

Friday, November 18, 2022, 8:30 a.m.

WSI Board Room (In-Person)

1600 E Century Ave, Bismarck, ND

[Click here to join the meeting](#)

AGENDA

I. CALL TO ORDER AND ACCEPTANCE OF AGENDA

- A. Executive Summary
- B. Welcome Art Thompson, WSI Director
- C. Welcome New Staff

II. ACCEPTANCE OF MINUTES (October 28, 2022)

III. BOARD EDUCATION (45 minutes)

- A. Exposure Overlays – Parametric

IV. INVESTMENTS (45 minutes)

- A. Quarterly Performance Review – Callan
- B. Multi-Asset and Fixed Income Products - Vendor Capability Assessment – Executive Session – Mr. Anderson¹

(Break)

V. GOVERNANCE (60 minutes)

- A. Investment Committee – Treasurer Beadle
- B. Governance & Policy Review Committee Update – Dr. Lech
 - 1. 2nd Reading SIB Governance Manual Amendments
- C. 2023 Legislative Session Planning – Ms. Murtha
- D. Securities Litigation Committee Appointment – Ms. Murtha

VI. Quarterly Monitoring Reports (20 minutes)

- A. Quarterly Budget/Expense Report – Mr. Skor
- B. Quarterly TFFR Ends – Mr. Roberts
- C. Quarterly Internal Audit Report – Ms. Sauter
- D. Executive Limitations/Staff Relations – Ms. Murtha

VII. OTHER (5 minutes)

- A. Resolution – Mr. Klipfel – At the discretion of the Chair this will be presented following the Board Education session.
- B. Discuss Need for December Meeting

Next Meetings:

Investment Committee – December 9, 2022, @ 9:00 a.m.
Securities Litigation – December 13, 2022, at 10:00 a.m.
SIB Meeting (Tentative) – December 16, 2022, at 8:30 a.m.
TFFR Board Meeting – January 26, 2023, at 1:00 p.m.
SIB Meeting – January 27, 2023, at 8:30 a.m.

VIII. ADJOURNMENT

Informal Reception for Mr. Klipfel and Mr. Erlendson following meeting.

¹ 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.

EXECUTIVE SUMMARY

SIB Regular Meeting

November 18, 2022 – 8:30am CT

- I. **Agenda:** The November 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.
- The meeting will begin with the introduction of Art Thompson, WSI Director and new RIO staff members online and in person.
- II. **Minutes (Board Action):** The October 28, 2022, Board meeting minutes are included for review and approval.
- III. **Board Education – Exposure Overlays (Information Only):** Parametric will provide information of how customized overlay strategies can be used for efficient fund level implementations, return enhancement, and risk mitigation
- III. **A. Investments – Consultant Performance Review (Board Action):** Callan will be on site to present a quarterly performance review.
- B. Investments – Multi-Asset and Fixed Income Products - Vendor Capability Assessment (Board Action):** Staff will present assessment information relating to a proposed investment initiative to the Board. An Executive Session is needed for the presentation of the information. Materials will be provided to the Board via a secure link.
- IV. **A. Governance – Investment Committee Update (Information Only):** The Committee Chair will provide the Board with an overview of discussion items from the most recent committee meeting.
- B. Governance & Policy Review Committee Update (Information Only):** Dr. Lech will provide an update on GPR committee activities.
- 1. Governance – 2nd Reading & Final Adoption – Amendment to Policy (Board Action):** Ms. Murtha will present policy amendments and changes to the SIB Governance manual reviewed/discussed by the Investment and GPR committees, and any comments from the TFFR Board.
- C. Governance – 2023 Legislative Session Planning (Board Action):** Ms. Murtha will present to the Board on anticipated public policy issues that may arise and be impactful to the SIB program during the 2023 session and ask the Board for staff guidance on testimony preparation. This item will be presented for input to the SIB GPR committee and be added to the Board book subsequent to the SIB GPR committee meeting.
- D. Governance – Securities Litigation Committee Appointment (Chair to Appoint):** Due to the committee vacancy created by the retirement of Mr. Klipfel a new Board member must be appointed to the Securities Litigation Committee.
- V. **A-D. Reports (Board Action):** Staff will provide monitoring reports on quarterly budget/expenses, TFFR ends, internal audit activities and executive limitations/staff relations.

Adjournment.

**NORTH DAKOTA STATE INVESTMENT BOARD
MINUTES OF THE
OCTOBER 28, 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
Claire Ness, PERS Board, Parliamentarian
Mel Olson, TFFR Board
Yvonne Smith, PERS Board

STAFF PRESENT: Scott Anderson, CIO
Eric Chin, Deputy CIO
Rachel Kmetz, Accounting Mgr
Missy Kopp, Exec Assistant
Jan Murtha, Exec Dir
Matt Posch, Sr. Investment Officer
Emmalee Riegler, Contracts/Records Admin
Sara Sauter, Internal Audit Supvr
Ryan Skor, CFO/COO
Dottie Thorsen, Internal Auditor
Susan Walcker, Senior Financial Accountant

GUESTS: John Arnold, Insurance Dept
Dean DePountis, Attorney General's Office
Karlene Fine, Industrial Commission
Candace Johnson, Securities Commission
Keith Kempenich, Legacy/Budget Stab. Adv. Board
Rachel Kriege, Insurance Dept
Adam Montgomery, Securities Commission
Andrea Pfennig, Greater ND Chamber
Members of the Public

CALL TO ORDER:

Lt. Gov. Sanford, Chair, called the State Investment Board (SIB) regular meeting to order at 8:30 a.m. on Friday, October 28, 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, Ms. Ness, Mr. Olson, Lt. Gov. Sanford, and Ms. Smith.

ACCEPTANCE OF AGENDA:

The Board considered the agenda for the October 28, 2022, meeting.

IT WAS MOVED BY MR. OLSON AND SECONDED BY DR. LECH 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. NESS, DR. LECH, MS. SMITH, AND LT. GOV. SANFORD
NAYS: NONE
MOTION CARRIED

MINUTES:

The Board considered the minutes of the September 23, 2022, SIB meeting.

IT WAS MOVED BY DR. LECH AND SECONDED BY COMMISSIONER GODFREAD AND CARRIED BY A VOICE VOTE TO APPROVE THE SEPTEMBER 23, 2022, MINUTES AS DISTRIBUTED.

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

BOARD EDUCATION:

Currency:

Mr. Anderson provided education on how the price of currency impacts the investment portfolio. The uncertainty of the price of currency flows through and significantly impacts the returns of global market indexes, earnings of companies, and the cost of living.

INVESTMENTS:

Annual Performance Review:

Mr. Anderson provided the annual performance review as of June 30, 2022. When looking at the benchmark indices year to date, both equities and fixed income are not doing well. It is unusual for both equities and fixed income returns to be so low. The returns improved a small amount in August. In September there was an overall inflation decline, but it's not coming down in a dramatic way, so there is still much uncertainty. TFFR is very well diversified, has a good asset allocation, and has been diligently rebalanced. The 5-year performance puts TFFR in the top quartile compared to similar funds. PERS has strong returns over time which shows the benefits of actively managing the portfolio. The Legacy Fund is well diversified, and the Advisory Board is currently working on the asset allocation. The Legacy Fund has had very strong active returns. WSI is also well diversified. Because WSI is an insurance fund, it has much more fixed income which results in lower risk and returns. Active returns for WSI are good over the 3 and 5-year period. Overall, each of the plans have good asset allocations for the mandate in place. The performance of the benchmarks has done well, and the active returns have been beneficial to the funds. The report provides performance information for all SIB clients. Board discussion followed.

IT WAS MOVED BY MR. OLSON AND SECONDED BY COMMISSIONER GODFREAD AND CARRIED BY A VOICE VOTE TO ACCEPT THE ANNUAL PERFORMANCE REVIEW.

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

Equity Transition Update:

Mr. Chin provided an update on the progress of the equity transition which the Board approved at the May 2022 meeting. As of yesterday, 95% of the transition has been completed. The transition has been a complex and nuanced transaction with approximately \$3.3 billion of add and \$3.3 billion of redemptions. There were over 1,900 securities on the sell list and over 5,400 on the buy list. Because of the complexity of the transition Northern Trust was brought on to assist with the process. The transition is expected to be complete on November 1, 2022.

The Board recessed at 10:07 a.m. and reconvened at 10:20 a.m.

Investment Policy Statement (IPS) Approvals:

Two Investment Policy Statements were provided to the Board for approval. Mr. Chin provided background on each IPS. The Cultural Endowment Fund's board chose their asset allocation and have approved the IPS for the Prairie Maintenance Endowment Fund, which now needs SIB approval.

IT WAS MOVED BY DR. LECH AND SECONDED BY MS. NESS AND CARRIED BY A ROLL CALL VOTE TO APPROVE THE ARTS ACROSS THE PRAIRIE MAINTENANCE ENDOWMENT FUND IPS.

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

NAYS: NONE

MOTION CARRIED

The Teachers' Fund for Retirement (TFFR) IPS was initially approved by the TFFR Board in April 2021, then by the SIB in May 2021. That version of the IPS had a more prescriptive allocation to broad US and non-US equities. Staff noticed that it was overly prescriptive, so brought the amended IPS to the TFFR Board for their approval at their July 2021 meeting. The IPS was not added to the SIB agenda, so staff is asking the Board to approve the TFFR IPS retroactive to July 2021.

IT WAS MOVED BY DR. LECH AND SECONDED BY MR. OLSON AND CARRIED BY A ROLL CALL VOTE TO APPROVE THE TFFR IPS RETROACTIVE TO JULY 2021.

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

NAYS: NONE

MOTION CARRIED

GOVERNANCE:

Investment Committee Update:

Mr. Anderson provided an update from the first meeting of the SIB Investment Committee (IC). The IC had its first meeting on October 7, 2022. The SIB Chair appointed Treasurer Beadle as Committee Chair and Commissioner Heringer as Vice Chair. The other members of the IC are Mr. Anderson and Mr. Chin and two outside investment professionals, Dr. Prodosh Simlai from University of ND and Dr. Ruilin Tian from ND State University. Mr. Anderson provided the Committee with the Governance for Growth presentation which had previously been presented to the Board. There was discussion about the need to modify the governance manual to incorporate the IC. Staff provided proposed policy changes to the IC for discussion. Staff also provided a summary of the investment program activities to date so the outside members could become familiar with our investment program. Board discussion followed.

Governance and Policy Review (GPR) Committee Update:

Dr. Lech provided an update on the GPR Committee meeting on October 24, 2022. Staff presented the proposed SIB Governance Manual policy amendments to the Committee. Dr. Lech explained the process for the proposed amendments which were reviewed by the IC and the GPR Committee before being presented to the SIB for approval.

IT WAS MOVED BY DR. LECH AND SECONDED BY COMMISSIONER GODFREAD AND CARRIED BY A ROLL CALL VOTE TO APPROVE THE INTRODUCTION AND 1ST READING OF AMENDMENTS TO SIB GOVERNANCE MANUAL POLICIES B-5, B-7, E-1, E-2, E-3, E-4, E-5, E-7, E-8, E-9, E-10, AND EXHIBITS.

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

NAYS: NONE

MOTION CARRIED

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

Mr. Anderson provided an update from the LBSFAB meeting on October 12, 2022. Representatives from RVK led a discussion regarding the asset allocation study for the Legacy Fund. There is a lot of uncertainty in the markets now and the possibility that legislation will affect the current in-state investment program, so the Advisory Board decided to keep the current asset allocation in place and reassess after legislative session is complete. RVK presented a draft investment policy for the Legacy Fund which reflects the requirements of the in-state program. The Advisory Board voted to approve the policy with a suggested amendment. RVK will bring the amended policy back to the next Advisory Board meeting. Board discussion followed.

Securities Litigation Committee:

Ms. Murtha provided an update on the Securities Litigation Committee meeting on September 27, 2022. The Committee elected Commissioner Heringer as the chair. The Committee received monitoring updates from the attorneys on active cases and one case that has been settled. The link to the meeting materials and agenda were provided.

Annual SIB Customer Satisfaction Survey Results:

Ms. Sauter shared the SIB Client Satisfaction Survey results. The survey is issued annually to fulfill the Governance Manual Policy Ends D-1. Eighteen surveys were sent to clients, and we received eleven responses. The overall score was 3.47 out of 4. There were a few comments shared which were all positive.

IT WAS MOVED BY DR. LECH AND SECONDED BY COMMISSIONER HERINGER AND CARRIED BY A VOICE VOTE TO ACCEPT THE SIB CLIENT SATISFACTION SURVEY RESULTS.

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

NAYS: NONE

MOTION CARRIED

QUARTERLY MONITORING REPORTS:

Annual Budget/Expense Report:

Mr. Skor reviewed the Annual Budget and Expense Report for the year ended June 30, 2022. The operating expenditures line includes the TFFR Pension Administration System (PAS) project. Without that project included, the operating expenditures line is at about 57% for budget available. Much of the budget for the PAS project will carry over to the next biennium. The report summarizes the schedule of consulting expenses and investment expenses. Board discussion followed.

Investment Ends:

Mr. Posch reviewed the Quarterly End Report for the quarter ending September 30, 2022. The equity harmonization project is almost complete. A similar proposal focused on fixed income was presented and approved by the Board at the September 2022 meeting. The transition for fixed income will occur soon. Interviews for the four new investment positions are completed and the new staff will start with RIO over the next couple of months. There are no investment managers currently on the watch list. Board discussion followed.

Executive Limitations/Staff Relations:

Ms. Murtha provided the Executive Limitations/Staff Relations report. Offers have been accepted for the four new investment positions and interviews are underway for the Chief Risk Officer position. The new Outreach and Communications Director will start in November. The new Retirement Accountant position will be posted soon. Ms. Murtha summarized current projects including the Legacy Fund asset allocation study, the TFFR Pioneer Project, Northern Trust initiative, and the Audit Consultant Request for Proposals. A list of staff presentations was provided. Board discussion followed.

IT WAS MOVED BY MR OLSON AND SECONDED BY MR. MICKELSON AND CARRIED BY A VOICE VOTE TO ACCEPT THE ANNUAL BUDGET/EXPENSE, INVESTMENT ENDS, AND EXECUTIVE LIMITATION/STAFF RELATIONS REPORTS.

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

NAYS: NONE

MOTION CARRIED

ADJOURNMENT:

With no further business to come before the SIB, Lt. Gov. Sanford adjourned the meeting at 11:00 a.m.

Prepared by:

Missy Kopp, Assistant to the Board



North Dakota State Investment Board

November 18, 2022

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Firm Overview

Parametric Overview

We help institutional investors build, manage, and protect their portfolios.



Extensive, established investment capabilities

An Industry pioneer in overlay solutions and custom indexing, Parametric is a trusted fiduciary for institutional asset owners.



Focus on transparency and repeatability

We provide research and rules-based solutions with a quantitative approach. Our solutions span global markets, asset classes, and instrument types.



Extension of staff partnership

We help investors solve specific portfolio challenges, implementing tailored solutions via a high-touch service model.

\$366B+

Firm wide AUM¹, including \$171 B+ in institutional assets

500+

Institutional client relationships

187

Investment professionals, including 105 CFA charterholders and 10 PhDs

30+

Years of investment experience across equities, fixed income, and derivatives

Asset figures are approximate as of 09/30/2022.

¹AUM includes overlay exposure, and both discretionary and non-discretionary assets of Parametric Portfolio Associates® LLC (the Firm).

Certain statements contained herein reflect the subjective view of Parametric and its personnel and as such cannot be independently verified. Please refer to the disclosures for additional information.

Institutional Capabilities

We offer a comprehensive platform for investors seeking to:

- ✓ Eliminate inefficiencies
- ✓ Create custom exposures
- ✓ Capitalize on market opportunities
- ✓ Address strategic and episodic risks

Efficient implementation

Flexible exposure management programs tailored to fit specific needs

Solution ideas

- Cash overlay
- Rebalancing
- Transition exposure
- Custom equity exposures
- Custom fixed income exposures
- Responsible investing (ESG)

Return enhancement

Systematic strategies that seek alpha across asset classes

Solution ideas

- Alternative risk premia
- Systematic alpha
- Portable alpha
- Commodity management
- Tax management

Risk mitigation

Customizable tools that address and manage specific portfolio risks

Solution ideas

- Tail-risk strategies
- Market and security hedging programs
- Asset and liability hedging
- Currency management

Investing involves market- and program-specific risks. All investments are subject to loss.

NDSIB & Parametric History

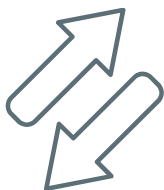
Parametric/NDSIB Partnership Overview

- > 2006
 - > An Enhanced Core Fixed Income portfolio was launched for the Insurance pool.
- > 2008
 - > The Enhanced Core Fixed Income portfolio was transitioned to two Enhanced Equity portfolios (US large cap and small cap) to assist NDSIB's asset allocation rebalancing objectives during the Global Financial Crisis.
 - > An overlay program was launched for NDSIB to further assist with asset class rebalancing during the GFC as well as to implement portable alpha programs and tactical positioning. The overlay program delivered approx. \$195 million in profits before being terminated in 2013.
- > 2009
 - > An Enhanced Small Cap portfolio was launched for the Pension plan (terminated in 2020).
- > 2011
 - > An Enhanced Large Cap portfolio was launched for the Pension plan.
- > 2020
 - > An overlay program was launched for several of the NDSIB accounts to facilitate asset class rebalancing. Positions were initiated in April 2020 and removed in June 2020. The overlay program delivered approx. \$48 million in profits before being terminated in 2021.

Parametric Overlay Solutions

Benefits of an Overlay Program

Investors employ customized overlay strategies that help them achieve policy objectives. Overlay strategies offer:



Return/cost improvement

Increased expected returns, reduced tracking error and transaction costs



Risk management

Enhanced risk controls, portfolio governance, and access to risk specialists



Increased efficiency

Greater liquidity, flexibility, and comprehensive reporting

Certain statements contained herein reflect the subjective views and opinions of Parametric and its personnel and as such cannot be independently verified. All investments are subject to loss. Please refer to the disclosures for additional information. Investing in an Overlay strategy involves risk. Please refer to Overlay Solutions: What Are the Risks? and other Disclosures in the Appendices.

Parametric Exposure Solutions

Parametric provides comprehensive, risk-managed overlay solutions that are designed in a customized and consultative manner.

	Core overlay solutions	Liability-driven investing	Cross-asset portfolio solutions (CAPS)
Applications	Cash overlay, rebalancing, transitions, and currency management	Hedge-ratio management, glide-path management, and core bonds	Broad portfolio risk-management solutions such as portfolio hedging, tactical implementation, and portable alpha
Objective	Increase expected portfolio returns, enhanced liquidity, and reduced tracking error relative to policy allocation	Reduce mismatch between plan assets and liabilities	Access to consultation and implementation expertise for management of portfolio risk-management programs
Approach	Daily monitoring of cash balances and asset allocation allows for efficient and timely adjustments to portfolio exposures	Customized and systematic solutions designed to provide more precise management of surplus risk throughout each stage of the LDI process	Full-service evaluation and implementation across a wide array of global asset classes and instrument types

There is no assurance the investment objectives will be achieved. Investing entails risk and there can be no assurance that Parametric will achieve profits or avoid incurring losses.

Solving Implementation Challenges with Core Overlay

Parametric Core Overlay Solutions can help mitigate policy implementation challenges

Solution

Cash overlay



What it provides:

- > Eliminates cash drag on operating and manager cash balances
- > Improved liquidity and reduced transaction costs
- > Increased expected returns

Rebalancing overlay



- > Daily monitoring of portfolio allocations and thresholds
- > Prompt rebalancing of portfolio exposures
- > Reduced transaction costs and tracking error

Transition overlay



- > Reduction of performance risk through mitigation of exposure gaps
- > Added flexibility in manager terminations and new manager searches
- > Exposure throughout long-settled redemptions (e.g. hedge fund receivables)

Currency overlay



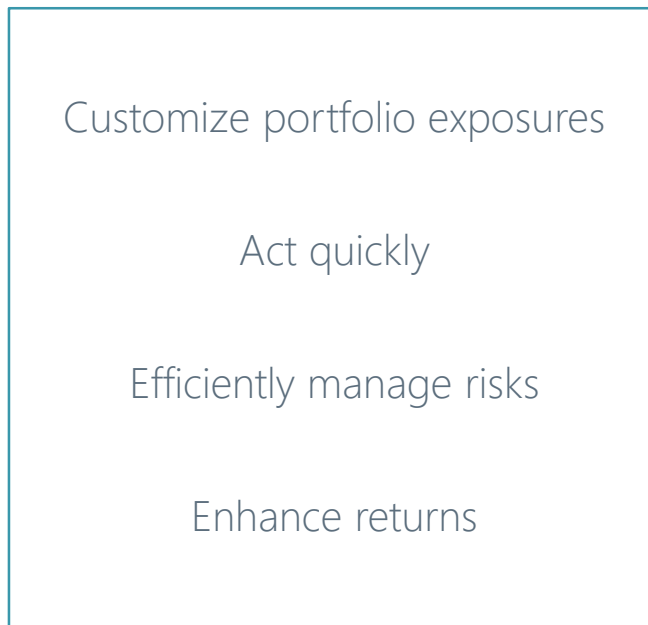
- > Mitigation of unintended currency risks
- > Ability to efficiently adjust currency exposure
- > Seamless integration with overlay program

Intended component may not meet benefits listed.

Cross-Asset Portfolio Solutions (CAPS)

A powerful, full-service implementation solution allowing institutional investors to efficiently implement exposures in a transparent, flexible, cost-effective, and timely manner.

In order to:

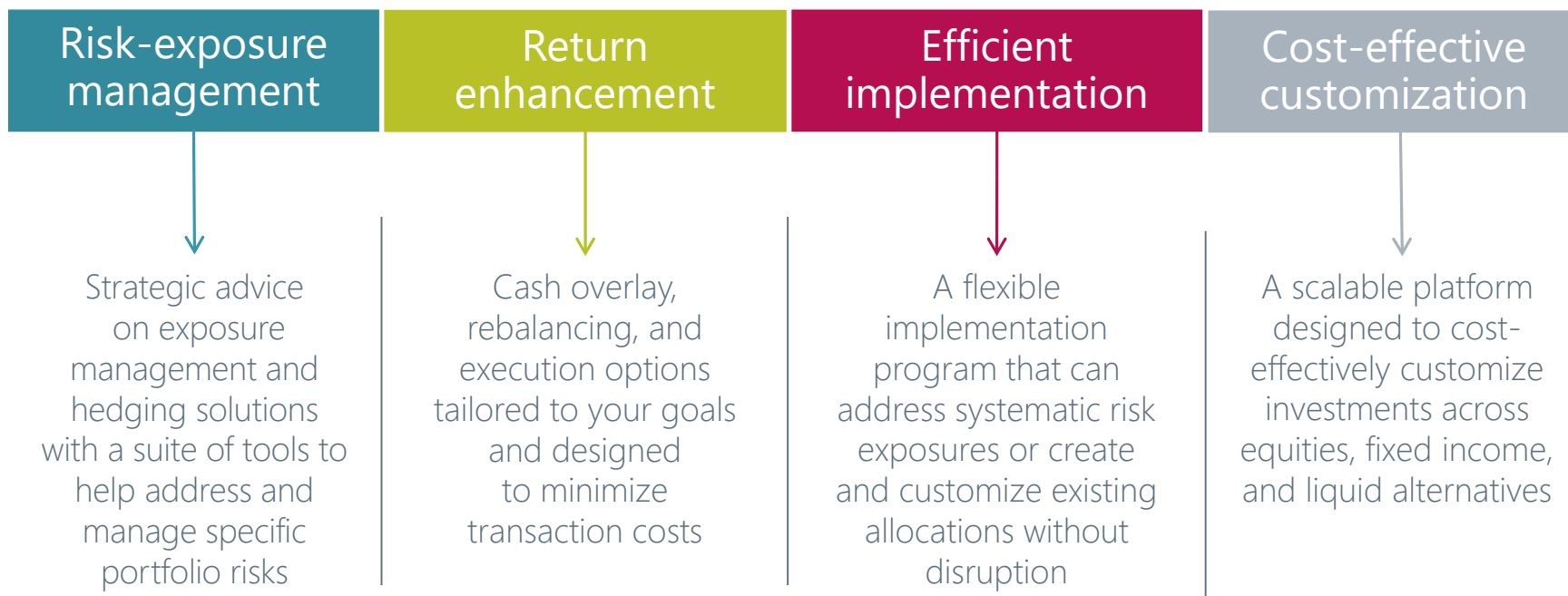


You may desire:



Solving Investor Challenges

An investment partnership with Parametric helps solve common portfolio challenges.



There is no assurance the investment objectives will be achieved. Investing entails risks and there can be no assurance that Parametric will achieve profits or avoid incurring losses.

CAPS Applications

Parametric's capabilities span a wide array of asset classes, global markets, and instrument types.



