%	0.0%	0.1%	3,513
<b>Total</b>	<b>3,123,498</b>	<b>100.0%</b>	<b>100.0%</b>		

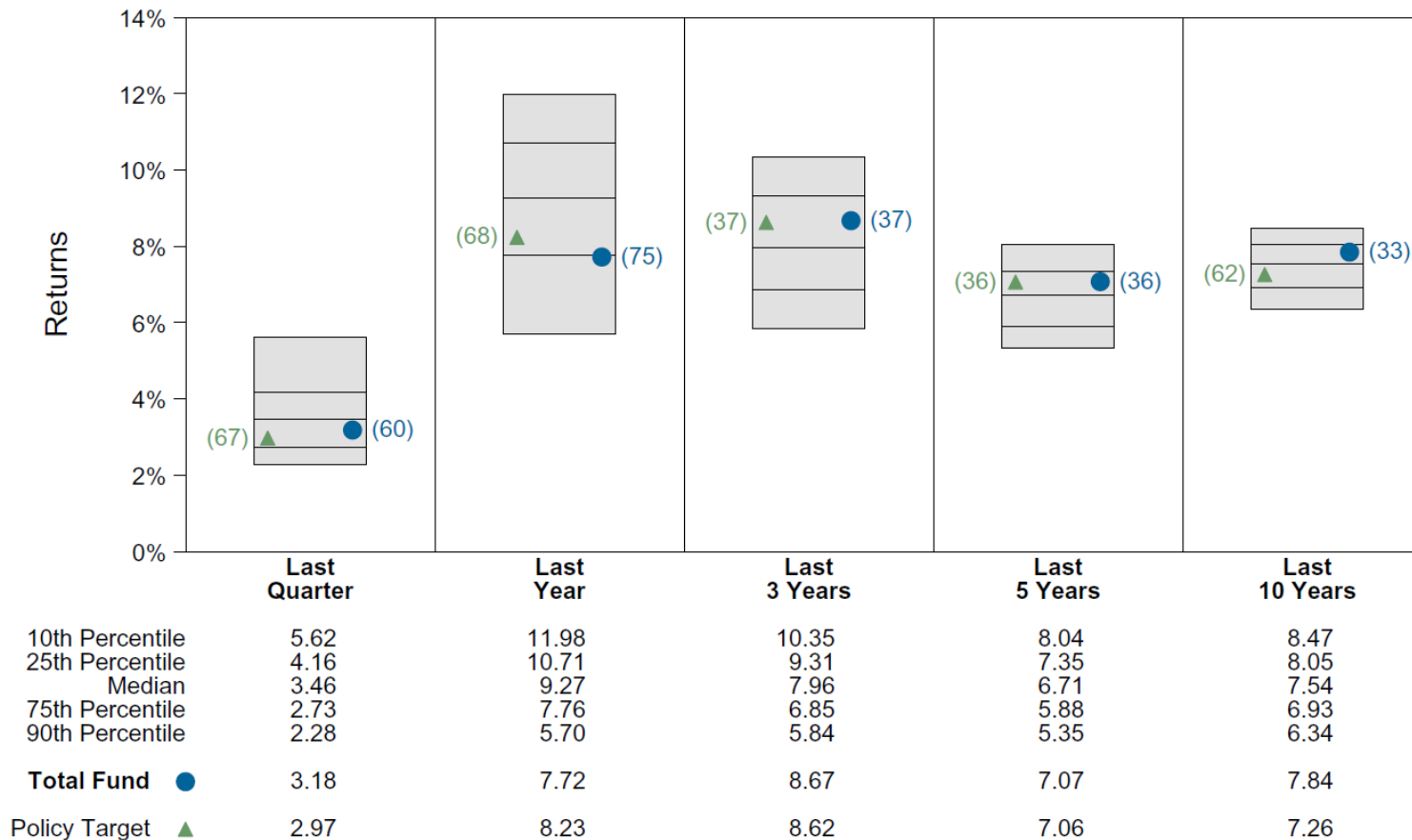
# TFFR PERFORMANCE

AS OF JUNE 30, 2023

TFFR \$3.1 Billion	Year to Date	1 Year	3 year	5 Year <sup>1</sup>	Risk (5 Year)
Total Fund Return - Net	6.7%	7.5%	8.4%	6.8%	9.9%
Policy Benchmark Return	6.7%	8.2%	8.6%	7.1%	10.2%
Total Relative Return	0.0%	-0.7%	-0.2%	-0.2%	
Total Relative Return(Corridor)		0.0%	0.5%	0.3%	

# PERFORMANCE – TFFR

## Callan Public Fund Sponsor Database



# INVESTMENT MANAGEMENT BENEFITS

## LEGACY TEN YEAR AVERAGE RETURN<sup>1</sup>



**FUND  
RETURN**

>



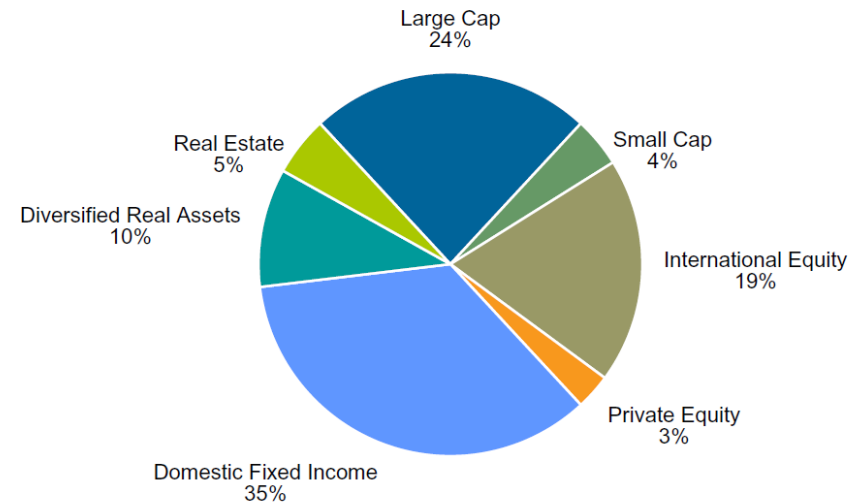
**POLICY  
RETURN**

**0.9%/\$840 MILLION  
Benefit<sup>2</sup>**

1. Thru JUNE 2023; North Dakota RIO ACFR
2. Starting with \$9.0 Billion of assets

# ASSET ALLOCATION

Target Asset Allocation



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	2,303,931	25.6%	23.8%	1.8%	160,825
Small Cap	395,233	4.4%	4.2%	0.2%	17,038
International Equity	1,816,250	20.2%	19.0%	1.2%	105,367
Private Equity	89,987	1.0%	3.0%	(2.0%)	(180,152)
Domestic Fixed Income	3,008,785	33.4%	35.0%	(1.6%)	(142,840)
Diversified Real Assets	875,809	9.7%	10.0%	(0.3%)	(24,656)
Real Estate	464,014	5.2%	5.0%	0.2%	13,781
Cash & Equivalents	48,368	0.5%	0.0%	0.5%	48,368
Transition Account	45	0.0%	0.0%	0.0%	45
Residual Holdings	2,223	0.0%	0.0%	0.0%	2,223
<b>Total</b>	<b>9,004,645</b>	<b>100.0%</b>	<b>100.0%</b>		

