

**Friday, May 20, 2022, 8:30 a.m.**  
**WSI Board Room (In-Person)**  
**Teleconferencing: 701.328.0950 Participant Code: 910 196 7#**  
**1600 E Century Ave, Bismarck, ND**

AGENDA

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

A. Executive Summary

**II. ACCEPTANCE OF MINUTES (April 22, 2022)**

**III. BOARD EDUCATION (45-60 minutes)**

- A. Inflation, Interest Rates, Bond Returns – Scott Anderson
- B. Risk Management – Dr. Paul White

**IV. INVESTMENTS (60-75 minutes)**

- A. Callan Quarterly Performance Review – Paul Erlendson, Alex Browning
- B. Manager and Portfolio Changes<sup>1</sup> Executive Session – Scott Anderson
- C. Lewis & Clark Interpretive Center Endowment Fund-Revised IPS – Connie Flanagan

(Break)

**V. GOVERNANCE (30-45 minutes)**

- A. Governance & Policy Review Committee Update – Dr. Lech, Mr. Anderson, Ms. Murtha
- B. Executive Review Committee Update<sup>2</sup> – Mr. Olson, Ms. Flanagan, Ms. Sauter
- C. Board & Committee Calendar – Ms. Murtha

**VI. Quarterly Monitoring Reports (20 minutes)**

- A. Audit Committee Report – Ms. Sauter
- B. Executive Limitations/Staff Relations – Ms. Murtha

**VII. OTHER (5 minutes)**

Resolution in Recognition of Connie Flanagan

**Next Meetings:**

SIB GPR Committee – May 18, 2022  
TFFR Board – July 21, 2022  
State Investment Board – July 22, 2022

**VIII. ADJOURNMENT**

An informal reception for Ms. Flanagan in recognition of her retirement will be held following the meeting.

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<sup>1</sup> Executive session pursuant to NDCC 44-04-18.4(1), 44-04-19.1(9), and 44-04-19.2 to discuss confidential commercial information and contract negotiating strategy.

<sup>2</sup> Executive session pursuant to NDCC 44-04-18.4(1), and 44-04-19.2 to review and discuss confidential commercial information

# EXECUTIVE SUMMARY

## SIB Regular Meeting

May 20 2022 – 8:30am CT

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- I. **Agenda:** The May 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. There will be a call-in number for the public.
- II. **Minutes (Board Action):** The April 22, 2022, Board meeting minutes are included for review and approval.
- III. **A. Board Education – Inflation, Interest Rates, Bond Returns (Information Only):** Mr. Anderson, CIO, will provide the Board with education on inflation, interest rates and bond returns; and how these factors affect the investment portfolio.  
**B. Board Education – Risk Management (Information Only):** Dr. White, CRO, will provide the Board with education on risk management practices that support management of the investment portfolio.
- IV. **A. Callan Quarterly Performance Review (Board Action):** Callan will provide an investment performance review which includes a reconciliation of RIO's reported investment returns and asset valuations with those reported by Northern Trust (primary custodian) for Board acceptance.  
**B. Manager & Portfolio Changes (Board Action for Executive Session):** Staff will present suggested manager and portfolio changes for consideration by the Board. Materials will be provided to the Board via a secure link.  
**C. Lewis & Clark Interpretive Center Endowment Fund-Revised IPS (Board Action):** Ms. Flanagan, CFO/COO, will present a revised investment policy statement for Board acceptance.
- V. **A. Governance & Policy Review Committee Update (Possible Board Action):** Staff will provide an update to the Board regarding recommendations from the SIB-GPR committee. The next committee meeting is currently scheduled for May 18, 2022, and materials will be provided subsequent to that meeting.  
**B. Executive Review Committee Update (Board Action):** Mr. Olson will present the Executive Director performance review, as well as salary recommendations from the committee. Discussion of confidential commercial information related to peer salary surveys require an executive session.  
**C. Board & Committee Calendar (Board Action):** Proposed 2022/23 SIB calendar for board approval. TFFR and Committee dates are included for reference.
- VI. **A-B. Reports (Board Action):** Staff will provide quarterly monitoring reports for internal audit and executive limitations/ staff relations.
- VII. **Other (Board Action):** A Board Resolution in recognition of Connie Flanagan is included for Board consideration. An informal retirement reception for Ms. Flanagan will follow the Board meeting.

**Adjournment.**

**NORTH DAKOTA STATE INVESTMENT BOARD  
MINUTES OF THE  
APRIL 22, 2022, BOARD MEETING (IN PERSON)**

**MEMBERS PRESENT:** Brent Sanford, Lt. Governor, Chair  
Dr. Rob Lech, TFFR Board, Vice Chair  
Thomas Beadle, State Treasurer  
Glenn Bosch, Legacy/Budget Stab. Adv. Board Rep  
Jon Godfread, Insurance Commissioner  
Joseph Herringer, Commissioner of Unv & School Lands  
Bryan Klipfel, Director of WSI  
Cody Mickelson, TFFR Board  
Adam Miller, PERS Board  
Mel Olson, TFFR Board  
Kim Riedlinger Wassim, PERS Board Alternate  
Yvonne Smith, PERS Board

**STAFF PRESENT:** Scott Anderson, CIO  
Eric Chin, Deputy CIO  
Connie Flanagan, CFO  
Missy Kopp, Exec Assistant  
Jayme Heick, Retirement Prog Spec  
Jan Murtha, Exec Dir  
Ann Nagel, Investment Accountant  
Matt Posch, Investment/Compliance Officer  
Emmalee Riegler, Contracts/Records Admin  
Sara Sauter, Internal Audit Supvr  
Rachelle Smith, Retirement Assistant  
Dottie Thorsen, Internal Auditor  
Tami Volkert, Employer Svs Coor  
Susan Walcker, Senior Financial Accountant  
Dr. Paul White, Chief Risk Officer

**GUESTS:** Jace Beehler, Gov Office  
Alex Browning, Callan  
Dean DePountis, Attorney General's Office  
Candace Johnson, Securities Commission  
Keith Kempenich, Legacy/Budget Stab. Adv. Board  
Jerry Kline, Legacy/Budget Stab. Adv. Board  
Brian Krochus, Tax Commissioner  
Scott Miller, PERS  
Adam Montgomery, Securities Commission  
Joe Morrissette, Director of OMB  
Bryan Reinhardt, PERS  
Colton Schulz, Insurance Department  
Karen Tyler, Securities Commissioner  
Teleconference Guests - 5

**CALL TO ORDER:**

Lt. Gov. Sanford Chair, called the State Investment Board (SIB) regular meeting to order at 8:30 a.m. on Friday, April 22, 2022. 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, Commissioner Godfread, Commissioner Heringer, Mr. Klipfel, Dr. Lech, Mr. Mickelson, Mr. Miller, Mr. Olson, Ms. Riedlinger Wassim, Lt. Gov. Sanford, and Ms. Smith.

**ACCEPTANCE OF AGENDA:**

The Board considered the agenda for the April 22, 2022, meeting.

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

**AYES: COMMISSIONER HERINGER, TREASURER BEADLE, MR MILLER, COMMISSIONER GODFREAD, MR. OLSON, MR KLIPFEL, MR. MICKELSON, MS. WASSIM, DR. LECH, MS. SMITH, AND LT. GOV. SANFORD**

**NAYS: NONE**

**MOTION CARRIED**

**MINUTES:**

The Board considered the minutes of the March 25, 2022, SIB meeting.

**IT WAS MOVED BY COMMISSIONER GODFREAD AND SECONDED BY MS. SMITH AND CARRIED BY A VOICE VOTE TO APPROVE THE MARCH 25, 2022, MINUTES AS DISTRIBUTED.**

**AYES: MR. MICKELSON, COMMISSIONER HERINGER, MS. SMITH, MR. KLIPFEL, TREASURER BEADLE, DR. LECH, COMMISSIONER GODFREAD, MR. OLSON, MR. MILLER, MS. WASSIM, AND LT. GOV. SANFORD**

**NAYS: NONE**

**MOTION CARRIED**

**BOARD EDUCATION:**

**Fund Return & Risk:**

Mr. Anderson provided education on fund risk and return. Return and risk are defined where compensated risk adds benefit when optimized and controlled in a well-constructed fund. The presentation included information on the value of an investment, market risk, sources of risk, tracking error risk, and fund management opportunities.

**INVESTMENTS:**

**Private Placement Opportunity Update:**

**IT WAS MOVED BY DR. LECH AND SECONDED BY MR. MILLER AND CARRIED BY A ROLL CALL VOTE TO ENTER EXECUTIVE SESSION PURSUANT TO NDCC 44-04-18.4(1) TO DISCUSS CONFIDENTIAL COMMERCIAL AND FINANCIAL INFORMATION.**

**AYES: MR. OLSON, MS. WASSIM, COMMISSIONER HERINGER, MR. MICKELSON, COMMISSIONER GODFREAD, MS. SMITH, MR. MILLER, TREASURER BEADLE, MR. KLIPFEL, DR. LECH, AND LT. GOV. SANFORD**

**NAYS: NONE**

**MOTION CARRIED**

The executive session began at 9:15 a.m. and ended at 9:22 a.m. In attendance were Board members, RIO staff, Mr. Depountis, and Mr. Schulz.

Manager & Investment Portfolio Changes:

**IT WAS MOVED BY DR. LECH AND SECONDED BY COMMISSIONER GODFREAD AND CARRIED BY A VOICE VOTE TO ENTER EXECUTIVE SESSION PURSUANT TO NDCC 44-04-18.4(1), 44-04-19.1(9), AND 44-04-19.2 TO DISCUSS CONFIDENTIAL COMMERCIAL INFORMATION AND CONTRACT NEGOTIATING STRATEGY.**

**AYES: TREASURER BEADLE, MR. MICKELSON, COMMISSIONER GODFREAD, MR. KLIPFEL, COMMISSIONER HERINGER, MS. SMITH, DR. LECH, MR. MILLER, MS. WASSIM, MR. OLSON, AND LT. GOV. SANFORD**  
**NAYS: NONE**  
**MOTION CARRIED**

The executive session began at 9:24 a.m. and ended at 9:47 a.m. In attendance were Board members, RIO staff, Mr. DePountis, and Mr. Schulz.

**IT WAS MOVED BY DR. LECH AND SECONDED BY COMMISSIONER GODFREAD AND CARRIED BY A ROLL CALL VOTE TO APPROVE STAFF TO PROCEED AS DISCUSSED AND REPORT BACK IN MAY.**

**AYES: MS. SMITH, MR. MILLER, MR. OLSON, MR. MICKELSON, DR. LECH, MS. WASSIM, MR. KLIPFEL, COMMISSIONER GODFREAD, COMMISSIONER HERINGER, TREASURER BEADLE, AND LT. GOV. SANFORD**  
**NAYS: NONE**  
**MOTION CARRIED**

The Board recessed at 9:50 a.m. and reconvened at 10:04 a.m.

**GOVERNANCE:**

Legacy & Budget Stabilization Fund Advisory Board (LBSFAB) Update:

Ms. Murtha shared an update from the LBSFAB meeting on April 8, 2022. RVK provided a project kick-off presentation for the asset allocation study of the Legacy Fund and the development of policies and guidelines for the in-state equity investment program. RVK outlined project scope, timing, and deliverables.

Governance & Policy Review (GPR) Committee Update:

Ms. Murtha provided an update from the GPR Committee meeting on April 21, 2022. The Committee elected officers, received education from staff on board and committee composition, internal investment management, and staff levels. The Committee will approve its meeting schedule at their meeting in May. Dr. Lech shared the Committee's plan to focus on prioritizing what topics will be dealt with first. Currently, the Committee plans to focus on analyzing SIB membership and composition, the formation of an investment committee, and the potential for internal investment and the staffing needs to accomplish this.

Securities Litigation Committee Member Appointment:

Ms. Murtha discussed the vacancies on the Securities Litigation Committee. There are two vacant Board member positions and one pending staff member position on the Committee. The first vacancy occurred when former Land Commissioner Jodi Smith resigned, Commissioner Heringer is willing to fill that opening. The other opening was previously filled by Mr. Seibel from the PERS Board. Mr. Klipfel has agreed to fill that opening. Upon Ms. Flanagan's retirement, staff recommended that Mr. Anderson be appointed as her replacement. SIB Governance Policy B-6 outlines the membership of this standing committee. Vacancies are filled by the SIB Chair. Lt. Gov. Sanford appointed Commissioner Heringer, Mr. Klipfel, and Mr. Anderson to the Securities Litigation Committee.

Audit Committee Member Appointment:

Ms. Murtha discussed the vacancy on the Audit Committee. Dr. Lech was appointed to serve on the SIB GPR Committee and requested that he be replaced on the Audit Committee. Dr. Lech represented TFFR on the Audit Committee, so he must be replaced with another TFFR representative. The Audit Committee charter requires that the Board appoints new members to the Committee.

**IT WAS MOVED BY DR. LECH AND SECONDED BY MR. OLSON AND CARRIED BY A ROLL CALL VOTE TO APPOINT MR. MICKELSON TO THE AUDIT COMMITTEE.**

**AYES: TREASURER BEADLE, MS. WASSIM, MR. OLSON, COMMISSIONER HERINGER, DR. LECH, MR. MILLER, COMMISSIONER GODFREAD, MR. MICKELSON, MS. SMITH, MR. KLIPFEL, AND LT. GOV. SANFORD**

**NAYS: NONE**

**MOTION CARRIED**

Executive Review Committee (ERC) Update:

Mr. Olson provided an update from the ERC. The ERC met on April 28, 2022, to review the survey and performance evaluation for the ED. The ERC will complete an evaluation of the ED then evaluate the budget before deciding on a recommendation of salary for SIB action in May.

**REPORTS:**

Investment Ends:

Mr. Chin provided the Quarterly Investment Ends Report for quarter one of 2022. During the quarter, the Chief Investment Officer, Scott Anderson, and Chief Risk Officer, Dr. Paul White joined the staff. Staff completed the Request for Proposal (RFP) process to identify a consultant for the asset allocation study and in-state investment program for the Legacy Fund. The LBSFAB selected RVK for both projects. The Board approved Arrowstreet Capital as an investment manager.

Budget/Financial Conditions Report:

Ms. Flannagan provided a summary of the Budget/Financial Conditions as of March 31, 2022. RIO is under budget at this point in the biennium. The report includes the Pension Administration System (PAS) project expenditures and investment expenses.

Executive Limitations/Staff Relations Report:

Ms. Murtha provided an update on staffing, procurement activities, and open record/media requests. The Deputy ED/Chief Retirement Officer position posting closed, and staff will conduct initial interviews in the next few weeks. The reclassification request for the Chief Financial Officer position was verbally denied. Staff plan to post at the current classification to get the process started then will appeal the denial as soon as written notification is received. Staff still hope to fill the position prior to Ms. Flannagan's departure.

The Accounting Manager position has been classified and posted with a closing date of May 2, 2022. The remaining classification requests are still pending a response from HRMS. The classification delays are impeding RIO's ability to pursue its strategic plan activities. Board members expressed their displeasure at the delay of classification when the positions and the budget were approved by the legislature.

The PAS project was awarded to Sagitec and an on-site kick-off meeting has been scheduled for May 16 and 17. Ms. Murtha will be including open records and media requests in this report to give the Board an understanding of the amount of time that is involved in responding to these requests. Staff are working to set up nd.gov email addresses for Board and Committee members who are not state employees to offer improved cybersecurity.

**IT WAS MOVED BY COMMISSIONER HERINGER AND SECONDED BY MR. OLSON AND CARRIED BY A VOICE VOTE TO ACCEPT THE INVESTMENT ENDS, BUDGET/FINANCIAL CONDITIONS, AND EXECUTIVE LIMITATIONS/STAFF RELATIONS REPORTS.**

**AYES: MR. KLIPFEL, MR. OLSON, COMMISSIONER GODFREAD, TREASURER BEADLE, COMMISSIONER HERINGER, DR. LECH, MR. MILLER, MS. SMITH, AND MR. MICKELSON**

**NAYS: NONE**

**MOTION CARRIED**

**ABSENT: LT. GOV. SANFORD**

**ADJOURNMENT:**

With no further business to come before the SIB, Dr. Lech adjourned the meeting at 10:22 a.m.

Respectfully Submitted:

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Lt. Governor Sanford, Chair  
State Investment Board

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Missy Kopp  
Recorder





# Inflation, Interest Rates and Bond Returns

Scott M Anderson, CFA

May 2, 2022

NORTH  
**Dakota**  
Be Legendary.

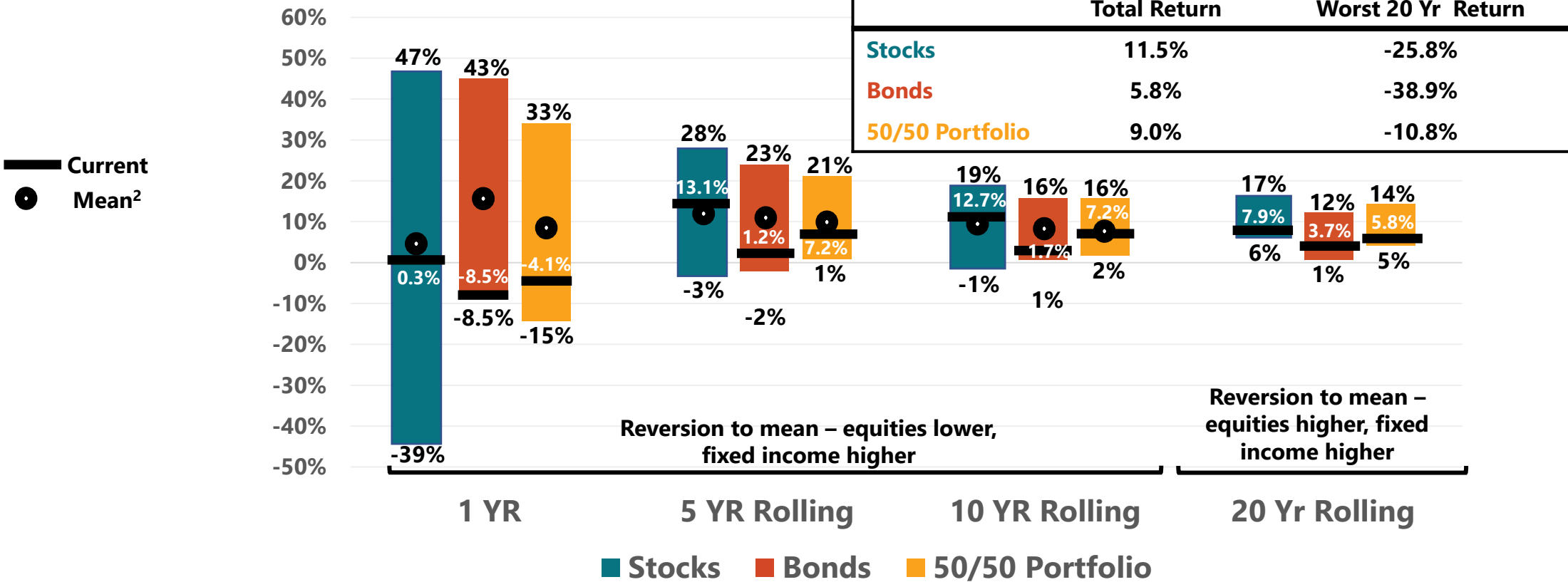
Retirement & Investment



# MARKET RETURNS IN PERSPECTIVE

## Range of Stock, Bond and Blended Returns<sup>1</sup>

(Annual Total Returns, 1950 – 2021)



1. JPM Guide to Markets – Factset, Bloomberg, Federal Reserve, Robert Shiller and Strategis/Ibbotson

2. Simple average of the range

# INFLATION IS THE GENERAL INCREASE IN PRICES OF GOODS AND SERVICES

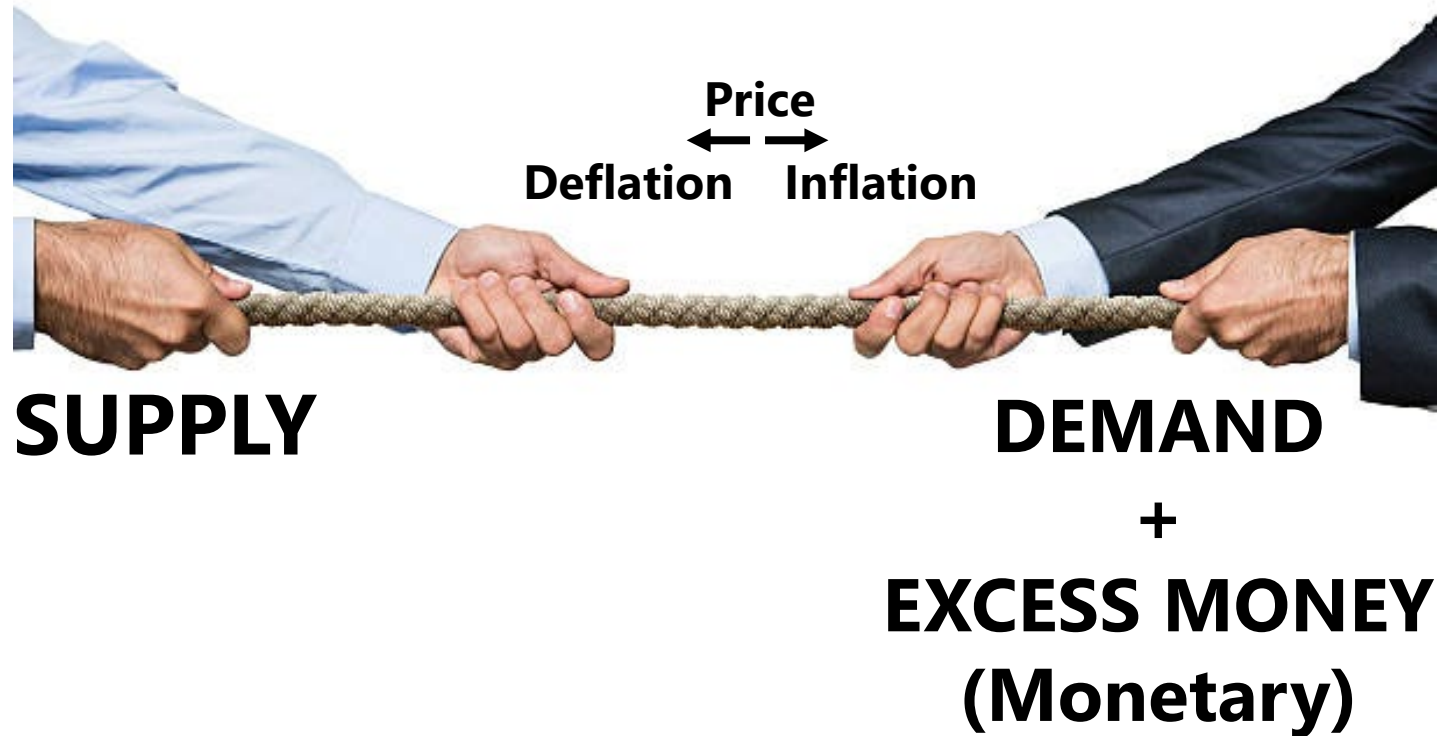


# PRICES ARE A TUG OF WAR OF SUPPLY AND DEMAND

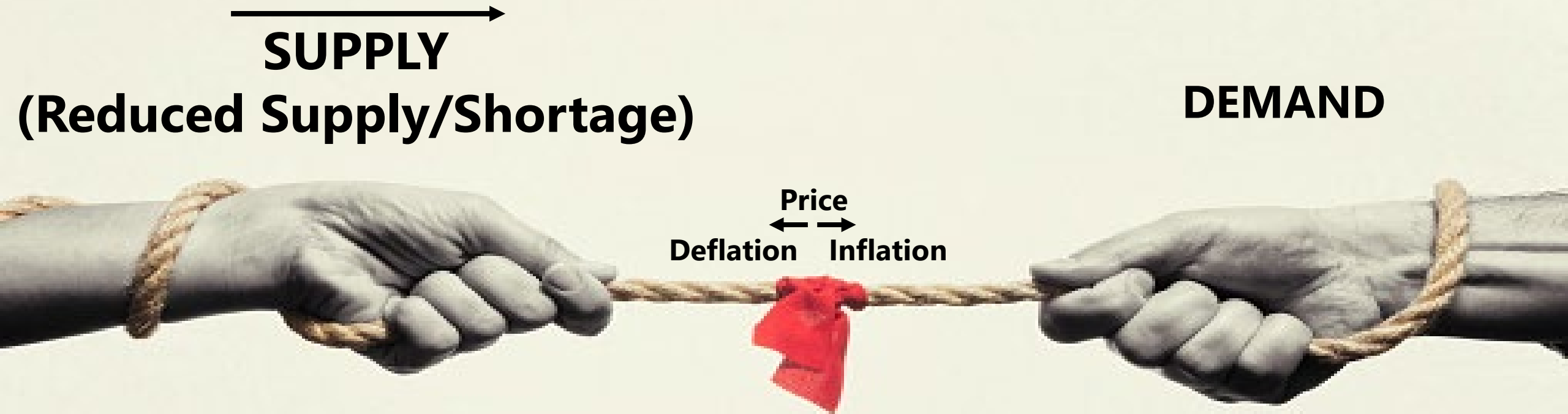


# INFLATION CAN BE A MONETARY PHENOMENON

EXCESS  
LIQUIDITY  
CREATES  
INFLATION



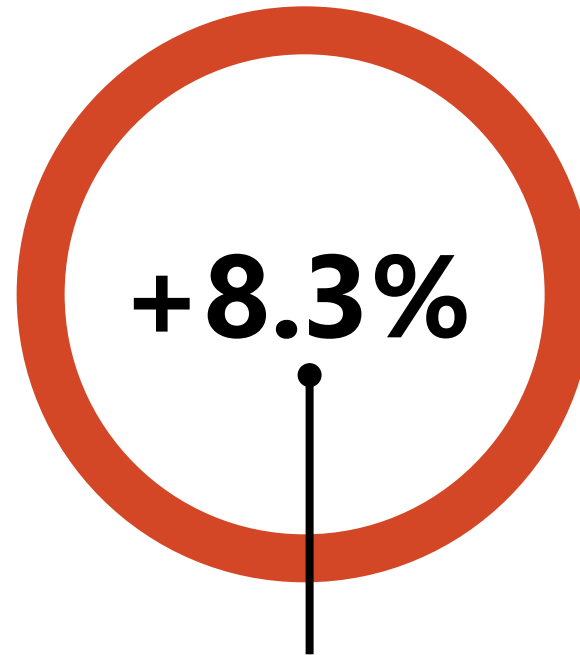
# INFLATION CAN BE CAUSED BY SHORTAGES



## INFLATION CAN COME FROM SUPPLY SHOCKS

# INFLATION UP; ECONOMY NEEDS COOLING

**BOTH EXCESS  
MONETARY  
LIQUIDITY AND  
SUPPLY CHAIN  
DISRUPTIONS  
CAUSE A LARGE  
INFLATION RATE**



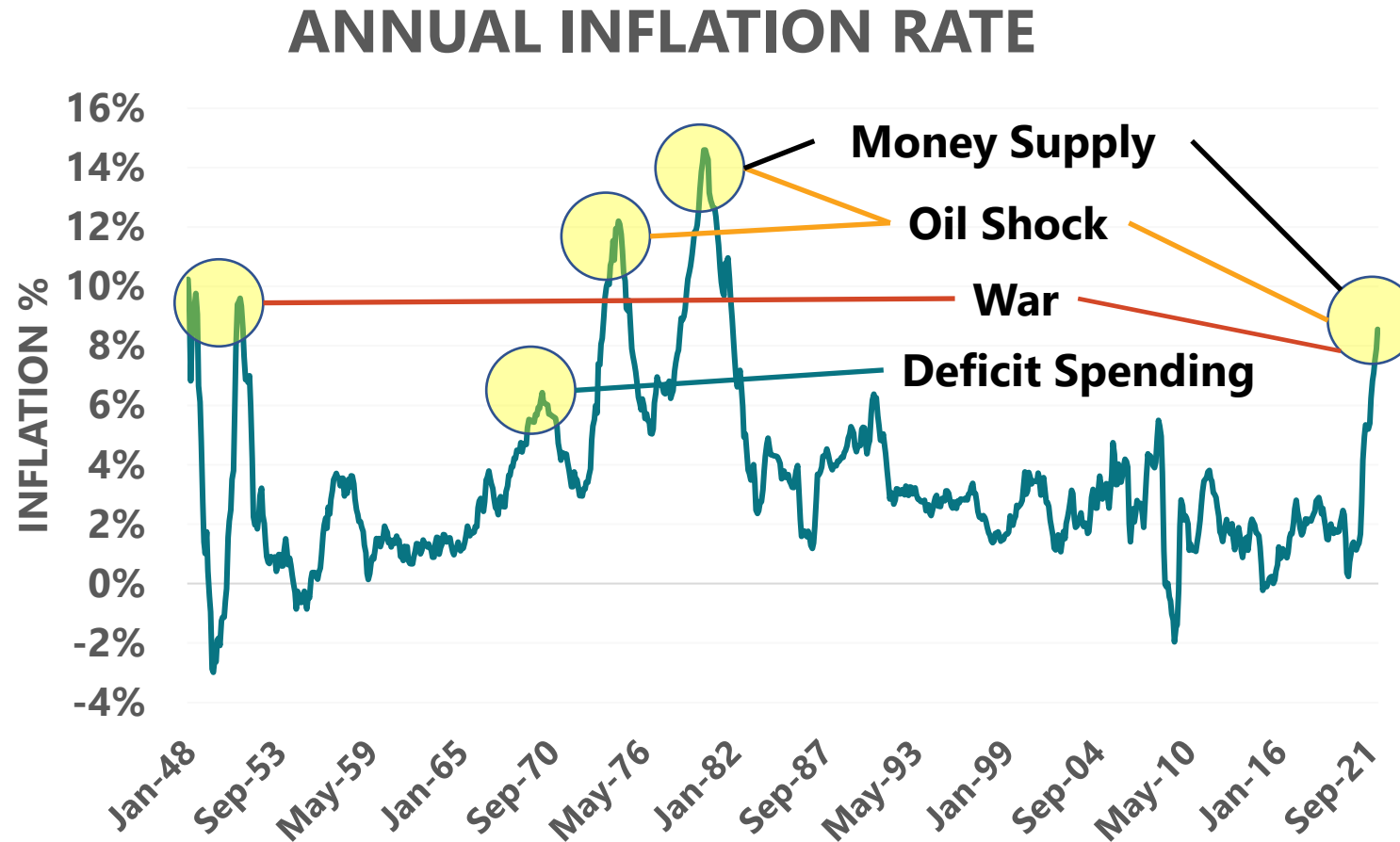
**ANNUAL INFLATION RATE<sup>1</sup>  
(April 2021 thru April 2022)**

- **Commodity Prices**
- **Supply Chain**
- **Labor Shortage**
- **Post Pandemic Growth**

1. CPI – US Bureau of Labor Statistics; Federal Reserve



# INFLATION OVER TIME



1. CPI – US Bureau of Labor Statistics; Federal Reserve

## PERSONAL CONSUMPTION INDEX<sup>1</sup> (Annualized Inflation Rates)

	PCE	Goods	Services	Food	Energy	PCE Excluding Food and Energy
2020	1.5	-0.1	2.0	3.9	-7.5	1.4
2021	5.7	8.5	4.3	5.6	28.9	4.8
Q1 2022	7.9	14.9	4.1	15.8	88.7	4.5
<b>Average</b>	<b>4.1</b>	<b>5.3</b>	<b>3.2</b>	<b>6.0</b>	<b>16.0</b>	<b>3.2</b>
Q4 2021	7.0	10.5	4.9	6.6	33.8	6.2

Labor Related
Material Related

Decelerating

1. PCE – US Bureau of Economic Analysis – Thru Q1



**CORPORATE BOND**

*In Witness Whereof, the said Corporation has caused this Certificate to be  
by its duly authorized officers and its Corporate Seal to be hereunto  
this \_\_\_\_\_ day of \_\_\_\_\_ A*

BONDS PAY A  
REGULAR  
COUPON (% Yield)  
AND RETURN  
PRINCIPAL

# A DOLLAR TODAY IS WORTH MORE THAN A DOLLAR TOMORROW



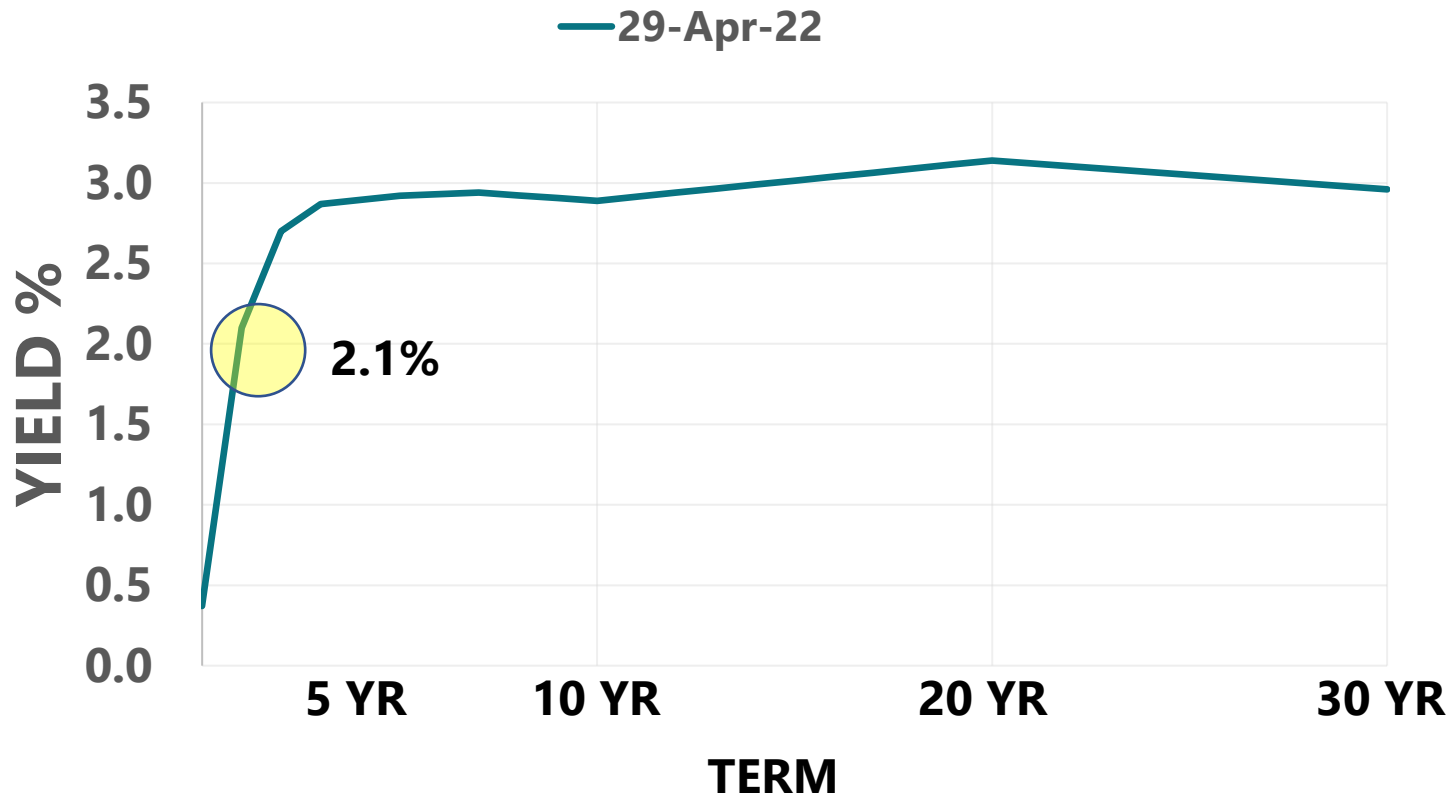
## VALUE OF \$1 IN THE FUTURE<sup>1</sup>

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
\$ 0.98	\$ 0.96	\$ 0.94	\$ 0.92	\$ 0.89

1. April 29, 2022, US Treasury Yield Curve – US Treasury

# A DOLLAR TOMORROW IS VALUED BY THE TREASURY YIELD CURVE

## TREASURY YIELD CURVE



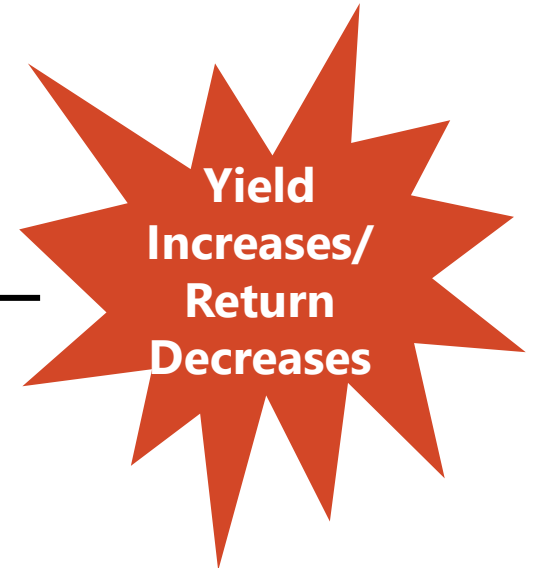
THE VALUE OF A DOLLAR  
1 YEAR FROM NOW:  
 $\$1/1.021 = \$0.98$   
(2.1% IS THE 1-YEAR  
TREASURY RATE)