Instruments

- Physicals
- Futures
- Forwards
- Options
- Swaps



Asset classes

- Equities
- Fixed income
- Currency
- Commodities/real assets
- Volatility



Common Solutions

- Overlay strategies
- Custom equity and fixed income allocations
- Strategic/tactical hedging
- Portable alpha
- Portfolio leverage
- Beta completion portfolios
- Factor exposure
- Expression of market views
- Liquidity/collateral management

Illustrative Examples

Custom Overlay Illustrative Example: Strategic Rebalancing

Investor background:

\$15B public pension using overlay to rebalance during volatile markets



Challenge:

Volatile market environment created significant asset allocation imbalances and rebalancing physically was challenging to coordinate and costly to implement

Potential solution:



- > Create comprehensive tracking report to monitor asset allocation
- > Designate asset classes to use for rebalancing
- > Rebalance within bands using synthetic overlay

Intended benefit:



- > Capture market reversion through overlay rebalancing positions
- > Minimization of portfolio tracking error relative to policy
- > No disruption to underlying portfolio throughout rebalance

The example provided is for illustrative purposes only. Client results may vary. There is no guarantee that the intended benefits or similar outcomes will be achieved. All investments are subject to risk, including the risk of loss. There is no assurance that Parametric will achieve profits or avoid incurring losses. Past performance is not indicative of future results.

Rebalancing Example: Scenario Layout

Fund Asset Allocation

- > \$6.2B fund has policy targets of 50% equity / 50% fixed income & real assets

Fund Challenges

- > Market movements create a policy drift from the target asset allocation
- > Physical rebalancing has several challenges, including:
 - > Manager and market liquidity
 - > Transaction costs
 - > Implementation lag

Overlay Solution

- > Futures contracts are used to rebalance, reducing the time and transaction costs associated with physical rebalancing

How Rebalancing Overlay Works

Market moves result in drift from policy targets

Overlay is used to rebalance portfolio

Asset Class	Policy Target	Actual Allocation (\$)	Actual Allocation (%)	Deviation from Policy	Rebalance Exposure	Resulting Allocation (\$)	Resulting Allocation (%)	Deviation from Policy
Equity	50%	\$2.54B	41.2%	-8.8%	0.272B	\$2.81B	45.6%	-4.4%
Fixed Income & Real Assets	50%	\$3.63B	58.8%	8.8%	-0.272B	\$3.36B	54.4%	4.4%
Total	100%	\$6.17B	100.0%	0%	\$0.0B	\$6.17B	100.0%	0%

For informational purposes only. Not a recommendation to buy or sell any instrument.
Source: Parametric, Date: 11/7/2022

Managing Private Market Asset Allocation Risk (i.e. the denominator effect)



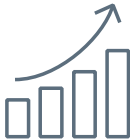
Challenge:

Differences in valuation of private and public markets creates an asset allocation imbalance where private markets are significantly overweight



Potential solution:

- > Determine areas of concern and potential concentrated exposure
 - > Ex. Technology, China
- > Identify proxy benchmarks or instruments to hedge overweight exposure
 - > Hedging using broad benchmarks (e.g. Nasdaq-100, Hang Seng Tech)
 - > Custom basket swaps of recent IPO names (e.g. Meituan)
- > Use broader overlay toolkit to rebalance underweight public markets



Intended benefit:

- > Maintain asset allocation with policy parameters
- > Minimize risk associated with concentrated positioning

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Custom Overlay Illustrative Example: Cash Overlay

Investor background:

\$70B public pension with a unitized plan structure



Challenge:

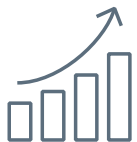
Eliminate performance drag from cash held to facilitate monthly pension obligations, capital calls, and participant contributions



Potential solution:

Securitize idle cash with exchange-traded index futures

- > Fund cash balances measured each day via custodial download
- > Blend of futures designed to approximate policy mix
- > Positions updated each day based on cash movements



Intended benefit:

Increased liquidity, operational efficiency, and expected return

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Custom Overlay Illustrative Example: Transition Overlay

Investor background:

Pension seeking to transition & re-allocate between managers



Challenge:

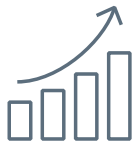
Maintain market exposure, lower performance risk, and increase expected return during transition events



Potential solution:

Use exchange-traded index futures to maintain market exposure

- > Coordinate with other asset managers to determine the timing of physical sales/purchases
- > Use overlay positions to replace desired exposures as physical assets are traded
- > Remove overlay positions as new physical positions are funded



Intended benefit:

Mitigation of exposure gaps, flexibility to accelerate manager changes

The example provided is for illustrative purposes only. Client results may vary. There is no guarantee that the intended benefits or similar outcomes will be achieved. All investments are subject to risk, including the risk of loss. There is no assurance that Parametric will achieve profits or avoid incurring losses. Past performance is not indicative of future results.

Custom Overlay Illustrative Example: Beta Completion

Investor background:

\$35B corporate pension seeking to minimize tracking error to benchmark



Challenge:

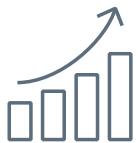
Add incremental equity market exposure to a portfolio of externally managed alternative strategies to achieve beta exposure equal to benchmark index



Potential solution:

Portfolio completion through exchange-traded futures

- > Market value of alternative strategies and embedded beta provided monthly
- > Required positions calculated to achieve index exposure to MSCI ACWI
- > Positions implemented and maintained until subsequent monthly update



Intended benefit:

Increase in expected long-term returns through minimizing beta slippage while preserving incremental, uncorrelated alternative returns

The example provided is for illustrative purposes only. Client results may vary. There is no guarantee that the intended benefits or similar outcomes will be achieved. All investments are subject to risk, including the risk of loss. There is no assurance that Parametric will achieve profits or avoid incurring losses. Past performance is not indicative of future results.

Custom Overlay Illustrative Example: Portable Alpha

Investor Background:

\$9B non-profit organization seeking to port an alternative alpha onto a traditional beta



Challenge:

Enhance the performance of the fund's domestic equity managers through the use of higher alpha generating managers



Potential solution:

Port an alternative alpha onto a traditional beta

- > Synthetically replicate the desired beta
- > Manage the collateral in a conservative manner to avoid liquidity events
- > Use excess physical cash to invest in alpha generating managers



Intended benefit:

Desired allocation to liquid alternative strategy without violation of organization's social goals

The example provided is for illustrative purposes only. Client results may vary. There is no guarantee that the strategy will be successful. Investing in a derivatives trading program involves risk. All investments are subject to loss. There is no assurance that Parametric will achieve profits or avoid incurring losses. Past performance is not indicative of future results.

Risks

Overlay Solutions: What Are the Risks?

Risk	Description	How Parametric mitigates
Market	Market performs in a way that was not anticipated. For example, cash outperforms capital markets.	Systematic market risk is an inherent part of the overlay program and can neither be diversified away nor mitigated. Client-specific policy guidelines are established to clearly define desired market risk based on client asset allocation targets.
Communication/information	Overlay index exposures are maintained based on underlying investment values provided by one or more third parties. There are often delays in the receipt of updated information which can lead to exposure imbalance risks. Manager changes and inadequate communication regarding cash flow moves into and out of the fund can lead to unwanted asset class exposures and loss.	Parametric establishes communication links with custodial, manager, and other sources to obtain and verify positions and cash flow data as soon as it becomes available. Suspect data may be researched and staff notified.
Margin/liquidity	Potential for the market to move in a manner adverse to the overlay position, causing a mark-to-market loss of capital to the fund and a resulting need to raise liquidity or to close positions. This could happen at a time when underlying fund or positions are also declining in value.	Parametric strives to be aware of potential collateral and cash requirements to reduce the risk of needing to remove positions. Additional margin requirements are communicated via email, and margin adequacy is available to the client daily.
Tracking error	Futures (synthetic) index returns fail to track benchmark index returns perfectly. This divergence between the price behavior of a position or portfolio and the price behavior of a benchmark is tracking error and impacts performance.	Parametric seeks to minimize tracking error by using liquid futures contracts with sufficient daily trading volume and open interest. All derivative contracts will have some tracking error.
Leverage	Creation of market exposure in excess of underlying collateral value may lead to significant capital losses and result in position liquidation.	Parametric obtains daily collateral pool values and adjusts beta overlay positions to maintain the ratio of total exposure to collateral within a predefined client-determined band.
Counterparty	Counterparty credit risk on OTC trading. Bilateral centrally cleared OTC counterparty risk is similar to the clearing risk of holding futures investments.	Parametric can facilitate the negotiation of ISDA documentation that seeks to reduce the potential credit risk associated with OTC counterparties. Parametric monitors credit ratings and credit default swap spreads for all counterparties used and will inform staff of developments that may negatively impact credit risk.
Collateral	The program may experience losses on the underlying designated assets in addition to potential losses on the index market exposure overlaying these assets.	This risk can't be mitigated by an overlay manager. Parametric discusses the potential for negative performance in the collateral used for the overlay prior to alpha transport applications with client.

Appendices

Biographies

Thomas Lee, CFA

Chief Investment Officer

Tom is a member of Parametric's Executive Committee and leads Parametric's Research, Strategy, Portfolio Management, and Trading teams, coordinating resources, aligning priorities, and establishing processes for achieving clients' investment objectives. Tom has coauthored articles on topics ranging from liability-driven investing to the volatility risk premium. He is a voting member of all the firm's investment committees. Prior to joining Parametric in 1994 (originally as an employee of the Clifton Group, which was acquired by Parametric in 2012), Tom spent two years working for the Board of Governors of the Federal Reserve in Washington, DC. He earned a BS in economics and an MBA in finance from the University of Minnesota. A CFA charterholder, Tom is a member of the CFA Society of Minnesota.

Clint Talmo, CFA

Director, Investment Strategy

Clint leads a team of investment professionals responsible for designing, trading, and managing customized overlay portfolios utilizing a wide spectrum of asset classes across global markets. Prior to joining Parametric in 2014, Clint was a partner at Aerwulf Asset Management. Previously, he worked for Interlachen Capital Group and EBF and Associates, where his responsibilities included research, trading, and portfolio management. He earned a BS in finance from the University of Colorado. A CFA charterholder, Clint is a member of the CFA Society of Minnesota.

Daniel Wamre, CFA

Director, Investment Strategy

Dan leads a team of investment professionals responsible for designing, trading, and managing overlay portfolios. He has extensive experience helping clients and consultants manage portfolio exposures and risk through futures and options-based strategies. Prior to joining Parametric in 1995 as an intern and full-time in 1998 (originally as an employee of the Clifton Group, which was acquired by Parametric in 2012), Dan spent four years as a platoon commander/executive officer in the US Marine Corps. Upon completion of graduate school, he spent 10 months working as a commercial banking credit analyst for US Bank in Minneapolis. He earned a BS from North Dakota State University and an MBA in finance from the University of Minnesota. A CFA charter holder, Dan is a member of the CFA Society of Minnesota.

Christopher Haskamp, CFA

Director, Investment Strategy Government Securities

Chris is a Director of Investment Strategy with a focus on alternative risk premia and fixed income strategies. Prior to joining Parametric in 2006 (originally as a member of the Clifton Group, which was acquired by Parametric in 2012), he spent three years as a scientist at the medical device firm Beckman Coulter. Chris earned a BS in biochemistry from the University of Minnesota; an MS in chemistry from the University of California, San Diego; and an MBA in finance from the University of Minnesota's Carlson School of Management. A CFA charterholder, Chris is a member of the CFA Society of Minnesota.

Alex Braun, CFA

Senior Portfolio Manager

Alex leads a team of investment professionals responsible for designing, trading, and managing overlay portfolios. Prior to joining Parametric in 2010, Alex interned at Imperial Capital (formerly Mercanti Group). He earned a BS degree in finance and accounting from the Carlson School of Management at the University of Minnesota. A CFA charterholder, Alex is a member of the CFA Society of Minnesota.

Richard Fong, CFA

Director, Investment Strategy

Ricky leads a team of investment professionals responsible for designing, trading, and managing overlay portfolios. Since joining Parametric in 2010, Ricky has become a valuable resource supporting management of client LDI and options-based risk management solutions. He earned a BA in financial economics from Gustavus Adolphus College. A CFA charterholder, Ricky is a member of the CFA Society of Minnesota.

Sylvia P. Horstmann, CFA

Senior Portfolio Manager

Sylvia is responsible for designing, trading, and managing overlay portfolios. Prior to joining Parametric in 2022, Sylvia spent 18 years managing overlay programs at Russell Investments. She earned a BA in business administration and a BA in economics from the University of Puget Sound. A CFA charterholder, Sylvia is a member of the CFA Society of New York.

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No security, discipline, or process is profitable all of the time. There is always the possibility of loss of principal. Derivatives such as futures, swaps, and other investment strategies have certain disadvantages and risks. Futures require the posting of initial and variation margin. Therefore, a portion of risk capital must be preserved for this purpose rather than being allocated to a manager. Liquid futures may not exist for published benchmarks which may result in tracking error. Also, some intraperiod mispricing may occur. Swaps require periodic payments, may be less liquid than futures, and may have counterparty/credit risk. Some investment strategies require a cash investment equal to the desired amount of exposure.

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Parametric is headquartered at 800 Fifth Avenue, Suite 2800, Seattle, WA 98104. Parametric’s Minneapolis office is located at 3600 Minnesota Drive, Suite 325, Minneapolis, MN 55435. For more information regarding Parametric and its investment strategies, or to request a copy of the firm’s Form ADV or a list of composites, contact us at 206 694 5500 (Seattle) or 951 767 7700 (Minneapolis), or visit www.parametricportfolio.com.

Callan



November 18, 2022

North Dakota State Investment Board

Performance Evaluation
as of September 30, 2022

Alex Browning
Senior Vice President

Craig Chaikin, CFA
Senior Vice President

Callan

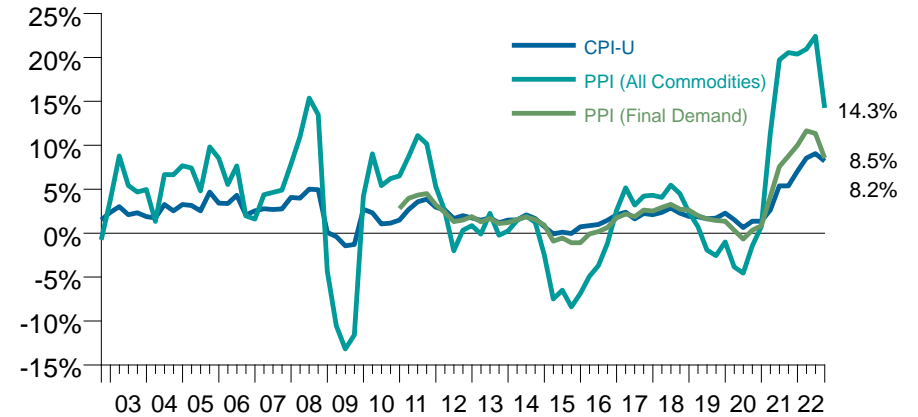
Market Update

U.S. Economy—Summary

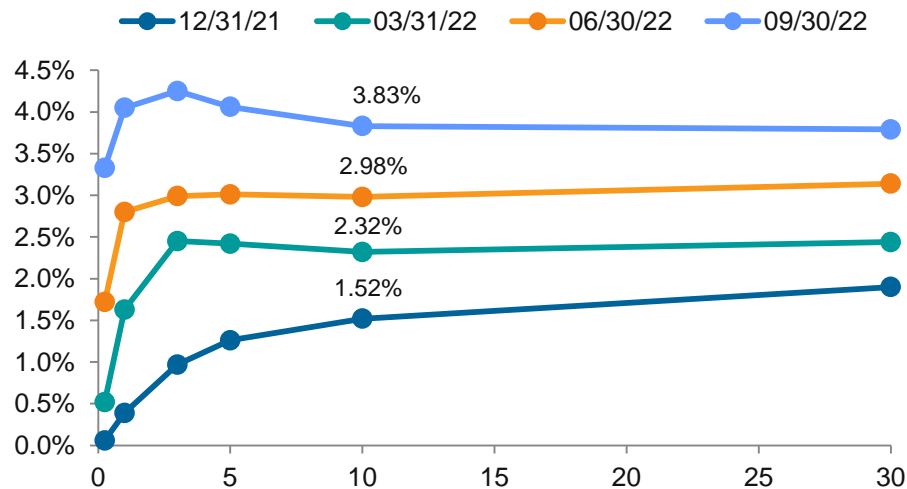
Third Quarter 2022

- After declining 0.6% in Q2, real U.S. GDP bounced back in the third quarter with an annualized growth rate of 2.6%, according to the advance estimate.
- Headline inflation remained elevated in September, climbing 8.2% year-over-year.
- The Federal Reserve made its third consecutive 75 basis point rate hike on September 21st (to a target range of 3.00–3.25%).
 - *The Fed made an additional 0.75% hike on 11/2/22.*
- The labor market continues to be a source of strength with unemployment remaining at 3.5% in September.

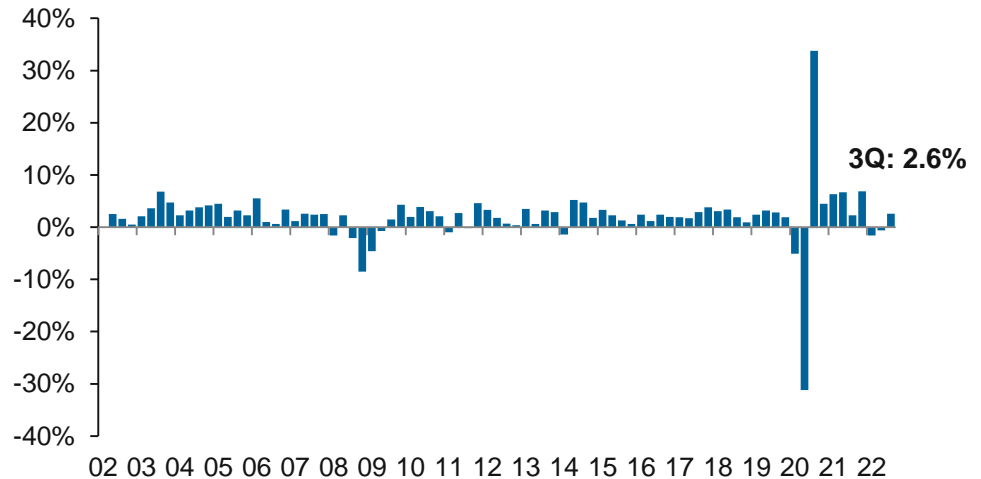
Inflation Year-Over-Year



U.S. Treasury Yield Curves



Quarterly Real GDP Growth

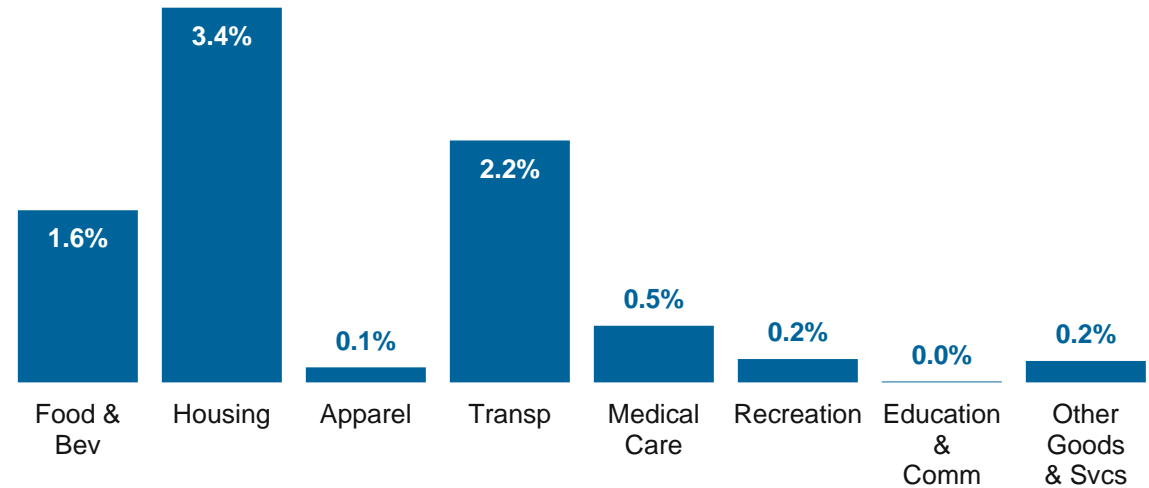


Sources: Bloomberg, Bureau of Labor Statistics, Callan. GDP reflective of 2Q22.

Contributors to Recent Inflation: Primary Categories

- Transportation inflation has finally begun to trend downward, albeit with still very high absolute levels.
- Housing took over as the biggest weighted contributor to headline inflation due to the category's high weight in the index (42.4%).
- Transportation's downward trend in inflation has been offset by an upward trend for Food & Beverage, Housing, and Medical Care.

Contribution to September 2022 YOY Inflation



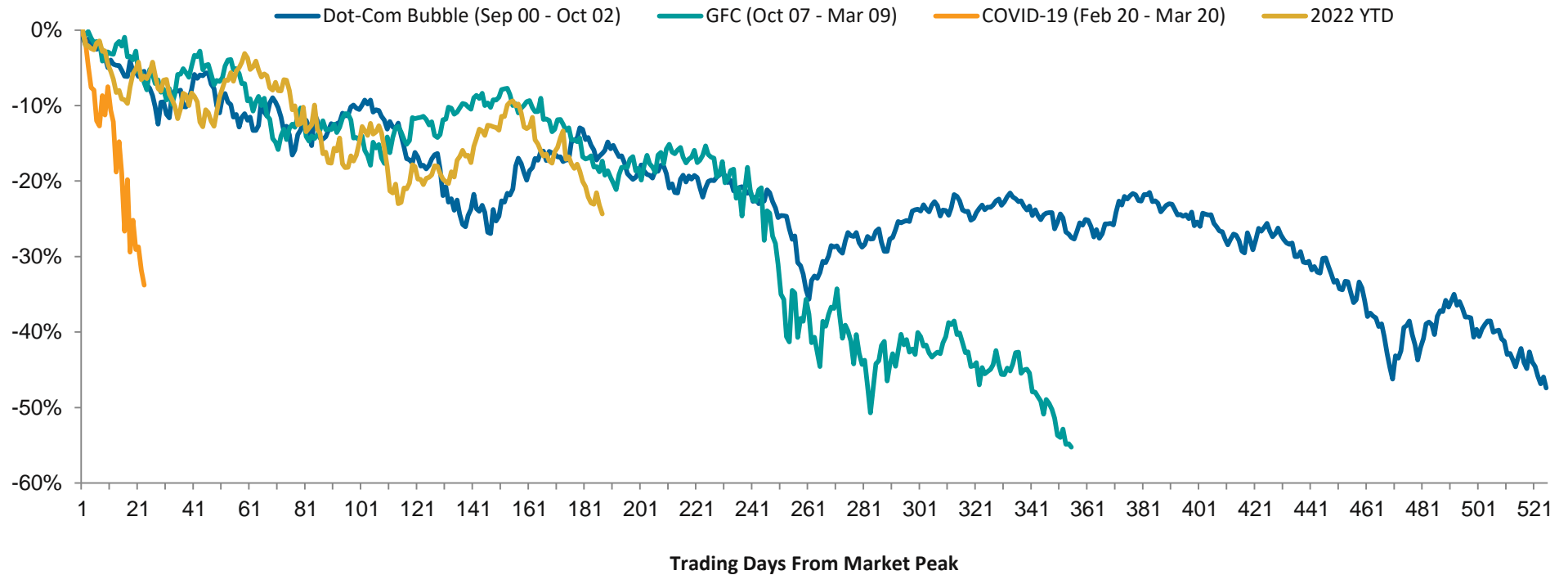
Primary Category	Primary Category Weight	Year-over-Year Change											
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
All Items	100.0%	6.2%	6.8%	7.0%	7.5%	7.9%	8.5%	8.3%	8.6%	9.1%	8.5%	8.3%	8.2%
Food & Bev	14.3%	5.1%	5.8%	6.0%	6.7%	7.6%	8.5%	9.0%	9.7%	10.0%	10.5%	10.9%	10.8%
Housing	42.4%	4.5%	4.8%	5.1%	5.7%	5.9%	6.4%	6.5%	6.9%	7.3%	7.4%	7.8%	8.0%
Apparel	2.5%	4.3%	5.0%	5.8%	5.3%	6.6%	6.8%	5.4%	5.0%	5.2%	5.1%	5.1%	5.5%
Transportation	18.2%	18.7%	21.1%	21.1%	20.8%	21.1%	22.6%	19.9%	19.4%	19.7%	16.4%	13.4%	12.6%
Medical Care	8.5%	1.3%	1.7%	2.2%	2.5%	2.4%	2.9%	3.2%	3.7%	4.5%	4.8%	5.4%	6.0%
Recreation	5.1%	3.9%	3.2%	3.3%	4.7%	5.0%	4.8%	4.3%	4.5%	4.6%	4.4%	4.1%	4.1%
Education & Communication	6.4%	1.8%	1.7%	1.6%	1.6%	1.6%	1.5%	1.0%	0.8%	0.8%	0.5%	0.5%	0.2%
Other Goods & Svcs	2.7%	4.2%	4.4%	4.5%	4.9%	5.6%	5.5%	5.7%	6.3%	6.7%	6.3%	6.6%	6.9%

Source: U.S. Bureau of Labor Statistics

2022 Equity Drawdown: A More 'Typical' Correction?

S&P 500 Cumulative Returns

Market Peak-to-Trough for Recent Corrections vs. 2022 YTD Through 09/30/22

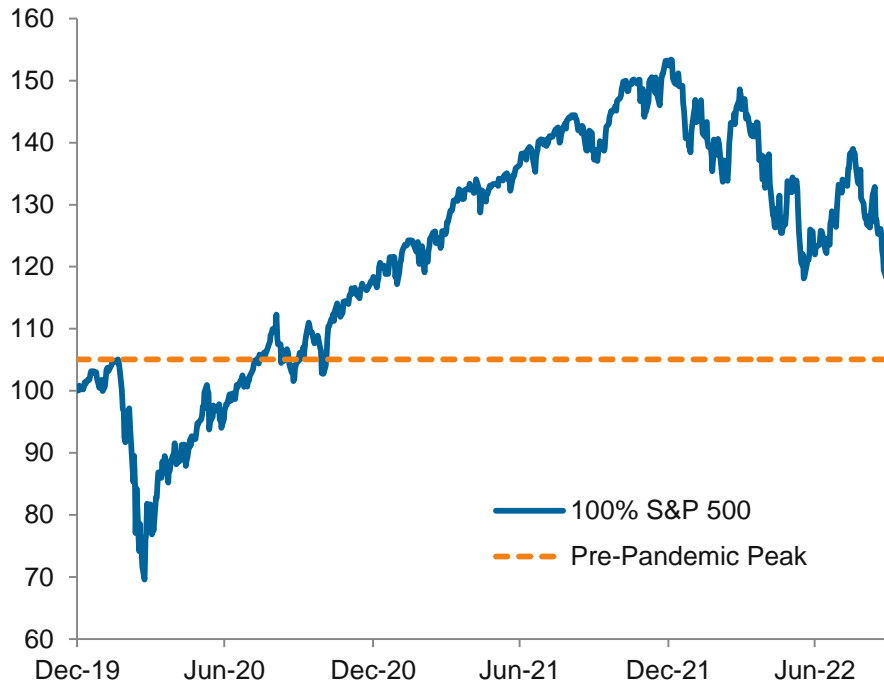


- While the COVID correction was swift and intense, so far the 2022 correction resembles the GFC and Dot-Com Bubble.
- The 2022 drawdown has been 187 trading days through September.
- It would take another 168 trading days to get to the bottom of the GFC and 338 trading days to get to the bottom of the Tech Bubble.