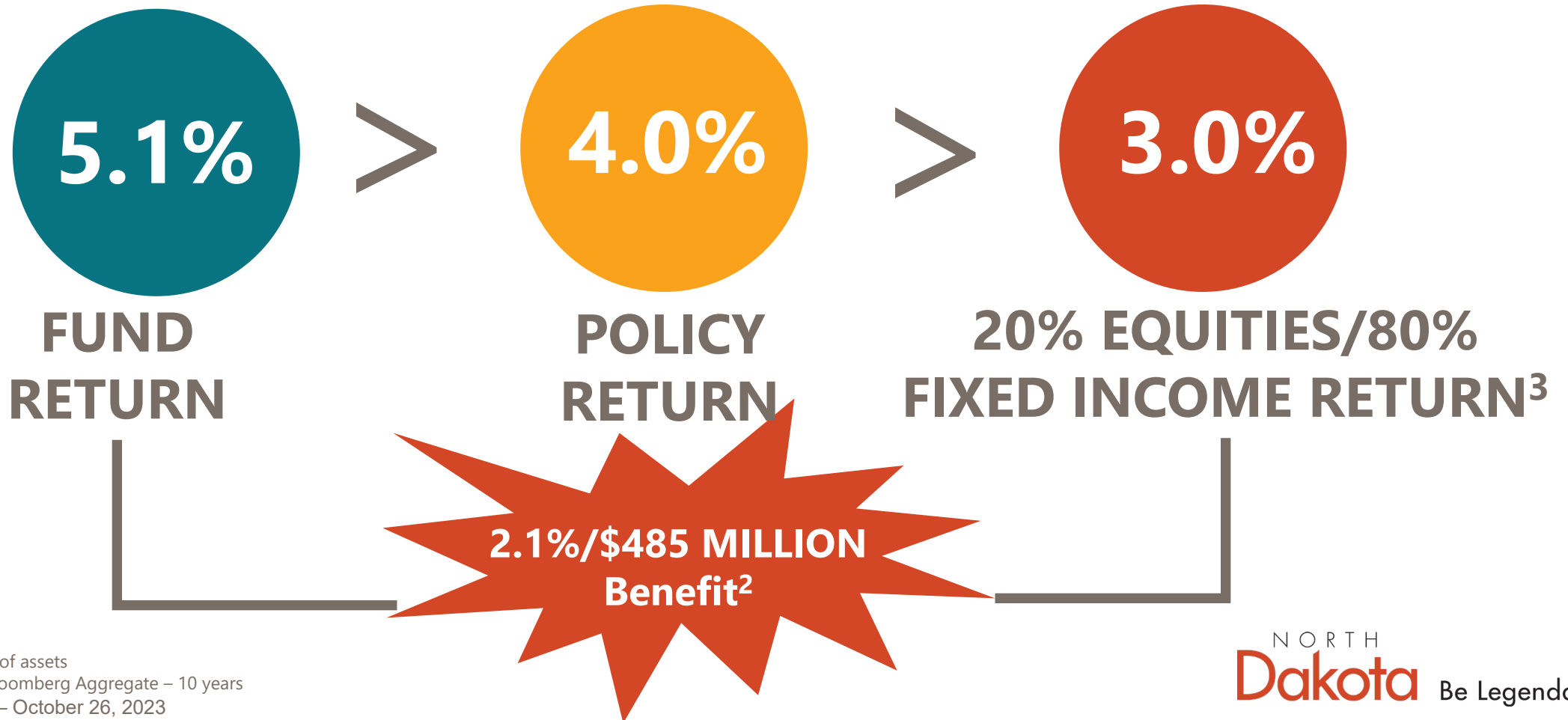
# PERFORMANCE – LEGACY

**AS OF JUNE 30, 2023**

<b>LEGACY \$3.1 Billion</b>	<b>Year to Date</b>	<b>1 Year</b>	<b>3 year</b>	<b>5 Year<sup>1</sup></b>	<b>Risk (5 Year)</b>
<b>Total Fund Return - Net</b>	<b>7.6%</b>	<b>8.2%</b>	<b>6.1%</b>	<b>5.5%</b>	<b>10.7%</b>
<b>Policy Benchmark Return</b>	<b>6.6%</b>	<b>6.8%</b>	<b>4.9%</b>	<b>5.0%</b>	<b>10.3%</b>
<b>Total Relative Return</b>	<b>1.0%</b>	<b>1.4%</b>	<b>1.2%</b>	<b>0.5%</b>	
<b>Total Relative Return(Corridor)</b>		<b>1.2%</b>	<b>1.1%</b>	<b>0.5%</b>	

# INVESTMENT MANAGEMENT BENEFITS

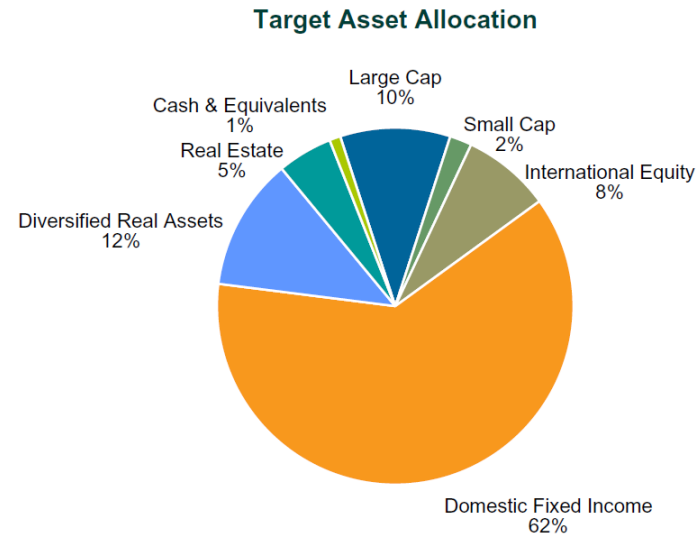
## WSI TEN YEAR AVERAGE RETURN<sup>1</sup>



1. Thru JUNE 2023  
2. Starting with \$2.1 Billion of assets  
3. 20% MSCI World/80% Bloomberg Aggregate – 10 years  
Scott M Anderson, CFA – October 26, 2023



# ASSET ALLOCATION



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	224,645	10.9%	10.0%	0.9%	17,974
Small Cap	38,875	1.9%	2.0%	(0.1%)	(2,459)
International Equity	164,148	7.9%	8.0%	(0.1%)	(1,188)
Domestic Fixed Income	1,253,107	60.6%	62.0%	(1.4%)	(28,253)
Diversified Real Assets	252,979	12.2%	12.0%	0.2%	4,974
Real Estate	112,128	5.4%	5.0%	0.4%	8,792
Cash & Equivalents	20,531	1.0%	1.0%	(0.0%)	(136)
Residual Holdings	296	0.0%	0.0%	0.0%	296
<b>Total</b>	<b>2,066,709</b>	<b>100.0%</b>	<b>100.0%</b>		