# BOND RETURNS ARE INVERSELY RELATED TO BOND YIELDS

## Illustration

$$\text{Return} = \frac{\text{Value}_{\text{After}} - \text{Value}_{\text{Before}}}{\text{Value}_{\text{Before}}} = \frac{\$0.979 - \$0.996}{\$0.996} = -1.7\%$$

		1 YEAR YIELD	VALUE OF \$1 IN ONE YEAR
DECEMBER 31, 2021	BEFORE	0.4%	\$0.996
APRIL 29, 2022	AFTER	2.1%	\$0.979

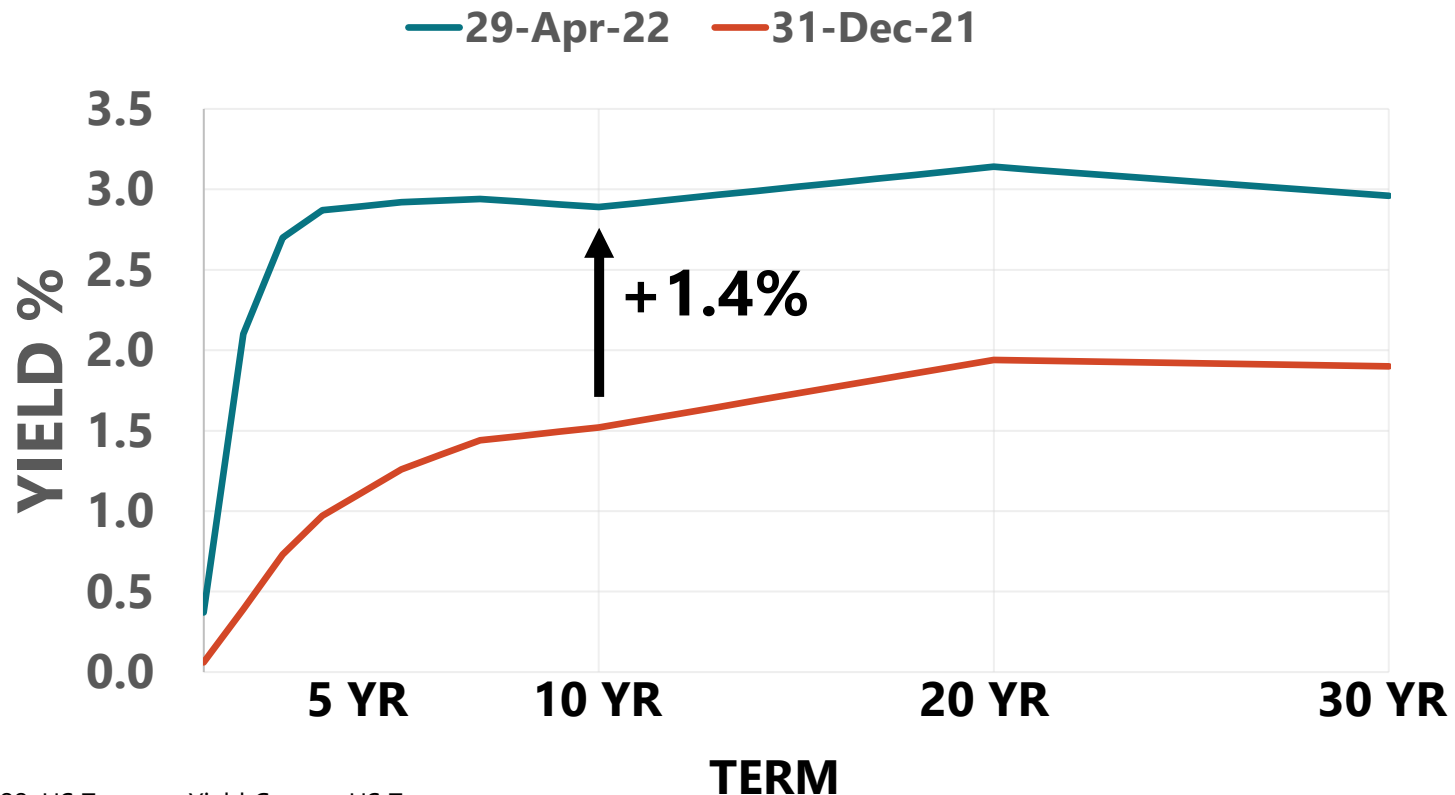


1. December 31, 2021, and April 29, 2022, US Treasury Yield Curve – US Treasury



# INTEREST RATES UP; BOND RETURNS DOWN

## TREASURY YIELD CURVE



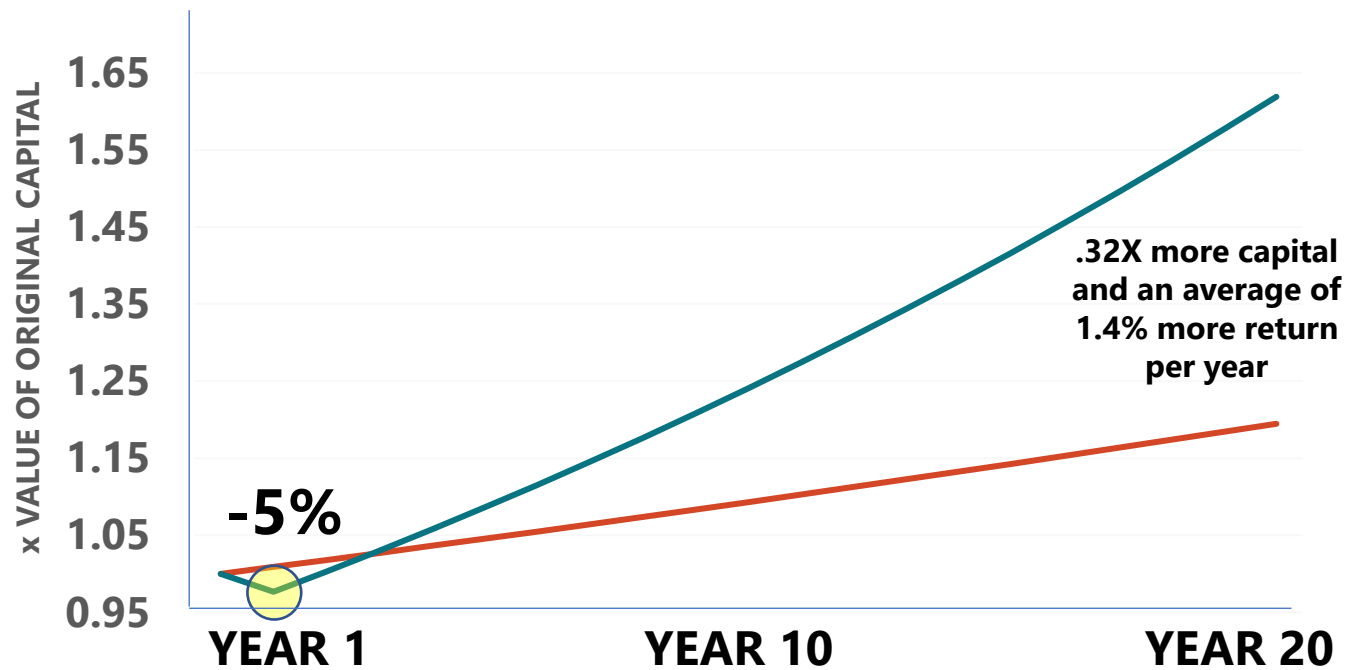
**About a  
-11.6% return  
on a 10 Yr  
Treasury**

1. December 31, 2021, and April 29, 2022, US Treasury Yield Curve – US Treasury

# BUT COUPONS ARE REINVESTED AT A HIGHER YIELD

## REINVESTING AT HIGHER RATES

— 31-DEC-21 YIELD CURVE — INCREASE TO 29-APR-22 YIELD CURVE



1. December 31, 2021, and April 29, 2022, US Treasury Yield Curve – US Treasury
2. Inspired by RBC article: "What do rising bond yields mean to long-term investors?"

## Illustration LADDERED BOND PORTFOLIO OF FIVE BONDS

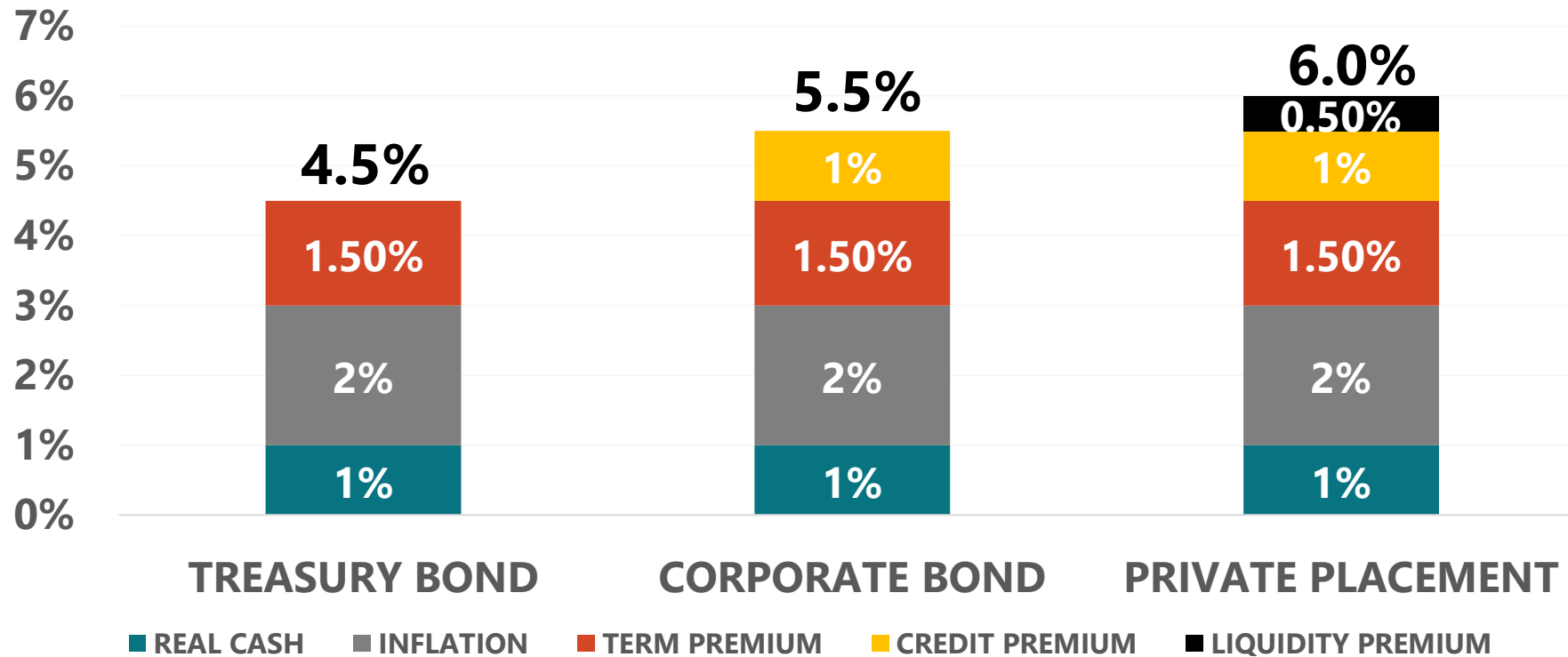
INVESTED	MATURITY (YEARS)	31-DEC-21	29-APR-22	CHANGE OF VALUE
100	1	0.4%	2.1%	-1.7%
100	2	0.7%	2.7%	-3.8%
100	3	1.0%	2.9%	-5.4%
100	4	1.3%	2.9%	-6.1%
100	5	1.4%	2.9%	-8.3%
100	Reinvest in new 5 yr	1.4%	2.9%	0.0%
100	...	1.4%	2.9%	0.0%

**Reinvest in a new five-year bond as one year bond rolls off**

# BOND YIELDS COMPENSATE RISKS


## COMPONENTS OF BOND YIELDS

Illustration



## CALCULATION OF IMPACT FROM CHANGE OF YIELDS<sup>1</sup>

	YTD CHANGE	IMPACT	RETURN
Treasury Yield	1.0%	-1.95X	-1.95%
Credit Spread	0.26%	-1.95X	-0.51%
<b>Total</b>	<b>1.26%</b>	<b>-1.95X</b>	<b>-2.46%</b>

  
**DURATION<sup>2</sup>**

## Illustration

BUDGET STABILIZATION FUND (\$730 million)	Year to Date
Total Fund Return	-3.72%
Policy Benchmark	-2.46%
<b>Total Relative Return</b>	<b>-1.26%</b>

- December 31, 2021, and April 29, 2022, US Treasury Yield Curve 2 yr Treasury Bill– US Treasury
- Duration: % change of return per change of % interest rate

# THIS WORKS FOR STOCKS TOO

$$\text{Value} = \frac{\overset{\textcircled{1}}{\text{CASH FLOW (Year 1)}}}{\text{COST OF CAPITAL} - \text{GROWTH RATE}}$$

Illustration

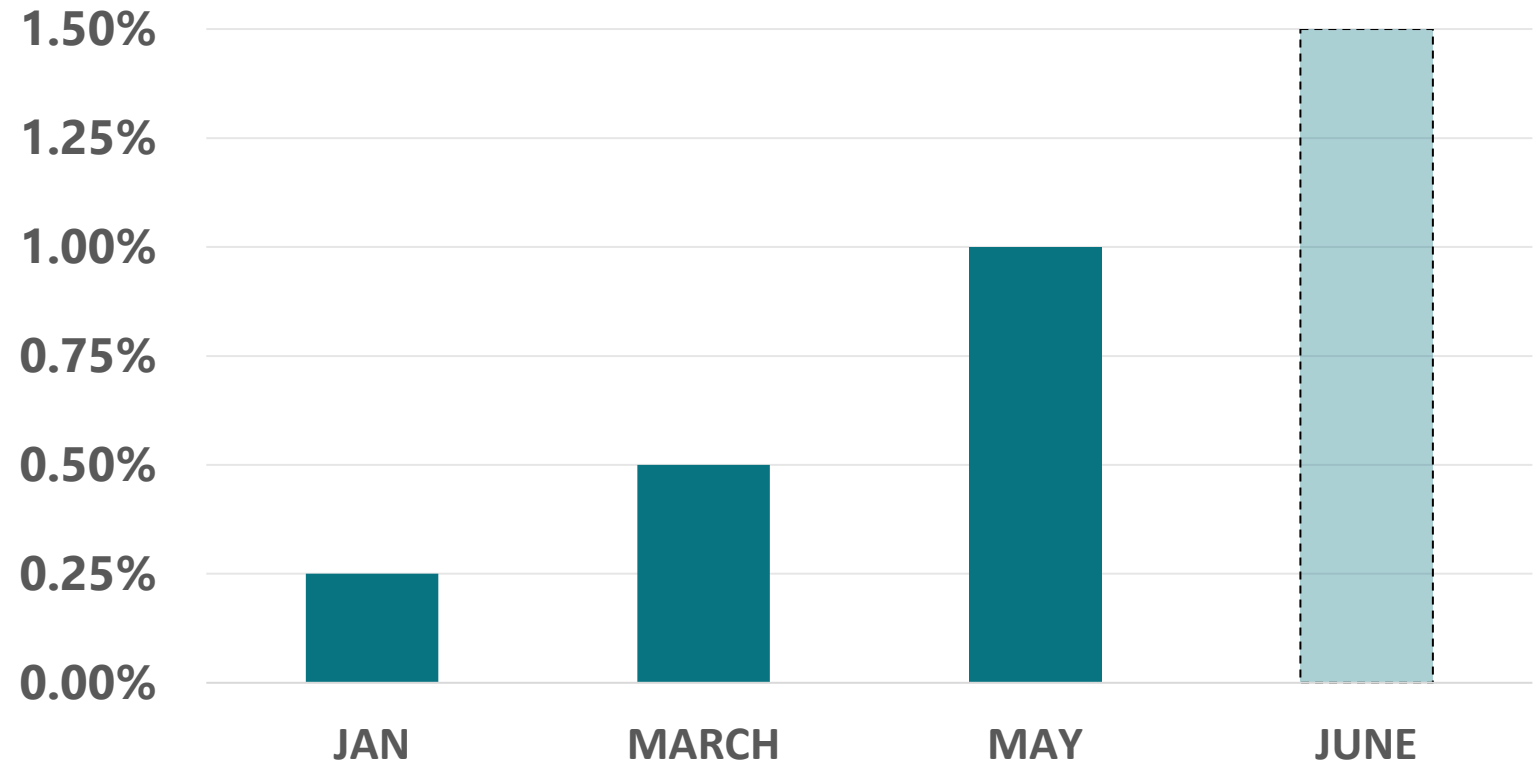
$$V_{(10\text{Yr} = 1.5\%)} = \frac{225}{9.7\% - 5\%} = \mathbf{4770}; \quad V_{(10\text{Yr} = 2.9\%)} = \frac{225}{11.1\% - 5.7\%} = \mathbf{4166}$$

$\underbrace{\hspace{15em}}_{\textcircled{2} \text{ Rates up 1.4\%}}$

$$\text{Return} = \frac{\text{Value}_{\text{After}} - \text{Value}_{\text{Before}}}{\text{Value}_{\text{Before}}} = \frac{\$4166 - \$4770}{\$4770} = \overset{\textcircled{3}}{\mathbf{-12.6\%}}$$

# FED RAISING RATES AGGRESSIVELY TO COOL ECONOMY

### FED RATE HIKES 2022



1. US Federal Reserve



# FED RATE HIKES IMPACT DEMAND; FISCAL POLICY ROLLING OFF; SUPPLY CONCERNS





# Risk Management

Paul White, PhD, CAIA

May 20, 2022

NORTH  
**Dakota**  
Be Legendary.

Retirement & Investment

# COMPENSATED VERSUS UNCOMPENSATED RISKS



“RISK MANAGEMENT  
MEANS  
CONTROLLED  
EXPOSURES TO  
DESIRED RISKS AND  
MINIMIZATION OF  
UNDESIRED RISKS”

# INTRO: ND RIO RISK MANAGEMENT PROCESS



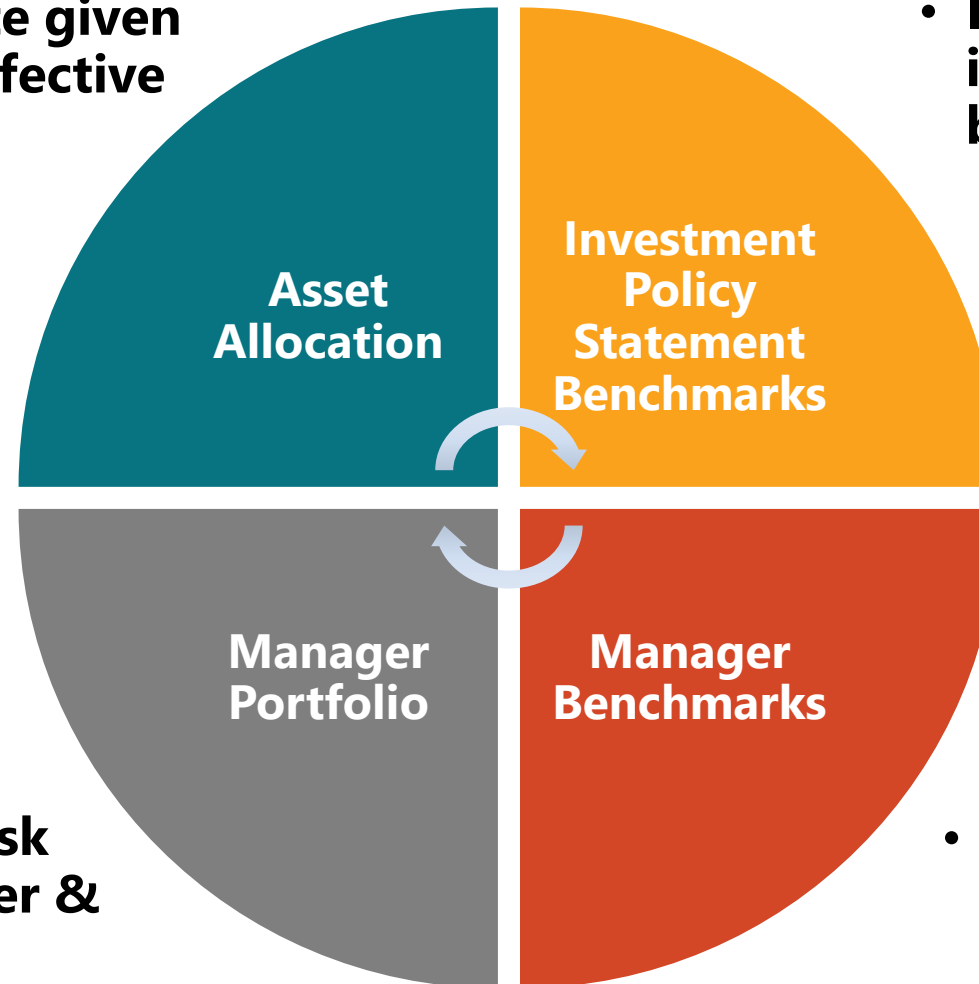
- **MEASURE** – USE APPROPRIATE TOOLS AND RISK METRICS TO CAPTURE RISK AS ACCURATELY AS POSSIBLE
- **ASSESS** – CHOOSE A RISK LENS (CREDIT, EQUITY, LIQUIDITY, TERM STRUCTURE, ALTERNATIVE) TO COVER MULTI-ASSET CLASSES
- **EVALUATE** – DOES THE RISK FALL WITHIN GUIDELINES AT SOME % CONFIDENCE INTERVAL (GUARDRAILS); *"BET SIZE VERSUS BET SIDE"*
- **MANAGE** – ADJUST TO GET BEST REWARD-TO-RISK TRADE-OFF (ESTABLISH A **RISK BUDGET**)



# ALLOCATING RISK ACCORDING TO RISK BUDGET

- **Make sure AA is appropriate given portfolio's mandate (Is it effective at first look?)**

- **Identify gaps/overlaps in risk exposures between AA & IPS**

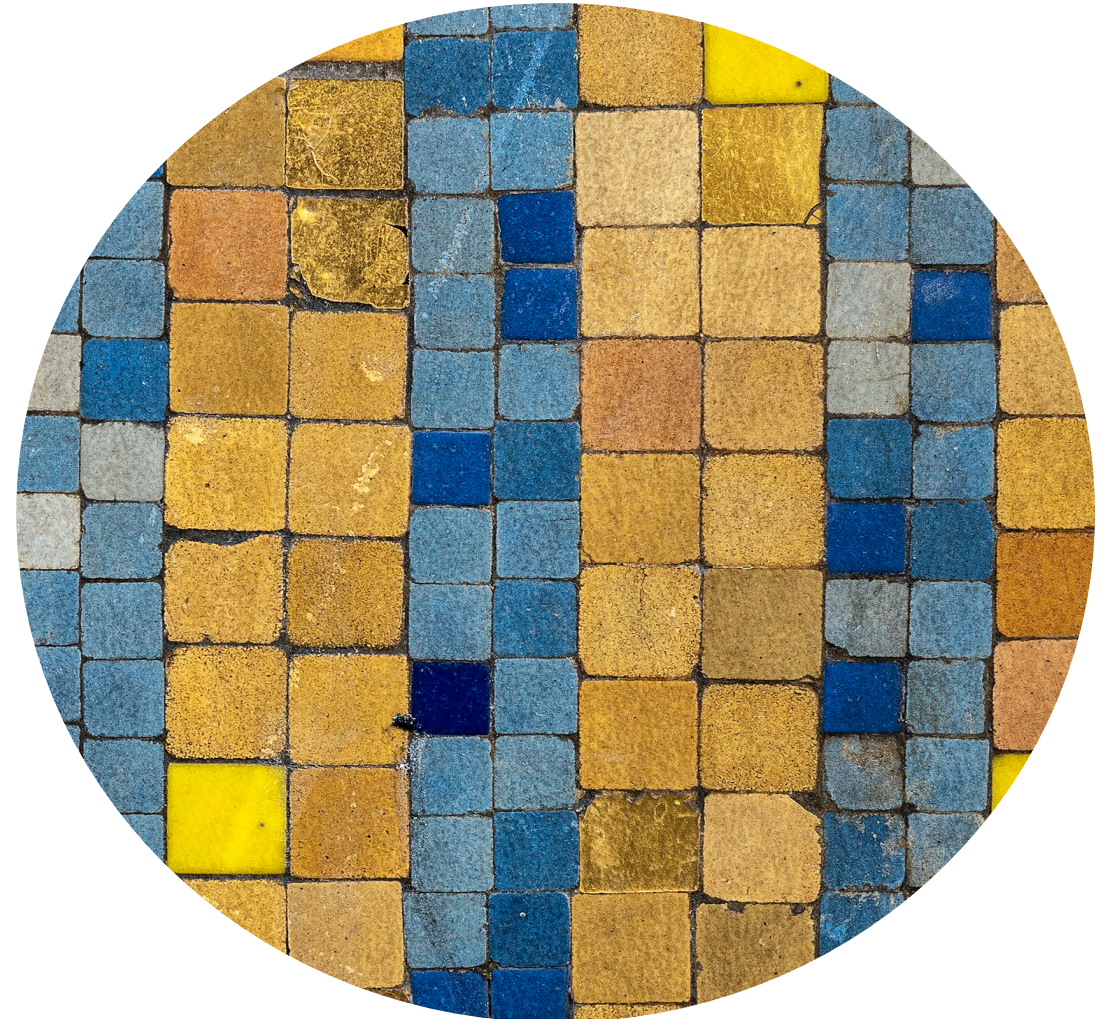


- **Identify gaps/overlaps in risk exposures between Manager & Manager Benchmarks**

- **Identify gaps/overlaps in risk exposures between IPS & Manager Benchmark**



*RISK MANAGEMENT IS  
A MOSAIC*  
TAKE ADVANTAGE OF IT  
AND USE MANY  
SYSTEMS!



**Pension Portfolio** – Predictable Long-Term Pension Annuity

- Defeasance of Liabilities

**Insurance Portfolio** – Predictable Claims Cash Flow

**Endowment Portfolio** – Predictable Spending Rule

- **MONTHLY**

- EXECUTIVE SUMMARY FOR BOARD
- RISK REPORTS – ACTIVE PORTFOLIO
- PERFORMANCE ATTRIBUTION

- **QUARTERLY**

- RISK REPORT – IPS AND ASSET ALLOCATION

- **ANNUAL**

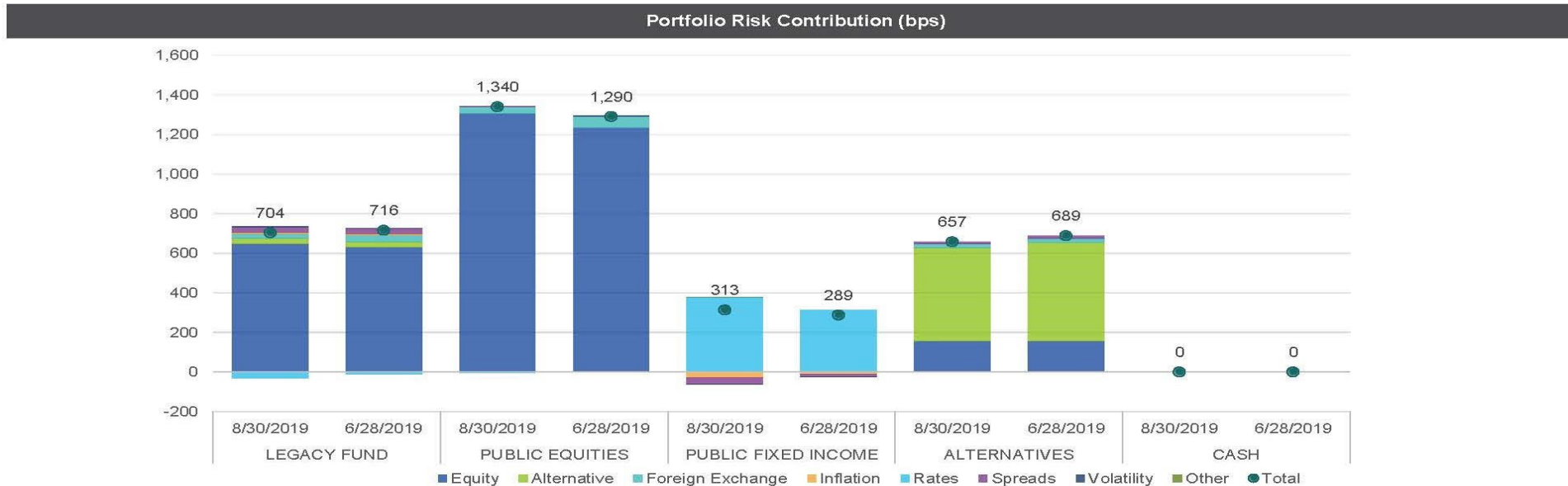
- END OF YEAR STRESS TEST MEMO

# ND RIO RISK MANAGEMENT

## Investment Risk Contribution

Illustration

Portfolio Risk Contribution (bps)												
	LEGACY FUND			PUBLIC EQUITIES			PUBLIC FIXED INCOME		ALTERNATIVES		CASH	
	8/30/2019	Δ		8/30/2019	Δ		8/30/2019	Δ	8/30/2019	Δ	8/30/2019	Δ
Equity	646	15		1,307	74		0	0	155	-2	0	0
Alternative	30	3		0	0		0	0	473	-22	0	0
Foreign Exchange	22	-13		33	-24		0	0	18	-4	0	0
Inflation	7	-1		0	0		-27	-16	0	0	0	0
Rates	-31	-19		-3	-1		376	62	0	0	0	0
Spreads	30	3		2	0		-34	-20	11	-2	0	0
Volatility	1	0		0	0		-2	-1	0	0	0	0
<b>Total</b>	<b>704</b>	<b>-12</b>		<b>1,340</b>	<b>49</b>		<b>313</b>	<b>25</b>	<b>657</b>	<b>-31</b>	<b>0</b>	<b>0</b>

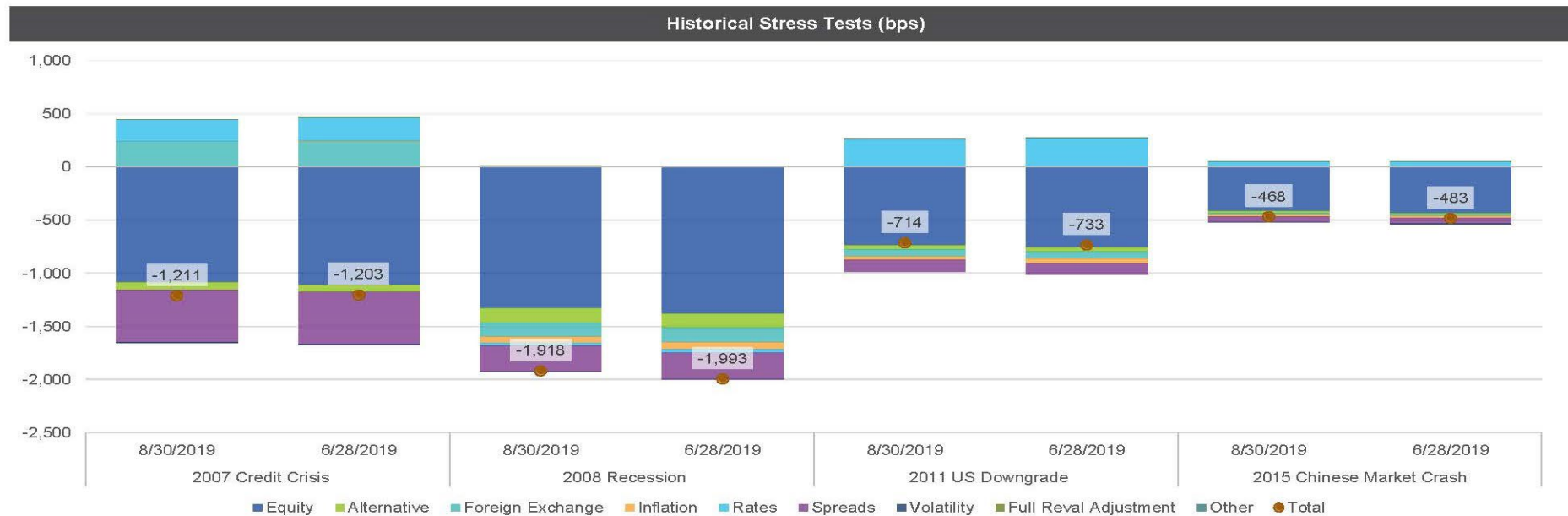


# ND RIO RISK MANAGEMENT

## Historical Stress Test

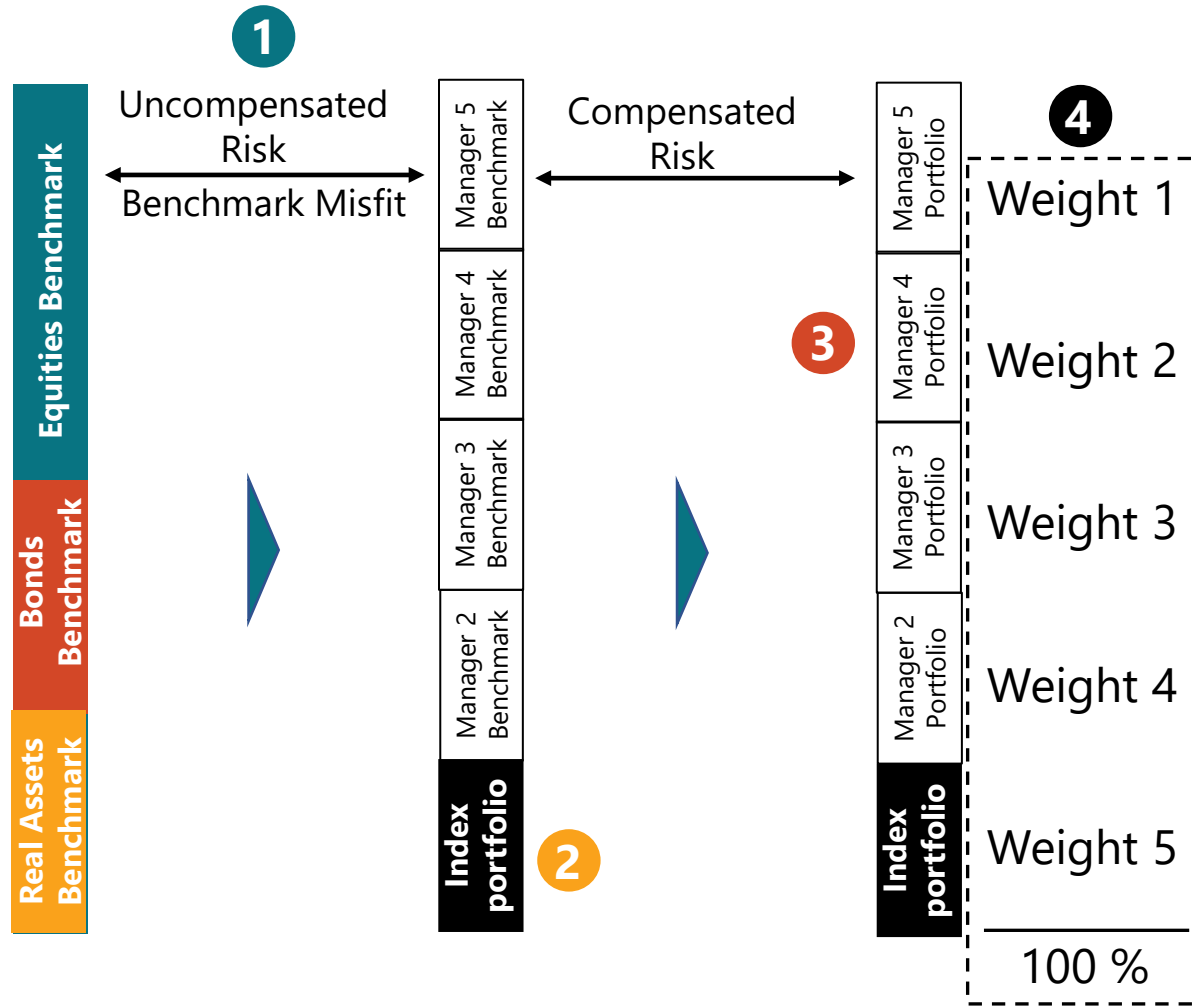
Illustration

	Stress Testing: Historical Stress Tests											
	2007 Credit Crisis			2008 Recession			2011 US Downgrade			2015 Chinese Market Crash		
	8/30/2019	QoQ Δ		8/30/2019	QoQ Δ		8/30/2019	QoQ Δ		8/30/2019	QoQ Δ	
Equity	-1,088	22		-1,326	56		-737	22		-418	16	
Alternative	-67	-3		-137	-9		-37	-1		-15	-1	
Foreign Exchange	241	0		-133	5		-67	3		-12	2	
Inflation	2	-3		-61	4		-37	3		-19	2	
Rates	200	-18		-25	9		264	-9		49	-2	
Spreads	-497	0		-244	5		-106	0		-54	-1	
Volatility	-3	1		-2	1		1	0		-1	0	
Full Reval Adjustment	1	-8		10	3		5	2		1	0	
Other	0	0		0	0		0	0		0	0	
<b>Total</b>	<b>-1,211</b>	<b>-8</b>		<b>-1,918</b>	<b>76</b>		<b>-714</b>	<b>19</b>		<b>-468</b>	<b>15</b>	





# FUNDS MANAGEMENT OPPORTUNITIES



- 1 Align Manager Benchmarks to policy benchmark series and benchmark series weight
- 2 Include index portfolios by benchmark to enable more efficient rebalancing, liquidity management and to control the tracking error
- 3 Terminate underperforming managers and index that portion of funds or replace it with performing managers
- 4 Optimize manager weights to achieve a targeted active return (based on assumptions) and tracking error. The optimization eliminates systematic risk<sup>1</sup> and optimizes optimal tracking error at the asset class level.

