New Hampshire Retirement System (NHRS)
Investment Committee Meeting

(Certain portions of the meeting may be held in a Non-Public Session)

Agenda
Tuesday, January 9, 2024

12:30 pm Call to Order

12:30 pm Approve Minutes **[Tab 1]**
- December 12, 2023, Public Meeting Minutes *(Action Expected)*

12:35 pm Comments from the Chief Investment Officer **[Tab 2]**
- Portfolio: Performance & Manager Update(s)
- Holdings Update
- Work Plan *(Action Expected)*

12:45 pm Callan Annual Private Debt and Equity Review **[Tab 3]**

1:30 pm The Townsend Group Presentation: Semi-Annual Portfolio Review **[Tab 4]**
- Review of Investment Plan for Calendar Year 2023
- Review of Investment Plan for Calendar Year 2024 *(Action Expected)*

2:15 pm Adjournment

Informational Materials **[Separate Binder]**
- Callan Monthly Review – November 2023
- Asset Allocation Update
- Private Debt & Equity Summary
- 2023 Proxy Voting Summary
- FY 2023 Comprehensive Annual Investment Report

Next Meeting: Tuesday, February 13, 2024

NOTE: The draft of these minutes from the December 12, 2023, Independent Investment Committee meeting is subject to approval and execution at a subsequent meeting.

Independent Investment Committee Meeting
December 12, 2023
DRAFT Public Minutes

New Hampshire Retirement System
54 Regional Drive
Concord, NH 03301

Committee Members:

- Maureen Kelliher, CFA, *Chair*
- Brian Bickford, CFA, CFP®, *Member*
- Christine Clinton, CFA, *Member*
- Mike McMahon, *Non-Voting Member*
- Paul Provost, CFP ®, *Member*

Staff:

- Jan Goodwin, *Executive Director*
- Raynald Leveque, *Chief Investment Officer*
- Gregory Richard, CFA, *Senior Investment Officer*
- Jesse Pasierb, *Investment Operations Analyst*
- Jonathan Diaz, *Investment Officer*
- Eileen Demers, *Consultant, Robert Half*
- Tim Crutchfield, *Deputy Director, and Chief Legal Counsel (by video conference)*
- Heather Hoffacker, *Internal Auditor (by video conference)*
- Marty Karlon*, Director of Communications (by video conference)*

Guests:

- Jay Kloepfer, *Executive Vice President, Callan LLC (by video conference)*
- Angel Haddad, *Senior Vice President, Callan LLC*
- Catherine Beard, *Senior Vice President, Callan LLC (by video conference)*
- Britt Murdoch, *Vice President, Callan LLC (by video conference)*
- Constantine Braswell, *Vice President, Callan LLC (by video conference)*
- Brian D'Arcy, *Partner, Sixth Street Partners LLC (by video conference)*
- Kate Thomas, *Managing Director, Sixth Street Partners LLC*

Chair Kelliher called the meeting to order at 12:30 PM.

On a motion by Mr. Provost, seconded by Mr. Bickford, the Independent Investment Committee (Committee) unanimously approved the public minutes of the November 14, 2023, Committee meeting as presented.

Mr. Leveque reviewed investment returns through recent periods and referred to the Callan Monthly Review for the period ending October 31, 2023. He shared an update on holdings within the NHRS portfolio. He confirmed that all allocations are in line with their approved ranges. Mr. Leveque updated the Committee on total plan liquidity, Russian holdings, and the Work Plan.

On a motion by Mr. Bickford, seconded by Ms. Clinton, the Committee unanimously approved contract renewals with Abel Noser and Townsend each for a two-year term through December 31, 2025.

Next, Mr. Leveque and Ms. Beard provided an overview of the Sixth Street TAO Global private credit opportunity. They discussed the considerations and merits of investing in Sixth Street TAO Global. Following this, the Committee heard from representatives of Sixth Street.

Ms. Thomas provided an overview of Sixth Street and its organizational structure. She detailed Sixth Street's organization history, investment strategy and process and closed by discussing TAO Global key merits. Mr. D'Arcy discussed case studies of investments in prior Sixth Street TAO funds, the TAO Global investment thesis, and outlined past fund performance.

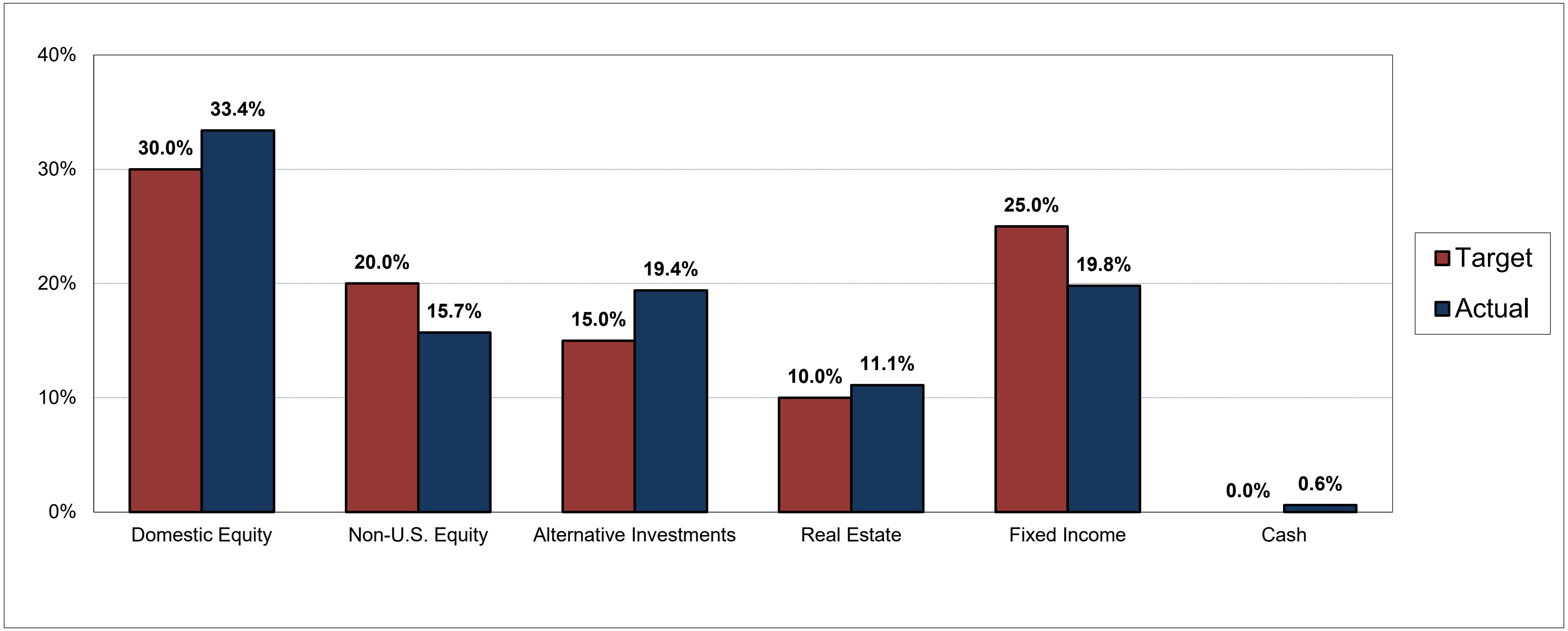
The Committee discussed the presentation made by Sixth Street and the opportunity to invest in TAO Global On a motion by Ms. Clinton, seconded by Mr. Bickford, the Committee unanimously voted to commit $75 million to Sixth Street TAO Global, subject to contract and legal review.

On a motion by Ms. Clinton, seconded by Mr. Bickford, the Committee unanimously voted to adjourn the meeting.

The meeting adjourned at 1:45 PM.

Current Status

Class Targets vs. Actual Allocation as of November 30, 2023 (Preliminary)



Source: NHRS

Asset Class Allocations Relative to Policy Targets and Ranges

As of November 30, 2023 (preliminary)

Asset Class	Range	Allocation Target	Actual	Variance	Objective	Comments
Domestic Equity	20 - 40%	30.0%	33.4%	3.4%	**Monitor**	No immediate action needed.
Non-U.S. Equity	15 - 25%	20.0%	15.7%	-4.3%	**Monitor**	Below target allocation but within approved allocation range. Continue to Monitor.
Alternative Investments (AI)[1]	5 - 25%	15.0%	19.4%	4.4%	**Monitor**	No immediate action needed.
Real Estate (RE)[1]	5 - 20%	10.0%	11.1%	1.1%	**Monitor**	Redemption from select open-end funds in process
Fixed Income	20 - 30%	25.0%	19.8%	-5.2%	**Monitor**	Below target allocation but within approved allocation range when cash is included. Continue to Monitor.
Cash	NA	0.0%	0.6%	0.6%	**No Action**	Minimal cash balance to provide liquidity, as needed, for annuities, capital calls, and other plan needs.
		100.0%	100.0%	0.0%		

[1]As reported on the November 30, 2023 Monthly Review

Source: NHRS

The table below details the rates of return for the fund's asset classes over various time periods ended November 30, 2023. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

Composite	Total Fund Weighting As of 11/30/2023	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
		Net of Fees Returns for Periods Ended November 30, 2023							
Total Domestic Equity	**30.81%**	**8.63%**	**-0.36%**	**1.15%**	**14.36%**	**8.16%**	**7.71%**	**9.99%**	**9.83%**
Domestic Equity Benchmark(1)		*9.32%*	*1.36%*	*2.96%*	*19.61%*	*12.61%*	*8.08%*	*11.48%*	*11.28%*
Excess Return		*-0.70%*	*-1.72%*	*-1.82%*	*-5.26%*	*-4.45%*	*-0.37%*	*-1.49%*	*-1.45%*
Total Non US Equity	**18.28%**	**8.68%**	**0.38%**	**0.21%**	**13.90%**	**12.59%**	**2.32%**	**5.33%**	**3.79%**
Non US Equity Benchmark(2)		*9.00%*	*1.20%*	*0.56%*	*10.08%*	*9.26%*	*1.67%*	*5.06%*	*3.41%*
Excess Return		*-0.32%*	*-0.82%*	*-0.36%*	*3.81%*	*3.33%*	*0.65%*	*0.27%*	*0.37%*
Total Fixed Income	**19.84%**	**4.60%**	**0.52%**	**0.05%**	**2.87%**	**2.75%**	**-3.08%**	**1.79%**	**2.09%**
Bloomberg Capital Universe Bond Index		*4.50%*	*0.47%*	*-0.03%*	*2.29%*	*1.94%*	*-4.05%*	*1.00%*	*1.65%*
Excess Return		*0.10%*	*0.05%*	*0.08%*	*0.58%*	*0.81%*	*0.97%*	*0.79%*	*0.44%*
Total Cash	**0.60%**	**0.47%**	**1.38%**	**2.29%**	**4.73%**	**5.09%**	**2.10%**	**1.91%**	**1.29%**
3-Month Treasury Bill		*0.45%*	*1.36%*	*2.22%*	*4.53%*	*4.91%*	*2.00%*	*1.82%*	*1.21%*
Excess Return		*0.02%*	*0.02%*	*0.06%*	*0.20%*	*0.19%*	*0.11%*	*0.09%*	*0.08%*
Total Real Estate (Q2)*	**11.11%**	**0.08%**	**-1.16%**	**-0.19%**	**-8.36%**	**-7.11%**	**11.45%**	**8.99%**	**10.68%**
Real Estate Benchmark(3)		*-0.71%*	*-2.36%*	*-4.25%*	*-12.26%*	*-12.17%*	*6.47%*	*5.00%*	*7.47%*
Excess Return		*0.79%*	*1.20%*	*4.06%*	*3.91%*	*5.07%*	*4.98%*	*3.99%*	*3.22%*
Total Private Equity (Q2)*	**14.50%**	**0.02%**	**-0.68%**	**-0.01%**	**5.26%**	**3.12%**	**19.62%**	**13.71%**	**12.23%**
Private Equity Benchmark(4)		*-1.73%*	*8.95%*	*10.87%*	*28.53%*	*17.21%*	*13.03%*	*14.19%*	*16.33%*
Excess Return		*1.74%*	*-9.63%*	*-10.88%*	*-23.27%*	*-14.10%*	*6.60%*	*-0.48%*	*-4.10%*
Total Private Debt (Q2)*	**4.86%**	**0.02%**	**-1.32%**	**-0.01%**	**3.56%**	**4.96%**	**8.47%**	**5.39%**	**6.75%**
Private Debt Benchmark(5)		*0.81%*	*4.39%*	*4.95%*	*13.25%*	*9.52%*	*4.11%*	*3.63%*	*6.66%*
Excess Return		*-0.79%*	*-5.71%*	*-4.97%*	*-9.69%*	*-4.56%*	*4.36%*	*1.76%*	*0.09%*
Total Fund Composite	**100.00%**	**5.02%**	**-0.22%**	**0.40%**	**7.00%**	**4.91%**	**6.27%**	**7.44%**	**6.96%**
Total Fund Benchmark(6)		*5.52%*	*1.77%*	*2.03%*	*10.58%*	*7.24%*	*4.25%*	*7.34%*	*7.17%*
Excess Return		*-0.50%*	*-1.99%*	*-1.63%*	*-3.59%*	*-2.32%*	*2.02%*	*0.10%*	*-0.20%*

(1) The Domestic Equity Benchmark is the Russell 3000 Index as of 7/1/2021.
(2) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.
(3) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.
(4) The Private Equity Benchmark is the Russell 3000 Index + 2% lagged 1 quarter as of 7/1/2022.
(5) The Private Debt Benchmark is (50% MStar LSTA Leveraged Loan 100 Idx + 50% Bloomberg High Yield Index) + 1% lagged 1 quarter as of 7/1/2022.
(6) Current Month Target = 30.0% Russell 3000 Index, 25.0% Bloomberg Universal, 20.0% MSCI ACWI ex-US, 10.0% NCREIF NFI-ODCE Value Weight Net lagged 3 months, 10.0% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg High Yield Corp lagged 3 months+1.0% and 2.5% MStar LSTA Lev Loan 100 lagged 3 months +1.0%.
(7) For the trailing 25 year period ended 11/30/23, the Total Fund has returned 6.85% versus the Total Fund Custom Benchmark return of 6.53%.
*Real Estate and Alternatives market values reflect current custodian valuations, which are typically lagged approximately 1 quarter.

FYTD *Fiscal Year to Date*
CYTD *Calendar Year to Date*
LTM *Last Twelve Months*

NHRS
New Hampshire Retirement System

To: Investment Committee

From: Raynald Leveque, Chief Investment Officer

Date: January 9, 2024

Re: **Work Plan / Recap of December Investment Committee Meeting**

Item: Action: ☒ Discussion: ☐ Informational: ☐

The attached six-month Work Plan summarizes the high-level tasks and projects being addressed by the Investment Committee and Staff.

A recap of the December Investment Committee meeting is as follows:

- Staff presented an update on the monthly performance of the public market asset classes of the NHRS, rebalancing, holdings, and the Work Plan.
- The Committee unanimously approved contract renewals with Abel Noser and Townsend each for a two-year term through December 31, 2025.
- The Committee heard a presentation from private debt manager Sixth Street and unanimously voted to commit $75 million to Sixth Street TAO Global, subject to contract and legal review.

NHRS
New Hampshire Retirement System

To: Investment Committee
From: Raynald Leveque, Chief Investment Officer
Date: January 9, 2024
Re: **Six-Month Investment Work Plan**
Item: Action: ☒ Discussion: ☐ Informational: ☐

As time progresses, the Work Plan will be updated to reflect tasks and initiatives associated with the current and subsequent quarter. Items completed over the fiscal year will also be included.

Presentations are displayed using the following format:
IC meeting date – Pertinent details

Updates from the prior month are highlighted in **bold**.

3rd Quarter FY 2024: January – March 2024

Investment Program
- Educational session on total plan asset classes
- Discuss macroeconomic investment themes that may impact the portfolio
  January – Investments Strategic Plan Presentation
  February – Callan Capital Markets Assumptions

Marketable Investments
- Schedule presentations of current investment managers
- Monitor marketable assets portfolio

Alternative Investments
- January – Callan, Semi-Annual Review of 2023 Private Debt & Private Equity Investment Plan
  January – Private Debt
- **February – Callan, 2024 Pacing Plan for Private Debt & Private Equity**
  - Approve 2024 Pacing Plan for Private Debt & Private Equity

Real Estate
- January - Townsend, Semi-Annual Review of the Real Estate Investment Plan
  - Approve 2024 Pacing Plan for Real Estate

Vendors
- February – Abel Noser, trading cost analysis

4th Quarter FY 2024: April – June 2024

Investment Program
- **June – Strategic Asset Allocation Update (Implementation Plan)**

Marketable Investments
- Schedule presentations of current investment managers
  April – Artisan Partners, Non-U.S. Equity Contract Renewal
  April – Causeway Capital Management, Non-U.S. Equity Contract Renewal
  June – BlackRock, U.S. Equity, S&P 500 Index Contract Renewal (*no presentation*)
- Monitor and execute structure of marketable assets portfolio

Alternative Investments
- Continue implementation of 2024 Private Debt & Equity Strategic Plan
  June - Callan, semi-annual update on the Private Debt & Equity program
- Review Private Debt & Equity investments

Real Estate
- Continue implementation of 2024 Real Estate Investment Plan
  June - Townsend, semi-annual update on the 2024 Real Estate Investment Plan

Vendors
- **April – ISS, Class Action Services Contract Renewal (*no presentation*)**

Completed Items – Fiscal Year 2024

2nd Quarter FY 2024: October – December 2023

Investment Program
- October - 2024 Investment Committee meeting schedule, unanimous approval
- November - Annual Review of Investment Manual
- November - FY 2023 Comprehensive Annual Investment Report, unanimous approval
- of Draft CAIR for submission to Board in December subject to inclusion of investment section from the Annual Comprehensive Financial Report
- November – NHRS Strategic Asset Allocation Review

Marketable Investments
- Schedule presentations of current investment managers
  October - Wellington, Non-U.S. Equity Contract Renewal unanimous five-year renewal vote in November.
- Monitor marketable assets portfolio.

Alternative Investments
- Continue implementation of the 2023 Private Debt & Equity Investment Plan
  December – Private Debt

Real Estate
- Continue implementation of the 2023 Real Estate Investment Plan
  December - Townsend Contract Renewal (*no presentation)*

Vendors

- December – Abel Noser, Trading Cost Analysis Contract Renewal (*no presentation*)

<u>1st Quarter FY 2024: July – September 2023</u>

Investment Program

- Discuss macroeconomic investment themes that may impact the portfolio
  July – J.P. Morgan and BlackRock presented

Marketable Investments

- Schedule presentations of current investment managers
  September – IR+M, Fixed Income contract renewal, unanimous five-year renewal vote in October
- Monitor and execute structure of marketable assets portfolio
  September - Callan, Marketable Investments fiscal year portfolio review

Alternative Investments

- Continue implementation of 2023 Private Debt & Equity Strategic Plan
  August – Ares, Pathfinder II, Private Debt, unanimous approval of $50 million commitment
  September – Ares, Pathfinder II, additional commitment of $25 million

Real Estate

- Continue implementation of 2023 Real Estate Investment Plan

Angel G. Haddad is a senior vice president in Callan's New Jersey consulting office. Angel works with a variety of clients, including corporate and public defined benefit plans, corporate defined contribution plans, endowments, and foundations. His client responsibilities include strategic planning, plan implementation, investment monitoring, and coordination of special client projects. Angel is a member of Callan's Client Policy Review Committee and is a shareholder of the firm.

Prior to joining Callan in 2012, Angel worked at Fischer, Francis, Trees & Watts, Inc., a specialty fixed income global investment management firm, as a relationship manager focusing on central bank and official institution clients. Prior to this, Angel was a principal with Mercer Investment Consulting, Inc., where he spent 11 years working with corporate defined benefit and defined contribution plans, endowments, and foundations in the U.S. and Caribbean, and a large sovereign wealth fund in South America.

Angel earned a BBA and MBA from the City University of New York - Baruch College, the Zicklin School of Business.

Britton M. Murdoch is a vice president in Callan's New Jersey consulting office. He works with a variety of fund sponsors, including corporate, public, endowment, and foundation clients. His responsibilities include strategic planning, implementation, investment manager evaluation and monitoring, education, business development, and other special projects. Britt is a member of Callan's Defined Contribution Committee and Public Defined Contribution team. He is also a shareholder of the firm.

Prior to joining Callan in 2014, Britt worked as an associate at J.P. Morgan Private Bank, where he was responsible for managing and developing private client relationships. In this role, he provided daily support to clients, performed annual reviews, and managed new client prospecting and integration. Britt began his career as a financial adviser and held the Financial Industry Regulatory Authority (FINRA) Series 6, 7, and 63 licenses.

Britt earned a BS in business administration from the University of Delaware, where he was the captain of the men's golf team.

Pete Keliuotis, CFA, is an executive vice president and the head of Callan's Alternatives Consulting group. He joined Callan in 2019 to lead the private equity, private credit, and hedge fund consulting teams, in addition to advising clients' alternatives investment portfolios. Pete is a member of Callan's Alternatives Review, Client Policy Review, Management, and Editorial committees. He is a shareholder of the firm.

Prior to joining Callan, Pete was a senior managing director of Cliffwater LLC and a senior member of their portfolio advisory team, specializing in alternative investing for institutional clients. Prior to Cliffwater, Pete was a managing director and the CEO of Strategic Investment Solutions, where he led the general and private markets consulting teams and advised several large institutional investors. Previous experience also includes Mercer Investment Consulting, where he was a principal and senior consultant, Hotchkis and Wiley in Los Angeles, and Northern Trust Company in Chicago.

Pete earned an MBA in analytic finance from the University of Chicago Booth School of Business and a BS in economics from the University of Illinois at Urbana-Champaign. He is a holder of the right to use the Chartered Financial Analyst® designation.

David Smith, CFA, CTP, is a senior vice president in Callan's Alternatives Consulting group. He joined Callan in 2021, focusing on private equity where his role includes manager research, due diligence, client servicing, strategic planning, and portfolio monitoring.

Prior to joining Callan, David was the treasurer for Syracuse University, where he was responsible for treasury and investment operations management, and the strategic vision for the Endowment Administration, Debt Financing, Bursar, Student Debt, and Cash Operations departments. Prior to Syracuse University, he was a partner at the private equity firm Bay Hills Capital Management, where he provided executive leadership to clients across North American lower-middle market buyout segment including primary and secondary fund investments and co-investments.

David earned an MBA from the Syracuse University School of Management and a BBA from Western Illinois University. He is a holder of the right to use the Chartered Financial Analyst® designation and the Certified Treasury Professional designation.

Callan

January 9, 2024

New Hampshire Retirement System (NHRS)

Annual Alternatives Portfolio Review

Pete Keliuotis
Alternatives Consulting

David Smith
Alternatives Consulting

Catherine Beard
Alternatives Consulting

Aidan Davison
Alternatives Consulting

NHRS Annual Alternatives Portfolio Review

- Executive Summary
- Private Equity and Private Credit Market Review
- Private Equity Portfolio Overview
- Private Credit Portfolio Overview

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Executive Summary

Executive Summary

Overview of NHRS Alternatives Portfolio

- As of June 30, 2023 NHRS had a target of 15% to Alternatives, including 10% to Private Equity and 5% to Private Credit.
  - *As of June 30, 2023 the exposure to Alternatives was 19.2%, which was within the allocation range between 5-25%.*
  - *Private Equity exposure was 14.2% and Private Credit was 5.0%.*
- Through 2Q 2023, the Alternatives portfolio has made $122 million in contributions and received $130 million in distributions. Cash flow activity has been lighter relative to 2022, although the portfolio remained cash flow positive in 2023.
- The Alternatives portfolio depreciated 3.3% during 1H 2023, which was in-line with the performance of the broader private markets. Over this period distributions represented about 5% of starting NAV. For comparison, the distribution yield for the calendar year 2022 was 22%.

Total Alternatives

	12/31/2022	06/30/2023	YTD Change
Committed	$3,616,775	$3,656,030	**$ 39,255**
Paid-In	$3,229,925	$3,351,631	**$ 121,705**
Uncalled	$907,191	$834,032	**$(73,159)**
Distributed	$2,396,415	$2,526,628	**$ 130,213**
NAV	$2,158,939	$2,223,918	**$64,978**
DPI	0.74x	0.75x	**0.01x**
RVPI	0.67x	0.66x	**(0.01x)**
TVPI	1.41x	1.42x	**0.01x**
IRR	10.96%	10.76%	**(0.20%)**

	2023 YTD
Total Appreciation	**(3.3%)**
Distribution Yield	**5.4%**
Net Cash Flow Yield	**0.4%**

Executive Summary

Summary of 2023 Commitments

- In 2023, $130 million was approved for commitments to private equity strategies. One commitment was with an existing GP and two commitments were approved for new GP relationships.
  - *The 2023 vintage commitments are across buyout strategies, with diversification by industry*
  - *NHRS established co-investment separate account vehicles alongside fund commitments to Apollo X and HIG Advantage II(3), which will result in a lower fee structure and is expected to further enhance the future return potential of NHRS' commitments to those firms.*
- In 2023, $200 million was approved for commitments to private credit strategies, all to new GPs, further diversifying the portfolio.
  - *The 2023 vintage commitments included a specialty finance strategy (Ares Pathfinder II) and two multi-sector strategies (SVP Capital Solutions II and Sixth Street TAO).*

2023 Vintage Private Equity Commitments

2023 Commitment Total:	**$130 million**
American Industrial Partners VIII (2)	$50 million
Apollo X / Co-Investment SMA	$40 million / $40 million
HIG Advantage II / Co-Investment SMA (1), (2), (3)	$50 million / $50 million

2023 Vintage Private Credit Commitments

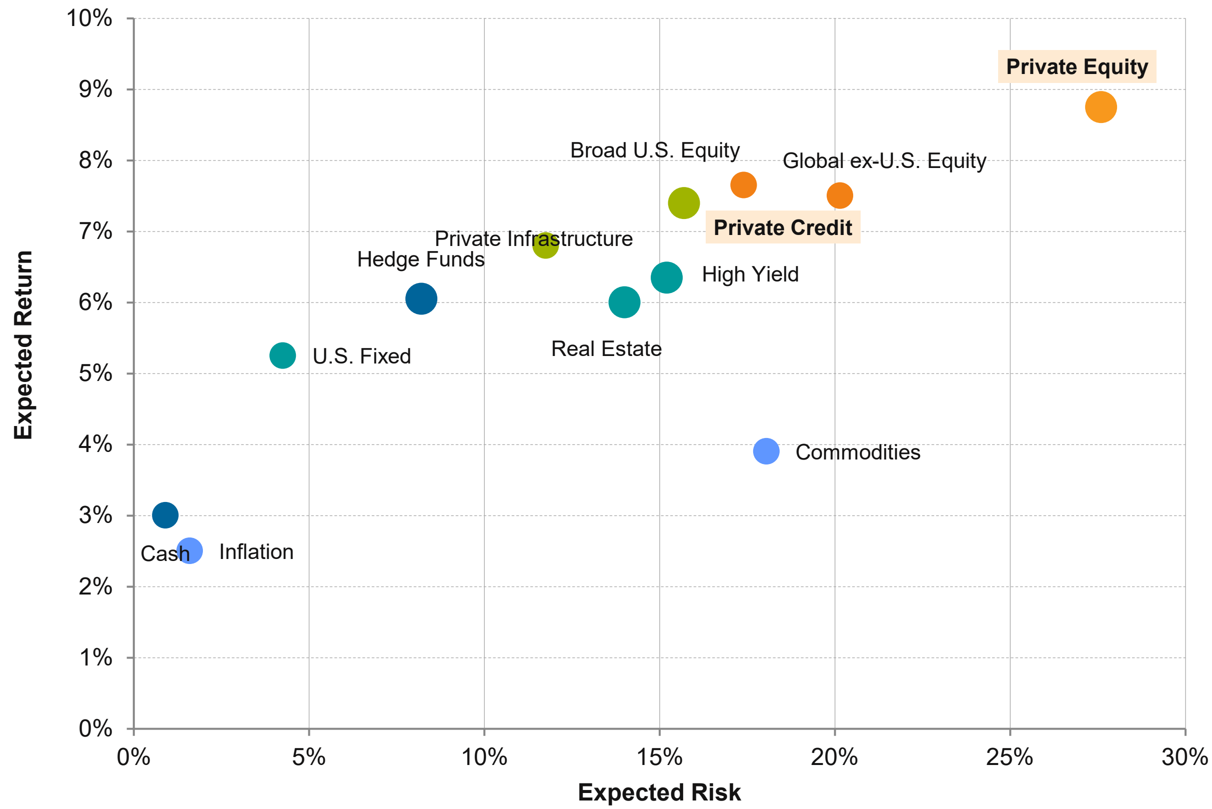
2023 Commitment Total:	**$200 million**
Ares Pathfinder II (1), (2)	$75 million
SVP Capital Solutions Fund II (1), (2)	$50 million
Sixth Street TAO (1), (2)	$75 million

(1) First capital call expected in 2024
(2) New GP relationship for NHRS
(3) Pending IIC Approval

Alternative Investment Risk and Return Expectations

2024–2033 Capital Market Assumptions

- Callan expects private markets to outperform public market equivalents due to illiquidity and complexity.
- Private Equity expected return is **8.75%**:
  130 bps above U.S. Equity and 145 bps above Developed non-U.S. equity
- Private Credit expected return is **7.4%**
  60 bps above High Yield and 135 bps below Private Equity.
- Return forecasts are net of fees and represent lower-risk (Core) allocations; client portfolios may have higher expected returns and risk.