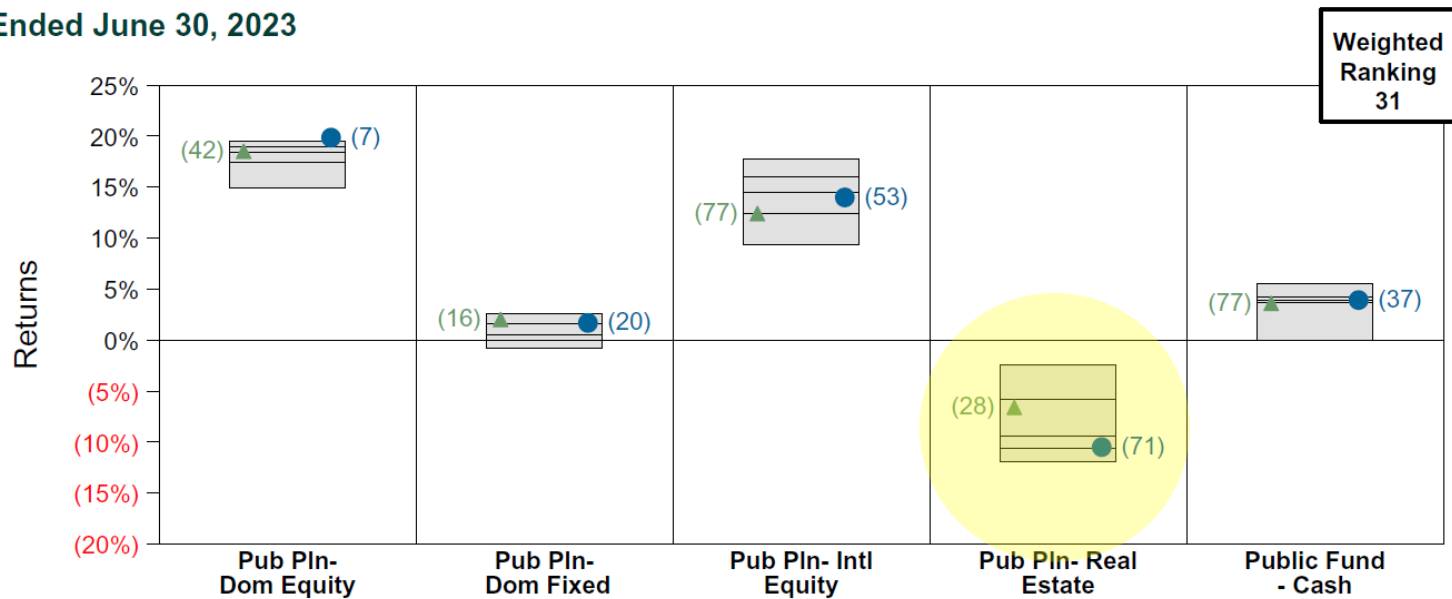
# PERFORMANCE – WSI

**AS OF JUNE 30, 2023**

<b>WSI \$2.1 Billion</b>	<b>Year to Date</b>	<b>1 Year</b>	<b>3 year</b>	<b>5 Year<sup>1</sup></b>	<b>Risk (5 Year)</b>
<b>Total Fund Return - Net</b>	<b>4.1%</b>	<b>2.7%</b>	<b>1.4%</b>	<b>3.4%</b>	<b>7.1%</b>
<b>Policy Benchmark Return</b>	<b>3.8%</b>	<b>2.4%</b>	<b>0.7%</b>	<b>3.1%</b>	<b>6.5%</b>
<b>Total Relative Return</b>	<b>0.3%</b>	<b>0.3%</b>	<b>0.7%</b>	<b>0.3%</b>	
<b>Total Relative Return(Corridor)</b>		<b>0.5%</b>	<b>0.7%</b>	<b>0.3%</b>	

# ASSET CLASS PERFORMANCE

## Total Asset Class Performance One Year Ended June 30, 2023



10th Percentile  
25th Percentile  
Median  
75th Percentile  
90th Percentile

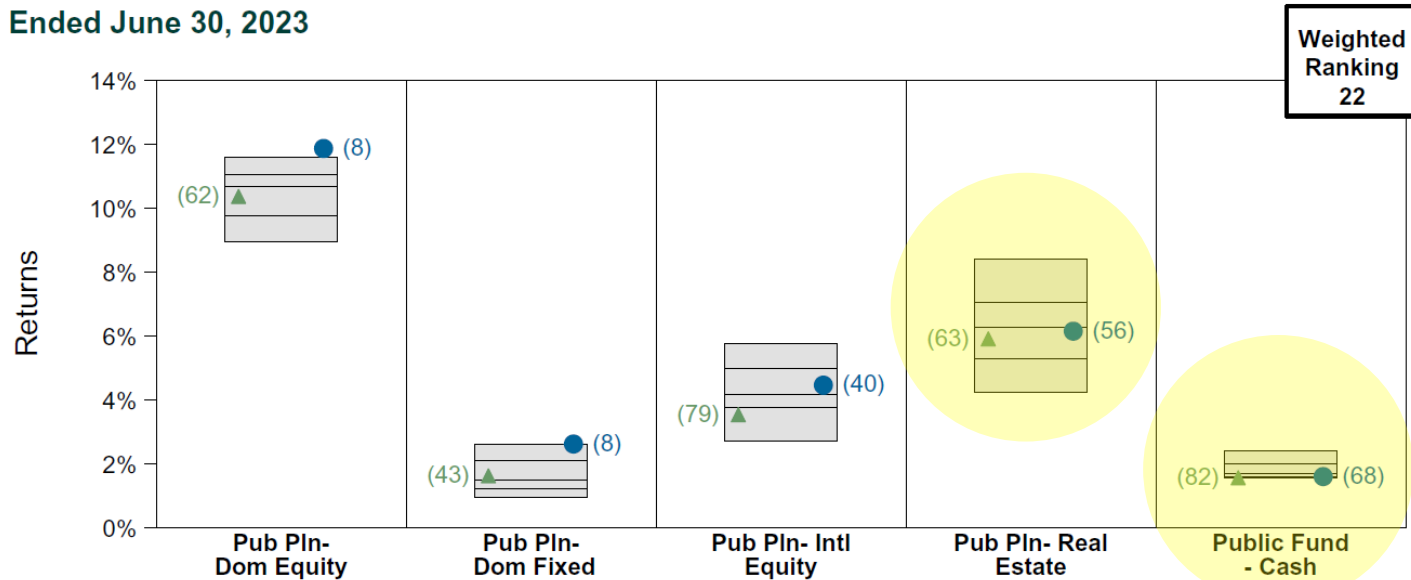
Asset Class Composite ●  
Composite Benchmark ▲

Pub Pln-Dom Equity      Pub Pln-Dom Fixed      Pub Pln-Intl Equity      Pub Pln-Real Estate      Public Fund - Cash

19.53      2.62      17.79      (2.48)      5.48  
18.92      1.55      16.04      (5.82)      4.17  
18.39      0.54      14.50      (9.46)      3.85  
17.43      (0.07)      12.42      (10.63)      3.62  
14.94      (0.83)      9.33      (11.93)      0.00  
19.85      1.68      13.98      (10.50)      3.92  
18.51      2.03      12.40      (6.60)      3.59

# ASSET CLASS PERFORMANCE

**Total Asset Class Performance  
Five Years Ended June 30, 2023**



10th Percentile	11.58	2.58	5.75	8.40	2.40
25th Percentile	11.06	2.09	4.98	7.04	1.98
Median	10.67	1.47	4.16	6.26	1.69
75th Percentile	9.77	1.21	3.76	5.27	1.56
90th Percentile	8.95	0.94	2.69	4.24	1.54
<b>Asset Class Composite</b> ●	11.87	2.61	4.45	6.14	1.59
Composite Benchmark ▲	10.37	1.61	3.52	5.90	1.55

# EQUITY MANAGER PERFORMANCE

	1 YR PORTFOLIO RETURN	1 YR POLICY RETURN	1 YR ACTIVE RETURN	5 YR PORTFOLIO RETURN	5 YR POLICY RETURN	5 YR ACTIVE RETURN	5 YR TRACKING ERROR	5 YR INFORMATION RATIO
<b>PERS PUBLIC EQUITY</b>	<b>16.97%</b>	<b>16.22%</b>	<b>0.75%</b>	<b>7.95%</b>	<b>7.89%</b>	<b>0.06%</b>	<b>1.39%</b>	<b>0.05</b>
<b>Domestic Equity</b>	<b>19.63%</b>	<b>18.36%</b>	<b>1.27%</b>	<b>11.66%</b>	<b>10.81%</b>	<b>0.85%</b>	<b>2.46%</b>	<b>0.35</b>
<b>Large Cap - Russell 1000</b>	<b>20.49%</b>	<b>19.36%</b>	<b>1.13%</b>	<b>13.28%</b>	<b>11.92%</b>	<b>1.36%</b>	<b>2.17%</b>	<b>0.63</b>
LA Capital Large Cap Growth	25.89%	19.36%	6.53%	15.57%	11.92%	3.65%	5.81%	0.63
LA Capital 60% Large Cap/40% Large Cap Active Extension	20.02%	19.36%	0.65%	12.82%	11.92%	0.89%	1.87%	0.48
NTAM - Quant Enhanced	17.88%	19.36%	-1.48%	10.85%	11.92%	-1.08%	2.79%	-0.39
Parametric/Clifton Group Enhanced	19.20%	19.36%	-0.16%	11.93%	11.92%	0.01%	1.53%	0.00
<b>Small Cap - Russell 2000</b>	<b>15.10%</b>	<b>12.31%</b>	<b>2.79%</b>	<b>5.78%</b>	<b>4.21%</b>	<b>1.57%</b>	<b>6.45%</b>	<b>0.24</b>
Atlanta Capital Small Cap Equity Fund	15.91%	12.31%	3.61%	9.09%	4.21%	4.88%	8.91%	0.55
Riverbridge Small Cap Growth (5 year is since 11/2020)	17.75%	12.31%	5.44%	0.30%	9.40%	-9.10%	12.08%	-0.75
Sycamore Small Cap Value (5 year is since 11/2020)	12.16%	12.31%	-0.14%	14.75%	9.40%	5.35%	9.82%	0.55
<b>International Equity</b>	<b>13.69%</b>	<b>12.47%</b>	<b>1.22%</b>	<b>4.23%</b>	<b>3.38%</b>	<b>0.85%</b>	<b>2.35%</b>	<b>0.36</b>
<b>**Total Intl All Cap - MSCI ACWI ex-US IMI</b>								
William Blair International Leaders	16.97%	12.47%	4.50%	5.62%	3.38%	2.23%	7.82%	0.29
Arrowstreet International Equity (5 year is since 01/2022)	17.26%	12.47%	4.79%	2.71%	-6.09%	8.79%	5.37%	1.64
<b>**Total Dev. Intl Small Cap - MSCI World ex-US Small</b>								
DFA Intl. Small Cap Value Portfolio	15.25%	10.05%	5.20%	2.19%	1.83%	0.36%	5.41%	0.07
Wellington International Small Cap Opportunities	11.62%	10.05%	1.58%	-0.36%	1.83%	-2.19%	4.07%	-0.54
<b>Emerging Markets - MSCI EM</b>	<b>-1.87%</b>	<b>1.75%</b>	<b>-3.62%</b>	<b>1.00%</b>	<b>0.93%</b>	<b>0.06%</b>	<b>3.82%</b>	<b>0.02</b>
Axiom Emerging Markets Equity Fund	-6.07%	1.75%	-7.82%	-0.37%	0.93%	-1.31%	4.66%	-0.28
DFA Emerging Markets Small Cap Portfolio	9.15%	1.75%	7.40%	4.43%	0.93%	3.50%	7.46%	0.47