1. Risk that active returns change in lockstep with the benchmark vs idiosyncratic risk that active returns move randomly with the benchmark

- MANY PENSION FUNDS OPTIMIZE ACTIVE RETURN/ACTIVE RISK
  - IGNORE EXTRA BENCHMARK RISK!
- ND RIO WILL EXPLORE **FUND CONSTRUCTION OPTIMIZATION**
  - MANAGE EXTRA BENCHMARK RISK!

# ND RIO RISK MANAGEMENT





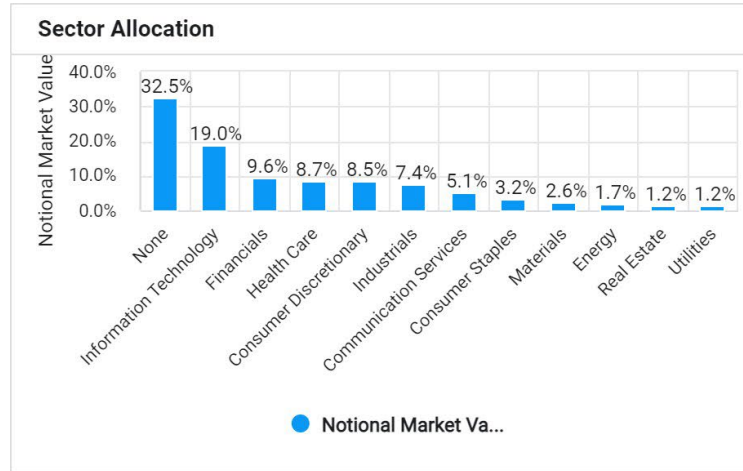
# ND RIO RISK MANAGEMENT



# WINNER MAKES HIS OWN STOPWATCH...



# APPENDIX



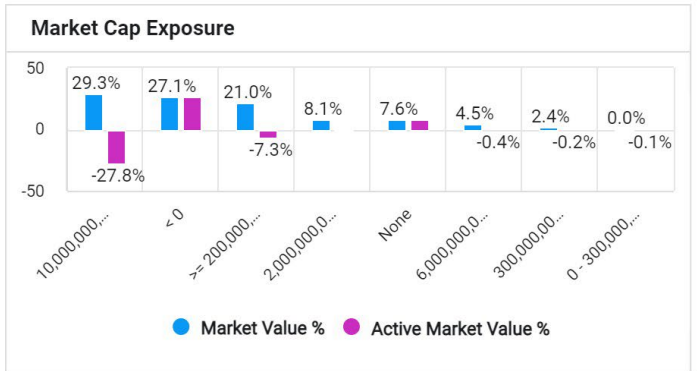
### Issuer Allocation

Description	CUSIP	Market Value %	Notic
∨ P_PUB_EQ		100.0%	
> 3I GROUP PLC		0.0%	
> 3M CO		0.1%	
> A O SMITH CORP		0.1%	
> A2A SPA		0.0%	
> AAON INC		0.0%	
> AB SKF		0.1%	
> ABBOTT LABORATORIES		0.4%	
> ABBVIE INC		0.5%	
> ABM INDUSTRIES INCORPORATED		0.0%	
> ACCENTURE PLC		0.4%	

### Portfolio Risk Analysis

Title	Factor Exposure	Standalone Risk (bp)	Risk Contribution (bp)	Stress PnL (bp)		
				Stock Market Drop Global (bp)	Equity Volatility Increase (bp)	Gold Down (bp)
∨ P_PUB_EQ		1,835.01	1,835.01	-946.28	-720.95	-93.34
> Equity		1,750.45	1,743.42	-900.25	-692.68	-31.88
> Foreign Exchange	0.00	179.19	87.97	-44.12	-27.03	-61.25
> Spreads		5.92	3.11	-1.59	-1.11	0.47
> Inflation		1.61	0.41	-0.21	-0.11	-0.40
> Volatility	0.13	1.71	0.16	-0.07	-0.10	0.00
> Rates		1.96	-0.05	-0.02	0.10	-0.28
> Other	0.00					

PUBLIC EQUITIES (BENCH\_PEN\_GBL\_EQ)  
P\_PUB\_EQ - 31-MAR-2022 - MSCWNIRUS - USD > EQ Portfolio Summary



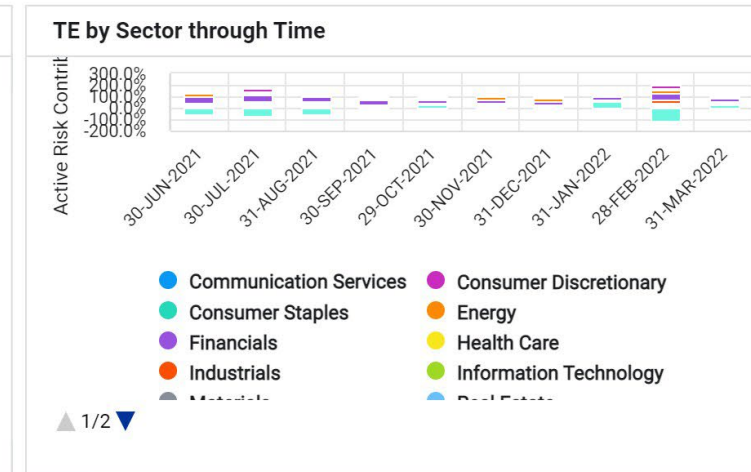
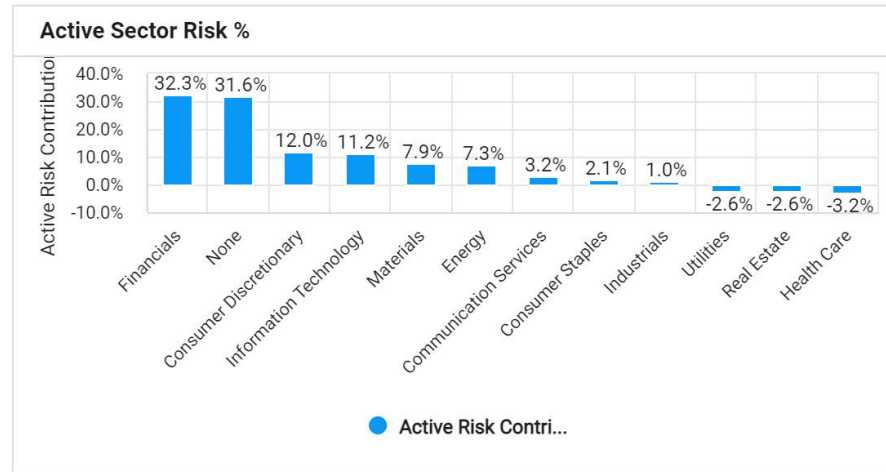
### Top 10 Holdings

Description	CUSIP	Market Value (m)	N
∨ P_PUB_EQ		1,149,796	
CF AXIOM EMERGING MARKET EQUITY FU	BRW824RW8	171,859	
LACM LARGE CAP ALPHA FUND LP 6-01 Prvt	BRT7NE8G5	146,666	
NT EQUITY COLLECTIVE FUND	B RTP3UYV9	129,738	
CF ARROWSTREET INTERNATIONAL EQUIT Prvt	BENLD6F61	122,124	
MICROSOFT CORP	594918104	107,535	
APPLE INC	037833100	107,027	
CF ARROWSTREET INTERNATIONAL EQUIT Prvt	BENLE0515	105,989	
DEFA INTL SMALL CAP VAL CI INST	233203736	90,573	

### Return Analysis - Quarter to Date

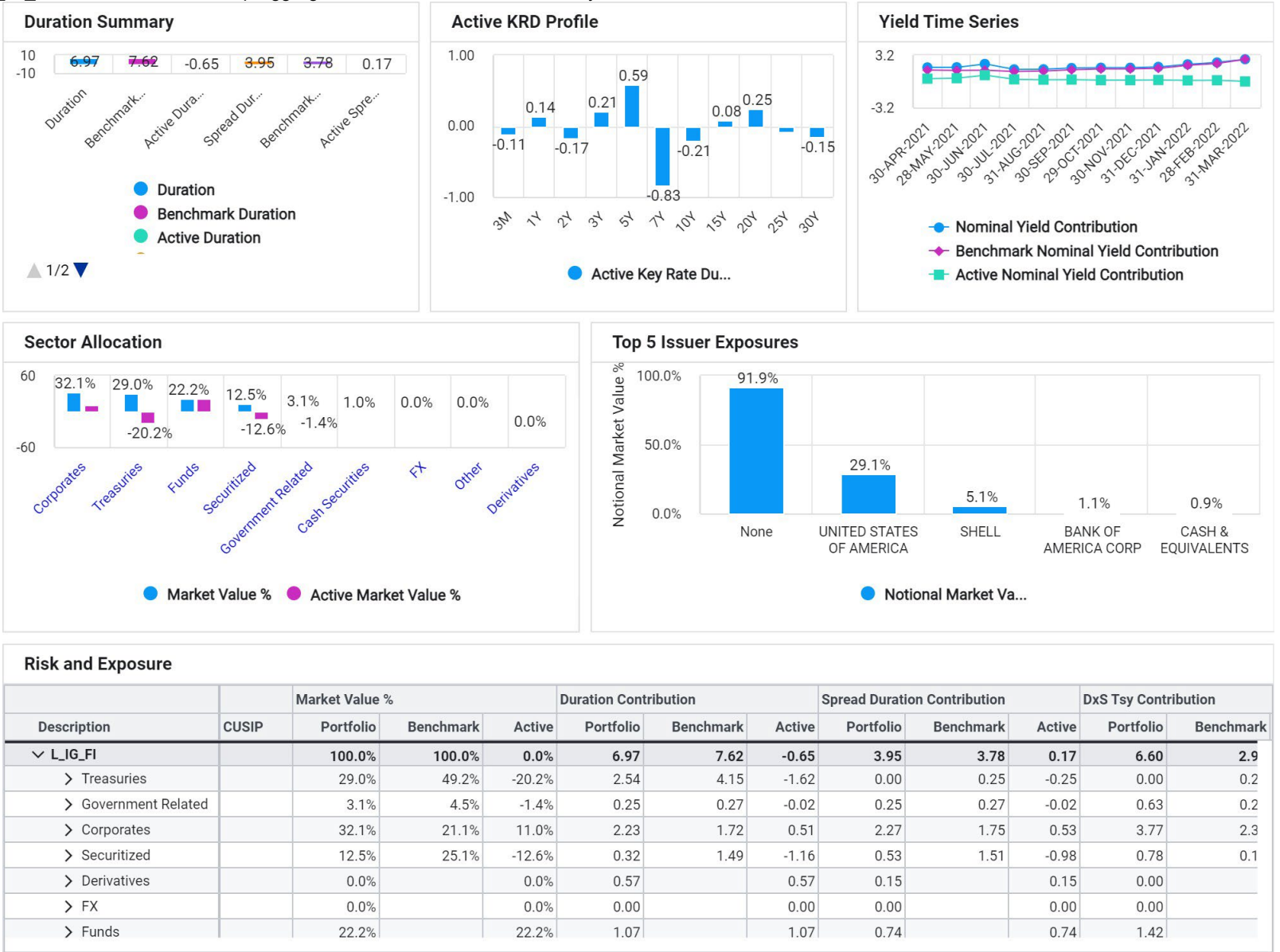
Description	CUSIP	Market Cap (m)	Market Value Weight			Total Return Contribution (bp)	Benchmark Total Return Contribution (bp)	A
			Portfolio	Benchmark	Active			
∨ P_PUB_EQ			100.00%	100.00%	0.00%	-705.13	-521.89	
> Communication Services			5.59%	7.21%	-1.62%	-43.17	-70.17	
> Consumer Discretionary			8.70%	11.70%	-2.99%	-117.17	-145.58	
> Consumer Staples			3.05%	6.99%	-3.94%	-0.23	-31.37	
> Energy			1.51%	4.36%	-2.85%	18.74	89.37	
> Financials			9.92%	15.70%	-5.78%	-49.91	-12.25	
> Health Care			8.33%	12.07%	-3.74%	-55.00	-62.05	
> Industrials			7.44%	11.01%	-3.57%	-54.66	-73.38	
> Information Technology			18.97%	19.76%	-0.79%	-181.61	-229.10	
> Materials			2.45%	5.14%	-2.70%	-4.27	17.16	

Risk by Factor									
Title	Factor Vol	Factor Level	Factor Exposure	Risk Contribution					
				Portfolio (bp)	Benchmark (bp)	Active (bp)	DLY Risk (bp)	DLY Benchmark Risk (bp)	DLY Activ
∨ P_PUB_EQ				1,537.67	1,506.90	134.45	1,775.16	1,772.73	
> Equity				1,500.67	1,462.03	125.29	1,688.56	1,676.31	
> Foreign Exchange			0.00	33.57	44.87	9.42	82.02	96.43	
> Spreads				3.73		-0.61	4.94		
> Rates				-0.33		0.31	-0.43		
> Inflation				0.21		-0.10	-0.03		
> Volatility			0.13	-0.17		0.14	0.09		
> Other			0.00						



Factor based analysis										
Title	Factor Type	Factor Level	Factor Vol	Factor Exposure			Standalone Risk			Ri
				Portfolio	Benchmark	Active	Portfolio (bp)	Benchmark (bp)	Active (bp)	
∨ P_PUB_EQ							1,537.67	1,506.90	134.45	
∨ Equity							1,506.91	1,470.48	128.59	
∨ WRLD Style				1.97	2.07	-0.09	1,376.71	1,398.14	50.72	
Market	Style Return	429.71	1,443.5000	0.98	1.00	-0.02	1,409.98	1,443.46	33.48	
Size	Style Return	113.43	214.4528	0.99	1.08	-0.09	212.04	232.10	20.06	
Volatility	Style Return	55.70	571.9342	-0.22	-0.26	0.04	126.13	147.92	21.79	
Momentum	Style Return	380.29	431.5484	0.24	0.20	0.04	104.05	84.87	19.18	
Reversal	Style Return	29.52	353.2450	0.09	0.12	-0.03	31.79	41.32	9.53	
Liquidity	Style Return	98.73	191.2548	0.28	0.31	-0.03	53.06	58.68	5.62	
SmallCap	Style Return	47.55	279.7436	-0.12	-0.12	0.01	32.26	34.21	1.95	
Value	Style Return	283.42	274.7192	-0.20	-0.26	0.06	53.86	70.56	16.70	
Profitability	Style Return	186.43	232.9890	0.36	0.26	0.09	83.49	61.42	22.07	

Investment Grade Fixed Income (Group Aggregate)  
 L\_IG\_FI - 31-MAR-2022 - Group Aggregate - USD > FI Portfolio Summary





Investment Grade Fixed Income (Group Aggregate)  
 L\_IG\_FI - 31-MAR-2022 - Group Aggregate - USD > FI Risk Summary

Risk by Factor Block

Title	Factor Vol	Factor Level	Factor Exposure	Standalone Risk (bp)	Benchmark Standalone Risk (bp)	Active Standalone Risk (bp)	WKL Risk Contrib (bp)
∨ L_IG_FI				410.30	427.19	91.28	410.30
∨ Fixed Income				410.40	421.62	90.15	410.40
> Rates				440.01	460.95	69.83	440.01
> Spreads				136.85	109.64	65.52	136.85
> Volatility			0.52	7.13	25.61	18.50	7.13
> Inflation				76.36	79.63	57.75	76.36
Time	50.7257	263.8800	0.85				
∨ Other				1.86		1.86	1.86

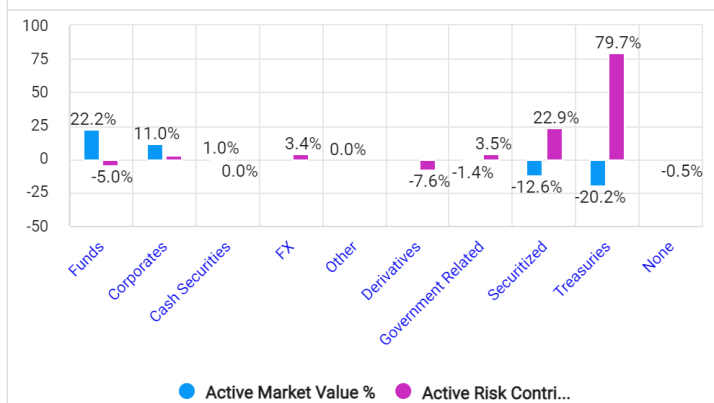
Risk by Systematic/Idiosyncratic

Title	Factor Vol	Factor Level	Factor Exposure	Standalone Risk (bp)	Benchmark Standalone Risk (bp)	Active Standalone Risk (bp)	WKL Risk (bp)
∨ L_IG_FI				410.30	427.19	91.28	410.30
∨ Systematic				410.10	427.12	90.14	409.77
> Rates				439.98	460.95	69.63	406.81
> Spreads				136.23	109.47	64.91	1.60
> Volatility			0.52	7.13	25.61	18.50	1.33
> Foreign f				0.19	50.68	50.72	0.05
> Inflation			1.21	75.90	79.53	57.08	-0.01
> Equity				0.07		0.07	-0.01

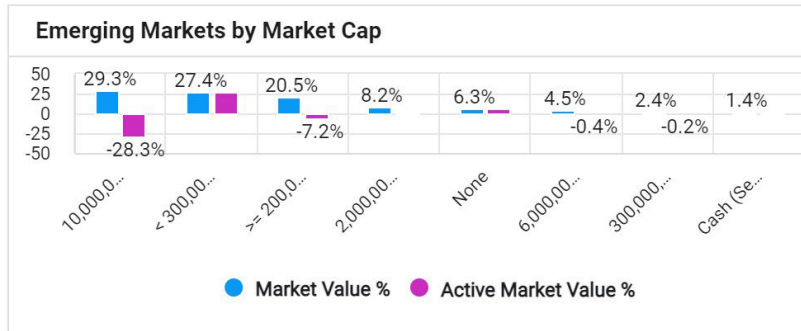
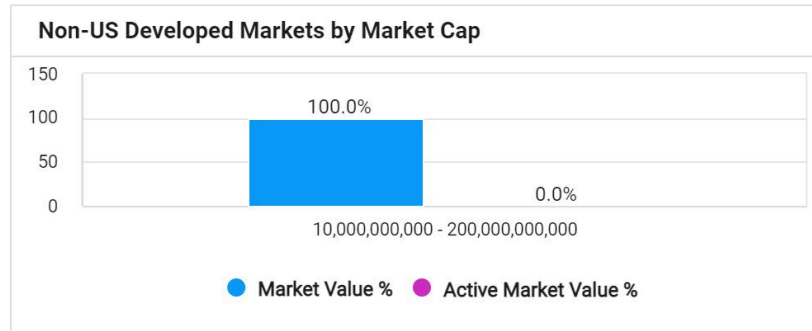
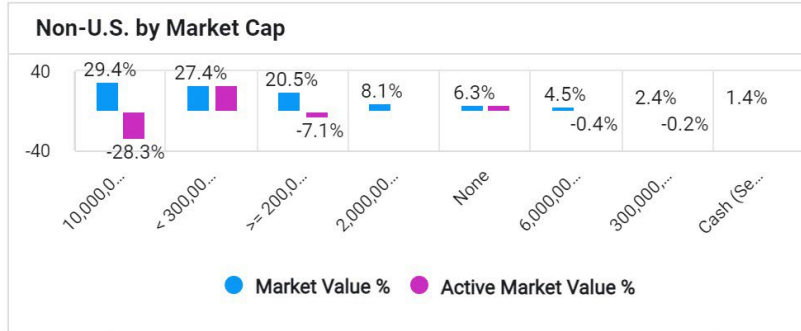
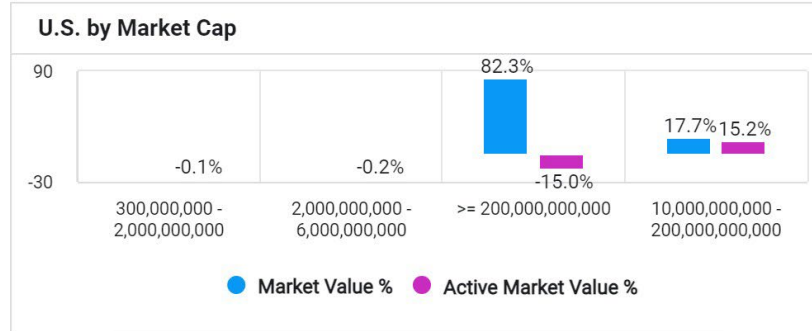
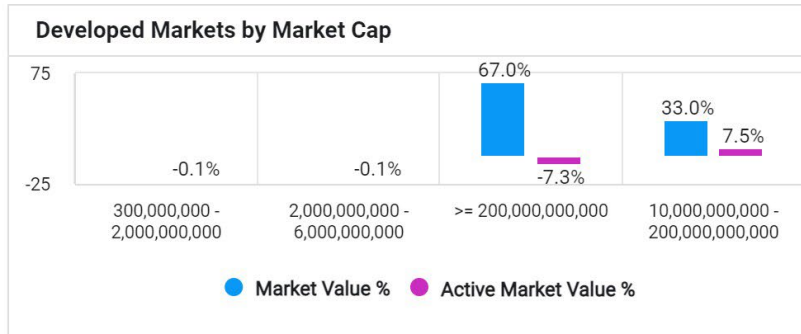
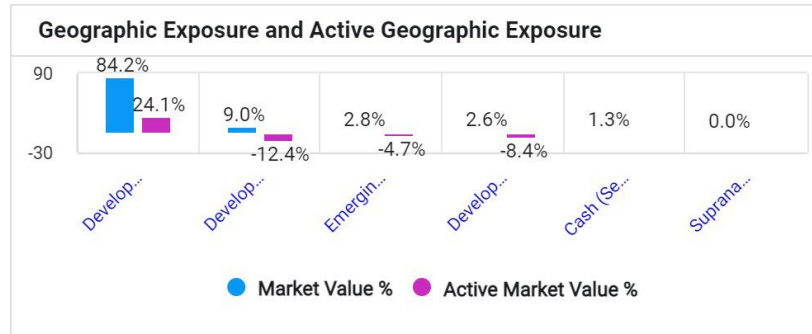
Factor Correlations

Title	Matrix Factor Correlation		
	Rates	Spreads	Volatility
∨ L_IG_FI	0.92	0.01	0.19
Rate	1.00	-0.33	0.18
Spre	-0.33	1.00	-0.08
Vola	0.18	-0.08	1.00
Infla	-0.22	0.16	0.03
Fore	0.26	-0.23	0.16
Equi	-0.28	0.34	-0.18
Othe			

Tracking Error and Exposure



Risk and Exposure							
Security Description	CUSIP	Notional Market Value (m)	Notional Market Value %	Absolute Notional Market Value %	Security Group	Security Type	Nom
∨ L_IG_FI		5,094,228	164.9%	252.8%			
∨ LIBOR Exposure		2,032,737	65.8%	81.4%			
∨ Maturity After 2021		2,032,737	65.8%	81.4%			
∨ USD		2,032,737	65.8%	81.4%			
> Futures		1,874,502	60.7%	76.3%			
> Bonds/Securitized		149,039	4.8%	4.8%			
> Loans		9,195	0.3%	0.3%			
∨ EURIBOR Exposure		28,960	0.9%	0.9%			
∨ Bonds/Securitized		28,960	0.9%	0.9%			
ANCHE-4A A 144A	BRWH6YNF9	1,926	0.1%	0.1%	ABS	ABS	
BNPAM_18-1A AR 144A	BRWHPB808	6,592	0.2%	0.2%	ABS	ABS	
CGMSE_17-2A AA2R 144A	BRWHGG3G7	5,449	0.2%	0.2%	ABS	ABS	
CGMSE_19-1A A1R 144A	BRWJY1EU3	5,765	0.2%	0.2%	ABS	ABS	
CORDA 7A ARR 144A	BRWHT89G5	7,203	0.2%	0.2%	ABS	ABS	
EPIC 21 NPL A A1 144A	BRWHPG1G0	7,241	0.2%	0.2%	ABS	ABS	



# Callan



May 20, 2022

## **North Dakota State Investment Board**

Performance Evaluation  
as of March 31, 2022

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**Paul Erlendson**  
Senior Vice President

**Alex Browning**  
Senior Vice President

Callan

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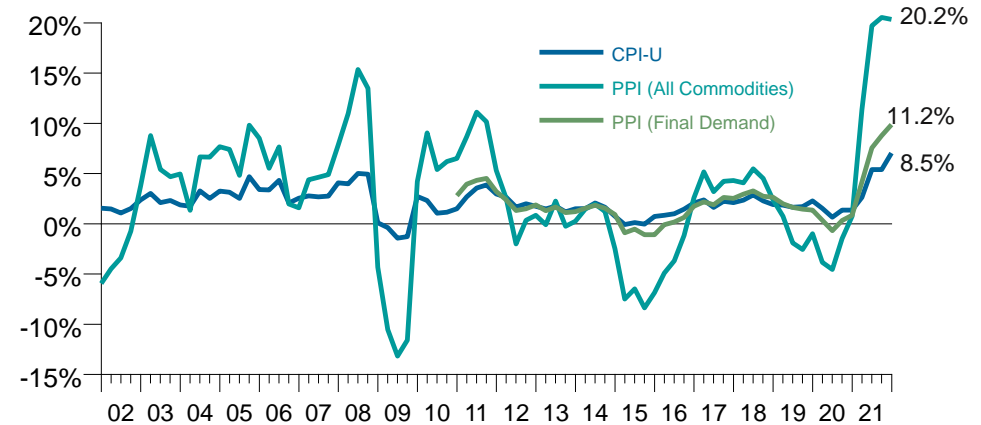
**Market Update**

# U.S. Economy—Summary

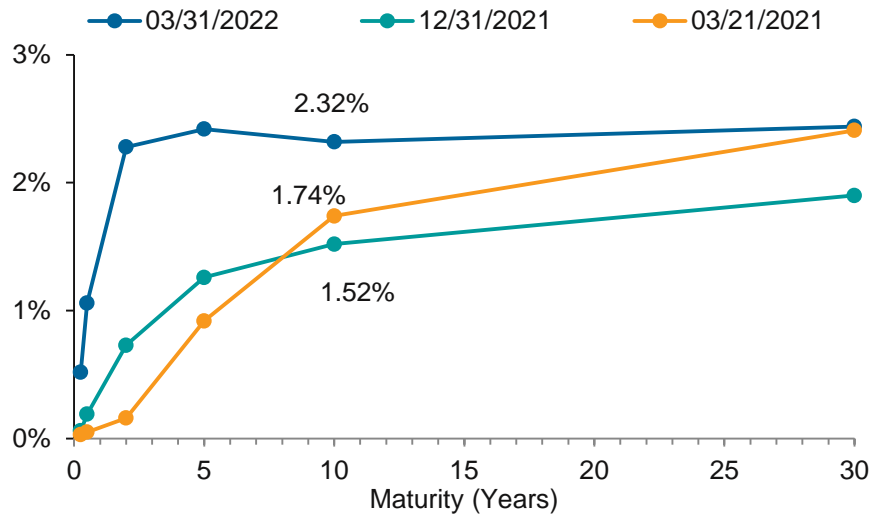
## First Quarter 2022

- The advance estimate of first quarter GDP showed a decline of 1.4% after climbing 6.9% in the fourth quarter.
- Inflation remains elevated in 2022. The CPI climbed 8.5% year-over-year as of March.
- The Federal Reserve made its first 0.25% rate hike of the year on March 16, followed by a 0.50% hike on May 4.
- The labor market remains a source of strength with unemployment falling to 3.6% in March.

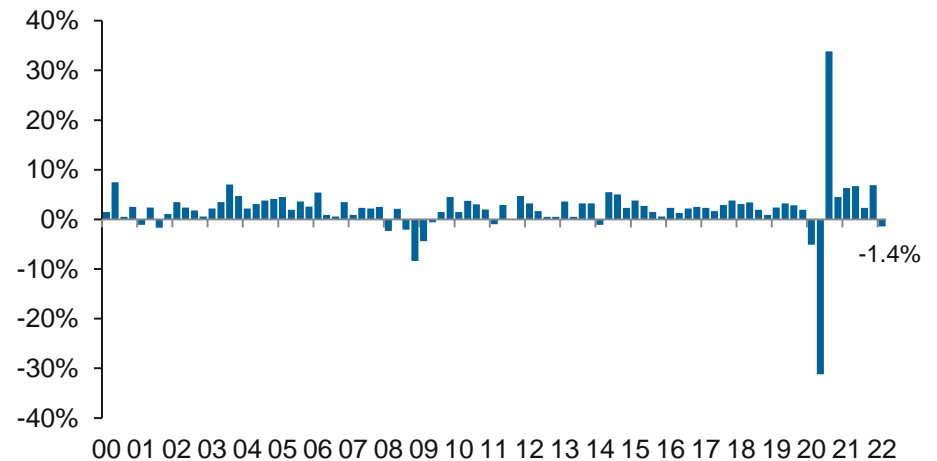
### Inflation Year-Over-Year



### U.S. Treasury Yield Curves



### Quarterly Real GDP Growth



Sources: Bloomberg, Bureau of Labor Statistics, Callan. GDP reflective of 4Q21.

# Down Equity and Fixed Income Markets in 1Q22

Negative returns for stocks and bonds at the same time are unusual

- **Global equity markets are down sharply following the invasion of Ukraine:**
  - Similar impact across developed markets
  - Greater impact on growth, small cap and emerging markets
- **Fixed income down with sharply higher inflation and interest rates:**
  - Blmbg Aggregate: -5.9% (and much worse since, -9.5% through April)
  - CPI-U: +8.5% for the year ended 1Q22
- **Number of times stocks and bonds have been down together:**
  - 37 quarters in almost 100 years, about 10% of the quarters
  - But just twice on a calendar-year basis
- **Inflation spiked to the highest rate reported in 40 years.**
- **Economic data show growth hit “pause” in the U.S.:**
  - Forecasters are revising growth estimates for 2022 down to 3% or lower.

Returns for Periods ended 3/31/22

	1 Quarter	1 Year	5 Years	10 Years	25 Years
<b>U.S. Equity</b>					
Russell 3000	-5.28	11.92	15.40	14.28	9.53
S&P 500	-4.60	15.65	15.99	14.64	9.44
Russell 2000	-7.53	-5.79	9.74	11.04	8.88
<b>Global ex-U.S. Equity</b>					
MSCI World ex USA	-4.81	3.04	7.14	6.25	5.25
MSCI Emerging Markets	-6.97	-11.37	5.98	3.36	--
MSCI ACWI ex USA Small Cap	-6.52	0.03	7.89	7.28	6.70
<b>Fixed Income</b>					
Bloomberg Aggregate	-5.93	-4.15	2.14	2.24	4.71
90-day T-Bill	0.04	0.06	1.13	0.63	2.01
Bloomberg Long Gov/Credit	-10.95	-3.11	4.60	4.72	6.93
Bloomberg Global Agg ex-US	-6.15	-7.89	1.27	0.06	3.40
<b>Real Estate</b>					
NCREIF Property	5.33	21.87	8.54	9.61	9.50
FTSE Nareit Equity	-3.86	26.49	9.63	9.81	9.69
<b>Alternatives</b>					
CS Hedge Fund	2.13	7.47	5.48	4.71	6.61
Cambridge Private Equity*	5.01	48.84	21.29	17.11	15.64
Bloomberg Commodity	25.55	49.25	9.00	-0.70	1.90
Gold Spot Price	6.86	13.90	9.33	1.57	7.07
<b>Inflation - CPI-U</b>	<b>3.12</b>	<b>8.54</b>	<b>3.35</b>	<b>2.28</b>	<b>2.37</b>

\*Cambridge PE data through 09/30/21.

Sources: Bloomberg, Callan, Cambridge, Credit Suisse, FTSE Russell, MSCI, NCREIF, S&P Dow Jones Indices

# Callan Periodic Table of Investment Returns

Cumulative Returns Ending March 31, 2022						Monthly Returns		
Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Jan 2022	Feb 2022	Mar 2022
Real Estate 7.14%	Real Estate 27.26%	Large Cap Equity 18.92%	Large Cap Equity 15.99%	Large Cap Equity 14.01%	Large Cap Equity 14.64%	Real Estate 2.33%	Real Estate 2.33%	Large Cap Equity 3.71%
Large Cap Equity -4.60%	Large Cap Equity 15.65%	US Small-Mid 13.79%	US Small-Mid 11.57%	US Small-Mid 9.99%	US Small-Mid 12.09%	Emerging Market Equity -1.89%	US Small-Mid 1.13%	Real Estate 2.33%
Dev ex-U.S. Equity -4.81%	Dev ex-U.S. Equity 3.04%	Real Estate 10.30%	Real Estate 8.90%	Real Estate 9.20%	Real Estate 9.91%	U.S. Fixed Income -2.15%	High Yield -1.03%	US Small-Mid 1.59%
High Yield -4.84%	US Small-Mid 0.34%	Dev ex-U.S. Equity 8.55%	Dev ex-U.S. Equity 7.14%	Dev ex-U.S. Equity 5.41%	Dev ex-U.S. Equity 6.25%	High Yield -2.73%	U.S. Fixed Income -1.12%	Dev ex-U.S. Equity 1.16%
US Small-Mid -5.82%	High Yield -0.66%	Emerging Market Equity 4.94%	Emerging Market Equity 5.98%	High Yield 5.03%	High Yield 5.75%	Dev ex-U.S. Equity -4.41%	Dev ex-U.S. Equity -1.56%	High Yield -1.15%
U.S. Fixed Income -5.93%	U.S. Fixed Income -4.15%	High Yield 4.58%	High Yield 4.69%	Emerging Market Equity 4.69%	Emerging Market Equity 3.36%	Large Cap Equity -5.17%	Emerging Market Equity -2.99%	Emerging Market Equity -2.26%
Emerging Market Equity -6.97%	Emerging Market Equity -11.37%	U.S. Fixed Income 1.69%	U.S. Fixed Income 2.14%	U.S. Fixed Income 1.87%	U.S. Fixed Income 2.24%	US Small-Mid -8.32%	Large Cap Equity -2.99%	U.S. Fixed Income -2.78%

Sources: ● Bloomberg Barclays Aggregate ● Bloomberg Barclays Corp High Yield ● Bloomberg Barclays Global Aggregate ex US  
● NCREIF ODCE Val Wtd ● MSCI World ex USA ● MSCI Emerging Markets ● Russell 2500 ● S&P 500



# Contributors to Recent Inflation: Primary Categories

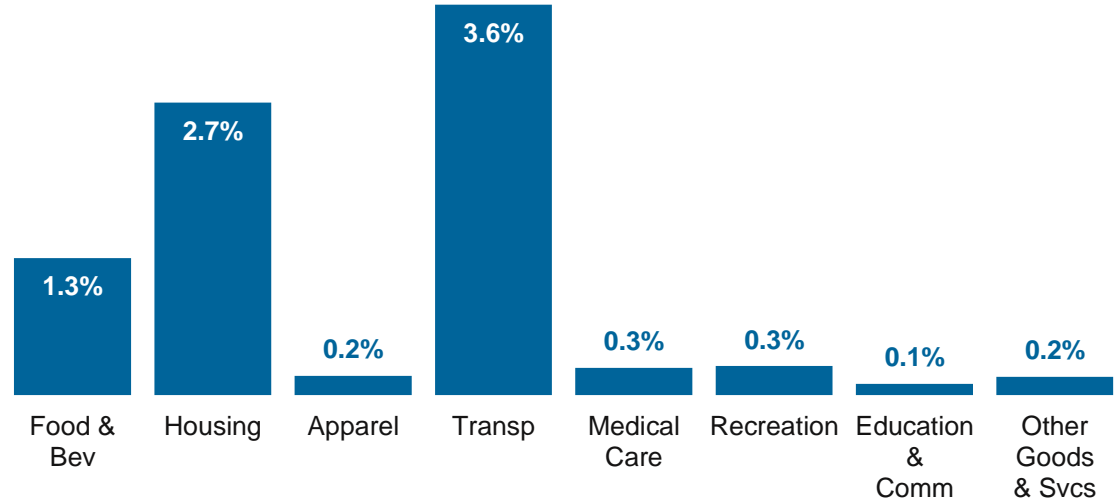
- **Transportation, including new and used cars, parts, and gasoline, saw a spike in inflation.**

- Year-over-year prints are almost three times higher than any other category.
- With a meaningful 18% weight in the index\*, transportation also has the highest weighted contribution to headline CPI.

- **Housing and food and beverage have also been significant contributors to headline CPI.**

- Inflation within these categories has been far lower than transportation, but their large index weights make them meaningful contributors to overall inflation.