Source: Callan 2024-2033 Capital Market Assumptions

Callan

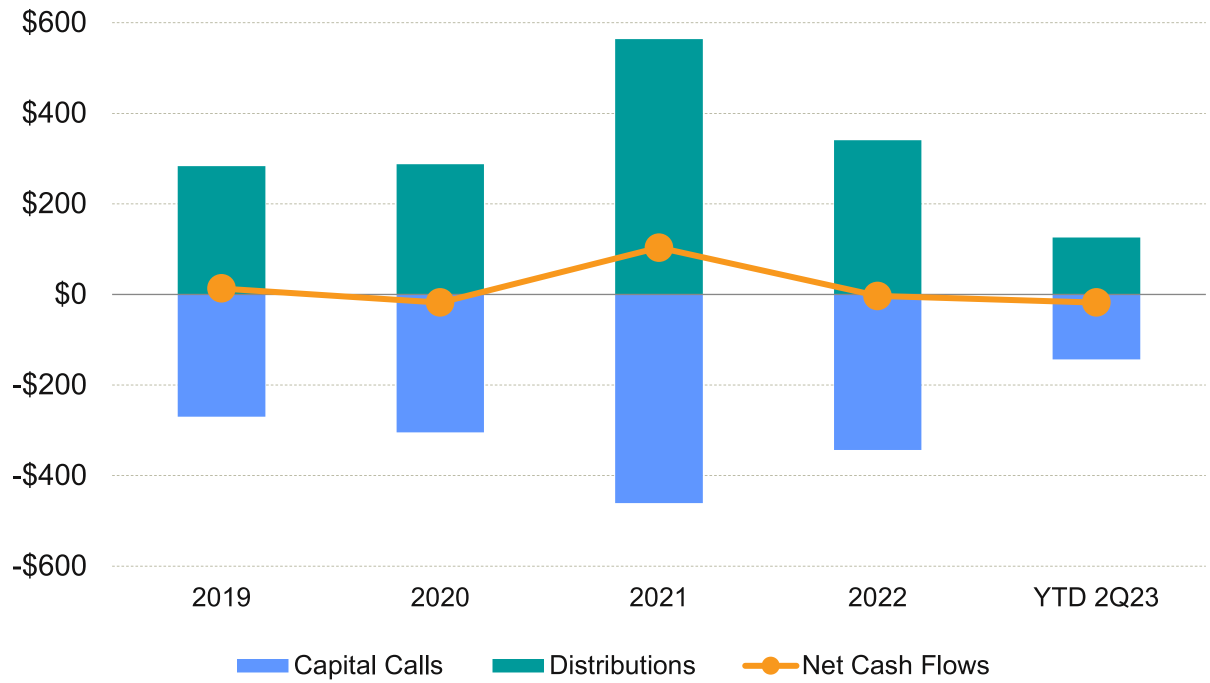
Private Equity and Private Credit Market Environment

Private Equity Market Trends

2022 - A Return to Normal

- 2021 was an exceptional year for private equity cash flows, with record levels of distributions driven by a surge in exit activity.
- In 2022, distributions sank back down to normalized levels, in response to a significant slowdown in private equity exits.
- So far in 2023, both cash inflows and outflows have dropped further, with capital calls outpacing distributions.

LP Cash Flows by Calendar Year ($b)



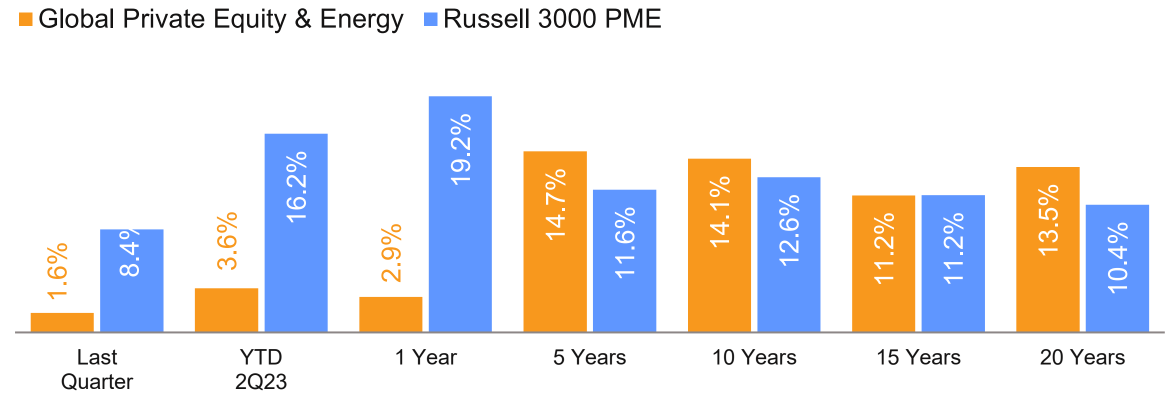
Source: Refinitiv/Cambridge Global Private Equity & Energy.

Private Equity Market Trends

Smoothing Effect in Performance

- Public equity's strong recovery in 2023 (led by the "Magnificent 7" technology stocks) has left private equity in its wake.
- Private equity doesn't recover as quickly as the public markets, because the smoothing effect dampens private equity returns in both up and down markets.
- Private equity only saw about a quarter of the gains of the public markets in 1H23, on a PME basis.
- Venture capital and growth equity are the only strategies that saw negative returns this past year, as those strategies continue to struggle with falling valuations.

Net IRRs as of 06/30/2023



Net IRRs by Strategy as of 06/30/2023

Strategy	Last Quarter	YTD 2Q23	1 Year	5 Years	10 Years	20 Years
Venture Capital	-0.7%	-1.5%	-9.3%	18.9%	18.2%	13.2%
Growth Equity	1.3%	2.6%	-0.3%	15.6%	15.0%	12.8%
Buyouts	2.6%	6.1%	8.1%	15.7%	15.3%	11.2%
Mezzanine	3.2%	9.9%	10.7%	11.1%	11.2%	10.5%
Credit Opportunities	1.4%	3.6%	7.4%	7.1%	7.6%	9.1%
Control-Oriented Distressed	1.2%	2.8%	4.9%	13.6%	12.0%	10.7%
Private Energy	1.5%	1.5%	6.6%	4.4%	4.0%	4.7%
Total Cambridge PE	**1.6%**	**3.6%**	**2.9%**	**14.7%**	**14.1%**	**13.5%**
NHRS PE	**2.7%**	**4.1%**	**3.2%**	**14.0%**	**14.2%**	**NA**

Source: Refinitiv/Cambridge. PME: Public Market Equivalent.

Private Equity Market Trends

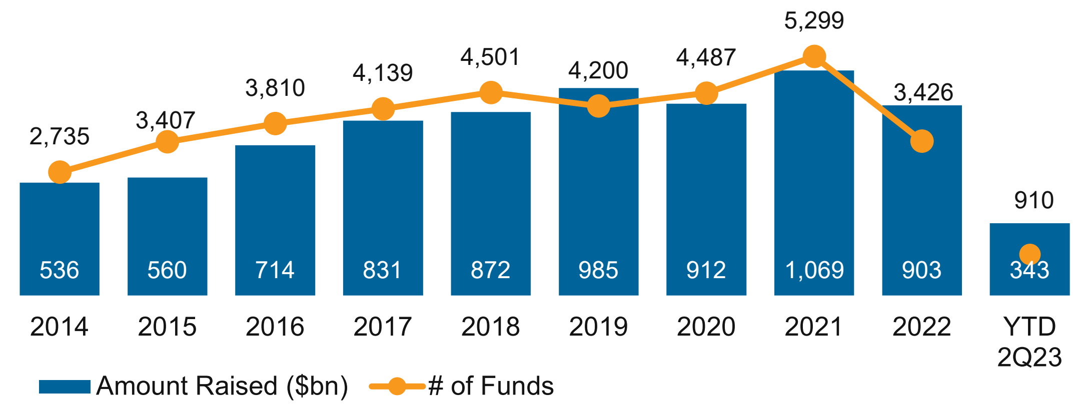
"Flight to Quality" in Fundraising

- Fundraising declined back to historical levels in 2022 after its frenzied peak in 2021.
- So far, 2023 has been another down year, with LPs being more selective with their commitments.
- With significantly fewer funds closing this year and constrained LP commitment budgets, many GPs are reluctant to come back to market in the near term.

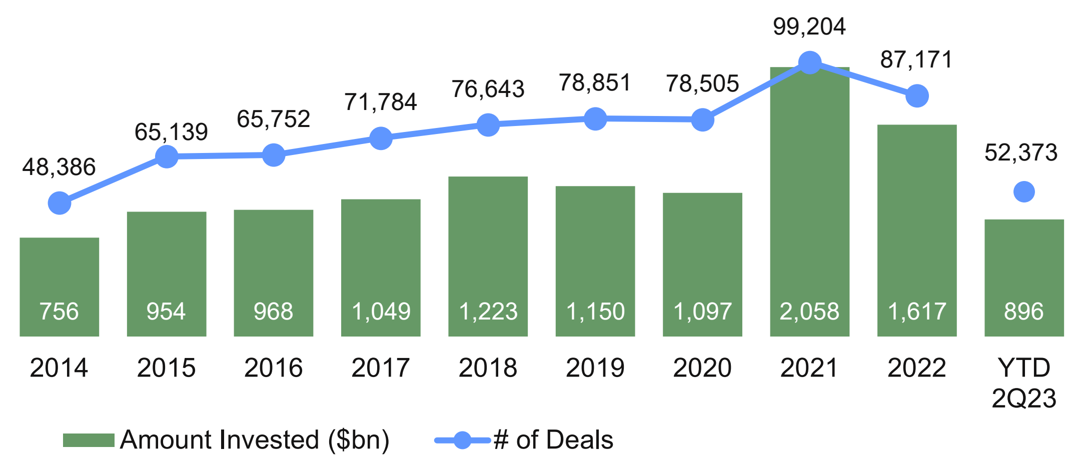
Slowdown in Deal and Exit Activity

- Both investment and exit activity have slowed markedly, following rising interest rates, declines in the public markets, and resulting price uncertainty.

Annual Fundraising



Annual Deal Activity



Source: PitchBook

Private Equity Market Trends

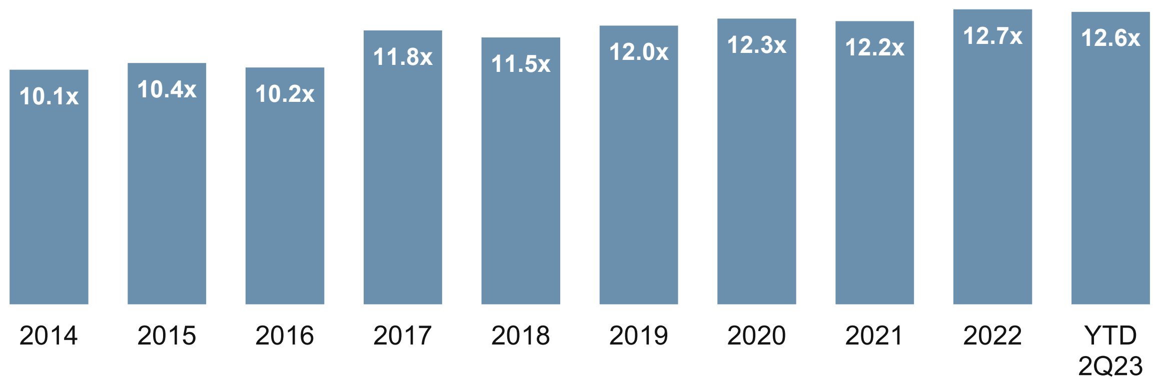
Buyout Valuations Plateau

- Although buyout valuations have plateaued in the first half of this year, EBITDA multiples remain elevated on an absolute basis, especially given the increases in interest rates.
- The bid-ask spread remains wide as many sellers are unwilling to accept lower valuations, which has contributed to slower deal activity this year.

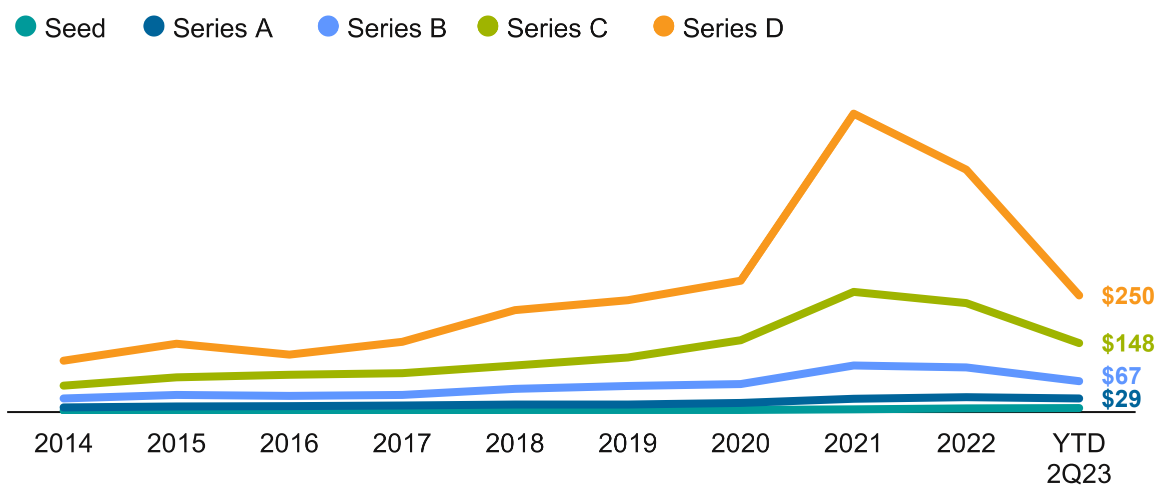
Late-Stage Valuations Plummet

- Late-stage venture-backed companies have seen a drastic drop in valuations, back to pre-pandemic levels. Late-stage valuations are especially sensitive to public markets declines given these companies are closer to an IPO.

US Buyout EBITDA Multiples



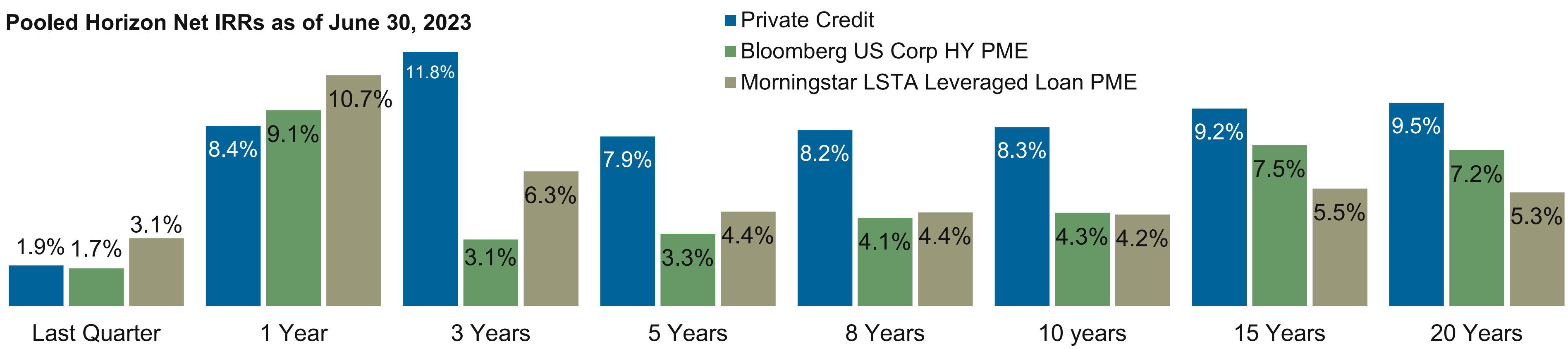
Venture Capital Pre-Money Valuations ($m)



Source: PitchBook. Both charts show the median multiple or valuation for each calendar year.

Private Credit Market Overview

Performance over time and compared to relevant indices



Pooled Horizon Net IRRs by Strategy as of June 30, 2023

Strategy	Last Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Senior Debt	1.9%	8.6%	8.0%	6.3%	6.8%	N/A
Subordinated Credit	3.2%	10.7%	15.0%	11.1%	11.2%	10.6%
Credit Opportunities	1.4%	7.4%	11.9%	7.1%	7.6%	8.9%
Total Cambridge Private Credit	**1.9%**	**8.4%**	**11.8%**	**7.9%**	**8.3%**	**9.5%**
Total NHRS Private Credit	**0.8%**	**5.3%**	**8.2%**	**4.8%**	**6.1%**	**N/A**

Private credit performance varies across sub-asset class and underlying return drivers. Over the past three years, the asset class has generated a net IRR of 11.8%, outperforming leveraged loans as of June 30, 2023. Higher-risk strategies have performed better than lower-risk strategies.

Source: Refinitiv/Cambridge; index definitions provided in the Appendix.

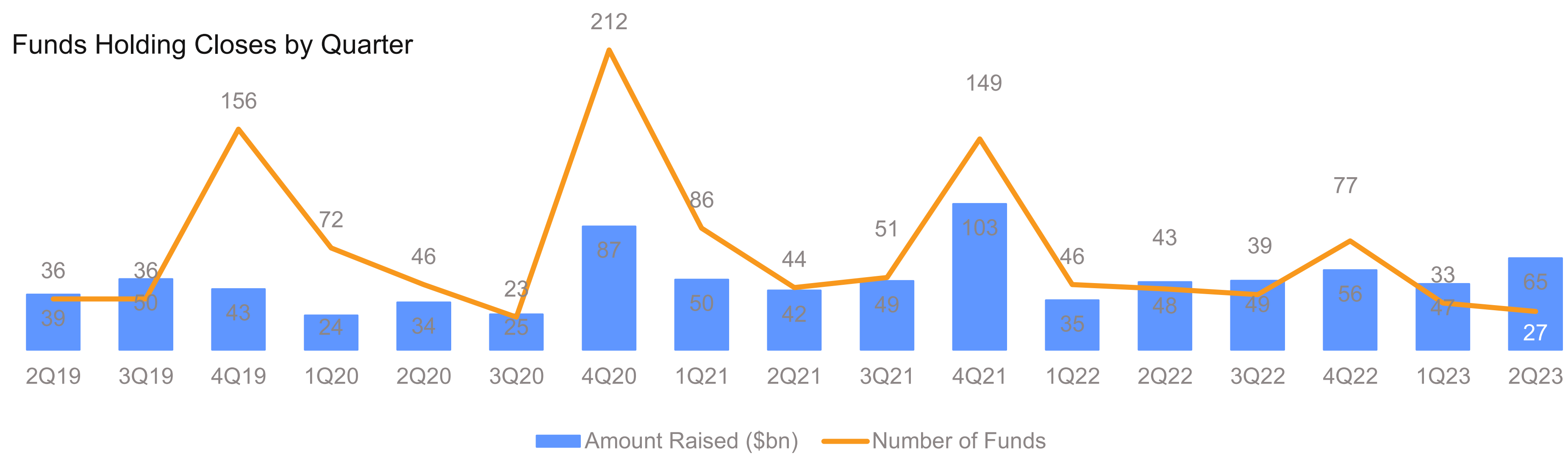
2Q 2023 Private Credit Fundraising Landscape

Activity remained strong through 2Q23

- Private credit fundraising was robust leading into the Covid dislocation with a particular focus on direct lending, asset-based lending and distressed strategies.
- In the current rising rate environment, a renewed focus has been placed on relative value, downside protection and managers' internal workout resources.
- Renewed interest in strategies with strong collateral protection such as asset-based lending as well as capital solutions and distressed strategies.
- Larger sponsor-backed lending seeing a new focus due to the high yield/BSL disintermediation by private debt.

Largest Funds Holding Closes in 2Q23

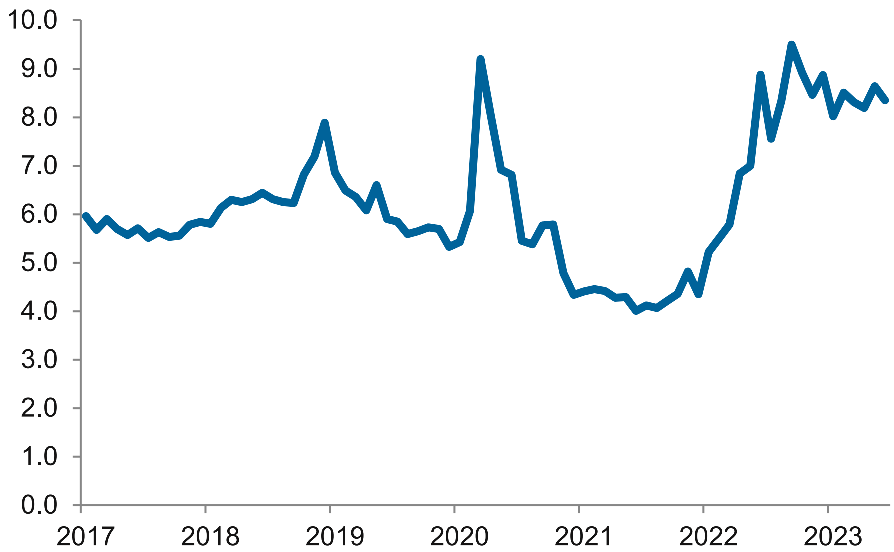
Name	Amount ($millions)	Strategy
HSBC Bank UK London SME Fund	$18,713	Direct Lending
HPS Strategic Investment Partners V	$12,000	Mezzanine Debt
HPS Core Senior Lending Fund II	$7,300	Direct Lending
Permira Credit Solutions V	$4,520	Direct Lending



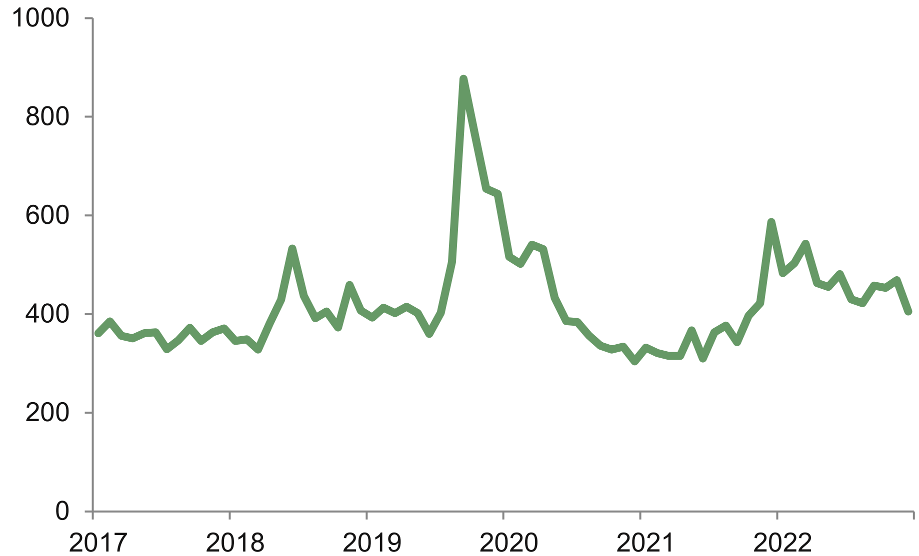
Source: Pitchbook

2Q 2023 Yield Spreads

High Yield Effective Yields Ended 6/30/23



US Corporate High Yield Spreads Ended 6/30/23

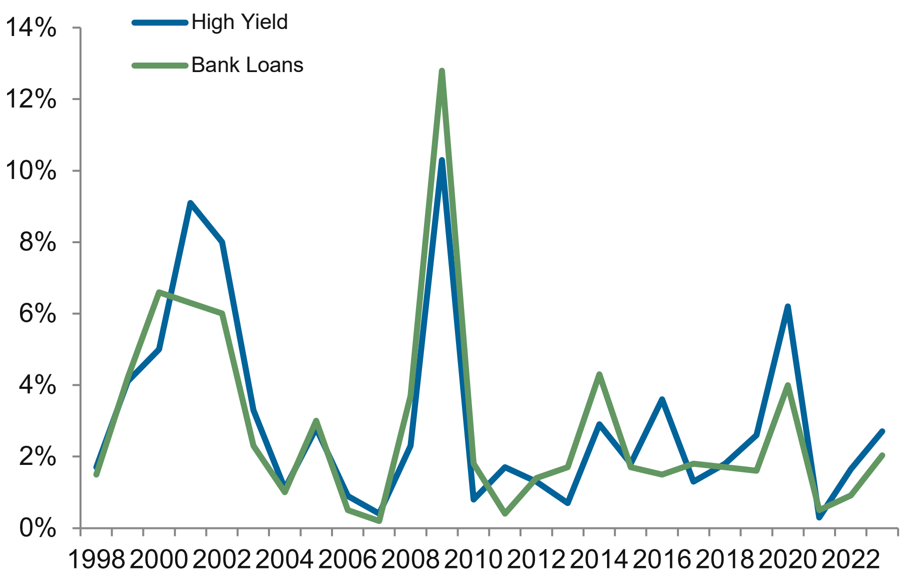


- U.S. sub-investment grade corporate yields rose dramatically at the beginning of 2022 with yields peaking in September. This was a combination of higher interest rates due to tighter Fed policy and a widening of high yield spreads.
- Spreads widened during the first half of 2022 due to weaker credit conditions as the U.S. economic outlook worsened. This has since moderated.

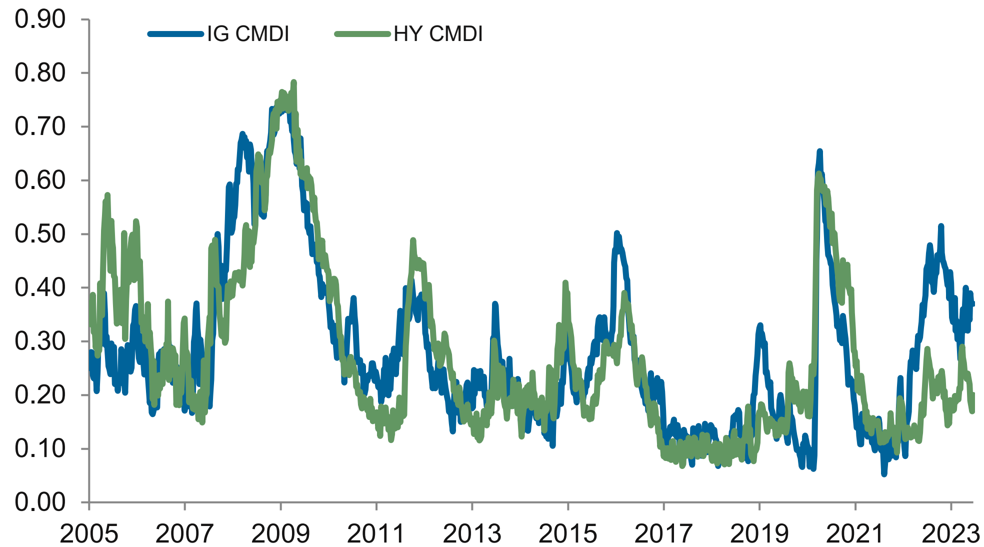
Sources: Bank of America, Federal Reserve Bank of St. Louis

2Q 2023 Distressed and Opportunistic Debt

US Corporate Default Rates Ended 6/30/23



Corporate Bond Market Distress Index (CMDI) Ended 6/30/23



- Default rates for U.S. corporate bonds ticked up in 1Q but remained well below the historical average of 3%-4%. Callan expects defaults to increase somewhat in coming months as economic growth slows and potentially turns negative.
- The Corporate Bond Market Distress Index (CMDI) rose rapidly during the first nine months of 2022, especially for investment grade bonds, highlighting market volatility and a drying up of liquidity, but has fallen since then. In 2023, as the IG distress index continues to fall, the HY bond indicator is on the rise. The CMDI incorporates a range of indicators, including new issuance and pricing for primary and secondary market bonds and relative pricing between traded and nontraded bonds.

Source: Federal Reserve Bank of New York, JPM

Private Equity Portfolio Overview

NHRS Private Equity Objectives

Selected Objectives for NHRS' Private Equity Program

Private Equity Investment Objectives	▪ Construction of a high quality, "all-weather" private equity portfolio ▪ Focused investment activity with active on-going monitoring of sponsors and partnerships ▪ Active involvement of NHRS Staff and Callan Private Equity Consulting to source, vet and diligence opportunities
Annual Commitment Pacing & Sizing	▪ $200-250 million of annual commitments for 2023 and beyond (subject to total plan growth and distribution rate of existing portfolio) ▪ Typical commitment size between $40-50 million for direct partnerships, incorporating risk and capacity considerations of new opportunities
Strategy Selection	▪ Initial and primary focus on diversified buyouts, with a mix of value-creation mechanisms ▪ Secondary consideration of complementary strategy types (i.e. SMID buyout, growth equity, distressed for control, venture capital, secondaries, etc.) ▪ Emphasis on United States/North America exposure for Direct Primary portfolio
NHRS Preferences & Sensitivities	▪ Focus on high-quality, reputed and stable private equity sponsors with demonstrable track records ▪ Strong performance, with key emphasis on capital recovery for realized/unrealized losses ▪ International investments must be compelling against relevant peer group, as well as domestic opportunities

NHRS Private Equity Objectives

Characteristics of Primary Private Equity Strategies*

	Category	Expected Returns	Description	Risk
Control-oriented	**Large buyout** *NHRS exposure: Apollo, Clearlake, Thoma Bravo, American Industrial*	20 – 25% gross IRR 2.0– 2.5x gross TVPI	Acquire control positions in mature businesses, typically valued in the $1 billion + range. Companies have long operating histories, established end markets, and developed product or service offerings.	Low loss ratios given company size and maturity, often ranging from 5% - 15%.
Control-oriented	**Small/Middle buyout** *NHRS exposure: Edgewater, CCMP, RFE*	25 – 30% gross IRR 2.5 – 3.0x gross TVPI	Acquire control positions in mature businesses, typically valued <$1 billion. Companies have operating histories, established end markets, and developed product or service offerings. Business are more likely to be founder or family-owned, and less institutionalized.	Higher loss ratios than large buyout given smaller company sizes, often ranging from 10% - 20%.
Control-oriented	**Distressed-for-control** *NHRS exposure: None*	20 – 30% gross IRR 2.0 – 3.0x gross TVPI	Acquire mature businesses facing operational or market challenges, often in distress and in need of restructuring.	Typically higher than large buyout given difficult financial positions of businesses, but lower than small buyout.
Non-control-oriented	**Growth equity** *NHRS exposure: Warburg Pincus, Carlyle Asia, Carlyle Japan, Carlyle Sub-Saharan Africa, Pinebrook*	25 – 30% gross IRR 2.5 – 3.0x gross TVPI	Acquire minority interests in growing businesses that are typically at or near profitability. Business are often still founder-owned, and in need of capital to scale.	Loss ratios typically range from 10 – 20%.
Non-control-oriented	**Late-stage venture** *NHRS exposure: Industry Ventures, Top Tier*	25 – 30% gross IRR 2.5 – 3.0x gross TVPI	Acquire minority interests in growing businesses through late-stage financing rounds, subsequent to other institutional investors. Companies have established business models but still have room for growth, and are often preparing for an IPO.	Loss ratios typically range from 15 – 25%.
Non-control-oriented	**Early-stage venture** *NHRS exposure: Industry Ventures, Top Tier*	30%+ gross IRR 3.0x+ gross TVPI	Acquire minority interests in startup businesses or ideas with significant growth potential, generally in the technology, consumer, or health care industries. Return dispersion is high.	Loss ratios are higher, typically in the 30 – 40% range.