\*\*Intl All Cap & Small Cap composites are new with no material history

# FIXED INCOME MANAGER PERFORMANCE

	1 YR PORTFOLIO RETURN	1 YR POLICY RETURN	1 YR ACTIVE RETURN	5 YR PORTFOLIO RETURN	5 YR POLICY RETURN	5 YR ACTIVE RETURN	5 YR TRACKING ERROR	5 YR INFORMATION RATIO
<b>PERS FIXED INCOME</b>	<b>1.70%</b>	<b>2.05%</b>	<b>-0.34%</b>	<b>2.61%</b>	<b>1.62%</b>	<b>0.99%</b>	<b>1.77%</b>	<b>0.56</b>
<b>INVESTMENT GRADE FIXED INCOME</b>	<b>-0.74%</b>	<b>-0.94%</b>	<b>0.20%</b>	<b>1.32%</b>	<b>0.77%</b>	<b>0.55%</b>	<b>1.51%</b>	<b>0.36</b>
<b>Bloomberg Aggregate</b>								
PRUDENTIAL CORE FIXED INCOME	-0.06%	-0.94%	0.87%	1.08%	0.77%	0.32%	1.68%	0.19
PIMCO CORE PLUS	-0.57%	-0.94%	0.36%	1.16%	0.77%	0.39%	1.19%	0.33
PIMCO DISCO II	5.07%	-0.94%	6.01%	4.79%	0.77%	4.03%	6.08%	0.66
MANULIFE TOTAL RETURN BOND FUND	1.18%	-0.94%	2.12%	2.41%	0.77%	1.65%	5.61%	0.29
<b>BELOW IG FIXED INCOME</b>	<b>7.36%</b>	<b>9.07%</b>	<b>-1.71%</b>	<b>5.67%</b>	<b>3.34%</b>	<b>2.33%</b>	<b>6.35%</b>	<b>0.37</b>
<b>Bloomberg High Yield 2% Issuer Constrained</b>								
ARES ND CREDIT STRATEGIES	7.65%	9.07%	-1.43%	7.91%	3.34%	4.57%	10.96%	0.42
CERBERUS ND PRIVATE CREDIT FUND	7.76%	9.07%	-1.31%	8.74%	3.34%	5.40%	9.33%	0.58
LOOMIS SAYLES HIGH YIELD	7.42%	9.07%	-1.65%	2.18%	3.34%	-1.16%	1.21%	-0.96
PIMCO BRAVO II (AUM ~ \$2mm)	-35.44%	9.07%	-44.51%	-7.07%	3.34%	-10.41%	20.58%	-0.51
<b>LEGACY FUND FIXED INCOME</b>	<b>1.32%</b>	<b>-0.94%</b>	<b>2.26%</b>	<b>2.08%</b>	<b>0.77%</b>	<b>1.32%</b>	<b>2.24%</b>	<b>0.59</b>
<b>INVESTMENT GRADE FIXED INCOME</b>	<b>1.32%</b>	<b>-0.94%</b>	<b>2.26%</b>	<b>2.08%</b>	<b>0.77%</b>	<b>1.32%</b>	<b>2.24%</b>	<b>0.59</b>
<b>Bloomberg Aggregate</b>								
WESTERN ASSET CORE FIXED INCOME	-0.64%	-0.94%	0.30%	0.80%	0.77%	0.03%	2.36%	0.01
PRUDENTIAL CORE FIXED INCOME (Formerly Core Plus)	-0.06%	-0.94%	0.87%	1.08%	0.77%	0.32%	1.68%	0.19
ALLSPRING US CORPORATE PLUS	2.97%	-0.94%	3.91%	2.98%	0.77%	2.21%	5.86%	0.38

# STRATEGY ACTIVITIES

MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
<ul style="list-style-type: none"> <li>▪ Prototype incentive comp system ✓</li> <li>▪ Benchmark corridor treatment decision ✓</li> <li>▪ Risk Strategy ✓</li> <li>▪ Delegated authority discussion ✓</li> </ul>	<ul style="list-style-type: none"> <li>▪ Incentive and unclassified role consultant RFP ✓</li> <li>▪ Implement benchmark corridor treatment ✓</li> <li>▪ Begin order management system search ✓</li> <li>▪ Begin governance manual re-write ✓</li> <li>▪ Public Markets Strategy ✓</li> <li>▪ Benchmark and hurdle rate consultant RFP ✓</li> </ul>	<ul style="list-style-type: none"> <li>▪ Begin investment IT strategy discussion ✓</li> <li>▪ Approve delegated authority with board ✓</li> <li>▪ Continue Order management search ✓</li> <li>▪ Private Markets Strategy ✓</li> <li>▪ Recommend delegated authority ✓</li> </ul>	<ul style="list-style-type: none"> <li>▪ Enable existing allocations with daily data ✓</li> <li>▪ Present investment IT strategy ✓</li> <li>▪ Continue Order management search ✓</li> <li>▪ Begin fund pooling discussion ✓</li> <li>▪ Propose Private Markets 1.0 and 2.0 ✓</li> <li>▪ Select benchmark and hurdle rate consultant ✓</li> <li>▪ Complete daily fund allocation process ✓</li> </ul>	<ul style="list-style-type: none"> <li>▪ Propose Equity 2.0; Approve Private Markets 1.0 and 2.0 ✓</li> <li>▪ Begin benchmark memo with benchmark consultant ✓</li> <li>▪ Coordinate hurdle rate discussions with incentive comp and unclassified role project ✓</li> <li>▪ Define data warehouse ✓</li> <li>▪ Select incentive and unclassified role consultant ✓</li> <li>▪ Begin incentive and unclassified role project ✓</li> </ul>	<ul style="list-style-type: none"> <li>▪ Define new roles ✓</li> <li>▪ Approve Equity 2.0, Begin FI 2.0 ✓</li> <li>▪ Propose benchmark memo with benchmark consultant ✓</li> <li>▪ Coordinate hurdle rate discussions with incentive comp and unclassified role project ✓</li> <li>▪ Define data warehouse ✓</li> <li>▪ Direct Investment Strategy ✓</li> </ul>	<ul style="list-style-type: none"> <li>▪ Propose incentive comp plan 1.0, define new role comp ✓</li> <li>▪ Implement Equity 2.0 ✓</li> <li>▪ Approve benchmark memo with benchmark consultant ✓</li> <li>▪ Coordinate hurdle rate discussions with incentive comp and unclassified role project ✓</li> <li>▪ Propose data warehouse ✓</li> </ul>	<ul style="list-style-type: none"> <li>▪ Overflow ✓</li> <li>▪ Prepare to post new roles in new year ✓</li> </ul>

## MEMORANDUM

**TO: SIB**  
**FROM: Jan Murtha, Executive Director**  
**DATE: October 20, 2023**  
**RE: PERS Board Decision and Special Legislative Session**

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

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

**Board Action Requested:** Information only.



## MEMORANDUM

**TO: SIB**  
**FROM: Jan Murtha, Executive Director**  
**DATE: October 20, 2023**  
**RE: Governance and Policy Review Committee**

### I. Summary of Actions

The SIB Governance & Policy Review Committee (GPR Committee) met on October 12, 2023, to discuss the following:

- SIB Governance Manual Review Project
- An update on the PERS Board decision and need for a special legislative session.