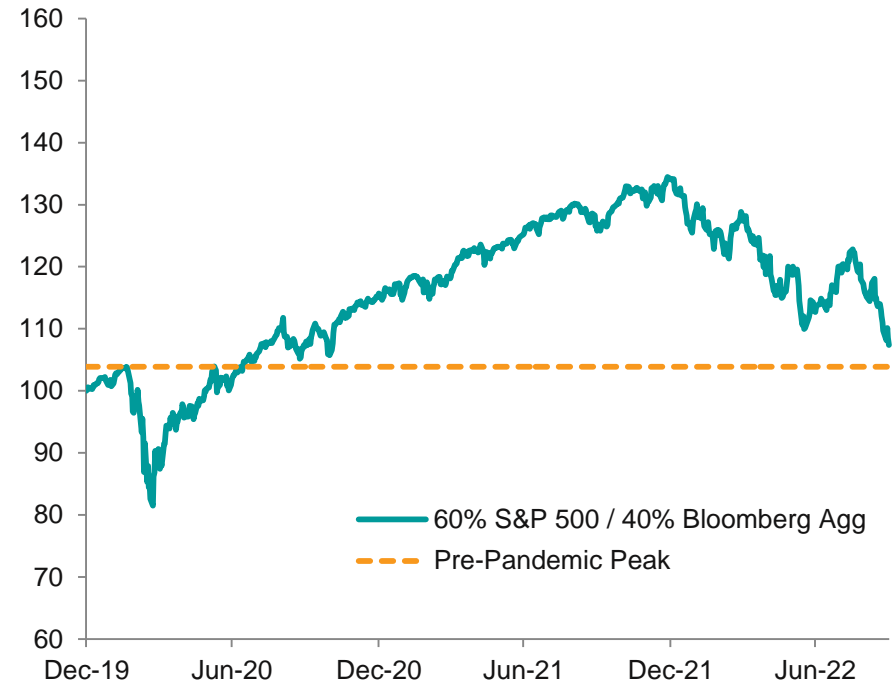
Sources: Callan, S&P Dow Jones Indices

Post-Pandemic Market Performance

Growth of \$100 Invested on 12/31/19



Growth of \$100 Invested on 12/31/19



	Investment in S&P 500	Investment in 60% S&P 500 / 40% Bloomberg Agg
Gain from pre-pandemic peak to post-pandemic peak	45.9%	29.4%
Gain over pre-pandemic peak as of 9/30/22	10.4%	3.4%
Loss from post-pandemic peak as of 9/30/22	-24.3%	-20.1%
Further loss needed to return to pre-pandemic peak	-9.4%	-3.3%
Total loss if markets decline from post-pandemic peak to pre-pandemic peak	-31.5%	-22.7%

Sources: Bloomberg, S&P Dow Jones Indices

Callan Periodic Table of Investment Returns

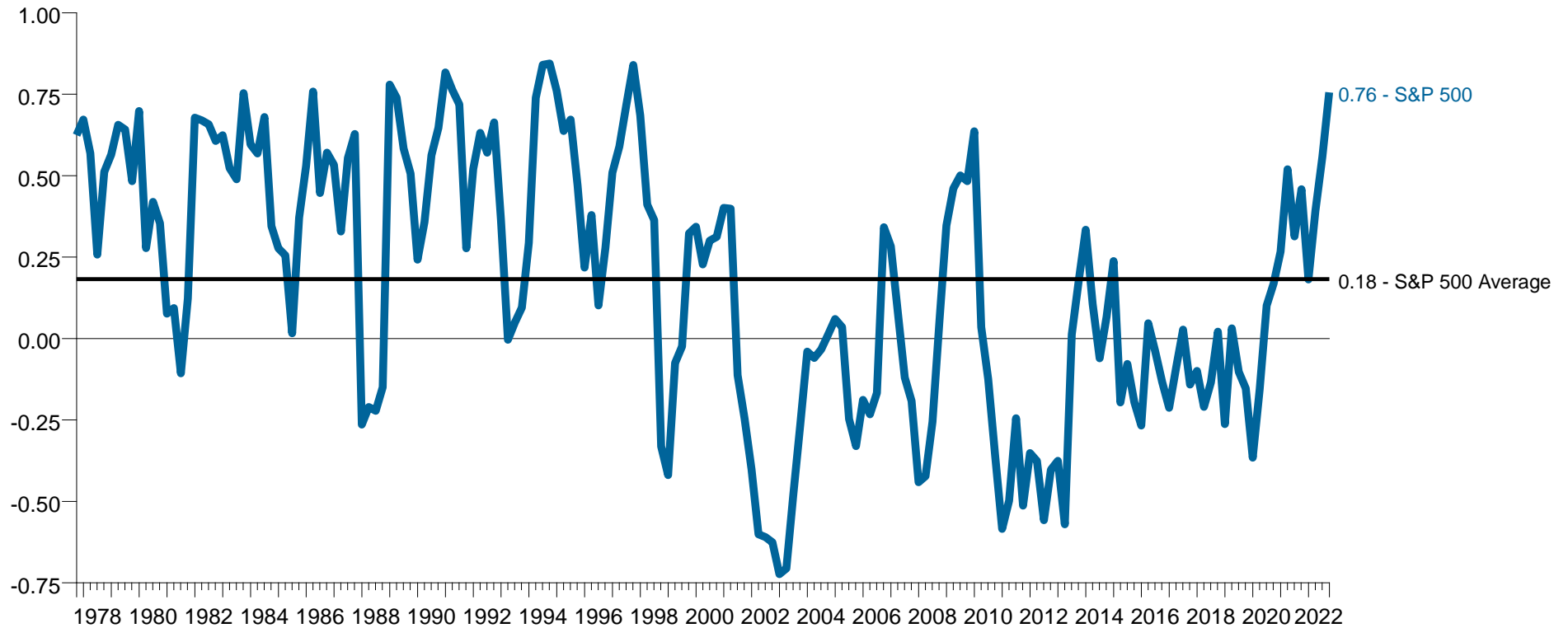
Cumulative Returns Ending September 30, 2022						Monthly Returns		
Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Jul 2022	Aug 2022	Sep 2022
Real Estate 0.31%	Real Estate 20.96%	Real Estate 11.38%	Real Estate 9.26%	Large Cap Equity 11.40%	Large Cap Equity 11.70%	US Small-Mid 10.35%	Emerging Market Equity 0.42%	Real Estate 0.10%
High Yield -0.65%	High Yield -14.14%	Large Cap Equity 8.16%	Large Cap Equity 9.24%	Real Estate 8.87%	Real Estate 9.91%	Large Cap Equity 9.22%	Real Estate 0.10%	High Yield -3.97%
US Small-Mid -2.82%	U.S. Fixed Income -14.60%	US Small-Mid 5.36%	US Small-Mid 5.45%	US Small-Mid 8.39%	US Small-Mid 9.58%	High Yield 5.90%	High Yield -2.30%	U.S. Fixed Income -4.32%
U.S. Fixed Income -4.75%	Large Cap Equity -15.47%	High Yield -0.45%	High Yield 1.57%	High Yield 4.13%	High Yield 3.94%	Dev ex-U.S. Equity 4.97%	US Small-Mid -2.66%	Large Cap Equity -9.21%
Large Cap Equity -4.88%	US Small-Mid -21.11%	Dev ex-U.S. Equity -1.21%	U.S. Fixed Income -0.27%	Emerging Market Equity 3.88%	Dev ex-U.S. Equity 3.62%	U.S. Fixed Income 2.44%	U.S. Fixed Income -2.83%	Dev ex-U.S. Equity -9.26%
Dev ex-U.S. Equity -9.20%	Dev ex-U.S. Equity -23.91%	Emerging Market Equity -2.07%	Dev ex-U.S. Equity -0.39%	Dev ex-U.S. Equity 3.21%	Emerging Market Equity 1.05%	Real Estate 0.10%	Large Cap Equity -4.08%	US Small-Mid -9.53%
Emerging Market Equity -11.57%	Emerging Market Equity -28.11%	U.S. Fixed Income -3.26%	Emerging Market Equity -1.80%	U.S. Fixed Income 0.54%	U.S. Fixed Income 0.89%	Emerging Market Equity -0.25%	Dev ex-U.S. Equity -4.67%	Emerging Market Equity -11.72%

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

Did Diversification Fail in 2022?

Stocks and bonds down together in each of the first three quarters of 2022

Rolling 1 Year Correlation of S&P 500 to Bloomberg Aggregate for 45 Years Ended September 30, 2022



Are we seeing a return to a regime of higher correlation between stocks and bonds, potentially lessening the diversification benefit of bonds to stocks?

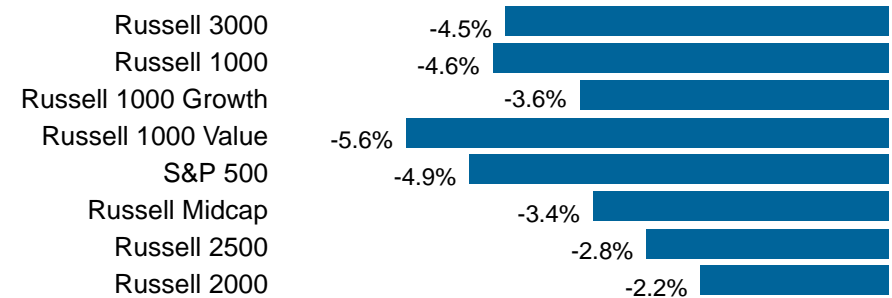
Sources: Bloomberg, Callan, S&P Dow Jones Indices

U.S. Equity Performance: 3Q22

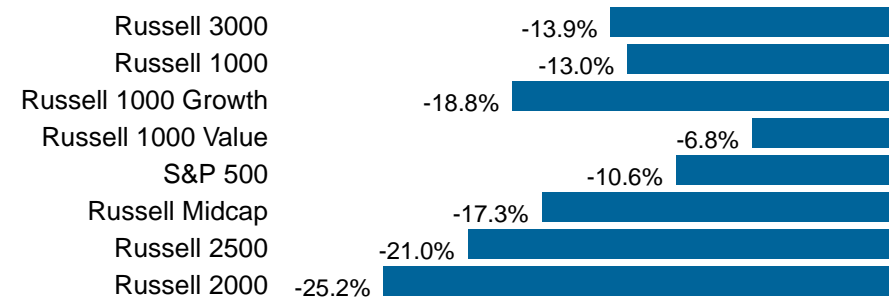
Challenging market conditions persist

- The S&P 500 Index dropped by 5% in 3Q22; all major U.S. indices across styles and market cap ranges were negative in the quarter, except for the Russell 2000 Growth Index, which was up 0.24%.
- During the quarter, all sectors posted negative returns, except for Energy (+2%) and Consumer Discretionary (+4%). The quarterly return for Consumer Discretionary was aided by an exceptional July in which it was up over 18%. Returns posted by Real Estate and Communication Services were the worst, -11% and -13%, respectively.
- Small cap (Russell 2000) outpaced large cap (Russell 1000) and growth outperformed value during the quarter, a reversal of what we've seen in previous quarters this year.
- Continued concerns around inflation and a potential recession, along with geopolitical headlines, contributed to a volatile and risk-averse environment.

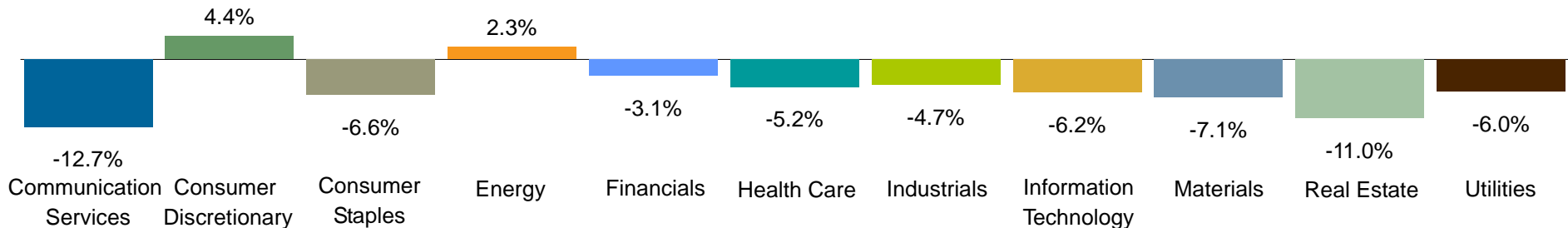
U.S. Equity: Quarterly Returns



U.S. Equity: One-Year Returns



Industry Sector Quarterly Performance (S&P 500)



Sources: FTSE Russell, S&P Dow Jones Indices

U.S. Equity Market: Valuation Metrics



Current P/E vs. 20-year avg. P/E			
	Value	Blend	Growth
Large	12.1 / 13.7	15.1 / 15.5	20.4 / 18.6
	11.8 / 14.4	13.8 / 16.3	19.7 / 20.3
Mid	13.2 / 16.9	16.8 / 21.3	22.8 / 34.1
Small			

Current P/E as % of 20-year avg. PE			
	Value	Blend	Growth
Large	88.5%	97.9%	109.8%
	82.1%	84.6%	97.2%
Mid	78.2%	78.7%	66.7%
Small			

Sources: FactSet, FRB, Robert Shiller, S&P Dow Jones Indices, Thomson Reuters, J.P. Morgan Asset Management
 Guide to the Markets – U.S. Data are as of September 30, 2022.

Global/Global ex-U.S. Equity Performance: 3Q22

Global market turmoil

- Global and global ex-U.S. equity markets waned for three consecutive quarters due to inflation, rising rates, and fears of a global recession.

Geopolitical and macro factors plague the market

- Political instability in Italy and the U.K. as a result of prime minister departures weighed on the market.
- China’s COVID-19 lockdowns and growing concerns around the property sector sapped sentiment and economic activity.

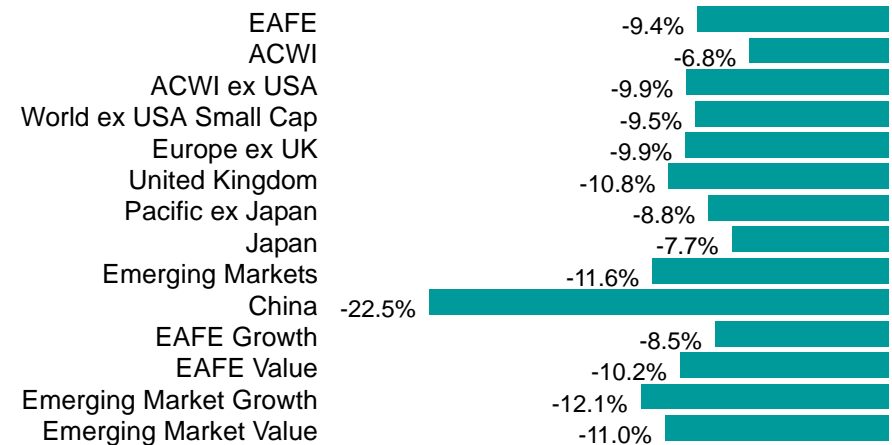
Growth vs. value

- Growth outpaced value in developed markets but lagged value in emerging markets.
 - *Rate-sensitive sectors in developed markets (e.g., Communication Services and Real Estate) were challenged given the tightening cycle by global central banks.*

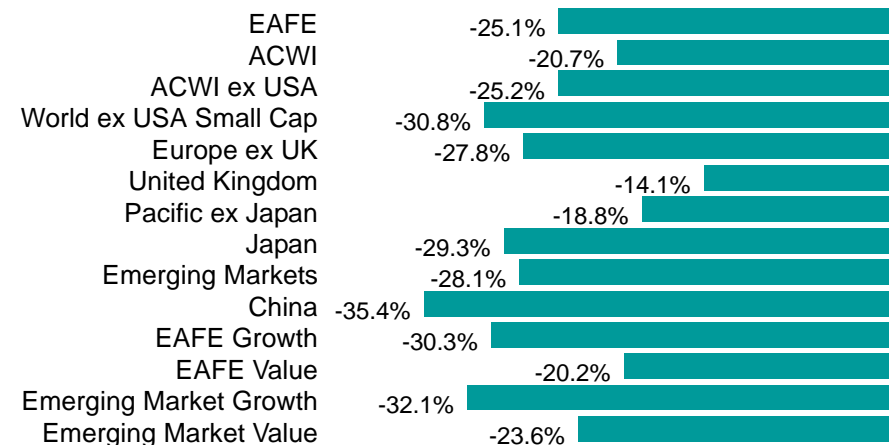
U.S. dollar vs. other currencies

- Growth and interest rate differentials as well as its safe haven status have fueled the U.S. dollar to a multi-decade high.
 - *The dollar gained vs. the euro and the yen by about 6%.*

Global Equity: Quarterly Returns



Global Equity: One-Year Returns

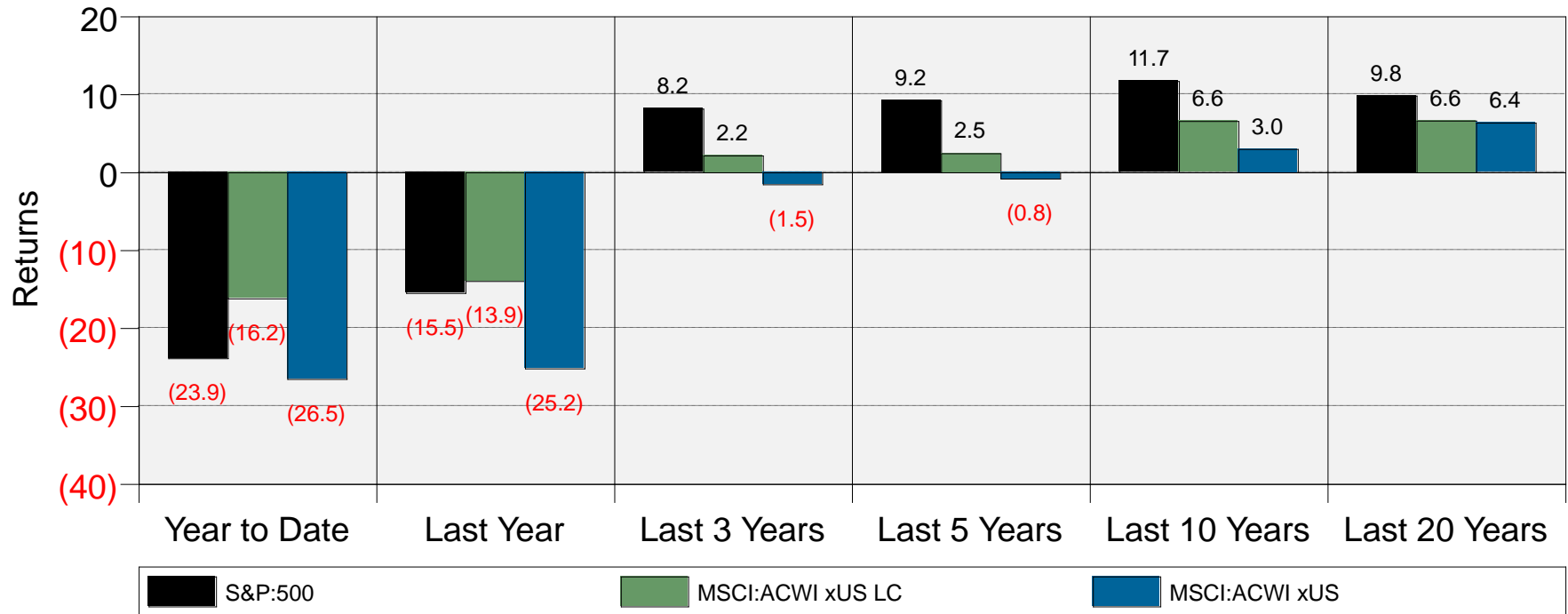


Source: MSCI

Global Equity Performance

Currency impact

Returns
for Various Periods
Current Quarter Ending September 30, 2022



- Dollar strength has historically dragged on global ex-U.S. equity performance.
- Over the last year, the currency impact has been the main driver behind the underperformance vs. U.S. equities.

U.S. Fixed Income Performance: 3Q22

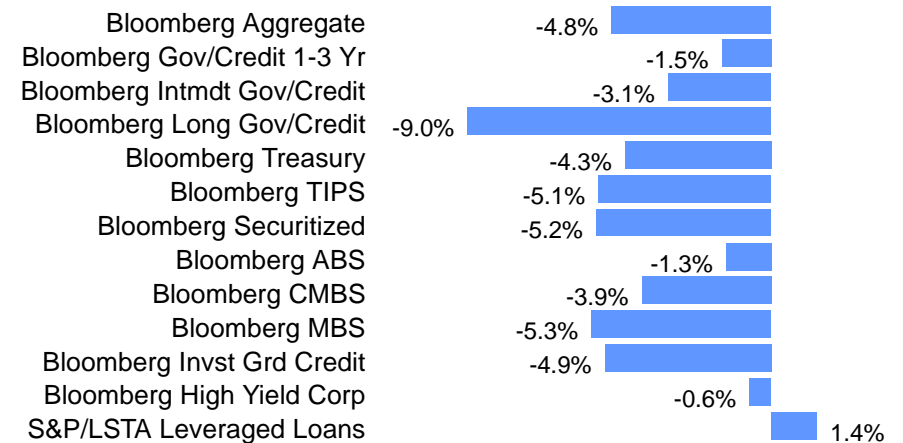
Bonds hit hard as rates rose sharply (again)

- Bloomberg US Aggregate worst nine-month return in its history
 - *As are trailing 1, 3, 5 and 10-year returns!*
 - *10-year return for Aggregate a mere 0.9%*
- Yield curve inverted at quarter-end; 2-year at 4.22%, 10-year at 3.83%.
- Fed raised rates by 150 bps during the quarter, bringing target to 3.0% to 3.25%.
 - *Median expectation from Fed is 4.4% at year-end and 4.6% at the end of 2023.*
 - *Longer-term expectations are much lower.*
- Volatility climbed to levels not seen since early 2020.

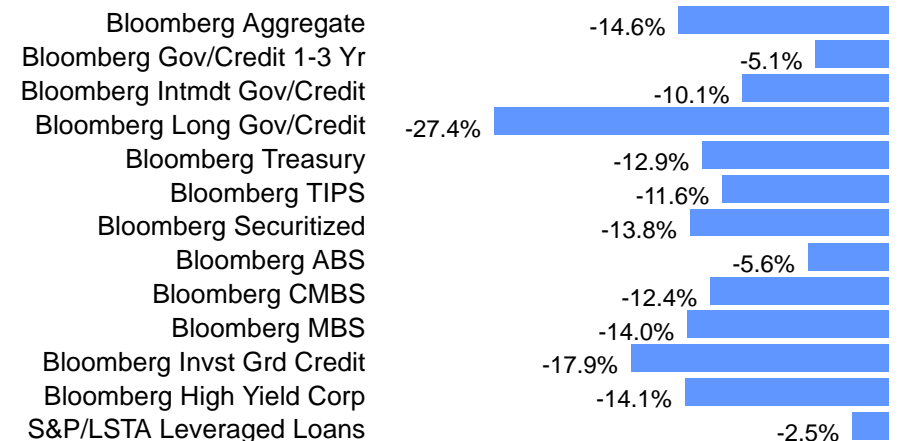
Spread sectors underperformed

- Mortgages had worst month ever vs. like-duration U.S. Treasuries in September; underperformed by 169 bps for 3Q
- Corporates also produced negative returns; the Bloomberg Corp yield-to-worst reached 5.7%.
- High yield fared better and loans gained.