* Co-investments and secondaries may be included across the above strategies.

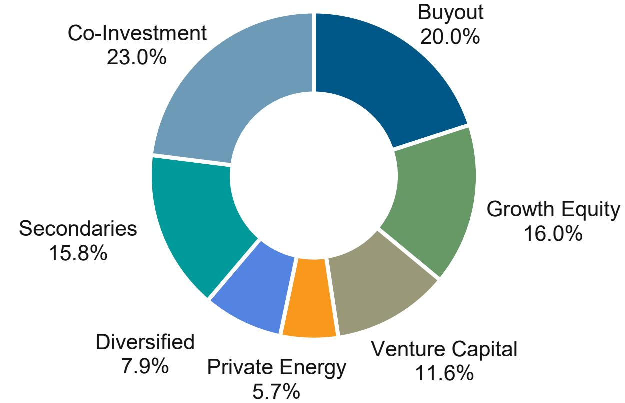
NHRS Private Equity Portfolio Structure

Current Structure

- **Direct Primaries:** Consists of 14 GPs, including 11 buyout/growth equity firms and three private energy firms. Thoma Bravo, Carlyle and Warburg Pincus represent the largest positions, totaling 27% of current NAV.
- **Fund of Funds:** Targeted exposure to international and venture capital strategies.
- **Secondaries:** Diversified exposure across four GPs, including specialist venture secondary funds.
- **Co-Investments:** Core exposure to the Blackrock Co-Investment strategy, representing approximately 20% of the private equity portfolio. Commitments to co-investment SMA vehicles have been made alongside fund commitments to Apollo and HIG; GP-specific co-investment allocations are expected to increase as a % of the PE program.

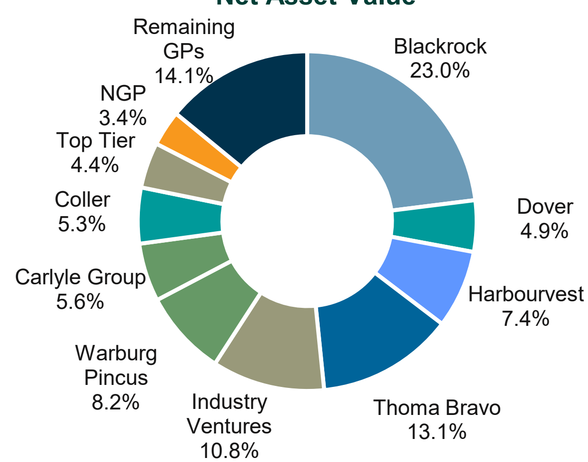
Current Private Equity Portfolio Composition

Net Asset Value



Current General Partner Exposure

Net Asset Value



Portfolio Composition represents Net Asset Value plus Unfunded Commitments estimated as of December 31, 2022

NHRS Private Equity Program Overview

12 Months Ended June 30, 2023

Portfolio Overweight

- NHRS' private equity portfolio was currently overweight at 14.2% vs the 10% target.
- As a result of the "denominator effect", many mature private equity portfolios were overweight their targets.

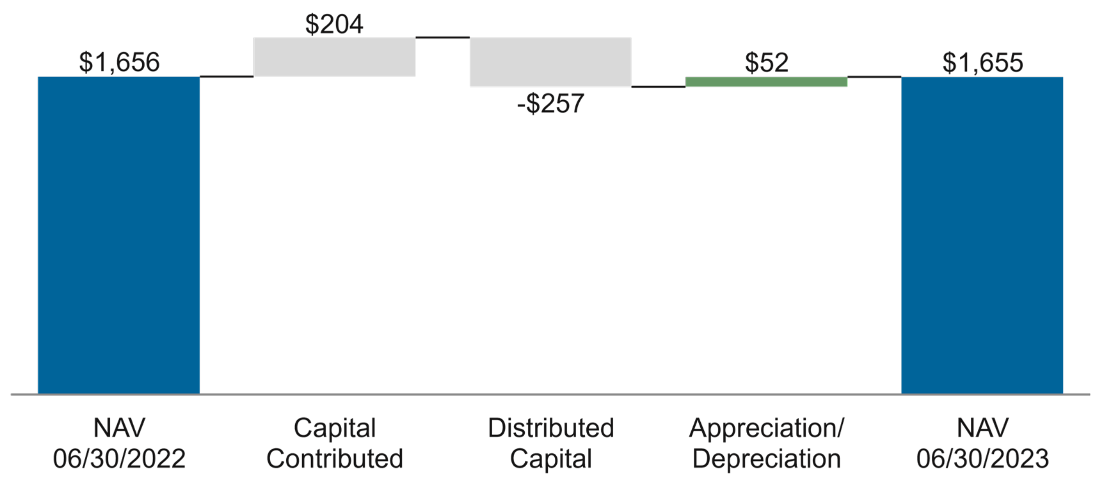
Slowing Distributions

- The NHRS portfolio received strong distributions of $258 million over the last year, although this was about $100 million less than the prior year. Distributions are expected to continue to be muted over the next year.

Unchanged NAV

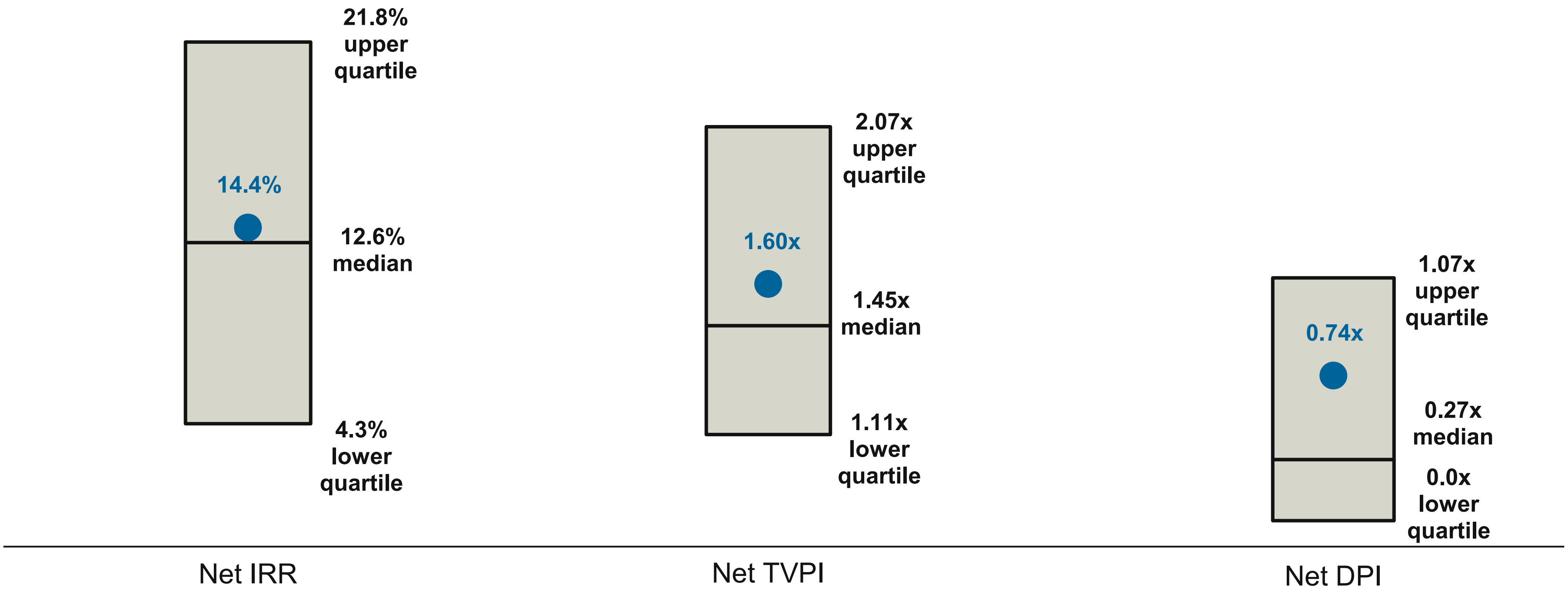
- The private equity portfolio remained cash flow positive over the last year. The portfolio appreciated slightly over this time, which resulted in no change in NAV.

	06/30/2022 ($m)	*% Change*	06/30/2023 ($m)
Commitments	$2,218	*6%*	$2,357
Paid-In Capital	$1,742	*12%*	$1,946
% Paid-In	*79%*	*4%*	*83%*
Uncalled Capital	$609	*(9%)*	$552
Distributed Capital	$1,192	*22%*	$1,450
NAV	**$1,656**	*0%*	**$1,655**
Total Value (NAV + Distributed)	**$2,849**	*9%*	**$3,104**



NHRS Private Equity Relative Performance

Inception through June 30, 2023



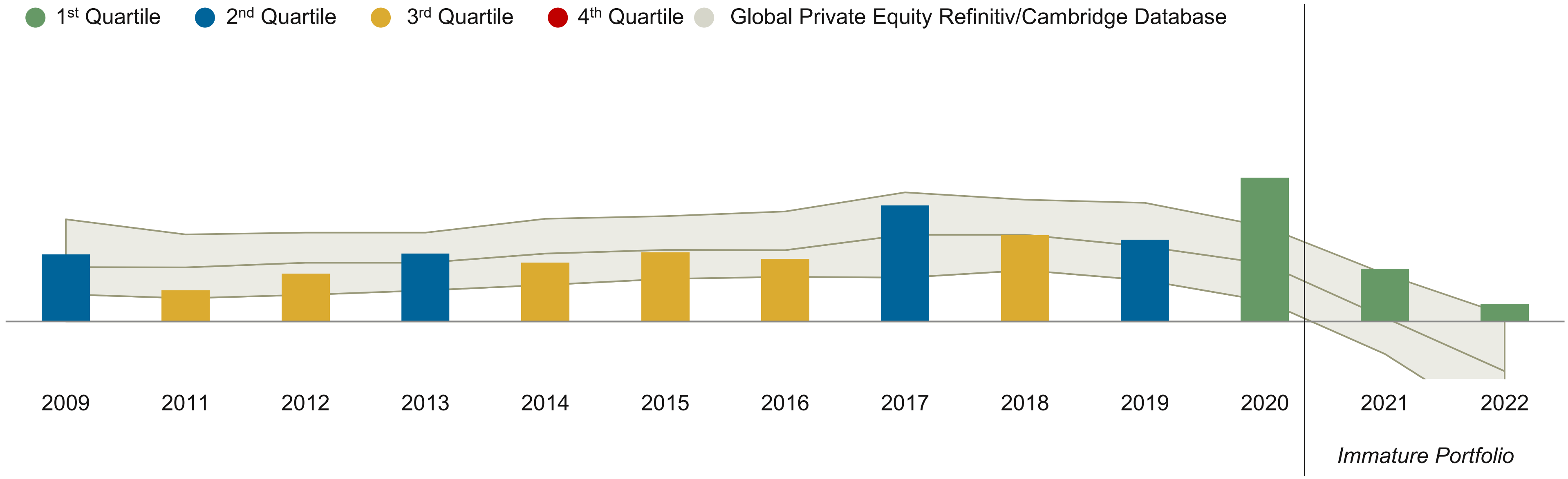
Performance

- The portfolio has generated 2nd quartile performance in terms of net IRR, TVPI, and DPI, reflecting a steady improvement in performance over recent years.
- The IRR is lagging relative to TVPI largely due to poor performance of earlier private equity vintages. The portfolio's DPI ranks well into the 2nd quartile, which was bolstered by its large allocation to secondaries strategies, which typically distribute capital quicker than primary fund commitments.

As of 06/30/2023. Quartile Rankings against the Global Private Equity Refinitiv/Cambridge database. Includes private energy.

NHRS Private Equity Performance by Vintage Year

Net IRR by Vintage Year



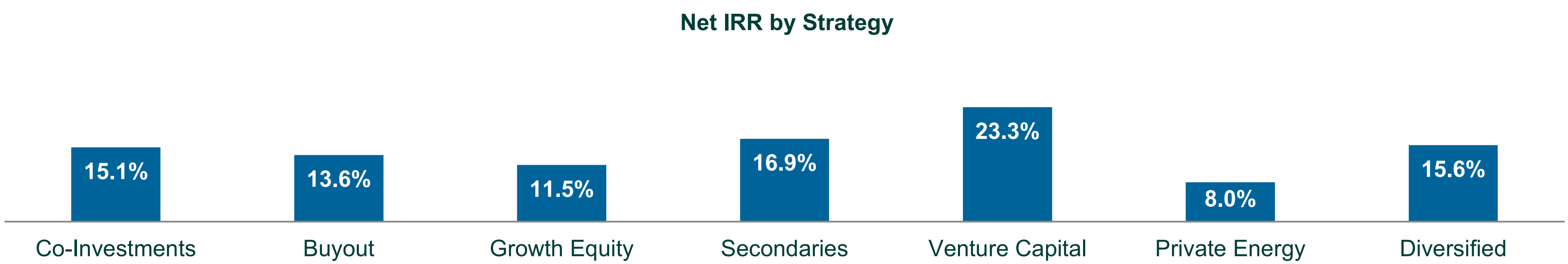
Performance

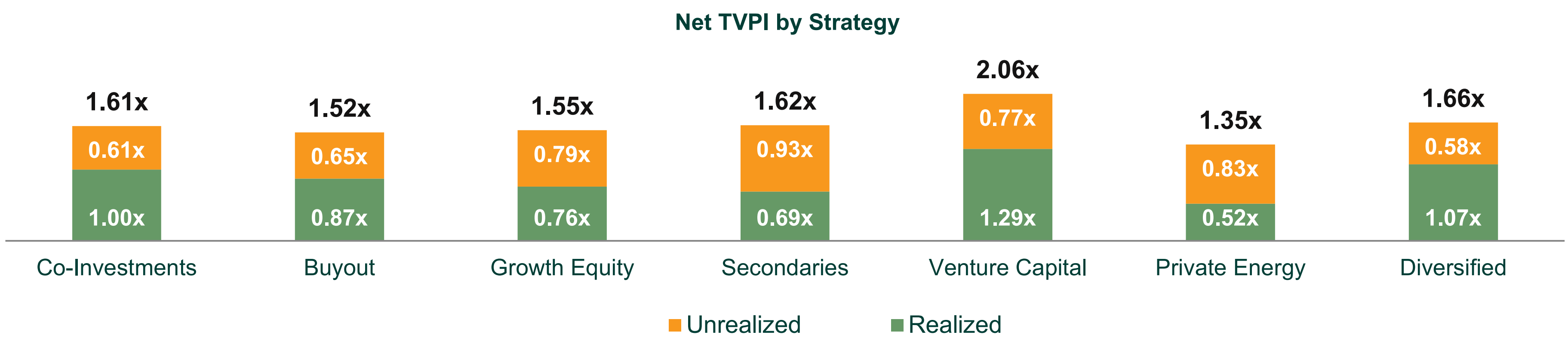
- The portfolio has exhibited mixed performance by vintage year. Since the portfolio's inception in 2009, six vintages have been in the 3rd quartile and seven, including two recent vintages, in the 1st and 2nd quartiles.
- The program's underperformance in 2011 and 2012 was largely a result of poor manager selection, with allocations to Edgewater, RFE Partners, and SL Europe all ranking in the 4th quartile. Underperformance in subsequent years, particularly 2014-2016, was primarily driven by allocations to energy strategies, which suffered from a crash in commodity prices.
- Performance has rebounded in recent years, with new partnerships developing well and currently ranking in the 1st and 2nd quartile.

NHRS Private Equity Performance by Strategy

Inception Through Period Ended June 30, 2023

- Venture Capital has been the best-performing segment, driven with strong revenue growth in the Technology, Healthcare, and Consumer sectors.
- Dedicated energy exposure in the portfolio has created headwinds in performance, driven by falling commodity prices, and a changing industry landscape, creating challenges for legacy E&P managers. Performance has rebounded YTD, however it still lags other strategy types.
- The buyout and growth equity portfolios have had mixed performance. Exposure to underperforming international strategies in Asia and Africa have detracted from returns.





NHRS Private Equity Portfolio Structure

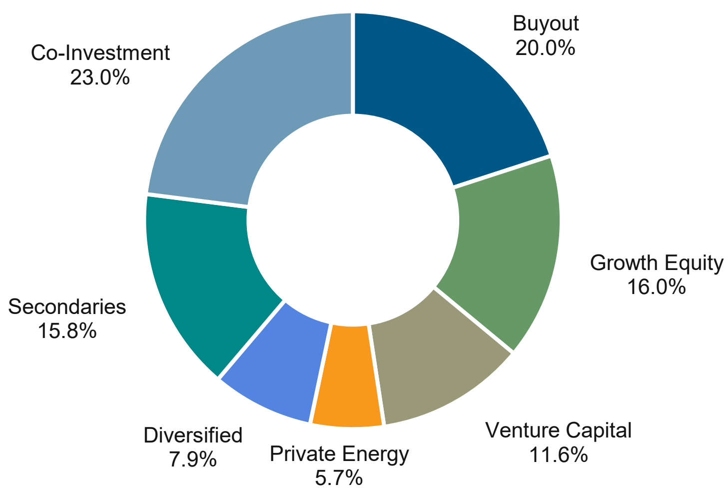
2024 Pro Forma Implementation Plan

2024 Focus Areas:

- Evaluate a potential re-ups for HarbourVest HIPEP X (international fund of funds); BlackRock Co-Investment strategy (in light of strategy emphasizing GP-specific co-investment opportunities); Industry Ventures (venture capital fund of funds); and Thoma Bravo XVI (technology buyout).
- Explore opportunities to add GP relationships to compliment the existing portfolio add/or upgrade existing GPs.

	2023	2024
Commitments	Apollo X American Industrial Partners VIII	HIG Advantage II
Potential Re-Ups		HarbourVest HIPEP X BlackRock Co-Investment 2024 Industry Ventures PH VII Thoma Bravo XVI
Potential New Commitments		Small/Mid-Market Buyout

Net Asset Value - Current



NHRS Private Equity Portfolio

Fund	Vintage	Commitment Amount ($m)
Co-Investment Funds		**$450**
BlackRock Private Op 2014	2015	$150
BlackRock Private Op 2018	2018	$150
BlackRock Private Op 2021	2021	$150
Fund of Funds – International		**$192.6**
SL Capital European Smaller Fds I	2012	$17.6
HarbourVest HIPEP VII	2014	$50
HarbourVest HIPEP VIII	2018	$50
HarbourVest HIPEP IX	2021	$75
Secondaries		**$435**
Lexington Capital Partners VII	2009	$40
Lexington Capital Partners VIII	2015	$50
Coller International Partners VI	2012	$20
Coller International Partners VII	2016	$50
Coller International Partners VIII	2020	$75
Dover Street VIII	2013	$50
Dover Street IX	2016	$50
Dover Street X	2020	$50
Dover Street XI	2022	$50
Fund of Funds – Venture Capital		**$275**
Industry Ventures Secondary VI	2011	$20
Industry Ventures Secondary VII	2013	$20
Industry Ventures Secondary IX	2021	$50
Industry Ventures Partnership Holdings III	2013	$20
Industry Ventures Partnership Holdings IV	2016	$20
Industry Ventures Partnership Holdings V	2019	$25
Industry Ventures Partnership Holdings VI	2021	$25
Top Tier Venture Velocity Fund	2014	$20
Top Tier Venture Velocity Fund II	2017	$25
Top Tier Venture Velocity Fund III	2019	$25
Top Tier Venture Velocity Fund IV	2021	$25

NHRS Private Equity Portfolio (continued)

Fund	Vintage	Commitment Amount ($m)
Buyout		**$516**
Edgewater Growth Partners III	2011	$20
Edgewater Growth Partners IV	2018	$50
RFE Investment Partners VIII	2012	$20
CCMP Capital Investors III	2014	$50
Thoma Bravo XII	2016	$46
Thoma Bravo XIII	2019	$50
Thoma Bravo XIV	2021	$50
Apollo IX	2019	$40
Apollo X	2023	$40
Clearlake Capital VII	2022	$50
American Industrial Partners VIII	2023	$50
HIG Advantage Fund II(1)	2023	$50
Growth Equity		**$371.1**
Carlyle Sub-Saharan Africa Fund	2012/2014	$27
Carlyle Japan III	2014	$26.1
Carlyle Asia IV	2014	$54
Carlyle Asia Fund V	2018	$50
Pine Brook Capital Partners II	2013	$50
Warburg Pincus Private Equity XII	2015	$64
Warburg Pincus Global Growth	2019	$50
Warburg Pincus Global Growth XIV	2022	$50
Private Energy		**$175**
NGP XI	2015	$75
Kayne Anderson Energy Fund VII	2016	$50
Actis Energy 4	2017	$50
Total Private Equity (50 commitments/ 21 GPs)		**$2,414.7**

‘(1) Pending IIC Approval

Private Credit Portfolio Overview

NHRS Private Credit Objectives

Selected Objectives for NHRS' Private Credit Program

Private Credit Investment Objectives	▪ Construction of a high quality, "all-weather" private credit portfolio ▪ Focused investment activity with active on-going monitoring of sponsors and partnerships ▪ Active involvement of NHRS Staff and Callan Private Credit Research to source, vet and diligence opportunities
Annual Commitment Pacing & Sizing	▪ Expected to be approximately $200 million total for projected annual private credit commitments ▪ Typical commitment size of $50-75 million, incorporating risk and capacity considerations of new opportunities ▪ Incremental growth of commitment sizing at higher end of annual commitment range
Private Credit Strategy Selection	▪ Primary consideration of Core strategies (Direct Lending) and Opportunistic (Multi-Sector) strategies ▪ Secondary consideration of complementary strategy types (i.e. Specialty Finance, Distressed) ▪ Portfolio is expected to be global in scope, with a primary emphasis on United States/North America
Manager / Strategy Preferences & Sensitivities	▪ Focus on high-quality, reputed and stable private credit managers with demonstrable track records ▪ Strong performance, with key emphasis on generating a high level of current income and the avoidance of realized credit losses, net of recoveries ▪ Strategies offered by managers based outside the U.S. must be compelling against the relevant peer group, as well as strategies managed by domestic firms; it is expected that multi-sector funds will likely have a significant allocation to non-US securities

NHRS Private Credit Objectives

Characteristics of Primary Private Credit Strategies*

	Category	Expected Net IRR	Return Driver(s)	Risk	Type of Collateral
Core	**Direct Lending and Mezzanine** *NHRS Exposure: Comvest, Monroe, Crescent, Alcentra, Arcmont, Ironwood*	6-8% unlevered; 8-10% levered; potentially higher for mezzanine	Coupon; prepayment fees; origination fees; credit spread	Credit risk; illiquidity	Corporate or asset
Core	**Structured Credit** *NHRS Exposure: CarVal*	7 to 9%	Coupon; excess spread	Priority of payment; servicing	Pools of cash flowing contractual obligations
Core	**Real Asset Lending**	6 to 8%	Coupon; origination fees	Priority of payment; servicing; illiquidity	Real assets
Opportunistic	**Distressed Debt/ Special Situations** *NHRS Exposure: Avenue, Gramercy, Sigular Guff*	10 to 15+%	Coupon; capital gain; recovery in debt prices; restructuring	Liquidity; negotiation with numerous interested parties	Corporate
Opportunistic	**Multi-Sector** *NHRS Exposure: Sixth Street, CarVal, SVP*	7 to 10%	Coupon; equity upside; alpha through sector rotation and broad opportunity set	Expertise in global liquid and private markets; value add from sector rotation	Multiple depending on asset mix
Niche	**Specialty Finance, Asset Based Lending, Other Niche** *NHRS Exposure: Atalaya, Ares, Riverstone*	8 to 10%	Cash flow recovery or enhancement through active servicing	Deep expertise required; highly specialized in nature; illiquidity	Typically cash flow related to stream of payments derived from portfolio of assets

* Co-investments and secondaries may be included across the above strategies

NHRS Private Credit Portfolio Structure

Current Structure

- **Direct Primaries:** Consists of 16 GPs, including six direct lending firms, three distressed firms, three multi-sector firms, one mezzanine firm, one energy lending firm, and two specialty finance firms.
- The top four GPs represent approximately 60% of the exposure, including Monroe, Alcentra, CarVal, and Comvest. However, this is expected to be reduced over time in favor of commitments to new GPs.
- **Fund of Funds:** One fund early in the program's development (Siguler Guff Distressed in 2011).
- **Secondaries:** No dedicated private credit secondaries strategies.
- **Co-Investments:** No dedicated private credit co-investment strategies.

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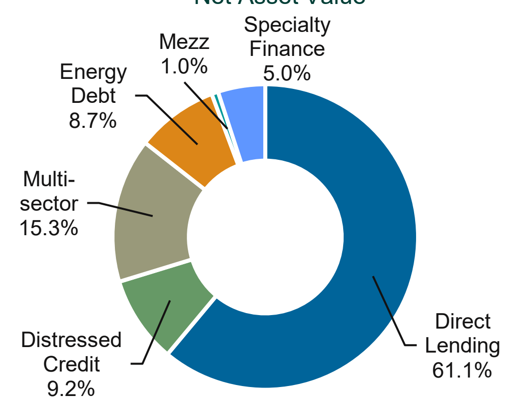
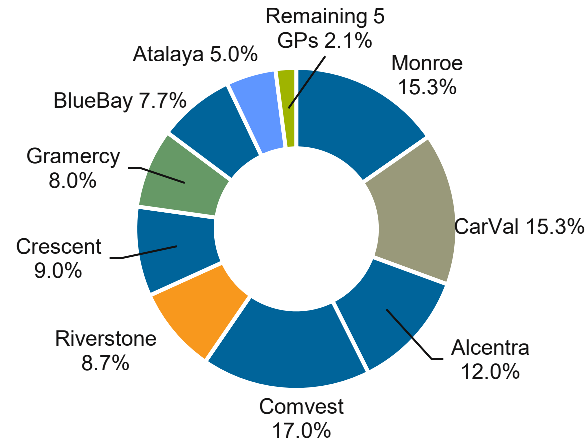
Current Private Credit Portfolio Composition

Net Asset Value



Current General Partner Exposure

Net Asset Value



Portfolio Composition represents Net Asset Value plus Unfunded Commitments estimated as of June 30, 2023

NHRS Private Credit Program Overview

12 Months Ended June 30, 2023

Portfolio at Target Weight

- As of June 30, 2023 the NHRS private credit portfolio was at the target weight of 5%.

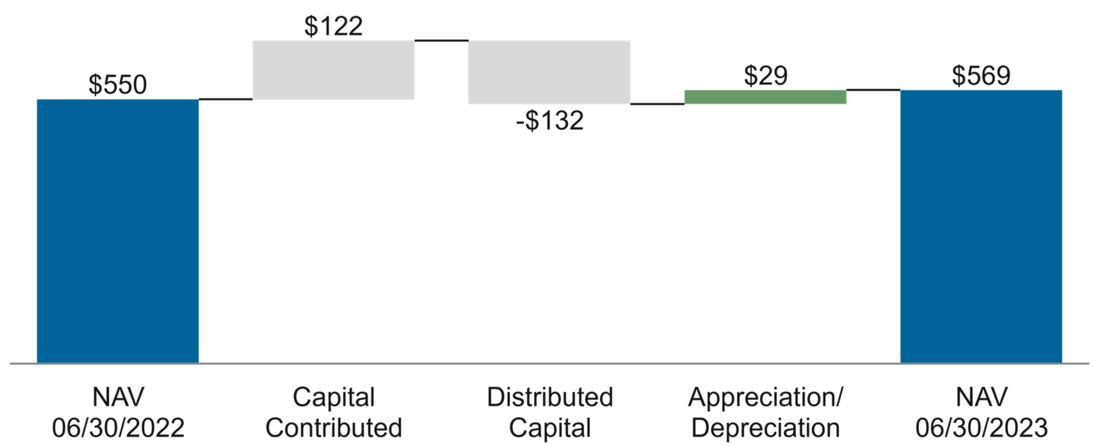
Strong Distributions

- The NHRS portfolio received significant distributions over the last year, totaling $132 million, or 14% of beginning NAV.

Slight Increase in NAV

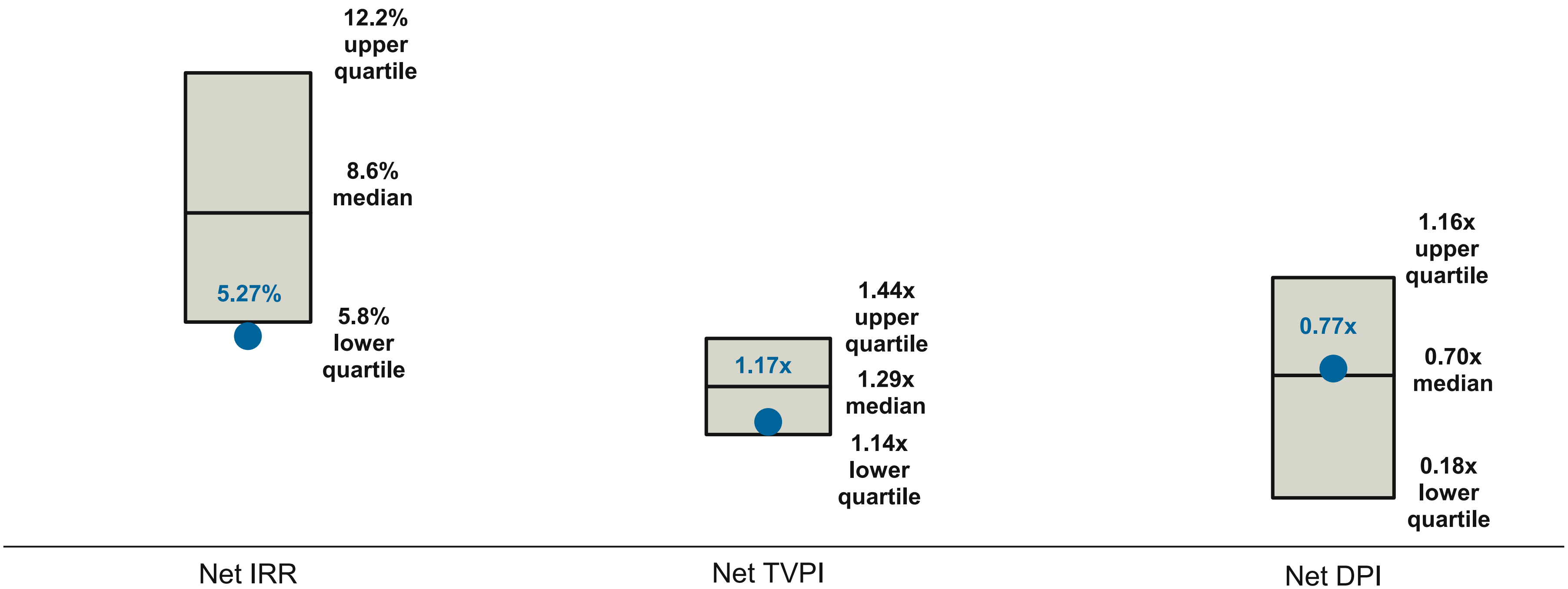
- Relatively even net cash flow along with positive portfolio appreciation resulted in an increase in NAV by 3.5%.