The Committee took the following actions:

- The committee reviewed, discussed and provided staff guidance on proposed changes to Section B of the SIB Governance Manual in accordance with the approved a work plan to conduct a comprehensive review of the SIB Governance Manual for the upcoming fiscal year. The committee is not bringing forward proposed changes at this time and will present all proposed amendments for first reading at the April 2024 SIB meeting, followed by Second Reading and Final Adoption at the May 2024 SIB meeting. This review is necessary given the creation of an internal investment management program and other governance updates.
- Additional information may be found at: [State Investment Board Governance & Policy Review Committee | Retirement Investment Office \(nd.gov\)](#)

**BOARD ACTION REQUESTED: Information Only.**

## MEMORANDUM

**TO:** SIB  
**FROM:** Scott Anderson, Chief Investment Officer  
**DATE:** October 26, 2023  
**RE:** Investment Committee Update

### **October 23, 2023, Investment Committee Meeting**

The Investment Committee met Monday October 23, 2023. The meeting was called to order and there was an acceptance of the agenda followed by an acceptance of the minutes from the September 8, 2023, meeting.

Mr. Chin provided a Public Markets Funds Management update that included a market update, manager performance and the internal development of tools for the Equity 2.0 project. Mr. Anderson then provided a preliminary internal direct investment strategy. Lastly, Mr. Moss and Mr. Zietlow provided a closed session Private Markets Portfolio Harmonization presentation. After the presentation, the investment committee approved the continuing of the project including an RFP for an external advisor.

<https://www.rio.nd.gov/sites/www/files/documents/PDFs/SIB%20Investment/Board/Materials/sibinvestmat20231023.pdf>

**BOARD ACTION REQUESTED: Information Only.**

**CUSTOMER SATISFACTION SURVEY  
NORTH DAKOTA STATE INVESTMENT BOARD  
2023**

Evaluation Forms Sent: 19  
Evaluation Forms Returned: 8

**1. Availability/Responsiveness to Requests (via calls and/or emails)**

Excellent	Above Average	Average	Poor	N/A
4	4	0	0	0

**2. Clarity and Effectiveness of Communications, Reports, and Presentations**

Excellent	Above Average	Average	Poor	N/A
2	6	0	0	0

**3. Frequency of Communications/Reporting**

Excellent	Above Average	Average	Poor	N/A
2	4	1	1	0

**4. Knowledge of Investments**

Excellent	Above Average	Average	Poor	N/A
4	4	0	0	0

**5. Overall value of services provided**

Excellent	Above Average	Average	Poor	N/A
4	4	0	0	0

**2023 Summary of SIB Client Satisfaction Survey Ratings - 8 Responses**

	Excellent	Above Average	Average	Poor	N/A
Totals	16	22	1	1	0
Weight	4	3	2	1	0
Percent	40%	55%	3%	3%	0%
<b>Average</b>	<b>3.33</b>				

**2022 Summary of SIB Client Satisfaction Survey Ratings - 11 Responses**

	Excellent	Above Average	Average	Poor	N/A
Totals	31	19	5	0	0
Weight	4	3	2	1	0
Percent	56%	35%	9%	0%	0%
<b>Average</b>	<b>3.47</b>				

**2021 Summary of SIB Client Satisfaction Survey Ratings - 12 Responses**

	Excellent	Above Average	Average	Poor	N/A
Totals	41	12	5	0	2
Weight	4	3	2	1	0
Percent	68%	20%	8%	0%	3%
<b>Average</b>	<b>3.63</b>				

**2020 Summary of SIB Client Satisfaction Survey Ratings - 13 Responses**

	Excellent	Above Average	Average	Poor	N/A
Totals	40	9	15	0	1
Weight	4	3	2	1	0
Percent	61.5%	13.8%	23.1%	0.0%	1.5%
<b>Average</b>	<b>3.39</b>				

**Overall Customer Satisfaction Survey Comments:**

- Not only meets but always goes beyond expectations - thank you for everything you do!
- It's difficult to know where our investments are at when the reporting lag is 3 or more months. Currently, in October we can only see our reports from June.
- The following responses were gathered from individual survey responses offered to the TFFR board: A better, more concise, more non-accountant type form or graph for the monthly and yearly financial reports. Something that a reasonably educated person could look at and within a few minutes get some understanding of the health or state of a fund or funds they are interested in. I think staff does a very good job meeting expectations. I'd like to see more frequent updates on customer engagement/outreach activities. I also think having a few more presentations on the Pioneer project and what the finished results will do for the system would be nice as I'm sure some of us would appreciate a refresher. The staff of RIO are very responsive to any questions and very quick to respond to any inquiries. While I know it is a work in progress, any positive public communications about the successes and benefits of TFFR are the next area of development that I believe will benefit TFFR. I believe that the SIB and RIO continue to do outstanding work in all of these areas. Reporting, transparency, investment strategy, and consideration for the needs of pensioners are consistently profound strengths. One area identified for development in the past, communications, has been bolstered by the hire and strong work of Ms. Mudder. I look forward to seeing the work that can be done with her position in the next year. The customer service and knowledge of the team is fabulous. Continue to do what has been working and looking for new ways to improve something each day.
- It would be helpful to receive the investment reports more timely each month.

## MEMORANDUM

**TO:** SIB  
**FROM:** Ryan K. Skor, CFO/COO  
**DATE:** October 19, 2023  
**RE:** Annual Budget/Expense Report

Enclosed are the following budget and expense reports for the fiscal year ended June 30, 2023:

- Expenditure Summary
- Budget Appropriation Status (with & without PAS project)
- PAS Modernization Project Summary
- Schedule of Consulting Expenses
- Schedule of Investment Expenses

**Board Action Requested:** Board acceptance.

**RETIREMENT AND INVESTMENT OFFICE  
EXPENDITURE SUMMARY REPORT  
FISCAL YEAR ENDED JUNE 30, 2023**

	TFFR		SIB		Total RIO	
	Actual Expenses	% of Total	Actual Expenses	% of Total	Actual Expenses	% of Total
<u>CONTINUING APPROPRIATIONS</u>						
INVESTMENT EXPENDITURES	\$ 15,295,817	5.4%	\$ 62,480,094	95.3%	\$ 77,775,911	22.4%
MEMBER CLAIMS						
ANNUITY PAYMENTS	254,361,928		-		254,361,928	
REFUND PAYMENTS	7,920,125		-		7,920,125	
TOTAL MEMBER CLAIMS	262,282,053	92.9%	-	0.0%	262,282,053	75.4%
OTHER CONTINUING APPROPRIATIONS	751,492	0.3%	1,120,636	1.7%	1,872,127	0.5%
TOTAL CONTINUING APPROPRIATIONS	278,329,362	98.6%	63,600,730	97.0%	341,930,092	98.3%
<u>APPROPRIATED EXPENDITURES</u>						
SALARIES AND BENEFITS	1,332,957	0.5%	2,152,375	3.3%	3,485,332	1.0%
OPERATING EXPENSES	2,320,417 •	0.8%	174,280	0.3%	2,494,697	0.7%
SIB EXPENSES ALLOCATED TO TFFR	385,510		(385,510)		-	
TOTAL APPROPRIATED EXPENDITURES	4,038,884	1.4%	1,941,145	3.0%	5,980,029	1.7%
TOTAL EXPENDITURES	\$ 282,368,246		\$ 65,541,874		\$ 347,910,120	

• Includes capital asset amounts paid through June 30, 2023 for the TFFR Pension Administration System Project that will be capitalized.