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 Performance: 3Q22

Appreciation returns turn negative, as sector returns are mixed

Income rose, but appreciation declined

- Income returns were positive across sectors.
- Valuations are reflective of strong fundamentals in Industrial and Apartment and continued uncertainty in Office and Retail.
- Return dispersion by manager within the ODCE Index was due to the composition of underlying portfolios, and increased borrowing costs are impacting values.
- 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	0.3%	21.0%	11.4%	9.3%	9.9%
Income	0.6%	2.7%	3.0%	3.1%	3.5%
Appreciation	-0.3%	17.9%	8.2%	6.0%	6.3%
NCREIF Property Index	0.6%	16.1%	9.9%	8.6%	9.5%
Income	0.9%	4.0%	4.2%	4.3%	4.7%
Appreciation	-0.4%	11.8%	5.6%	4.2%	4.6%

Returns are geometrically linked

NCREIF Property Index Quarterly Returns by Region and Property Type



Source: NCREIF, ODCE return is net

Callan

NDSIB Total Performance Summary

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 September 30, 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 September 30, 2022.
- 3. Are the Plans' investment results meeting strategic objectives?**
 - Total Fund returns for PERS, 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 September 30, 2022. TFFR underperformed its target.
- 4. Are the fees paid to managers reasonable given the competitive landscape and given the value delivered?**
 - In most cases, 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.

NDSIB Consolidated Gross Performance Summary

As of September 30, 2022

	Last Quarter	Last Year	Last 5 Years
Consolidated Pension Trust	-3.60%	-10.01%	5.80%
<i>Consolidated Pension Trust Target</i>	-3.49%	-10.70%	5.44%
Relative Performance vs. Target	-0.11%	0.69%	0.36%
PERS Total Fund	-3.72%	-10.23%	5.80%
<i>NDSIB PERS Total Fund Target</i>	-3.65%	-11.11%	5.31%
Relative Performance vs. Target	-0.07%	0.88%	0.49%
TFFR Total Fund	-3.42%	-9.70%	5.85%
<i>NDSIB TFFR Total Fund Target</i>	-3.28%	-10.15%	5.64%
Relative Performance vs. Target	-0.14%	0.45%	0.21%
WSI Total Fund	-4.36%	-13.07%	2.66%
<i>NDSIB WSI Total Fund Target</i>	-4.40%	-13.05%	2.04%
Relative Performance vs. Target	0.04%	-0.02%	0.62%
Legacy - Total Fund	-4.69%	-14.27%	3.80%
<i>NDSIB Legacy - Total Fund Target</i>	-4.81%	-14.88%	3.30%
Relative Performance vs. Target	0.12%	0.61%	0.50%
Budget - Total Fund	-0.88%	-6.47%	0.90%
<i>NDSIB Budget - Total Fund Target</i>	-1.46%	-5.01%	0.71%
Relative Performance vs. Target	0.58%	-1.46%	0.19%

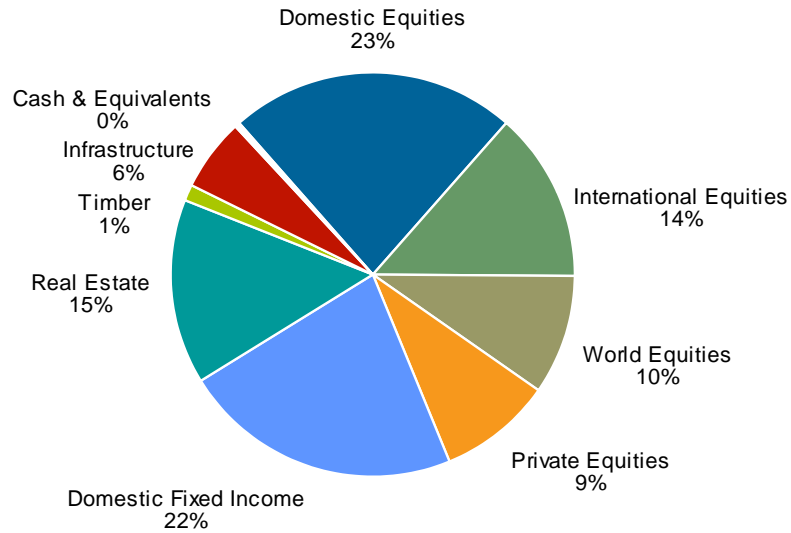
Consolidated Pension Trusts Quarterly Review

- Public Employees Retirement System
- Teachers' Fund for Retirement

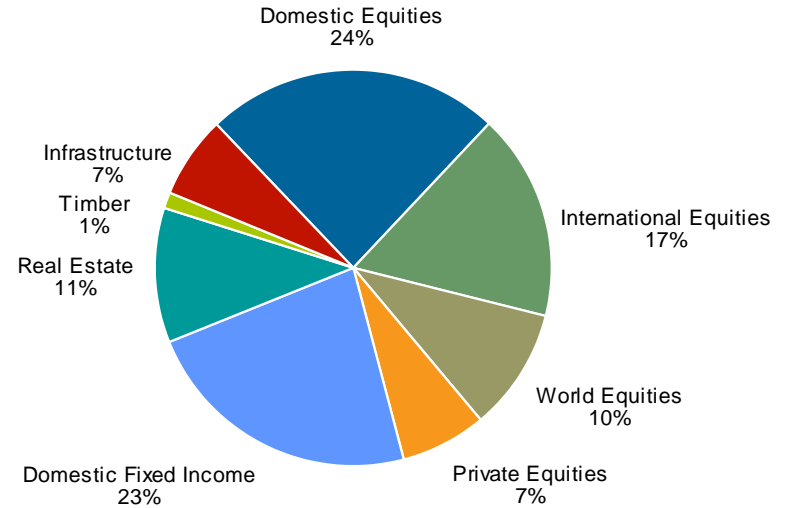
PERS Allocation

As of September 30, 2022

Actual Asset Allocation



Target Asset Allocation

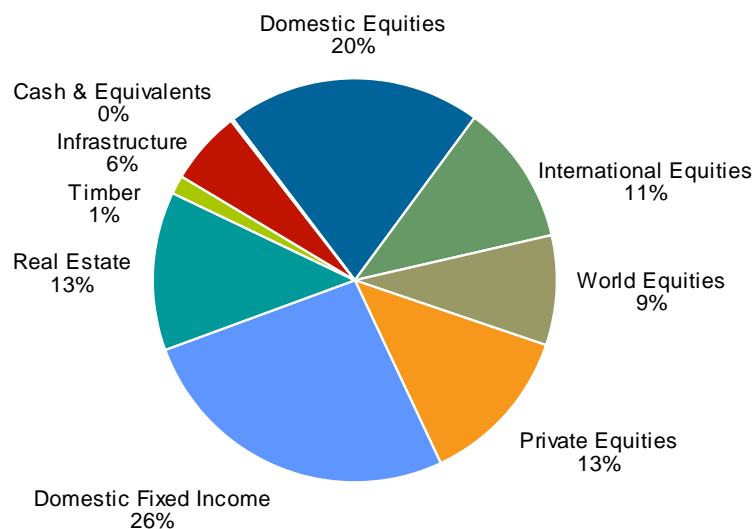


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	812,840	23.0%	24.1%	(1.2%)	(40,798)
International Equities	482,061	13.6%	16.9%	(3.3%)	(115,481)
World Equities	339,005	9.6%	10.0%	(0.4%)	(14,943)
Private Equities	320,844	9.1%	7.0%	2.1%	73,080
Domestic Fixed Income	793,766	22.4%	23.0%	(0.6%)	(20,315)
Real Estate	523,746	14.8%	11.0%	3.8%	134,403
Timber	47,665	1.3%	1.3%	0.0%	0
Infrastructure	204,702	5.8%	6.7%	(0.9%)	(30,792)
Cash & Equivalents	14,854	0.4%	0.0%	0.4%	14,854
Total	3,539,482	100.0%	100.0%		

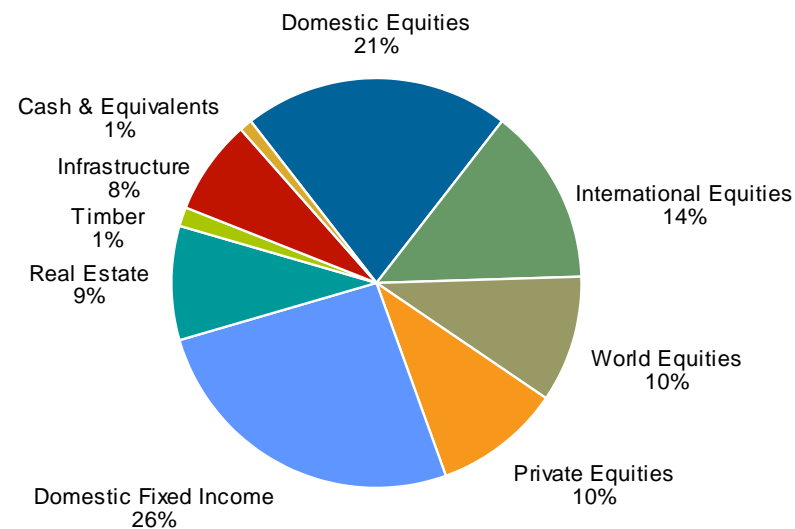
TFFR Allocation

As of September 30, 2022

Actual Asset Allocation



Target Asset Allocation

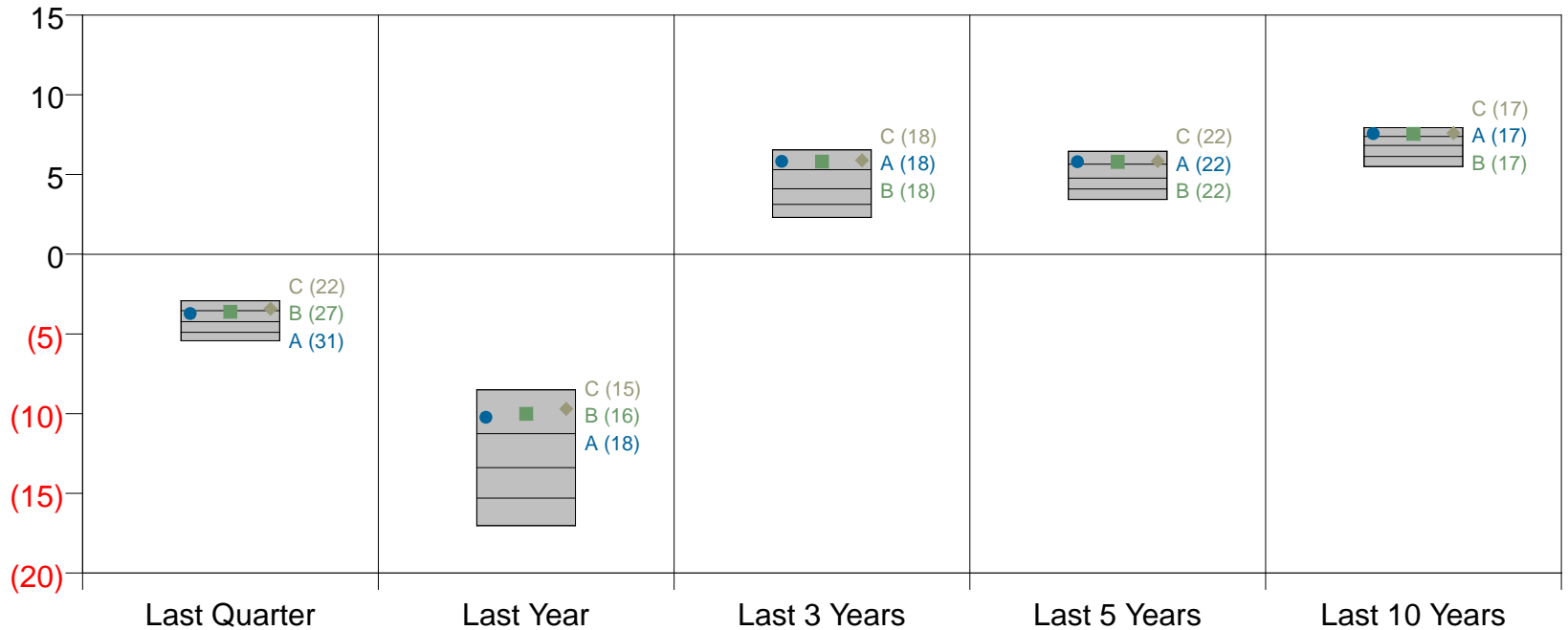


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	580,807	20.4%	21.0%	(0.6%)	(16,322)
International Equities	320,344	11.3%	14.0%	(2.7%)	(77,742)
World Equities	251,643	8.8%	10.0%	(1.2%)	(32,704)
Private Equities	363,965	12.8%	10.0%	2.8%	79,618
Domestic Fixed Income	750,116	26.4%	26.0%	0.4%	10,813
Real Estate	360,064	12.7%	9.0%	3.7%	104,151
Timber	42,547	1.5%	1.5%	(0.0%)	(0)
Infrastructure	167,742	5.9%	7.5%	(1.6%)	(45,623)
Cash & Equivalents	6,244	0.2%	1.0%	(0.8%)	(22,190)
Total	2,843,471	100.0%	100.0%		

Consolidated Pension Trust, PERS, and TFFR Performance Rankings

Returns for Periods Ended September 30, 2022

Group: Callan Public Fund Sponsor Database



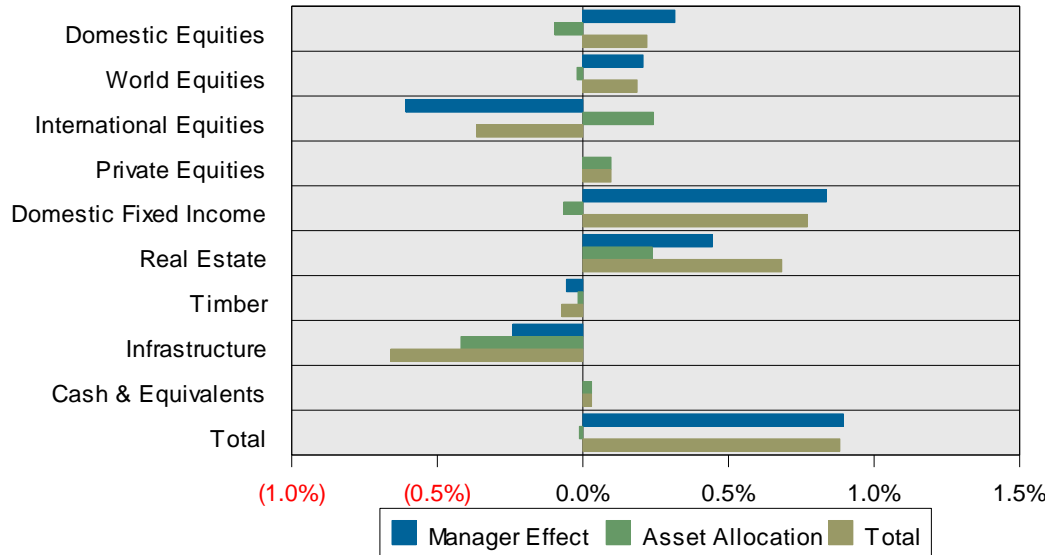
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	(2.91)	(8.50)	6.55	6.46	7.95
25th Percentile	(3.54)	(11.25)	5.31	5.66	7.39
Median	(4.23)	(13.39)	4.11	4.78	6.83
75th Percentile	(4.89)	(15.29)	3.13	4.10	6.13
90th Percentile	(5.43)	(17.03)	2.32	3.44	5.50

NDPERS-Total Fund	● A	(3.72)	(10.23)	5.83	5.80	7.57
NDPEN-Total Fund	■ B	(3.60)	(10.01)	5.81	5.80	7.56
NDTFFR-Total Fund	◆ C	(3.42)	(9.70)	5.90	5.85	7.60

PERS Performance and Attribution

As of September 30, 2022

One Year Relative Attribution Effects



Returns for 1 Year Ended 09/30/2022

Return Type	Return (%)
Gross	-10.23%
Net of fees	-10.45%
Target	-11.11%
Net added	0.66%

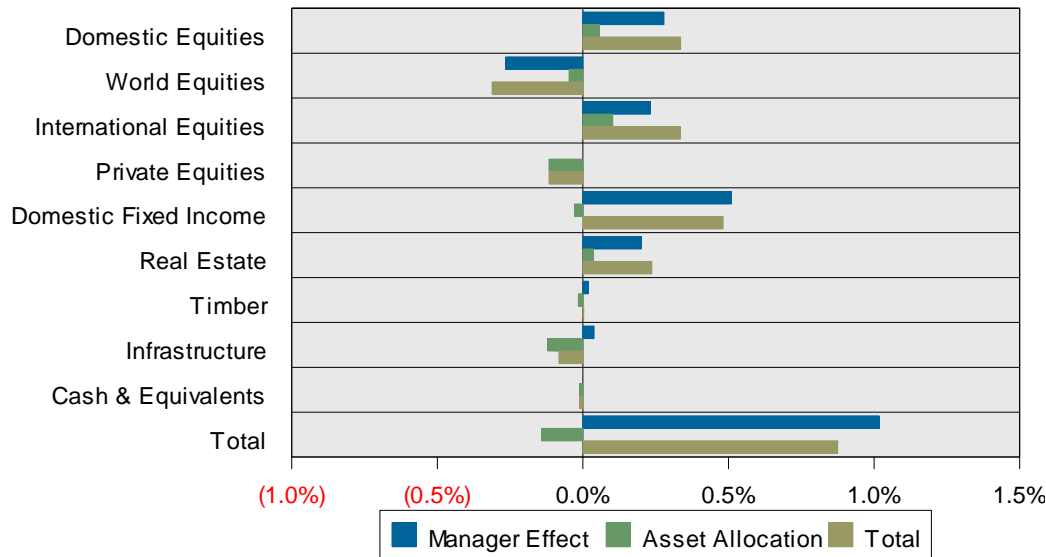
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	25%	24%	(17.31%)	(18.47%)	0.32%	(0.10%)	0.22%
World Equities	10%	10%	(17.62%)	(19.63%)	0.21%	(0.02%)	0.19%
International Equities	15%	17%	(28.19%)	(24.91%)	(0.61%)	0.24%	(0.36%)
Private Equities	8%	7%	7.86%	7.86%	0.00%	0.10%	0.10%
Domestic Fixed Income	24%	23%	(10.95%)	(14.42%)	0.84%	(0.07%)	0.77%
Real Estate	12%	11%	21.33%	16.08%	0.45%	0.24%	0.68%
Timber	1%	1%	7.37%	12.54%	(0.06%)	(0.02%)	(0.07%)
Infrastructure	5%	7%	8.76%	15.24%	(0.24%)	(0.42%)	(0.66%)
Cash & Equivalents	0%	0%	0.76%	0.76%	0.00%	0.03%	0.03%
Total			(10.23%)	(11.11%)	+ 0.90%	+ (0.01%)	0.88%

PERS Performance and Attribution

As of September 30, 2022

Three Year Annualized Relative Attribution Effects



Returns for 3 Years Ended 09/30/2022

Return Type	Return (%)
Gross	5.83%
Net of fees	5.56%
Target	4.96%
Net added	0.60%

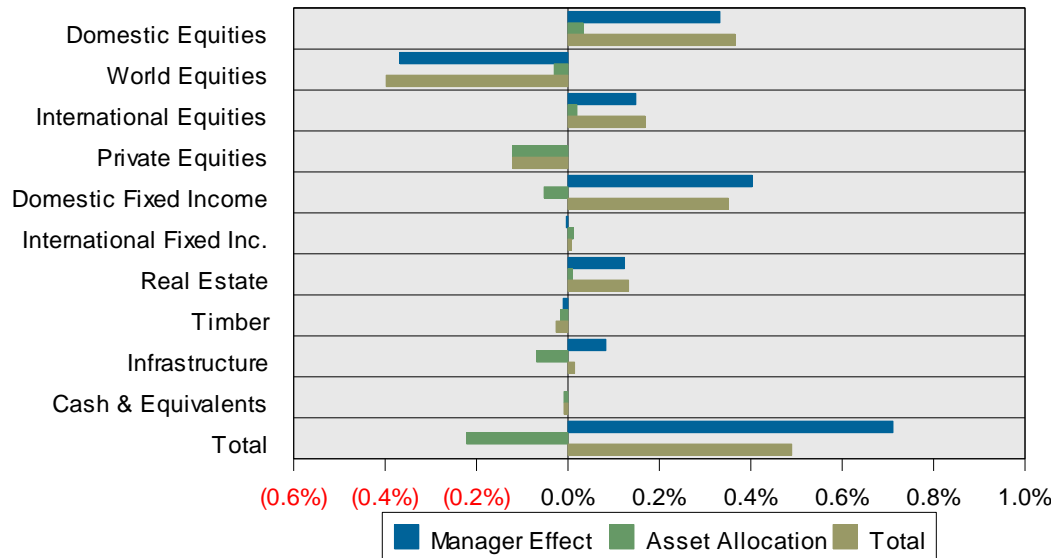
Three Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	24%	23%	8.55%	7.26%	0.28%	0.06%	0.34%
World Equities	13%	12%	3.06%	4.56%	(0.26%)	(0.05%)	(0.31%)
International Equities	16%	16%	0.11%	(1.35%)	0.23%	0.10%	0.33%
Private Equities	6%	7%	20.38%	20.38%	0.00%	(0.12%)	(0.12%)
Domestic Fixed Income	24%	23%	(0.32%)	(2.33%)	0.51%	(0.03%)	0.48%
Real Estate	11%	11%	11.75%	9.91%	0.20%	0.04%	0.24%
Timber	2%	2%	6.17%	5.80%	0.02%	(0.02%)	0.00%
Infrastructure	5%	6%	9.11%	8.51%	0.04%	(0.12%)	(0.08%)
Cash & Equivalents	0%	0%	0.60%	0.60%	0.00%	(0.01%)	(0.01%)
Total			5.83%	4.96%	+ 1.02%	+ (0.14%)	0.88%

PERS Performance and Attribution

As of September 30, 2022

Five Year Annualized Relative Attribution Effects



Returns for 5 Years Ended 09/30/2022

Return Type	Return (%)
Gross	5.80%
Net of fees	5.55%
Target	5.31%
Net added	0.24%

Five Year Annualized Relative Attribution Effects

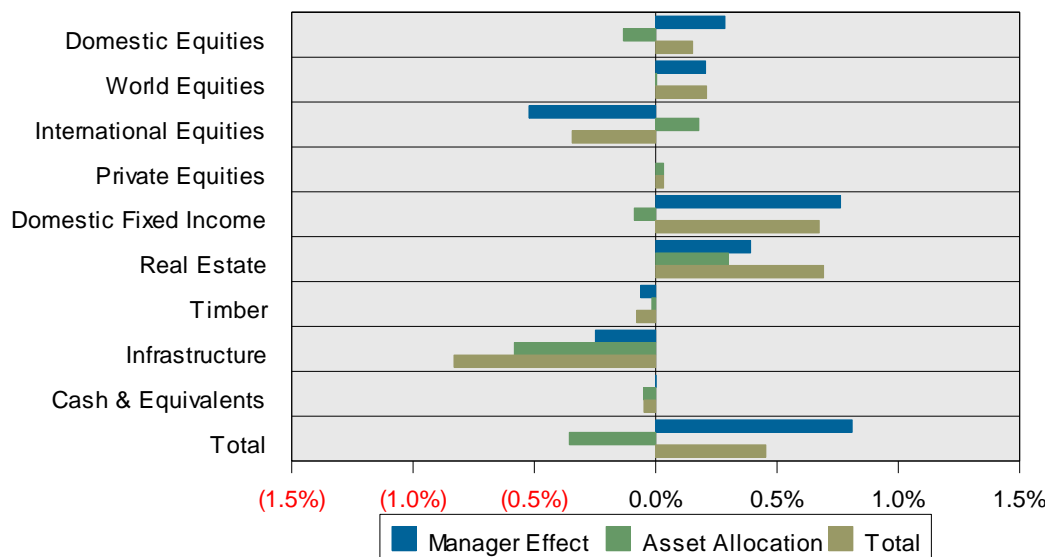
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	22%	9.35%	7.84%	0.33%	0.03%	0.37%
World Equities	14%	14%	3.14%	5.30%	(0.37%)	(0.03%)	(0.40%)
International Equities	16%	15%	0.23%	(0.67%)	0.15%	0.02%	0.17%
Private Equities	5%	7%	15.29%	15.29%	0.00%	(0.12%)	(0.12%)
Domestic Fixed Income	23%	23%	2.01%	0.34%	0.40%	(0.05%)	0.35%
International Fixed Inc.	0%	0%	-	-	(0.00%)	0.01%	0.01%
Real Estate	11%	11%	9.75%	8.62%	0.12%	0.01%	0.13%
Timber	2%	2%	3.96%	4.69%	(0.01%)	(0.02%)	(0.03%)
Infrastructure	5%	6%	8.20%	6.49%	0.08%	(0.07%)	0.01%
Cash & Equivalents	1%	0%	1.17%	1.17%	0.00%	(0.01%)	(0.01%)