Contribution to March 2022 YOY Inflation



Primary Category	Primary Category Weight	Year-over-Year Change											
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
All Items	100.0%	4.2%	5.0%	5.4%	5.4%	5.3%	5.4%	6.2%	6.8%	7.0%	7.5%	7.9%	8.5%
Food & Bev	14.3%	2.3%	2.1%	2.4%	3.4%	3.7%	4.5%	5.1%	5.8%	6.0%	6.7%	7.6%	8.5%
Housing	42.4%	2.6%	2.9%	3.1%	3.4%	3.5%	3.9%	4.5%	4.8%	5.1%	5.7%	5.9%	6.4%
Apparel	2.5%	1.9%	5.6%	4.9%	4.2%	4.2%	3.4%	4.3%	5.0%	5.8%	5.3%	6.6%	6.8%
Transportation	18.2%	14.9%	20.0%	21.5%	19.4%	17.8%	16.6%	18.7%	21.1%	21.1%	20.8%	21.1%	22.6%
Medical Care	8.5%	1.5%	0.9%	0.4%	0.3%	0.4%	0.4%	1.3%	1.7%	2.2%	2.5%	2.4%	2.9%
Recreation	5.1%	2.1%	1.6%	2.4%	3.5%	3.4%	3.5%	3.9%	3.2%	3.3%	4.7%	5.0%	4.8%
Education & Communication	6.4%	1.7%	1.9%	2.1%	1.1%	1.2%	1.7%	1.8%	1.7%	1.6%	1.6%	1.6%	1.5%
Other Goods & Svcs	2.7%	2.7%	2.7%	2.5%	2.9%	3.5%	3.4%	4.2%	4.4%	4.5%	4.9%	5.6%	5.5%

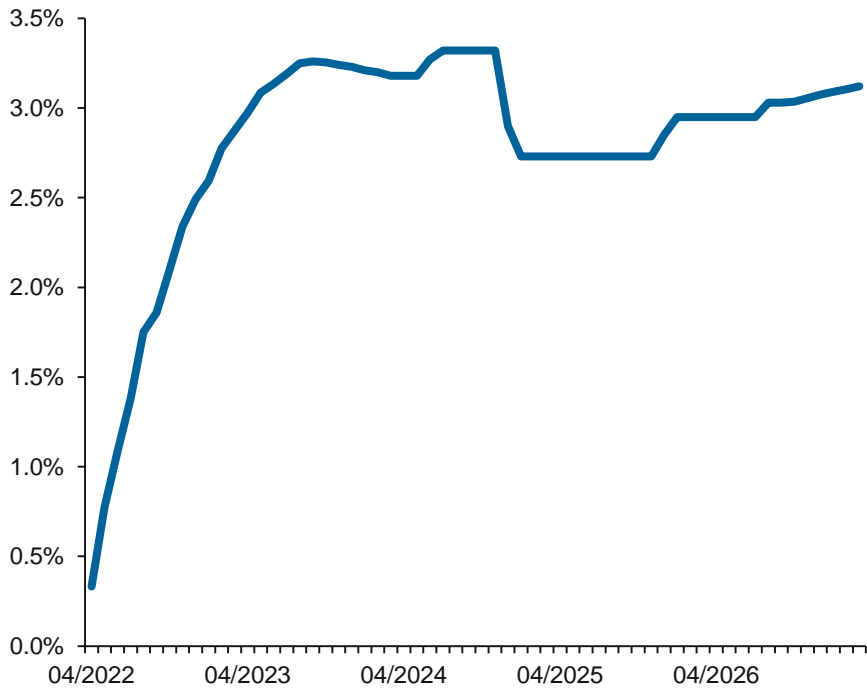
\*Category weights received a revision for 2022. The Transportation weight is up from 15% to 18% with this revision.

Source: U.S. Bureau of Labor Statistics

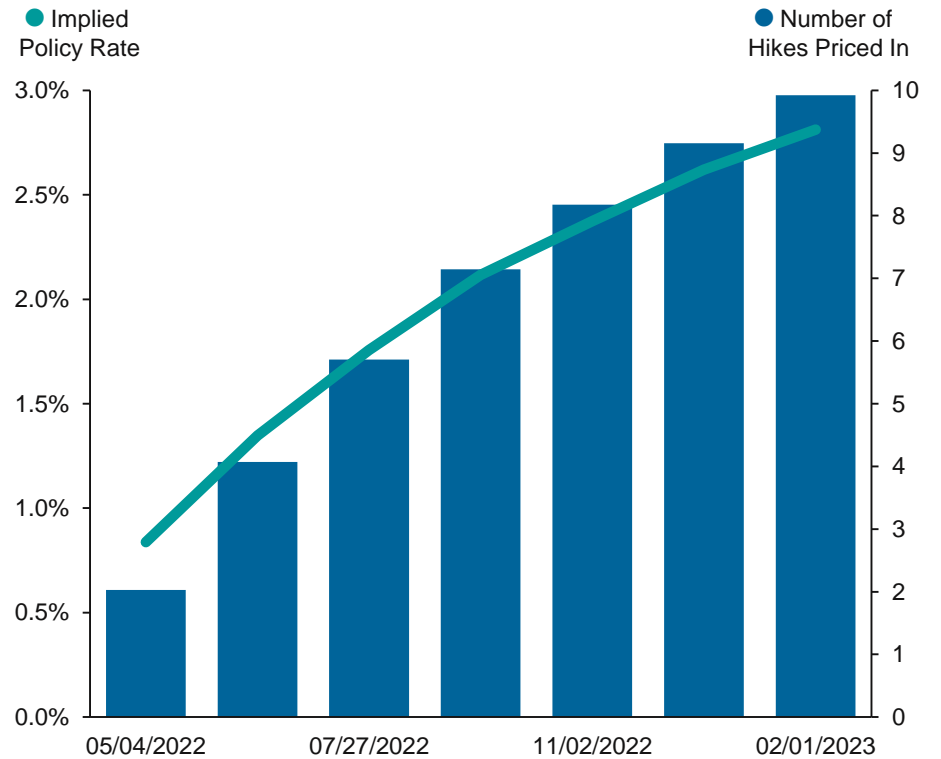
# Markets Pricing in Aggressive Hikes

U.S. Fed Rate Expectations: Higher terminal U.S. rate expectations, but relatively short cycle

Fed Fund Futures



Markets Pricing in 10 25 bps hikes by early 2023



Source: Bloomberg

# S&P 500 Valuation Measures



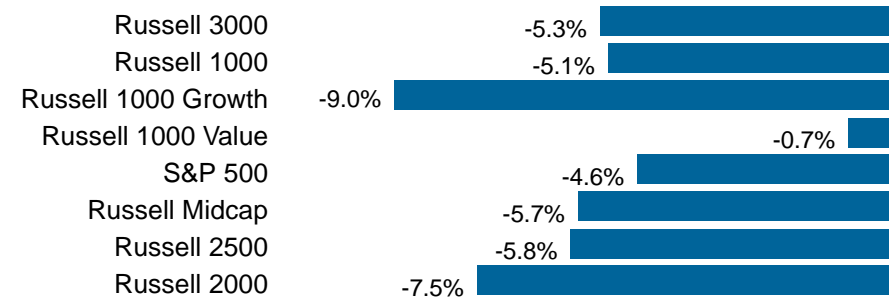
Source: JPMorgan, Guide to the Markets, March 31, 2022

# U.S. Equity Performance: 1Q22

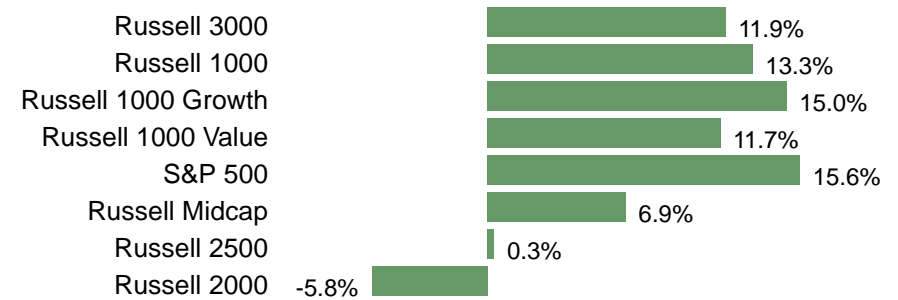
## Returns take a step back given increased macro uncertainty

- The S&P 500 Index fell 4.6% in 1Q, but was down more than 12% early in March before staging a rally into quarter-end.
- Value stocks sharply outpaced growth across capitalizations, with the spread exceeding 10% in both mid and small caps and just over 8% in large caps.
- Energy (+39%) was the best-performing sector given a 33% spike in WTI crude oil prices. Commodity-linked Basic Materials and Utilities sectors also performed well on a relative basis.
- Communication Services (-12%), Consumer Discretionary (-9%), and Information Technology (-8%) were the worst-performing sectors.
- Uncertainty over rates, inflation, and geopolitical tensions all contributed to a volatile and risk averse environment.

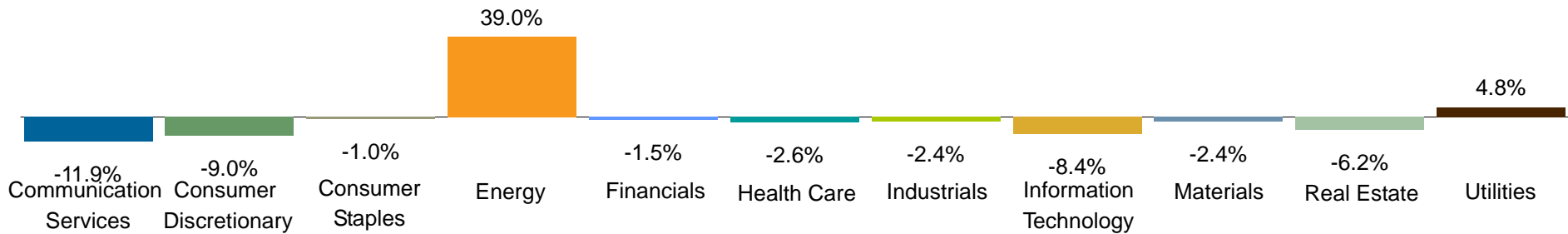
### U.S. Equity: Quarterly Returns



### U.S. Equity: One-Year Returns



### Industry Sector Quarterly Performance (S&P 500)



Sources: FTSE Russell, S&P Dow Jones Indices

# Global ex-U.S. Equity Performance: 1Q22

## War in Ukraine stoked market volatility

- In the aftermath of invading Ukraine, Russia faced condemnation and sanctions that crippled its stocks, bonds, and currency and shocked the global markets.
- The fog of war exacerbated inflationary concerns and led energy prices to surge as Russia is the second-largest natural gas provider and the third-largest oil producer in the world.
- Energy exporters notably outperformed importers.

## Fears of COVID-19

- A resurgence of COVID-19 cases in Europe and Asia, specifically in China, weighed on global recovery.
- China’s zero-COVID policy has injected doubt into the 2022 GDP growth projection of 5.5%, already its lowest annual target in more than 25 years.

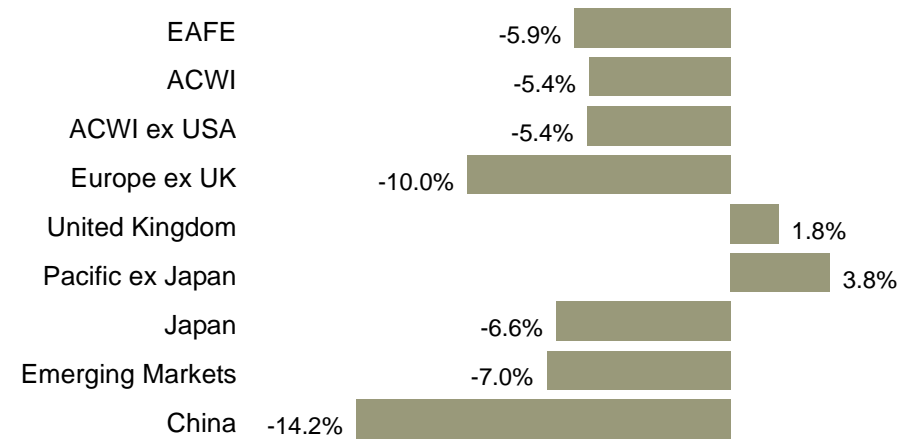
## Growth vs. value

- Value sectors such as Energy, Materials, and Financials were in favor relative to growth sectors like Consumer Discretionary and Information Technology due to a combination of recession fears and tightening monetary cycle.
- *However, Energy was the worst performer within Emerging Markets due to the removal of Russia from indices with effectively zero value.*

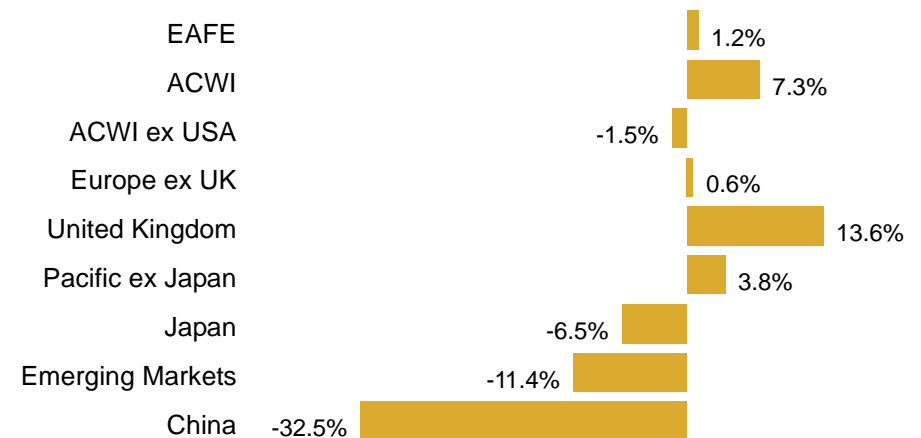
## U.S. dollar vs. other currencies

- With the uncertainty of war, the U.S. dollar strengthened against other major currencies.

### Global Equity: Quarterly Returns



### Global Equity: One-Year Returns



# U.S. Fixed Income Performance: 1Q22

## Bonds hit hard as rates rose sharply

- Bloomberg Aggregate worst quarterly return since 1980
- Curve flattened; as of 3/31 5-year UST yield 10 bps higher than 10-year UST yield (2.42% vs 2.32%)
- TIPS outperformed nominal Treasuries and 10-year breakeven spreads widened to 2.84% from 2.56% as of year-end.

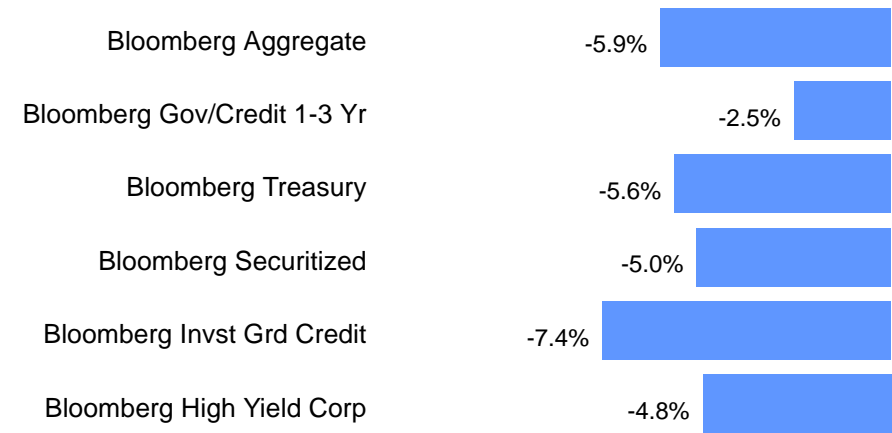
## Credit sectors underperformed

- Investment grade corporates underperformed duration-matched U.S. Treasuries by 145 bps; RMBS by 71 bps.
- High yield “benefited” from less interest rate sensitivity and relatively higher exposure to the energy sector; excess return vs. U.S. Treasuries was 92 bps.
- Defaults remain low (less than 1%) and yield breached 6%.

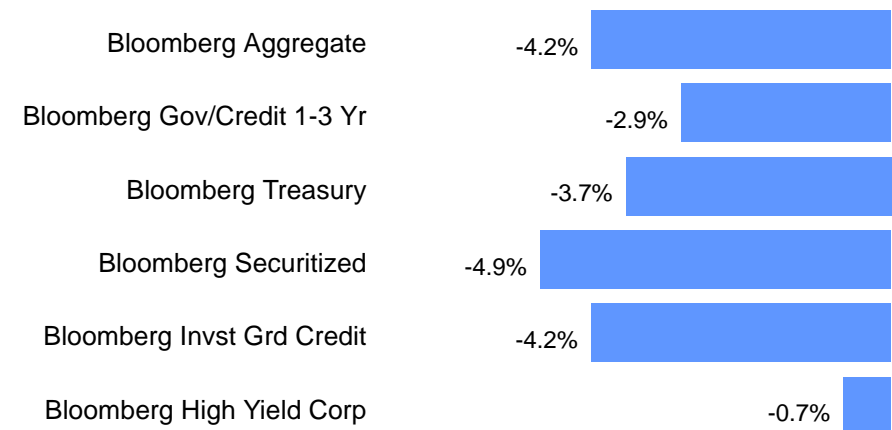
## Securitized sectors performed relatively well

- Consumer ABS held up the best within the sector due to its shorter duration profile and solid consumer spending.
- Conduit CMBS traded in line as economy re-opens.
- Agency MBS saw duration extend by 0.4 yr due to higher rates (deters refinancing and slows payments to monthly mins).

## U.S. Fixed Income: Quarterly Returns



## U.S. Fixed Income: One-Year Returns



Sources: Bloomberg, S&P Dow Jones Indices

# U.S. Private Real Estate Market Trends

## Continued strong performance across the asset class

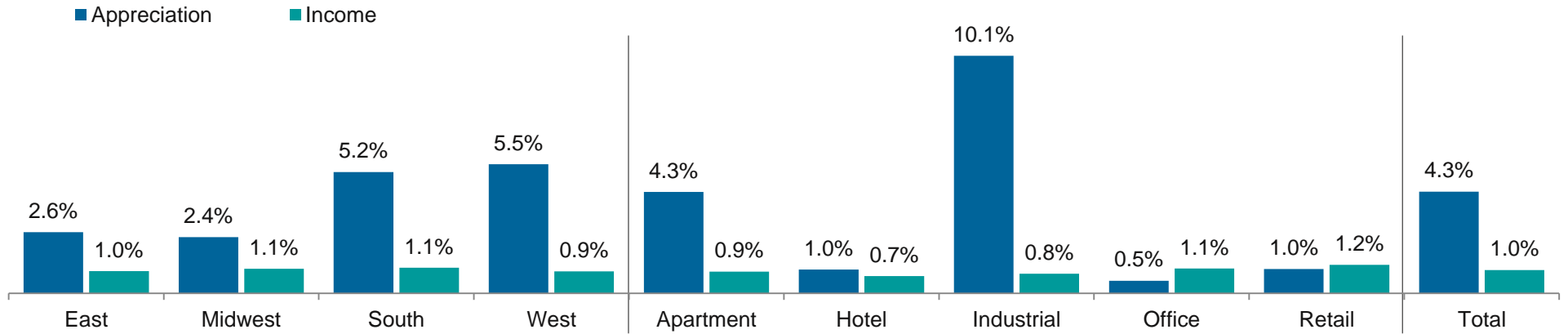
### Another strong quarter for real estate

- Income returns were positive across sectors.
- Valuations are reflective of strong fundamentals in Industrial and Apartment and continued uncertainty despite a modest recovery in Office and Retail.
- Return dispersion by manager within the ODCE Index was due to the composition of underlying portfolios.
- Niche sectors such as self-storage and life sciences continued to be accretive.

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
NCREIF ODCE	7.4%	28.5%	11.3%	9.9%	10.9%
Income	0.9%	4.0%	4.0%	4.1%	4.5%
Appreciation	6.4%	23.8%	7.1%	5.6%	6.2%
NCREIF Property Index	5.3%	21.9%	9.6%	8.5%	9.6%
Income	1.0%	4.2%	4.3%	4.4%	4.6%
Appreciation	4.3%	17.2%	5.2%	4.0%	4.8%

Returns are geometrically linked

### NCREIF Property Index Quarterly Returns by Region and Property Type



Source: NCREIF, ODCE return is net

Callan

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**NDSIB Total Performance Summary**



# NDSIB Consolidated Gross Performance Summary

As of March 31, 2022

	Last Quarter	Last Year	Last 5 Years
<b>Consolidated Pension Trust</b>	-3.51%	9.07%	10.08%
<i>Consolidated Pension Trust Target</i>	-2.76%	9.36%	9.62%
Relative Performance vs. Target	-0.75%	-0.29%	0.46%
<b>PERS Total Fund</b>	-3.58%	9.14%	10.16%
<i>NDSIB PERS Total Fund Target</i>	-2.85%	9.11%	9.58%
Relative Performance vs. Target	-0.73%	0.03%	0.58%
<b>TFFR Total Fund</b>	-3.42%	9.06%	10.05%
<i>NDSIB TFFR Total Fund Target</i>	-2.62%	9.81%	9.71%
Relative Performance vs. Target	-0.80%	-0.75%	0.34%
<b>WSI Total Fund</b>	-4.99%	1.22%	6.12%
<i>NDSIB WSI Total Fund Target</i>	-4.58%	0.89%	5.24%
Relative Performance vs. Target	-0.41%	0.33%	0.88%
<b>Legacy - Total Fund</b>	-5.15%	3.70%	8.20%
<i>NDSIB Legacy - Total Fund Target</i>	-4.43%	3.59%	7.71%
Relative Performance vs. Target	-0.72%	0.11%	0.49%
<b>Budget - Total Fund</b>	-3.70%	-3.32%	1.58%
<i>NDSIB Budget - Total Fund Target</i>	-2.45%	-2.86%	1.25%
Relative Performance vs. Target	-1.25%	-0.46%	0.33%

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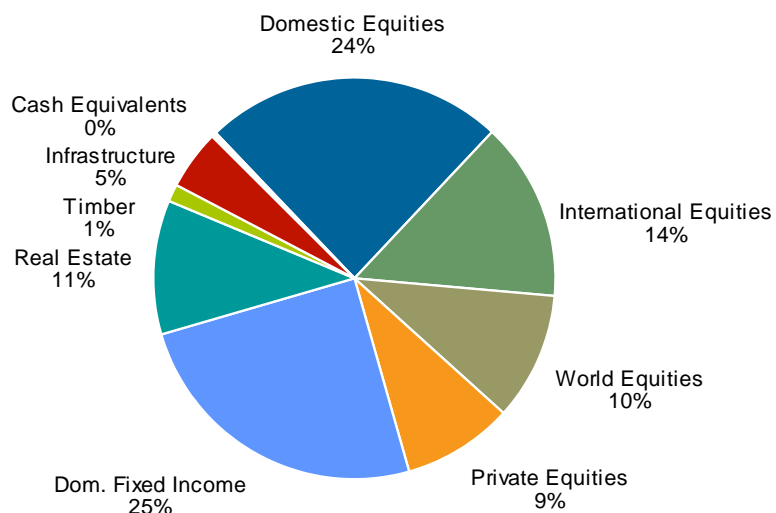
## **Consolidated Pension Trusts Quarterly Review**

- Public Employees Retirement System
- Teachers' Fund for Retirement

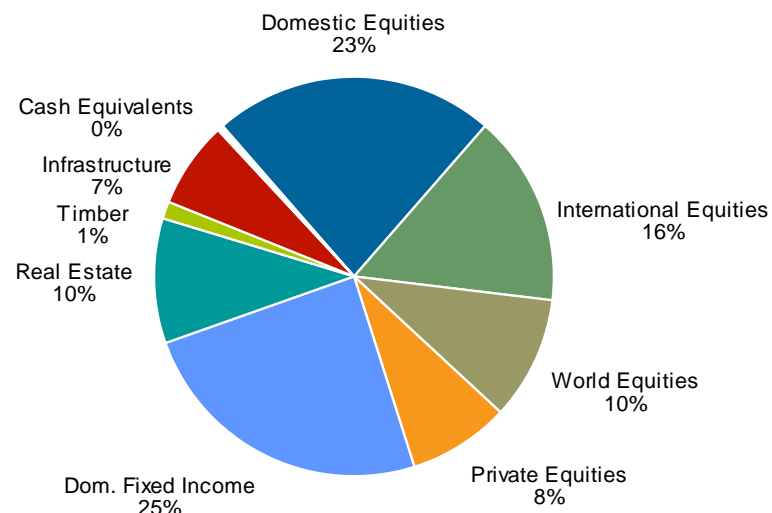
# Consolidated Pension Trust Allocation

As of March 31, 2022

**Actual Asset Allocation**



**Target Asset Allocation**

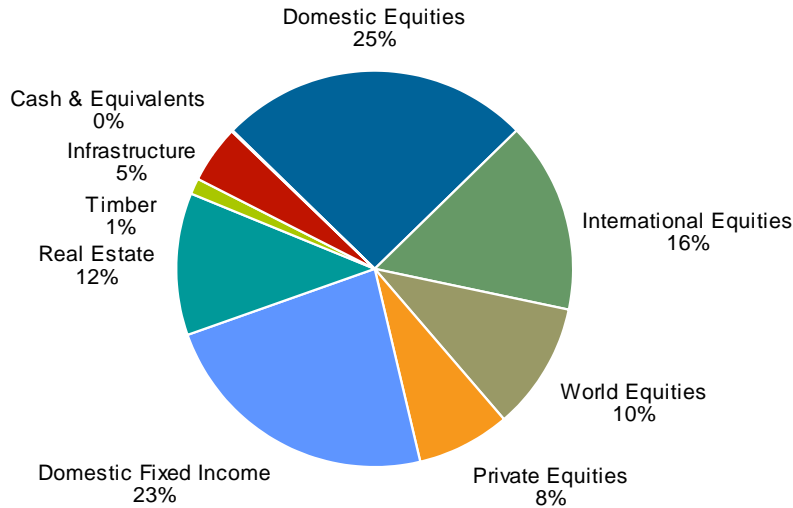


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	1,823,243	24.1%	22.8%	1.4%	102,144
International Equities	1,090,118	14.4%	15.5%	(1.1%)	(83,352)
World Equities	777,815	10.3%	10.0%	0.3%	21,627
Private Equities	671,104	8.9%	8.2%	0.7%	50,863
Dom. Fixed Income	1,884,923	24.9%	24.5%	0.4%	30,195
Real Estate	818,008	10.8%	10.1%	0.7%	52,515
Timber	107,275	1.4%	1.4%	0.0%	(0)
Infrastructure	360,685	4.8%	7.0%	(2.2%)	(169,616)
Cash Equivalents	28,707	0.4%	0.4%	(0.1%)	(4,515)
<b>Total</b>	<b>7,561,880</b>	<b>100.0%</b>	<b>100.0%</b>		

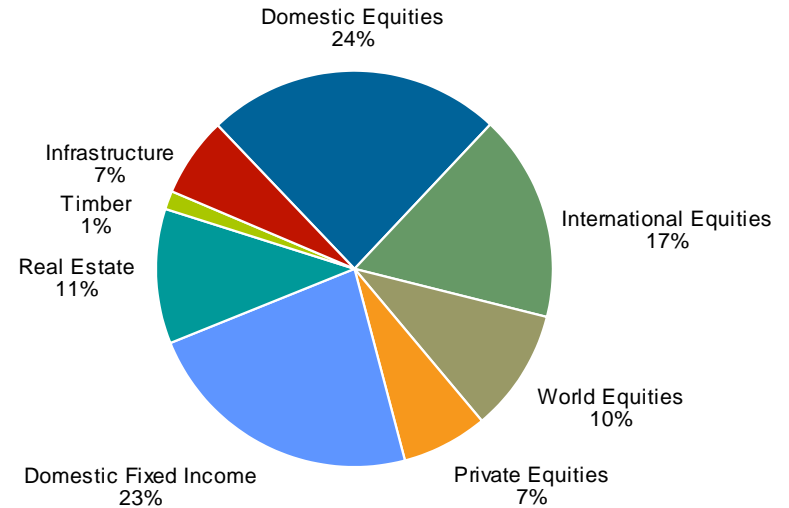
# PERS Allocation

As of March 31, 2022

**Actual Asset Allocation**



**Target Asset Allocation**

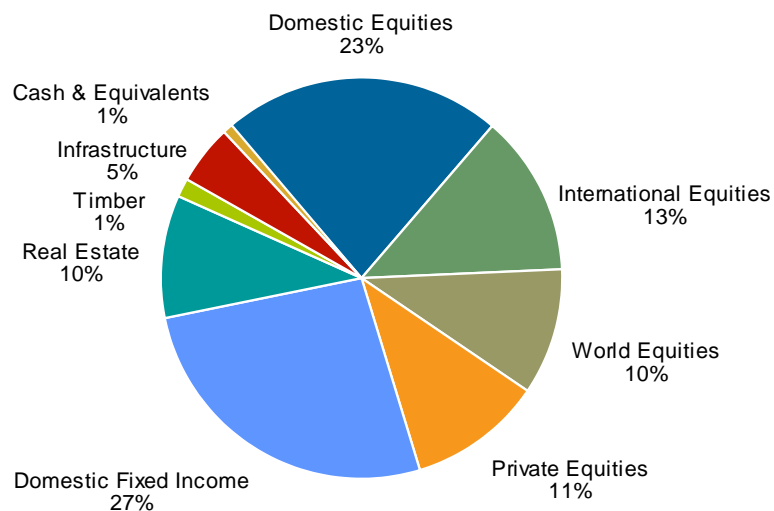


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	1,028,660	25.4%	24.1%	1.3%	51,774
International Equities	632,687	15.6%	16.9%	(1.3%)	(51,129)
World Equities	421,387	10.4%	10.0%	0.4%	16,336
Private Equities	308,318	7.6%	7.0%	0.6%	24,782
Domestic Fixed Income	944,990	23.3%	23.0%	0.3%	13,372
Real Estate	468,567	11.6%	11.0%	0.6%	23,010
Timber	54,248	1.3%	1.3%	0.0%	0
Infrastructure	189,097	4.7%	6.7%	(2.0%)	(80,696)
Cash & Equivalents	2,559	0.1%	0.0%	0.1%	2,559
<b>Total</b>	<b>4,050,513</b>	<b>100.0%</b>	<b>100.0%</b>		

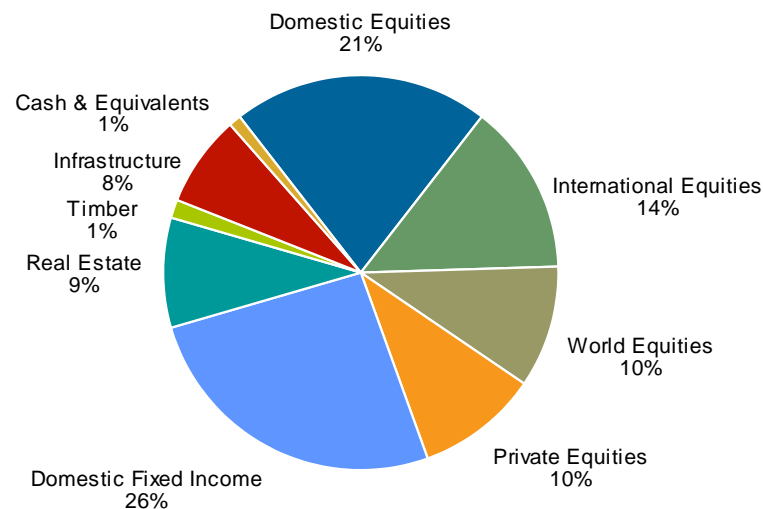
# TFFR Allocation

As of March 31, 2022

**Actual Asset Allocation**



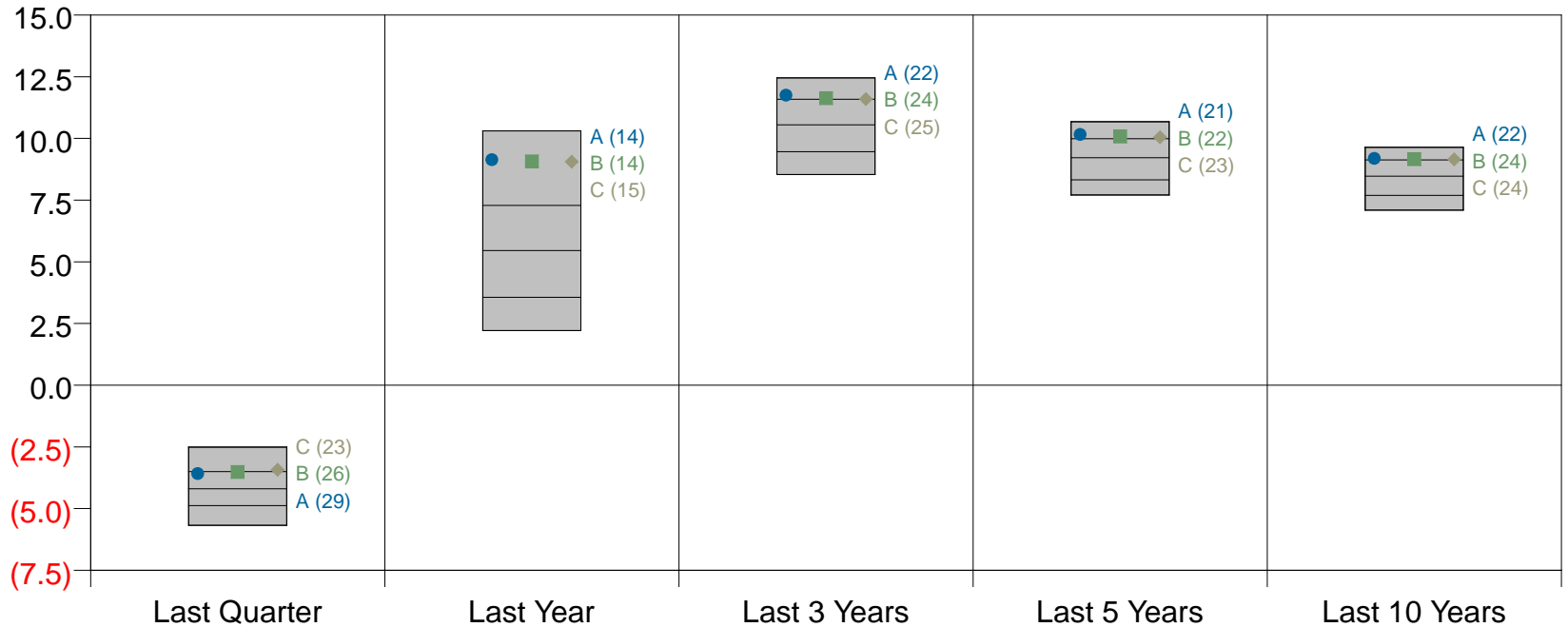
**Target Asset Allocation**



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	732,258	22.6%	21.0%	1.6%	51,112
International Equities	421,844	13.0%	14.0%	(1.0%)	(32,253)
World Equities	329,999	10.2%	10.0%	0.2%	5,644
Private Equities	349,755	10.8%	10.0%	0.8%	25,400
Domestic Fixed Income	860,438	26.5%	26.0%	0.5%	17,115
Real Estate	321,158	9.9%	9.0%	0.9%	29,238
Timber	48,423	1.5%	1.5%	(0.0%)	(0)
Infrastructure	154,661	4.8%	7.5%	(2.7%)	(88,836)
Cash & Equivalents	25,015	0.8%	1.0%	(0.2%)	(7,420)
<b>Total</b>	<b>3,243,552</b>	<b>100.0%</b>	<b>100.0%</b>		

# Consolidated Pension Trust, PERS, and TFFR Performance Rankings

Returns for Periods Ended March 31, 2022  
 Group: Callan Public Fund Sponsor Database

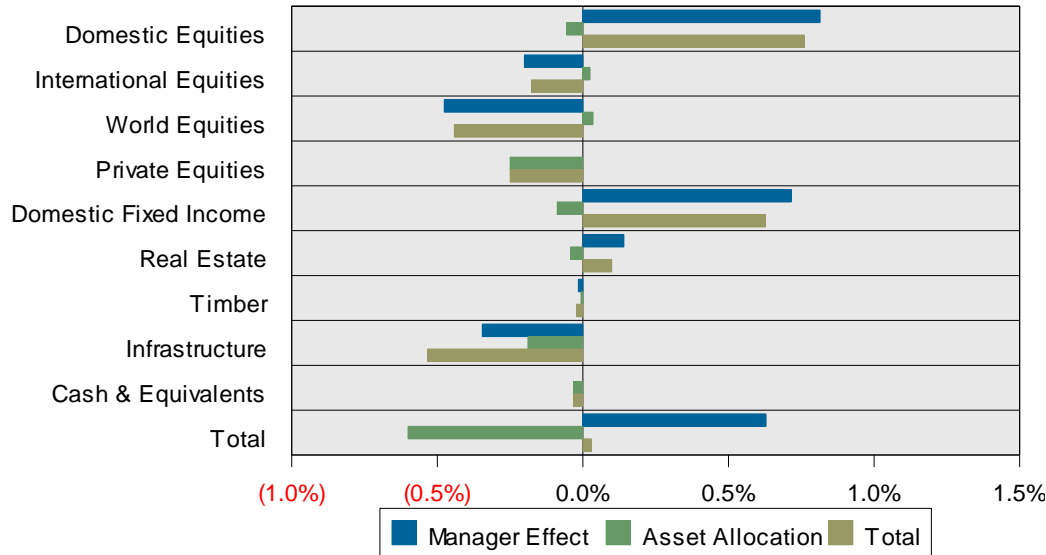


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	(2.50)	10.31	12.46	10.68	9.64
25th Percentile	(3.50)	7.29	11.59	9.99	9.13
Median	(4.20)	5.46	10.55	9.22	8.48
75th Percentile	(4.87)	3.56	9.47	8.32	7.70
90th Percentile	(5.67)	2.22	8.54	7.71	7.10
NDPERS-Total Fund ● A	(3.58)	9.14	11.75	10.16	9.19
NDPEN-Total Fund ■ B	(3.51)	9.07	11.64	10.08	9.16
NDTFFR-Total Fund ◆ C	(3.42)	9.06	11.59	10.05	9.16