**RETIREMENT AND INVESTMENT OFFICE  
2021-2023 BIENNIUM APPROPRIATION STATUS REPORT  
AS OF JUNE 30, 2023**

	2021-2023 BUDGET	ADJUSTED APPROPRIATION	EXPENDITURES			
			BIENNIUM TO DATE ACTUAL	BUDGET AVAILABLE	% BUDGET AVAILABLE	% OF BIENNIUM REMAINING
SALARIES AND BENEFITS	\$ 5,103,977.00 *	\$ 6,848,720.40 **	\$ 5,801,640.04	\$ 1,047,080.36	15.29%	0.00%
OPERATING EXPENDITURES	3,567,403.00 *	3,642,403.00 **	2,171,932.93	1,470,470.07	40.37%	0.00%
CAPITAL ASSETS	6,300,000.00	6,300,000.00	2,149,786.50	4,150,213.50	65.88%	0.00%
CONTINGENCY	100,000.00	100,000.00	85,831.81	14,168.19	14.17%	0.00%
<b>TOTAL</b>	<b>\$ 15,071,380.00</b>	<b>\$ 16,891,123.40</b>	<b>\$ 10,209,191.28</b>	<b>\$ 6,681,932.12</b>	<b>39.56%</b>	<b>0.00%</b>

\* In addition to the Capital Assets line, the salaries and benefit line includes \$50,000 and the operating expenditure budget includes \$2,318,875 for TFFR Pension Administration System Project.

\*\* The adjusted appropriation includes additional amounts appropriated during the Special Legislative Session in November 2021 along with salary adjustments for additional internship program funding and target market equity adjustments.

**APPROPRIATION STATUS LESS PAS BUDGET AND EXPENSES  
AS OF JUNE 30, 2023**

	2021-2023 BUDGET	ADJUSTED APPROPRIATION	EXPENDITURES			
			BIENNIUM TO DATE ACTUAL	BUDGET AVAILABLE	% BUDGET AVAILABLE	% OF BIENNIUM REMAINING
SALARIES AND BENEFITS	\$ 5,053,977.00	\$ 6,798,720.40 *	\$ 5,801,640.04	\$ 997,080.36	14.67%	0.00%
OPERATING EXPENDITURES	1,248,528.00	1,323,528.00	1,260,679.45	62,848.55	4.75%	0.00%
CAPITAL ASSETS	0.00	0.00	0.00	0.00	N/A	0.00%
CONTINGENCY	100,000.00	100,000.00	85,831.81	14,168.19	14.17%	0.00%
<b>TOTAL</b>	<b>\$ 6,402,505.00</b>	<b>8,222,248.40 \$</b>	<b>7,148,151.30</b>	<b>1,074,097.10</b>	<b>13.06%</b>	<b>0.00%</b>

\* The adjusted appropriation includes additional amounts appropriated during the Special Legislative Session in November 2021 along with salary adjustments for additional internship program funding and target market equity adjustments.

**RETIREMENT AND INVESTMENT OFFICE  
SCHEDULE OF CONSULTING EXPENSES  
FOR THE YEARS ENDED JUNE 30, 2023 and 2022**

	Pension Trust		Investment Trust	
	2023	2022	2023	2022
Actuary fees:				
Segal Consulting	\$ 121,476	\$ 122,505	\$ -	\$ -
GRS Consulting	30,000	-	-	-
Total Actuary Fees	<u>151,476</u>	<u>93,241</u>	<u>-</u>	<u>-</u>
Auditing/Accounting fees:				
CliftonLarsonAllen LLP	15,750	84,999	15,750	22,460
Project management fees:				
Segal Consulting	255,599	185,909	-	-
Disability consulting fees:				
Sanford Health	250	150	-	-
Legal fees:				
K&L Gates LLP	1,351	10,649	(1,351)	13,936
Jackson Walker LLP	12,101	9,204	44,659	15,487
ND Attorney General	12,747	20,494	17,268	12,819
Total legal fees:	<u>26,199</u>	<u>40,347</u>	<u>60,576</u>	<u>42,242</u>
Total consultant expenses	<u><u>\$ 449,274</u></u>	<u><u>\$ 433,910</u></u>	<u><u>\$ 76,326</u></u>	<u><u>\$ 64,702</u></u>



**PAS MODERNIZATION PROJECT**  
**Budget vs Actual as of June 30, 2023**

	Budget	Actual Paid	Budget Status
Salaries	\$ 50,000	\$ -	\$ 50,000
Operating	2,650,000	1,242,377	1,407,623
Capital Assets	6,300,000	2,149,786	4,150,214
Total Project Budget	<u>\$ 9,000,000</u>	<u>\$ 3,392,163</u>	<u>\$ 5,607,837</u>

**ND State Investment Board  
Schedule of Investment Expenses**

	FY 2023				FY 2022			
	Average Market Value	Fees in \$	Fees as % of Average MV	Contribution to Total Fees	Average Market Value	Fees in \$	Fees as % of Average MV	Contribution to Total Fees
<b>Investment managers' fees:</b>								
Global equity managers	153,414,649	1,256,475	0.82%	0.01%	778,055,038	2,565,320	0.33%	0.01%
Domestic large cap equity managers	3,901,008,851	5,248,183	0.13%	0.03%	3,508,296,807	3,880,337	0.11%	0.02%
Domestic small cap equity managers	710,028,452	4,766,011	0.67%	0.03%	1,066,504,540	6,919,320	0.65%	0.04%
Developed international equity managers	2,794,383,481	8,253,205	0.30%	0.04%	2,615,506,915	9,620,944	0.37%	0.05%
Emerging markets equity managers	205,361,541	1,003,763	0.49%	0.01%	243,976,660	1,295,609	0.53%	0.01%
Investment grade domestic fixed income managers	5,082,705,814	9,276,058	0.18%	0.05%	5,462,267,919	13,330,897	0.24%	0.07%
Below investment grade fixed income managers	757,991,840	13,916,976	1.84%	0.07%	744,017,535	11,176,827	1.50%	0.06%
Real estate managers	1,481,965,576	451,825	0.03%	0.00%	1,328,183,734	10,055,390	0.76%	0.05%
TIPS managers	540,756,966	632,633	0.12%	0.00%	684,813,857	759,536	0.11%	0.00%
Timber managers	117,024,703	814,521	0.70%	0.00%	142,726,721	936,658	0.66%	0.00%
Infrastructure managers	922,643,719	18,183,038	1.97%	0.10%	796,049,219	28,966,983	3.64%	0.15%
Private equity managers	839,335,084	9,089,546	1.08%	0.05%	666,645,838	10,242,017	1.54%	0.05%
Short term bond managers	780,813,029	879,205	0.11%	0.00%	765,934,121	867,223	0.11%	0.00%
Balanced fund managers	237,744,407	1,041,946	0.44%	0.01%	264,062,038	1,173,541	0.44%	0.01%
Cash & equivalents managers	170,662,726	261,127	0.15%	0.00%	132,831,403	201,849	0.15%	0.00%
<b>Total investment management fees</b>	<b>18,695,840,839</b>	<b>75,074,513</b>	<b>0.40%</b>		<b>19,199,872,344</b>	<b>101,992,451</b>	<b>0.53%</b>	
Custodian fees		1,457,180	0.01%	0.01%		1,597,784	0.01%	0.01%
Investment consultant fees		781,620	0.00%	0.00%		569,956	0.00%	0.00%
SIB Administrative fees		3,620,374	0.02%	0.02%		2,401,614	0.01%	0.01%
<b>Total investment expenses</b>		<b>80,933,686</b>	<b>0.43%</b>			<b>106,561,805</b>	<b>0.56%</b>	
<b>Performance/Incentive Fees (included in totals above)</b>								
Domestic large cap equity managers		810,463	0.02%	0.00%		(1,626,614)	-0.01%	0.00%
Domestic small cap equity managers		-	0.00%	0.00%		-	0.00%	0.00%
Developed international equity managers		850,152	0.03%	0.00%		186,251	0.01%	0.00%
Emerging markets equity managers		8,584	0.00%	0.00%		-	0.00%	0.00%
Investment grade domestic fixed income managers		1,027,773	0.02%	0.00%		1,521,483	0.02%	0.00%
Below investment grade fixed income managers		5,935,721	0.78%	0.03%		5,938,304	0.45%	0.02%
Real estate managers		(7,840,771)	-0.53%	-0.04%		2,215,907	0.17%	0.01%
Infrastructure managers		8,305,051	0.90%	0.04%		16,628,448	0.58%	0.02%
<b>Total Performance Fees Paid (excluding private equity)</b>		<b>9,096,973</b>	<b>0.05%</b>			<b>24,863,779</b>	<b>0.13%</b>	
<b>Breakdown of Total Fees by Pool</b>								
Pension	6,971,571,671	34,031,341	0.49%		7,467,975,530	53,028,514	0.71%	
Insurance	2,899,814,778	7,122,555	0.25%		3,101,308,221	7,959,546	0.26%	
Legacy	8,586,065,828	38,824,292	0.45%		8,359,201,542	44,378,730	0.53%	

# Quarterly Report on Ends

## Quarter ending September 30, 2023

### Investment Program

#### Quarter Highlights

Highlights of the quarter include a range of activity from funding new investments, onboarding new technology, and starting new initiatives.