	06/30/2022 ($m)	*% Change*	06/30/2023 ($m)
Commitments	$1,297	*0%*	$1,299
Paid-In Capital	$1,283	*10%*	$1,406
% Paid-In	*99%*	-	*105%*
Uncalled Capital	$380	*(26%)*	$282
Distributed Capital	$945	*14%*	$1,077
NAV	**$550**	*3%*	**$569**
Total Value (NAV + Distributed)	**$1,495**	*10%*	**$1,646**



NHRS Private Credit Relative Performance

Inception through June 30, 2023

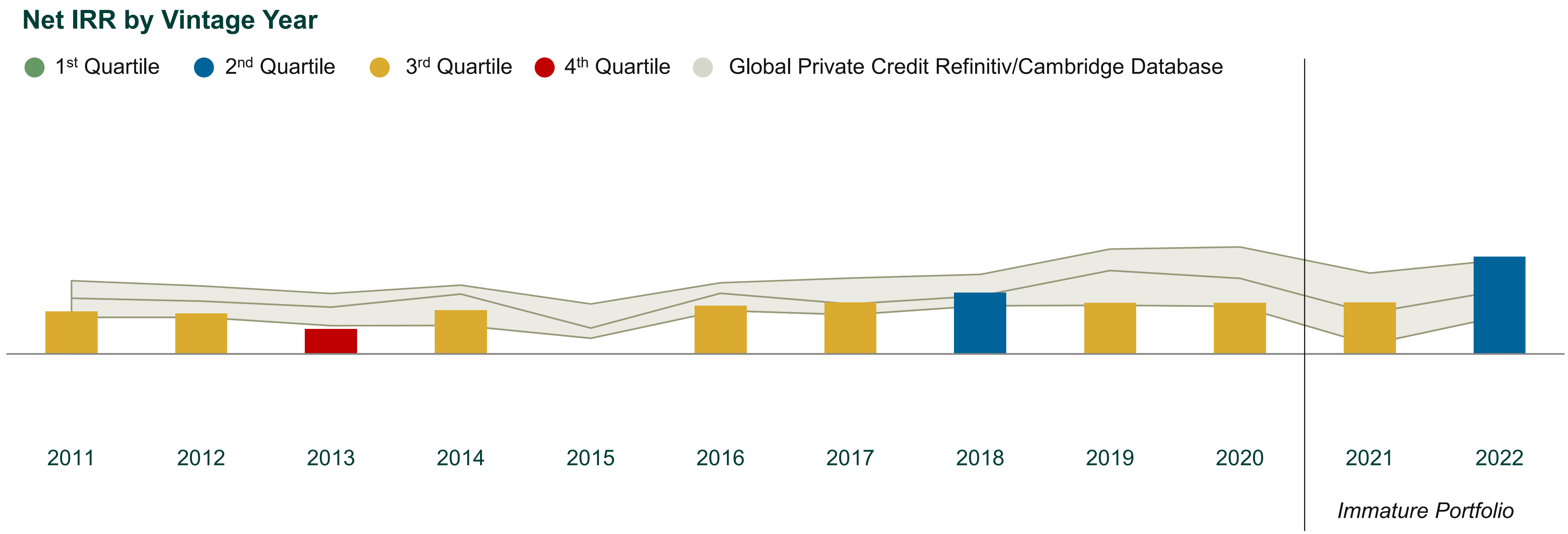


Quartile Performance Commentary

- The portfolio has generated 4th quartile performance on an IRR basis and 3rd quartile on a TVPI basis, consistent with prior years.
- The portfolio has underperformed relative to the Refinitiv database due to NHRS' underperforming legacy investments and the benchmark's higher weighting toward credit opportunities strategies. These legacy commitments to Gramercy, Avenue, Tennenbaum, Riverstone and Siguler Guff have underperformed largely due to poorly timed energy and non-US distressed investments.

As of 06/30/2022. Quartile Rankings against the Global Private Credit Refinitiv/Cambridge database.

NHRS Private Credit Performance by Vintage Year



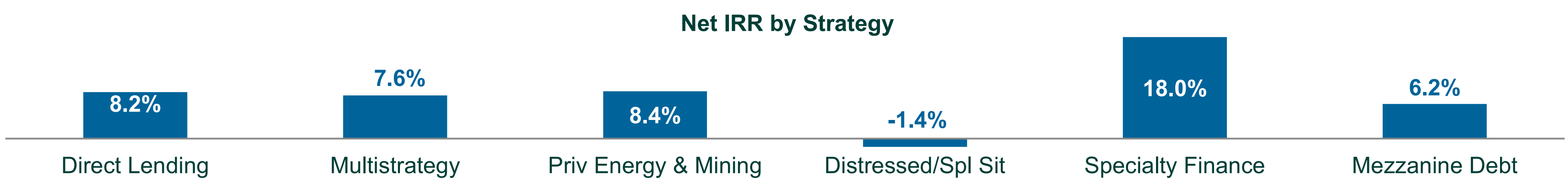
Quartile Performance

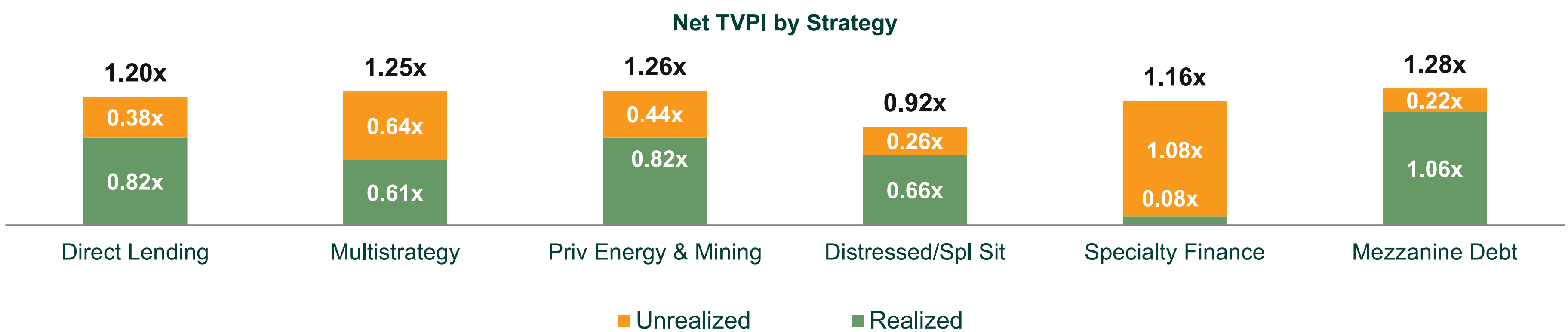
- The portfolio has exhibited consistent 3rd quartile by vintage year. Across the last 11 vintage years, seven years has been in the 3rd quartile and two in the 4th quartile.
- Performance has been trending positively in recent years, in line with the broader private credit markets.

NHRS Private Credit Performance by Strategy

Inception Through Period Ended June 30, 2023

- Direct Lending and Multistrategy funds have been the foundation of the portfolio. These strategies have the strongest performance, tracking to an 8.2% net IRR and 7.6% net IRR, respectively. Specialty Finance is a newer exposure for the portfolio and is expected to increase over time as it provides collateral diversification and potentially higher risk-adjusted returns.
- Legacy Distressed/Special Situation strategies have been detractors to performance. The distressed/special situations portfolio has faced headwinds from dedicated emerging markets exposure.





NHRS Private Credit Portfolio Structure

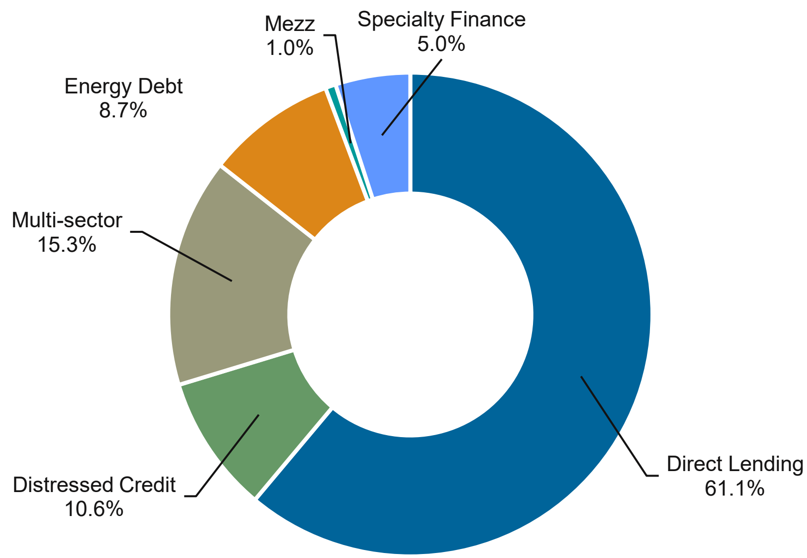
2024 Pro Forma Implementation Plan

2024 Focus Areas:

- Evaluate potential re-ups for Crescent Direct Lending Fund IV (Senior Direct Lending), Comvest Credit Partners VII (Senior Direct Lending), and Atalaya ASOF IX (Specialty Finance).
- Underperforming stub exposures will continue to run off.
- Add diversification with potential allocations to opportunistic, non-US funds, and niche exposures while further diversifying the specialty finance allocation.
- Potentially add upper middle-market direct lending exposure given today's environment of higher yields and wider yield spreads.
- Consider reducing the number of GPs in less differentiated areas like middle market direct lending, which may lead to significant fee savings.

	2023	2024
Commitments	Ares Pathfinder II SVP Capital Solutions Fund II Sixth Street TAO	
Potential Re-Ups		Comvest Credit Partners VII Atalaya ASOF IX Crescent Direct Lending IV
Potential New Commitments		

Net Asset Value - Current



NHRS Private Credit Portfolio

Fund	Vintage	Commitment Amount ($m)
Fund of Funds		**$20**
Siguler Guff Distressed Opportunities IV	2011	$20
Direct Lending Buyout		**$790**
Monroe Capital Senior Secured Direct Loan Fund	2013	$50
Crescent Direct Lending Levered Fund	2014	$50
Crescent Direct Lending Levered Fund II	2017	$50
Crescent Direct Lending Levered Fund III	2021	$50
Alcentra European Direct Lending Fund	2014	$50
Alcentra European Direct Lending Fund II	2016	$50
Alcentra European Direct Lending Fund III	2018	$50
Comvest Capital III	2015	$40
Comvest Capital IV	2016	$50
Comvest Capital V	2020	$50
Comvest Credit Partners VI	2022	$50
Monroe Capital Private Credit Fund II	2015	$50
Monroe Capital Private Credit Fund III	2018	$50
Monroe Capital Private Credit Fund IV	2021	$50
BlueBay Direct Lending Fund II	2015	$50
BlueBay Direct Lending Fund III	2018	$50
Distressed		**$140**
Avenue Special Situations Fund VI	2011	$20
Tennenbaum Opportunities Fund VI	2011	$20
Gramercy Distressed Opportunity Fund II	2013	$50
Gramercy Distressed Opportunity Fund III	2015	$50
Multi- Sector		**$275**
CarVal Investors Credit Value Fund III	2015	$50
CarVal Investors Credit Value Fund IV	2017	$50
CarVal Investors Credit Value Fund V	2021	$50
Sixth Street TAO	2023	$75
SVP Capital Solutions II	2023	$50

NHRS Private Credit Portfolio (continued)

Fund	Vintage	Commitment Amount ($m)
Niche – Energy Lending		**$100**
Riverstone Credit Partners	2016	$50
Riverstone Credit Partners II	2017	$50
Mezzanine		**$20**
Ironwood Mezzanine Fund III	2012	$20
Niche – Specialty Finance		**$125**
Ares Pathfinder II	2023	$75
Atalaya Special Opportunities Fund VIII	2021/2022	$50
Total Private Credit (31 Commitments/ 17 GPs*)		**$1,470**

*Number of GPs include legacy GP Matlin Patterson, not reflected in the table.

The Townsend Group Presenter Biographies

Anthony Frammartino, President

Mr. Frammartino is the CEO and President of The Townsend Group. He is a member of the Global Macro Strategy and Investment Committees for the firm and has been a member of the Management Committee since its inception in 2011. Prior to heading Townsend, he led the investment management business from 2011-2022 directing the firm's forays into new asset management lines.

Mr. Frammartino joined The Townsend Group in 2004, having served as an investment banker advising real estate investors on public and private transactions at KeyBanc Capital Markets (FKA McDonald Investments).

Mr. Frammartino received an MBA in Finance from The Weatherhead School of Management at Case Western Reserve University and a BS in Accounting from The University of Akron.

Industry Experience: 21 years
Townsend Tenure: 19 years

Tony Pietro, Partner

Tony Pietro is a Partner and member of the Investment Committee of the firm. Mr. Pietro is responsible for leading the investment management activities for the firm in the United States.

Mr. Pietro participates in all aspects of investment management including, but not limited to, leading client relationships, strategic and investment planning, and investment due diligence and execution. Mr. Pietro has acted as the lead underwriter for several client investments. Since originally joining The Townsend Group in 2006, Mr. Pietro has also focused on various aspects of the firm's businesses, including spending periods of time working within the dedicated advisory and investment underwriting groups.

Mr. Pietro has prior experience in multifamily development as a Project Manager for the NRP Group, a full-service development, construction, and property management firm.

Mr. Pietro obtained his BS in Finance with a concentration in Real Estate from Ohio University.

Industry Experience: 17 years
Townsend Tenure: 17 years

The Townsend Group Presenter Biographies

Joe Davenport, Partner

Mr. Davenport joined The Townsend Group in 2012. As a Partner, Joe is responsible for discretionary portfolio management for clients with more than $3 billion in total real estate assets under management. Mr. Davenport participates in strategic and investment planning, investment due diligence and execution, portfolio management, and performance reporting.

Prior to joining The Townsend Group, Mr. Davenport worked in risk management and corporate finance for a Fortune 100 insurance and financial services company.

Mr. Davenport received a BS in Finance and Real Estate from The Ohio State University, and a MS in Finance from Indiana University.

Industry Experience: 11 years
Townsend Tenure: 11 years

Christian Nye, Associate Partner

Christian Nye joined The Townsend Group in 2016. He is an Associate Partner on the portfolio management team. His main responsibilities include strategic and investment planning, investment due diligence and execution, portfolio analytics, and performance reporting. He also supports the development of Townsend's research and investment strategies.

Mr. Nye received his BSBA specialized in Finance and Real Estate from The Ohio State University. Mr. Nye is a CFA® charter holder.

Industry Experience: 7 years
Townsend Tenure: 7 years

The Townsend Group Presenter Biographies

Michael Golubic, Partner

Michael Golubic joined The Townsend Group in 2003 and is a Partner of the firm. He is a primary senior relationship manager and portfolio manager to discretionary clients of the firm with real asset allocations exceeding $1 billion. Mr. Golubic also maintains primary responsibility for the firm's efforts in the evaluation of global real asset strategies with a focus on infrastructure. He has been responsible for over $8 billion in client commitments to private equity infrastructure funds and co-investments. During his tenure at Townsend, Mr. Golubic has also participated in the underwriting of open-end commingled funds as well as US and Latin America non-core real estate opportunity funds.

Mr. Golubic is a member of The National Council of Real Estate Investment Fiduciaries (NCREIF) and The Pension Real Estate Association (PREA). In addition, Mr. Golubic frequently speaks at industry conferences including past participation at the Milken Institute Global Conference, PEI Infrastructure Investor Summit and IREI Investing in Infrastructure Conference. In 2018, Mr. Golubic was named as one of the Knowledge Brokers New Guards by CIO Magazine.

Mr. Golubic received a BS in Finance and Management Information Systems from Miami University.

Industry Experience: 20 years
Townsend Tenure: 20 years

Callan

November 30, 2023

New Hampshire Retirement System

Investment Measurement Service Monthly Review

The table below details the rates of return for the fund's asset classes over various time periods ended November 30, 2023. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

Composite	Total Fund Weighting As of 11/30/2023	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
		Net of Fees Returns for Periods Ended November 30, 2023							
Total Domestic Equity	**30.81%**	**8.63%**	**-0.36%**	**1.15%**	**14.36%**	**8.16%**	**7.71%**	**9.99%**	**9.83%**
Domestic Equity Benchmark(1)		*9.32%*	*1.36%*	*2.96%*	*19.61%*	*12.61%*	*8.08%*	*11.48%*	*11.28%*
Excess Return		*-0.70%*	*-1.72%*	*-1.82%*	*-5.26%*	*-4.45%*	*-0.37%*	*-1.49%*	*-1.45%*
Total Non US Equity	**18.28%**	**8.68%**	**0.38%**	**0.21%**	**13.90%**	**12.59%**	**2.32%**	**5.33%**	**3.79%**
Non US Equity Benchmark(2)		*9.00%*	*1.20%*	*0.56%*	*10.08%*	*9.26%*	*1.67%*	*5.06%*	*3.41%*
Excess Return		*-0.32%*	*-0.82%*	*-0.36%*	*3.81%*	*3.33%*	*0.65%*	*0.27%*	*0.37%*
Total Fixed Income	**19.84%**	**4.60%**	**0.52%**	**0.05%**	**2.87%**	**2.75%**	**-3.08%**	**1.79%**	**2.09%**
Bloomberg Capital Universe Bond Index		*4.50%*	*0.47%*	*-0.03%*	*2.29%*	*1.94%*	*-4.05%*	*1.00%*	*1.65%*
Excess Return		*0.10%*	*0.05%*	*0.08%*	*0.58%*	*0.81%*	*0.97%*	*0.79%*	*0.44%*
Total Cash	**0.60%**	**0.47%**	**1.38%**	**2.29%**	**4.73%**	**5.09%**	**2.10%**	**1.91%**	**1.29%**
3-Month Treasury Bill		*0.45%*	*1.36%*	*2.22%*	*4.53%*	*4.91%*	*2.00%*	*1.82%*	*1.21%*
Excess Return		*0.02%*	*0.02%*	*0.06%*	*0.20%*	*0.19%*	*0.11%*	*0.09%*	*0.08%*
Total Real Estate (Q2)*	**11.11%**	**0.08%**	**-1.16%**	**-0.19%**	**-8.36%**	**-7.11%**	**11.45%**	**8.99%**	**10.68%**
Real Estate Benchmark(3)		*-0.71%*	*-2.36%*	*-4.25%*	*-12.26%*	*-12.17%*	*6.47%*	*5.00%*	*7.47%*
Excess Return		*0.79%*	*1.20%*	*4.06%*	*3.91%*	*5.07%*	*4.98%*	*3.99%*	*3.22%*
Total Private Equity (Q2)*	**14.50%**	**0.02%**	**-0.68%**	**-0.01%**	**5.26%**	**3.12%**	**19.62%**	**13.71%**	**12.23%**
Private Equity Benchmark(4)		*-1.73%*	*8.95%*	*10.87%*	*28.53%*	*17.21%*	*13.03%*	*14.19%*	*16.33%*
Excess Return		*1.74%*	*-9.63%*	*-10.88%*	*-23.27%*	*-14.10%*	*6.60%*	*-0.48%*	*-4.10%*
Total Private Debt (Q2)*	**4.86%**	**0.02%**	**-1.32%**	**-0.01%**	**3.56%**	**4.96%**	**8.47%**	**5.39%**	**6.75%**
Private Debt Benchmark(5)		*0.81%*	*4.39%*	*4.95%*	*13.25%*	*9.52%*	*4.11%*	*3.63%*	*6.66%*
Excess Return		*-0.79%*	*-5.71%*	*-4.97%*	*-9.69%*	*-4.56%*	*4.36%*	*1.76%*	*0.09%*
Total Fund Composite	**100.00%**	**5.02%**	**-0.22%**	**0.40%**	**7.00%**	**4.91%**	**6.27%**	**7.44%**	**6.96%**
Total Fund Benchmark(6)		*5.52%*	*1.77%*	*2.03%*	*10.58%*	*7.24%*	*4.25%*	*7.34%*	*7.17%*
Excess Return		*-0.50%*	*-1.99%*	*-1.63%*	*-3.59%*	*-2.32%*	*2.02%*	*0.10%*	*-0.20%*

(1) The Domestic Equity Benchmark is the Russell 3000 Index as of 7/1/2021.
(2) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.
(3) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.
(4) The Private Equity Benchmark is the Russell 3000 Index + 2% lagged 1 quarter as of 7/1/2022.
(5) The Private Debt Benchmark is (50% MStar LSTA Leveraged Loan 100 Idx + 50% Bloomberg High Yield Index) + 1% lagged 1 quarter as of 7/1/2022.
(6) Current Month Target = 30.0% Russell 3000 Index, 25.0% Bloomberg Universal, 20.0% MSCI ACWI ex-US, 10.0% NCREIF NFI-ODCE Value Weight Net lagged 3 months, 10.0% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg High Yield Corp lagged 3 months+1.0% and 2.5% MStar LSTA Lev Loan 100 lagged 3 months +1.0%.
(7) For the trailing 25 year period ended 11/30/23, the Total Fund has returned 6.85% versus the Total Fund Custom Benchmark return of 6.53%.
*Real Estate and Alternatives market values reflect current custodian valuations, which are typically lagged approximately 1 quarter.

The table below details the rates of return for the fund's investment managers over various time periods ended November 30, 2023. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

Composite	Total Fund Weighting As of 11/30/2023	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
	Net of Fees Returns for Periods Ended November 30, 2023								
Total Domestic Equity	**30.81%**	**8.63%**	**-0.36%**	**1.15%**	**14.36%**	**8.16%**	**7.71%**	**9.99%**	**9.83%**
Domestic Equity Benchmark(1)		*9.32%*	*1.36%*	*2.96%*	*19.61%*	*12.61%*	*8.08%*	*11.48%*	*11.28%*
Excess Return		*-0.70%*	*-1.72%*	*-1.82%*	*-5.26%*	*-4.45%*	*-0.37%*	*-1.49%*	*-1.45%*
Large Cap Domestic Equity	**18.19%**	**9.13%**	**1.74%**	**3.34%**	**20.62%**	**13.68%**	**9.68%**	**11.49%**	**10.89%**
S&P 500 Index		*9.13%*	*1.74%*	*3.34%*	*20.80%*	*13.84%*	*9.76%*	*12.51%*	*11.82%*
Excess Return		*-0.01%*	*0.00%*	*0.00%*	*-0.18%*	*-0.16%*	*-0.08%*	*-1.02%*	*-0.92%*
BlackRock S&P 500	**18.19%**	**9.13%**	**1.74%**	**3.34%**	**20.62%**	**13.68%**	**9.68%**	**12.46%**	**11.78%**
S&P 500 Index		*9.13%*	*1.74%*	*3.34%*	*20.80%*	*13.84%*	*9.76%*	*12.51%*	*11.82%*
Excess Return		*-0.01%*	*0.00%*	*0.00%*	*-0.18%*	*-0.16%*	*-0.08%*	*-0.06%*	*-0.04%*
Smid Cap Domestic Equity	**5.48%**	**8.14%**	**-3.63%**	**-2.26%**	**5.99%**	**0.72%**	**4.69%**	**6.70%**	**7.30%**
Russell 2500 Index		*9.00%*	*-3.34%*	*-2.51%*	*6.06%*	*-0.25%*	*3.26%*	*6.91%*	*7.53%*
Excess Return		*-0.86%*	*-0.29%*	*0.25%*	*-0.07%*	*0.97%*	*1.43%*	*-0.21%*	*-0.24%*
AllianceBernstein	**3.40%**	**10.41%**	**-3.08%**	**-1.98%**	**7.48%**	**1.94%**	**2.90%**	**7.33%**	**8.09%**
Russell 2500 Index		*9.00%*	*-3.34%*	*-2.51%*	*6.06%*	*-0.25%*	*3.26%*	*6.91%*	*7.53%*
Excess Return		*1.41%*	*0.26%*	*0.53%*	*1.43%*	*2.19%*	*-0.36%*	*0.41%*	*0.56%*
TSW	**2.08%**	**4.61%**	**-4.52%**	**-2.72%**	**3.63%**	**-1.22%**	**7.91%**	**5.73%**	**6.12%**
TSW Blended Benchmark (2)		*9.08%*	*-2.55%*	*-0.81%*	*4.97%*	*-1.27%*	*7.63%*	*6.83%*	*7.49%*
Excess Return		*-4.46%*	*-1.97%*	*-1.91%*	*-1.34%*	*0.06%*	*0.28%*	*-1.11%*	*-1.38%*
Small Cap Domestic Equity	**7.14%**	**7.74%**	**-2.96%**	**-1.55%**	**5.96%**	**0.75%**	**5.42%**	**8.90%**	**8.69%**
Russell 2000 Index		*9.05%*	*-4.37%*	*-3.60%*	*4.20%*	*-2.57%*	*1.13%*	*4.78%*	*6.13%*
Excess Return		*-1.31%*	*1.41%*	*2.05%*	*1.77%*	*3.32%*	*4.29%*	*4.11%*	*2.56%*
Boston Trust	**1.88%**	**5.30%**	**-3.67%**	**-2.42%**	**1.88%**	**-2.93%**	**8.81%**	**9.10%**	**8.36%**
Russell 2000 Index		*9.05%*	*-4.37%*	*-3.60%*	*4.20%*	*-2.57%*	*1.13%*	*4.78%*	*6.13%*
Excess Return		*-3.75%*	*0.70%*	*1.18%*	*-2.31%*	*-0.36%*	*7.68%*	*4.32%*	*2.23%*
Segall Bryant & Hamill	**1.99%**	**7.83%**	**-1.85%**	**-0.33%**	**5.15%**	**1.10%**	**6.81%**	**9.50%**	**8.25%**
Russell 2000 Index		*9.05%*	*-4.37%*	*-3.60%*	*4.20%*	*-2.57%*	*1.13%*	*4.78%*	*6.13%*
Excess Return		*-1.22%*	*2.52%*	*3.27%*	*0.95%*	*3.66%*	*5.68%*	*4.72%*	*2.12%*
Wellington	**3.27%**	**9.14%**	**-3.22%**	**-1.77%**	**8.99%**	**2.78%**	**2.88%**	**8.42%**	**9.18%**
Russell 2000 Index		*9.05%*	*-4.37%*	*-3.60%*	*4.20%*	*-2.57%*	*1.13%*	*4.78%*	*6.13%*
Excess Return		*0.09%*	*1.15%*	*1.82%*	*4.79%*	*5.35%*	*1.75%*	*3.64%*	*3.04%*

(1) The Domestic Equity Benchmark is the Russell 3000 Index as of 7/1/2021.

(2) TSW Blended Benchmark is the Russell 2500 Value Index as of 7/1/2019. Prior to 7/1/2019 it was the Russell 2500.