# PERS Performance and Attribution

As of March 31, 2022

## One Year Relative Attribution Effects



## Returns for 1 Year Ended 03/31/2022

Return Type	Return (%)
Gross	9.14%
Net of fees	8.84%
Target	9.11%
Net added	-0.27%

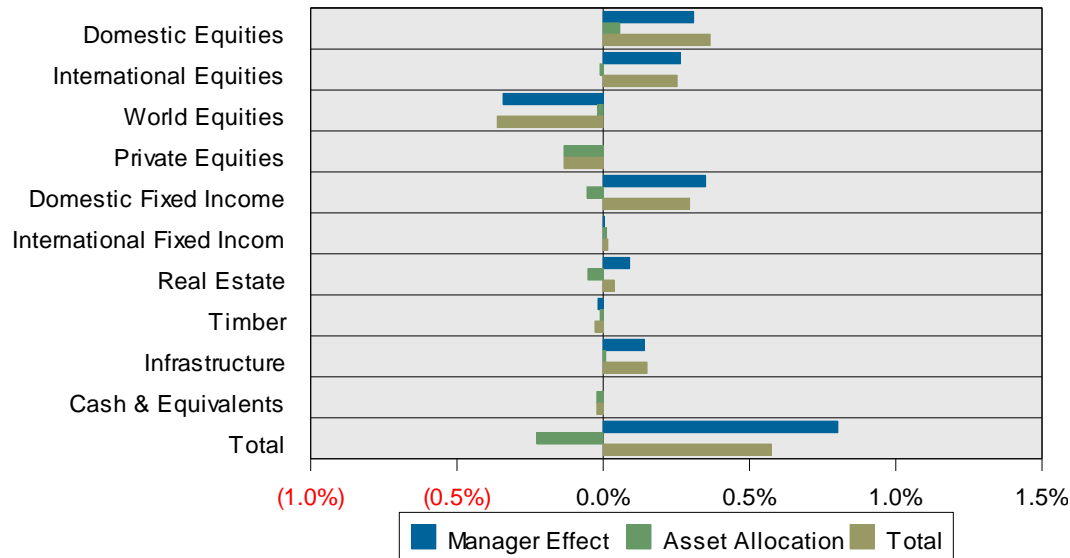
## One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	26%	24%	12.41%	9.26%	0.82%	(0.06%)	0.76%
International Equities	17%	17%	(2.04%)	(0.67%)	(0.20%)	0.02%	(0.18%)
World Equities	11%	10%	6.24%	10.12%	(0.48%)	0.03%	(0.44%)
Private Equities	7%	7%	48.54%	48.54%	0.00%	(0.25%)	(0.25%)
Domestic Fixed Income	24%	23%	(0.34%)	(3.09%)	0.72%	(0.09%)	0.63%
Real Estate	10%	11%	23.51%	21.87%	0.14%	(0.04%)	0.10%
Timber	1%	1%	10.60%	11.82%	(0.02%)	(0.01%)	(0.02%)
Infrastructure	4%	7%	9.00%	17.41%	(0.35%)	(0.19%)	(0.53%)
Cash & Equivalents	0%	0%	0.06%	0.06%	0.00%	(0.03%)	(0.03%)
<b>Total</b>			<b>9.14%</b>	<b>9.11%</b>	<b>+ 0.63%</b>	<b>+ (0.60%)</b>	<b>0.03%</b>

# PERS Performance and Attribution

As of March 31, 2022

## Five Year Annualized Relative Attribution Effects



## Returns for 5 Years Ended 03/31/2022

Return Type	Return (%)
Gross	10.16%
Net of fees	9.89%
Target	9.58%
Net added	0.31%

## Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	22%	15.98%	14.54%	0.31%	0.06%	0.37%
International Equities	16%	15%	8.56%	6.91%	0.26%	(0.01%)	0.25%
World Equities	15%	14%	10.10%	12.42%	(0.34%)	(0.02%)	(0.36%)
Private Equities	4%	7%	17.67%	17.67%	0.00%	(0.13%)	(0.13%)
Domestic Fixed Income	22%	22%	4.44%	2.95%	0.35%	(0.06%)	0.30%
International Fixed Income	1%	1%	-	-	0.00%	0.01%	0.02%
Real Estate	11%	11%	9.39%	8.54%	0.09%	(0.05%)	0.04%
Timber	2%	2%	3.38%	4.08%	(0.02%)	(0.01%)	(0.03%)
Infrastructure	5%	6%	8.53%	5.61%	0.14%	0.01%	0.15%
Cash & Equivalents	1%	0%	1.13%	1.13%	0.00%	(0.02%)	(0.02%)

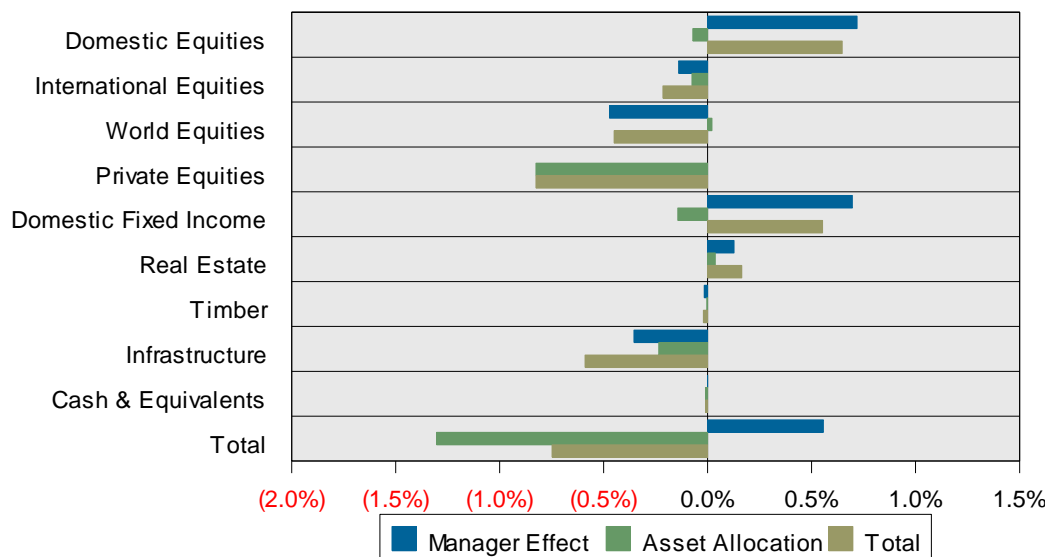
<b>Total</b>	<b>10.16% = 9.58% + 0.80% + (0.23%)</b>	<b>0.57%</b>
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# TFFR Performance and Attribution

As of March 31, 2022

## One Year Relative Attribution Effects



## Returns for 1 Year Ended 03/31/2022

Return Type	Return (%)
Gross	9.06%
Net of fees	8.78%
Target	9.81%
Net added	-1.03%

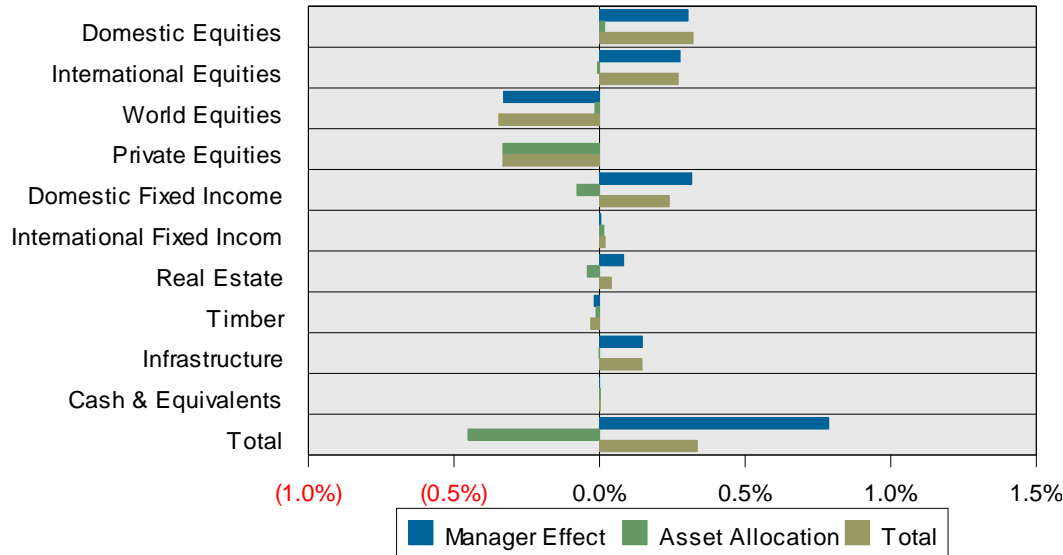
## One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	12.30%	9.26%	0.72%	(0.07%)	0.65%
International Equities	15%	14%	(1.85%)	(0.67%)	(0.14%)	(0.08%)	(0.21%)
World Equities	11%	10%	6.26%	10.12%	(0.47%)	0.02%	(0.45%)
Private Equities	8%	10%	48.56%	48.56%	0.00%	(0.83%)	(0.83%)
Domestic Fixed Income	27%	26%	(0.74%)	(3.08%)	0.70%	(0.14%)	0.55%
Real Estate	9%	9%	23.51%	21.87%	0.13%	0.04%	0.16%
Timber	2%	2%	10.60%	11.82%	(0.02%)	(0.00%)	(0.02%)
Infrastructure	4%	7%	9.00%	17.41%	(0.35%)	(0.24%)	(0.59%)
Cash & Equivalents	1%	1%	0.06%	0.06%	(0.00%)	(0.01%)	(0.01%)
<b>Total</b>			<b>9.06%</b>	<b>9.81%</b>	<b>+ 0.56%</b>	<b>+ (1.30%)</b>	<b>(0.75%)</b>

# TFFR Performance and Attribution

As of March 31, 2022

## Five Year Annualized Relative Attribution Effects



## Returns for 5 Years Ended 03/31/2022

Return Type	Return (%)
Gross	10.05%
Net of fees	9.79%
Target	9.71%
Net added	0.08%

## Five Year Annualized Relative Attribution Effects

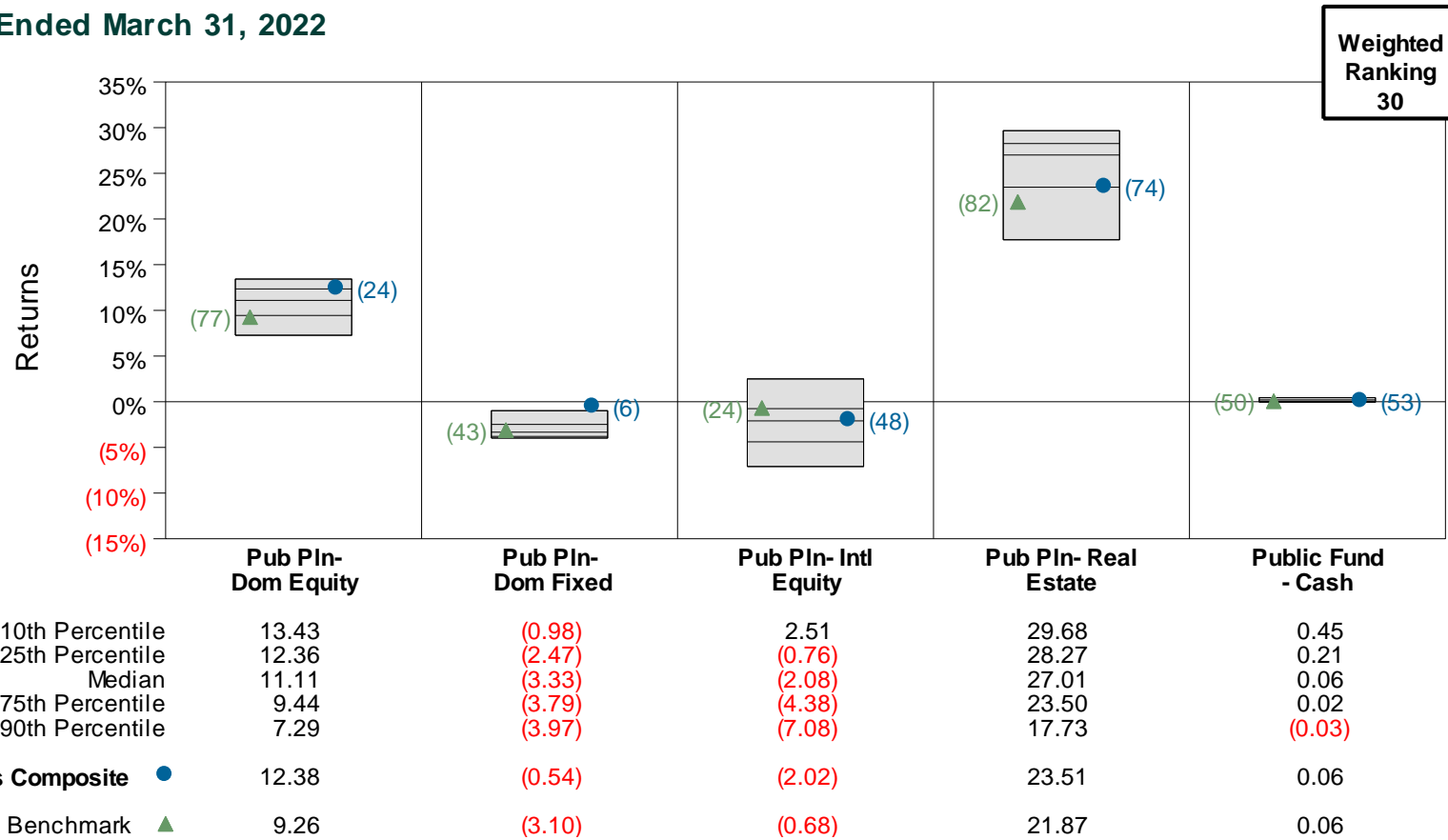
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	16.00%	14.57%	0.30%	0.02%	0.32%
International Equities	15%	14%	8.51%	6.81%	0.28%	(0.01%)	0.27%
World Equities	15%	14%	10.11%	12.42%	(0.33%)	(0.02%)	(0.35%)
Private Equities	5%	7%	17.67%	17.67%	0.00%	(0.33%)	(0.33%)
Domestic Fixed Income	23%	23%	4.23%	2.92%	0.32%	(0.08%)	0.24%
International Fixed Income	1%	1%	-	-	0.00%	0.01%	0.02%
Real Estate	10%	10%	9.39%	8.54%	0.08%	(0.04%)	0.04%
Timber	2%	2%	3.38%	4.08%	(0.02%)	(0.01%)	(0.03%)
Infrastructure	5%	6%	8.53%	5.61%	0.15%	(0.00%)	0.15%
Cash & Equivalents	1%	1%	1.13%	1.13%	(0.00%)	0.00%	0.00%

**Total** **10.05% = 9.71% + 0.79% + (0.45%)** **0.34%**

# Asset Class Composite Results

## Consolidated Pension Trust Asset Class Results vs. Other Public Pension Funds

### Total Asset Class Performance One Year Ended March 31, 2022

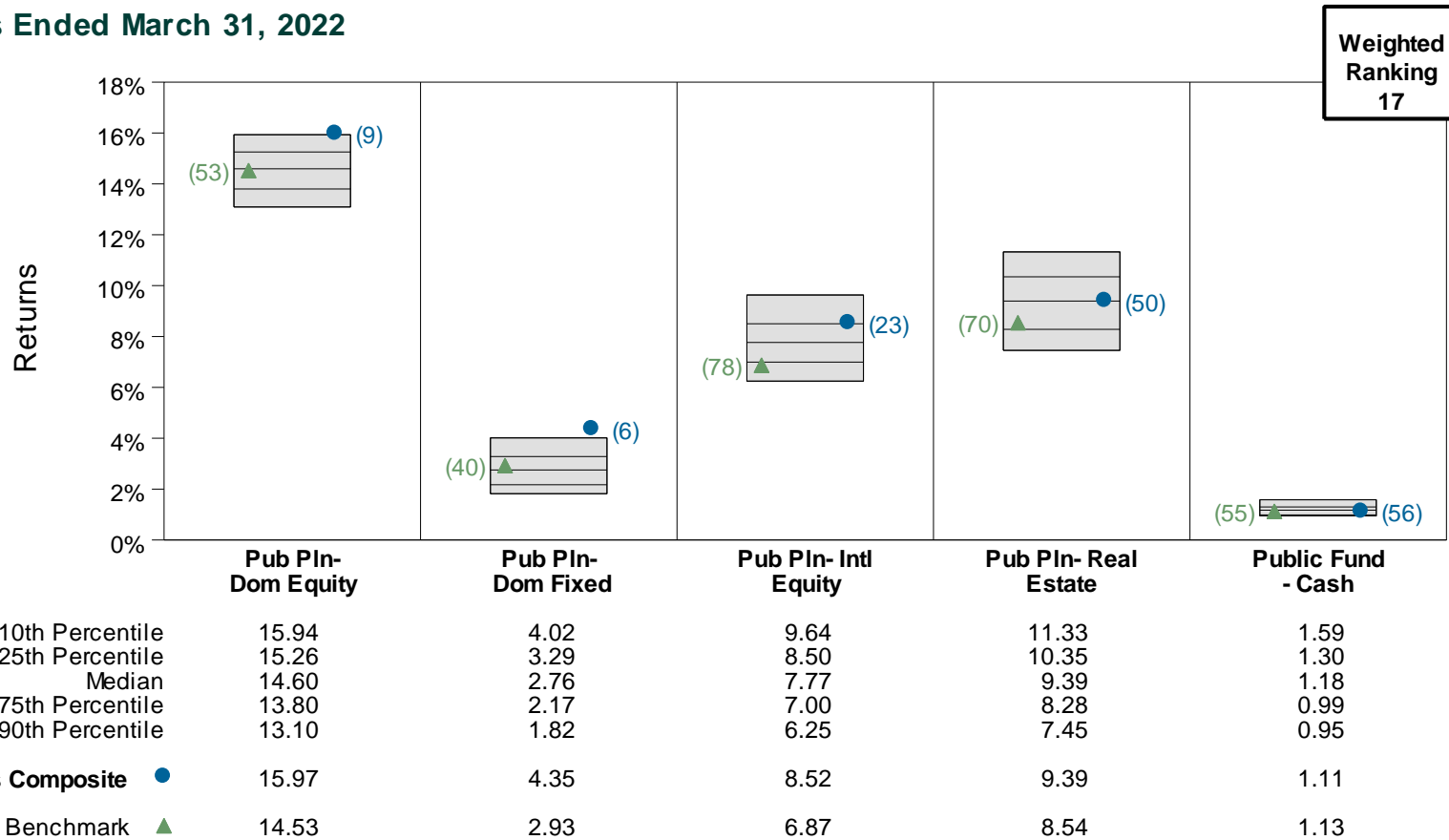


- All asset classes outperformed their respective benchmarks over the trailing year, with the exception of International Equity.
- All asset classes with the exception of Real Estate outperformed their respective peer medians.

# Asset Class Composite Results

## Consolidated Pension Trust Asset Class Results vs. Other Public Pension Funds

### Total Asset Class Performance Five Years Ended March 31, 2022



- All asset classes outperformed their respective benchmarks over the trailing five years (except for Cash).
- All asset classes ranked at or above median over the trailing five years (except for Cash).

Callan

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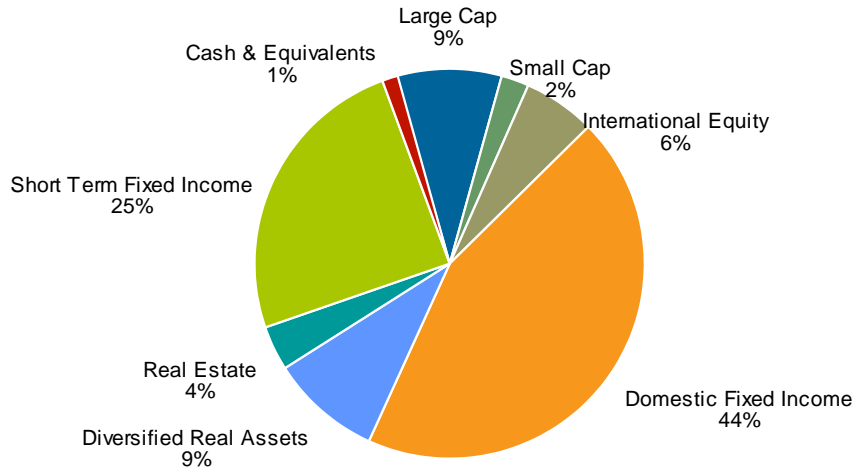
## **Consolidated Insurance Trust Quarterly Review**

- Workforce Safety and Insurance Legacy Fund
- Budget Stabilization Fund

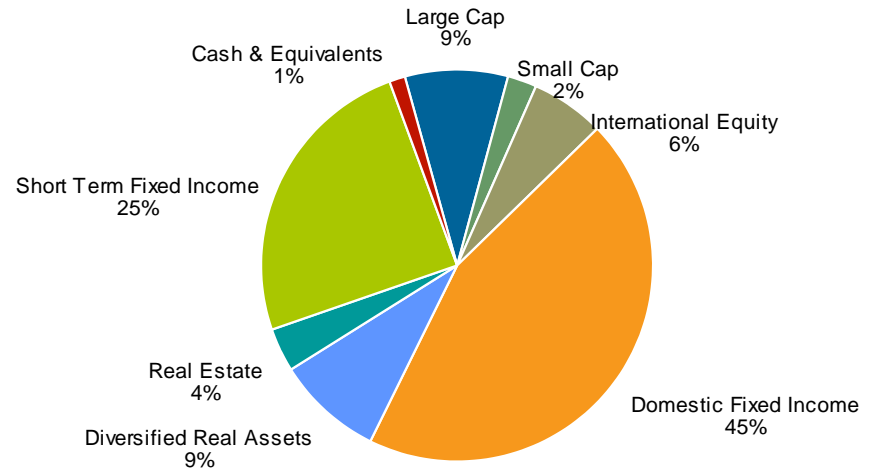
# Consolidated Insurance Trust Allocation

As of March 31, 2022

**Actual Asset Allocation**



**Target Asset Allocation**

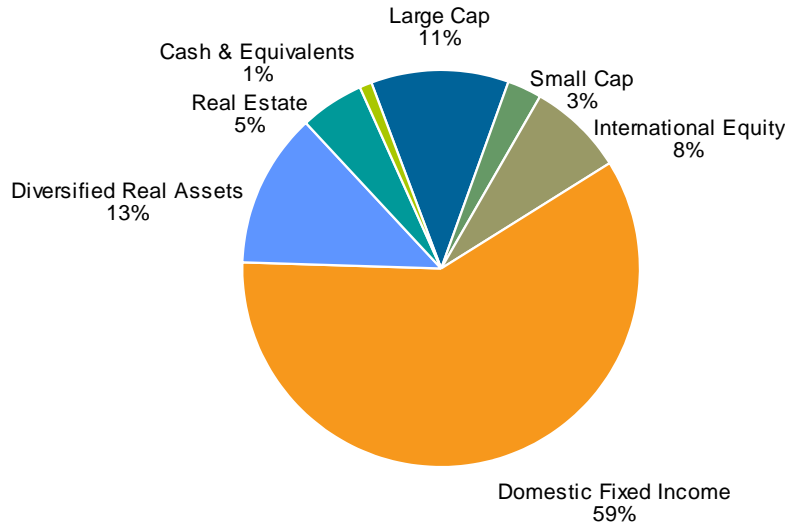


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	266,984	8.7%	8.5%	0.1%	4,605
Small Cap	69,485	2.3%	2.4%	(0.2%)	(5,165)
International Equity	183,615	6.0%	6.1%	(0.1%)	(3,809)
Domestic Fixed Income	1,359,541	44.2%	44.6%	(0.4%)	(13,653)
Diversified Real Assets	283,575	9.2%	8.8%	0.5%	14,098
Real Estate	114,584	3.7%	3.6%	0.1%	4,039
Short Term Fixed Income	760,192	24.7%	24.7%	0.0%	(0)
Cash & Equivalents	39,916	1.3%	1.3%	(0.0%)	(115)
<b>Total</b>	<b>3,077,892</b>	<b>100.0%</b>	<b>100.0%</b>		

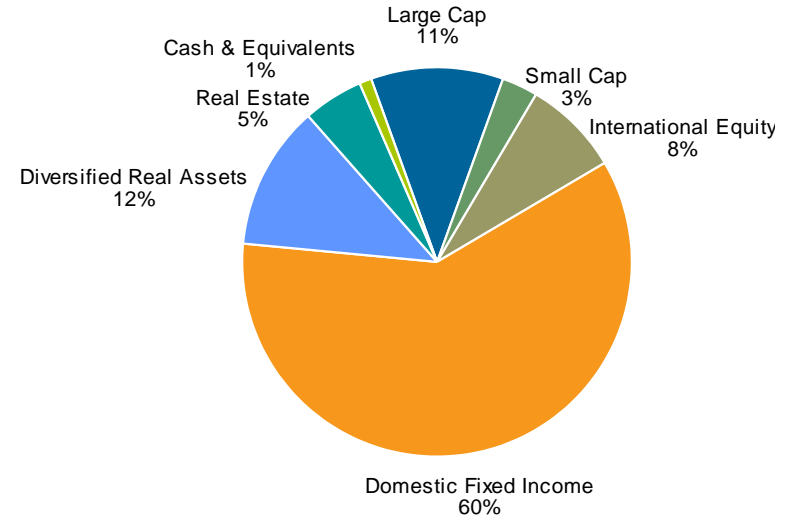
# WSI Allocation

As of March 31, 2022

**Actual Asset Allocation**



**Target Asset Allocation**

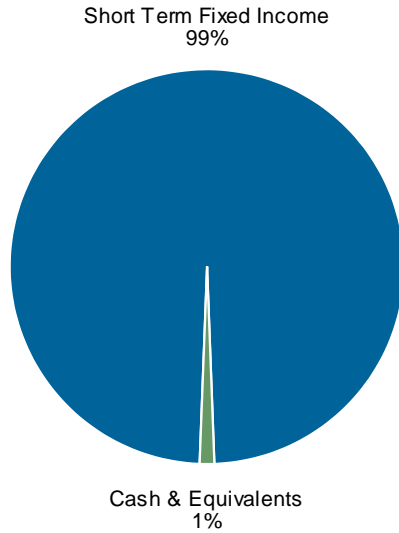


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	247,457	11.2%	11.0%	0.2%	4,766
Small Cap	61,060	2.8%	3.0%	(0.2%)	(5,128)
International Equity	172,617	7.8%	8.0%	(0.2%)	(3,886)
Domestic Fixed Income	1,310,049	59.4%	60.0%	(0.6%)	(13,722)
Diversified Real Assets	278,844	12.6%	12.0%	0.6%	14,090
Real Estate	114,353	5.2%	5.0%	0.2%	4,038
Cash & Equivalents	21,905	1.0%	1.0%	(0.0%)	(158)
<b>Total</b>	<b>2,206,284</b>	<b>100.0%</b>	<b>100.0%</b>		

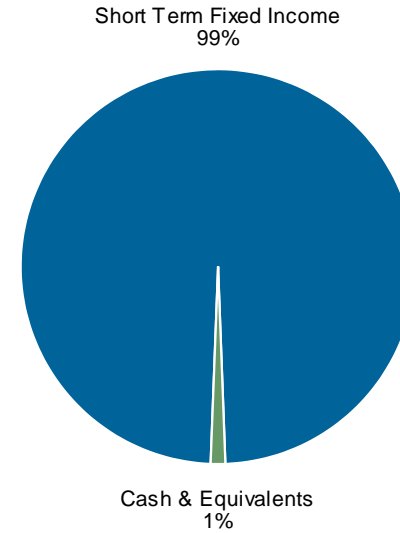
# Budget Stabilization Fund Allocation

As of March 31, 2022

**Actual Asset Allocation**



**Target Asset Allocation**



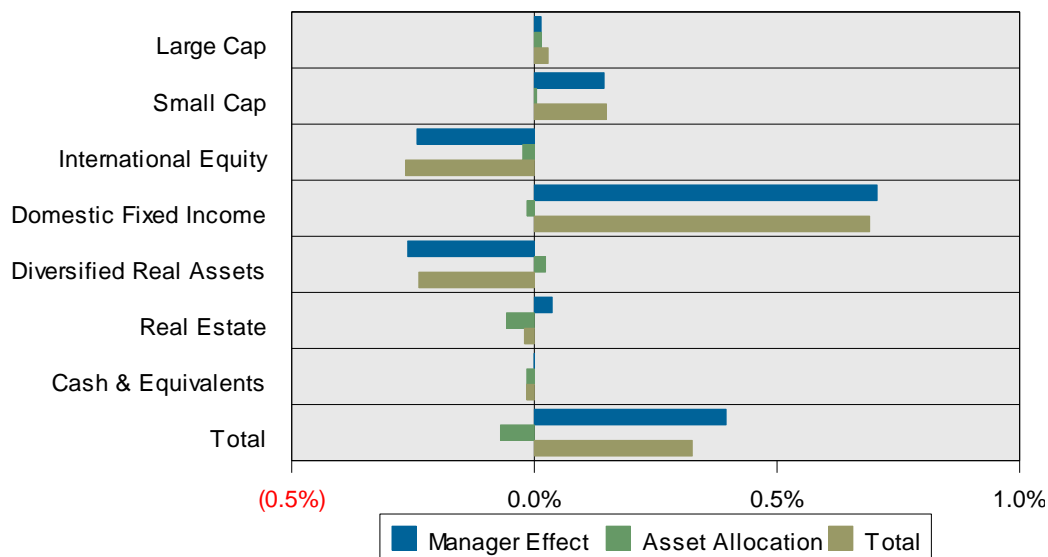
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Short Term Fixed Income	722,885	99.0%	98.1%	0.9%	6,423
Cash & Equivalents	7,156	1.0%	1.9%	(0.9%)	(6,423)
Total	730,041	100.0%	100.0%		



# WSI Performance and Attribution

As of March 31, 2022

## One Year Relative Attribution Effects



## Returns for 1 Year Ended 03/31/2022

Return Type	Return (%)
Gross	1.22%
Net of fees	1.02%
Target	0.89%
Net added	0.13%

## One Year Relative Attribution Effects

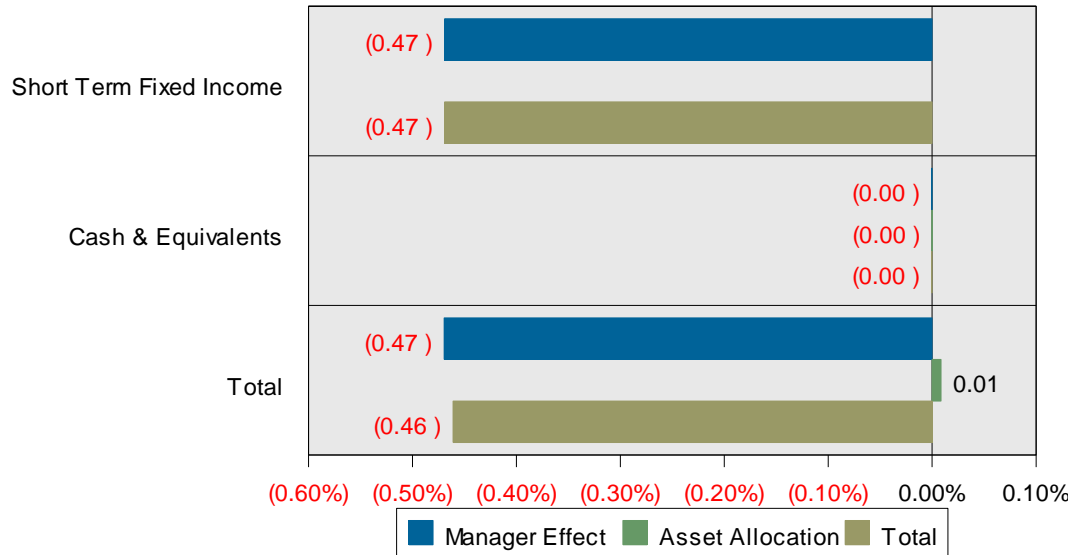
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	11%	11%	13.47%	13.27%	0.01%	0.01%	0.03%
Small Cap	3%	3%	(1.09%)	(5.79%)	0.14%	0.00%	0.15%
International Equity	8%	8%	(0.15%)	3.04%	(0.24%)	(0.02%)	(0.27%)
Domestic Fixed Income	60%	60%	(3.02%)	(4.15%)	0.71%	(0.02%)	0.69%
Diversified Real Assets	12%	12%	5.23%	7.44%	(0.26%)	0.02%	(0.24%)
Real Estate	4%	5%	22.92%	21.87%	0.04%	(0.06%)	(0.02%)
Cash & Equivalents	1%	1%	0.04%	0.06%	(0.00%)	(0.02%)	(0.02%)
<b>Total</b>			<b>1.22%</b>	<b>0.89%</b>	<b>+ 0.40%</b>	<b>+ (0.07%)</b>	<b>0.33%</b>



# Budget Stabilization Fund Performance and Attribution

As of March 31, 2022

## One Year Relative Attribution Effects



## Returns for 1 Year Ended 03/31/2022

Return Type	Return (%)
Gross	-3.32%
Net of fees	-3.45%
Target	-2.86%
Net added	-0.59%

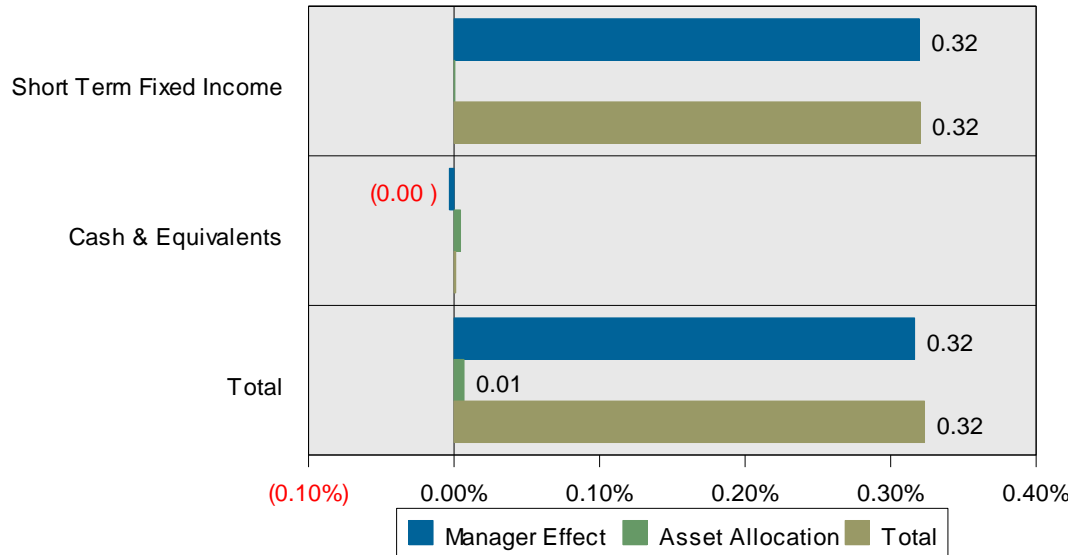
## One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return		
Short Term Fixed Income	99%	99%	(3.39%)	(2.91%)	(0.47%)	0.00%	(0.47%)		
Cash & Equivalents	1%	1%	0.04%	0.06%	(0.00%)	(0.00%)	(0.00%)		
<b>Total</b>			<b>(3.32%)</b>	<b>(2.86%)</b>	<b>+</b>	<b>(0.47%)</b>	<b>+</b>	<b>0.01%</b>	<b>(0.46%)</b>

# Budget Stabilization Fund Performance and Attribution

As of March 31, 2022

## Five Year Annualized Relative Attribution Effects



## Returns for 5 Years Ended 03/31/2022

Return Type	Return (%)
Gross	1.58%
Net of fees	1.46%
Target	1.25%
Net added	0.21%