At the plan level, we initiated two key endeavors: bringing Verus on board as a benchmark consultant and crafting an RFP for the acquisition of an order and execution management system. The annual compliance project began at the start of the fiscal year and the review of the investment manager documentation has been underway.

Altor Fund VI and Kelso Investment Associates XI, the two private equity commitments that were approved last quarter have been finalized. Hamilton Lane, a new private markets data solution provider has been onboarded. This platform will assist the private markets team with monitoring and identifying private market funds.

In public markets, the transition from Axiom Emerging Markets to DFA EM All Cap Core was completed over the quarter. The team continues to work on the Equity 2.0 project.

#### Portfolio Changes & Investment Consultant

Axiom (Emerging Markets Equity) has transitioned to DFA EM All Cap Core

#### Other

- Staff continues to conduct due diligence on prospect managers/products for future consideration.
- Staff continues to monitor each client's asset allocation monthly and makes rebalancing decisions based on rebalancing policy and cash flow requirements.
- Staff attended meetings with many SIB client boards, sub-committees and/or legislative committees or representatives including TFFR, PERS, and WSI.
- There are currently no managers on the watch list.

# NDRIO Investment Due Diligence Quarterly Monitoring Report

Jul-01-2023 to Sep-30-2023

Date	Firm	Subject	Location	RIO Attendees
7/5/2023	Bain	Introduction	Onsite	Lance Zietlow
7/5/2023	TIR	Timber Discussion	Call	George Moss, Lance Zietlow
7/6/2023	Commonfund	Secondaries Discussion	Call	George Moss, Lance Zietlow
7/6/2023	Brevan Howard	Introduction	Onsite	Eric Chin, Lance Zietlow
7/7/2023	PIMCO	Introduction	Onsite	Lance Zietlow
7/11/2023	Lone Star Funds	LSFXII / LSREFVII	Call	George Moss, Lance Zietlow
7/11/2023	McGinty Road Partners	Introduction	Call	George Moss, Lance Zietlow
7/12/2023	William Blair & Company	Review	RIO	Derek Dukart, Jason Yu, Matthew Posch, Nitin Vaidya
7/12/2023	Cerberus	Correspondence	Call	Lance Zietlow
7/12/2023	Hamilton Lane	NDSIB / HL - Services Agreement	Call	George Moss, Lance Zietlow
7/13/2023	Macquarie	MIP IV LPAC Meeting	Call	George Moss, Lance Zietlow
7/13/2023	Pzena Investment Management	Introduction	Onsite	Lance Zietlow
7/13/2023	CenterSquare	Introduction	Onsite	Lance Zietlow
7/14/2023	TIR	Timber Update	Call	George Moss, Lance Zietlow
7/17/2023	Principal	Introduction	Onsite	Lance Zietlow

7/17/2023 Willow Tree Credit Partners	Introduction	Call	George Moss, Lance Zietlow
7/18/2023 Finback Investment Partners	Follow-up	Call	George Moss, Lance Zietlow
7/18/2023 ABR Capital Partners	Introduction	Call	George Moss, Lance Zietlow
7/19/2023 Ares	Introduction: Real Estate Secondaries	Call	George Moss, Lance Zietlow
7/19/2023 Drive Capital	Introduction	Onsite	Lance Zietlow
7/19/2023 Generational Partners	Introduction	Call	George Moss, Lance Zietlow
7/19/2023 AgAmerica	Introduction	Call	George Moss, Lance Zietlow
7/20/2023 Hamilton Lane	NDSIB / HL - Services Agreement	Call	George Moss, Lance Zietlow
7/20/2023 Portfolio Advisors	Introduction: GP-led Secondaries	Call	George Moss, Lance Zietlow
7/21/2023 Adams Street Partners	Introduction: Secondaries	Call	George Moss, Lance Zietlow
7/24/2023 K1	Introduction	Call	Lance Zietlow
7/24/2023 JP Morgan	Follow ups from NDSIB/JPM US Equities meeting	Onsite	Derek Dukart
7/24/2023 Investcorp	Introduction: GP Stakes	Call	George Moss, Lance Zietlow
7/25/2023 Two Sigma	Introduction: Private Market Capabilities	Onsite	George Moss, Lance Zietlow
7/26/2023 Cerberus	Supply Chain Fund	Onsite	George Moss, Lance Zietlow
7/26/2023 Acadian	Acadian Update	Onsite	Eric Chin, Matthew Posch
7/26/2023 Kelso	On-Site Due Diligence	Onsite	George Moss, Lance Zietlow, Scott Anderson
7/27/2023 JP Morgan	Annual Review	Onsite	George Moss, Lance Zietlow
7/27/2023 Strategic Global Advisors	SGA - International and Global Equities	Onsite	Matthew Posch
7/27/2023 GQG Partners	GQG / ND - Thank you & Follow up	Onsite	Derek Dukart, Eric Chin

7/27/2023	Two Sigma	Two Sigma   Thank you & follow-ups	Onsite	Derek Dukart, Eric Chin
7/28/2023	Westport Capital	Introduction	Call	George Moss, Lance Zietlow
7/28/2023	Benefit Street	Introduction	Call	George Moss, Lance Zietlow
7/28/2023	KKR	Real Estate Introduction	Call	Lance Zietlow
7/31/2023	Principal	Introduction: Data Center Growth & Income	Call	George Moss, Lance Zietlow
8/1/2023	EnTrust	Introduction: Blue Ocean	Call	George Moss, Lance Zietlow
8/2/2023	Harrison Street	Introduction	Call	George Moss, Lance Zietlow
8/2/2023	Veritas Capital	Introduction	Call	George Moss, Lance Zietlow
8/3/2023	Millennium/Worldquant	Prospect Meeting	Onsite	Derek Dukart, George Moss, Lance Zietlow, Matthew Posch, Nitin Vaidya
8/3/2023	General Atlantic	Follow-up	Call	George Moss, Lance Zietlow
8/3/2023	Manulife	Introduction: PM Capabilities	Call	George Moss, Lance Zietlow
8/4/2023	Neuberger Berman	Introduction: PE/Co-invest	Call	George Moss, Lance Zietlow
8/4/2023	Stafford Capitol Partners	Timber follow-up	Call	George Moss, Lance Zietlow
8/7/2023	Cerberus	Follow-up: NPL Fund	Call	George Moss, Lance Zietlow
8/8/2023	Kelso	Kelso Correspondence	Onsite	Lance Zietlow
8/8/2023	Northlight Capital	Introduction	Call	George Moss, Lance Zietlow
8/8/2023	Grosvenor	Portfolio Update	Call	George Moss, Lance Zietlow
8/8/2023	CIFC	Follow-up: Credit Strategy	Call	George Moss
8/8/2023	Tiger Global Management	Meeting - North Dakota Legacy Fund   Tiger Global	Onsite	Lance Zietlow
8/9/2023	50 South Capital	In-state Private Equity Pacing	Call	George Moss, Lance Zietlow, Scott Anderson

8/9/2023 RVK	In-state Private Equity Pacing	Call	George Moss, Lance Zietlow, Scott Anderson
8/10/2023 HIG	PE Fundraise Follow-up	Call	George Moss
8/10/2023 RCP	Co-invest and Emerging Mgr Platforms	Call	George Moss
8/11/2023 Portfolio Advisors	Follow-up: GP-led Secondaries	Call	George Moss, Lance Zietlow
8/15/2023 Aether	Introduction	Call	Lance Zietlow
8/16/2023 Lime Rock	Introduction	Call	Lance Zietlow
8/17/2023 Pretium	Introduction	Call	George Moss, Lance Zietlow
8/17/2023 Blue Owl Capital	Blue Owl Introduction	Call	George Moss, Lance Zietlow
8/18/2023 Invesco	Private Credit	Onsite	Lance Zietlow
8/18/2023 Invesco	Real Estate Asia V	Onsite	George Moss
8/18/2023 Kelso	Due Diligence	Call	George Moss, Lance Zietlow
8/22/2023 Ares Management LLC	Ares Annual Investment Meeting	Onsite	George Moss, Lance Zietlow
8/23/2023 Valor	Follow-up: Valor Equity Partners	Onsite	George Moss, Lance Zietlow
8/23/2023 Parametric	Manager Meeting	Onsite	Derek Dukart, Eric Chin, George Moss, Jason Yu, Matthew Posch, Nitin Vaidya
8/28/2023 Charlesbank	Introduction: Credit Opportunities Fund III	Call	George Moss, Lance Zietlow
8/29/2023 Jacobs Levy Equity Management	Jacobs Levy Intro	Call	Derek Dukart, Eric Chin, Jason Yu, Matthew Posch, Nitin Vaidya
8/29/2023 Adams Street Partners	Kelso Discussion	Call	George Moss, Lance Zietlow
8/30/2023 WAMCO	Introduction: CLO and private credit products	Call	George Moss, Lance Zietlow
8/31/2023 Labyrinth	Introduction	Call	George Moss
8/31/2023 S2 Capital	Introduction	Call	George Moss, Lance Zietlow