The table below details the rates of return for the fund's investment managers over various time periods ended November 30, 2023. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

		Net of Fees Returns for Periods Ended November 30, 2023							
Composite	Total Fund Weighting As of 11/30/2023	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Non US Equity	**18.28%**	**8.68%**	**0.38%**	**0.21%**	**13.90%**	**12.59%**	**2.32%**	**5.33%**	**3.79%**
Non US Equity Benchmark (1)		*9.00%*	*1.20%*	*0.56%*	*10.08%*	*9.26%*	*1.67%*	*5.06%*	*3.41%*
Excess Return		*-0.32%*	*-0.82%*	*-0.36%*	*3.81%*	*3.33%*	*0.65%*	*0.27%*	*0.37%*
Core Non US Equity	**11.16%**	**8.88%**	**0.62%**	**0.70%**	**14.87%**	**14.27%**	**4.16%**	**5.61%**	**3.28%**
Core Non US Benchmark (2)		*9.00%*	*1.20%*	*0.56%*	*10.09%*	*9.26%*	*1.67%*	*5.06%*	*3.41%*
Excess Return		*-0.12%*	*-0.58%*	*0.13%*	*4.79%*	*5.01%*	*2.49%*	*0.55%*	*-0.13%*
Aristotle	**1.44%**	**8.76%**	**0.72%**	**0.09%**	**12.85%**	**10.98%**	**-**	**-**	**-**
MSCI EAFE		*9.28%*	*1.27%*	*0.54%*	*12.27%*	*12.36%*	-	-	-
Excess Return		*-0.52%*	*-0.55%*	*-0.45%*	*0.57%*	*-1.38%*	-	-	-
Artisan Partners	**3.16%**	**7.84%**	**0.22%**	**0.81%**	**11.31%**	**9.57%**	**0.95%**	**5.39%**	**-**
MSCI EAFE		*9.28%*	*1.27%*	*0.54%*	*12.27%*	*12.36%*	*3.80%*	*5.99%*	-
Excess Return		*-1.44%*	*-1.05%*	*0.27%*	*-0.96%*	*-2.80%*	*-2.84%*	*-0.60%*	-
BlackRock SuperFund	**1.58%**	**8.97%**	**1.22%**	**0.56%**	**-**	**-**	**-**	**-**	**-**
MSCI ACWI Ex-US		*9.00%*	*1.20%*	*0.56%*	-	-	-	-	-
Excess Return		*-0.03%*	*0.01%*	*0.00%*	-	-	-	-	-
Causeway Capital	**3.61%**	**9.22%**	**0.31%**	**1.22%**	**21.88%**	**23.47%**	**9.36%**	**8.30%**	**-**
MSCI EAFE		*9.28%*	*1.27%*	*0.54%*	*12.27%*	*12.36%*	*3.80%*	*5.99%*	-
Excess Return		*-0.06%*	*-0.96%*	*0.67%*	*9.61%*	*11.10%*	*5.57%*	*2.31%*	-
Lazard	**1.37%**	**10.53%**	**1.56%**	**-0.13%**	**12.07%**	**10.66%**	**-**	**-**	**-**
MSCI EAFE		*9.28%*	*1.27%*	*0.54%*	*12.27%*	*12.36%*	-	-	-
Excess Return		*1.25%*	*0.29%*	*-0.67%*	*-0.20%*	*-1.71%*	-	-	-
Emerging Markets	**1.43%**	**6.70%**	**-0.96%**	**-0.77%**	**5.60%**	**4.05%**	**-6.32%**	**0.62%**	**1.11%**
MSCI EM		*8.00%*	*1.09%*	*0.77%*	*5.70%*	*4.21%*	*-4.04%*	*2.34%*	*2.12%*
Excess Return		*-1.30%*	*-2.05%*	*-1.54%*	*-0.10%*	*-0.16%*	*-2.29%*	*-1.72%*	*-1.02%*
Wellington Emerging Markets	**1.43%**	**6.70%**	**-0.96%**	**-0.77%**	**3.31%**	**2.67%**	**-6.18%**	**0.90%**	**2.23%**
MSCI EM		*8.00%*	*1.09%*	*0.77%*	*5.70%*	*4.21%*	*-4.04%*	*2.34%*	*2.12%*
Excess Return		*-1.30%*	*-2.05%*	*-1.54%*	*-2.38%*	*-1.54%*	*-2.14%*	*-1.44%*	*0.11%*
Non US Small Cap	**1.10%**	**10.51%**	**-0.32%**	**-0.05%**	**8.02%**	**7.84%**	**-1.31%**	**-1.19%**	**-0.62%**
MSCI EAFE Small Cap		*10.06%*	*-0.99%*	*-0.04%*	*5.48%*	*6.61%*	*-0.83%*	*3.70%*	*4.31%*
Excess Return		*0.46%*	*0.67%*	*-0.01%*	*2.54%*	*1.23%*	*-0.48%*	*-4.89%*	*-4.93%*
Wellington Int'l Small Cap Research	**1.10%**	**10.51%**	**-0.32%**	**-0.05%**	**8.02%**	**7.84%**	**-**	**-**	**-**
MSCI EAFE Small Cap		*10.06%*	*-0.99%*	*-0.04%*	*5.48%*	*6.61%*	-	-	-
Excess Return		*0.46%*	*0.67%*	*-0.01%*	*2.54%*	*1.23%*	-	-	-
Global Equity	**4.59%**	**8.38%**	**0.40%**	**-0.60%**	**17.07%**	**14.20%**	**5.62%**	**10.31%**	**9.64%**
MSCI ACWI net		*9.23%*	*1.56%*	*2.34%*	*16.60%*	*12.01%*	*5.69%*	*9.07%*	*7.60%*
Excess Return		*-0.84%*	*-1.16%*	*-2.94%*	*0.47%*	*2.19%*	*-0.07%*	*1.24%*	*2.04%*
Walter Scott Global Equity	**4.59%**	**8.38%**	**0.40%**	**-0.60%**	**17.07%**	**14.20%**	**5.62%**	**10.31%**	**9.64%**
Walter Scott Blended Benchmark (3)		*9.23%*	*1.56%*	*2.34%*	*16.60%*	*12.01%*	*5.69%*	*9.07%*	*7.60%*
Excess Return		*-0.84%*	*-1.16%*	*-2.94%*	*0.47%*	*2.19%*	*-0.07%*	*1.24%*	*2.04%*

(1) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.
(2) The Core Non US Equity Index is the MSCI ACWI ex US as of 7/1/2007. Prior to 7/1/2007 it was the MSCI EAFE Index.
(3) The Walter Scott Blended Benchmark is the MSCI ACWI Index as 5/1/2008. Prior to 5/1/2008 it was the MSCI EAFE Index.

The table below details the rates of return for the fund's investment managers over various time periods ended November 30, 2023. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

Net of Fees Returns for Periods Ended November 30, 2023									
Composite	Total Fund Weighting As of 11/30/2023	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Fixed Income	**19.84%**	**4.60%**	**0.52%**	**0.05%**	**2.87%**	**2.75%**	**-3.08%**	**1.79%**	**2.09%**
Fixed Income Benchmark (1)		*4.50%*	*0.47%*	*-0.03%*	*2.29%*	*1.94%*	*-4.05%*	*1.00%*	*1.65%*
Excess Return		*0.10%*	*0.05%*	*0.08%*	*0.58%*	*0.81%*	*0.97%*	*0.79%*	*0.44%*
BlackRock SIO Bond Fund	**2.27%**	**2.81%**	**1.56%**	**2.30%**	**4.34%**	**4.46%**	**0.60%**	**-**	**-**
BlackRock Custom Benchmark (2)		*0.44%*	*1.35%*	*2.26%*	*4.73%*	*5.08%*	*2.17%*	-	-
Excess Return		*2.37%*	*0.21%*	*0.04%*	*-0.39%*	*-0.62%*	*-1.57%*	-	-
Brandywine Asset Mgmt	**1.96%**	**8.31%**	**-0.18%**	**-2.65%**	**0.52%**	**2.31%**	**-6.01%**	**0.09%**	**0.88%**
Brandywine Custom Benchmark (3)		*5.02%*	*0.26%*	*-0.88%*	*0.92%*	*0.64%*	*-8.10%*	*-1.78%*	*-0.84%*
Excess Return		*3.29%*	*-0.44%*	*-1.76%*	*-0.40%*	*1.68%*	*2.09%*	*1.87%*	*1.71%*
FIAM (Fidelity) Tactical Bond	**3.17%**	**4.71%**	**0.20%**	**-0.34%**	**2.78%**	**2.31%**	**-1.79%**	**-**	**-**
Bloomberg Aggregate		*4.53%*	*0.26%*	*-0.45%*	*1.64%*	*1.18%*	*-4.47%*	-	-
Excess Return		*0.18%*	*-0.07%*	*0.10%*	*1.14%*	*1.13%*	*2.68%*	-	-
Income Research & Management	**6.67%**	**4.18%**	**0.23%**	**-0.33%**	**2.42%**	**1.86%**	**-4.54%**	**1.40%**	**1.88%**
Bloomberg Gov/Credit		*4.33%*	*0.44%*	*-0.23%*	*1.97%*	*1.48%*	*-4.66%*	*1.06%*	*1.54%*
Excess Return		*-0.15%*	*-0.21%*	*-0.09%*	*0.46%*	*0.37%*	*0.12%*	*0.34%*	*0.35%*
Loomis Sayles	**2.42%**	**4.59%**	**1.24%**	**1.66%**	**4.36%**	**4.25%**	**-1.47%**	**3.31%**	**3.28%**
Loomis Sayles Custom Benchmark (4)		*4.53%*	*0.90%*	*1.02%*	*4.30%*	*3.76%*	*-2.43%*	*1.98%*	*2.43%*
Excess Return		*0.06%*	*0.34%*	*0.64%*	*0.07%*	*0.49%*	*0.96%*	*1.33%*	*0.85%*
Manulife Strategic Fixed Income	**1.83%**	**4.42%**	**0.92%**	**0.71%**	**4.09%**	**3.80%**	**-1.60%**	**2.27%**	**-**
Bloomberg Multiverse		*5.06%*	*0.84%*	*0.23%*	*1.82%*	*2.39%*	*-6.09%*	*-0.57%*	-
Excess Return		*-0.63%*	*0.08%*	*0.48%*	*2.27%*	*1.42%*	*4.49%*	*2.84%*	-
Mellon US Agg Bond Index	**1.52%**	**4.54%**	**0.26%**	**-0.45%**	**-**	**-**	**-**	**-**	**-**
Bloomberg Aggregate Bond Index		*4.53%*	*0.26%*	*-0.45%*	-	-	-	-	-
Excess Return		*0.01%*	*0.00%*	*0.00%*	-	-	-	-	-
Total Cash	**0.60%**	**0.47%**	**1.38%**	**2.29%**	**4.73%**	**5.09%**	**2.10%**	**1.91%**	**1.29%**
3-month Treasury Bill		*0.45%*	*1.36%*	*2.22%*	*4.53%*	*4.91%*	*2.00%*	*1.82%*	*1.21%*
Excess Return		*0.02%*	*0.02%*	*0.06%*	*0.20%*	*0.19%*	*0.11%*	*0.09%*	*0.08%*
Total Marketable Assets	**69.52%**	**7.36%**	**0.11%**	**0.61%**	**10.63%**	**7.54%**	**3.07%**	**6.26%**	**5.93%**
Total Marketable Index (5)		*7.63%*	*1.05%*	*1.38%*	*11.20%*	*8.25%*	*2.44%*	*6.53%*	*6.24%*
Excess Return		*-0.27%*	*-0.94%*	*-0.77%*	*-0.57%*	*-0.71%*	*0.63%*	*-0.27%*	*-0.31%*

(1) The Fixed Income Benchmark is the Bloomberg Universal Bond Index as of 7/1/2007.
(2) The BlackRock Custom Benchmark is 3 Month SOFR compounded in arrears as of 1/1/2022.
(3) The Brandywine Blended Benchmark is the FTSE WGBI Ex-China Index as of 11/1/2021.
(4) The Loomis Sayles Custom Benchmark is 65% Bloomberg Aggregate and 35% Bloomberg High Yield.
(5) Marketable Assets Index is 40% Russell 3000, 26.7% MSCI ACWI ex US, and 33.3% Bloomberg Universal as of 7/1/2021.

The table below details the rates of return for the fund's investment managers over various time periods ended November 30, 2023. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

		Net of Fees Returns for Periods Ended November 30, 2023							
Composite	Total Fund Weighting As of 11/30/2023	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Real Estate (Q2)* (5)	**11.11%**	**0.08%**	**-1.16%**	**-0.19%**	**-8.36%**	**-7.11%**	**11.45%**	**8.99%**	**10.68%**
Real Estate Benchmark (1)		*-0.71%*	*-2.36%*	*-4.25%*	*-12.26%*	*-12.17%*	*6.47%*	*5.00%*	*7.47%*
Excess Return		*0.79%*	*1.20%*	*4.06%*	*3.91%*	*5.07%*	*4.98%*	*3.99%*	*3.22%*
Strategic Core Real Estate (Q2)*	**6.91%**	**-0.06%**	**-1.62%**	**-0.21%**	**-12.65%**	**-11.11%**	**9.01%**	**7.42%**	**9.26%**
Real Estate Benchmark (1)		*-0.71%*	*-2.36%*	*-4.25%*	*-12.26%*	*-12.17%*	*6.47%*	*5.00%*	*7.47%*
Excess Return		*0.65%*	*0.74%*	*4.04%*	*-0.38%*	*1.06%*	*2.53%*	*2.42%*	*1.79%*
Tactical Non-Core Real Estate (Q2)*	**4.20%**	**0.31%**	**-0.39%**	**-0.16%**	**0.26%**	**0.82%**	**15.83%**	**11.86%**	**13.24%**
Real Estate Benchmark (1)		*-0.71%*	*-2.36%*	*-4.25%*	*-12.26%*	*-12.17%*	*6.47%*	*5.00%*	*7.47%*
Excess Return		*1.02%*	*1.98%*	*4.09%*	*12.52%*	*12.99%*	*9.36%*	*6.86%*	*5.77%*
Total Alternative Assets (Q2)*	**19.37%**	**0.02%**	**-0.85%**	**-0.01%**	**4.82%**	**3.59%**	**16.22%**	**11.08%**	**9.50%**
Alternative Assets Benchmark (2)		*-0.89%*	*7.44%*	*8.90%*	*23.34%*	*14.70%*	*10.13%*	*10.87%*	*12.04%*
Excess Return		*0.91%*	*-8.29%*	*-8.91%*	*-18.52%*	*-11.11%*	*6.08%*	*0.21%*	*-2.54%*
Total Private Equity (Q2)*	**14.50%**	**0.02%**	**-0.68%**	**-0.01%**	**5.26%**	**3.12%**	**19.62%**	**13.71%**	**12.23%**
Private Equity Benchmark (3)		*-1.73%*	*8.95%*	*10.87%*	*28.53%*	*17.21%*	*13.03%*	*14.19%*	*16.33%*
Excess Return		*1.74%*	*-9.63%*	*-10.88%*	*-23.27%*	*-14.10%*	*6.60%*	*-0.48%*	*-4.10%*
Total Private Debt (Q2)*	**4.86%**	**0.02%**	**-1.32%**	**-0.01%**	**3.56%**	**4.96%**	**8.47%**	**5.39%**	**6.75%**
Private Debt Benchmark (4)		*0.81%*	*4.39%*	*4.95%*	*13.25%*	*9.52%*	*4.11%*	*3.63%*	*6.66%*
Excess Return		*-0.79%*	*-5.71%*	*-4.97%*	*-9.69%*	*-4.56%*	*4.36%*	*1.76%*	*0.09%*

(1) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.

(2) The Alternative Assets Benchmark is 66.7% Russell 3000 Index + 2% lagged 1 quarter and 33.3% ((50% S&P LSTA Leveraged Loan 100 Index + 50% Bloomberg High Yield Index) + 1%) lagged 1 quarter as of 7/1/2022.

(3) The Private Equity Benchmark is the Russell 3000 Index + 2% lagged 1 quarter as of 7/1/2022.

(4) The Private Debt Benchmark is (50% MStar LSTA Leveraged Loan 100 Index / 50% Bloomberg High Yield Index) + 1% lagged 1 quarter as of 7/1/2022.

(5) Total Real Estate returns includes Townsend discretionary fee as of 7/1/2022.

*Real Estate and Alternatives market values reflect current custodian valuations, which are typically lagged approximately 1 quarter.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of November 30, 2023, with the distribution as of October 31, 2023. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Distribution Across Investment Managers

	November 30, 2023				October 31, 2023	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Domestic Equity	**$3,502,335,842**	**30.81%**	**$0**	**$278,801,215**	**$3,223,534,627**	**29.71%**
Large Cap Domestic Equity	**$2,067,945,455**	**18.19%**	**$0**	**$172,981,319**	**$1,894,964,136**	**17.46%**
Blackrock S&P 500	2,067,945,455	18.19%	0	172,981,319	1,894,964,136	17.46%
SMid Cap Domestic Equity	**$623,166,764**	**5.48%**	**$0**	**$47,147,094**	**$576,019,670**	**5.31%**
AllianceBernstein	386,977,775	3.40%	0	36,634,046	350,343,729	3.23%
TSW	236,188,989	2.08%	0	10,513,049	225,675,940	2.08%
Small Cap Domestic Equity	**$811,223,623**	**7.14%**	**$0**	**$58,672,802**	**$752,550,821**	**6.94%**
Boston Trust	213,708,126	1.88%	0	10,827,051	202,881,075	1.87%
Segall Bryant & Hamill	225,751,374	1.99%	0	16,525,210	209,226,163	1.93%
Wellington	371,764,123	3.27%	0	31,320,540	340,443,583	3.14%
Total Non US Equity	**$2,077,577,216**	**18.28%**	**$0**	**$166,778,097**	**$1,910,799,119**	**17.61%**
Core Non US Equity (1)	**$1,268,929,772**	**11.16%**	**$0**	**$103,968,206**	**$1,164,961,566**	**10.74%**
Aristotle	164,117,512	1.44%	0	13,270,580	150,846,932	1.39%
Artisan Partners	358,768,937	3.16%	0	26,238,976	332,529,961	3.06%
BlackRock Superfund	179,560,032	1.58%	0	14,786,472	164,773,560	1.52%
Causeway Capital	409,981,179	3.61%	0	34,753,003	375,228,175	3.46%
Lazard	155,812,952	1.37%	0	14,897,606	140,915,346	1.30%
Emerging Markets	**$162,113,645**	**1.43%**	**$0**	**$10,305,089**	**$151,808,557**	**1.40%**
Wellington Emerging Markets	162,113,645	1.43%	0	10,305,089	151,808,557	1.40%
Non US Small Cap	**$125,132,320**	**1.10%**	**$0**	**$11,969,710**	**$113,162,611**	**1.04%**
Wellington Int'l Small Cap Research	125,132,320	1.10%	0	11,969,710	113,162,611	1.04%
Global Equity	**$521,401,479**	**4.59%**	**$0**	**$40,535,093**	**$480,866,386**	**4.43%**
Walter Scott Global Equity	521,401,479	4.59%	0	40,535,093	480,866,386	4.43%
Total Fixed Income	**$2,254,946,091**	**19.84%**	**$0**	**$99,572,343**	**$2,155,373,748**	**19.86%**
BlackRock SIO Bond Fund	258,456,031	2.27%	0	7,154,626	251,301,405	2.32%
Brandywine Asset Mgmt	223,077,805	1.96%	0	17,175,615	205,902,190	1.90%
FIAM (Fidelity) Tactical Bond	360,371,266	3.17%	0	16,289,383	344,081,884	3.17%
Income Research & Management	757,729,845	6.67%	0	30,477,234	727,252,611	6.70%
Loomis Sayles	274,877,031	2.42%	0	12,122,371	262,754,661	2.42%
Manulife Strategic Fixed Income	207,931,794	1.83%	0	8,855,408	199,076,386	1.83%
Mellon US Agg Bond Index	172,502,318	1.52%	0	7,497,707	165,004,611	1.52%
Total Cash	**$67,973,895**	**0.60%**	**$(19,877,981)**	**$434,195**	**$87,417,681**	**0.81%**
Total Marketable Assets	**$7,902,833,044**	**69.52%**	**$(19,877,981)**	**$545,585,850**	**$7,377,125,175**	**67.99%**
Total Real Estate	**$1,263,340,022**	**11.11%**	**$(2,876,554)**	**$1,480,436**	**$1,264,736,140**	**11.66%**
Strategic Core Real Estate	785,754,190	6.91%	(1,966,778)	1	787,720,967	7.26%
Tactical Non-Core Real Estate	477,585,831	4.20%	(909,776)	1,480,434	477,015,173	4.40%
Total Alternative Assets	**$2,201,900,979**	**19.37%**	**$(7,462,884)**	**$411,298**	**$2,208,952,565**	**20.36%**
Private Equity	1,648,857,615	14.50%	1,004,176	298,723	1,647,554,715	15.18%
Private Debt	553,043,364	4.86%	(8,467,060)	112,575	561,397,850	5.17%
Total Fund Composite	**$11,368,074,046**	**100.0%**	**$(30,217,419)**	**$547,477,583**	**$10,850,813,881**	**100.0%**

-Alternatives market values reflect current custodian valuations, which may not be up to date.
(1) Includes $689,160.90 in legacy assets that are not actively managed and in liquidation following the termination of Fisher Investments.

New Hampshire Retirement System
Target History

30-Jun-2022 - 30-Nov-2023		
Domestic Broad Eq	Russell 3000 Index	30.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Russell 3000 Index+2.00%	10.00%
Other Alternatives	Bloomberg HY Corporate+1.00%	2.50%
Other Alternatives	Morningstar LSTA Leveraged Loan 100+1.00%	2.50%
		100.00%

30-Jun-2021 - 30-Jun-2022		
Domestic Broad Eq	Russell 3000 Index	30.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+3.00%	10.00%
Other Alternatives	Morningstar LSTA Leveraged Loan 100	5.00%
		100.00%

30-Sep-2020 - 30-Jun-2021		
Domestic Broad Eq	S&P 500 Index	30.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+3.00%	10.00%
Other Alternatives	Morningstar LSTA Leveraged Loan 100	5.00%
		100.00%

30-Jun-2015 - 30-Sep-2020		
Domestic Broad Eq	S&P 500 Index	30.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	15.00%
		100.00%

31-Mar-2015 - 30-Jun-2015		
Domestic Broad Eq	Russell 3000 Index	37.30%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.70%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	9.00%
		100.00%

31-Dec-2014 - 31-Mar-2015		
Domestic Broad Eq	Russell 3000 Index	37.70%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.80%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	8.50%
		100.00%

30-Sep-2014 - 31-Dec-2014		
Domestic Broad Eq	Russell 3000 Index	39.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	7.40%
		100.00%

30-Jun-2014 - 30-Sep-2014		
Domestic Broad Eq	Russell 3000 Index	39.60%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.90%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	6.50%
		100.00%

31-Mar-2014 - 30-Jun-2014		
Domestic Broad Eq	Russell 3000 Index	42.20%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	4.20%
		100.00%

31-Dec-2013 - 31-Mar-2014		
Domestic Broad Eq	Russell 3000 Index	41.80%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	9.10%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	4.10%
		100.00%

30-Sep-2013 - 31-Dec-2013		
Domestic Broad Eq	Russell 3000 Index	42.90%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	3.50%
		100.00%

30-Jun-2013 - 30-Sep-2013		
Domestic Broad Eq	Russell 3000 Index	42.50%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	9.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	3.50%
		100.00%

31-Mar-2013 - 30-Jun-2013		
Domestic Broad Eq	Russell 3000 Index	43.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	3.40%
		100.00%

31-Dec-2012 - 31-Mar-2013		
Domestic Broad Eq	Russell 3000 Index	43.60%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.80%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.60%
		100.00%

Alternatives Benchmark represents from 7/1/2022 to present: 66.7% Russell 3000 Idx + 2% (1 qtr lag) and 33.3% ((50% S&P LSTA Leveraged Loan 100 Idx + 50% Bloomberg HY Idx) + 1%) (1 qtr lag).
From 7/1/2019 to 7/1/2022: 66.7% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag). From 7/1/2016 to 7/1/2019: 33.3% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag) + 33.3% of Cash (6-mo USD LIBOR) + 5%. From 7/1/2015 to 7/1/2016: 33.3% S&P 500 +3% (1qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Idx(1 qtr lag) + 33.3% of Cash (1 month USD LIBID) +5%. From 7/1/2013 to 7/1/2015: S&P 500 plus 5% (1 qtr lag). From 7/1/2011 to 7/1/2013: Qtr ending weight of Private Equity x S&P 500 plus 5% + Qtr ending weight Absolute Return x CPI + 5%. Prior to 7/1/2011: CPI + 5%.

New Hampshire Retirement System
Target History

30-Sep-2012 - 31-Dec-2012		
Domestic Broad Eq	Russell 3000 Index	43.90%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.70%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.40%
		100.00%

30-Jun-2012 - 30-Sep-2012		
Domestic Broad Eq	Russell 3000 Index	43.50%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	9.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.50%
		100.00%

31-Mar-2012 - 30-Jun-2012		
Domestic Broad Eq	Russell 3000 Index	40.10%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	7.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.30%
		100.00%

31-Dec-2011 - 31-Mar-2012		
Domestic Broad Eq	Russell 3000 Index	39.70%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	8.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.30%
		100.00%

30-Sep-2011 - 31-Dec-2011		
Domestic Broad Eq	Russell 3000 Index	40.20%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	7.40%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.40%
		100.00%

30-Jun-2011 - 30-Sep-2011		
Domestic Broad Eq	Russell 3000 Index	42.50%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.40%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.10%
		100.00%

31-Mar-2011 - 30-Jun-2011		
Domestic Broad Eq	Russell 3000 Index	43.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.30%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	1.70%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

31-Dec-2010 - 31-Mar-2011		
Domestic Broad Eq	Russell 3000 Index	43.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.20%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	1.80%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Sep-2010 - 31-Dec-2010		
Domestic Broad Eq	Russell 3000 Index	42.80%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.40%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	1.80%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Jun-2010 - 30-Sep-2010		
Domestic Broad Eq	Russell 3000 Index	42.90%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.00%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.10%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

31-Dec-2009 - 30-Jun-2010		
Domestic Broad Eq	Russell 3000 Index	43.30%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	4.70%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.00%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Sep-2009 - 31-Dec-2009		
Domestic Broad Eq	Russell 3000 Index	42.30%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.50%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.20%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Jun-2009 - 30-Sep-2009		
Domestic Broad Eq	Russell 3000 Index	41.50%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	6.20%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.30%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

Alternatives Benchmark represents from 7/1/2022 to present: 66.7% Russell 3000 Idx + 2% (1 qtr lag) and 33.3% ((50% S&P LSTA Leveraged Loan 100 Idx + 50% Bloomberg HY Idx) + 1%) (1 qtr lag).
From 7/1/2019 to 7/1/2022: 66.7% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag). From 7/1/2016 to 7/1/2019: 33.3% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag) + 33.3% of Cash (6-mo USD LIBOR) + 5%. From 7/1/2015 to 7/1/2016: 33.3% S&P 500 +3% (1qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Idx(1 qtr lag) + 33.3% of Cash (1 month USD LIBID) +5%. From 7/1/2013 to 7/1/2015: S&P 500 plus 5% (1 qtr lag). From 7/1/2011 to 7/1/2013: Qtr ending weight of Private Equity x S&P 500 plus 5% + Qtr ending weight Absolute Return x CPI + 5%. Prior to 7/1/2011: CPI + 5%.

New Hampshire Retirement System
Target History

31-Mar-2009 - 30-Jun-2009		
Domestic Broad Eq	Russell 3000 Index	38.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	9.30%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.70%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

31-Dec-2008 - 31-Mar-2009		
Domestic Broad Eq	Russell 3000 Index	37.20%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	9.70%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	3.10%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Sep-2008 - 31-Dec-2008		
Domestic Broad Eq	Russell 3000 Index	38.90%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index	8.20%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Consumer Price Index (W) + 5%	2.90%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Jun-2008 - 30-Sep-2008		
Domestic Broad Eq	Russell 3000 Index	40.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index	7.30%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Consumer Price Index (W) + 5%	2.70%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Jun-2007 - 30-Jun-2008		
Domestic Broad Eq	Russell 3000 Index	44.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index	5.00%
Intl Equity	MSCI ACWI xUS (Net)	16.00%
Other Alternatives	Consumer Price Index (W) + 5%	5.00%
		100.00%

30-Nov-2006 - 30-Jun-2007		
Domestic Broad Eq	Russell 3000 Index	44.00%
Domestic Fixed	Bloomberg Universal	26.00%
Real Estate	NCREIF Property Index	5.00%
Intl Equity	MSCI ACWI xUS (Net)	16.00%
Other Alternatives	Consumer Price Index (W) + 5%	5.00%
Global Fixed-Inc	Brandywine Blended Benchmark	4.00%
		100.00%

30-Jun-2003 - 30-Nov-2006		
Domestic Broad Eq	Russell 3000 Index	47.00%
Domestic Fixed	Bloomberg Universal	18.00%
Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI ACWI xUS (Net)	12.00%
Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Fixed-Inc	Brandywine Blended Benchmark	3.00%
		100.00%

31-Oct-1997 - 30-Jun-2003		
Domestic Broad Eq	S&P 500 Index	50.00%
Domestic Fixed	Bloomberg Universal	18.00%
Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI EAFE (Net)	9.00%
Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Fixed-Inc	Brandywine Blended Benchmark	3.00%
		100.00%

31-Mar-1990 - 31-Oct-1997		
Domestic Broad Eq	S&P 500 Index	50.00%
Domestic Fixed	Bloomberg Universal	18.00%
Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI EAFE (Net)	9.00%
Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Fixed-Inc	JPM GBI Global Unhedged USD	3.00%
		100.00%

30-Jun-1975 - 31-Mar-1990		
Domestic Broad Eq	S&P 500 Index	50.00%
Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI EAFE (Net)	9.00%
Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Fixed-Inc	JPM GBI Global Unhedged USD	3.00%
		82.00%

Alternatives Benchmark represents from 7/1/2022 to present: 66.7% Russell 3000 Idx + 2% (1 qtr lag) and 33.3% ((50% S&P LSTA Leveraged Loan 100 Idx + 50% Bloomberg HY Idx) + 1%) (1 qtr lag).
From 7/1/2019 to 7/1/2022: 66.7% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag). From 7/1/2016 to 7/1/2019: 33.3% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag) + 33.3% of Cash (6-mo USD LIBOR) + 5%. From 7/1/2015 to 7/1/2016: 33.3% S&P 500 +3% (1qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Idx(1 qtr lag) + 33.3% of Cash (1 month USD LIBID) +5%. From 7/1/2013 to 7/1/2015: S&P 500 plus 5% (1 qtr lag). From 7/1/2011 to 7/1/2013: Qtr ending weight of Private Equity x S&P 500 plus 5% + Qtr ending weight Absolute Return x CPI + 5%. Prior to 7/1/2011: CPI + 5%.

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NHRS Asset Allocation Update

NHRS Investment Team

Independent Investment Committee Meeting

January 9, 2024

Summary

- At November 30, 2023 the preliminary Total Fund value was approximately $11.4 billion.

- New Asset Allocation Targets and Ranges were approved by the Board of Trustees on September 11, 2012 (Targets) and May 14, 2019 (Ranges), respectively.

- Allocations are managed within approved allocation ranges. All asset classes are continually monitored and Staff takes action to prudently rebalance as a range limit is approached.

- Current status of Targets vs. Actual is illustrated on page 2.