Total	5.80% = 5.31% + 0.71% + (0.22%)	0.49%
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TFFR Performance and Attribution

As of September 30, 2022

One Year Relative Attribution Effects



Returns for 1 Year Ended 09/30/2022

Return Type	Return (%)
Gross	-9.70%
Net of fees	-9.91%
Target	-10.15%
Net added	0.24%

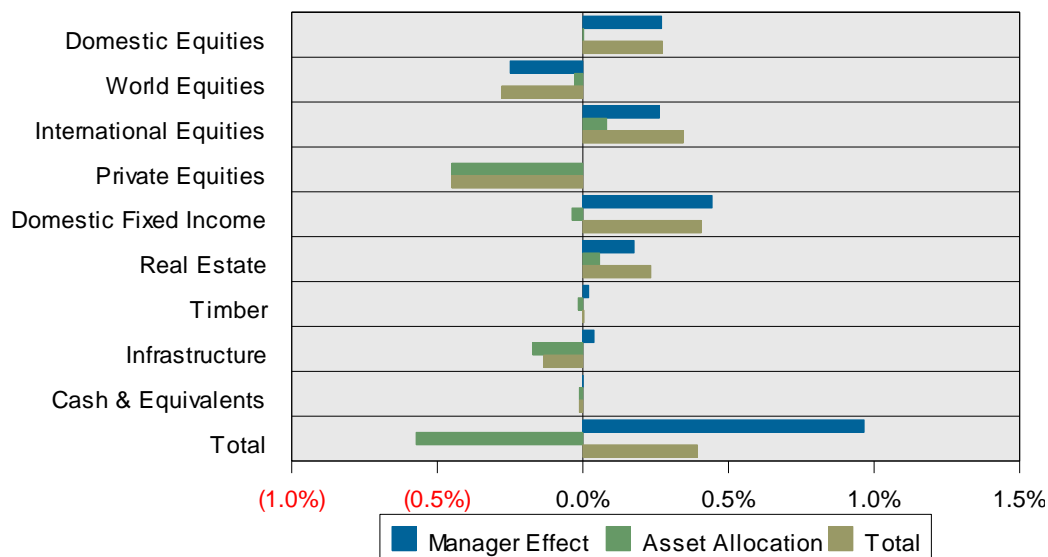
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	22%	21%	(17.33%)	(18.47%)	0.29%	(0.13%)	0.15%
World Equities	10%	10%	(17.62%)	(19.63%)	0.21%	0.00%	0.21%
International Equities	13%	14%	(28.13%)	(24.91%)	(0.52%)	0.18%	(0.34%)
Private Equities	10%	10%	7.86%	7.86%	0.00%	0.03%	0.03%
Domestic Fixed Income	27%	26%	(11.68%)	(14.41%)	0.76%	(0.09%)	0.67%
Real Estate	10%	9%	21.33%	16.08%	0.39%	0.30%	0.69%
Timber	1%	1%	7.37%	12.54%	(0.06%)	(0.02%)	(0.08%)
Infrastructure	5%	8%	8.76%	15.24%	(0.25%)	(0.58%)	(0.83%)
Cash & Equivalents	1%	1%	0.76%	0.62%	0.00%	(0.05%)	(0.05%)
Total			(9.70%)	(10.15%)	+ 0.81%	+ (0.36%)	0.45%

TFFR Performance and Attribution

As of September 30, 2022

Three Year Annualized Relative Attribution Effects



Returns for 3 Years Ended 09/30/2022

Return Type	Return (%)
Gross	5.90%
Net of fees	5.64%
Target	5.50%
Net added	0.14%

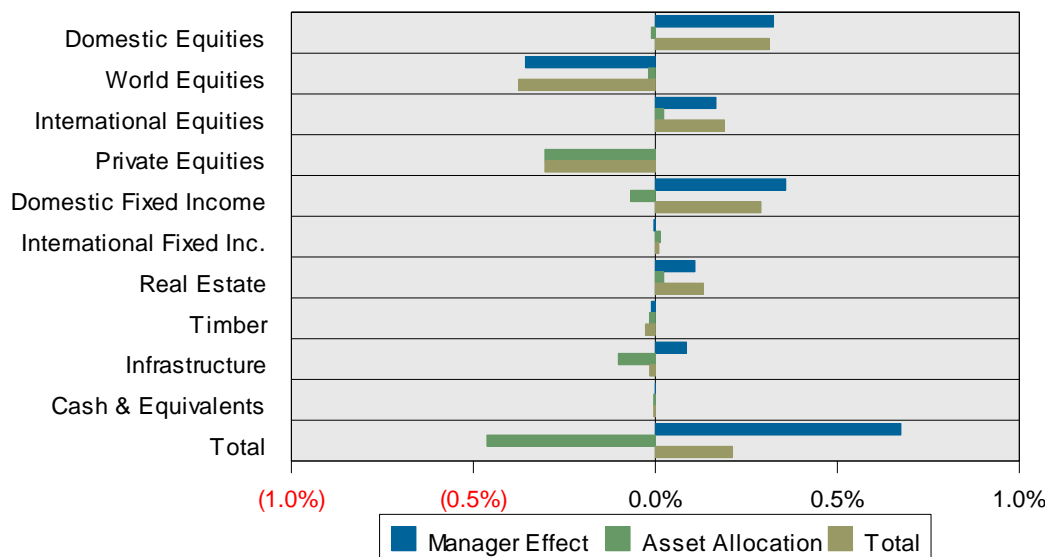
Three Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	22%	21%	8.58%	7.27%	0.27%	0.00%	0.27%
World Equities	13%	12%	3.07%	4.56%	(0.25%)	(0.03%)	(0.28%)
International Equities	15%	14%	0.00%	(1.52%)	0.26%	0.08%	0.34%
Private Equities	7%	8%	20.38%	20.38%	0.00%	(0.45%)	(0.45%)
Domestic Fixed Income	26%	25%	(0.77%)	(2.32%)	0.44%	(0.04%)	0.41%
Real Estate	10%	9%	11.75%	9.91%	0.18%	0.06%	0.23%
Timber	2%	2%	6.17%	5.80%	0.02%	(0.02%)	0.00%
Infrastructure	5%	7%	9.11%	8.51%	0.04%	(0.17%)	(0.13%)
Cash & Equivalents	1%	1%	0.60%	0.59%	(0.00%)	(0.01%)	(0.01%)
Total			5.90%	5.50%	+ 0.97%	+ (0.57%)	0.39%

TFFR Performance and Attribution

As of September 30, 2022

Five Year Annualized Relative Attribution Effects



Returns for 5 Years Ended 09/30/2022

Return Type	Return (%)
Gross	5.85%
Net of fees	5.60%
Target	5.64%
Net added	-0.04%

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%	9.38%	7.87%	0.32%	(0.01%)	0.31%
World Equities	14%	14%	3.14%	5.30%	(0.36%)	(0.02%)	(0.38%)
International Equities	15%	14%	0.20%	(0.74%)	0.17%	0.02%	0.19%
Private Equities	6%	7%	15.29%	15.29%	0.00%	(0.30%)	(0.30%)
Domestic Fixed Income	24%	24%	1.70%	0.33%	0.36%	(0.07%)	0.29%
International Fixed Inc.	0%	0%	-	-	(0.00%)	0.01%	0.01%
Real Estate	10%	10%	9.75%	8.62%	0.11%	0.02%	0.13%
Timber	2%	2%	3.96%	4.69%	(0.01%)	(0.02%)	(0.03%)
Infrastructure	5%	6%	8.20%	6.49%	0.09%	(0.10%)	(0.02%)
Cash & Equivalents	1%	1%	1.17%	1.15%	0.00%	(0.00%)	(0.00%)

Total **5.85% = 5.64% + 0.67% + (0.46%)** **0.21%**

Callan

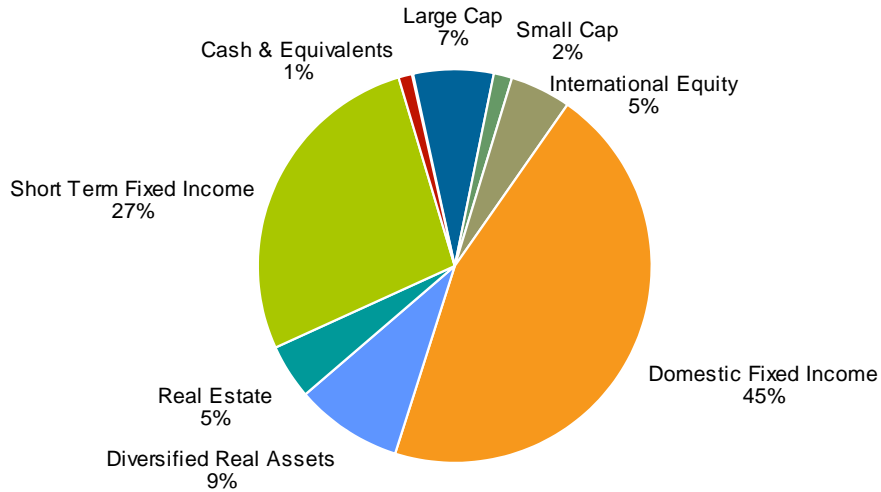
Consolidated Insurance Trust Quarterly Review

- Workforce Safety and Insurance Legacy Fund
- Budget Stabilization Fund

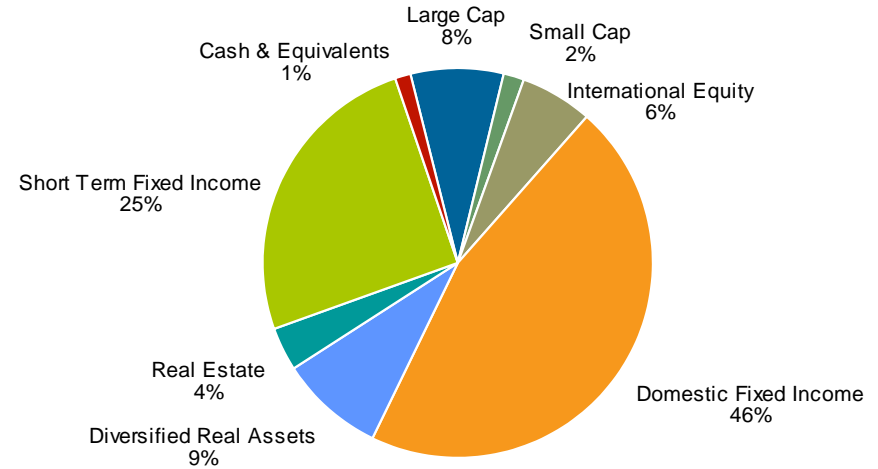
Consolidated Insurance Trust Allocation

As of September 30, 2022

Actual Asset Allocation



Target Asset Allocation

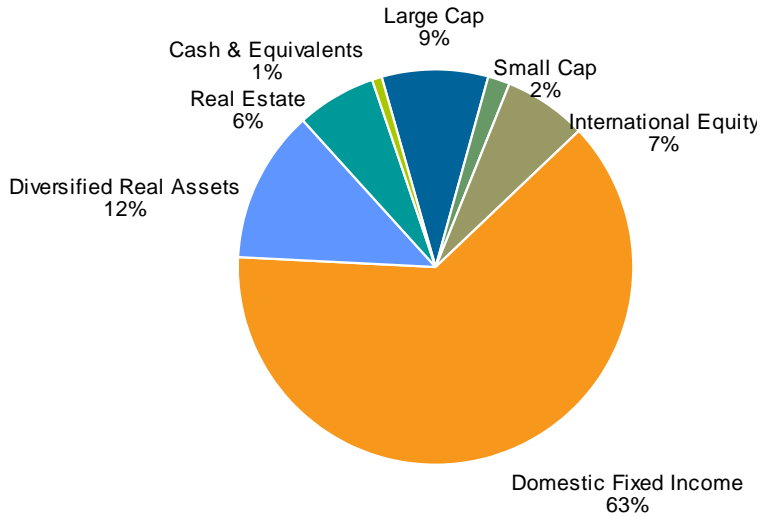


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	185,936	6.6%	7.7%	(1.1%)	(31,648)
Small Cap	42,301	1.5%	1.7%	(0.2%)	(5,145)
International Equity	141,538	5.0%	6.0%	(1.0%)	(28,320)
Domestic Fixed Income	1,270,930	45.2%	45.7%	(0.5%)	(14,215)
Diversified Real Assets	248,192	8.8%	8.7%	0.1%	3,965
Real Estate	127,083	4.5%	3.6%	1.0%	26,791
Short Term Fixed Income	764,812	27.2%	25.3%	1.9%	52,685
Cash & Equivalents	31,627	1.1%	1.3%	(0.1%)	(4,034)
Total	2,812,420	100.0%	100.0%		

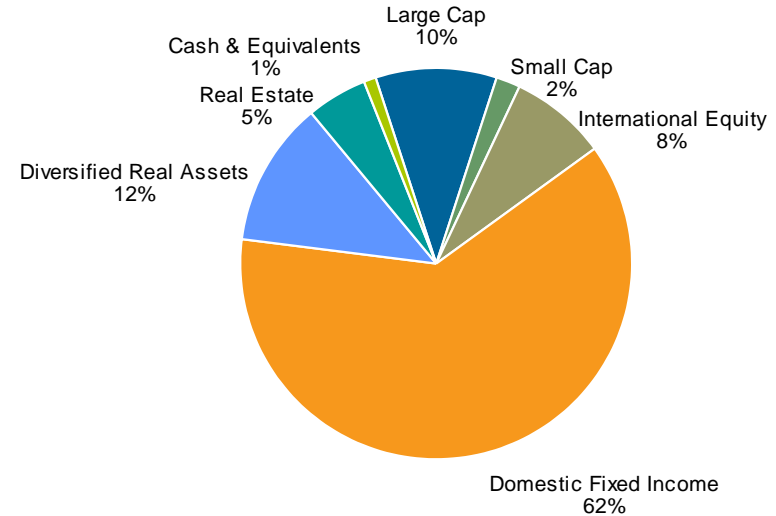
WSI Allocation

As of September 30, 2022

Actual Asset Allocation



Target Asset Allocation

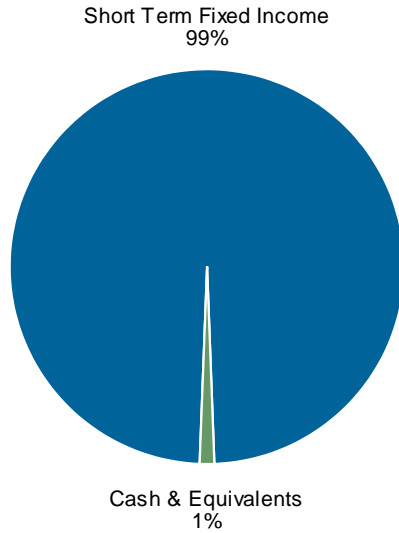


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	169,935	8.7%	10.0%	(1.3%)	(25,590)
Small Cap	35,357	1.8%	2.0%	(0.2%)	(3,748)
International Equity	132,613	6.8%	8.0%	(1.2%)	(23,807)
Domestic Fixed Income	1,230,253	62.9%	62.0%	0.9%	17,998
Diversified Real Assets	244,373	12.5%	12.0%	0.5%	9,743
Real Estate	126,881	6.5%	5.0%	1.5%	29,119
Cash & Equivalents	15,837	0.8%	1.0%	(0.2%)	(3,715)
Total	1,955,249	100.0%	100.0%		

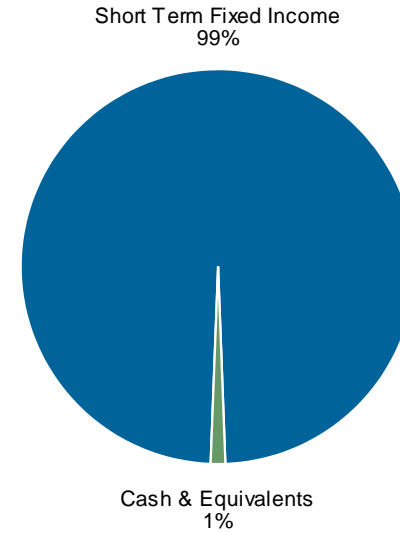
Budget Stabilization Fund Allocation

As of September 30, 2022

Actual Asset Allocation



Target Asset Allocation

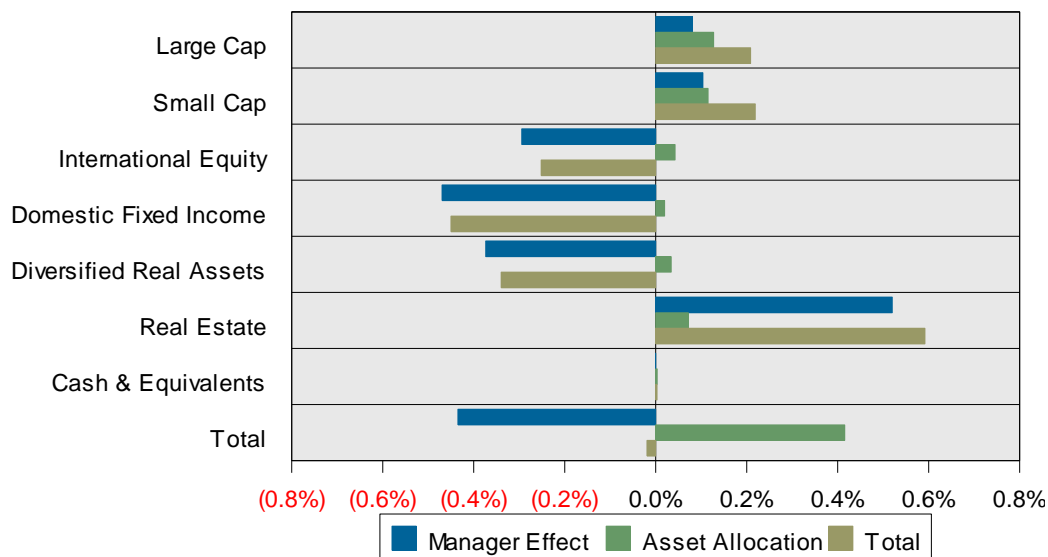


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Short Term Fixed Income	706,259	99.3%	99.2%	0.1%	518
Cash & Equivalents	4,815	0.7%	0.8%	(0.1%)	(518)
Total	711,074	100.0%	100.0%		

WSI Performance and Attribution

As of September 30, 2022

One Year Relative Attribution Effects



Returns for 1 Year Ended 09/30/2022

Return Type	Return (%)
Gross	-13.07%
Net of fees	-13.23%
Target	-13.05%
Net added	-0.18%

One Year Relative Attribution Effects

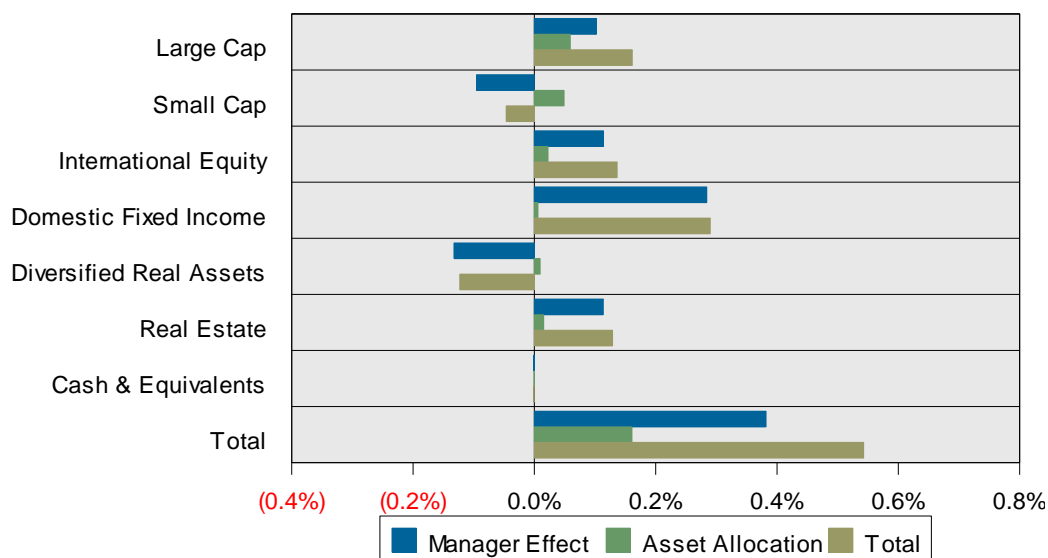
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	10%	11%	(16.41%)	(17.22%)	0.08%	0.13%	0.21%
Small Cap	2%	3%	(18.82%)	(23.50%)	0.10%	0.12%	0.22%
International Equity	8%	8%	(27.18%)	(23.91%)	(0.29%)	0.04%	(0.25%)
Domestic Fixed Income	61%	60%	(15.33%)	(14.60%)	(0.47%)	0.02%	(0.45%)
Diversified Real Assets	12%	12%	(6.83%)	(3.58%)	(0.37%)	0.03%	(0.34%)
Real Estate	5%	5%	29.83%	16.08%	0.52%	0.07%	0.59%
Cash & Equivalents	1%	1%	0.61%	0.62%	(0.00%)	0.00%	0.00%

Total (13.07%) = (13.05%) + (0.43%) + 0.42% (0.02%)

WSI Performance and Attribution

As of September 30, 2022

Three Year Annualized Relative Attribution Effects



Returns for 3 Years Ended 09/30/2022

Return Type	Return (%)
Gross	0.56%
Net of fees	0.37%
Target	0.01%
Net added	0.36%

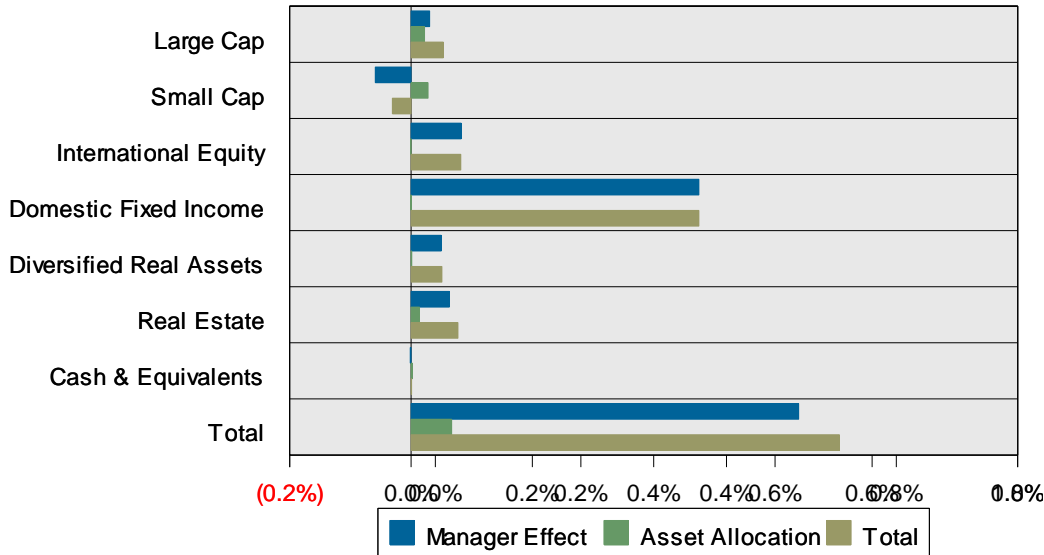
Three Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	11%	11%	8.86%	7.95%	0.10%	0.06%	0.16%
Small Cap	3%	3%	2.20%	4.29%	(0.10%)	0.05%	(0.05%)
International Equity	8%	8%	0.07%	(1.21%)	0.11%	0.02%	0.14%
Domestic Fixed Income	61%	60%	(2.71%)	(3.26%)	0.28%	0.01%	0.29%
Diversified Real Assets	12%	12%	1.70%	2.76%	(0.13%)	0.01%	(0.12%)
Real Estate	5%	5%	11.86%	9.91%	0.11%	0.02%	0.13%
Cash & Equivalents	1%	1%	0.50%	0.59%	(0.00%)	(0.00%)	(0.00%)
Total			0.56%	0.01%	+ 0.38%	+ 0.16%	0.54%

WSI Performance and Attribution

As of September 30, 2022

Five Year Annualized Relative Attribution Effects



Returns for 5 Years Ended 09/30/2022

Return Type	Return (%)
Gross	2.66%
Net of fees	2.48%
Target	2.04%
Net added	0.44%