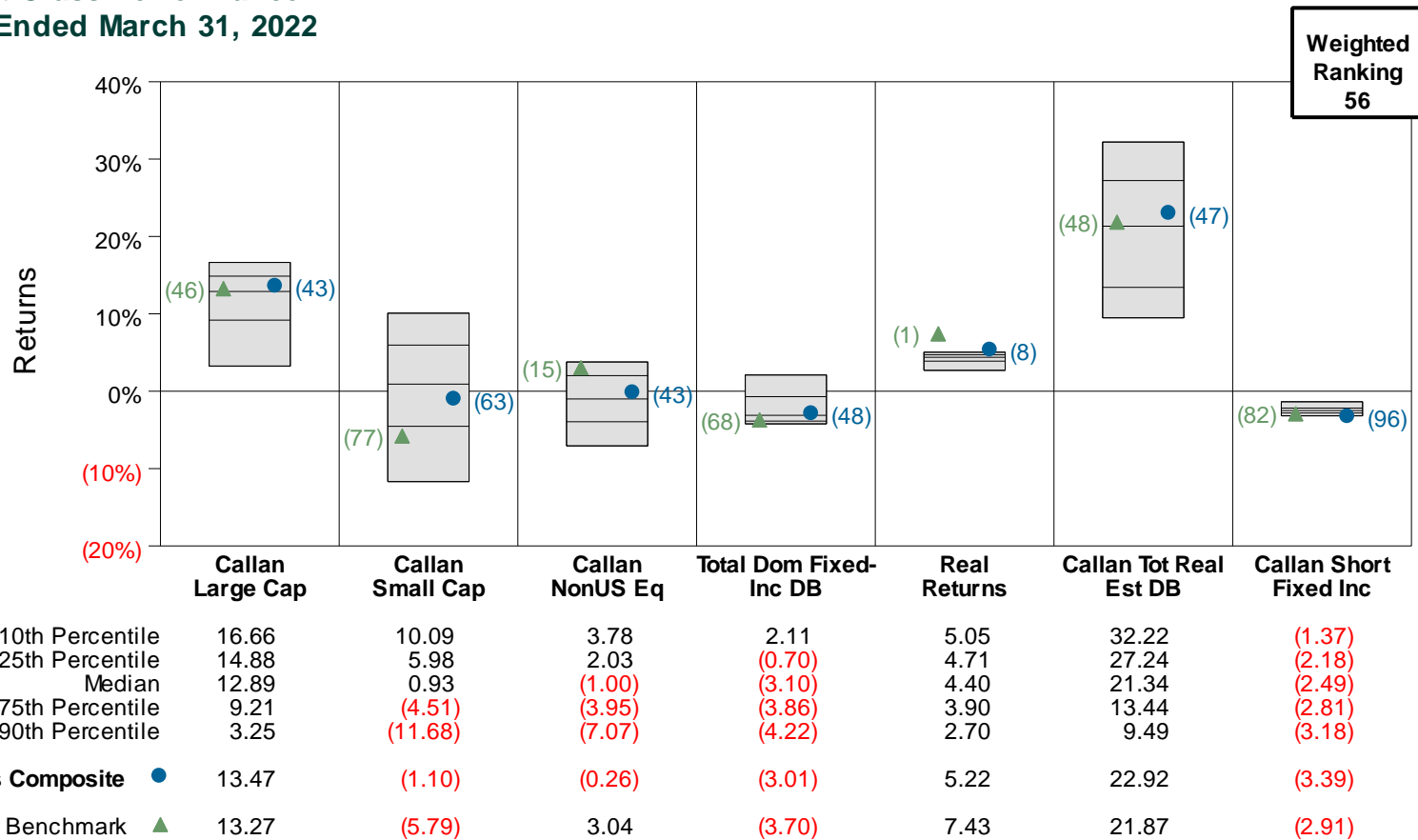
## Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Short Term Fixed Income	98%	97%	1.58%	1.26%	0.32%	0.00%	0.32%
Cash & Equivalents	2%	3%	1.00%	1.13%	(0.00)%	0.00%	0.00%
<b>Total</b>			<b>1.58%</b>	<b>1.25%</b>	<b>+ 0.32%</b>	<b>+ 0.01%</b>	<b>0.32%</b>

# Asset Class Composite Results

## Consolidated Insurance Trust Asset Class Results vs. Callan Style Groups

Total Asset Class Performance  
One Year Ended March 31, 2022

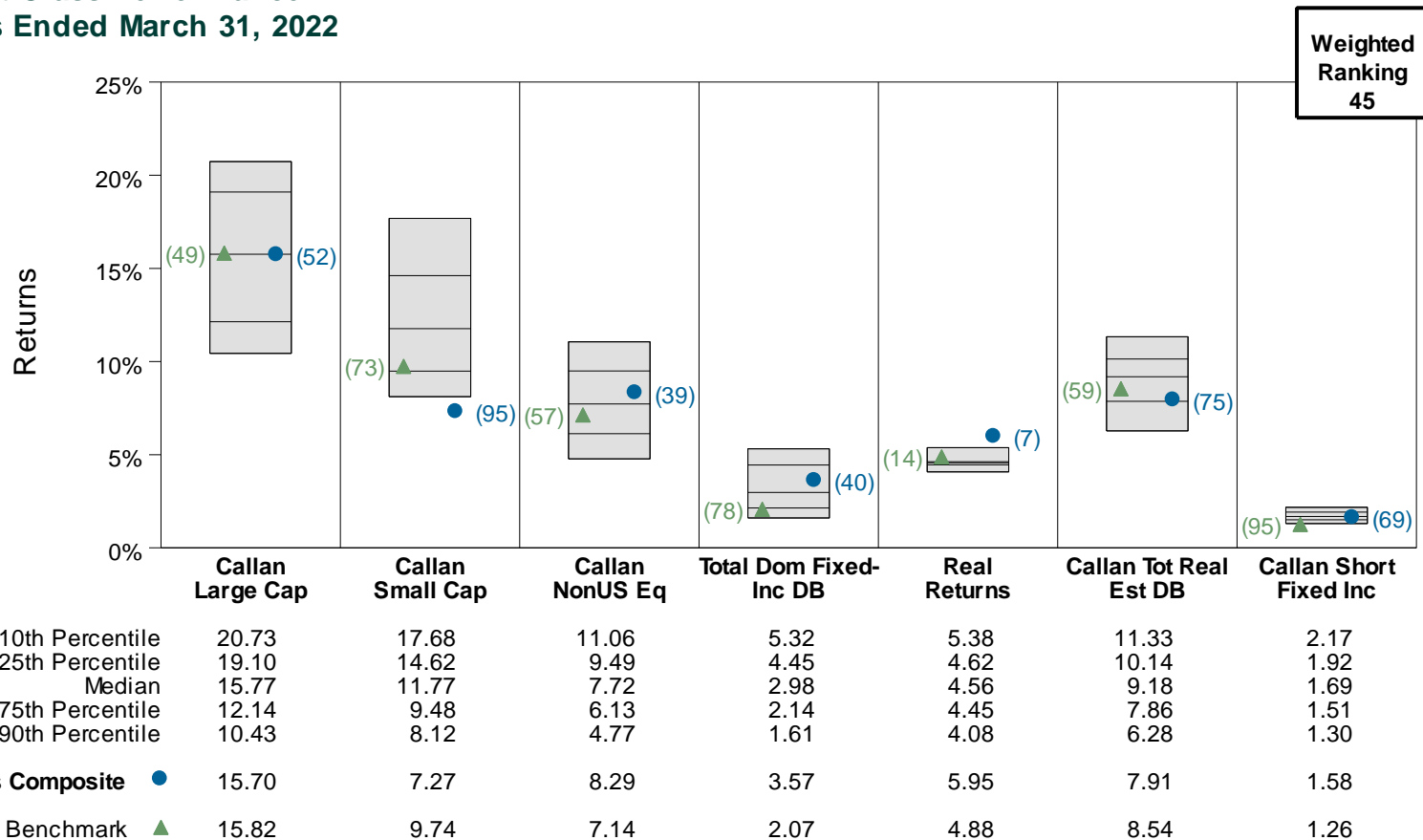


- International Equity, Short Duration Fixed Income, and Real Returns underperformed the composite benchmark over the trailing year with all other asset classes outperforming.
- Small Cap Equity and Short Duration Fixed Income performed below median.

# Asset Class Composite Results

## Consolidated Insurance Trust Asset Class Results vs. Callan Style Groups

Total Asset Class Performance  
Five Years Ended March 31, 2022



- U.S. Large Cap, U.S. Small Cap, and Real Estate trailed the benchmark over the trailing 5-year period. Fixed Income, International Equity, Short Fixed Income and Real Returns have outpaced the benchmark.
- Small Cap ranks in the bottom decile over the period. Real Estate ranks in the 75<sup>th</sup> percentile. Large Cap Equity and Short Duration Fixed Income are below median, while all other strategies are above median.

Callan

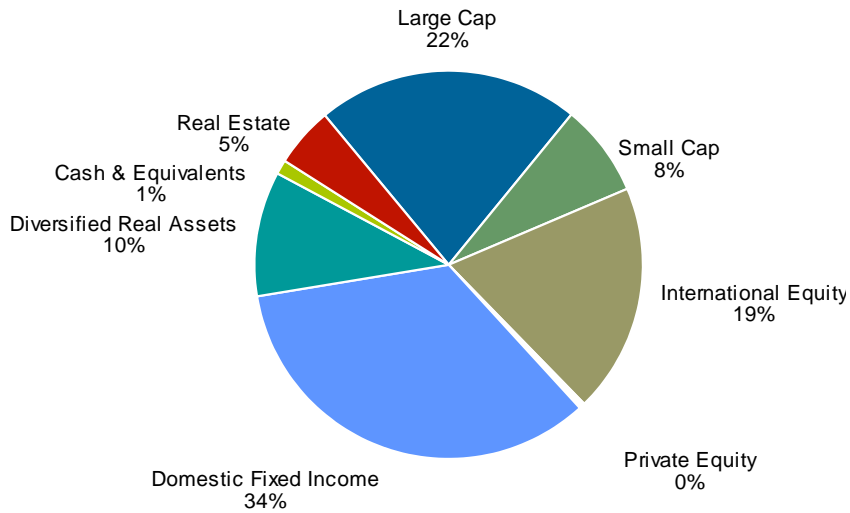
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**Legacy Fund Quarterly Review**

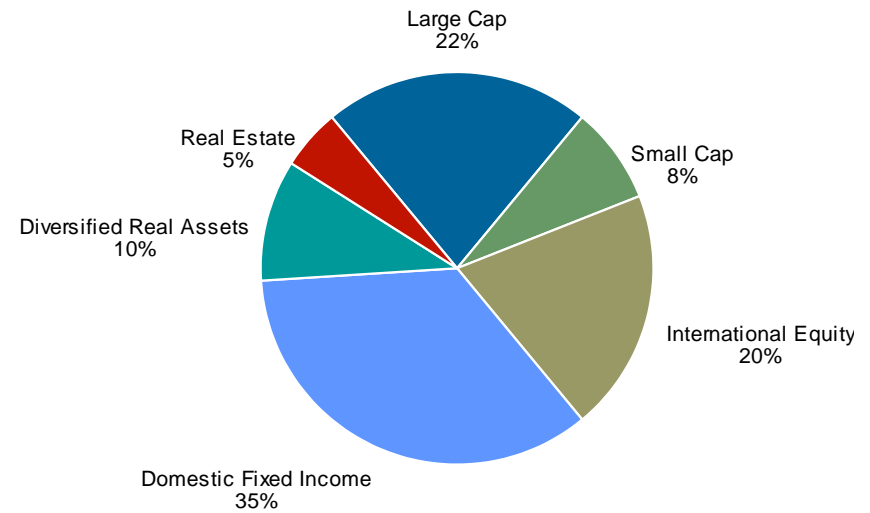
# Legacy Fund Allocation

As of March 31, 2022

**Actual Asset Allocation**



**Target Asset Allocation**



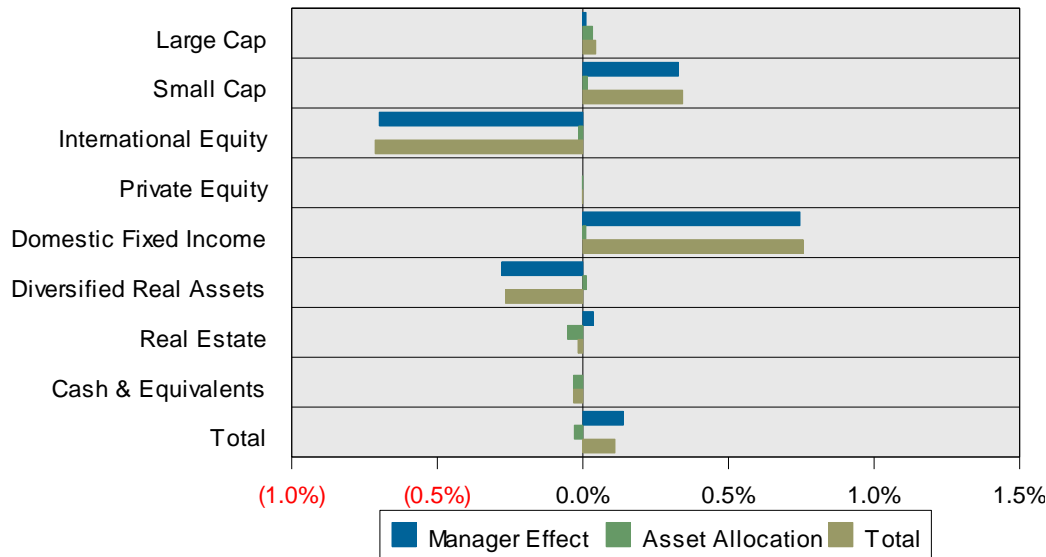
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	1,856,855	21.9%	22.0%	(0.1%)	(5,306)
Small Cap	655,662	7.7%	8.0%	(0.3%)	(21,488)
International Equity	1,614,329	19.1%	20.0%	(0.9%)	(78,544)
Private Equity	38,989	0.5%	0.0%	0.5%	38,989
Domestic Fixed Income	2,892,048	34.2%	35.0%	(0.8%)	(70,480)
Diversified Real Assets	883,573	10.4%	10.0%	0.4%	37,137
Cash & Equivalents	100,581	1.2%	0.0%	1.2%	100,581
Real Estate	422,329	5.0%	5.0%	(0.0%)	(889)
<b>Total</b>	<b>8,464,367</b>	<b>100.0%</b>	<b>100.0%</b>		



# Legacy Performance and Attribution

As of March 31, 2022

## One Year Relative Attribution Effects



## Returns for 1 Year Ended 03/31/2022

Return Type	Return (%)
Gross	3.70%
Net of fees	3.46%
Target	3.59%
Net added	-0.13%

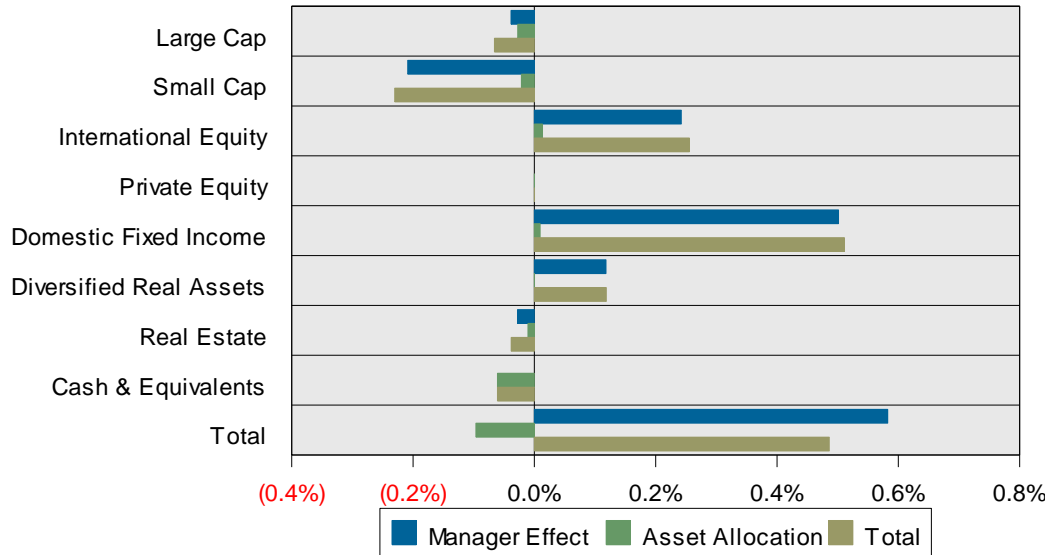
## One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	22%	22%	13.33%	13.27%	0.01%	0.03%	0.04%
Small Cap	8%	8%	(1.77%)	(5.79%)	0.33%	0.01%	0.34%
International Equity	20%	20%	(0.69%)	3.04%	(0.70%)	(0.01%)	(0.71%)
Private Equity	0%	0%	8.02%	8.02%	0.00%	(0.00%)	(0.00%)
Domestic Fixed Income	34%	35%	(2.07%)	(4.15%)	0.75%	0.01%	0.76%
Diversified Real Assets	10%	10%	7.01%	9.70%	(0.28%)	0.01%	(0.27%)
Real Estate	4%	5%	23.01%	21.87%	0.04%	(0.05%)	(0.02%)
Cash & Equivalents	1%	0%	0.03%	0.03%	0.00%	(0.03%)	(0.03%)
<b>Total</b>			<b>3.70%</b>	<b>3.59%</b>	<b>+ 0.14%</b>	<b>+ (0.03%)</b>	<b>0.11%</b>

# Legacy Performance and Attribution

As of March 31, 2022

## Five Year Annualized Relative Attribution Effects



## Returns for 5 Years Ended 03/31/2022

Return Type	Return (%)
Gross	8.20%
Net of fees	7.98%
Target	7.71%
Net added	0.27%

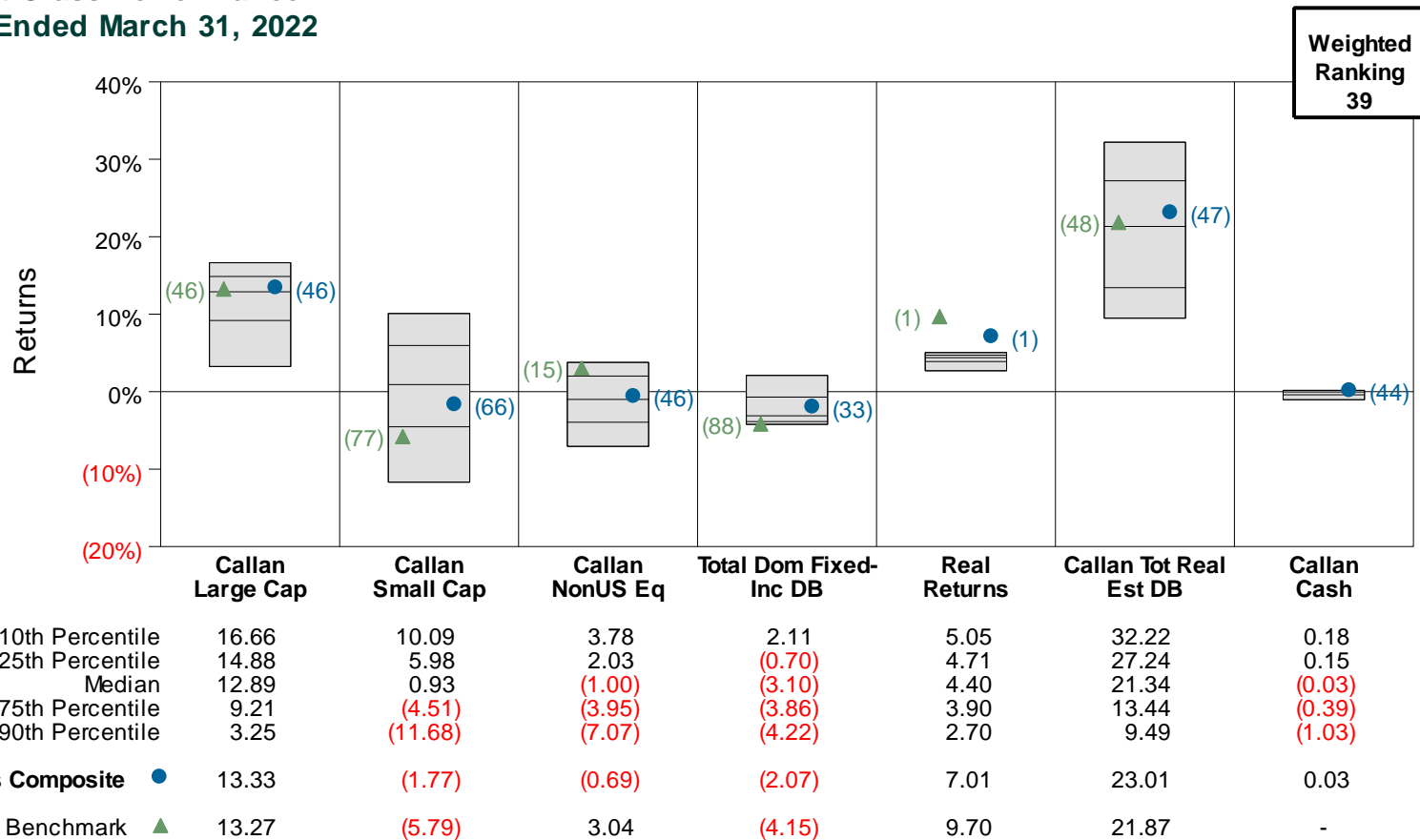
## Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	22%	22%	15.58%	15.82%	(0.04%)	(0.03%)	(0.07%)
Small Cap	8%	8%	7.37%	9.74%	(0.21%)	(0.02%)	(0.23%)
International Equity	20%	20%	8.20%	7.14%	0.24%	0.01%	0.26%
Private Equity	0%	0%	-	-	0.00%	0.00%	0.00%
Domestic Fixed Income	35%	35%	3.68%	2.14%	0.50%	0.01%	0.51%
Diversified Real Assets	10%	10%	6.79%	5.48%	0.12%	0.00%	0.12%
Real Estate	5%	5%	7.88%	8.54%	(0.03%)	(0.01%)	(0.04%)
Cash & Equivalents	1%	0%	0.99%	0.99%	0.00%	(0.06%)	(0.06%)
<b>Total</b>			<b>8.20%</b>	<b>7.71%</b>	<b>+ 0.58%</b>	<b>+ (0.10%)</b>	<b>0.49%</b>

# Asset Class Composite Results

## Legacy Fund Asset Class Results vs. Callan Style Groups

Total Asset Class Performance  
One Year Ended March 31, 2022

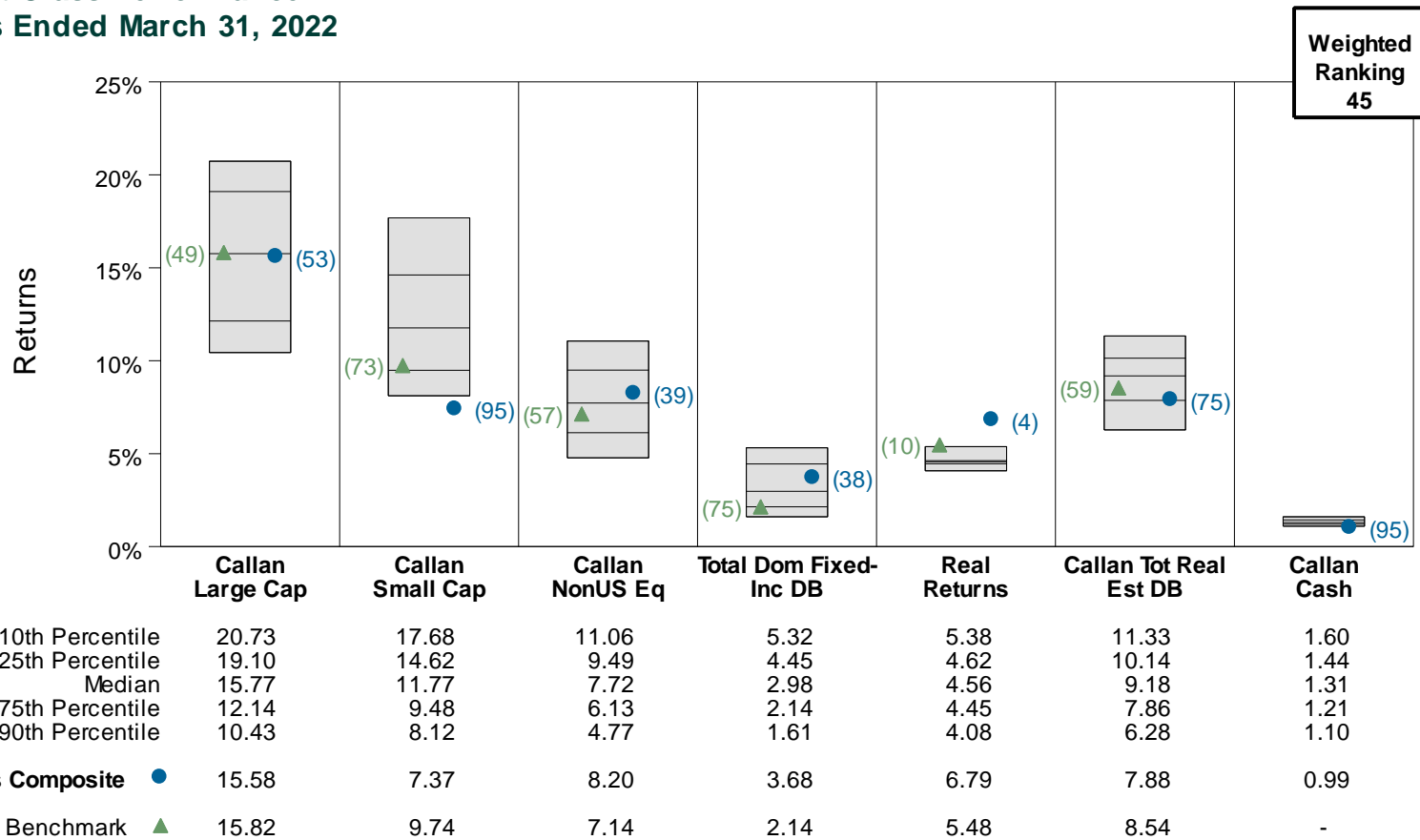


- U.S. Large Cap Equity , U.S. Small Cap Equity, Domestic Fixed Income, and Real Estate all outperformed their benchmarks. Non-U.S. Equity and Real Returns underperformed.
- U.S SC Equity was the only asset class to underperform the median manager.

# Asset Class Composite Results

## Legacy Fund Asset Class Results vs. Callan Style Groups

Total Asset Class Performance  
Five Years Ended March 31, 2022



- Non-U.S. Equities, Domestic Fixed Income, and Real Returns all beat their respective benchmarks over the past five years.
- Real Returns ranked in the top decile, while Non-U.S. Equity and Fixed Income ranked above median.

Callan

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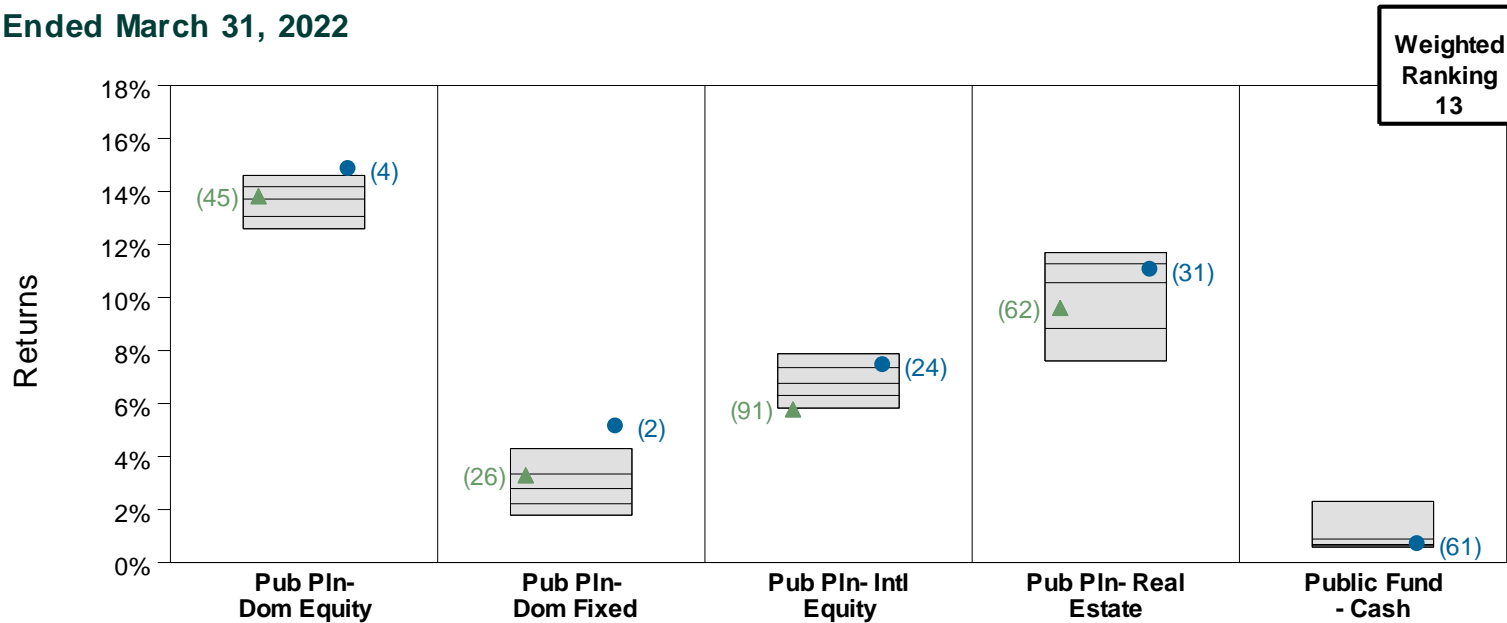
## **Appendix**

Consolidated Asset Class Rankings

# Asset Class Composite Results

## PERS' Asset Class Results vs. Other Public Pension Funds

### Total Asset Class Performance Ten Years Ended March 31, 2022



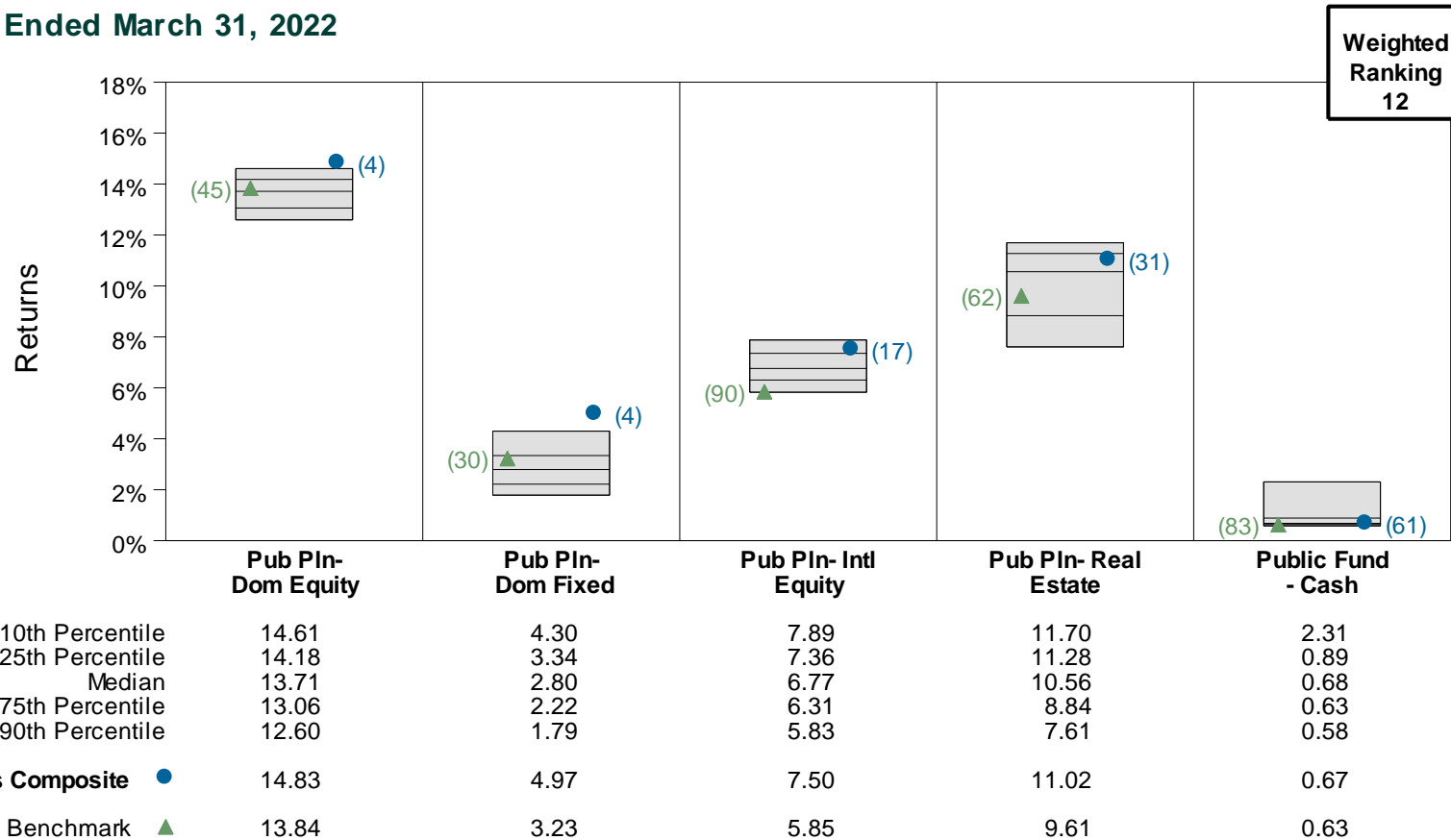
	Pub Pln-Dom Equity	Pub Pln-Dom Fixed	Pub Pln-Intl Equity	Pub Pln-Real Estate	Public Fund - Cash
10th Percentile	14.61	4.30	7.89	11.70	2.31
25th Percentile	14.18	3.34	7.36	11.28	0.89
Median	13.71	2.80	6.77	10.56	0.68
75th Percentile	13.06	2.22	6.31	8.84	0.63
90th Percentile	12.60	1.79	5.83	7.61	0.58
<b>Asset Class Composite</b> ●	14.82	5.11	7.41	11.02	0.67
Composite Benchmark ▲	13.82	3.29	5.78	9.61	-

- All asset classes have outperformed their benchmarks and all asset classes performed in the top quartile over the last 10 years (excluding cash).
- Domestic Equity and Fixed Income ranked in the top decile over the period.

# Asset Class Composite Results

## TFFR's Asset Class Results vs. Other Public Pension Funds

### Total Asset Class Performance Ten Years Ended March 31, 2022

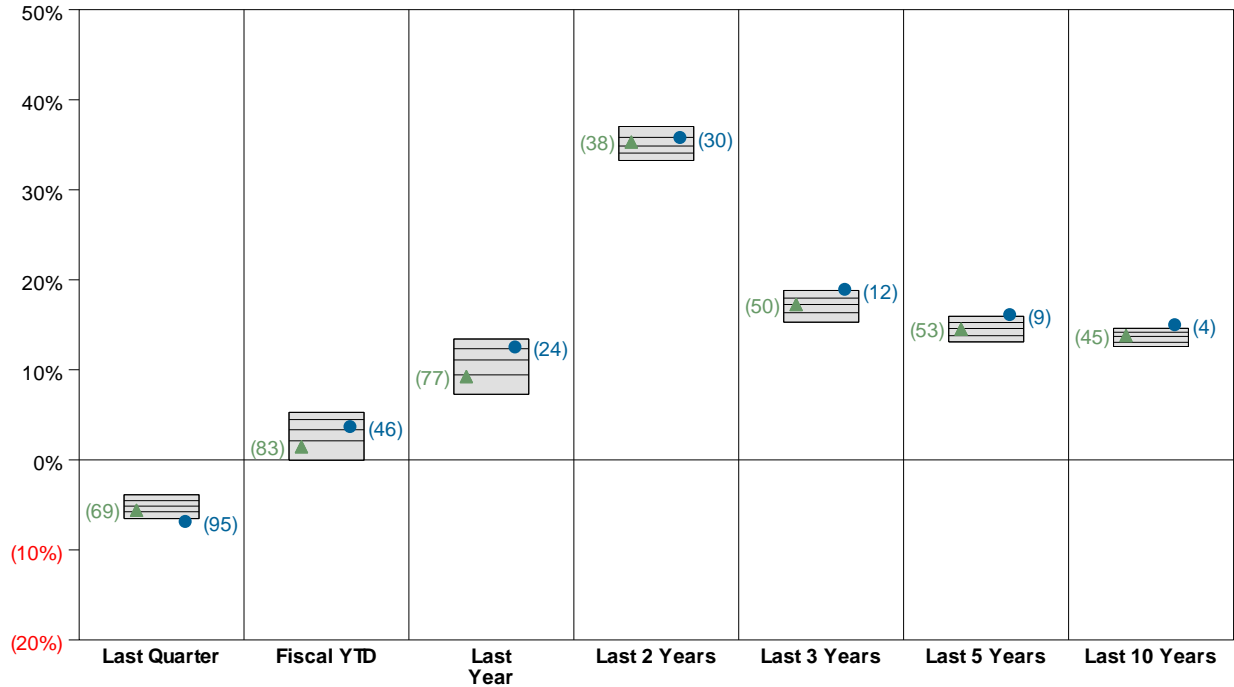


- All asset classes have outperformed their benchmarks over the last 10 years (excluding cash).
- Domestic Equity and Fixed Income ranked in the top decile over the period. International Equity ranked in the top quartile.