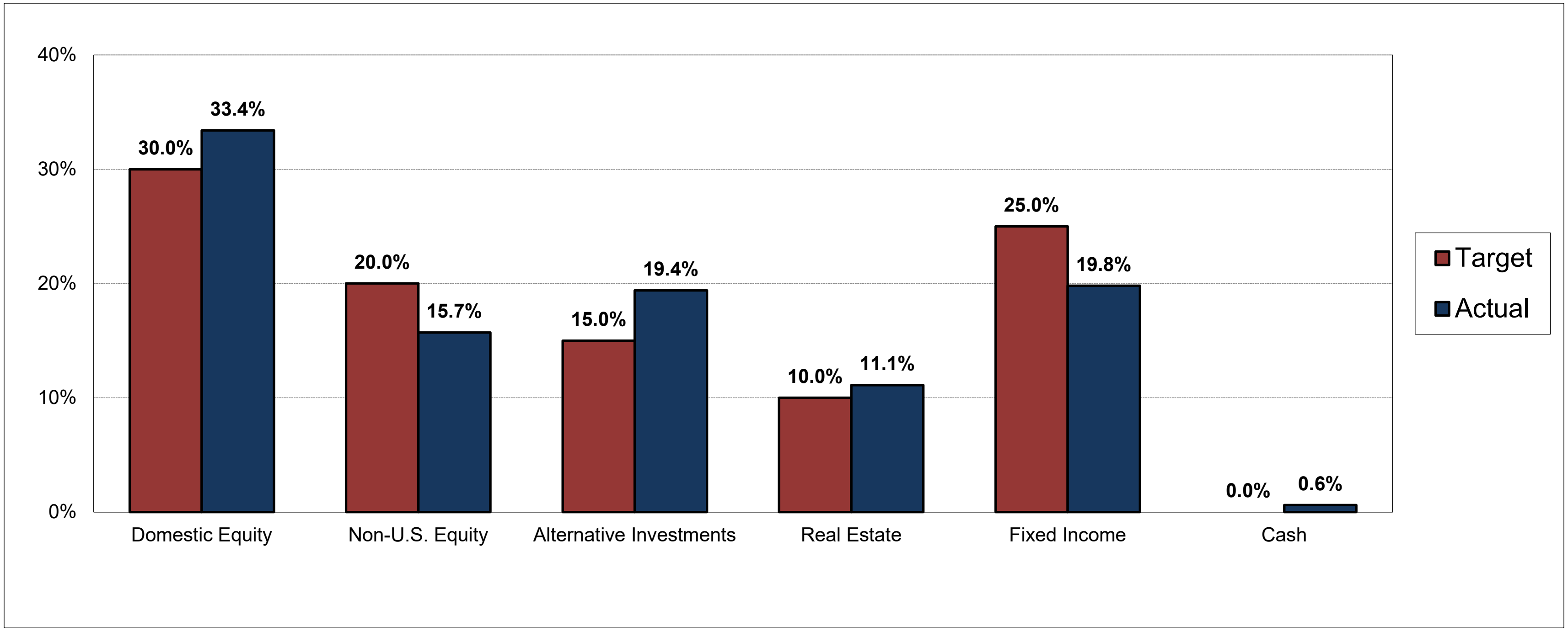
- All asset classes are within approved allocation ranges* (page 3) as of November 30th, 2023.

  **Fixed Income is below the target allocation but within the approved allocation range when cash is added.*

- Total Fund allocation is above and below the target of 70% Equity-like and 30% Fixed Income investments, respectively as of November 30th (page 4).

Current Status

Class Targets vs. Actual Allocation
as of November 30, 2023 (Preliminary)



Source: NHRS

Asset Class Allocations Relative to Policy Targets and Ranges

As of November 30, 2023 (preliminary)

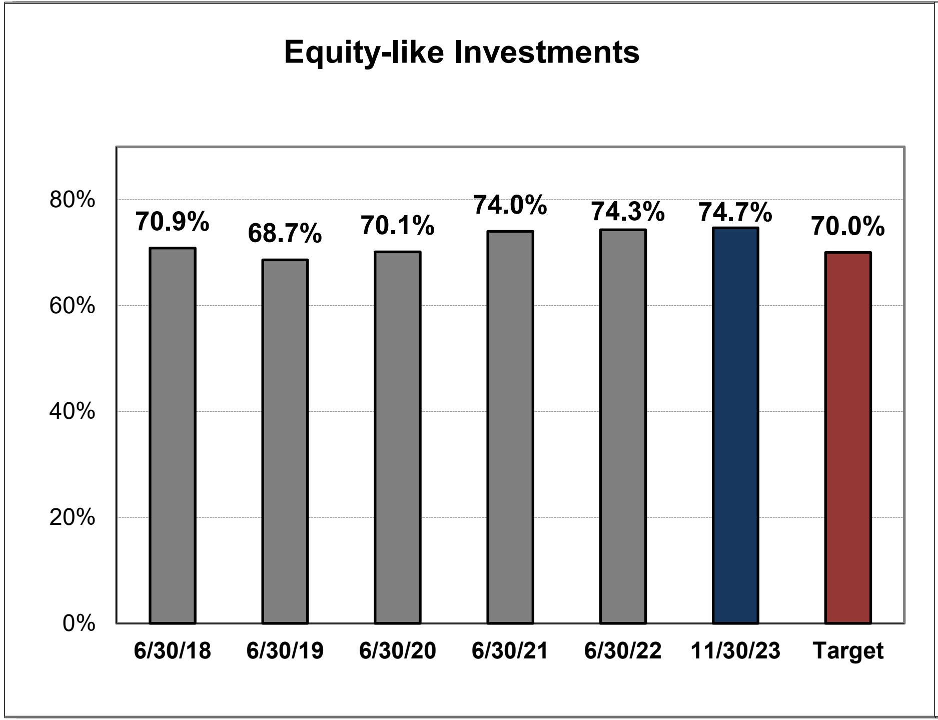
Asset Class	Range	Allocation Target	Actual	Variance	Objective	Comments
Domestic Equity	20 - 40%	30.0%	33.4%	3.4%	**Monitor**	No immediate action needed.
Non-U.S. Equity	15 - 25%	20.0%	15.7%	-4.3%	**Monitor**	Below target allocation but within approved allocation range. Continue to Monitor.
Alternative Investments (AI)[1]	5 - 25%	15.0%	19.4%	4.4%	**Monitor**	No immediate action needed.
Real Estate (RE)[1]	5 - 20%	10.0%	11.1%	1.1%	**Monitor**	Redemption from select open-end funds in process
Fixed Income	20 - 30%	25.0%	19.8%	-5.2%	**Monitor**	Below target allocation but within approved allocation range when cash is included. Continue to Monitor.
Cash	NA	0.0%	0.6%	0.6%	**No Action**	Minimal cash balance to provide liquidity, as needed, for annuities, capital calls, and other plan needs.
		100.0%	100.0%	0.0%		

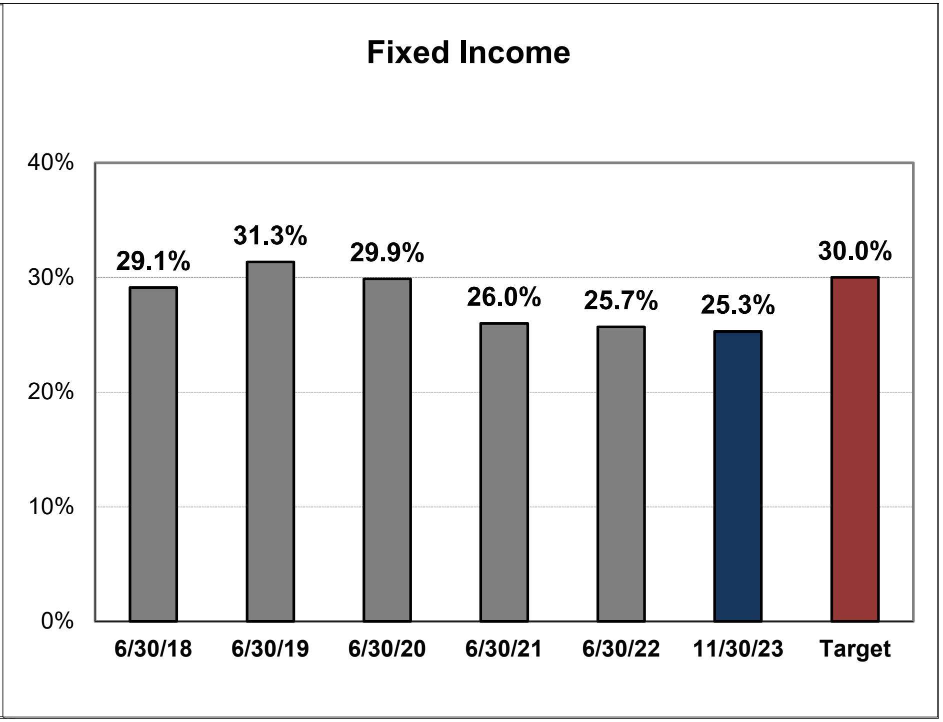
[1]As reported on the November 30, 2023 Monthly Review

Source: NHRS

Total Fund Allocation from 6/30/18 through 11/30/23 (Preliminary)

- The Total Fund allocation is above and below the target of 70% Equity-like and 30% Fixed Income investments, respectively.





Source: NHRS

Private Debt & Equity Summary: As of December 31, 2023

IIC Approval	Investment Name		Amount		Strategy
June 2009	Lexington Capital Partners VII	$	20,000,000		Secondaries
March 2011	Siguler Guff Distressed Opportunities IV *	$	20,000,000		Distressed
April 2011	Avenue Special Situations Fund VI	$	20,000,000		Distressed
April 2011	Lexington Capital Partners VII	$	20,000,000		Secondaries
May 2011	Industry Ventures Fund VI *	$	20,000,000		Secondaries
August 2011	RFE Investment Partners VIII *	$	20,000,000		Buyout
August 2011	Tennenbaum Opportunities Fund VI	$	20,000,000		Distressed
September 2011	Edgewater Growth Capital Partners Fund III *	$	20,000,000		Buyout
November 2011	SL Capital European Smaller Funds I *	$	20,000,000	**	Buyout
July 2012	Ironwood Mezzanine Fund III *	$	20,000,000		Mezzanine
July 2012	Coller International Partners VI	$	20,000,000		Secondaries
December 2012	Paul Capital Partners X *	$	12,500,000		Secondaries
February 2013	HarbourVest Dover Street VIII *	$	50,000,000		Secondaries
May 2013	Gramercy Distressed Opportunity Fund II *	$	50,000,000		Distressed
July 2013	Monroe Capital Senior Secured Direct Loan Fund *	$	50,000,000		Direct Lending
September 2013	**Industry Ventures Fund VII ***	**$**	**20,000,000**		**Secondaries**
September 2013	Industry Ventures Partnership Holdings Fund III *	$	20,000,000		Venture Capital
October 2013	Pine Brook Capital Partners II	$	50,000,000		Growth
February 2014	CCMP Capital Investors III	$	50,000,000		Buyout
February 2014	Carlyle Group *	$	150,000,000		Growth
March 2014	Crescent Direct Lending Levered Fund *	$	50,000,000		Direct Lending
April 2014	**Lexington Capital Partners VIII ***	**$**	**50,000,000**		**Secondaries**
August 2014	Alcentra European Direct Lending Fund	$	50,000,000		Direct Lending
August 2014	HarbourVest HIPEP VII *	$	50,000,000		Buyout
September 2014	Top Tier Venture Velocity Fund *	$	20,000,000		Secondaries
October 2014	BlackRock Private Opportunities Fund - 2014 Series	$	150,000,000		Co-Investments
November 2014	NGP Natural Resources XI *	$	75,000,000		Energy
January 2015	Comvest Capital III *	$	40,000,000		Direct Lending
January 2015	CarVal Investors Credit Value Fund III *	$	50,000,000		Multisector
April 2015	**Coller International Partners VII**	**$**	**50,000,000**		**Secondaries**
August 2015	**Gramercy Distressed Opportunity Fund III ***	**$**	**50,000,000**		**Distressed**
August 2015	**Monroe Capital Private Credit Fund II ***	**$**	**50,000,000**		**Direct Lending**
August 2015	BlueBay Direct Lending Fund II *	$	50,000,000	**	Direct Lending
September 2015	**Industry Ventures Partnership Holdings Fund IV ***	**$**	**20,000,000**		**Venture Capital**
September 2015	Warburg Pincus XII	$	64,000,000	***	Growth
November 2015	**HarbourVest Dover Street IX ***	**$**	**50,000,000**		**Secondaries**
November 2015	Kayne Anderson Energy Fund VII *	$	50,000,000		Energy
February 2016	**Alcentra European Direct Lending Fund II ***	**$**	**50,000,000**		**Direct Lending**
February 2016	Riverstone Credit Partners *	$	50,000,000		Energy
March 2016	Thoma Bravo Fund XII	$	46,000,000	***	Buyout
October 2016	**Comvest Capital IV ***	**$**	**50,000,000**		**Direct Lending**
December 2016	**HarbourVest HIPEP VIII ***	**$**	**50,000,000**		**Buyout**
January 2017	Actis Energy 4	$	50,000,000		Energy
February 2017	**Edgewater Growth Capital Partners Fund IV ***	**$**	**50,000,000**		**Buyout**
February 2017	**Top Tier Venture Velocity Fund 2 ***	**$**	**25,000,000**		**Secondaries**
April 2017	Apollo Investment Fund IX	$	40,000,000	***	Buyout
June 2017	**Crescent Direct Lending Levered Fund II ***	**$**	**50,000,000**		**Direct Lending**
September 2017	**Carlyle Asia V ***	**$**	**50,000,000**		**Growth**
September 2017	**CarVal Investors Credit Value Fund IV ***	**$**	**50,000,000**		**Multisector**
October 2017	**BlackRock Private Opportunities Fund - 2018 Series**	**$**	**150,000,000**		**Co-Investments**
November 2017	**Riverstone Credit Partners II ***	**$**	**50,000,000**		**Energy**
February 2018	**Industry Ventures Partnership Holdings Fund V ***	**$**	**25,000,000**		**Venture Capital**
March 2018	**BlueBay Direct Lending Fund III ***	**$**	**50,000,000**		**Direct Lending**
April 2018	**Monroe Capital Private Credit Fund III ***	**$**	**50,000,000**		**Direct Lending**
September 2018	**Alcentra European Direct Lending Fund III ***	**$**	**50,000,000**		**Direct Lending**
September 2018	**Thoma Bravo Fund XIII**	**$**	**50,000,000**		**Buyout**
September 2018	**Warburg Pincus Global Growth**	**$**	**50,000,000**		**Growth**
April 2019	**HarbourVest Dover Street X ***	**$**	**50,000,000**		**Secondaries**
April 2019	**Top Tier Venture Velocity Fund 3 ***	**$**	**25,000,000**		**Secondaries**

Private Debt & Equity Summary: As of December 31, 2023

IIC Approval	Investment Name	Amount		Strategy
March 2020	**Coller International Partners VIII**	**$ 75,000,000**		**Secondaries**
March 2020	**HarbourVest HIPEP IX ***	**$ 75,000,000**		**Buyout**
April 2020	**Comvest Capital V ***	**$ 50,000,000**		**Direct Lending**
September 2020	**Thoma Bravo Fund XIV**	**$ 50,000,000**	***	**Buyout**
October 2020	**CarVal Investors Credit Value Fund V ***	**$ 50,000,000**		**Multisector**
October 2020	**Industry Ventures Fund IX ***	**$ 50,000,000**		**Secondaries**
November 2020	**BlackRock Private Opportunities Fund - 2021 Series**	**$ 150,000,000**		**Co-Investments**
December 2020	**Monroe Capital Private Credit Fund IV ***	**$ 50,000,000**		**Direct Lending**
February 2021	**Crescent Direct Lending Levered Fund III ***	**$ 50,000,000**		**Direct Lending**
June 2021	**Industry Ventures Partnership Holdings Fund VI ***	**$ 25,000,000**		**Venture Capital**
September 2021	**Top Tier Venture Velocity Fund 4 ***	**$ 25,000,000**		**Secondaries**
November 2021	Atalaya Special Opportunities Fund VIII	$ 50,000,000		Specialty Finance
February 2022	Clearlake Capital Partners VII	$ 50,000,000		Buyout
February 2022	**Thoma Bravo Fund XV**	**$ 50,000,000**		**Buyout**
March 2022	**Comvest Capital VI ***	**$ 50,000,000**		**Direct Lending**
March 2022	**Warburg Pincus 14**	**$ 50,000,000**		**Growth**
May 2022	**HarbourVest Dover Street XI ***	**$ 50,000,000**		**Secondaries**
May 2023	American Industrial Partners VIII	**$ 50,000,000**		Buyout
May 2023	**Apollo X**	**$ 40,000,000**		**Buyout**
May 2023	**Apollo X Co-Investment**	**$ 40,000,000**		**Buyout**
Aug / Sept 2023	Ares Pathfinder II	**$ 75,000,000**		Specialty Finance
October 2023	Strategic Value Partners Capital Solutions II	**$ 50,000,000**		Multisector
December 2023	Sixth Street Partners TAO Global	**$ 75,000,000**		Multisector
		$ 3,982,500,000		

Red indicates Private Equity ($2,512.5m or 63% of commitments)
Green indicates Private Debt ($1,470.0m or 37% of commitments)

Investments that are bolded and shaded represent re-ups

* Advisory Board Member (includes observer seats)
** Commitment made in Euros
*** Amount reduced due to oversubscription

To: Investment Committee and Board of Trustees

From: Raynald Leveque, Chief Investment Officer

Date: January 09, 2024

Re: **2023 Proxy Voting Summary**

Item: Action: ☐ Discussion: ☐ Informational: ☒

Shareholder responsibility is fundamental to good corporate governance, which requires an appropriate balance between the rights of shareholders and the need for management and the board to direct a corporation's affairs with a long-term perspective. The System's shareholder voting rights must be managed with the same care as any of its other assets. Therefore, the Board has adopted a formal Proxy Voting Policy reflecting three objectives: to protect the System's rights; to promote responsible corporate policies and activities; and, to enhance long-term value.

The Proxy Voting Policy under which voting was conducted during calendar year 2023 was adopted by the Board on May 14, 2019. The Policy will be reviewed with Institutional Shareholder Services ("ISS"), the System's proxy voting agent, in early 2024 to ensure that it reflects current industry practices and any changes necessary due to new legislation. Should changes to the Policy be recommended by ISS, a revised Policy will be presented to the Investment Committee for recommendation to the Board.

For the 2023 calendar year, a total of 14,233 proposals were voted, representing 1,239 meetings for the companies owned in the System's investment portfolio. Among other things, the proxies focused on the election of board directors, auditor ratification and executive compensation. System policies generally support management if the position is reasonable, is not detrimental to the long-term economic prospects of the company, and does not tend to diminish the rights of shareholders.

Nearly 100% of votes cast during 2023 were compliant with the System's Proxy Voting Policy. One vote out of 14,233 was classified as "against" the System's Proxy Voting policy as a result of an administrative issue, which did not have any impact on the ultimate vote outcome.

A summary of 2023 proxy voting is provided below.

Summary of 2023 Proxy Voting:

	For	Against	Abstain/Withhold	Total
Management Proposals	12,313	1,358	509	14,180
Shareholder Proposals	175	71	359	605
Total	12,488 (84%)	1,429 (9%)	868 (6%)	**15,513***

* Does not include 728 "Say on Pay Frequency" votes, as these are not voted on a *For* or *Against* basis, but are voted for either *One, Two-, or Three-Year* terms.

TOWNSEND® GROUP
an Aon company

New Hampshire Retirement System

PROPRIETARY & CONFIDENTIAL
January 2024

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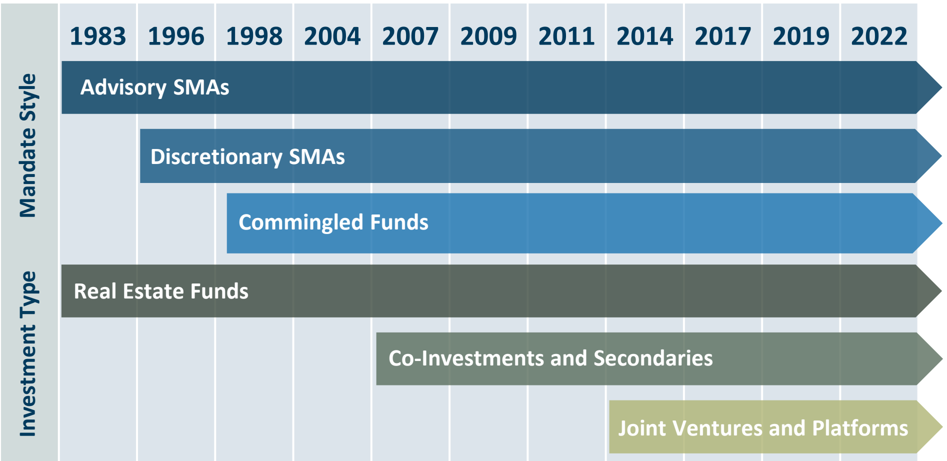
Townsend Overview
A Global Real Assets Platform



Townsend Offices

119	$23 B	$123 B	>2,700	>110/50	>$218B/1,500	>5B/18	>$8B/160	2010
Professionals	Assets Under Management	Advised Assets	Positions in Townsend's Proprietary Database	Fund Advisory Board Seats / Active Investment Representation	Capital Committed / Number of Funds Approved Since 2004	Townsend-led Open-End Fund Originations Since 2010	Secondary, JV, Co-Investment, Recap, and Platform Deals	UNPRI Signatory

Townsend Competitive Advantages

- Leverage Platform Scale and Information Advantages to Drive Sourcing and Due Diligence
- Research-driven approach seeking to identify global relative value and align capital with favorable themes
- Cycle-tested senior leadership team and Investment Committee with diverse investment backgrounds
- Strategic and non-competitive capital/liquidity provider to GPs and LPs alike

Time periods noted may differ, however the dates shown represent most recent data available. As of March 31, 2023, Townsend had assets under management of approximately $23.5 billion; and provided advisory services to clients who had real estate/real asset allocations exceeding $123.2 billion. Please refer to back pages for additional disclosures and definitions. Employee numbers as of September 2023. Townsend's views are as of the date of this publication and may be changed or modified at any time and without notice.

Investment Sourcing and Execution

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LEVERAGING A SPECIALIZED INDUSTRY POSITION

Fund manager consolidation (larger commitments to fewer managers) has left hundreds of high-quality operators under-capitalized

We believe Townsend's industry position and ability to aggregate capital has allowed for sourcing from a vast number of high-quality partners

- **Regular meetings and Inbound Inquiry** — *+350 Meetings Annually*
- **Direct Outreach to Sponsors with Thematic Strategies**
- **Longstanding firm-wide presence in the market**
- **Representation on Advisory Boards** — *+110 seats*
- **Brokers and Placement Agent Relationships**

Primary Fund Opportunities

Sourced over 6 years (2017-2Q23)

Origination
Sourcing & Initial Meeting/Consideration

2,046

Under Consideration
Investment Committee Review to Proceed

1,423

Initial Due Diligence
Comprehensive Research & Consideration

319

Approved / Executed
Investment Committee Approval

59 Approved
2.9% Selection Rate

Secondaries, Platforms, JVs, and Co-Invests

Sourced over 6 years (2017-2Q23)

Origination
Sourcing & Initial Meeting/Consideration

4,063 Opportunities
$303.7 B

Initial Due Diligence
Comprehensive Research & Consideration

Approved / Executed
Investment Committee Approval

66 Closed Deals
$4.3 B
1.6% Selection Rate

We believe greater deal selectivity across sectors, markets, partners, and transactions may create alpha potential for clients

Source: Townsend, June 2023.
Reflects TREA Strategies investments sourced, underwritten, and closed between 2017 and 2023. Actual results and developments may differ materially from those expressed or implied herein. Past performance is not indicative of future results. Townsend's views are as of this date of this publication and may be changed or modified at any time without notice. There is no guarantee that Townsend will have access to similar types of investments or opportunities in the future.

Introduction to Townsend: Global Investment Platform

TOWNSEND® GROUP
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COMPREHENSIVE GLOBAL REAL ASSET COVERAGE DEEP REGIONAL AND SECTOR EXPERIENCE

INVESTMENT & ADVISORY COMMITTEES

Anthony Frammartino
John Schaefer
Martin Rosenberg
Morgan Angus
Tony Pietro
Mike Golubic
Jay Long (IC Chair)
Prashant Tewari
Min Lim
Nick Duff
Karen Rode

GLOBAL MACRO STRATEGY COMMITTEE

Jay Long
John Schaefer
Prashant Tewari
Asieh Mansour[1]

ADVISORY SOLUTIONS

27 Professionals*

INVESTMENT STRATEGY & UNDERWRITING

Co-Invest/JVs, Funds/Clubs, Real Assets

37 Professionals*

PORTFOLIO MANAGEMENT

23 Professionals*

MARKETING & BUSINESS DEVELOPMENT

3 Professionals

BUSINESS OPERATIONS

26 Professionals

REPORTING & ADMINISTRATION

12 Professionals

[1]Senior Advisor to The Townsend Group
*Individuals may support both client and research functions or other responsibilities on an ongoing basis.
Updated October 2023. Townsend's views are as of this date of this publication and may be changed or modified at any time without notice.

Real Estate Program Update

Evolving Successful Partnership

TOWNSEND® GROUP
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PROGRAM TRANSFORMATION UNDER TOWNSEND

	2009	2023
Allocation		
Execution[1]		
Region		
Performance[1,2]		

[1]Includes investments in closing process; percentage represents net asset value
[2]Returns for Townsend Initiated Investments; does not include legacy investments
Source: The Townsend Group. Data as of June 30, 2023. Townsend's views are as of this date of this publication and may be changed or modified at any time without notice. Past performance is not indicative of future results. Actual results and developments may differ materially from those expressed or implied herein.

Real Estate Program Overview

OVERVIEW

- Role of real estate
  - Risk-adjusted returns
  - Low correlations to other asset classes
  - Potential inflation hedge
- Allocation
  - Target 10% (range 5-20%) of total plan assets
    - **Operating within targeted range**
- Risk Mitigation
  - Designed in conjunction with NHRS
    - **All categories in compliance**
- Benchmark
  - NCREIF-ODCE[1]
    - Measured net of fees over market cycles
    - **Townsend outperformance over all time periods**

Category	Compliance Criteria	Compliance Detail
Return Objective	NPI + 50 basis points, net of fees, historically NFI-ODCE, net of fees, as of July 1, 2015	
Style Sector	Minimum 50% Strategic Maximum 50% Tactical	
Location Diversification	Maximum 35% Ex-US Maximum 50% of Ex-US in emerging markets	
Property Diversification	Maximum 40% to a single property type	
Investment Diversification	Maximum 20% to a single Strategic investment Maximum 10% to a single Tactical investment	
Manager Diversification	Maximum 40% to a single manager	
Leverage	Maximum 50% Strategic Maximum 75% Tactical	

[1]National Council of Real Estate Investment Fiduciaries Open-End Diversified Core Equity; a collection of commingled funds pursuing a core investment strategy in the United States

Source: The Townsend Group, NCREIF. Data as of June 30, 2023. Townsend's views are as of this date of this publication and may be changed or modified at any time without notice. Past performance is not indicative of future results. Actual results and developments may differ materially from those expressed or implied herein.

Real Estate Program Overview

CURRENT PROFILE

- Program has steadily progressed to achieve and maintain desired allocation over time
  - Converted to higher quality, more diversity
  - Style sector targets achieved and maintained
  - Executing through proprietary investments

Source: The Townsend Group. Data as of June 30, 2023. Townsend's views are as of this date of this publication and may be changed or modified at any time without notice. Past performance is not indicative of future results. Actual results and developments may differ materially from those expressed or implied herein.

Calendar Year 2023 Investment Plan Update

GOALS

[1]Circumstances may warrant more of less aggressive investment pacing consistent with market conditions

Source: The Townsend Group. Data as of June 30, 2023. Townsend's views are as of this date of this publication and may be changed or modified at any time without notice. Past performance is not indicative of future results. Actual results and developments may differ materially from those expressed or implied herein.

Recent Investments

PROGRESS

[1]Circumstances may warrant more or less aggressive investment pacing consistent with market conditions
[2]USD millions
Source: The Townsend Group. Townsend's views are as of this date of this publication and may be changed or modified at any time without notice. Past performance is not indicative of future results. Actual results and developments may differ materially from those expressed or implied herein.

Recent Investments

1 Returns reflect initial underwriting prior to expenses and fees.
All information prepared as of June 2023. Past performance is not a guarantee of future results.
The example shown is for illustrative purposes only. Actual results and developments may differ materially from those expressed, implied or projected herein. Please see back pages for additional important disclosures. Case studies were not selected on performance-based criteria and were selected to demonstrate investments of similar mandate

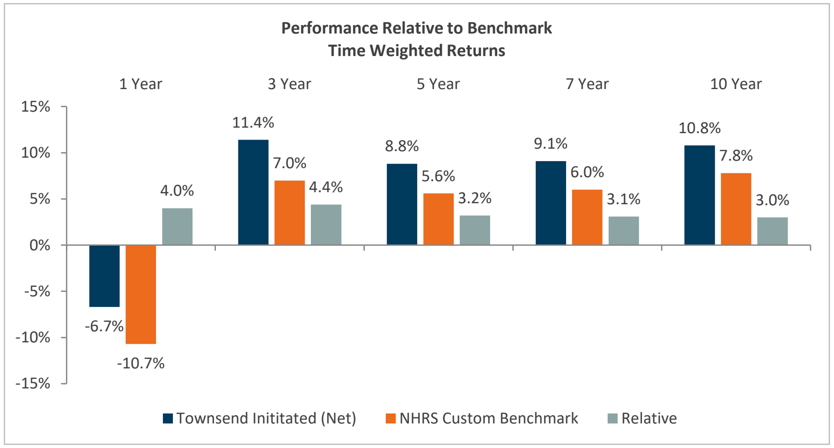
Industrial outdoor Storage – Sector Overview

1 Returns reflect initial underwriting prior to expenses and fees.
All information prepared as of June 2023. Past performance is not a guarantee of future results.
The example shown is for illustrative purposes only. Actual results and developments may differ materially from those expressed, implied or projected herein. Please see back pages for additional important disclosures. Case studies were not selected on performance-based criteria and were selected to demonstrate investments of similar mandate

Performance

OVERVIEW

- Townsend was awarded discretion beginning in 2009
  - Over 13 years of performance history with consistent benchmark outperformance[1]
  - 11.3% net annualized return and 1.5x equity multiple and over $976 million of value created
    - 28 investments, fully or substantially realized, have returned a 15.1% net IRR and a 1.6x net equity multiple, creating over $282 million of value



- Long-Term Drivers
  - Trade into core diversified funds
  - Direct property asset/sales management
  - Proprietary/newly formed-open end funds
  - Townsend Special Situations
  - Townsend negotiated fee savings
  - Active portfolio positioning (Property types, geographies, risk profiles, etc.)

[1]NHRS Custom Benchmark comprised of NPI + 50 bps from inception to June 30, 2015 and NCREIF Fund Index – Open End Diversified Core Equity net of fees thereafter.
Source: The Townsend Group. Data as of June 30, 2023. Townsend's views are as of this date of this publication and may be changed or modified at any time without notice. Past performance is not indicative of future results. Actual results and developments may differ materially from those expressed or implied herein. Fee savings are not guaranteed.