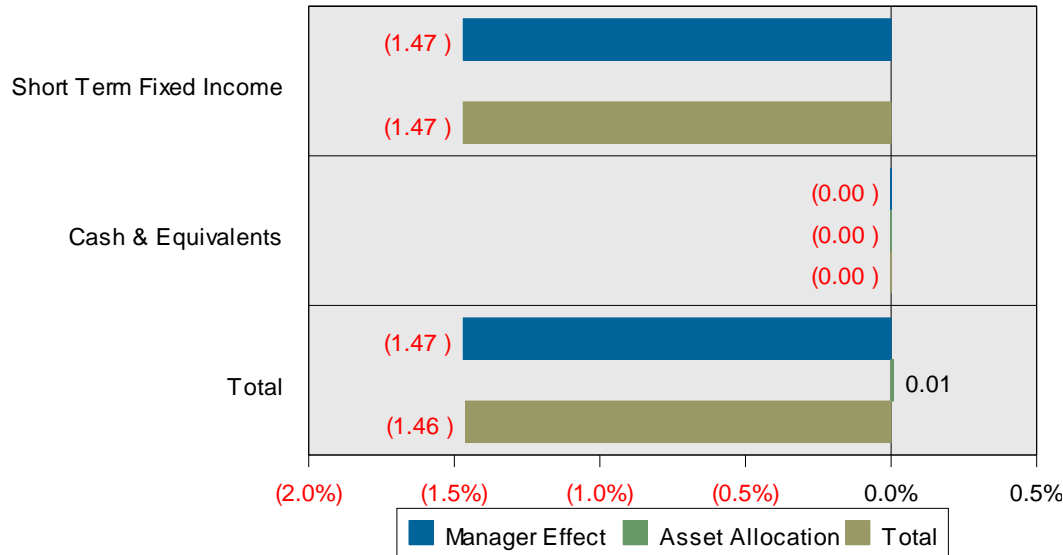
Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	11%	11%	9.11%	9.00%	0.02%	0.02%	0.04%
Small Cap	3%	3%	2.19%	3.55%	(0.06%)	0.03%	(0.04%)
International Equity	8%	8%	(0.08%)	(0.39%)	0.04%	0.01%	0.05%
Domestic Fixed Income	59%	59%	0.53%	(0.27%)	0.44%	(0.00%)	0.44%
Diversified Real Assets	13%	13%	3.41%	3.20%	0.03%	0.00%	0.04%
Real Estate	5%	5%	9.66%	8.62%	0.07%	0.03%	0.10%
Cash & Equivalents	1%	1%	1.03%	1.15%	(0.00%)	0.00%	0.00%
Total			2.66%	2.04%	+ 0.53%	+ 0.08%	0.62%

Budget Stabilization Fund Performance and Attribution

As of September 30, 2022

One Year Relative Attribution Effects



Returns for 1 Year Ended 09/30/2022

Return Type	Return (%)
Gross	-6.47%
Net of fees	-6.57%
Target	-5.01%
Net added	-1.56%

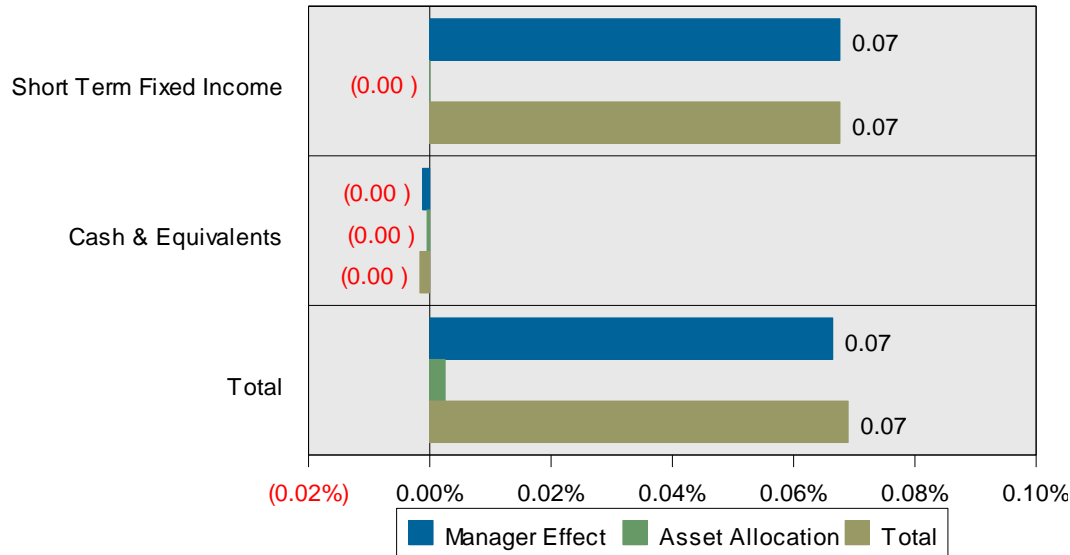
One Year Relative Attribution Effects

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%	(6.56%)	(5.07%)	(1.47%)	0.00%	(1.47%)
Cash & Equivalents	1%	1%	0.61%	0.62%	(0.00%)	(0.00%)	(0.00%)
Total			(6.47%)	(5.01%)	(1.47%)	0.01%	(1.46%)

Budget Stabilization Fund Performance and Attribution

As of September 30, 2022

Three Year Annualized Relative Attribution Effects



Returns for 3 Years Ended 09/30/2022

Return Type	Return (%)
Gross	-0.33%
Net of fees	-0.44%
Target	-0.40%
Net added	-0.04%

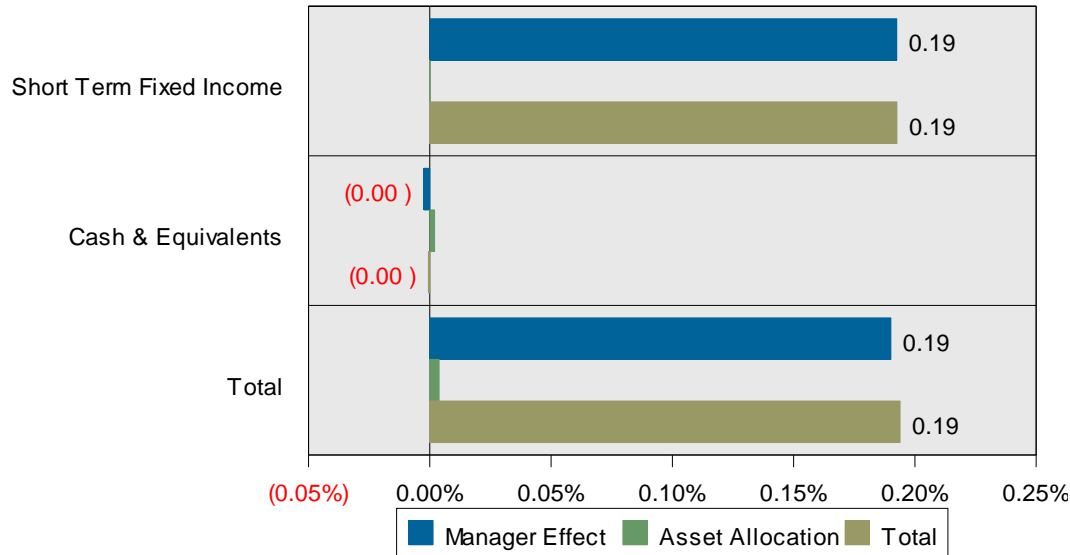
Three Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Short Term Fixed Income	99%	99%	(0.35%)	(0.41%)	0.07%	(0.00%)	0.07%
Cash & Equivalents	1%	1%	0.50%	0.59%	(0.00%)	(0.00%)	(0.00%)
Total			(0.33%)	(0.40%)	+ 0.07%	+ 0.00%	0.07%

Budget Stabilization Fund Performance and Attribution

As of September 30, 2022

Five Year Annualized Relative Attribution Effects



Returns for 5 Years Ended 09/30/2022

Return Type	Return (%)
Gross	0.90%
Net of fees	0.79%
Target	0.71%
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
Short Term Fixed Income	98%	98%	0.89%	0.70%	0.19%	0.00%	0.19%
Cash & Equivalents	2%	2%	1.03%	1.15%	(0.00)%	0.00%	(0.00)%
Total			0.90%	0.71%	+ 0.19%	+ 0.00%	0.19%

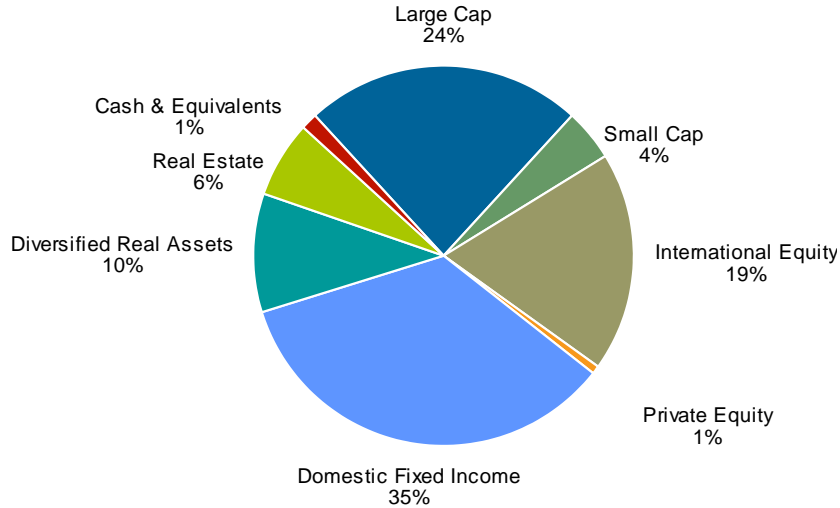
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Legacy Fund Quarterly Review

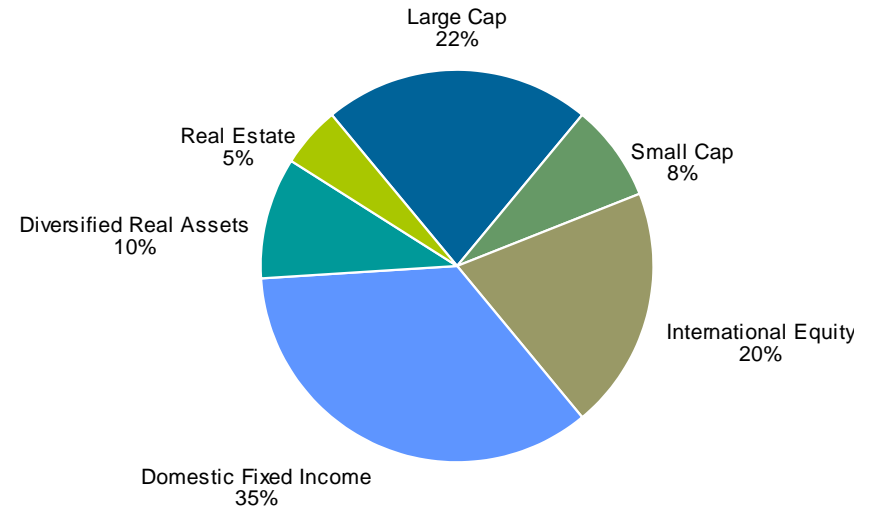
Legacy Fund Allocation

As of September 30, 2022

Actual Asset Allocation



Target Asset Allocation

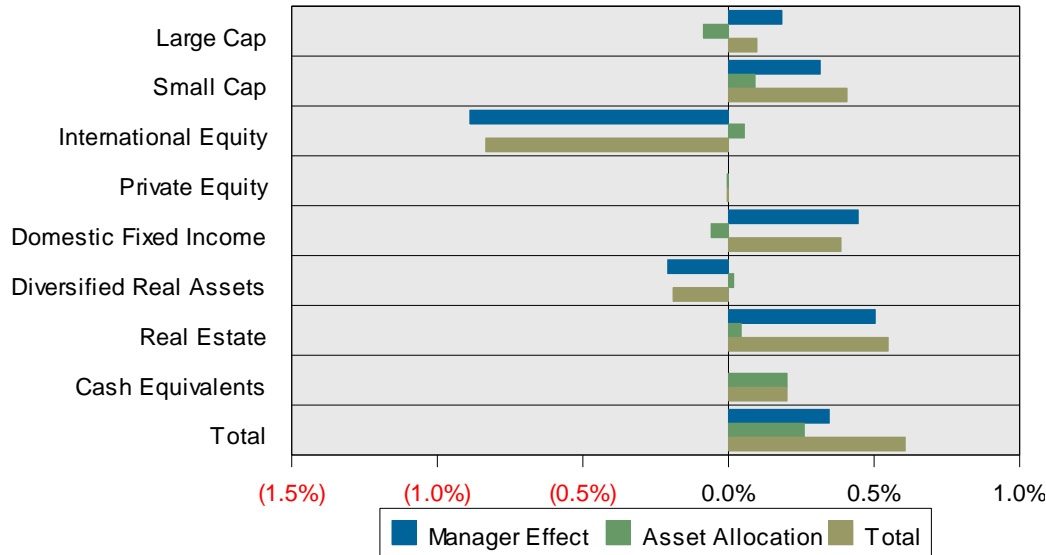


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	1,843,839	23.6%	22.0%	1.6%	123,611
Small Cap	342,202	4.4%	8.0%	(3.6%)	(283,336)
International Equity	1,464,403	18.7%	20.0%	(1.3%)	(99,441)
Private Equity	56,615	0.7%	0.0%	0.7%	56,615
Domestic Fixed Income	2,704,596	34.6%	35.0%	(0.4%)	(32,131)
Diversified Real Assets	791,914	10.1%	10.0%	0.1%	9,992
Real Estate	504,613	6.5%	5.0%	1.5%	113,653
Cash & Equivalents	111,037	1.4%	0.0%	1.4%	111,037
Total	7,819,219	100.0%	100.0%		

Legacy Performance and Attribution

As of September 30, 2022

One Year Relative Attribution Effects



Returns for 1 Year Ended 09/30/2022

Return Type	Return (%)
Gross	-14.27%
Net of fees	-14.46%
Target	-14.88%
Net added	0.42%

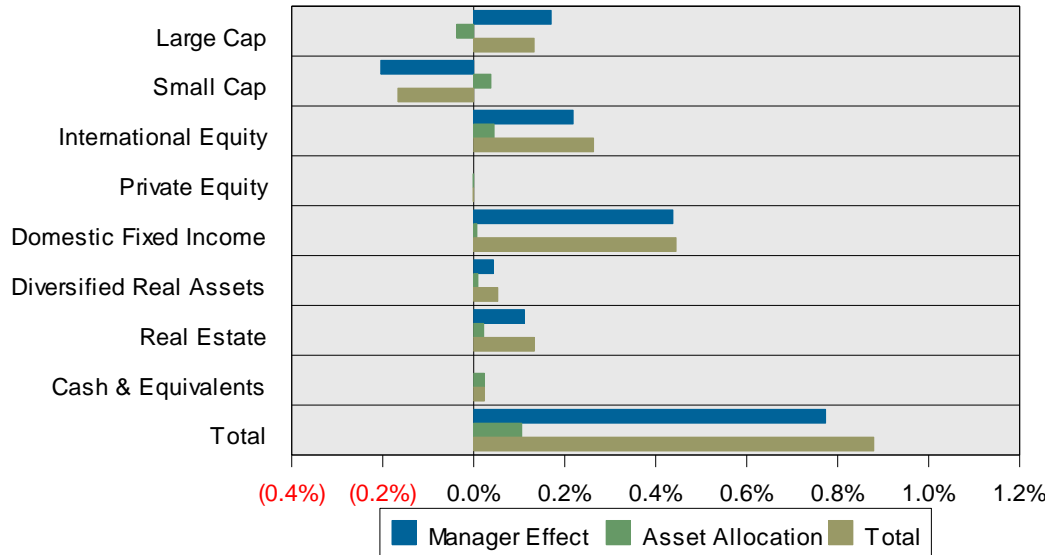
One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	22%	23%	(16.34%)	(17.22%)	0.18%	(0.09%)	0.10%
Small Cap	7%	7%	(19.44%)	(23.50%)	0.32%	0.09%	0.41%
International Equity	19%	20%	(28.01%)	(23.91%)	(0.89%)	0.05%	(0.83%)
Private Equity	0%	0%	3.41%	3.41%	0.00%	(0.00%)	(0.00%)
Domestic Fixed Income	35%	35%	(13.27%)	(14.60%)	0.45%	(0.06%)	0.39%
Diversified Real Assets	10%	10%	(2.56%)	(0.15%)	(0.21%)	0.02%	(0.19%)
Real Estate	5%	5%	29.96%	16.08%	0.50%	0.04%	0.55%
Cash Equivalents	1%	0%	0.60%	0.60%	0.00%	0.20%	0.20%
Total			(14.27%)	(14.88%)	+ 0.35%	+ 0.26%	0.61%

Legacy Performance and Attribution

As of September 30, 2022

Three Year Annualized Relative Attribution Effects



Returns for 3 Years Ended 09/30/2022

Return Type	Return (%)
Gross	2.94%
Net of fees	2.73%
Target	2.06%
Net added	0.67%

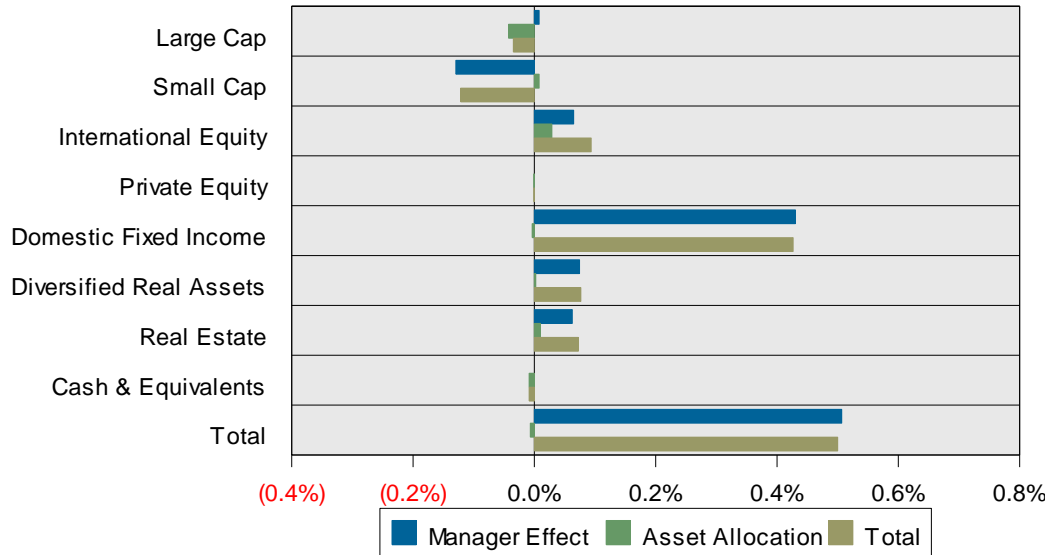
Three Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	22%	22%	8.71%	7.95%	0.17%	(0.04%)	0.13%
Small Cap	8%	8%	2.29%	4.29%	(0.20%)	0.04%	(0.17%)
International Equity	20%	20%	(0.29%)	(1.21%)	0.22%	0.04%	0.26%
Private Equity	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Domestic Fixed Income	35%	35%	(1.84%)	(3.26%)	0.44%	0.01%	0.45%
Diversified Real Assets	10%	10%	4.97%	4.40%	0.04%	0.01%	0.05%
Real Estate	5%	5%	11.87%	9.91%	0.11%	0.02%	0.13%
Cash & Equivalents	1%	0%	0.49%	0.49%	0.00%	0.02%	0.02%
Total			2.94%	2.06%	+ 0.77%	+ 0.11%	0.88%

Legacy Performance and Attribution

As of September 30, 2022

Five Year Annualized Relative Attribution Effects



Returns for 5 Years Ended 09/30/2022

Return Type	Return (%)
Gross	3.80%
Net of fees	3.59%
Target	3.30%
Net added	0.29%

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%	9.00%	9.00%	0.01%	(0.04%)	(0.03%)
Small Cap	8%	8%	2.30%	3.55%	(0.13%)	0.01%	(0.12%)
International Equity	20%	20%	(0.22%)	(0.39%)	0.06%	0.03%	0.09%
Private Equity	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Domestic Fixed Income	35%	35%	1.09%	(0.27%)	0.43%	(0.00%)	0.43%
Diversified Real Assets	10%	10%	4.90%	4.05%	0.07%	0.00%	0.08%
Real Estate	5%	5%	9.63%	8.62%	0.06%	0.01%	0.07%
Cash & Equivalents	1%	0%	1.02%	1.02%	0.00%	(0.01%)	(0.01%)
Total			3.80%	3.30%	+ 0.51%	+ (0.01%)	0.50%

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Appendix

Consolidated Asset Class Rankings

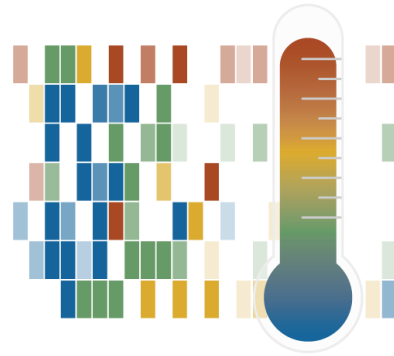
Callan Update

Published Research Highlights from 3Q22

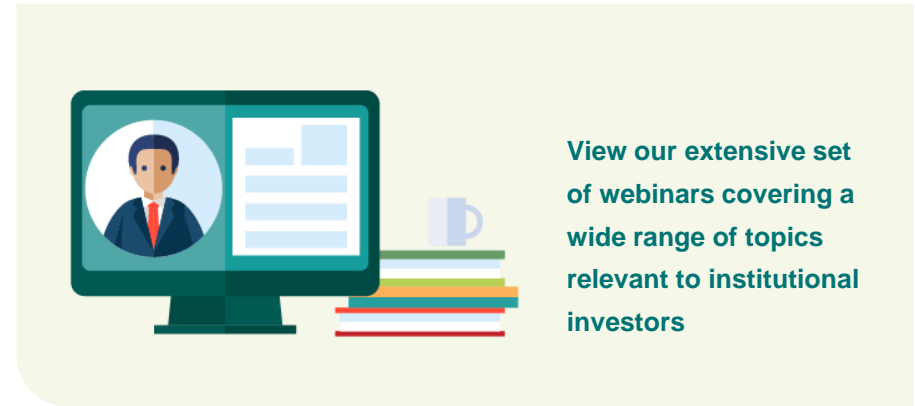
Research Café: Preliminary 2023 CMAs



Real Estate Indicators: Cool Enough or Too Hot?



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Dario Buechi

Additional Reading

- Alternatives Focus* 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 Alternatives

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 alternative investments like private equity, hedge funds, and real estate and how they can play a key role in any portfolio. In our “Callan College” on Alternatives, you will learn about the importance of allocations to alternatives, and how to consider integrating, evaluating, and monitoring them.

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.

- March 1–2, 2023 – In Person Session – Chicago
- May 24–25, 2023 – Virtual Session via Zoom

Please visit our website at www.callan.com/events-education as we add dates to our 2023 calendar!

Mark Your Calendar

Callan Institute’s 2023 National Conference

April 2–4, 2023
Scottsdale, Arizona

Watch your email for further details and an invitation.

Webinars & Research Café Sessions

Webinar: Rebalancing During This Unusual Market Environment

November 9, 2022 – 9:30am (PT)

SIB Performance Report Appendix November 2022

Performance Reports prepared by Callan for quarter ending September 30, 2022, are available on the RIO website at:

[Newsletters & Reports | Retirement Investment Office \(nd.gov\)](#)

Executive session materials will be sent to Board members through secure link.

MEMORANDUM

TO: SIB
FROM: Scott Anderson, Chief Investment Officer
DATE: October 10, 2022
RE: Investment Committee Update

The Investment Committee met Thursday October 10, 2022. The meeting was called to order and the agenda and minutes were accepted. The committee then reviewed a proposed schedule of Investment Committee meetings for the remainder of the fiscal year. The committee received a presentation from investment staff regarding the RIO equity portfolio review including the activities undertaken to position equity portfolio structure for future success, manager performance attribution, risk attribution and a description of each manager's strategy. Eric Chin provided an update of the equity transition to a new portfolio structure including a summary of the changes and the performance of the transition. Lastly, Eric Chin provided a compliance process update.

<https://www.rio.nd.gov/sites/www/files/documents/PDFs/SIB%20Investment/Board/Materials/sibinvestmat20221110.pdf>

BOARD ACTION REQUESTED: Information Only.

MEMORANDUM

TO: SIB
FROM: Jan Murtha, Executive Director
DATE: November 17, 2022
RE: GPR Committee Update

I. Introduction

At the October 28, 2022 Board meeting the SIB approved the following changes to SIB Governance Manual:

B-5, B-7, E-1, E-2, E-3, E-4, E-5, E-7, E-7, E-8, E-9, and E-10.

At the November 16, 2022 SIB-GPR committee meeting, the committee met and reviewed the following:

1. Proposed Legislation to provide recommendations to the SIB and staff on Board of Trustee positions during session.
2. SIB proxy voting process. – This process will be presented as Board Education at the January SIB meeting.

At the November SIB meeting staff will present:

1. For Second Reading & Final Adoption – Changes to the SIB Governance manual with suggested comments.

II. 2nd Reading & Final Adoption – SIB Governance Manual Changes

At the October 2022 meeting of the SIB, the Board approved proceeding with changes to facilitate Investment Committee operations. Comment was sought from the TFFR-GPR committee and A.A.G. DePountis, and will be requested from the TFFR Board at its meeting on November 17, 2022. Attorney DePountis provided additional suggestions to clarify the policies. Staff is reviewing these suggestions and will provide an update copy of the proposed policy changes with these suggestions highlighted at the November meeting.

ACTION REQUESTED: Motion to approve 2nd Reading & Final Adoption of policy amendments B-5, B-7, E-1, E-2, E-3, E-4, E-5, E-7, E-7, E-8, E-9, and E-10 with proposed changes.

III. 2023 Legislative Planning

Staff will provide a Legislative Planning presentation to the Board incorporating the SIB-GPR committee recommendations for Board discussion and guidance.

ACTION REQUESTED: Provide staff guidance on Board of Trustee position for testimony.