# Consolidated Pension Trust: Domestic Equity

As of March 31, 2022

## Performance vs Public Fund - Domestic Equity (Gross)



10th Percentile	(3.86)	5.27	13.43	37.03	18.82	15.94	14.61
25th Percentile	(4.53)	4.48	12.36	35.83	17.96	15.26	14.18
Median	(5.14)	3.35	11.11	34.85	17.25	14.60	13.71
75th Percentile	(5.76)	2.11	9.44	34.08	16.35	13.80	13.06
90th Percentile	(6.51)	(0.04)	7.29	33.25	15.28	13.10	12.60
<b>Domestic Equities</b>	● (7.00)	3.54	12.38	35.65	18.78	15.97	14.85
Domestic Equity Target	▲ (5.59)	1.47	9.26	35.31	17.27	14.53	13.82

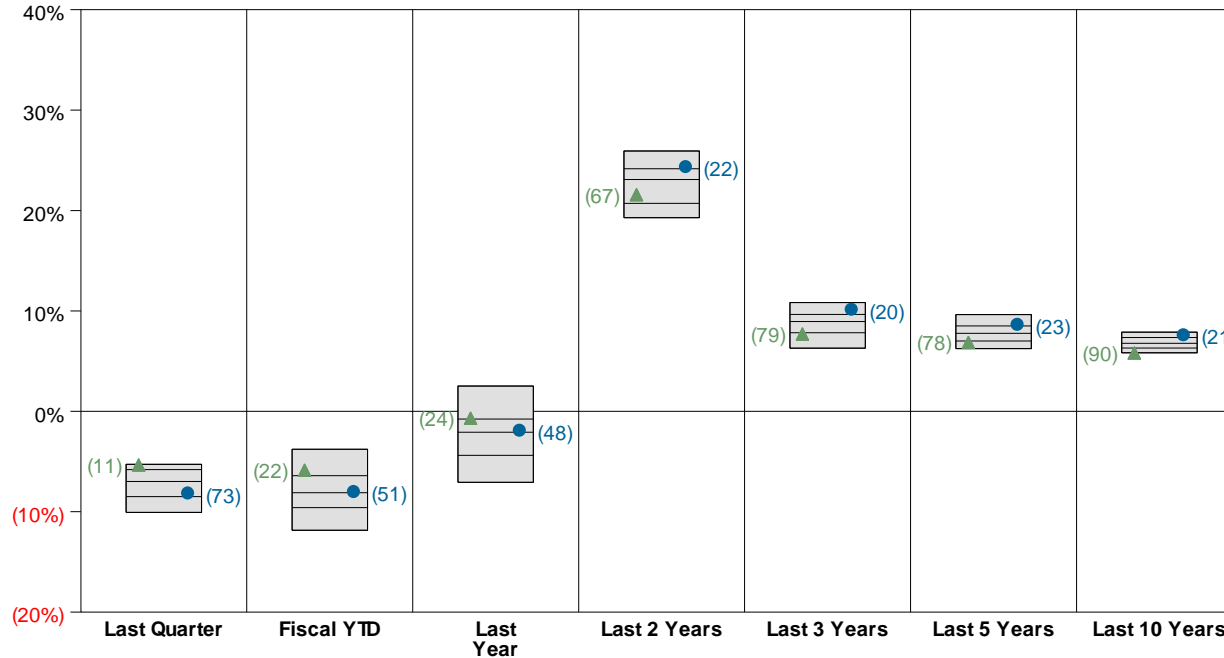
- The Domestic Equity composite outperformed the benchmark in all measured periods longer than one quarter.
- NDSIB's Domestic Equity portfolio has a meaningful growth tilt versus other Public Pension Funds.



# Consolidated Pension Trust: International Equity

As of March 31, 2022

## Performance vs Public Fund - International Equity (Gross)



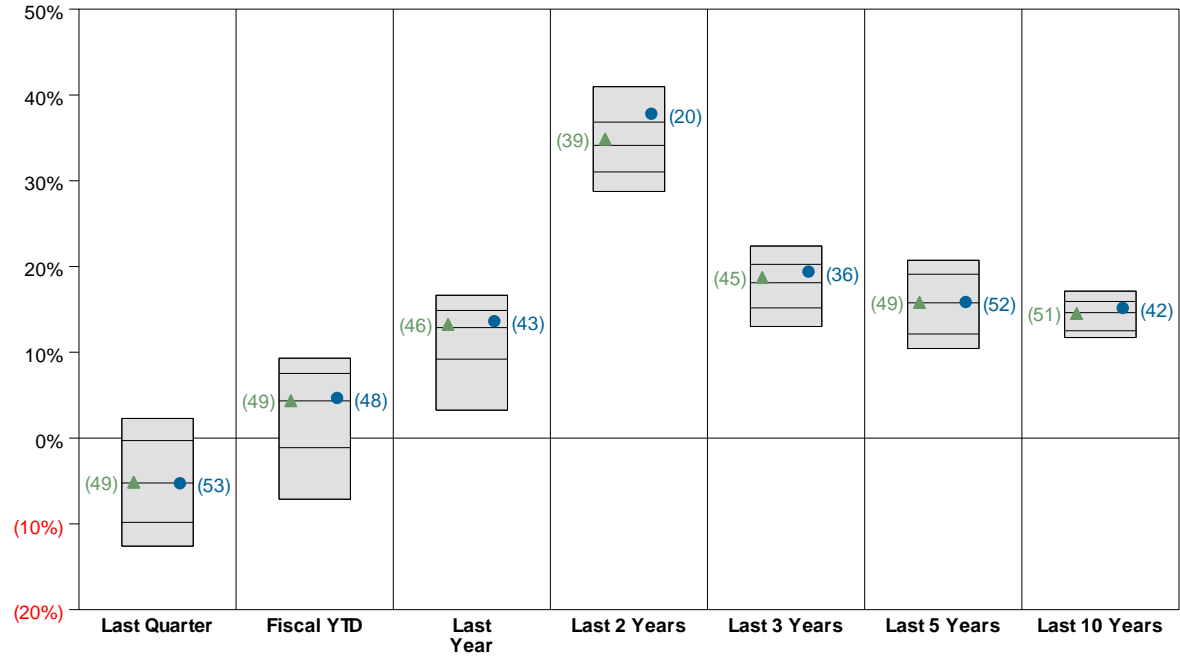
10th Percentile	(5.28)	(3.78)	2.51	25.93	10.84	9.64	7.89
25th Percentile	(5.79)	(6.42)	(0.76)	24.15	9.65	8.50	7.36
Median	(6.98)	(8.10)	(2.08)	23.09	8.94	7.77	6.77
75th Percentile	(8.50)	(9.59)	(4.38)	20.72	7.83	7.00	6.31
90th Percentile	(10.07)	(11.84)	(7.08)	19.29	6.29	6.25	5.83
<b>International Equities</b>	<b>(8.28)</b>	<b>(8.15)</b>	<b>(2.02)</b>	24.23	10.02	8.52	7.47
International Equity Target	(5.34)	(5.86)	(0.68)	21.58	7.70	6.87	5.82

- The portfolio has performed in the top quartile over the two-, three-, and ten-year periods.
- NDSIB's international equity portfolio has also benefited from a growth tilt versus other Public Pension Funds over longer periods, while the positioning was a headwind in the first quarter.

# Consolidated Insurance Trust: Large Cap Equity

As of March 31, 2022

## Performance vs Callan Large Capitalization (Gross)



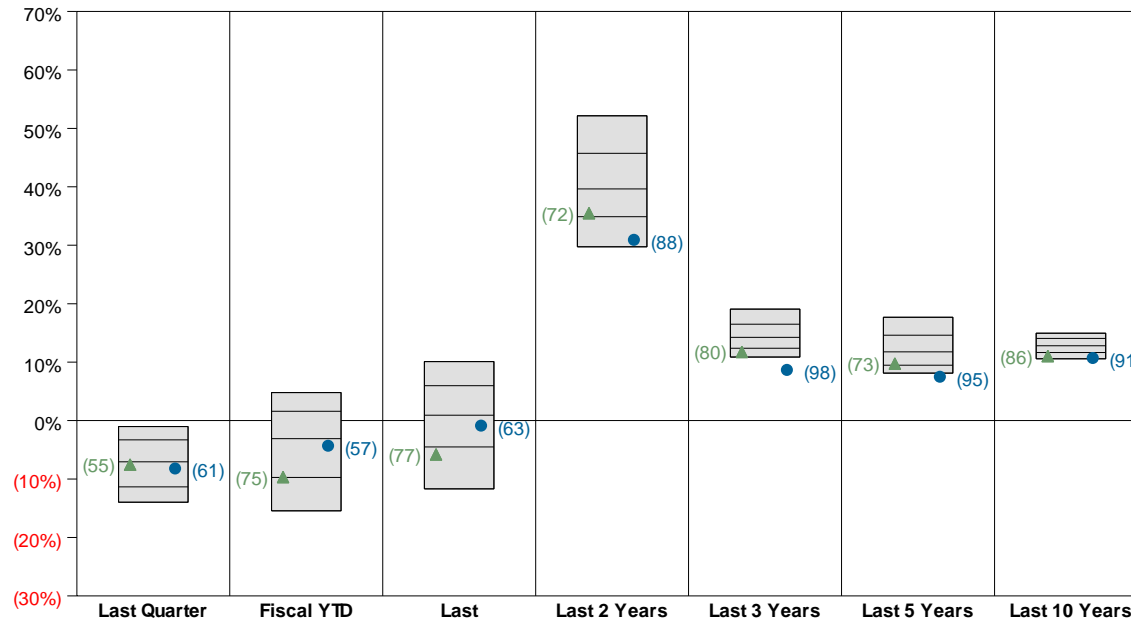
10th Percentile	2.28	9.31	16.66	40.98	22.40	20.73	17.12
25th Percentile	(0.29)	7.54	14.88	36.83	20.26	19.10	15.93
Median	(5.23)	4.34	12.89	34.13	18.12	15.77	14.62
75th Percentile	(9.82)	(1.11)	9.21	31.03	15.17	12.14	12.51
90th Percentile	(12.60)	(7.12)	3.25	28.75	13.01	10.43	11.72
<b>Large Cap</b>	● (5.42)	4.53	13.47	37.66	19.25	15.70	15.01
Large Cap Equity Target	▲ (5.13)	4.36	13.27	34.87	18.71	15.82	14.53

- The portfolio has generally performed above the median among peer composites.

# Consolidated Insurance Trust: Small Cap Equity

As of March 31, 2022

## Performance vs Callan Small Capitalization (Gross)



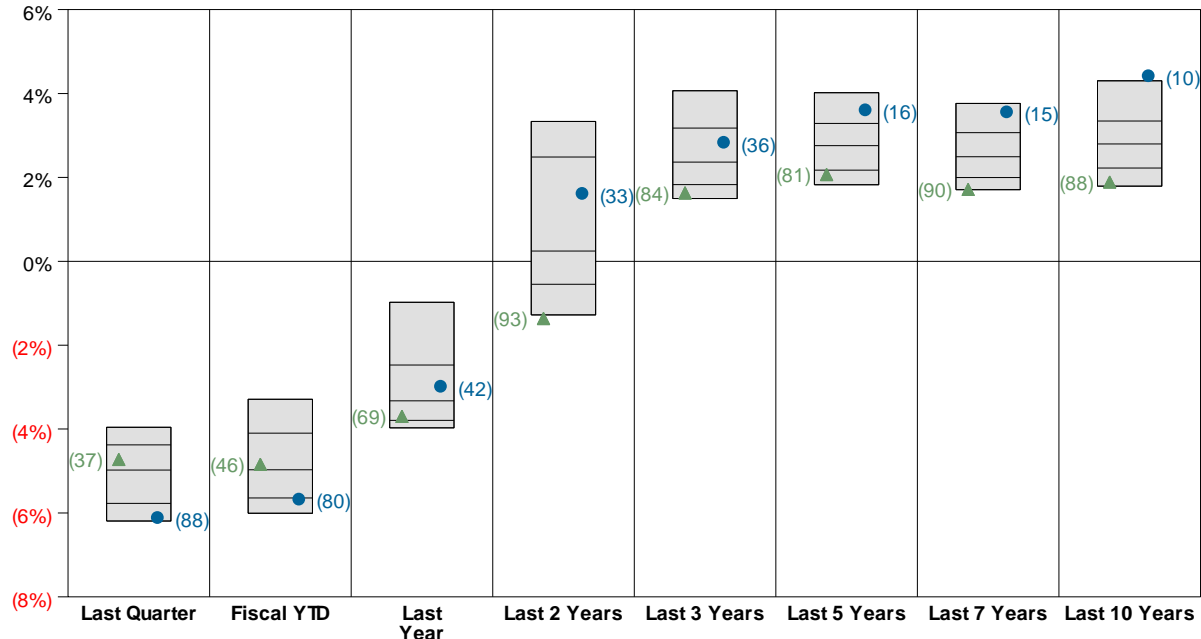
	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	(1.01)	4.80	10.09	52.15	19.07	17.68	14.95
25th Percentile	(3.30)	1.59	5.98	45.74	16.50	14.62	14.06
Median	(7.04)	(3.08)	0.93	39.64	14.23	11.77	12.80
75th Percentile	(11.34)	(9.73)	(4.51)	34.89	12.39	9.48	11.65
90th Percentile	(13.96)	(15.44)	(11.68)	29.73	10.87	8.12	10.57
<b>Small Cap</b> ●	(8.41)	(4.52)	(1.10)	30.73	8.45	7.27	10.48
Small Cap Equity Target ▲	(7.53)	(9.66)	(5.79)	35.49	11.74	9.74	11.04

- The asset class underperformed the benchmark over all periods two years and greater.

# Consolidated Insurance Trust: Domestic Fixed Income

As of March 31, 2022

## Performance vs Public Fund - Domestic Fixed (Gross)



10th Percentile	(3.96)	(3.29)	(0.98)	3.33	4.07	4.02	3.76	4.30
25th Percentile	(4.38)	(4.10)	(2.47)	2.49	3.17	3.29	3.07	3.34
Median	(4.98)	(4.97)	(3.33)	0.25	2.36	2.76	2.49	2.80
75th Percentile	(5.77)	(5.64)	(3.79)	(0.55)	1.83	2.17	2.00	2.22
90th Percentile	(6.19)	(6.01)	(3.97)	(1.28)	1.50	1.82	1.71	1.79
<b>Domestic Fixed Income</b>	<b>● (6.14)</b>	<b>(5.70)</b>	<b>(3.01)</b>	<b>1.58</b>	<b>2.80</b>	<b>3.57</b>	<b>3.53</b>	<b>4.39</b>
Domestic Fixed Inc. Target	<b>▲ (4.72)</b>	<b>(4.84)</b>	<b>(3.70)</b>	<b>(1.36)</b>	<b>1.63</b>	<b>2.07</b>	<b>1.71</b>	<b>1.89</b>

- The asset class outperformed the target over all measured periods one-year and greater.
- The domestic fixed income asset class ranked in the top quartile for the five, seven, and ten-year periods. The asset class is above median for all periods one-year and greater.

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## Conclusions and observations

- 1. Are the Plans' assets invested as outlined in the Plan's Investment Policy Statement?**
  - Each of the Trust's asset allocation were within policy ranges as of March 31, 2022.
- 2. Are the Plans' cash flows being managed consistent with the Plan's strategic asset allocation policy?**
  - Each Trust's cash flows were managed to rebalance towards strategic targets as of March 31, 2022.
- 3. Are the Plans' investment results meeting strategic objectives?**
  - Total Fund returns for PERS, TFFR, WSI, Budget Stabilization and Legacy Funds have each exceeded their respective benchmarks on a net-of-fee basis for the trailing five-year period ended March 31, 2022.
  - Within the Total Fund structures, the small cap equity allocations underperformed benchmark over most cumulative periods ended March 31, 2022. Two small cap managers were terminated due to performance concerns and were replaced by new firms (Riverbridge and Sycamore) one year ago.
  - Since the manager changes were implemented, small cap results have exceeded benchmark.
- 4. Are the fees paid to managers reasonable given the competitive landscape and given the value delivered?**
  - Total Fund net-of-fee results exceed benchmark.
- 5. Are any corrective steps necessary to bring the Plan back into compliance with long-term objectives?**
  - No action steps are recommended as the Plans are meeting objectives.

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## Callan Update

# Published Research Highlights from 1Q22

*Alternatives Focus*, a new quarterly publication



Callan 2022-2031 Capital Markets Assumptions



2022 Defined Contribution Trends Survey



Periodic Table Collection: Year-End 2021

2017	2018	2019	2020	2021
Emerging Markets	Real Estate Funds	Large Cap	Small Cap	Large Cap
37.28%	7.36%	31.49%	19.96%	28.71%
Dev ex-U.S. Equity	Cash Equivalent	Small Cap	Large Cap	Real Estate Funds
24.21%	1.87%	25.52%	18.40%	21.02%
Large Cap	U.S. Fixed	Dev ex-U.S. Equity	Emerging Markets	Small Cap
21.83%	0.01%	22.49%	18.31%	14.82%
Small Cap	High Yield	Emerging Markets	Global ex-U.S. Fixed	Dev ex-U.S. Equity
14.65%	-2.08%	18.44%	10.11%	12.62%

## Recent Blog Posts

**Hedge Funds and Ukraine: A Guide for Institutional Investors**

Joe McGuane

**Why It Was a Tough 4Q21 for Large Cap Growth Managers**

David Wang

**DOL Shifts Tone on Private Equity in DC Plans**

Patrick Wisdom

## Additional Reading

*Private Equity Trends* quarterly newsletter

Active vs. Passive quarterly charts

*Capital Markets Review* quarterly newsletter

Monthly Updates to the Periodic Table

*Market Pulse Flipbook* quarterly markets update

*Real Estate Indicators* market outlook

# Callan Institute Events

Upcoming conferences, workshops, and webinars

## Callan College

### Intro to Investments – Learn the Fundamentals

This course is for institutional investors, including trustees and staff members of public plans, corporate plans, and nonprofits. This session familiarizes trustees and staff with basic investment theory, terminology, and practices.

**Join our next LIVE session in San Francisco** (1½-day session):  
July 26–27, 2022

**Join our next VIRTUAL session via Zoom** (3 sessions, 2–3 hours each):  
September 20–22, 2022

## Mark Your Calendar

### 2022 June Regional Workshops

June 7, 2022 – Atlanta  
June 9, 2022 – Portland

### 2022 October Regional Workshops

October 18, 2022 – Denver  
October 20, 2022 – San Francisco

*Watch your email for further details and an invitation.*

## Webinars & Research Café Sessions

### Research Café: Private Equity Fee Study

May 11, 2022 – 9:30am (PT)

### Webinar: Pension Risk Transfer

May 18, 2022 – 9:30am (PT)

### Market Intelligence

July 15, 2022 – 9:30am (PT)



**Executive Session information will be sent to Board members via secure link**

## Memorandum

**TO:** State Investment Board

**FROM:** Connie Flanagan

**DATE:** May 6, 2022

**RE:** New Investment Client – State Historical Society of ND

The State Investment Board (SIB) previously entered into a contract with ND Parks & Recreation for the investment of the Lewis & Clark Interpretive Center Endowment Fund. The fund is intended to supplement appropriations for the maintenance of the Interpretive Center. Investment management services for this fund began in March 2018.

During the 2021 Legislative Session, the responsibility for the maintenance of the Lewis & Clark Interpretive Center was moved from ND Parks & Recreation to the State Historical Society of ND (SHSND). As part of this transfer, the responsibility for the Lewis & Clark Interpretive Center Endowment Fund was also moved to SHS. There have been some legal language issues related to trust delegation that SHSND has been working through, but we are now at a point where the parties involved are satisfied that the responsibility for the endowment fund now falls under SHSND. Based on that, the contract with the SIB must be modified to reflect that the relationship is now with SHSND, and not Parks & Recreation.

As required by statute, approval was received from the Industrial Commission on April 29<sup>th</sup> for the SIB to enter into the contract with SHSND. The draft revised contract and related investment policy statement are attached for reference. No change in the asset allocation has been requested at this time.

**Staff requests SIB acceptance of the revised investment policy statement for the Lewis & Clark Interpretive Center Endowment Fund under the new client, State Historical Society of ND.**

## INVESTMENT MANAGEMENT AGREEMENT

This agreement is entered into by and between the North Dakota State Investment Board ("NDSIB") and the *State Historical Society of North Dakota* ("Trustee").

WHEREAS, the Trustee desires to retain the NDSIB as its investment manager with respect to the *Lewis and Clark Interpretive Center Endowment Fund* ("Fund") and the NDSIB desires to provide investment management services to the Trustee as set forth in this agreement;

WHEREAS, the NDSIB is authorized to provide investment management services to, and manage the money of, any agency, institution, or political subdivision of the state, subject to agreement with the Industrial Commission, under North Dakota Century Code (N.D.C.C.) § 21-10-06;

WHEREAS, the Industrial Commission, by resolution dated April 29, 2022, has given its approval for the NDSIB to provide investment management services to the Trustee;

NOW THEREFORE, in consideration of the covenants to be performed by each party on behalf of the other, as hereinafter set forth, it is understood and AGREED by and between the parties hereto as follows:

### SECTION 1: APPOINTMENT OF THE MANAGER.

The Trustee appoints NDSIB as its investment manager.

### SECTION 2: POWERS OF THE MANAGER.

NDSIB has complete discretionary authority to allocate the Fund's assets according to the Fund's Statement of Investment Goals, Objectives and Policies (Attachment A) which is attached and incorporated by reference. The governing body of the Fund shall ensure

that Attachment A meets the requirements of and follows the procedures set forth in N.D.C.C. § 21-10-02.1. NDSIB will utilize money managers and can delegate discretionary authority to the individual money managers as to selection, retention, and sale of individual securities.

SECTION 3: FUND ACCOUNT.

The NDSIB will establish separate fund accounts on its internal accounting system, and any other accounts with the NDSIB's master custodian as may be appropriate, to maintain separate accounting for the Fund's assets. It is understood that the NDSIB, when investing the Fund's assets, may commingle those assets with other funds under the control of the NDSIB. Separate accounting will be maintained at all times.

The Trustee has the right at any time to make withdrawals from and additions to the fund accounts. Written notice of any withdrawal or addition must be provided to NDSIB prior to the action that is intended to be taken.

All assets will be custodied by the NDSIB's master custodian or such other bank or trust company as is acceptable to the NDSIB. Such custodian shall have physical possession of the assets in the account and is responsible for the safekeeping of the assets. All payments, distributions, and other transactions in cash or securities with respect to the fund account must be delivered promptly to or by the custodian and NDSIB is not responsible or liable with respect to the acts or omissions of the custodian in this regard.

SECTION 4: SERVICE TO OTHER FUNDS.

It is understood that NDSIB may from time to time give advice and take action with respect to other trust funds, which may differ from the advice given or the timing or the nature of action taken with respect to this Fund.

SECTION 5: RECORDS.

NDSIB will keep accurate books and records relating to its transactions under this agreement including records of all purchase and sale transactions. Confirmations of such transactions are available to the Trustee. NDSIB books and records relating to its transactions are open during regular office hours for inspection. NDSIB will provide reports to the Trustee of its performance and activities under this Agreement according to the schedule set forth on Attachment B and incorporated by reference. The parties understand that all records generated or maintained pursuant to this agreement are subject to North Dakota open records law.

SECTION 6: AUTHORIZED PERSONNEL.

NDSIB will provide the Trustee a written list of NDSIB's employees who are authorized to act under this Agreement which is attached as Attachment C and incorporated by reference. The Trustee will provide NDSIB a written list of individuals authorized to provide written instructions to NDSIB relating to matters contained herein which is attached as Attachment D and incorporated by reference.

SECTION 7: NDSIB STANDARDS.

NDSIB will apply the prudent investor rule in investing for funds under its supervision pursuant to N.D.C.C. § 21-10-07. This means that the NDSIB in making investments shall

exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income. However, NDSIB may raise any legally available defense for any act or omission of itself or authorized personnel or any agent connected with NDSIB's obligations under this Agreement. In addition to carrying out its fiduciary responsibilities under the prudent investor rule, the NDSIB's fiduciary responsibilities include establishing and implementing policies in accordance with N.D.C.C. § 21-10-02.1 and approving investment regulations or resolutions recommended to it by the investment director pursuant to N.D.C.C. § 21-10-05. Additionally, NDSIB as a statutorily created state agency and fiduciary shall competently perform any duty imposed on it pursuant to N.D.C.C. ch. 21-10 or any other applicable law.

#### SECTION 8: FEES AND EXPENSES OF MANAGER.

The Fund is responsible for the actual fees attributable to the Fund charged by money managers, the master custodian, consultants, and other professionals pursuant to N.D.C.C. § 21-10-06.2. If the Fund's assets are commingled with other NDSIB funds, such fees will be the Fund's proportional shares of those same fees charged to the NDSIB.

In addition, the Fund will pay to the NDSIB an administrative fee, payable quarterly, based on the Fund's pro rata share of the NDSIB's administrative expenses. A minimum fee of the lesser of 15 basis points of the total market value of the Fund or \$1,000 per year will apply. All fees will be paid directly out of the Fund's assets.

SECTION 9: NOTICES.

Any notice or demand made under the terms of this Agreement must be made in writing and delivered to the addresses set forth as follows:

a. If to NDSIB at:

North Dakota Retirement and Investment Office  
3442 East Century Avenue, P.O. Box 7100  
Bismarck, ND 58507-7100

b. If to the Trustee at:

State Historical Society of North Dakota  
612 East Boulevard Ave.  
Bismarck, ND 58505

c. The above addresses may be changed at any time by written amendment.

SECTION 10: TERM and TERMINATION.

This Agreement will commence on the date by which all necessary signatures have been obtained and continue until terminated. This Agreement may be terminated at any time by either party by giving the other party ninety (90) days written notice of termination or such other shorter notice as may be mutually agreed upon. Termination shall be without prejudice to any obligations or liabilities of either party already accrued prior to the termination.

SECTION 11: MERGER CLAUSE.

This agreement constitutes the entire agreement between the parties. No waiver, consent, modification, or change of terms of this agreement shall bind either party unless in writing and signed by both parties. Such waiver, consent, modification, or change, if made, shall be effective only in the specific instance and for the specific purpose given. There are no understandings, agreements, representations, oral or written, not specified herein

regarding this agreement. The parties, by the signature of their authorized representatives, hereby acknowledge that they have read this agreement, understand it, and agree to be bound by its terms and conditions.

SECTION 12: FORCE MAJEURE

NDSIB shall not be held responsible for delay or default caused by fire, flood, riot, acts of God or war if the event is beyond NDSIB'S reasonable control and NDSIB gives notice to Trustee immediately upon occurrence of the event causing the delay or default or that is reasonably expected to cause a delay or default.

SECTION 13: APPLICABLE LAW AND VENUE

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



Effective this day of , 2022.

NORTH DAKOTA STATE  
INVESTMENT BOARD

NORTH DAKOTA PARKS AND  
RECREATION DEPARTMENT

By: \_\_\_\_\_

Janilyn Murtha, Executive Director

By: \_\_\_\_\_

Bill Peterson, Director

## LIST OF ATTACHMENTS

Fund's Statement of Investment Goals, Objectives  
and Policies

Attachment A

Report Listing

Attachment B

NDSIB Authorized Employees List

Attachment C

Trustee Authorized Employees List

Attachment D

# **LEWIS AND CLARK INTERPRETIVE CENTER ENDOWMENT FUND**

## **INVESTMENT POLICY STATEMENT**

### **1. PLAN CHARACTERISTICS AND FUND CONSTRAINTS**

The Lewis and Clark Interpretive Center Endowment Fund (Fund) was created in 2003 exclusively for the maintenance, repair and upkeep of the ND Lewis and Clark Interpretive Center/Rest Area, for programming and facility improvements. The original principal was endowed to the North Dakota Lewis and Clark Bicentennial Foundation (Foundation) who transferred the funds to the North Dakota Parks and Recreation Department in 2017. The State Legislature changed the responsibility of maintenance of the facility to the State Historical Society of North Dakota (Historical Society) effective July 1, 2021. The Foundation then approved the transfer of investment authority of the Fund to the Historical Society in July 2021.

### **2. FUND GOALS**

It is the intention of the Historical Society to utilize the earnings of the Fund to supplement its biennial appropriation for the maintenance of the Lewis and Clark Interpretive Center.

### **3. RESPONSIBILITIES AND DISCRETION OF THE STATE INVESTMENT BOARD (SIB).**

The Historical Society has entered into a contract with the SIB for investment services as allowed under NDCC 21-10-06. The Historical Society is responsible for establishing policies on investment goals and asset allocation of the fund. The SIB is charged with implementing these policies and investing the assets of the fund in the manner provided in NDCC 21-10-07, the prudent investor rule. Under this rule, the fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income. The fund must be invested exclusively for the benefit of the members and their beneficiaries in accordance with this investment policy.

Management responsibility for the investment program not assigned to the SIB in Chapter 21-10 of the North Dakota Century Code (NDCC) is hereby delegated to the SIB, who must establish written policies for the operation of the investment program, consistent with this investment policy.

The SIB may delegate investment responsibility to professional money managers. Where a money manager has been retained, the SIB's role in determining investment strategy and security selection is supervisory, not advisory.

The SIB is responsible for establishing criteria, procedures, and making decisions with respect to hiring, keeping, and terminating money managers. SIB investment responsibility also includes selecting performance measurement services, consultants, report formats, and frequency of meetings with managers.

The SIB will implement changes to this policy as promptly as is prudent.

#### 4. RISK TOLERANCE

The Historical Society is unwilling to undertake investment strategies that might jeopardize the ability of the Fund to maintain principal value over the long-term.

#### 5. INVESTMENT OBJECTIVES

The Historical Society's investment objectives are expressed in terms of reward and risk expectations relative to investable, passive benchmarks. The fund's policy benchmark is comprised of policy mix weights of appropriate asset class benchmarks as set by the SIB.

1. The fund's rate of return, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.
2. Risk, as measured by the annual standard deviation of net returns for the Fund, should not exceed that of the policy portfolio by more than 100 basis points over a minimum evaluation period of five years.
3. The risk-adjusted performance of the Fund, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.

#### 6. POLICY ASSET MIX

Asset allocation policy is critical because it defines the basic risk and return characteristics of the investment portfolio. Asset allocation targets are established using an asset-liability analysis designed to assist the Historical Society in determining an acceptable volatility target for the fund and an optimal asset allocation policy mix. This analysis estimates the potential impact of various asset class mixes on key measures of total fund risk.

After consideration of all the inputs and a discussion of its own collective risk tolerance, the Historical Society approves the appropriate policy asset mix for the fund.

<u>Asset Class</u>	<u>Policy Target(%)</u>
Global Equity	35
Global Fixed Income	64
Cash Equivalents	1

While the Historical Society recognizes fluctuations in market values will lead to short-term deviations from policy targets, the Historical Society does not intend to engage in tactical asset allocation. Rebalancing of the fund to this target will be done in accordance with the SIB's rebalancing policy, but not less than annually.

## 7. RESTRICTIONS

While the SIB is responsible for establishing specific quality, diversification, restrictions, and performance objectives for the investment vehicles in which the fund's assets will be invested, it is understood that:

- a. Futures and options may be used to hedge or replicate underlying index exposure, but not for speculation.
- b. Derivatives use will be monitored to ensure that undue risks are not taken by the money managers.
- c. No transaction shall be made which threatens the tax exempt status of the fund.
- d. All assets will be held in custody by the SIB's master custodian or such other custodians as are acceptable to the SIB.
- e. No unhedged short sales or speculative margin purchases shall be made.
- f. Economically targeted investing is prohibited unless the investment meets the Exclusive Benefit Rule.

For the purpose of this document economically targeted investment is defined as an investment designed to produce a competitive rate of return commensurate with risk involved, as well as to create collateral economic benefits for a targeted geographic area, group of people, or sector of the economy.

Also, for the purpose of this document, the Exclusive Benefit Rule is met if the following four conditions are satisfied:

- (1) The cost does not exceed the fair market value at the time of investment.
- (2) The investment provides the fund with an equivalent or superior rate of return for a similar investment with a similar time horizon and similar risk.
- (3) Sufficient liquidity is maintained in the fund to permit distributions in accordance with the terms of the plan.
- (4) The safeguards and diversity that a prudent investor would adhere to are present.

Where investment characteristics, including yield, risk, and liquidity are equivalent, the Historical Society's policy favors investments which will have a positive impact on the economy of North Dakota.

## 8. INTERNAL CONTROLS

A system of internal controls must be in place by the SIB to prevent losses of public funds arising from fraud or employee error. Such controls deemed most important are the separation of responsibilities for investment purchases from the recording of investment activity, custodial safekeeping, written confirmation of investment transactions, and established criteria for broker relationships. The annual financial audit must include a comprehensive review of the portfolio, accounting procedures for security transactions and compliance with the investment policy.

**9. EVALUATION AND REVIEW.**

Investment management of the fund will be evaluated against the fund's investment objectives. Emphasis will be placed on five year results. Evaluation should include an assessment of the continued feasibility of achieving the investment objectives and the appropriateness of the Investment Policy Statement for achieving those objectives.

Performance reports will be provided to the Historical Society quarterly and investment performance presentations will be provided to the Historical Society upon request, but not less than annually. Such reports will include asset returns and allocation data as well as information regarding all significant and/or material matters and changes pertaining to the investment of the fund, including, but not limited to:

1. A list of the advisory services managing investments for the Historical Society.
2. A list of investments at market value, compared to previous reporting period, of each fund managed by each advisory service.
3. Earnings, percentage earned, and change in market value of each fund's investments.
4. Comparison of the performance of each fund managed by each advisory service to other funds under the SIB's control and to generally accepted market indicators.
5. All material legal or legislative proceedings affecting the SIB.
6. Compliance with this investment policy statement.

**State Historical Society of North Dakota Adopted and Approved:**

Date \_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_  
William Peterson  
Director  
State Historical Society of North Dakota

\_\_\_\_\_  
Janilyn Murtha  
~~Interim~~ Executive Director  
North Dakota Retirement & Investment Office

**NORTH DAKOTA STATE INVESTMENT BOARD  
REPORTING SERVICES**

Reporting services to be provided by the North Dakota State Investment Board to the Trustee will be as follows:

- Monthly - Financial Statements - Based on reconciled custodian reports generally available 45 calendar days after the close of the month.  
  
Preliminary Performance Reports - Based on reconciled custodian reports and preliminary manager returns generally available 45 calendar days after the close of the month.
- Annually - Copy of North Dakota Retirement and Investment Office's audited annual financial statements as prepared by NDSIB's independent auditor; generally available December 15 for fiscal year ending June 30.

**NORTH DAKOTA STATE INVESTMENT BOARD  
DELEGATION OF AUTHORITY**

The following North Dakota Retirement and Investment Office employees are authorized to act under this agreement.

<u>NAME</u>	<u>TITLE</u>	<u>EMAIL ADDRESS</u>
Janilyn Murtha	Executive Director	janilynmurtha@nd.gov
Scott Anderson, CFA	CIO	scanderson@nd.gov
Connie Flanagan	Chief Financial Officer	cflanagan@nd.gov



**TRUSTEE DELEGATION OF AUTHORITY**

The following employees are authorized to provide written instructions to the North Dakota State Investment Board for the indicated transactions:

Transaction

1. Investment Guidelines including asset allocations
2. Withdrawal or addition of assets

Individual

Email Address

By: \_\_\_\_\_

\_\_\_\_\_

Date

## MEMORANDUM

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**TO:** SIB  
**FROM:** Jan Murtha, Executive Director  
**DATE:** May 19, 2022  
**RE:** GPR Committee Update

The GPR committee met May 18, 2022. GPR committee members and RIO staff will be available to provide a verbal update to the SIB at its May meeting regarding the committee discussion and present three recommendations.

*The first recommendation* relates to the establishment of a new standing committee for investments. *The second recommendation* relates to a policy change for due diligence procedure. *The third recommendation* relates to recommendations for future amendments to Board composition.

Pursuant to Policy B-10 of the SIB Governance Manual the creation of a standing committee requires an amendment to Policy B-6; and an amendment to the due diligence procedure requires an amendment to Policy E-10. Amendments may be adopted over the course of two meetings. The first meeting required an Introduction and First Reading. The second meeting requires a Second Reading and Final adoption.

Policy B-10 states:

*Upon request of the Executive Director or a Board member a new policy or amendment shall be placed on the Board's agenda for action as follows:*

*1. Introduction and first reading. A brief explanation or summary of the new policy or amendment shall be presented to the Board. Upon approval of introduction and first reading, the measure shall be placed on the agenda of the next scheduled meeting of the Board for second reading and adoption. When appropriate, the measure shall be distributed to interested parties.*

*2. Second reading and adoption. Interested parties and the public shall be allowed an opportunity to comment on the policy or amendment before final action by the Board. The measure shall take effect immediately following second reading and adoption by the Board, unless a different effective date is stated.*

*3. Amendments. Amendments may be proposed at any time before final adoption of the measure. Upon determination by the Board that adoption of an amendment constitutes a substantive change that significantly changes the meaning or effect of the measure, the Board shall continue consideration of second reading and adoption to the next meeting to permit further review and comment.*

A draft of the proposed policy changes and draft charter are enclosed for your consideration.