9/5/2023 Barings	Introduction: Private credit capabilities	Call	George Moss, Lance Zietlow
9/5/2023 KKR	Introduction: Real Estate	Call	George Moss, Lance Zietlow
9/6/2023 Cerberus	Update: Supply Chain Fund, NPL Fund and Private Credit	Onsite	George Moss, Lance Zietlow Derek Dukart, Eric Chin, Jason Yu, Matthew Posch, Nitin Vaidya
9/7/2023 Barings	Review	Onsite	George Moss, Lance Zietlow
9/7/2023 KKR	Introduction: Opportunistic Real Estate Credit	Onsite	George Moss, Lance Zietlow
9/11/2023 Sixth Street Advisors	Cardworks Discussion	Call	George Moss, Lance Zietlow
9/11/2023 Montana Capital	Introduction: Secondaries	Call	George Moss, Lance Zietlow
9/12/2023 Manulife	Introduction: Secondaries	Call	George Moss, Lance Zietlow
9/12/2023 Edison Partners	Introduction: Growth Equity	Call	George Moss, Lance Zietlow
9/12/2023 PAG	Credit Opportunity Fund (Asia)	Call	George Moss, Lance Zietlow
9/12/2023 Stafford Capitol Partners	Introduction: Other Capabilities & Strategies	Call	George Moss, Lance Zietlow
9/13/2023 Adams Street Partners	Introduction: Private Credit & BDC	Call	George Moss, Lance Zietlow
9/13/2023 Ares	Introduction: Ares Corporate Opportunities Fund (ACOF)	Call	George Moss, Lance Zietlow
9/13/2023 Guidepost	Introduction	Call	George Moss, Lance Zietlow
9/13/2023 Prudential	Introduction: Real Estate Tactical Credit	Call	George Moss, Lance Zietlow
9/14/2023 Neuberger Berman	Follow-up: GP-Led and Real Estate Secondaries	Call	George Moss, Lance Zietlow
9/14/2023 Fortress	Introduction	Call	George Moss, Lance Zietlow
9/15/2023 AXA	Introduction	Call	George Moss, Lance Zietlow
9/18/2023 PIMCO	Catch-up	Call	George Moss, Lance Zietlow
9/18/2023 Macquarie	Catch-up	Call	George Moss, Lance Zietlow



9/18/2023	Portfolio Advisors	Follow-up: GP-led Secondaries	Call	George Moss, Lance Zietlow
9/19/2023	50 South Capital	Follow-up with RVK	Call	George Moss, Lance Zietlow
9/19/2023	EnCap	Catch-up: Fundraising and in-state Investments	Call	George Moss
9/19/2023	Iron Point Partners	Catch-up	Call	Lance Zietlow
9/19/2023	TIR	Follow up: Springbank performance	Call	George Moss, Lance Zietlow
9/20/2023	GoldenTree	Introduction	Call	George Moss, Lance Zietlow
9/20/2023	BroadRiver	Introduction	Call	George Moss, Lance Zietlow
9/20/2023	Blue Owl Capital	Follow-up: GP-Led Secondaries Team	Call	George Moss, Lance Zietlow
9/21/2023	Cerberus	Follow up: NPL Fund 2	Call	George Moss, Lance Zietlow
9/21/2023	Barings	Follow up: In-state Investment Program	Call	George Moss, Lance Zietlow
9/21/2023	Anchorage Capital	Introduction	Call	George Moss, Lance Zietlow
9/22/2023	HarbourVest	Introduction: Secondaries / Dover Street XI	Call	George Moss, Lance Zietlow
9/25/2023	White Wolf Capital	Follow-up: SBIC Fund	Call	George Moss
9/26/2023	Atlantic Pacific	Introduction (cap intro)	Call	George Moss
9/27/2023	Briarcliffe	Follow-up: Private Credit (cap intro)	Call	George Moss
9/28/2023	HIG	Follow-up: Advantage Buyout and Capital Partners	Call	George Moss
9/29/2023	Mudrick Capital	Introduction	Call	George Moss

## MEMORANDUM

**TO: SIB**  
**FROM: Jan Murtha, Executive Director**  
**DATE: October 20, 2023**  
**RE: Executive Limitations**

Ms. Murtha will provide a verbal update at the meeting on staff relations and strategic planning. Including updates on the following topics:

### I. New Board & Committee Member Update

Board and committee members have been provided access to current onboarding materials. The next in person onboarding meeting has been scheduled for Monday, October 30, 2023, at 1:00 p.m. in the WSI Board room. A Teams link will be provided for those unable to attend in person. Staff is working on creating a survey tool for these training sessions.

### II. Retirements/Resignations/FTE's/Temporary Assistance:

Position Title*	Status
Retirement Membership Specialist	Posting closed. Interviews to be scheduled.

\*Remaining new FTEs related to the Internal Investment program are expected to be posted in 2024.

### III. Current Project Activities/Initiatives:

- **TFFR Pioneer Project** – The TFFR Pioneer Project continues with implementation consistent with the project plan. Currently the project is in an elaboration phase involving review of system components. The amount of time spent on the project by various staff members continues to vary from 5 to 25 hours or more per week.
- **Northern Trust Initiative** – In an effort to enhance the infrastructure for the investment program the Investment and Fiscal teams continues to coordinate with Northern Trust for additional functionality/capabilities.
- **Audit Consultant Report:** Staff has created an Executive Steering committee comprised of the ED, CFO/COO, and IA Supervisor to oversee a project to implement recommendations from Weaver Consulting. A project plan for implementing the recommendations will be provided to the Audit Committee in November.
- **Compensation Study RFP:** An RFP for a Compensation Study was issued for consultant services necessary to prepare and present an incentive compensation plan for approval to the Board and develop

compensation goals for agency positions. The ERCC issued an award in August and staff is currently finalizing contract negotiations with the successful bidder.

- **Investment Program Software Solutions:** Staff has identified the procurement activities necessary to facilitate the technology infrastructure necessary to move forward with internal investment management. The Investment Committee has reviewed and approved the corresponding procurement plan. Further updates will be provided at the meeting.

#### **IV. Board & Committee Presentations September 23, 2023, through October 27, 2023.**

Staff attended/provided or is scheduled to attend/provide the following presentations to Boards and Committees during the above referenced time period:

- **BND Interim Study Discussion – 9/28/23**
- **National Council on Teacher Retirement Annual Meeting – 10/7 to 10/10**
- **SIB Investment Committee – 10/23/23**
- **SIB GPR Committee – 10/12/23**
- **NDCEL (Council of Educational Leaders) Conference – 10/20**
- **SIB Investment Committee – 10/23/23**
- **RIO All Staff Training – 10/24/23**
- **Employee Benefits Programs Committee (Legislature) – Rescheduled**
- **Cash Management Interim Study Discussion – Rescheduled**
- **SIB meeting – 10/26/23**
- **TFFR Admin Rules public hearing – 10/27/23**
- **ND School Boards Association Conference – 10/27/23**

#### **V. Executive Director Education/Travel Activities**

October 7<sup>th</sup> through the 10<sup>th</sup>, 2023, myself and Deputy ED – Chief Retirement Officer Chad Roberts attended the National Council on Teacher Retirement (NCTR) Annual Conference. This organization collects and provides information and education specifically on issues impacting public pension systems serving educators.

**Board Action Requested:** Board acceptance.