POLICY TYPE: GOVERNANCE PROCESS

POLICY TITLE: *BOARD COMMITTEE PRINCIPLES*

Unless specifically provided by governance policy, board committees will be assigned ~~so as~~ to minimally interfere with the wholeness of the board's job and so as never to interfere with delegation from board to executive director. Board committees will be used sparingly.

1. Board committees are to help the board do its job, not to help the staff do its job. Committees ordinarily will assist the board by preparing policy alternatives and implications for board deliberation. Board committees are created to advise the board, not the staff. The Investment Committee is a hybrid committee comprised of Board members, Staff and external investment experts. The investment committee is delegated authority as provided by Board policy.
2. Board committees may not speak or act for the board except when formally given such authority for specific and time-limited purposes. Expectations and authority will be carefully stated in order not to conflict with authority delegated to the executive director.
3. Board committees cannot exercise authority over staff however committees will make requests of staff through the executive director unless staff is assigned to the committee. Because the executive director works for the full board, he or she will not be required to obtain approval of a board committee before an executive action. In keeping with the board's broader focus, board committees will normally not have direct dealings with current staff operations.
4. Board committees are to avoid over-identification with the committee's assignment. Therefore, a board committee which has helped the board create policy will not be used to monitor organizational performance on that policy. The Investment Committee is chartered to monitor certain investment strategy execution and investment performance in a more detailed way than the Board which receives independent performance appraisals and summarized updates on investment activities. The Board is the ultimate governance authority of the investment program.
5. This policy applies only to committees which are formed by board action, whether or not the committees include non-board members. It does not apply to committees formed under the authority of the executive director.
6. The chairperson will appoint board committees authorized by the board. The operational life span of a board committee will be defined at the time of appointment.

Policy Implemented: June 23, 1995.

Amended: November 22, 1996, February 27, 2015

POLICY TYPE: GOVERNANCE PROCESS

POLICY TITLE: ANNUAL BOARD PLANNING CYCLE

To accomplish its job outputs with a governance style consistent with board policies, the board will strive to follow a biennial agenda which (a) completes a re-exploration of *Ends* policies annually and (b) continually improves its performance through attention to board education and to enriched input and deliberation.

1. A biennial calendar will be developed.
2. The cycle will conclude each year on the last day of June in order that administrative budgeting can be based on accomplishing a one-year segment of the most recent board long-range vision.
 - A. In the first three months of the new cycle, the board will strive to develop its agenda for the ensuing one-year period.
 - B. Scheduled monitoring will be used to evaluate and adjust the annual agenda as needed.
3. Education, input, and deliberation will receive paramount attention in structuring the series of meetings and other board activities during the year.
 - A. To the extent feasible, the board will strive to identify those areas of education and input needed to increase the level of wisdom and forethought it can give to subsequent choices.
 - B. A board education plan will be developed during July and August of each year.
4. The sequence derived from this process for the board planning year ending June 30 is as follows: (Additional comments forthcoming)
 - A. July: Election of officers, appoints audit and investment committee, plan annual agenda, begin to develop board education plan, and new board member orientation.
 - B. August: Present education plan and continue new board member orientation.
 - C. September: Annual Review of Governance Manual.
 - D. October: Chief Investment Officer review of investment results. Annual meeting for evaluation of RIO vs. *Ends* policies and annual board evaluation.
 - E. November: Chief Investment Officer report on investment work plan.
 - F. January: During second year of the biennium, begin to develop *Ends* policies for the coming biennium for budget purposes.
 - G. February: Chief Investment Officer present the investment work plan. Evaluation of Executive Director.
 - H. March: Chief Investment Officer review of investment results and report on investment work plan. During first year of biennium, set budget guidelines for budget development.

POLICY TYPE: GOVERNANCE PROCESS

I. June: Chief Investment Officer review of investment results and report on investment work plan

4. The sequence derived from this process for the board planning year ending June 30 is as follows:
- A. July: Election of officers, appoints audit committee, plan annual agenda, begin to develop board education plan, and new board member orientation.
 - B. August: Investment Director review of investment results, establish investment work plan, add investment education to education plan, and continue new board member orientation.
 - C. September: Annual Review of Governance Manual.
 - D. October: Annual meeting for evaluation of RIO vs. *Ends* policies and annual board evaluation.
 - E. November: Investment Director report on investment work plan.
 - F. January: During second year of the biennium, begin to develop *Ends* policies for the coming biennium for budget purposes.
 - G. February: Investment Director report on investment work plan.
Evaluation of Executive Director.
 - H. March: During first year of biennium, set budget guidelines for budget development.
 - I. May: Investment Director report on investment work plan.

Policy Implemented: June 23, 1995; November 19, 1999.

Amended: September 26, 2014, February 27, 2015.

POLICY TYPE: INVESTMENTS

POLICY TITLE: *FIDUCIARY DUTIES*

By virtue of the responsibilities assigned to the SIB by North Dakota Century Code Chapter 21-10, the members of the SIB are fiduciaries for eleven statutory funds. Through contractual obligations, fiduciary responsibility extends to ~~twelve~~ contracted additional funds.

A fiduciary is a person who has discretionary authority or management responsibility for assets held in trust to which another has beneficial title or interest. The fiduciary is responsible for knowing the "prudent requirements" for the investment of trust assets. Remedial actions may be assessed against fiduciaries for violations of fiduciary duty.

North Dakota state law provides broad fiduciary guidelines for the SIB members. NDCC 21-10-07 specifies that "the state investment board shall apply the prudent investor rule in investing for funds under its supervision except that Section 21-10-07.1 requires the SIB to give preference to qualified investment firms and financial institutions with a presence in the state for legacy fund investment purposes. The "prudent investor rule" means that in making investments, 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~~ regarding speculation but ~~in regard to~~ regarding the permanent disposition of funds, considering probable safety of capital as well as probable income."

Procedural prudence is a term that has evolved to describe the appropriate activities of a person (or persons) who act in a fiduciary role. Court decisions to date indicate that procedural prudence is more important in assessing fiduciary activities than actual portfolio performance. A fiduciary cannot be faulted for making the "wrong" decision provided that proper due diligence was performed.

The key to successfully discharging the SIB's fiduciary duties is the establishment of and adherence to proper due diligence procedures. While not bound by ERISA (Employee Retirement and Income Security Act of 1974), the SIB will use the procedural prudence outlined by ERISA as guidance in developing its procedures:

1. An investment policy must be established for each fund and must be in writing.
2. Plan assets must be diversified, unless under the circumstances it would be prudent not to do so.
3. Investment decisions must be made with the skill and care of a prudent expert.
4. Investment performance must be monitored.
5. Investment expenses must be controlled.
6. Prohibited transactions must be avoided.

Policy Implemented: September 20, 1995.

Amended: May 30, 1997, January 22, 1999, February 27, 2009, October 26, 2018.

POLICY TYPE: INVESTMENTS

POLICY TITLE: INVESTMENT PROCESS

The SIB believes that an investment program must be built and managed like any good business, with a clear statement of mission, overall objectives, roles and responsibilities, and policies and guidelines. Major issues to be faced by the SIB will revolve around:

- Setting asset allocation targets
- Setting appropriate benchmarks
- Finding the right managers
- Funds implementation and ongoing execution
- Monitoring the program
- Searching for appropriate new opportunities

~~Asset allocation targets:~~

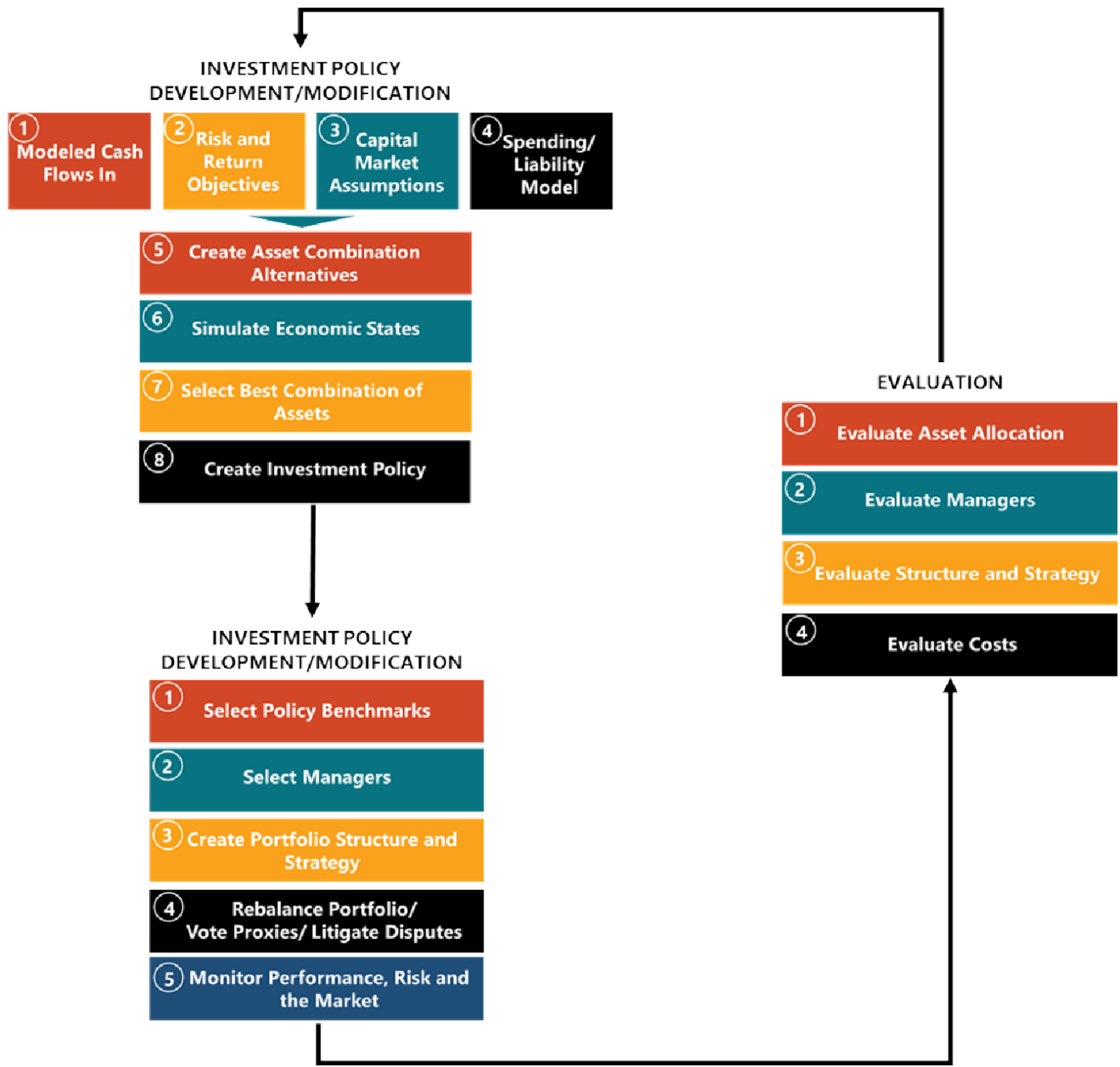
- ~~• Setting appropriate benchmarks.~~
- ~~• Finding the right managers.~~
- ~~• Monitoring the program.~~
- ~~• Searching for appropriate new opportunities.~~

To ensure rigorous attention to all aspects of the investment program, the SIB follows an established investment process. This process, described by the diagram on the following page, involves three phases:

- Investment policy development/modification.
- Implementation/monitoring.
- Evaluation.

The first column of boxes describes the policy development phase, the middle column implementation/monitoring, and the last box on right evaluation. Activities associated with internal entities are shown along the top. Those associated with external entities are shown along the bottom. The middle shows activities that internal and external entities work on together.

Policy Implemented: September 20, 1995.



POLICY TYPE: INVESTMENTS

POLICY TITLE: KEY PROGRAM ENTITIES AND RESPONSIBILITIES

The key responsibilities of the entities involved in the investment program are:

Fund Governing Bodies

1. Establish policy on investment goals and objectives.
2. Establish asset allocation or approve a pool allocation.
3. Hire actuary when required.

SIB

1. Invest funds entrusted by statute and contracted entities, delegating investment authority when deemed appropriate.
2. Set policies for appropriate investments and investment practices of entrusted funds.
3. Approve asset allocation and investment policies of participating trust funds or establish pool asset allocation previously approved by the Investment Committee.
4. Monitor the progress of the implementation of the investment strategy.
5. Monitor the performance and risk of the investment program provided by an independent third-party performance appraisal.
6. The Board will receive program updates, training regarding investment topics, market updates, investment performance/risk, investment procedures, program costs and updates on investment execution of investment strategies from Investment Committee representatives.
7. Approve benchmark recommendations from an independent third-party benchmark consultant previously approved by the Investment Committee.
8. Review summaries of Investment Committee proceedings.
9. Review updates regarding specific investment strategies, manager selection, termination, guideline changes and changes to instrument usage.
10. The Board may choose to have decision authority over specific Investment Committee decisions when deemed appropriate including new investment programs, strategies, techniques, instruments, and initiatives.

Investment Committee

1. The Committee will suggest and recommend changes to the SIB Investment Policy, as necessary including any delegation of authority to RIO investment staff.
2. The Committee will review periodically and approve changes and additions to the IC Guidelines and will report any revisions to the SIB.
3. The Committee may examine internally (if approved) and externally managed portfolios, individual

POLICY TYPE: INVESTMENTS

POLICY TITLE: *KEY PROGRAM ENTITIES AND RESPONSIBILITIES*

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.

4. The Committee will review and approve the use of new investment instruments prior to their implementation in internal (if approved) and external SIB portfolios.
5. 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.
6. 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.
7. The Committee will review 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.
8. The Committee will review all compliance-related issues including compliance with statutes, administrative rules, internal and external manager investment guidelines or as otherwise requested.
9. 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.
10. 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.
11. 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.
12. 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).
13. The Committee will review annual benchmark recommendations from a Board-appointed benchmark consultant and will provide its evaluation and recommendation to the Board.
14. The Committee will review and revise portfolio guidelines as necessary.
15. 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.
16. The Committee will conduct periodic round table discussions of the economic and investment environment.

4. Report the investment performance of the funds to each fund's governing authority.

POLICY TYPE: INVESTMENTS

POLICY TITLE: *KEY PROGRAM ENTITIES AND RESPONSIBILITIES*

5. Hire and terminate money managers, custodians, and consultants.

Chief Investment Officer and RIO Staff

1. Participate on the Investment Committee and report to the Board as required.
2. Implement investment policies approved by the Investment Committee and the Board.
3. Provide research and administrative for SIB client funds and client projects.
4. Recommend investment policies and procedures appropriate for governing the investment of entrusted funds.
5. Lead the development of asset allocations, investment strategies, manager mandates, manager guidelines, investment implementations and investment policies to be approved by the Investment Committee and Board.
6. Hire and terminate money managers, custodians, and consultants as delegated by the Investment Committee and Board.
- 7.6. Negotiate manager contract terms and conditions as delegated by the Investment Committee and Board.
- 8.7. Evaluate money manager adherence to investment objectives, mandate requirements and guidelines.
- 9.8. Provide performance reports to the Investment Committee, the Board and Boards of participating funds as a representative of the Investment Committee and the SIB.
- 10.9. Recommend hiring or terminating money managers, custodians, consultants, and other outside services needed to effectively manage the investment funds.
- 11.10. Develop and maintain appropriate accounting policies and investment systems for the funds entrusted to the SIB.

Investment Consultant

1. Measure money manager performance and monitor adherence to investment goals, objectives, and policies.
2. Assist in the annual evaluation of program policies, results, and the development of annual work plan.
3. Work with Staff to develop the asset allocation or asset/liability studies.
4. Provide information for requested money manager searches.
5. Assist in development of investment policies and manager structure and rebalancing guidelines.
6. Extension of staff for special projects.

Actuary

1. Assist fund governing bodies in developing benefit and funding policies.
2. Measure actuarial soundness of plan.
3. Perform experience studies as requested by plan sponsor.
4. Provide liability projections as needed.
5. Conduct annual evaluation of program policies, results, and assist in developmental of annual work plan.
6. Assist in implementation of annual work plan.

POLICY TYPE: INVESTMENTS

POLICY TITLE: KEY PROGRAM ENTITIES AND RESPONSIBILITIES

Auditor

1. Measure, validate, and offer an opinion on agency financial statements and management.
2. Assist in developing appropriate accounting policies and procedures.
3. Bring technical competence, sound business judgment, integrity, and objectivity to the financial reporting process.

Master Custodian

1. Provide safekeeping of all securities purchased by managers on behalf of the SIB.
2. Provide global custody services.
3. Collect interest, dividend, and principal payments in a timely manner.
4. Provide for timely settlement of securities.
5. Price all securities and post transactions daily.
6. Maintain short-term investment vehicles for investment of cash not invested by SIB managers. Sweep all manager accounts daily to ensure all available cash is invested.
7. Provide monthly, quarterly, and annual accounting reports for posting to RIO's general ledger.
8. May manage a securities lending program to enhance income.
9. Provide electronic access to accounting reports.
10. Provide other services that assist with the monitoring of managers and investments.

Portfolio Managers

1. Manage portfolios as assigned by the SIB.
2. Provide liquidity, as required, in a timely and cost-efficient manner.
3. Vote proxies.
4. Provide educational assistance to board.

Policy Implemented: September 20, 1995.

Amended: February 27, 2009

SIB

- ~~1. Invest funds entrusted by statute and contracted entities.~~
- ~~2. Set policies on appropriate investments and investment practices for entrusted funds.~~
- ~~3. Approve asset allocation and investment policies of participating trust funds.~~
- ~~4. Report the investment performance of the funds to each fund's governing authority.~~
- ~~5. Hire and terminate money managers, custodians, and consultants. Investment Officer and~~

POLICY TYPE: INVESTMENTS

POLICY TITLE: KEY PROGRAM ENTITIES AND RESPONSIBILITIES

RIO Staff

- ~~1. Implement investment policies approved by the SIB.~~
- ~~2. Provide research and administrative support for SIB projects.~~
- ~~3. Recommend investment regulations appropriate for governing the investment of entrusted funds.~~
- ~~4. Assist fund governing bodies in developing asset allocation and investment policies.~~
- ~~5. Evaluate money manager adherence to investment objectives.~~
- ~~6. Provide performance reports to the SIB and boards of participating funds.~~
- ~~7. Recommend hiring or terminating money managers, custodians, consultants, and other outside services needed to effectively manage the investment funds.~~
- ~~8. Develop and maintain appropriate accounting policies and systems for the funds entrusted to the SIB.~~

Investment Consultant

- ~~1. Measure money manager performance and monitor adherence to investment goals, objectives, and policies.~~
- ~~2. Conduct annual evaluation of program policies and results, and assist in development of annual work plan.~~
- ~~3. Assist in implementation of annual work plan.~~
- ~~4. Conduct asset allocation or asset/liability studies.~~
- ~~5. Conduct requested money manager searches.~~
- ~~6. Assist in development of investment policies and manager structure and rebalancing guidelines.~~
- ~~7. Extension of staff for special projects.~~

Actuary

- ~~1. Assist fund governing bodies in developing benefit and funding policies.~~
- ~~2. Measure actuarial soundness of plan.~~
- ~~3. Perform experience studies as requested by plan sponsor.~~
- ~~4. Provide liability projections as needed.~~
- ~~5. Conduct annual evaluation of program policies and results and assist in developmental of annual work plan.~~
- ~~6. Assist in implementation of annual work plan.~~

Auditor

- ~~1. Measure, validate, and offer an opinion on agency financial statements and management.~~
- ~~2. Assist in developing appropriate accounting policies and procedures.~~
- ~~3. Bring technical competence, sound business judgment, integrity, and objectivity to the financial reporting process.~~

Master Custodian

- ~~1. Provide safekeeping of all securities purchased by managers on behalf of the SIB.~~
- ~~2. Provide global custody services.~~
- ~~3. Collect interest, dividend, and principal payments in a timely manner.~~

POLICY TYPE: INVESTMENTS

POLICY TITLE: KEY PROGRAM ENTITIES AND RESPONSIBILITIES

- ~~4. Provide for timely settlement of securities.~~
- ~~5. Price all securities and post transactions daily.~~
- ~~6. Maintain short term investment vehicles for investment of cash not invested by SIB managers. Sweep all manager accounts daily to ensure all available cash is invested.~~
- ~~7. Provide monthly, quarterly, and annual accounting reports for posting to RIO's general ledger.~~
- ~~8. May manage a securities lending program to enhance income.~~
- ~~9. Provide electronic access to accounting reports.~~
- ~~10. Provide other services that assist with the monitoring of managers and investments.~~

Portfolio Managers

- ~~1. Manage portfolios as assigned by the SIB.~~
- ~~2. Provide liquidity, as required, in a timely and cost efficient manner.~~
- ~~3. Vote proxies.~~
- ~~4. Provide educational assistance to board.~~

Policy Implemented:

September 20, 1995.

Amended: February 27, 2009

POLICY TYPE: INVESTMENTS

POLICY TITLE: INVESTMENT POLICY DEVELOPMENT – TRUST FUNDS

All funds under SIB management must have a written investment policy. Investment policy forms the cornerstone of the management of any investment program. A sound investment policy ensures that fund assets are managed in a disciplined process, based on long-term fundamental investment principles.

For the larger, more complex trust funds, consultants are used to assist in policy and asset allocation development. Their specialized skills are needed to model and analyze the many variables that go into determining a proper asset allocation.

Policy development starts with the specification of investment objectives, constraints, and preferences. Fund trustees must address a number of factors:

- What is the fund's objective(s)?
- What is the board's tolerance for risk or threshold for under-performance?
- What are the fund's liquidity needs and cash flow characteristics?
- What are the board's asset class preferences and constraints?
- What is the actuarial earnings assumption?
- What are the legal or political considerations?
- What is the investment time horizon?

Since the ultimate objective of fund investments is to provide for the payment of future capital needs, claims, or other monetary requirements, it is essential that the investment policy be developed within the context of fund liabilities or spending policy. The development of investment policy, therefore, is always unique to the circumstances of each fund.

Complex actuarial models are used to quantify the liabilities of the pension plans and Workforce Safety and Insurance. Internal entities develop cash flow forecasts for the smaller funds based on past claims or anticipated expenditures.

Asset allocation optimizations are used to quantify the range of future investment outcomes. Investment consultants contribute needed expertise on capital market expectations and in identifying the risks associated with a particular asset allocation.

For some funds, the risk/return tradeoffs of alternative portfolios are not well represented by expected returns and standard deviation. More important are the expected results for required sponsor and participant contributions and funded ratios over time. Asset/liability modeling is the tool that allows the governing boards to examine and assess the tradeoffs leading to an appropriate investment policy.

The results of the optimizations are a description of the range of financial results that might realistically be expected to occur. These results provide the basis for determining an asset allocation.

POLICY TYPE: INVESTMENTS

POLICY TITLE: INVESTMENT POLICY DEVELOPMENT – TRUST FUNDS

In accordance with NDCC 21-10-02.1, RIO staff works with each fund's governing authority, and consultants as needed, to develop an investment policy, which includes an appropriate asset allocation, for each of the statutory funds. Contracted entities are responsible for their own policy development. **Pooling of funds is allowed by statute. A pooled allocation will have an investment policy that can be approved by each fund's governing authority.**

Each policy, as a minimum, will include the following information:

1. Fund characteristics and constraints.
 - a. An explanation as to the purpose of the portfolio and its legal structure.
 - b. Size of portfolio and the likelihood and amount of future contributions and disbursements
 - c. Participant demographics when applicable.
 - d. Fiscal health of fund.
 - e. Constraints.
 - f. Unique circumstances.
2. Responsibilities of SIB.
3. Investment objectives.
4. Standards of investment performance.
5. Asset allocation policy and guidelines.
6. Evaluation and review.

Policy Implemented: September 20, 1995.

Amended: February 27, 2009

POLICY TYPE: INVESTMENTS

POLICY TITLE: INVESTMENT POLICY DEVELOPMENT – INVESTMENT POOLS

Asset Class Implementation

The SIB may internally manage investment of funds as approved by the Investment Committee and if there is a policy approval for internal investment management by the Board. Within each asset class there are numerous manager strategies, internal and external that may be employed by the SIB to affect exposure to the various asset classes as well as achieve an excess return to the policy benchmark.

Investment Pools

Investment pools may be defined for asset allocations as well as individual asset classes, sub-asset classes, manager portfolios or transactions and unitized for allocation to client funds.

SIB investment pool policy statements will define the following:

~~The SIB does no in-house investment of funds. All investment activity is delegated to outside money managers. Within each asset class there are numerous manager styles (i.e. market sector specializations) that may be employed by the SIB to affect exposure to the various asset classes.~~

~~SIB investment pool policy statements will define the following for each asset class:~~

1. Strategic objectives.
2. Performance objectives.
 - a. Appropriate capital market benchmarks.
 - b. Excess return targets, after payment of investment management fees.
 - c. Peer-group ranking.
 - d. Risk characteristics.
 - e. Termination factors.
3. Portfolio constraints.
 - a. Quality of securities/portfolio (security – BAA/portfolio – AA).
 - b. Quality held (maximum in company/industry/economic sector).
 - c. Other specific restrictions if applicable (ADRs, 144A securities, prohibited transactions, etc.).
4. Investment structure.
 - a. Percent of assets per manager cycle.
 - b. Ranges for rebalancing.