Performance

Source: The Townsend Group. Data as of June 30, 2023. Townsend's views are as of this date of this publication and may be changed or modified at any time without notice. Past performance is not indicative of future results. Actual results and developments may differ materially from those expressed or implied herein.

Performance

REAL ESTATE PROGRAM FEE SAVINGS

- Townsend seeks to reduce manager fees without compromising quality of execution as a risk-free way to drive performance

- Leveraging Townsend's size and influence, in many cases fee breaks are achieved through aggregation of capital

[1]Relative to market rate investment at equivalent size to the June 30, 2023, valuation.

[2]Relative to a market rate non-core fund investment, assuming equivalent performance for each underlying investment, and hypothetical liquidation at June 30, 2023, valuations. Fee savings are equivalent to excess profit relative to a market rate non-core fund fee structure and is divided equally over the duration of the program.

Source: The Townsend Group. Townsend's views are as of this date of this publication and may be changed or modified at any time without further notice. Investing involves risk, including loss of principal. Past performance is not indicative of future results. Actual results and developments may differ materially from those expressed or implied herein. Fee savings are not guaranteed.

Performance

SPECIAL SITUATIONS FEE SAVINGS

[1]Townsend estimated the market average joint venture fee structure based on information reported to Townsend by fund managers, as well as through conversations with other market participants. This estimate is based on information reported to Townsend on a voluntary basis, and joint venture structures / IRR impacts may vary materially from the data presented in this analysis. The analysis assumes that operating partners are utilized on all underlying investments. Fee structures with operators include a ~50bp average acquisition fee, no AM fees, and a promote structure of 15% > 12% and 30% > 16%..
[2]The fee structure of a Traditional Allocator was estimated based on an estimated average of market terms. Townsend conducts an annual survey of value-add fund managers. The most common fee structure was a 150bps Asset Management Fee and a 20% carried interest over an 8% preferred return, with a 50% catch-up. This estimate is based on information reported to Townsend on a voluntary basis, and fund structures / IRR impacts may vary materially from the data presented in this analysis.
[3]The fee structure of a Specialist Operator Fund was estimated based on an estimated average of market terms. Townsend conducts an annual survey of value-add fund managers. The most common fee structure was a 150bps Asset Management Fee and a 20% carried interest over an 9% preferred return, with a 50% catch-up. This estimate is based on information reported to Townsend on a voluntary basis, and fund structures / IRR impacts may vary materially from the data presented in this analysis.
Source: The Townsend Group. Townsend's views are as of this date of this publication and may be changed or modified at any time without notice. Investing involves risk, including loss of principal. Past performance is not indicative of future results. Actual results and developments may differ materially from those expressed or implied herein. Fee savings are not guaranteed.

Calendar Year 2024 Investment Plan

GOALS

[1]Circumstances may warrant more of less aggressive investment pacing consistent with market conditions
[2]Projections as of year end 2024; subject to change
Source: The Townsend Group. Data as of June 30, 2023. Townsend's views are as of this date of this publication and may be changed or modified at any time without notice. Past performance is not indicative of future results. Actual results and developments may differ materially from those expressed or implied herein.

Pipeline

Source: The Townsend Group. All information prepared as of December 2023. Past performance is not indicative of future results. Actual results and developments may differ materially from those expressed or implied herein. Investors will not acquire an interest in the pictured property, the property is owned by an investment managed by the sponsor and not the program. Please see back pages for additional important disclosures. There is no guarantee that Townsend will have access to similar types of investments or opportunities in the future. Townsend's views are as of this date of this publication and may be changed or modified at any time without further notice.

Appendices

View of the World

NHRS and Townsend History

Infrastructure

Disclosures

Disclosures

This presentation (the “Presentation”) is being furnished on a confidential basis to a limited number of sophisticated individuals meeting the definition of a Qualified Purchaser under the Investment Advisors Act of 1940 for informational and discussion purposes only and does not constitute an offer to sell or a solicitation of an offer to purchase any security.

This document has been prepared solely for informational purposes and is not to be construed as investment advice or an offer or solicitation for the purchase or sale of any financial instrument. While reasonable care has been taken to ensure that the information contained herein is not untrue or misleading at the time of preparation, The Townsend Group makes no representation that it is accurate or complete. Some information contained herein has been obtained from third-party sources that are believed to be reliable. The Townsend Group makes no representations as to the accuracy or the completeness of such information and has no obligation to revise or update any statement herein for any reason. Any opinions are subject to change without notice and may differ or be contrary to opinions expressed by other divisions of The Townsend Group as a result of using different assumptions and criteria. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Statements contained in this Presentation that are not historical facts and are based on current expectations, estimates, projections, opinions and beliefs of the general partner of the Fund and upon materials provided by underlying investment funds, which are not independently verified by the general partner. Such statements involve known and unknown risks, uncertainties and other factors, and undue reliance should not be placed thereon. Additionally, this Presentation contains “forward-looking statements.” Actual events or results or the actual performance of the Fund may differ materially from those reflected or contemplated in such forward-looking statements.

Material market or economic conditions may have had an effect on the results portrayed.

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There can be no assurance that any account will achieve results comparable to those presented. Past performance is not indicative of future results.

Townsend is a wholly owned, indirect subsidiary of Aon plc.

Disclosures and Definitions

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GENERAL DISCLOSURES

There can be no assurance that any account will achieve results comparable to those presented. Past performance is not indicative of future results. Investing involves risk, including possible loss of principal.

Returns reflect the equal-weighted returns calculated during the periods indicated. Note: If including Core, this is value-weighted. In addition, the valuations reflect various assumptions, including assumptions of actual unrealized value existing in such investments at the time of valuation. As a result of portfolio customization/blending and other factors, actual investments made for your account may differ substantially from the investments of portfolios comprising any indices or composites presented.

Due to the customized nature of Townsend's client portfolios, the performance stated may be considered "hypothetical" as it does not reflect the experience of individual client portfolios, but rather aggregate client positions in the stated investment strategy.

NON REGULATORY ASSETS UNDER MANAGEMENT

As of March 31, 2023, Townsend had assets under management of approximately $23.5 billion. When calculating assets under management, Townsend aggregates net asset values and unfunded commitments on a quarterly basis. Townsend relies on third parties to provide asset valuations, which typically takes in excess of 90 days after the quarter end. Therefore, assets under management have been calculated using March 31, 2023 figures where available but may also include December 31, 2022 figures. Assets under management are calculated quarterly and includes discretionary assets under management and non-discretionary client assets where the client's contractual arrangement provides the client with the ability to opt out of or into particular transactions, or provides other ancillary control rights over investment decision-making (a/k/a "quasi-discretionary"). Regulatory AUM is calculated annually and can be made available upon request.

ADVISED ASSETS

As of March 31, 2023, Townsend provided advisory services to clients who had real estate/real asset allocations exceeding $123.2 billion. Advised assets includes real estate and real asset allocation as reported by our clients for whom Townsend provides multiple advisory services—including strategic and underwriting advice for the entire portfolio. Advised assets are based on totals reported by each client to Townsend or derived from publicly available information. Advised assets are calculated quarterly. Select clients report less frequently than quarterly in which case we roll forward prior quarter totals. The recent change in Advised Assets is due to a change in the reporting of certain special projects.

TREA STRATEGIES (NON-CORE) employ a global non-core multi strategy approach with 50% or more of the investments invested in non primary fund investments such as co-investments, joint ventures, secondaries and clubs. Strategies are diversified by geography, sector, property type, manager and vintage year.

CORE-PLUS STRATEGIES (CORE) employ a global core/core plus multi strategy approach investing in primary funds, joint ventures, co-investments, secondaries, direct investments, debt strategies and REITs. Strategies are diversified by geography, sector, property type, manager and vintage year.

SEPARATE ACCOUNTS includes all Townsend active discretionary accounts which invest in a variety of investment styles and structures.

NFI-ODCE INDEX

The NFI-ODCE Index is a capitalization-weighted, gross of fees, time-weighted return index with an inception date of 1/1/1978. Published reports may also contain equal-weighted and net of fees information. Open-end funds are generally defined as infinite-life vehicles consisting of multiple investors who have the ability to enter or exit the fund on a periodic basis, subject to contribution and/or redemption requests, thereby providing a degree of potential investment liquidity. The term Diversified Core Equity style typically reflects lower risk investment strategies utilizing low leverage and generally represented by equity ownership positions in stable U.S. operating properties (as defined herein). The NFI-ODCE is a quasi-managed index based on the periodic review by the Index Policy Committee ("IPC") of the index's criteria thresholds."

Disclosures

TREA STRATEGIES

Townsend's TREA Strategies (Non-Core) employ a global non-core multi strategy approach with 50% or more of the investments invested in non primary fund investments such as co-investments, joint ventures, secondaries and clubs. Strategies are diversified by geography, sector, property type, manager and vintage year.

Global Opportunistic Strategy:

Townsend's 2007 vintage TREA Program was comprised of one closed end single limited partner vehicle (U.S. Public Pension Fund-of-One).

Global Value-Add Strategy:

Townsend's 2007 vintage TREA Program was comprised of one closed end single limited partner vehicle (U.S. Public Pension Fund-of-One).

Townsend's 2008-10-11 vintage TREA Program was comprised of one closed end single limited partner vehicle (Asian Pension Fund-of-One) and two commingled funds (HNW and Small Institution Fund (White Label)).

Townsend's 2012 vintage TREA Program was comprised of one closed end single limited partner vehicle (Asian Pension Fund-of-One) and one commingled fund (Townsend Real Estate Alpha Fund, L.P.).

Townsend's 2015 vintage TREA Program was comprised of one closed end single limited partner vehicle (Asian Pension Fund-of-One) and one commingled fund (Townsend Real Estate Alpha Fund II, L.P.).

Townsend's 2018 vintage TREA Program was comprised of one closed end single limited partner vehicle (Asian Pension Fund-of-One) and one commingled fund (Townsend Real Estate Alpha Fund III, L.P.).

Note: Investment level net IRR's and equity multiples are reported. Net IRR is the net return earned by an investor over a particular time frame, including the performance of both realized and unrealized investments, at fair value. The Net IRR is based upon daily investor level cash flows, current quarter net asset value as hypothetical liquidation mark, and is after the deduction of fees. Investment performance data is reported to Townsend on a quarterly basis by the underlying investment manager. The value of unrealized investments is subject to change.

Net Investment Multiple: Based upon daily investor level cash flows. Calculated as ([Since Inception Distributions + Since Inception Withdrawals + Net Asset Value])/Paid in Capital).

The Townsend Group's Investment Committee (IC) collaboratively makes all strategic investment decisions affecting Townsend's client portfolios.

New Hampshire Retirement System

A Component Unit of the State of New Hampshire

Comprehensive Annual Investment Report

For the Fiscal Year Ended June 30, 2023

NHRS
New Hampshire Retirement System

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NHRS
New Hampshire Retirement System

December 12, 2023

The Honorable Christopher Sununu, Governor
The Honorable Jeb Bradley, President of the Senate
The Honorable Sherman Packard, Speaker of the House of Representatives

Annual Report for Fiscal Year 2023

The Independent Investment Committee (Investment Committee) of the New Hampshire Retirement System (NHRS, System) is pleased to present the Comprehensive Annual Investment Report for the Fiscal Year ended June 30, 2023, in accordance with the provisions of the Revised Statutes Annotated (RSA) 100-A:15, VII of the State of New Hampshire.

Asset Allocation & Summary of Results

Total assets at the end of Fiscal Year 2023 were $11.4 billion, reflecting a $0.7 billion increase compared to $10.7 billion the prior year. The System's investment portfolio is prudently managed for the long-term in order to generate adequate returns to support benefit payments promised to members. To achieve that goal, investments are broadly diversified across the following asset classes: domestic (U.S.) and non-U.S. stocks, bonds, real estate, and alternative investments.

The target allocation and range for each asset class shown below was adopted by the Board of Trustees on May 14, 2019, based on a recommendation of the Investment Committee.

Asset Class	Target Allocation	Allocation Range	Actual Allocation at June 30, 2023*
U.S. Equity	30%	20 - 40%	33.0%
Non-U.S. Equity	20%	15 - 25%	15.6%
Fixed Income	25%	20 – 30%	20.7%
Real Estate	10%	5 – 20%	11.3%
Alternative Investments	15%	5 – 25%	19.6%

* U.S. Equity and Non-U.S. Equity have been adjusted to reflect a global equity portfolio which may opportunistically invest in each of these asset classes. Fixed Income includes cash. Refer to Appendix C for additional detail.

As illustrated in the table, as of June 30, 2023 all asset classes were within the allocation ranges.

The NHRS return was 8.2% net of fees for the Fiscal Year ended June 30, 2023 compared to the benchmark return of 9.8%. The five-year annualized net of fees return was 7.1% compared to the benchmark return of 6.9%. The ten-year annualized net of fees return was 7.9% compared to the benchmark return of 7.9%. Note that these benchmarks do not include any management fees which would be incurred if NHRS invested in the underlying indices. Compared to our peers, NHRS ranked in the top 30% and 17% for the five and ten-year trailing periods, respectively. These rankings are based on the Callan Public Fund Large Defined Benefit Gross Universe.

Over the long-term, the 25-year annualized net of fees return was 6.5%. The System's actuarial assumed rate of return is 6.75%.

Please refer to Appendix A for a detailed review of investment performance as well as market commentary.

The Investment Committee

The Investment Committee is responsible for investing in accordance with policies established by the NHRS Board of Trustees (Board), and making recommendations to the Board regarding asset allocation, investment consultants, and other investment policy matters. In addition, the Investment Committee is responsible for selecting investment managers, agents, and custodial banks; and reviewing performance.

The Investment Committee meets monthly and is comprised of six members: three independent voting members and an active non-voting member of the retirement system appointed by the Governor and Executive Council; and two voting members of the Board of Trustees appointed by the Chair of the Board. All members are required by statute to have significant experience in institutional investing or finance. As of June 30, 2023, the independent member was Christine Clinton, CFA; and the active member was Michael McMahon.

The two Board members serving on the Investment Committee were Maureen Kelliher, CFA (Chair); and Paul Provost, CFP ®. Brian Bickford was appointed to the Investment Committee as an independent voting member in June 2023 and began serving in July 2023. One vacancy remains for an independent voting member. Brief biographies and photographs of the Investment Committee members as of June 30, 2023 follow this report.

The Committee would like recognize a prior Committee member, Tim Lesko, for his contributions and dedicated service. Mr. Lesko served on the Committee over 5 years between January 2018 and December 2022. Mr. Lesko continues his service to the New Hampshire Retirement System as Chair of its Board of Trustees.

Investment Manual

The NHRS Investment Manual provides governance and oversight of the pension fund assets and is presented in Appendix C of this report. Highlights are listed below:

- The Investment Policy and Accountability Matrix provide a description of the roles and responsibilities of the Board, the Investment Committee, NHRS Staff, and the System's service providers;

- The Proxy Voting Policy and Securities Lending Policy provide specific guidance on these individual topics;

- The program's benchmarks and asset allocation policy are detailed along with discussions of risk management, liquidity, rebalancing and portfolio monitoring controls;

- Various considerations related to the oversight of investments are described, including the selection of service providers and use of active or passive strategies; and

- Asset class guidelines detail portfolio construction, permissible and prohibited investment vehicles, as well as concentration limits

The Board sets the assumed rate of return based on the recommendations of the System's actuary, NHRS Staff, the Investment Committee, and analysis provided by the investment consultant and other industry experts. A written opinion letter on this subject is included in this report as Appendix B.

Governance, Benchmarks and Measurement of Outcomes

The management and administration of the pension trust is a complex effort involving multiple stakeholders with distinct roles and responsibilities as described in the Investment Manual and in statute. At each regular meeting of the Board or Investment Committee, status reports are provided regarding the outcomes of various investment initiatives. Additionally, performance is reviewed versus benchmarks at the manager-level, asset class-level, and portfolio-level on a monthly and quarterly basis, as appropriate, and over various time-periods since the inception of a particular investment mandate or strategy to continually evaluate the portfolio.

NHRS continuously monitors the investment fees paid to managers and discloses alternative investment fees on an aggregate basis each quarter in compliance with the New Hampshire House Bill (HB) 173 passed in 2021. NHRS has a procedure to monitor Environmental, Social, and Governance factors for all marketable managers.

Administrative Comments

The Investment Committee meets at the System's offices monthly. Notice is provided regarding the time, agenda and location of these meetings pursuant to RSA 91-A:2, II. The Investment Committee promotes transparency regarding the investment program through these public meetings, investment materials and reports. Meeting minutes are posted on the NHRS website. Certain investment matters may require discussion in non-public session in accordance with statute. On a regular basis, the Investment Committee receives presentations from investment managers currently retained by NHRS as well as from prospective managers.

Raynald D. Leveque was the System's Chief Investment Officer for the Fiscal Year ending June 30, 2023. In this capacity, Mr. Leveque served as the primary staff liaison on investment matters. In addition, he directed all aspects of the System's investment program including the development of recommendations regarding the System's overall investment strategy and asset allocation; oversight of external portfolio managers; and promoting productive relationships with investment consultants and service providers. A biography of Mr. Leveque follows this report.

Each fiscal year, NHRS produces an Annual Comprehensive Financial Report (ACFR), which details the operation and financial condition of the retirement system. This report also includes a financial section which outlines the funded status and unfunded actuarial accrued liability, in addition to other actuarial statistics. ACFR reports are available on the System's website, www.nhrs.org.

Overview of Significant Investment Committee Initiatives during the 2023 Fiscal Year:

- Reviewed capital market expectations and asset allocation in conjunction with an asset/liability study underway
- Hired passive non-U.S. equity and fixed income managers for rebalancing and asset allocation decisions
    - Completed rebalance of the non-U.S. equity and fixed income portfolios by allocating to the passive managers
- Reviewed the long-term performance of all current marketable investment managers against their respective benchmarks and renewed their contracts, where appropriate
    - Updated public market manager contract terms from two years to five years going forward
- Approved NHRS Investment Staff's (Staff's) proposal for a Staff-driven investment manager recommendation process
- Reviewed and renewed, where appropriate, service provider/other contracts:
    - Renewed the custodial bank agreement with BNY Mellon for an additional two-year period and incorporated a private markets transparency service offered through BNY Mellon
- Approved a revised proxy voting policy which was subsequently approved by the NHRS Board of Trustees
- Reviewed and discussed the structure of the public markets portfolio
- Continued the expansion of the alternative investments program; new commitments of $130 million in aggregate were made to three private equity investment strategies.

- Performed a comprehensive review of all private debt and equity commitments made since the program's restart in 2009 and adopted an annual private debt and equity strategic plan

- Adopted an annual real estate investment plan

The Investment Committee is dedicated to achieving the best long-term investment results possible within acceptable levels of risk and consistent with prudent policies and practices.

Respectfully submitted,

Maureen Kelliher, Chair	Jan Goodwin, Executive Director
Christine Clinton	Raynald Leveque, Chief Investment Officer
Paul Provost	
Michael McMahon	

Maureen Kelliher has more than four decades of investment management experience. She has served as co-chief and chief investment officer for trust and investment management firms as well as money desk manager for several banks. She holds the Chartered Financial Analyst® (CFA®) designation and is a member of the CFA Institute. She lives in Dover.

Christine Clinton has been working in the investment management industry for more than two decades after cofounding Bluestone Wealth Management LLC. Prior to Bluestone, she worked as a Corporate Controller for several high-tech start-ups in the communications, finance and biotech industries in the Boston area. Christine is a CPA as well as a Chartered Financial Analyst® (CFA) charterholder. She is a member of the CFA Institute and Boston Securities Analysts Society. She lives in Dublin.

Paul Provost is a 30-year veteran of the wealth management and trust business, he has led the wealth management businesses for local community banks in New Hampshire since 2002. He is the president of New Hampshire Trust Company (NHTrust), a subsidiary of New Hampshire Mutual Bancorp headquartered in Concord. Paul earned a bachelor's degree from the University of Vermont and a master's degree in Administrative Management from Saint Michael's College. He is a Certified Financial Planner. He also serves on the boards of the New Hampshire Higher Education Loan Corporation and the Concord Hospital Trust. He previously served as a board chair for the NH Charitable Foundation, Capital Region, and the Central New Hampshire Boys & Girls Club. He lives in Concord.

Mike McMahon has been a member of Hampton Fire Rescue for nearly 30 years, where he currently serves as Fire Chief. During this time, he has served in a variety of financial and investment roles. He has spent over two decades in credit union leadership and is currently a director at Service Credit Union. Mike was a member of the 2017 Decennial Retirement Commission and serves in many other community leadership roles.

Raynald Leveque is the Chief Investment Officer for the New Hampshire Retirement System. Before joining New Hampshire in 2022, Raynald was the Deputy Chief Investment Officer for the State of Connecticut's $41 billion Retirement Plans and Trust Funds. Prior to the State of Connecticut, Raynald held leadership roles in strategic asset allocation, risk management and quantitative portfolio management at the $254 billion New York State Common Retirement Fund, and Invesco (formerly OppenheimerFunds). Raynald earned his master's degree in finance from Fordham University and a bachelor's degree in computer engineering from the Rochester Institute of Technology.

Appendix A

Investment Consultant’s Letter

Investment Performance Review & Market Commentary

Investment Reports

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Callan

Callan LLC
1 Deforest Avenue
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Summit, NJ 07901

Main 908.522.3880
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www.callan.com

October 31, 2023

Board of Trustees
Investment Committee
Executive Director
The New Hampshire Retirement System
54 Regional Drive
Concord, NH 03301-8507

Dear NHRS Fiduciaries:

Callan LLC (Callan) is pleased to provide an overview of the New Hampshire Retirement System (NHRS) investment program for the fiscal year ended June 30, 2023. Fiscal year 2023 was a very strong performing, yet volatile year for the capital markets due to a variety of factors. Recessionary fears were prevalent as the yield curve remained inverted throughout the majority of the fiscal year and inflation reached levels not seen since the early 1980's. The Federal Reserve hiked interest rates relatively aggressively in an effort to contain inflationary pressures. Investors continue to monitor the potential unintended consequences of the Fed's current Monetary Policy, including its impact on the real economy and the possibility of a recession. The regional banking crisis that took place during the third quarter of the fiscal year (March 2023) serves as an example of some of the unintended consequences of the current policy. In addition, geopolitical events, such as China's decision to move away from "zero-COVID" policies, the ongoing war in Ukraine, and the U.S. debt ceiling, for example, contributed to higher volatility in the capital markets. Despite these events, U.S. GDP rose during each quarter of the fiscal year and the labor market remained robust with unemployment at a generational low. Furthermore, inflation dropped significantly during the second half of the fiscal year, ending at nearly 3%, due mostly to having better balance between supply and demand dynamics in the current environment, falling food and energy prices, and the incremental impact of the Fed's Monetary Policy. The capital markets, particularly broad global equities, were resilient over the fiscal year, rising by double digits. Bond indices produced mixed results, while commodities and other alternatives asset classes fared relatively poorly.

NHRS follows an investment strategy designed to meet its funding requirements over the long-term. Assets are allocated efficiently to ensure that beneficiaries will receive the benefits they were promised. The Fund is managed on a total return basis, while recognizing the importance of capital preservation and prudent risk management. Additionally, the Independent Investment Committee (IIC) administers the Fund in accordance with sound fiduciary standards and industry best practices. The Fund's strategic asset allocation and related objectives, parameters and specific delegation of responsibilities are explicitly defined in the Investment Policy Statement. The IIC manages the investment program pursuant to the investment policy, develops asset class guidelines, monitors and evaluates performance, and makes decisions regarding the retention or termination of asset managers. The investment manual includes all investment policies and asset class guidelines and may be obtained from the NHRS website at www.nhrs.org. The following pages report on the performance and attributes of the investment program for fiscal year 2023.

Callan

Market Review for the Year Ended June 30, 2023

The market volatility experienced over the fiscal year reflected fluctuations in risk sentiment amid an array of systemic risk factors, including yields, inflation, China's "zero-COVID" policies, the U.S. debt ceiling, the implications of the war between Russia and Ukraine, as well as other issues impacting the global markets. Risk assets performed poorly over the first quarter of the fiscal year, but rebounded strongly during the final three quarters. U.S. GDP readings were positive throughout the fiscal year, rising 3.2%, 2.6%, 2.0% and 2.4% over the first, second, third, and fourth quarters, respectively. Strong GDP growth results were driven by a robust labor market as well as a significant decline in inflationary pressures. Price reductions have been broad-based in the U.S., but primarily driven by the food and energy sectors. U.S. equities outperformed developed non-U.S. equities over the fiscal year. The S&P 500 Index rose 19.6% over the fiscal year while the MSCI EAFE Index rose 18.8%. Emerging markets equities, as measured by the MSCI Emerging Markets Index, returned 1.8%, underperforming both U.S. and non-U.S. developed markets equities. Within emerging markets, China detracted the most as concerns surrounding China's real estate sector and poor economic data impacted investor sentiment. Fixed income markets were challenged, as inflation drove the 10-year U.S. Treasury yield over 4% for the first time since 2011. The Bloomberg U.S. Aggregate Bond Index returned -0.9% over the fiscal year.

NHRS Investment Portfolio Review

For the fiscal year ended June 30, 2023, the NHRS Total Fund returned 8.2%, net of investment management fees (or "net"), and underperformed the Total Fund Benchmark return of 9.8%. The Fund posted a return of 8.8%, gross of investment management fees (or "gross"), ranking in the 33rd percentile relative to peers in Callan's Large Defined Benefit Public Fund Universe, which consisted of 85 constituents as of June 30, 2023. The Fund's domestic equity and alternatives portfolios underperformed their respective benchmarks. From an asset allocation standpoint, given the "denominator effect" institutional investors experienced over the last fiscal year, an underweight to domestic equity and non-US equity as well as an overweight to real estate detracted from performance. For the trailing three-year period, the Fund returned 9.6% (net), ranking in the 22nd percentile of its peers (peer group rankings are measured gross of investment management fees). For the trailing five-year period, the Fund returned 7.1% (net), ranking in the top third of the peer group (30th percentile). For the trailing ten-year period, the Fund returned 7.9% (net), ranking in the 17th percentile of its peers, and for the trailing twenty-five year period, the Fund returned 6.5% (net), below the current assumed rate of return of 6.75% but ranked in the 32nd percentile of its peers.

During fiscal year 2023, the IIC engaged in the following activities:

- **Asset Allocation:** Reevaluated the Fund's strategic asset allocation, with an emphasis on understanding the impact of increasing exposure to alternatives given liquidity concerns;
- **Rebalancing:** NHRS Staff worked with the IIC to rebalance the portfolio, with an emphasis on the Fund's fixed income and non-U.S. positions to bring the allocations back within acceptable IPS parameters;
- **Structural modifications:** NHRS Staff introduced two passive exposures (BlackRock Superfund – Non-U.S. Equity and Mellon U.S. Aggregate Bond Index – Fixed Income) and terminated one of the emerging markets active managers due to performance concerns – Neuberger Berman;
- **Alternative Assets Portfolio Pacing and Implementation:** Continued to implement the approved allocations within the Alternative Assets portfolio.

Callan

Callan LLC provides NHRS with strategic planning, implementation, performance monitoring services, and on-going research and education on a variety of relevant topics for institutional investors. The investment performance analysis produced by Callan has been developed using performance evaluation methodologies that are consistent with industry best practices. The performance results presented in this letter are calculated using a time-weighted returns and are reported both net of investment management fees, as well as gross of fees.

Sincerely,

Angel Haddad
Senior Vice President

Britton M. Murdoch
Vice President

Investment Performance Review – Fiscal Year 2023

Overview

For the fiscal year ended June 30, 2023, the NHRS Total Fund returned 8.2%, net of investment management fees (or "net"), and underperformed the Total Fund Benchmark return of 9.8%. The Fund posted a return of 8.8%, gross of investment management fees (or "gross"), ranking in the 33rd percentile relative to peers in Callan's Large Defined Benefit Public Fund Universe, which consisted of 85 constituents as of June 30, 2023. With the positive momentum experienced in the capital markets, the overall portfolio (the "Fund") performed well on an absolute basis but underperformed its total fund target. The Fund's domestic equity and alternatives portfolios underperformed their respective benchmarks. From a strategic asset allocation standpoint, given the "denominator effect" institutional investors experienced over the last fiscal year, an underweight to domestic equity and non-US equity as well as an overweight to real estate detracted from performance.

U.S. Equity Markets

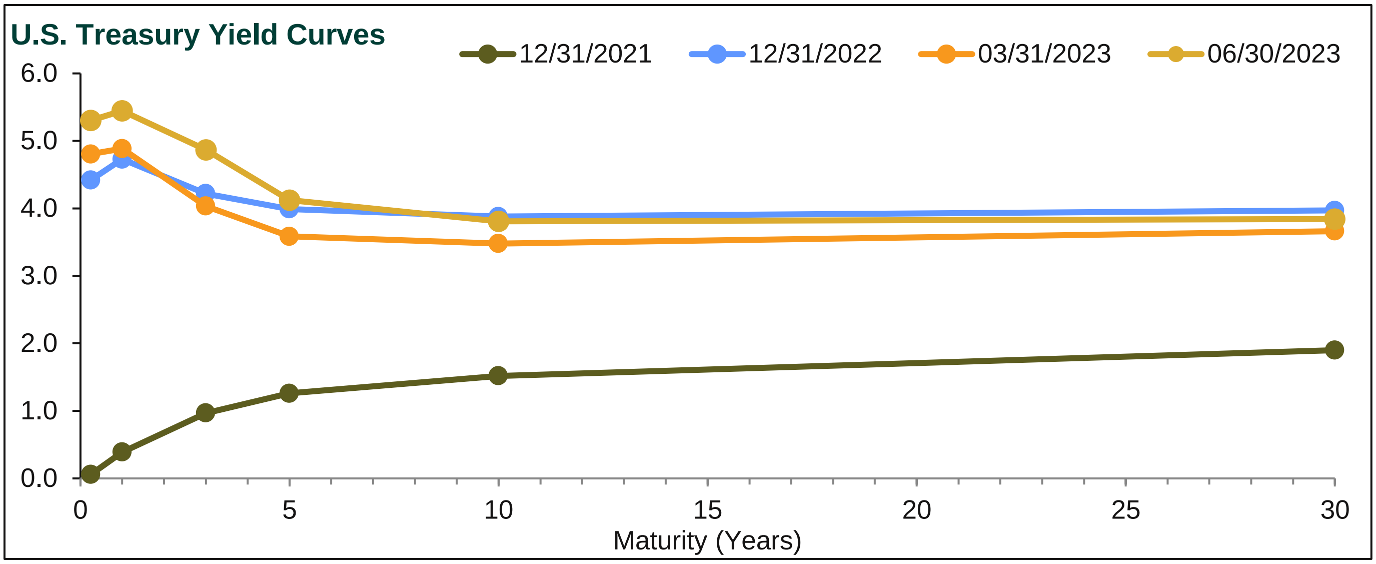
U.S. stocks registered a return of 19.6% over the fiscal year, as measured by the S&P 500 Index. The annualized return over the past 10 years was 12.9%. Most of the sectors represented in the index produced positive returns over the fiscal year, led by the Information Technology, Industrials, and Consumer Discretionary sectors. Real Estate and Utilities were the only sectors to produce negative returns over the fiscal year. Growth stocks outperformed value stocks over the period, with value slightly in favor over the first half of the fiscal year and growth stocks heavily in favor over the second half. Small cap stocks produced strong absolute returns but underperformed large cap stocks over the period, returning 12.3%, as measured by the Russell 2000 Index.