Materials from the May GPR committee meeting are available for viewing at:

[SIB Governance & Policy Review Committee | Retirement Investment Office \(nd.gov\)](#)

**BOARD ACTIONS REQUESTED: 1) Motion to approve Amendment to Policy B-6 and Draft Investment Committee Charter for First Reading. 2) Motion to approve Amendment to Policy E-10 for First Reading. 3) Board discussion regarding recommendations for Board Composition.**

The board's standing committees are set forth in this policy as follows:

1. Audit Committee
2. Securities Litigation Committee
3. Executive Review Committee
4. Governance and Policy Review Committee
5. Investment Committee

- A. The Audit Committee, Securities Litigation Committee, Executive Review Committee, **and** the Governance and Policy Review Committee, **and the Investment Committee** shall operate under the terms of a charter approved by the board.

#### INTRODUCTION – Audit Committee

An Audit Committee has been established as a standing committee of the State Investment Board (SIB). The Audit Committee will assist the SIB in carrying out its oversight responsibilities as they relate to the Retirement and Investment Office (RIO) internal and external audit programs, including financial and other reporting practices, internal controls, and compliance with laws, regulations, and ethics.

The primary objective of the internal audit function is to assist the SIB and management in the effective discharge of their responsibilities. To this end, internal auditing will furnish them with analyses, appraisals, recommendations, and pertinent information concerning the activities reviewed.

Functions and units within RIO will be reviewed at appropriate intervals to determine whether they are effectively carrying out their responsibilities of planning, organizing, directing, and controlling in accordance with SIB and management instructions, applicable laws, policies, and procedures, and in a manner consistent with both the RIO objectives and high standards of administrative practice.

#### POLICY OF THE STATE INVESTMENT BOARD – Audit Committee

The audit staff shall have full, free, and unrestricted access to all RIO activities, records, property, and personnel relative to the subject under review. The audit function will be conducted in a manner consistent with acceptable professional standards and coordinated with others to best achieve the audit objectives and the RIO objectives.

The Internal Audit Services Unit is responsible for developing and directing a broad, comprehensive program of internal auditing within RIO. The Internal Audit Services Unit will report administratively to management and functionally to the Audit Committee of the SIB.

The RIO unit supervisors are responsible for seeing that corrective action on reported weaknesses is either planned or taken within 30 days from the receipt of a report disclosing those weaknesses if known or applicable. The unit supervisors are also responsible for seeing that a written report of action planned or completed is sent to the executive director. If a plan for action is reported, a second report shall be made promptly upon completion of the plan.

#### INTRODUCTION – Securities Litigation Committee

A Securities Litigation Committee (SLC) has been established as a standing committee of the State Investment Board (SIB). The SLC will assist the SIB in fulfilling its fiduciary oversight responsibilities of monitoring the investment assets entrusted to it by the various statutory and contracted funds, and to serve as a communications link for the SIB, RIO's management and staff, third party securities litigation firms, and others.

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**POLICY TITLE: *STANDING COMMITTEES***

The SLC will determine when an active role should be pursued in regards to securities litigation affecting investments within the SIB's portfolios based on the SIB approved Securities Litigation Policy and approved SIB Securities Litigation Committee Charter.

**POLICY OF THE STATE INVESTMENT BOARD – Securities Litigation Committee**

The SLC is authorized to:

- Draft policy (to be formally approved by SIB) regarding dollar and/or risk thresholds for determining when to opt-out of class actions and/or seek direct litigation or lead plaintiff status;
- Based on SIB approved policy make decisions on the level of participation the SIB will take in direct litigation, opt-in or group litigation, anti-trust and other class actions; and
- Approve the selection of special assistant attorneys (in conjunction with the approval of the Office of the Attorney General) in cases of direct litigation.

RIO's management is responsible for ongoing monitoring of securities litigation and claims filing. RIO management and staff will enable the SLC to provide a periodic update to the SIB on the SLC's activities and related recommendations.

The SLC has the responsibility to provide oversight in the areas of:

- policy development;
- determination on direct litigation and/or lead plaintiff status; and
- approval of special assistant attorneys (outside counsel) with concurrence of the Attorney General.

**INTRODUCTION – Executive Review Committee**

An Executive Review Committee (ERC) has been established as a standing committee of the SIB. The ERC will assist the SIB in fulfilling its fiduciary oversight responsibilities of “monitoring executive performance (which) is synonymous with monitoring organizational performance against board policies on *Ends* and *Executive Limitations*”. Internal audit will be responsible for preparing an annual summary of the required reports submitted to the SIB by the Executive Director in connection with its review of policy adherence to *Ends* and *Executive Limitations*. Internal audit will also assist the ERC in completing annual surveys of the Executive Director with the SIB, SIB clients, and RIO team members.

The ERC will conduct a formal evaluation of the Executive Director during the first half of every calendar year. This formal evaluation by the ERC will serve as the basis for an annual compensation recommendation to be reviewed and approved by the SIB on or before June 30<sup>th</sup> each year. Internal audit will also assist the SIB and ERC in administering the annual board self-assessment process.

## POLICY TITLE: *STANDING COMMITTEES*

### POLICY OF THE STATE INVESTMENT BOARD – Executive Review Committee

The ERC is authorized to:

- Conduct a formal evaluation of the Executive Director annually;
- Obtain SIB approval of the annual performance evaluation of the Executive Director;
- Make a compensation recommendation to the SIB on or before June 30<sup>th</sup> of each year; and
- Administer a formal self-assessment of the SIB periodically (unless instructed otherwise).

The ERC and/or RIO will seek SIB approval prior to formally engaging any third party assistance in conducting the annual executive review process or board self-assessment.

### INTRODUCTION – Governance & Policy Review

A Governance and Policy Review Committee has been established as a standing committee of the SIB. The Governance and Policy Review Committee will assist the SIB in fulfilling its fiduciary oversight responsibilities to fulfill its responsibilities regarding matters that relate to governing the SIB, policies, and identifying and making recommendations to the SIB.

The Governance and Policy Review Committee will be responsible for reviewing the governance manual, recommending policy changes, and when directed by the board review governance specific concerns, and make recommendations for improvement.

### POLICY OF THE STATE INVESTMENT BOARD – Governance & Policy Review Committee

The Governance & Policy Review Committee is authorized to:

- Review and recommend policies for the governance manual.
- Ensure the governance manual reflects best practices and good governance.
- As directed by the board, review specific governance concerns, and make recommendations for improvement.
- Request RIO staff for specific topic training or education

### INTRODUCTION – Investment Committee

The Investment Committee (the “Committee”) is created to provide oversight of SIB investments within the parameters established by the SIB. Oversight will include an analysis of risk and return at the portfolio, asset class, and client fund levels. Additionally, the Committee will provide input to the Board on asset allocation and benchmark recommendations.

In general, the Committee will focus on various policies and procedures of the agency to ensure they are consistent with industry standards and that they continue to keep pace with prudent investment theory and practice.

The Committee will review decisions made about deviations from established benchmarks and allocation of investments among internal management (if approved) and external management, including decisions about passive, active and quantitative styles.

### POLICY OF THE STATE INVESTMENT BOARD – Investment Committee

The Investment Committee is authorized to:

- propose to the SIB changes to its Investment Policy including delegation of investment authority to RIO investment staff;
- approve the SIB Investment Committee Investment Guidelines (IC Guidelines);
- approve the general strategies for each investment division; and
- approve new investment instruments.

## **North Dakota State Investment Board Committee Charter**

The North Dakota State Investment Board Investment Committee (SIB Investment Committee), in conjunction with North Dakota Retirement and Investment Office management (RIO) and North Dakota State Investment Board (SIB), has developed the following policies and procedures relating to the prudent management of SIB assets.

### **COMMITTEE PURPOSE AND CHARTER**

The Investment Committee (the "Committee") is created to provide oversight of SIB investments within the parameters established by the SIB. Oversight will include an analysis of risk and return at the portfolio, asset class, and client fund levels. Additionally, the Committee will provide input to the Board on asset allocation and benchmark recommendations.

In general, the Committee will focus on various policies and procedures of the agency to ensure they are consistent with industry standards and that they continue to keep pace with prudent investment theory and practice.

The Committee will review decisions made about deviations from established benchmarks and allocation of investments among internal management (if approved) and external management, including decisions about passive, active and quantitative styles.

The Committee is responsible for (i) proposing to the SIB changes to its Investment Policy including delegation of investment authority to RIO investment staff; (ii) approving the SIB Investment Committee Investment Guidelines (IC Guidelines); (iii) approving the general strategies for each investment division; and (iv) approving new investment instruments. All investment guidelines must be consistent with the investment authority provided in North Dakota Century Code Chapter 21-10.

### **GOVERNANCE & POLICY REVIEW COMMITTEE COMPOSITION AND TERM LIMITS**

The Governance & Policy Review Committee shall be composed of two members of the SIB board, two external investment professionals and two RIO staff appointed by the SIB Chair. The SIB Chair will also appoint a Chair and a Vice Chair of the Committee. The two external investment professionals may be either currently active or retired and have substantial institutional investment experience.



Membership on the Committee will be for one year or termination of term on the SIB. Vacancies will be filled by the SIB at the first scheduled meeting following the vacancy. There will be no limit to the number of terms served on the Committee.

The Chief Investment Officer will be responsible for meeting preparation.

### **DUTIES AND RESPONSIBILITIES**

- A.** The Committee will suggest and recommend changes to the SIB Investment Policy, as necessary including any delegation of authority to RIO investment staff.
- B.** The Committee will review periodically and approve changes and additions to the IC Guidelines and will report any revisions to the SIB.
- C.** The Committee may examine internally (if approved) and externally managed portfolios, individual investments, correlation among portfolios, and such other matters as the Committee deems appropriate for the purpose of understanding, measuring, controlling, monitoring, and reporting SIB investment exposure.
- D.** The Committee will review and approve the use of new investment instruments prior to their implementation in internal (if approved) and external SIB portfolios.
- E.** The Committee will oversee the review and implementation of any other new investment programs or initiatives in all SIB portfolios and will coordinate any necessary related SIB approvals.
- F.** For purposes of fulfilling its risk management and oversight responsibilities, the Committee will act as liaison between the RIO investment Staff and the SIB on issues concerning investment risk management.
- G.** The Committee will review a subset of asset class strategies at least quarterly to assess established risk limits and evaluate strategy and will approve such strategies annually. The relevant Investment Staff shall be responsible for the specific investment decisions and implementations including internally (if approved) and externally managed mandates that are used to execute the approved strategies.
- H.** The Committee will review all compliance-related issues referred by the Enterprise Risk and Compliance Committee, including compliance with statutes, administrative rules, internal and external manager investment guidelines or as otherwise requested.

- I.** The Committee will review asset allocation plans and strategies and will review and approve any proposed changes to SIB's strategic asset allocations and fund-level active risk objectives before they are presented to the Board for approval. The Committee will provide consultation and assistance to the SIB, ED and staff concerning total fund allocation changes or rebalance decisions, as needed.
- J.** The Committee will review and act on all requests from investment managers, both internal (if approved) and external for waivers to provisions in their investment guidelines. On an emergency basis when it is impractical to timely convene a meeting of the Investment Committee, either the Chair or Vice Chair of the committee with the concurrence of the Chief Investment Officer of the Committee or the Executive Director, may approve a waiver. That waiver will be brought to the Committee for ratification at its next regularly scheduled meeting.
- K.** The Committee may review and analyze other compliance-, risk- or derivative-related (if approved) matters that are directed to the attention of the Committee by the SIB, external auditors, the Internal Audit group, and RIO investment and accounting staff.
- L.** The Committee will receive quarterly reports regarding transitions (if any) and shall review with the applicable Investment Staff the costs and impacts associated with the transitions. It will also from time-to-time review reports on the trading effectiveness of investment execution of internal investment strategies (if approved).
- M.** The Committee will review annual benchmark recommendations from a Board-appointed benchmark consultant and will provide its evaluation and recommendation to the Board.
- N.** The Committee will review and revise portfolio guidelines as necessary.
- O.** The Committee will establish procedures for the methodology and frequency of review of (i) fund, asset class and portfolio performance, (ii) performance attribution, (iii) allocation within asset classes and (iv) risk levels. Procedures will be shared with the Board of Trustees.
- P.** The Committee will conduct periodic round table discussions of the economic and investment environment.

### **GENERAL COMMITTEE PROCEDURES**

- Q.** A majority of the voting members of the Committee constitute a quorum. A majority of a quorum is required to take any Committee action or approve any motion. If an approved motion lacked the support by the Committee Chair, the results of the vote shall be reported in a separate report to the Board of Trustees at its next regularly scheduled meeting. Any member proposing or responsible for oversight of an investment being brought to the Committee for approval will be recused from the vote.
- R.** The Committee shall establish a regular monthly meeting schedule. Non-routine meetings may be called by any Committee member with sufficient lead time to provide appropriate notice of the meeting under ...
- S.** The Committee Charter shall be approved by the SIB.
- T.** Minutes of Committee meetings shall be kept and be provided to SIB. Regular Board meetings shall include an agenda item for discussion of Committee actions and proceedings.
- U.** The Committee may establish standing subcommittees or temporary working groups to carry on assigned activities. Such subcommittees or working groups will report on their activities to the Committee as requested by the Committee.

### **DERIVATIVE INVESTMENTS**

- V.** Procedures for review, processing, and monitoring of derivative investments (if approved) will be established by the Committee.
- W.** Specific investment policies regarding the use of derivative instruments (if approved) are determined for each portfolio by the IC Guidelines. Such policies, as amended from time to time, are officially contained in the IC Guidelines or external manager contracts.
- X.** The Chief Financial Officer or designee will review with the Committee any changes in the accounting treatment and required note disclosures for external reporting purposes used for derivative instruments, based on the applicable fund, the characteristics of the instrument and any underlying assets or liabilities.

## POLICY TYPE: INVESTMENTS

### POLICY TITLE: *EVALUATION*

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The SIB will follow an annual evaluation cycle for the investment program to ensure systematic review of investment policies and performance results and the development and implementation of corrective action plans. Evaluation of the program seeks to answer such questions as:

- Are all investment goals being met?
- What has worked and what has not?
- Have changes occurred in the capital markets, plan design, or board philosophy to warrant changes in investment policy?
- Are money managers meeting our expectations?
- Is continued confidence in the money managers warranted?
- Are accounting practices sound and fair to participating funds?
- Is service delivered in the most cost-effective manner?

The SIB's consultants play a key role in helping to answer some of these questions. The external auditor's report provides insight on accounting practices and cost effectiveness.

#### Evaluation of Money Managers

Achievement of the SIB's performance goals hinges on the success of the investment strategies and money managers it employs. Evaluation of each money manager must consider the following:

- Has the manager achieved the SIB's performance objectives?
- Has the firm adhered to the investment philosophy for which it was hired?
- Have there been any organizational or personnel changes that may negatively affect future performance?
- Are areas of concern being adequately addressed?
- Can the manager perform well in the future, regardless of whether extraordinary events, long-term performance, and/or short-term performance argue for termination?

These criteria are assessed by quantitative and qualitative means:

- Analyses provided by the investment consultant.
- Annual meetings with each manager in Bismarck, onsite at the managers' offices or virtually to discuss performance, investment philosophy, organizational changes, economic outlook, and areas of concern.

Longer periods of time are better than shorter time periods when assessing a manager's performance. Ideally, performance should be assessed over a market cycle. Market cycles have varying lengths but have historically averaged 5-7 years. The SIB will use a minimum five-year period to evaluate manager performance against long-term performance standards. Long-term performance standards will be a market index that the manager has previously agreed to be measured against.

Shorter-term performance standards will also be established for each money manager. These standards will incorporate a minimum three-year measurement period and measure the manager against a previously agreed-upon peer group or style market index.

Long-term performance standards, short-term performance standards, extraordinary events, and termination factors will be incorporated in the written asset class investment policies.

#### Evaluation of Program Costs

Costs will be broken out by internal administration, investment consultants, master custodian, and external manager fees. Reports will detail this information by investment pool, managers, and by fund.

These costs will be compared to other funds on an annual basis and generally include a fee study conducted by an experienced investment consultant every two years. Staff is encouraged to identify other cost-comparison sources which may include the engagement of specialized fee consultants to conduct in-depth fee reviews on a periodic basis, subject to board review and approval.

**Policy Implemented:** September 20, 1995.

**Amended:** ~~May 19, 2022~~ ~~October 26, 2018~~





# BOARD COMPOSITION DISCUSSION

May 19, 2022

NORTH  
**Dakota**  
Be Legendary.

Retirement & Investment

# THREE ARCHETYPE BOARD COMPOSITIONS

## ARCHETYPE ONE

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GOVERNOR (Lt. Governor)  
TREASURER  
WSI DIRECTOR  
LAND COMMISSIONER  
4 PENSION (TFFR AND PERS)  
OMB DIRECTOR  
INSURANCE OR COMMERCE COMMISSIONER  
2 INVESTMENT PROFESSIONALS  
LEGACY FUND ADVISORY  
12 voting, 1 nonvoting

## ARCHETYPE TWO

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GOVERNOR (Lt. Governor)  
TREASURER  
WSI DIRECTOR  
(no land assets)  
4 PENSION (TFFR AND PERS)  
OMB DIRECTOR  
INSURANCE OR COMMERCE COMMISSIONER  
2 INVESTMENT PROFESSIONALS  
LEGACY FUND ADVISORY  
11 voting, 1 nonvoting

## MEMORANDUM

**TO: State Investment Board**  
**FROM: SIB Executive Review Committee**  
**DATE: May 13, 2022**  
**RE: Executive Director Compensation**

Your Executive Review Committee met several times in the past month to discuss a plan for Executive Director compensation. We reviewed data and analysis to support a recommendation for a salary increase and compensation plan for the Executive Director. Public fund survey data from three years and two sources was used to determine an overall average for similar positions in other public funds. A summary of that data will be provided to the Board in Executive Session.

The Committee was not only tasked with recommending a salary for the current period but was also asked to consider a longer-term recommendation for the SIB to adopt which will allow future salary increases to be built into the agency's budget requests. After reviewing the data, the committee recommends the SIB adopt a goal statement related to the compensation of the Executive Director as follows:

**It is the goal of the SIB, assuming the Executive Director (ED) is meeting the expectations of the board, to compensate the ED at or above the 50<sup>th</sup> percentile of peer public funds of similar size and composition. Available public fund surveys will be utilized to determine those parameters and comparisons. The SIB has set a target date of 7/1/2024 to reach the targeted salary level.**

Based on the data (2019-2021 survey results from two highly respected firms) the overall average salary at the 50<sup>th</sup> percentile was \$262,854. **To reach this target by 7/1/2024, the Committee recommends the following salary increases for the Executive Director effective July 1, 2022. 1) the 2% Legislative increase granted during the 2021 Legislative Session and 2) an additional increase of 10% as a first step in reaching the targeted 50<sup>th</sup> percentile. (12% total increase)**

The following tables show the calculations of both the 2% legislative increase and various options considered for reaching the targeted 50<sup>th</sup> percentile. The 10% option will result in reaching the target within the desired timeframe. If adopted, this will allow staff to include an annual 10% increase in the budget request for the 2023-25 biennium.



Current Salary	\$ 203,000
2% Legislative Increase	<u>4,060</u>
July 1, 2022 Salary with Legislative Increase	\$ 207,060

Average 50th Percentile Salary	\$ 262,854					
Less July 1 Salary	<u>(207,060)</u>					
Difference	<u>\$ 55,794</u>	27.5%				
<b>Additional Increase Options</b>	<b>Increase</b>	<b>7/1/22</b>	<b>7/1/23</b>	<b>7/1/24</b>	<b>7/1/25</b>	<b>7/1/26</b>
5%	\$ 10,150	\$ 217,210	\$ 228,071	\$ 239,474	\$ 251,448	\$ 264,020
7.5%	15,225	222,285	238,956	256,878	276,144	
10%	20,300	227,360	250,096	275,106		
12.5%	25,375	232,435	261,489			
15%	30,450	237,510	273,137			

**BOARD ACTION REQUESTED. 1) Motion to adopt goal statement. 2) Motion to approve 2% Legislative increase. 3) Motion to approve 10% additional salary increase as of 7/1/2022.**

**Executive Review of  
Janilyn Murtha, Executive Director  
April 28, 2022**

**Evaluation Process:**

In compliance with the State Investment Board (SIB) Governance Policy, the SIB conducted a formal evaluation of the Executive Director, based on accomplishment of *Ends* and *Compliance with Executive Limitations*. An Executive Review Subcommittee, consisting of SIB board members Mel Olson, Adam Miller and Yvonne Smith, was appointed to oversee the evaluation process. Staff assistance was provided by Sara Sauter, Supervisor of Internal Audit, Connie Flanagan, Chief Financial Officer/Chief Operating Officer, and by Missy Kopp, Executive Assistant.

- The following surveys and reports were reviewed as part of the evaluation:
  - Executive Director Performance Survey
  - Independent Audit Report for the period ending June 30, 2021, issued by CliftonLarsonAllen LLP.
  - RIO Financial FY Ended 6/30/2021 – November 16, 2021
  - Quarterly Monitoring Reports – February 26, 2021, May 21, 2021, July 23, 2021, and October 22, 2021
  - Executive Limitation Audit CY 2022 – February 16, 2022
  - ED/CIO Effectiveness Survey
  
- Ms. Murtha also completed a self-assessment of her performance for consideration.

On April 28, 2022, the Executive Review Subcommittee reviewed the results and discussed areas of strength and developmental opportunities. The results and subsequent discussion form the basis for the formal evaluation. The evaluation will be presented to the SIB for final approval at the May 20, 2022, SIB Board Meeting.

**Findings and Conclusions:**

Ten SIB members completed the evaluation survey. The survey was five open-ended questions:

- Overwhelming the Board members are pleased with the Executive Directors performance and appreciate efforts for leading RIO through the challenges presented during 2021.
  
- Themes of comments regarding the information provided during Board meetings include:

- **Board Education:** The education received by the Board has been timely and relevant. Complicated topics are being presented in a way that is easy to understand.
- **Board Investments:** Investment information is clear and enhanced using comparisons and illustrations. The amount of information can be overwhelming, but when explained is manageable. One recommendation from to highlight 3-5 important points for the Board to takeaway from investment presentations.
- **Board Governance:** Governance presentations have been informative and clear.
- **Board Reports:** The reports given are informative and communicated well.
- **General Comments:** Extremely satisfied; Ms. Murtha is professional, future-focused, and a great leader through the turbulent 2021 year. The Board recognizes the demanding workload placed on Ms. Murtha, and the outstanding job done.

### **Investments:**

- SIB client investments exceeded \$20 billion as of December 31, 2021.
- In fiscal year 2021, the SIB approximately paid \$120.98 million in fees and earned approximately \$361.9 million in estimated excess returns after fees. The \$361.9 million is in excess of returns after the benchmarks were met and fees were paid. RIO continues to earn positive risk adjusted rates of return all while reducing fees for most clients.
- Over 98% of the SIB Pension clients earned net returns which exceeded their respective policy benchmarks for the 5-year period ending January 31, 2022 (based on AUM).

### **Executive Director Effectiveness Survey Results**

- Survey participation responses were received from fourteen out of nineteen employees, a 74% participation rate. Overall, survey responses were positive, although some minor dissent was noted.
- Twelve out of the thirteen responses also agreed that the Executive Director provides a clear sense of purpose direction, roles, and responsibility for staff.
- All thirteen of the employees agree that the Executive Director seeks input from all team members as appropriate.
- Most employees agreed the Executive Director takes time to understand other perspectives and is open to changing his position.
- The Executive Director received favorable responses in valuing employees. Staff overwhelmingly agrees that the Executive Director shows genuine concern for staff.
- The responses to the open-ended question were very positive, with most employees indicating that they are very satisfied with the job being done by the Executive Director. That Ms. Murtha has been a strong leader through the difficult time the agency experienced this last year.

## Executive Director Self-Evaluation

- Ms. Murtha stated that a conscious effort has been put into having frequent board education on relevant topics. For investments, Ms. Murtha is working with the Chief Investment Officer to ensure presentations are efficient and responsive to SIB questions and concerns. For Board governance, Ms. Murtha is working coordinating efforts with both Board and agency to become proactive in governance development and review. For committee reports, Ms. Murtha is working on improving committee report formats to become more efficient and succinct. Overall, Ms. Murtha recognizes that improvement in every area is not only possible but must be a goal. While Ms. Murtha supports change as appropriate, she is mindful that change management requires listening, learning, and thoughtful implementation.

## Summary

This evaluation shows that Ms. Murtha provides excellent leadership as the Executive Director. Ms. Murtha led RIO through many challenges the past year in a positive, professional, and strategic-focused way. Her credibility and respect among board members, stakeholders, clients, and staff are evident.

Focus for the upcoming year is the continuing to improve communication efforts with legislators, clients, and the public relating to both the investment and retirement programs.

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Ms. Jan Murtha, State Investment Board ED

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Date

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Mel Olson, Executive Review Committee Chair

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Date

# State Investment Board & Committee Calendar 2022-23

Below please find a combined SIB & TFFR Board and Committee Calendar for 2022-2023. The TFFR Board approved its 2022/23 schedule at its meeting on April 21, 2022. While committee dates are subject to change, if the proposed Board schedule meets expectations staff requests the Board approve the following:

## **July 2022**

July 21, 2022 – TFFR @ 1:00 PM  
July 21, 2022 - SIB GPR @ 10:00 AM  
July 22, 2022 – SIB @ 8:30 AM

## **August 2022**

August 9, 2022- TFFR GPR @ 10:00 AM  
August 9, 2022 – SIB Audit Committee @ 2:30 PM  
August 23, 2022 – SIB GPR @ 2:30 PM  
August 26, 2022 – SIB @ 8:30 AM

## **September 2022**

September 20, 2022 – SIB Securities @ 10:00 AM  
September 22, 2022 – SIB GPR @ 10:00 AM  
September 22, 2022 – TFFR @ 1:00 PM  
September 23, 2022 – SIB @ 8:30 AM

## **October 2022**

October 26, 2022 – SIB GPR @ 2:30 PM  
October 28, 2022 – SIB @ 8:30 AM

## **November 2022**

November 8, 2022 – TFFR GPR @ 3:30 PM  
November 15, 2022 – SIB Audit Committee @ 2:30 PM  
November 16, 2022 – SIB GPR @ 2:30 PM  
November 17, 2022 – TFFR @ 1:00 PM  
November 18, 2022 – SIB @ 8:30 AM

## **December 2022**

December 13, 2022 – SIB Securities @ 10:00 AM  
December 16, 2022 – SIB @ 8:30 AM (tentative)

## **January 2023**

January 26, 2023 – TFFR @ 1:00 PM  
January 26, 2023 – SIB GPR @ 10:00 AM  
January 27, 2023 – SIB @ 8:30 AM

## **February 2023**

February 7, 2023 – TFFR GPR @ 3:30 PM  
February 16, 2023 – SIB Audit Committee @ 10:00 AM  
February 16, 2023 – TFFR @ 2:00 PM (tentative)  
February 17, 2023 – SIB @ 8:30 AM

## **March 2023**

March 21, 2023 – SIB Securities @ 10:00 AM  
March 23, 2023 – SIB GPR @ 10:00 AM  
March 23, 2023 – TFFR @ 1:00 PM  
March 24, 2023 – SIB @ 8:30 AM

## **April 2023**

April 27, 2023 – SIB GPR @ 10:00 AM  
April 27, 2023 – TFFR @ 1:00 PM  
April 28, 2023 – SIB @ 8:30 AM

## **May 2023**

May 9, 2023 – TFFR GPR @ 3:30 PM  
May 11, 2023 – SIB Audit Committee @ 2:30 PM  
May 18, 2023 – SIB GPR @ 10:00 AM  
May 19, 2023 – SIB @ 8:30 AM

## **June 2023**

June 13, 2023 – SIB Securities @ 10:00 AM  
June 15, 2023 – TFFR Board Retreat @ 1:00 PM

**BOARD ACTION REQUESTED: Board Acceptance.**

## MEMORANDUM

**TO:** State Investment Board

**FROM:** Sara Sauter, Supervisor of Internal Audit

**DATE:** May 20, 2022

**SUBJECT:** Audit Activities Quarterly Update

The SIB Audit Committee met May 10, 2022. The SIB Audit Committee reviewed and approved the third quarter audit activities and update on current audit activities.

The following were presented and approved:

1. June 30, 2022, Fiscal Year Financial Statement Audit Kickoff
  - a. Engagement Scope
    - i. RIO's Financial Statements as of June 30, 2022
    - ii. TFFR's GASB 68 Schedules as of June 30, 2022
    - iii. Report on Internal Controls and Compliance
    - iv. Written Communication with the Board
  - b. Workplan
    - i. Risked-Based Approach
    - ii. Investments, Contributions, Benefit Payments, Actuarial Data
  - c. Timeline
    - i. Planning & Testing: May – August 2022
    - ii. Final Audit Reports: October – November 2022
2. 2022-2023 Internal Audit Workplan
  - a. Allocate time to audits, consulting, and quality assurance
  - b. Fluid Workplan
    - i. Will be updated as needed

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

<https://www.rio.nd.gov/sites/www/files/documents/PDFs/SIB%20Audit/Board/Materials/sibauditmat20220510.pdf>

**MEMORANDUM**

**TO:** State Investment Board  
**FROM:** Jan Murtha, Executive Director  
**DATE:** May 19, 2022  
**RE:** Executive Limitations/Staff Relations **Updated**

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

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

Additional updates regarding ongoing discussions with HRMS related to classification and reclassification requests will be provided at the meeting. A copy of the updated organization chart is included for your reference.

<b>Employee Title</b>	<b>Status</b>
Deputy ED – Chief Retirement Officer	Posted February 2022, closed 4/4/22. Initial Interviews are scheduled in May. Final interviews will be arranged with TFFR Search committee.
Chief Fiscal Officer/Chief Operating Officer	Anticipate posting by 5/20/22. Attempting to fill by June. Reclassification request was submitted to include Chief Operating Officer duties (CFO/COO) and increase grade. HRMS denied reclass request 5/18/22. RIO anticipates posting the position at the current grade and appealing the reclass decision or pursuing a pay grade exception.
Legal Intern	Interviews Conducted March 2022. Offer has been accepted. Anticipated to fill this summer as part of UND Law School Externship Program. Anticipated term June 6 though July 22.
Investment #1	Classification approved 4/27/22, posting pending.
Investment #2	Classification approved 4/27/22, posting pending.
Investment #3	Classification approved 5/3/22, posting pending.
Investment #4	Classification approved, 5/3/22, posting pending.
Investment Reclassification Request #1	Reclassification of current Investment Analyst position to support new organization structure. Reclassification request approved week of May 9.
Accounting #1	Classification request, position posted, closed 5/2/22. Interviews scheduled in May.
Programs Coordinator	JDQ requirements currently under review.

## **2. Current Kick-Off Activities:**

- **Legacy Fund Asset Allocation Study** – RIO with the assistance of State Procurement coordinated the procurement effort for a consultant to oversee this project on behalf of the Legacy and Budget Stabilization Fund Advisory Board (“Advisory Board”). RVK was awarded the contract and the Kick-off meeting with the Advisory Board occurred 4/8/22.
- **PAS Project** – The ESC awarded the vendor solution contract to Sagitec. Onsite formal project Kick-off meeting is scheduled for 5/16/22 & 5/17/22 with RIO and ITD staff.
- **Northern Trust Onsite** – As part of RIO’s strategic plan we are reviewing opportunities to increase collaboration and information flow with our custodian bank Northern Trust. An onsite visit with representatives from Northern Trust is scheduled for 5/19/22.

## **3. RIO Board & Committee Presentations – March 1 through May 31, 2022**

Staff provided presentations to the following Boards and Committees during the above referenced time period.

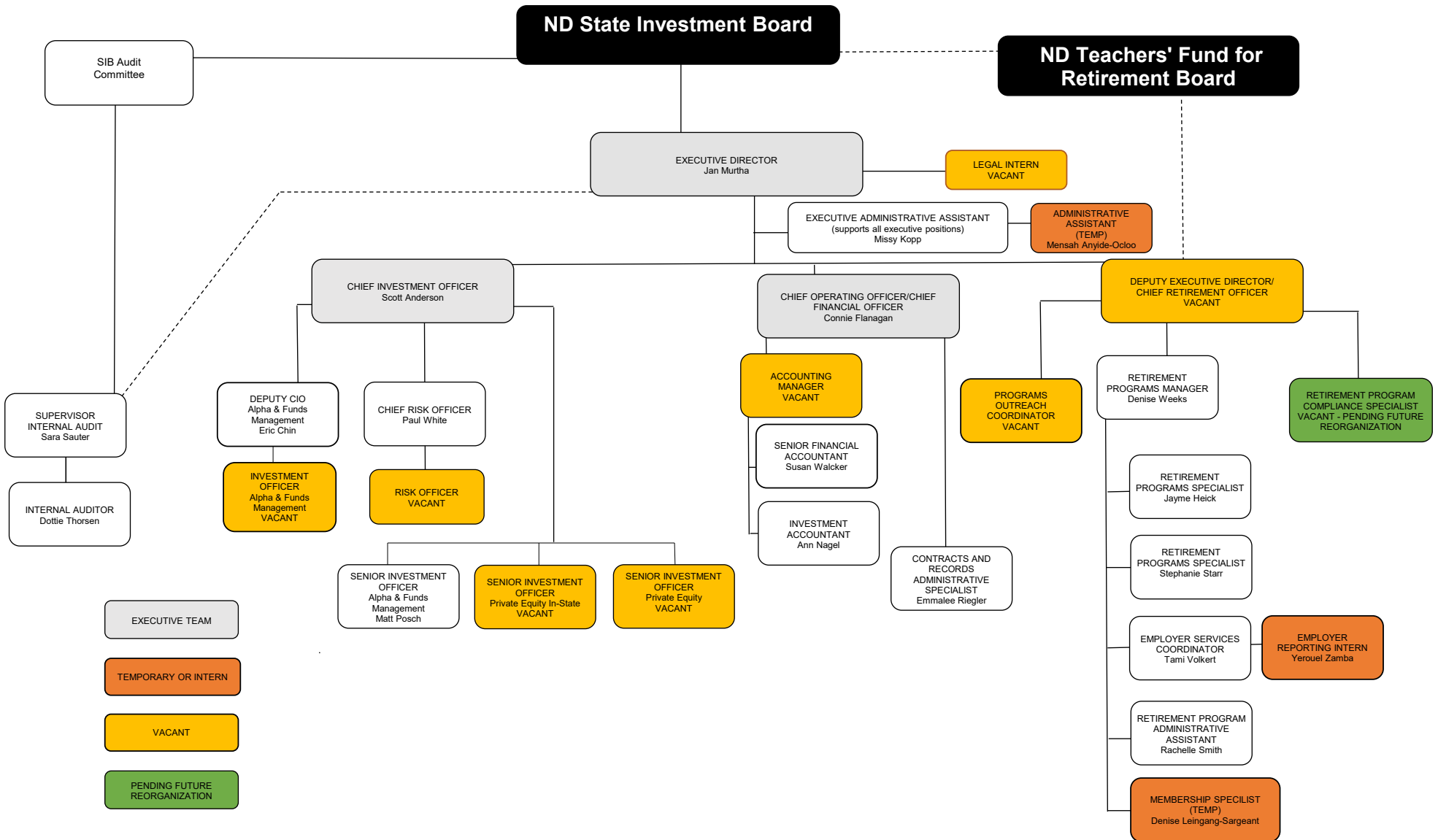
- **Special SIB – 3/3/22**
- **Cultural Endowment Fund Board Meeting – 3/15/22**
- **Fargodome – 3/23/2022**
- **TFFR – 3/24/22**
- **SIB – 3/25/22**
- **Legacy Earnings Committee – 3/29/22**
- **Legislative Audit & Fiscal Review Committee – 3/31/22 (for questions only)**
- **SIB Executive Review Committee 4/6/22**
- **Advisory Board (Legacy) – 4/8/22**
- **State Historical Society Board Meeting – 4/8/22**
- **SIB GPR Committee – 4/21/22**
- **TFFR – 4/21/22**
- **SIB – 4/22/22**
- **Government Finance Committee – 4/27/22**
- **SIB Executive Review Committee – 4/28/22**
- **Employee Benefits Programs Committee - 5/3/22**
- **SIB Audit Committee – 5/10/22**
- **TFFR GPR Committee – 5/10/22**
- **Executive Review Committee – 5/12/22**
- **SIB GPR Committee – 5/18/22 (scheduled)**
- **SIB – 5/20/22 (scheduled)**
- **PERS – 5/24/22 (scheduled)**

**BOARD ACTION REQUESTED: Board Acceptance.**



# RETIREMENT AND INVESTMENT OFFICE

Current with New FTEs



ND State Investment Board Resolution  
In Recognition of  
Connie Flanagan

WHEREAS, Connie Flanagan has served as valued and dedicated member of the Retirement & Investment Office for more than 30 years; and

WHEREAS, Connie Flanagan has diligently carried out her duties and responsibilities as Chief Fiscal Officer and Chief Operating Officer in support of both the TFFR and SIB Programs; and

WHEREAS, Connie Flanagan has diligently helped to maintain the fiscal operations, integrity and stability of the TFFR and SIB Programs.

NOW THEREFORE, BE IT RESOLVED that Connie Flanagan be duly recognized by this Board for her years of unselfish dedication to the State of North Dakota through her service to the Retirement & Investment Office.

DATED this 20<sup>th</sup> day of May, 2022

On Behalf of the SIB

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Lt. Governor Brent Sanford, Chair

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Votes

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Date