POLICY TYPE: INVESTMENTS

5. Control Procedures

- a. Duties and responsibilities of the SIB
- b. Duties and responsibilities of money managers.
- c. Reporting requirements.

Policy Implemented: September 20, 1995.

Amended: February 27, 2009

STATEMENT OF POLICY

It shall be the policy of the State Investment Board (SIB) to vote all proxies appurtenant to shares held in the various plans administered by the Board, and to vote said shares in a manner that best serves the system's interests. Specifically, all shares are to be voted with the interest of preserving or enhancing share value. The Board endorses the Department of Labor opinion that proxies have economic power which shareholders are obligated to exercise to improve corporate performance. The Board further recognized that proxy issues are frequently complex, requiring expert guidance; accordingly, it has adopted procedures that employ such experts.

The objectives of these policies are as follows:

1. Exercise the value empowered in proxies.
2. Maintain or improve share value for the exclusive benefit of the participants.
3. ~~Achieve changes for the common good whenever these do not conflict with the exclusive benefit objective.~~

PROCEDURES

DISTINCTION OF RESPONSIBILITIES

Master Custodian

The system's master custodian shall be responsible for timely receipt and distribution of proxy ballots to the appropriate investment management institutions.

Managers

The managers shall be responsible for promptly voting all proxies pursuant to the Board's policies, and in keeping with the managers' best judgments.

Staff

Staff, in concert with the master custodian and the managers, shall be responsible for monitoring the receipt and voting of all proxies.

Board

The Board shall administer and enforce its policies. This administration and enforcement requires reporting from responsible persons, as discussed in the following.

REPORTING

Master Custodian

The master custodian shall report quarterly in writing on all pertinent proxy issues, including (1) receipt of proxy material; (2) nature of issues; (3) due date; (4) names of managers and dates forwarded; and (5) deficiency reports covering proxies that should have been received but were not.

Managers

Managers shall report quarterly in writing on how proxies have been voted, with explanations given whenever the Board's guidelines have not been followed.

Staff

Internal compliance staff shall report annually on the efficiency of the process, the portion of total proxies that have actually been voted, and compliance with Board directives.

GUIDELINES

~~The Board believes that good corporate investment decisions require good corporate governance, and that social responsibilities cannot be ignored in these decision processes. Accordingly, the practice of faithfully voting with management will *not* be tolerated, nor will the "Wall Street Rule" which advocates the sale of shares if there is disagreement with management.~~

~~In keeping with the Board's philosophy, the managers are encouraged to vote *for* proposals that *increase* or enhance the following, and against those that decrease or diminish the same:~~

- ~~• Health of the population~~
- ~~• Environmental conditions~~
- ~~• Management and Board accountability~~
- ~~• Abolition of management entrenchment~~
- ~~• Control of executive compensation~~
- ~~• Shareholder rights and ownership~~
- ~~• Fair labor practices~~

~~Guidelines may be altered periodically by the Board as situations warrant.~~

Policy Implemented: September 20, 1995.

Amended: February 27, 2009, October 26, 2018.

POLICY TYPE: INVESTMENTS

POLICY TITLE: IMPLEMENTATION – INVESTMENT MANAGER SELECTION

The SIB hires investment managers with the intention of maintaining long-standing relationships. Care is taken to select managers for defined roles based on their strengths in designated areas. The hiring process is done in accordance with all applicable state and federal laws.

~~Some manager selections are conducted by the consultant while others may be directed by the staff in coordination with the SIB. Ultimately, the selection process is often a team effort involving the investment consultants, SIB members, and RIO staff. A consultant may be invaluable in this activity due to the large volume of data that needs to be collected, verified, and summarized. Also, their ongoing dialogue with money management firms provides useful qualitative input.~~

The investment management business has rapidly evolved since the 1990's. It is recognized that many viable firms have been formed as the result of spin-offs or start-ups and may not have a traditional long-term investment performance history in accordance with the following guidelines. There has also been a tremendous increase in the types of strategies available to institutional investors resulting in the need for flexibility in the establishment of investment criteria. Subject to the case-by-case acceptance of deviation by the SIB members, money managers must meet the following minimum selection criteria for inclusion in a manager search:

- Must be a registered investment adviser, bank, insurance company, or investment company (mutual fund). Should provide ADV Part II (registered investment adviser) prospectus (investment company) or comparable information (bank or insurance company).
- Provide at least five years of actual quarterly performance data that is time weighted a representative composite of ~~accounts, and~~ accounts and meets Global Investment Performance Standards (GIPS).
- Provide information that illustrates the key investment personnel have been together for at least five years and the capabilities of the firm can handle the current level of investment activity.
- Able to articulate the firm's investment strategies and philosophy in a manner understandable by the Board, and provide a statement that the strategy has been followed for at least five years.
- Disclose any pending or past litigation or censure.
- Be willing to acknowledge their fiduciary status in writing (mutual funds are exempted from this requirement).

The following steps will be followed in the selection process, subject to modification relative to investment strategy and manager search circumstances:

- Develop a profile of the type of manager needed. This is based on the investment goals and asset allocations. Included in the profile are such things as:
 1. Quantitative characteristics, such as GIPS-compliant composite return data, risk-adjusted rates of return and relevant portfolio characteristics.
 2. Qualitative characteristics, such as key personnel, investment philosophy, investment strategy, research orientation, decision making process, and risk controls.
 3. Organizational factors such as type and size of firm, ownership structure, client servicing capabilities, ability to obtain and retain clients, and fees.

POLICY TYPE: INVESTMENTS

POLICY TITLE: IMPLEMENTATION – INVESTMENT MANAGER SELECTION

~~The following steps will be followed in the selection process, subject to modification relative to investment strategy and manager search circumstances:~~

- ~~• —Develop a profile of the type of manager needed. This is based on the investment goals and asset allocations. Included in the profile are such things as:
 - ~~Quantitative characteristics, such as GIPS-compliant composite return data, risk-adjusted rates of return and relevant portfolio characteristics.~~
 - ~~Qualitative characteristics, such as key personnel, investment philosophy, investment strategy, research orientation, decision making process, and risk controls.~~
 - ~~Organizational factors, such as type and size of firm, ownership structure, client servicing capabilities, ability to obtain and retain clients, and fees.~~~~
- ~~• Staff will provide a written report to the Investment Committee as required on the due diligence process conducted during the selection process. This report will include selection steps followed and process steps excluded. The Investment Officer will give a written report to the SIB on the due diligence process conducted by the Investment Officer, RIO staff, and the SIB in the manager selection process. This report will include selection steps followed and process steps excluded.~~
- Consultant and/or staff use the profile to screen their data base for managers that meet SIB criteria.
- Consultant and/or staff reduce the group to the top candidates and prepare a summary report. The report will contain pertinent data on each of the candidates.
- When appropriate, on-site visits may be made by staff and board members to the candidates' home offices. Visits by board members to potential manager sites must have board approval.
- When appropriate the Investment Officer will conduct fact-finding pre-interviews. SIB trustees and RIO staff will receive notice of these pre-interviews.

Interviews are conducted with each of the finalists in Bismarck. All are required to bring the potential portfolio manager to the interview. Particular attention is paid to gaining an understanding of the investment process and determining the manager's compatibility with the SIB's guidelines-requirements and objectives.

The Investment Officer will schedule manager interviews with the SIB. Following these interviews, the Investment Officer, with the advice of RIO staff and consultants, will make recommendations to the SIB on manager selection.

- The SIB will select the investment manager by majority vote.
- Manager(s) selected by the SIB are notified immediately by RIO staff. Unsuccessful candidates are notified by consultant.
- Investment management contracts are reviewed and finalized, sent to the Attorney General for approval review, and executed.
- Accounts are set up at the master custodian and on the internal general ledger.

POLICY TYPE: INVESTMENTS

POLICY TITLE: IMPLEMENTATION – INVESTMENT MANAGER SELECTION

- Consultant is notified when to begin the measurement of the investment performance of the manager(s).

Policy Implemented: September 20, 1995

Amended: February 27, 2009

POLICY TYPE: INVESTMENTS

POLICY TITLE: IMPLEMENTATION – PORTFOLIO REBALANCING

Portfolio Rebalancing

The need to rebalance the portfolio can arise ~~due to~~from a new asset allocation or because market activity has driven the actual distribution of assets away from the desired mix. To minimize transaction costs ~~due to~~from rebalancing, RIO ~~works with the investment consultants to determine~~develops appropriate ranges around the target mix (which are specified in the policy statement). Rigidly adhered to, such a policy is a valuable risk control tool. By maintaining asset mix within reasonably tight ranges, the SIB avoids making unintentional "bets" in the asset mix and avoids market-timing decisions.

All ~~of the~~ funds the SIB oversees have an asset allocation with minimum and maximum limits assigned. RIO's rebalancing policy requires the asset mix to be determined at the end of each month and that appropriate rebalancing takes place.

~~RIO's rebalancing policy requires the asset mix to be determined at the end of each month. At the end of each quarter, all portfolios deviating from the target beyond the acceptable limits are rebalanced to target.~~

Policy Implemented: September 20, 1995.

The Board and the Investment Committee 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.

POLICY TYPE: INVESTMENTS

POLICY TITLE: *EVALUATION*

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: October 26, 2018, July 22, 2022.



2023 Legislative Session Planning - SIB

SIB – GPR Committee

NORTH
Dakota
Be Legendary.

Topics & Guidance

Staff will provide an informational Legislation tracking matrix to the Board weekly following updates to committee hearing schedules by Leg. Counsel.

Board meetings will continue as scheduled once per month.

- In-State Investment Program
- Investment Program Changes
 - RIO Initiatives
 - Board Composition
 - ESG/Social Investing
- Retirement Plan Design Changes & Funding
 - PERS
 - TFFR
- GPR Committee Rec:
 - Support
 - Neutral
 - Negative

Clarifying/No
Program Impact



Major Changes/High
Impact

In-State Investment Program

Anticipated:

- Clarification of Statutory Provisions.
 - Asset Allocation Adjustments
 - Waterfall Adjustments
- GPR Committee Rec:
 - Neutral
 - Parameters
 - Feasibility of Administration
 - Candid Observations/Expert Testimony

Investment Program Changes

RIO Initiatives - Known

- Internal Investment Opportunities

SIB Governance - Anticipated

- Board Composition
 - Land Assets
 - Legislation?
- ESG/ Social Investing Legislation

• GPR Committee Rec:

- Support for Internal Investment package.
- The GPR Committee recommends that RIO submit an agency bill regarding SIB member composition. To be discussed by full Board.
- Neutral for ESG/Social Investing legislation.

• Parameters

- Client Fund Benefits
- Agency HR Impact
- Governance & Control

TWO ARCHETYPE BOARD COMPOSITIONS

ARCHETYPE ONE

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

ARCHETYPE TWO

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

Retirement Plan Design Changes

Known Bills:

- DB Plan Closure

Retirement Comm. 10-31-22:

- <https://ndlegis.gov/assembly/67-2021/interim/23-0280-02000.pdf>
- Funding Proposals

Anticipated Topics:

- Plan Design Changes.
 - PERS
 - TFFR

- GPR COMMITTEE REC:

- Neutral

- Parameters

Impact to Investment Program
from Plan Design Changes and
Funding Proposals.

N O R T H
Dakota

Be Legendary.™

MEMORANDUM

TO: SIB
FROM: Jan Murtha, Executive Director
DATE: November 17, 2022
RE: Securities Litigation Committee

I. Introduction:

Due to the impending retirement of Mr. Klipfel a vacancy on the Securities Litigation Committee will occur immediately following the November SIB meeting. The committee is scheduled to meet on December 13th prior to the next SIB meeting. While the committee charter states that vacancies may be filled at the first regular meeting following the vacancy, staff is requesting the Chair to appoint a replacement for Mr. Klipfel prior to the next scheduled committee meeting.

II. SIB Governance Manual B-6 on Standing Committees states:

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.

III. The committee charter states:

The Committee will consist of the Executive Director of RIO, one member of RIO fiscal or investment staff, RIO general counsel, and two members of the SIB appointed by the Chair. Membership on the Committee will be for one year or termination of term on the SIB. Vacancies will be filled by the SIB Chair at the first scheduled meeting following the vacancy. There will be no limit to the number of terms served on the Committee.

IV. Current Committee members are:

Land Commissioner Joe Heringer – Chair;
WSI Director Bryan Klipfel;
Assistant Attorney General Dean DePountis;
RIO Chief Investment Officer Scott Anderson; and
RIO Executive Director: Jan Murtha.

As stated in the Securities Litigation Committee Charter, Committee membership will be for one year or termination of term on the SIB. Vacancies will be filled by the SIB Chair at the first scheduled meeting following the vacancy. There will be no limit to the number of terms served on the Committee.

BOARD ACTION. Chair to appoint replacement for Mr. Klipfel.

MEMORANDUM

TO: State Investment Board
FROM: Ryan K. Skor, CFO/COO
DATE: November 18, 2022
RE: Quarterly Budget & Expense Report

Enclosed are the following quarterly budget and expense reports for the quarter ended September 30, 2022:

- Budget Appropriation Status Report
- Expenditure Summary Report
- PAS Modernization Project Status Report

BOARD ACTION REQUESTED: Board Acceptance.

BUDGET APPROPRIATION STATUS

AS OF SEPTEMBER 30, 2022

	<u>2021-2023 BUDGET</u>	<u>ADJUSTED APPROPRIATION</u>	<u>BIENNIUM TO DATE ACTUAL</u>	<u>EXPENDITURES</u>		
				<u>BUDGET AVAILABLE</u>	<u>% BUDGET AVAILABLE</u>	<u>% OF BIENNIUM REMAINING</u>
SALARIES AND BENEFITS	\$ 5,103,977.00 *	\$ 6,841,839.00	\$ 3,023,054.81	\$ 3,818,784.19	55.82%	37.50%
OPERATING EXPENDITURES	3,567,403.00 *	3,642,403.00	1,077,341.43	2,565,061.57	70.42%	37.50%
CAPITAL ASSETS	6,300,000.00	6,300,000.00	934,912.50	5,365,087.50	85.16%	37.50%
CONTINGENCY	100,000.00	100,000.00	83,531.81	16,468.19	16.47%	37.50%
TOTAL	<u><u>\$ 15,071,380.00</u></u>	<u><u>\$ 16,884,242.00</u></u>	<u><u>\$ 5,118,840.55</u></u>	<u><u>11,765,401.45</u></u>	<u><u>69.68%</u></u>	<u><u>37.50%</u></u>

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

The adjusted appropriation includes additional amounts appropriated during the Special Legislative Session in November 2021.

EXPENDITURE REPORT

AS OF AND FOR THE QUARTER ENDED SEPTEMBER 30, 2022

	<u>INVESTMENT</u>	<u>RETIREMENT</u>	<u>QUARTERLY TOTALS</u>	<u>FISCAL YEAR TO - DATE</u>	<u>BIENNIUM TO - DATE</u>
<u>CONTINUING APPROPRIATIONS</u>					
INVESTMENT EXPENDITURES	\$ 0	\$ 0	\$ 0	\$ 0	\$ 75,493,703
MEMBER CLAIMS					
1. ANNUITY PAYMENTS	0	63,866,807	63,866,807	63,866,807	308,571,902
2. REFUND PAYMENTS	0	2,115,833	2,115,833	2,115,833	9,258,193
TOTAL MEMBER CLAIMS	0	65,982,639	65,982,639	65,982,639	317,830,095
OTHER CONTINUING APPROPRIATIONS	805	24,322	25,127	25,127	872,476
TOTAL CONTINUING APPROPRIATIONS	805	66,006,962	66,007,767	66,007,767	394,196,274
<u>BUDGETED EXPENDITURES</u>					
1. SALARIES & BENEFITS					
SALARIES	289,078	212,603	501,682	501,682	2,209,817
OVERTIME/TEMPORARY	16,903	20,858	37,761	37,761	74,149
TERMINATION SALARY & BENEFITS	0	0	0	0	0
FRINGE BENEFITS	87,313	79,991	167,304	167,304	739,089
TOTAL SALARY & BENEFITS	393,294	313,453	706,747	706,747	3,023,055
2. OPERATING EXPENDITURES					
DATA PROCESSING	16,343	70,082	86,425	86,425	423,455
TELECOMMUNICATIONS - ISD	948	945	1,893	1,893	11,592
TRAVEL	3,235	1,772	5,007	5,007	43,540
IT - SOFTWARE/SUPPLIES	33	34	67	67	109
POSTAGE SERVICES	651	3,354	4,004	4,004	29,790
IT - CONTRACTUAL SERVICES	506	42,176	42,682	42,682	119,243
BUILDING/LAND RENT & LEASES	10,228	7,817	18,044	18,044	127,315
DUES & PROF. DEVELOPMENT	1,048	2,247	3,294	3,294	24,001
OPERATING FEES & SERVICES	354	722	1,076	1,076	41,898
REPAIR SERVICE	0	0	0	0	654
PROFESSIONAL SERVICES	0	9,529	9,529	9,529	233,204
INSURANCE	669	571	1,240	1,240	2,432
OFFICE SUPPLIES	11	119	130	130	2,145
PRINTING	4	595	599	599	8,254
PROFESSIONAL SUPPLIES & MATERIALS	166	528	694	694	2,321
MISCELLANEOUS SUPPLIES	81	30	110	110	1,500
IT EQUIPMENT UNDER \$5000	6	58	65	65	305
OTHER EQUIP. UNDER \$5000	0	0	0	0	0
OFFICE EQUIP. & FURNITURE UNDER \$5000	0	0	0	0	399
TOTAL OPERATING EXPENDITURES	34,282	145,761	180,044	180,044	1,077,341
3. CAPITAL ASSETS	0	0	0	0	934,913
4. CONTINGENCY	2,887	0	2,887	2,887	83,532
TOTAL BUDGETED EXPENDITURES	430,463	459,214	889,678	889,678	5,118,841
TOTAL EXPENDITURES	\$ 430,463	\$ 66,441,854	\$ 66,897,444	\$ 66,897,444	\$ 399,315,115

EXPENDITURE REPORT

AS OF AND FOR THE QUARTER ENDED SEPTEMBER 30, 2022

PAS PROJECT - UNEXPENDED PORTION CARRIED FORWARD TO 2021-23 BIENNIUM

	2019-2021 Biennium Approved Budget	2019-2021 Biennium Actual	Carryover to 2021-2023 Biennium	2021-2023 Biennium Actual *	Total PAS Project to Date
TEMPORARY SALARIES	50,000	0	50,000	0	0
IT - DATA PROCESSING (NDIT PROJECT MGMT)	775,000	34,025	740,975	47,737	81,763
PROFESSIONAL SERVICES	1,875,000	297,099	1,577,901	353,352	650,451
CAPITAL ASSETS	6,300,000	0	6,300,000	934,913	934,913
TOTAL PAS PROJECT BUDGET	9,000,000	331,125	8,668,875	1,336,002	1,667,126

* The amounts in the 2021-2023 actual column are included in the totals on the Expenditure Report on the previous page.

MEMORANDUM

TO: State Investment Board
FROM: Chad R. Roberts, DED/CRO
DATE: October 24, 2022
RE: TFFR Ends Report 1st QTR 2023 ending September 30, 2022

This report highlights exceptions to the normal operating conditions of the TFFR program for the period spanning July 1, 2022, through September 30, 2022.

Advertisement for the newly created position of Communications and Outreach Director was posted with an expected onboarding of late October or early November for the selected candidate.

Advertisement for the Accounting Intern for employer reporting was posted to replace the previous intern who completed college. Onboarding is expected to be in the late November early timeframe for the selected candidate.

Requirements sessions for the “Pioneer” project were completed in early September. Pilot 1, the first of four parts in the design phase, was begun in mid-September with an anticipated completion date of December 16, 2022.

A NDIT Business Analyst that supported RIO operations resigned in September to take another position. NDIT is supplementing the workload with additional assets until a replacement is hired. A replacement is expected to be in place in late November.

An RFP was issued for the actuarial audit and the vendor, GRS, was selected. A kickoff meeting was scheduled for early October to begin the study.

The TFFR GPR Committee met in September 2022 and established a 2023 workplan. Included in that workplan is a full review of the TFFR policy manual with the delivery of all recommended changes in 4th QTR of 2023 to the full TFFR Board of Trustees.

Executive Director Jan Murtha provided testimony at the September Retirement Committee regarding impact to TFFR plan relating to the proposed PERS defined benefit plan closure legislation.

BOARD ACTION REQUESTED: Board Acceptance.

MEMORANDUM

TO: State Investment Board

FROM: Sara Seiler, Supervisor of Internal Audit

DATE: November 16, 2022

SUBJECT: Audit Activities Quarterly Update

The SIB Audit Committee met on November 15, 2022. The SIB Audit Committee reviewed and approved the first quarter audit activities and receive an update on current audit activities.

The following reports were presented and approved:

1. June 30, 2022, Fiscal Year Financial Statement Audit
 - a. 2022 Financial Statement Audit Results
 - i. Unmodified “clean” opinion
 - ii. No material weaknesses were identified
 - iii. No significant deficiencies were identified
 - b. GASB 68 Schedule Audit
 - i. Tested 12 separate employers, 137 total employees tested
 1. One employer with a finding – immaterial
 - ii. Expected to issue final report end of 2022
2. Payroll Audit
 - a. Reviewed agency’s payroll from time period January 2022-August 2022
 - b. Recommendation
 - i. Annual training for managers and staff on the Overtime Policy and procedures.
3. File Maintenance Audit
 - a. Reviewed various retirement processes, transactions, and information for accuracy
 - b. Recommendations
 - i. Review death, purchases, refunds, and retirements for FY 2021 & 2022 for accuracy and documentation
 - ii. Ensure all staff is adequately cross trained on policies and procedures
4. Internal Audit Business Process
 - a. Issued RFP to evaluate internal audit and its future needs
 - b. Weaver & Tidwell, LLP was awarded the bid
 - i. Kickoff is tentatively scheduled for November 2022

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/sibauditmat20221115.pdf>

MEMORANDUM

TO: SIB
FROM: Jan Murtha, Executive Director
DATE: November 9, 2022
RE: Executive Limitations/Staff Relations

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

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

Employee Title	Status
TFFR Compliance Officer-Retirement Accountant.	2 FTE's attributed to the retirement program were reorganized effective November 2022 and represent the final phase of a reorganization plan that had been initiated in September 2021. The existing Employer Services Coordinator position was reorganized into a TFFR Compliance Officer position (with the same employee remaining in that FTE), and the vacant full-time Member Specialist position is pending reclassification into a Retirement Accountant position – currently pending HRMS review. The duties of the Membership Specialist position are currently being performed by a temporary employee. This reorganization was prompted by system improvements resulting from the Pioneer Project.
Chief Risk Officer	Interviews Scheduled.
Sr. Investment Officer	Starting November 2022.
Sr. Investment Officer	Offer Accepted, start date pending.
Investment Officer	Starting November 2022.
Risk Officer	Starting November 2022.
Communications/Outreach Director	Started November 7, 2023.
Accounting Intern	Offer pending.

2. Current Project Activities/Initiatives:

- **Legacy Fund Asset Allocation Study** – RVK continues its work on the Legacy Fund Asset Allocation Study and provided recommendations for changes to the Legacy Fund Investment Policy Statement (IPS) and recommendations regarding future program considerations at the October meeting. The Advisory Board will finalize it's requested changes to the IPS at its next meeting and those changes will be presented to the SIB thereafter.
- **TFFR PAS Project** (hereinafter TFFR "Pioneer Project")– The TFFR Pioneer Project continues with implementation consistent with the project plan. Currently the project is in an elaboration phase involving review of system components. The amount of time spent on the project by various staff members currently varies from 5 to 25 hours or more per week.
- **Northern Trust Initiative** – In an effort to enhance the infrastructure for the investment program the Investment and Fiscal teams are leading an initiative to coordinate with Northern

Trust for additional functionality/capabilities.

- **Audit Consultant RFP:** In September staff issued an RFP for Audit consultant services to assist with the development of additional internal audit business practices to support program evolution consistent with the agencies strategic plan. A notice of award has been issued and the finalization of the contract is currently pending.

3. RIO Board & Committee Presentations – November 1 through November 30, 2022

Staff provided or is scheduled to provide the following presentations to Boards and Committees during the above referenced time period.

- **SIB Investment Committee – 11/10/22**
- **TFFR GPR Committee – 11/10/22**
- **SIB Audit Committee – 11/15/22**
- **SIB GPR Committee – 11/16/22**
- **TFFR Board – 11/17/22**
- **SIB meeting 11/18/22**

BOARD ACTION REQUESTED: Board Acceptance.

ND State Investment Board Resolution
In Appreciation of
Bryan Klipfel

WHEREAS, Bryan Klipfel has served as the Director of WSI and a member of the State Investment Board since 2009; and

WHEREAS, Bryan Klipfel has diligently carried out his duties and responsibilities as a member of the SIB and fiduciary of the SIB Program; and

WHEREAS, Bryan Klipfel has been a valued and dedicated member of the SIB in helping maintain the integrity and stability of the SIB Program.

NOW THEREFORE, BE IT RESOLVED that Bryan Klipfel be duly recognized by the SIB for his years of unselfish dedication to the State of North Dakota through his service on the State Investment Board.

DATED this 18th day of November 2022

On Behalf of the SIB

Lt. Governor Brent Sanford, Chair

Votes

Date