Non-U.S. Equities

Developed non-U.S. equities and emerging market equities produced positive returns during the fiscal year. The strong U.S. dollar began to depreciate versus other currencies starting in September 2022, contributing to strong non-U.S. equity performance. For the fiscal year, developed non-U.S. equities significantly outperformed emerging markets. China posted particularly weak returns over the fiscal year, -16.8% as measured by the MSCI China Index, due to multiple challenges including deteriorating exports, a high youth unemployment rate, a distressed property market, and languishing domestic demand. For the one-year period ended June 30, 2023, developed non-U.S. equity markets, as measured by the MSCI EAFE Index, posted a return of 18.8% and emerging markets, as measured by MSCI Emerging Markets Index, posted a return of 1.8%.

Fixed Income

The fiscal year began with heightened inflation levels near 9%, spurring the Fed to raise interest rates at near historic levels and contributing to systematic issues such as regional banking failures in the U.S. The rising rate environment proved challenging for fixed income investing over the fiscal year with the Bloomberg Aggregate declining 0.9%. However, negative returns were limited to higher quality U.S. securities with high yield and global bond indices producing positive performance. The 10-year U.S. Treasury yield remained at high levels relative to recent history during fiscal year 2023, beginning at 3.01% as of June 30, 2022, and ending at 3.81% as of June 30, 2023. The yield curve remained inverted throughout the vast majority of the fiscal year signaling potential recession.



Real Estate and Alternative Investments

The real estate market returned -10.5% for the fiscal year, as measured by the NCREIF ODCE Index, with depreciation of 13% and income returns of 2.5%. During the fiscal year, ODCE redemption queues steadily increased and transaction volume steadily decreased each quarter. Real estate valuations are reflective of higher interest rates, which have put upward pressure on capitalization rate and discount rate assumptions. Income returns remained positive throughout each quarter of the fiscal year across all sectors. Underperformance was broadly spread across region and property types. The Office sector performed the worst, depreciating close to 20% while Hotels were the only sector to produce positive performance over the fiscal year.

Alternative investments posted positive returns for the fiscal year. After experiencing severe declines in public equity performance during fiscal year 2022, private equity investors were bracing for and experienced a more challenging return environment compared to the public markets. Broad private equity returns were positive for the last two quarters of the fiscal year, with buyout gains offsetting VC losses. Fundraising over the first half of 2023 was behind levels reached during the first half of 2022 by approximately 62% in venture capital and 26% in buyouts.

NHRS Asset Class Highlights

NHRS Asset Class	FY 2023 Return (Net of Fees)
Total Fund	**8.18%**
Total Fund Custom Index	*9.81%*
Total Domestic Equity	**17.25%**
US Equity Index	*18.95%*
Total Non-US Equity	**19.01%**
Non-US Equity Index	*12.72%*
Total Fixed Income	**1.43%**
Fixed Income Benchmark	*-0.04%*
Total Real Estate	**-7.24%**
Real Estate Benchmark	*-10.73%*
Total Alternatives	**3.58%**
Alternative Assets Benchmark	*18.22%*

The NHRS Total Domestic Equity portfolio, comprised of both passive and actively managed portfolios, returned 17.3% (net), underperforming the strategic benchmark (Russell 3000 Index) by 170 basis points over fiscal year

2023. The Domestic Equity portfolio's passive large cap exposure had a 19.4% return compared to 12.9% for the small/mid-cap composite and 15.2% for the small cap composite. The small/mid-cap composite outperformed its Russell 2500 benchmark and the small cap composite underperformed its Russell 2000 benchmark.

The NHRS Total Non-U.S. Equity portfolio, which is comprised of both passive and actively managed portfolios with exposures to both developed and emerging markets, returned 19.0% (net). The Non-U.S. Equity portfolio outperformed its benchmark by 629 basis points during the fiscal year as all active core non-US equity, emerging market equities, and non-US small cap equity managers outperformed their respective benchmarks.

The NHRS Total Fixed Income portfolio is comprised of passive and broadly diversified actively managed portfolios, including domestic and international exposures. This aggregate portfolio had a 1.4% return (net), outperforming the Total Fixed Income Index return by 147 basis points. An overweight to lower quality and higher yielding issues relative to the Bloomberg Universal Index had a positive impact on relative performance. Exposure to non-U.S. issues also impacted relative performance, as non-U.S. bonds outperformed their U.S. counterparts over the fiscal year.

The NHRS Real Estate portfolio returned -7.2% (net), outperforming its benchmark return of -10.7%. Outperformance was driven by the Tactical Non-Core Real Estate allocation within the portfolio; the Strategic Core portfolio slightly detracted from relative results.

Lastly, for fiscal year 2023, the Alternative Investments portfolio generated a return of 3.6% (net) while its benchmark returned 18.2%. Underperformance was driven by both the private equity and private debt allocations within the portfolio, given more modest valuations for alternative investments in 2023.

Callan

Investment Market Update (by asset type)

Index Summary (6/30/23)	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Equity Indices				
S&P 500 Index	19.6%	14.6%	12.3%	12.9%
Russell 1000 Index	19.4%	14.1%	11.9%	12.6%
Russell 1000 Growth Index	27.1%	13.7%	15.1%	15.7%
Russell 1000 Value Index	11.5%	14.3%	8.1%	9.2%
Russell 2000 Index	12.3%	10.8%	4.2%	8.3%
Russell 2000 Growth Index	18.5%	6.1%	4.2%	8.8%
Russell 2000 Value Index	6.0%	15.4%	3.5%	7.3%
Russell 2500 Index	13.6%	12.3%	6.6%	9.4%
Russell 3000 Index	19.0%	13.9%	11.4%	12.3%
MSCI ACWI Index	16.5%	11.0%	8.1%	8.8%
MSCI ACWI ex US Index	12.7%	7.2%	3.5%	4.8%
MSCI EAFE Index	18.8%	8.9%	4.4%	5.4%
MSCI EAFE Growth Index	20.2%	6.3%	5.4%	6.4%
MSCI EAFE Value Index	17.4%	11.3%	2.9%	4.2%
MSCI Europe Index	21.8%	10.7%	5.2%	5.7%
MSCI Japan Index	18.1%	5.7%	3.1%	5.2%
MSCI Pacific ex JPN Index	5.9%	6.5%	2.7%	4.3%
MSCI EM Index	1.8%	2.3%	0.9%	3.0%
Fixed Income Indices				
Bloomberg Aggregate Index	-0.9%	-4.0%	0.8%	1.5%
Bloomberg Gov't/Credit Index	-0.7%	-4.1%	1.0%	1.7%
Bloomberg TIPS Index	-1.4%	-0.1%	2.5%	2.1%
Bloomberg High Yield Corporate Index	9.1%	3.1%	3.4%	4.4%
S&P LSTA Leveraged Loan 100 Index	11.8%	5.4%	4.0%	3.7%
Bloomberg Global Aggregate Index	-1.3%	-5.0%	-1.1%	0.2%
Bloomberg High Yield Muni Index	2.9%	1.8%	2.8%	4.2%
JPM EMBI Global Diversified Index	7.4%	-3.1%	0.6%	2.8%
JPM GBI-EM Global Diversified Index	11.4%	-1.4%	0.3%	-0.6%
Other Indices				
Bloomberg Commodity Price Index	-13.3%	16.0%	3.0%	-2.0%
S&P GSCI Index	-14.2%	25.1%	2.8%	-3.5%
Alerian MLP Index	30.5%	30.7%	6.2%	0.9%
FTSE NAREIT Composite Index	-4.3%	6.2%	4.4%	6.6%
NCREIF NFI-ODCE Equal Weight Net Index	-10.5%	7.6%	6.1%	8.1%

Callan

Investment Market Update (sorted by best to worst 1-year performance)

Index Summary (6/30/23)	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Alerian MLP Index	30.5%	30.7%	6.2%	0.9%
Russell 1000 Growth Index	27.1%	13.7%	15.1%	15.7%
MSCI Europe Index	21.8%	10.7%	5.2%	5.7%
MSCI EAFE Growth Index	20.2%	6.3%	5.4%	6.4%
S&P 500 Index	19.6%	14.6%	12.3%	12.9%
Russell 1000 Index	19.4%	14.1%	11.9%	12.6%
Russell 3000 Index	19.0%	13.9%	11.4%	12.3%
MSCI EAFE Index	18.8%	8.9%	4.4%	5.4%
Russell 2000 Growth Index	18.5%	6.1%	4.2%	8.8%
MSCI Japan Index	18.1%	5.7%	3.1%	5.2%
MSCI EAFE Value Index	17.4%	11.3%	2.9%	4.2%
MSCI ACWI Index	16.5%	11.0%	8.1%	8.8%
Russell 2500 Index	13.6%	12.3%	6.6%	9.4%
MSCI ACWI ex US Index	12.7%	7.2%	3.5%	4.8%
Russell 2000 Index	12.3%	10.8%	4.2%	8.3%
S&P LSTA Leveraged Loan 100 Index	11.8%	5.4%	4.0%	3.7%
Russell 1000 Value Index	11.5%	14.3%	8.1%	9.2%
JPM GBI-EM Global Diversified Index	11.4%	-1.4%	0.3%	-0.6%
Bloomberg High Yield Corporate Index	9.1%	3.1%	3.4%	4.4%
JPM EMBI Global Diversified Index	7.4%	-3.1%	0.6%	2.8%
Russell 2000 Value Index	6.0%	15.4%	3.5%	7.3%
MSCI Pacific ex JPN Index	5.9%	6.5%	2.7%	4.3%
Bloomberg High Yield Muni Index	2.9%	1.8%	2.8%	4.2%
MSCI EM Index	1.8%	2.3%	0.9%	3.0%
Bloomberg Gov't/Credit Index	-0.7%	-4.1%	1.0%	1.7%
Bloomberg Aggregate Index	-0.9%	-4.0%	0.8%	1.5%
Bloomberg Global Aggregate Index	-1.3%	-5.0%	-1.1%	0.2%
Bloomberg TIPS Index	-1.4%	-0.1%	2.5%	2.1%
FTSE NAREIT Composite Index	-4.3%	6.2%	4.4%	6.6%
NCREIF NFI-ODCE Equal Weight Net Index	-10.5%	7.6%	6.1%	8.1%
Bloomberg Commodity Price Index	-13.3%	16.0%	3.0%	-2.0%
S&P GSCI Index	-14.2%	25.1%	2.8%	-3.5%

Callan

S&P 500 Sectors (sorted by best to worst 1-year performance)

Sector	Benchmark Weight (%) as of 6/30/23	Benchmark Return (%) as of 6/30/23
Information Technology	28.3%	40.3%
Industrials	8.5%	25.2%
Consumer Discretionary	10.7%	24.7%
Energy	4.1%	18.8%
Communication Services	8.4%	17.3%
Materials	2.5%	15.1%
Financial	12.4%	9.5%
Consumer Staples	6.7%	6.6%
Health Care	13.4%	5.4%
Utilities	2.6%	-3.7%
Real Estate	2.5%	-4.1%

Note: Figures may not add up to exactly 100% due to rounding.

Summary

Consistent with Callan's most recent asset allocation study, we believe that the Fund's current asset allocation target is appropriate to meet its long-term return objectives. However, as part of its on-going monitoring process, NHRS Staff is evaluating opportunities to diversify away from equity beta risk in an effort to enhance risk-adjusted returns going forward. To this end, NHRS Staff is reevaluating the Fund's strategic asset allocation for the Board's review. The overall manager structure of the portfolio is stable and will be evaluated by Staff in the future. Overall, the Fund exhibits competitive performance relative to objectives over the long-term.

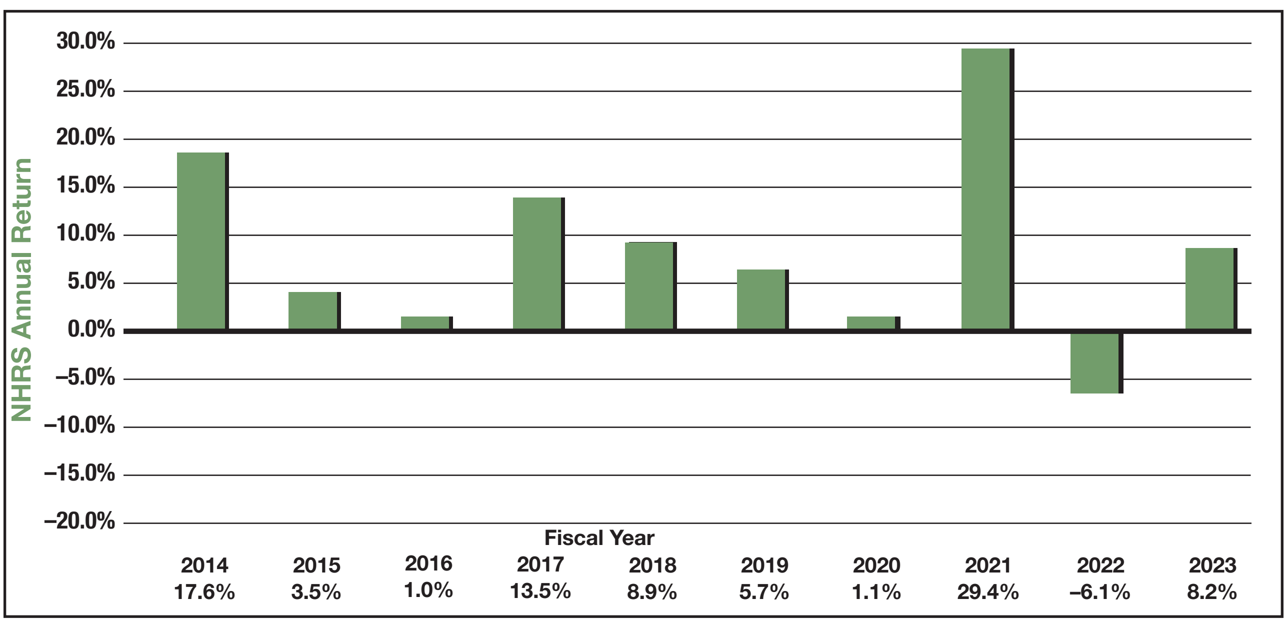
ANNUALIZED INVESTMENT RETURNS—ACTUAL VERSUS INDICES

	Current Year 2023	Annualized 3 Year	5 Year	10 Year
Total NHRS Fund	8.2%	9.6%	7.1%	7.9%
Total Fund Custom Index*	9.8	7.4	6.9	7.9
Domestic Equity	17.3	14.2	9.7	11.2
Total Domestic Equity Blended Benchmark*	19.0	13.0	11.4	12.4
Non-U.S. Equity	19.0	7.8	4.0	5.0
Total Non-U.S. Equity Blended Benchmark*	12.7	7.2	3.5	4.8
Fixed Income	1.4	(1.5)	1.6	2.2
Total Fixed Income Blended Benchmark*	0.0	(3.4)	1.0	1.8
Real Estate	(7.2)	11.6	9.0	10.8
Total Real Estate Blended Benchmark*	(10.7)	7.0	5.6	7.8
Alternative Investments	3.6	16.3	11.1	9.8
Total Alternative Investments Benchmark*	18.2	13.6	11.5	12.4
Cash Equivalents	3.9	1.3	1.6	1.1
90 Day T-Bills	3.6	1.3	1.6	1.0

Performance returns are calculated on a net-of-fees time-weighted rate of return basis.

*In a dynamic market, strategies and objectives evolve over time. Consequently, these benchmarks are blended due to historical investment strategy decisions. Detailed descriptions of the benchmarks above are available by contacting NHRS.

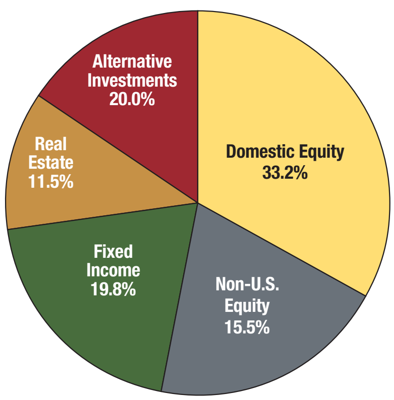
Ten Year History of Time-Weighted Total NHRS Fund Annual Returns



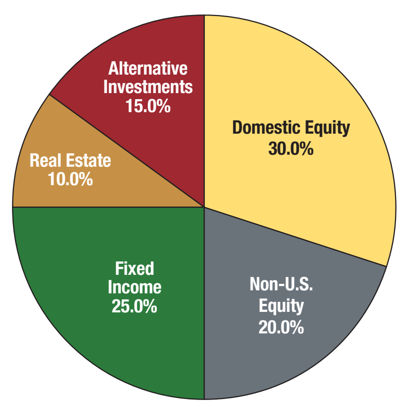
ACTUAL ASSET ALLOCATION VERSUS TARGET ASSET ALLOCATION

	As of June 30, 2023		
	Actual %	Target %	Target Range %
Domestic Equity	33.2%	30.0%	20–40
Non-U.S. Equity	15.5%	20.0	15–25
Fixed Income	19.8%	25.0	20–30
Real Estate	11.5%	10.0	5–20
Alternative Investments	20.0%	15.0	5–25
TOTAL FUND	**100.0%**	**100.0%**	

Actual Asset Allocation as of June 30, 2023



Target Asset Allocation as of June 30, 2023



TEN LARGEST STOCK HOLDINGS BY FAIR VALUE*

(in thousands)

	Shares	Stock	June 30, 2023 Fair Value
1	459,835	MICROSOFT CORP	$156,592
2	794,051	APPLE INC	154,022
3	585,532	AMAZON.COM INC	76,330
4	132,823	NVIDIA CORP	56,187
5	382,741	ALPHABET INC — CLASS C	46,300
6	319,071	ALPHABET INC — CLASS A	38,193
7	144,690	TESLA INC	37,876
8	37,517	LVMH MOET HENNESSY LOUIS VUITT	35,323
9	218,855	NOVO NORDISK A/S	35,255
10	118,807	META PLATFORMS INC	34,095

TEN LARGEST FIXED INCOME HOLDINGS BY FAIR VALUE*

(in thousands)

	Par**	Security	June 30, 2023 Fair Value
1	36,439,000	U.S. Treasury Note — 0.625%, 2026	$32,463
2	27,680,000	U.S. Treasury Note — 3.500%, 2033	26,962
3	26,322,000	U.S. Treasury Note — 3.500%, 2028	25,560
4	25,479,000	U.S. Treasury Bond — 3.000%, 2052	21,663
5	29,935,000	U.S. Treasury Bond — 1.125%, 2040	19,247
6	19,349,000	U.S. Treasury Note — 0.375%, 2026	17,372
7	20,013,000	U.S. Treasury Bond — 2.250%, 2052	14,463
8	14,335,000	U.S. Treasury Note — 2.750%, 2032	13,142
9	14,507,000	U.S. Treasury Bond — 3.000%, 2048	12,239
10	10,500,000	United Kingdom Gilt Regs — 3.250%, 2033	12,171

**A complete listing of separate account portfolio holdings is available by contacting the NHRS offices. NHRS also invests in various commingled investment vehicles, for which the underlying investments are custodied outside of The Bank of NY Mellon (Master Custodian for NHRS), as reported on the Summary of Investments schedule.

**Par value is denoted in local currency.

SCHEDULE OF INVESTMENT MANAGEMENT AND SERVICE FEES

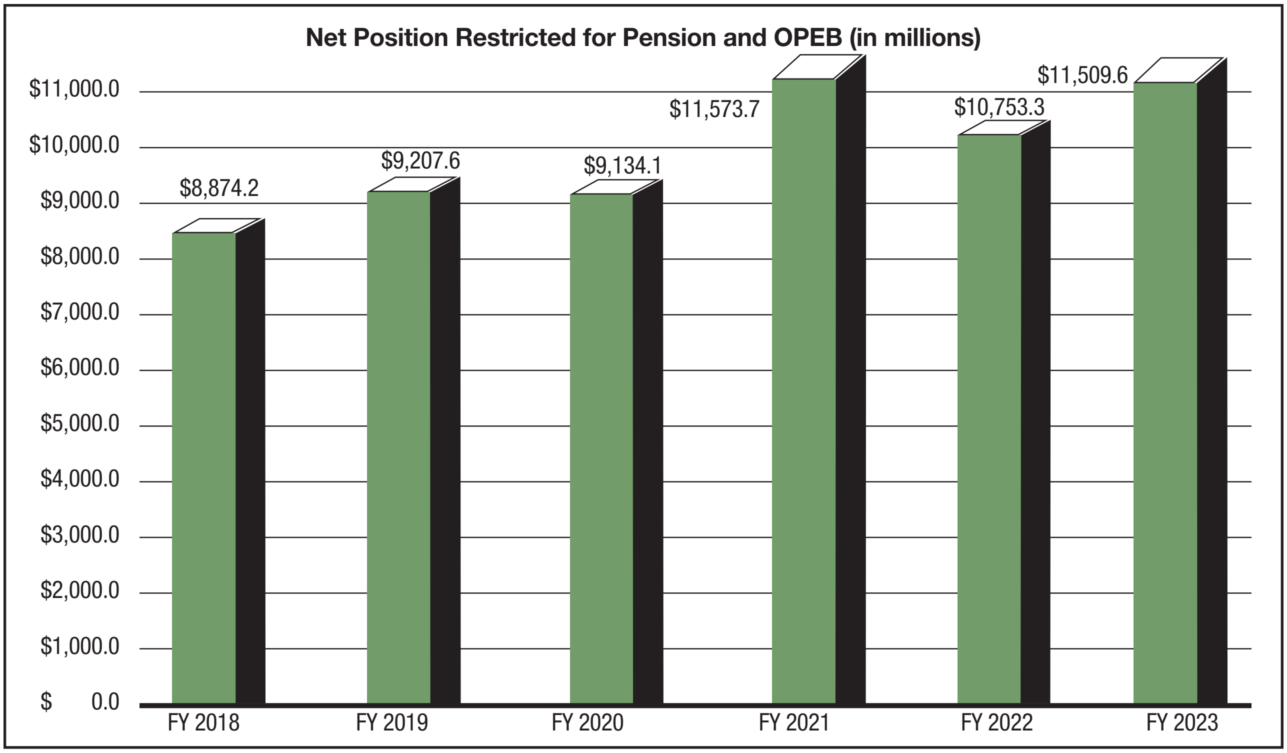
	YEAR ENDED JUNE 30, 2023		
	Assets Under Management (in thousands)	Fees (in thousands)	Average Basis Points
INVESTMENT MANAGEMENT FEES			
Equity Portfolios:			
Domestic	$ 3,701,437	$ 10,014	27
Non-U.S.	1,722,744	9,828	57
Fixed Income Portfolios	2,212,369	5,750	26
Alternative Investments*	2,228,344	16,072	72
Real Estate	1,281,586	13,635	106
Cash and Cash Equivalents	233,910	—	—
TOTAL INVESTMENT MANAGEMENT FEES	**$11,380,390**	**$ 55,299**	**49**
INVESTMENT SERVICE FEES			
Custodial Fees	$11,380,390	$ 737	1
Investment Advisor Fees — External	11,380,390	650	1
Investment Professional Fees	11,380,390	336	1
Investment Administrative Expenses — Internal	11,380,390	863	1
TOTAL INVESTMENT MANAGEMENT AND SERVICE FEES	**$11,380,390**	**$ 57,885**	**51**

*The custodian records all transactions on a net of fee basis.

SCHEDULE OF BROKERAGE COMMISSIONS PAID

	YEAR ENDED JUNE 30, 2023		
Brokerage Firm	**Number of Shares Traded (in thousands)**	**Total Commissions (in thousands)**	**Commissions Per Share**
GOLDMAN SACHS & CO, NY	7,422	$ 85	0.01
MORGAN STANLEY AND CO., LLC, NEW YORK	5,766	81	0.01
MERRILL LYNCH INTL LONDON EQUITIES	6,484	76	0.01
JEFFERIES & CO INC, NEW YORK	4,680	75	0.02
J P MORGAN SECS LTD, LONDON	5,174	64	0.01
BTIG LLC, NEW YORK	2,178	52	0.02
RBC CAPITAL MARKETS LLC, NEW YORK	3,225	46	0.01
J.P MORGAN SECURITIES INC, NEW YORK	1,973	44	0.02
LIQUIDNET INC, NEW YORK	2,263	41	0.02
MERRILL LYNCH PIERCE FENNER SMITH INC NY	2,802	37	0.01
UBS EQUITIES, LONDON	3,044	35	0.01
BERNSTEIN SANFORD C & CO, NEW YORK	3,570	34	0.01
UBS SECURITIES LLC, STAMFORD	2,566	34	0.01
BMO CAPITAL MARKETS CORP, NEW YORK	1,442	33	0.02
BARCLAYS CAPITAL LE, NEW YORK	1,271	32	0.03
CREDIT SUISSE, NEW YORK (CSUS)	2,350	31	0.01
WELLS FARGO SECURITIES, LLC, NEW YORK	1,409	29	0.02
COWEN AND CO LLC, NEW YORK	1,704	26	0.02
PERSHING LLC, JERSEY CITY	1,410	23	0.02
All Others (188 not listed separately)	39,435	624	0.02
TOTAL BROKERAGE COMMISSIONS PAID	**100,168**	**$ 1,502**	**0.01**

Commission detail is not included in the schedule above for the commingled funds in which NHRS invests.



SUMMARY OF INVESTMENTS

TYPE OF INVESTMENT	June 30, 2023 Fair Value (in millions)	Percent of Total Fair Value
FIXED INCOME		
Collateralized/Asset Backed Securities	$ 192.3	1.7%
Corporate Bonds	505.1	4.5%
Government and Agency Bonds	520.0	4.7%
Blackrock Strategic Income Opportunities	252.1	2.3%
Fidelity	361.1	3.2%
Manulife	197.7	1.9%
Mellon US AG Bond	173.3	1.6%
TOTAL FIXED INCOME	**$ 2,210.2**	**19.7%**
EQUITY		
Consumer Cyclical	$ 596.9	5.4%
Consumer Non-Cyclical	1,151.9	10.3%
Energy	183.2	1.6%
Financial Services	778.6	7.0%
Industrial Materials	634.9	5.7%
Technology	901.0	8.1%
Basic Materials	192.7	1.7%
Communications	394.6	3.5%
Utilities	120.3	1.1%
Blackrock Superfund	178.5	1.6%
Wellington NHT	6.5	0.1%
Wellington ISCRE	124.8	1.1%
Wellington Emerging Markets Local Equity Fund	162.7	1.5%
TOTAL EQUITY	**$ 5,426.6**	**48.7%**
OTHER INVESTMENTS		
Alternative Investments	$ 2,227.8	20.0%
Real Estate	1,281.6	11.5%
TOTAL INVESTMENTS	**$ 11,146.2**	**100.0%**

Appendix B

Gabriel Roeder Smith & Company Actuarial Opinion Letter

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September 29, 2023

Board of Trustees
New Hampshire Retirement System
54 Regional Drive
Concord, New Hampshire 03301

Re: Reasonableness of the Assumed Rate of Return

Dear Board Members:

The purpose of this letter is to provide our actuarial opinion regarding the reasonableness of the assumed rate of return for the New Hampshire Retirement System and to address any differences between the assumed rate of return and the expected rate of return under the System's investment policy statement as required under New Hampshire statute.

Background:

The requirement under New Hampshire statute is as follows:

RSA 100-A:15 VII.

(c) An annual investment policy statement which shall incorporate the following:

(1) A clear statement of investment objectives including the adoption of a reasonable and sound expected rate of return the retirement system is attempting to earn. The expected rate of return utilized for the statement of investment objectives shall bear some reasonable relationship to the assumed rate of return set by the trustees for the biennial actuarial calculation. *The retirement system's actuaries shall issue a written opinion in regard to the reasonableness of the assumed rate of return that shall address any difference between the assumed rate of return and the expected rate of return.*

We understand the current asset allocation targets and ranges, adopted by the Board of Trustees in September 2012, are based on asset liability modeling and asset allocation recommendations from investment consultants. The Independent Investment Committee reviewed, in March of this year, the results of asset/liability and asset allocation studies and confirmed the asset allocation targets and ranges remain appropriate. Based on the 2023 capital market assumptions, Callan has indicated the following expectations for NHRS' current asset allocation:

- During the next 10-year period:
  - The expected rate of return is 7.25% per year;
  - The standard deviation is 13.05% per year; and
  - The implicit price inflation rate is 2.50% per year.

- During the next 30-year period:
  - The expected rate of return is 7.80% per year;
  - The standard deviation is 13.05% per year; and
  - The implicit price inflation rate is 2.50% per year.

In determining the assumed rate of return for the actuarial valuation, we abide by Actuarial Standard of Practice (ASOP) No. 27, Selection of Economic Assumptions for Measuring Pension Obligations, as adopted by the Actuarial Standards Board.

Under ASOP No. 27, we determine a reasonable assumption for each economic assumption. The reasonable assumption must be appropriate for the purpose of the measurement, reflect the actuary's professional judgement, take into account relevant historical and current demographic data, reflect the actuary's estimate of future experience or the estimates inherent in the market data and have no significant bias. For the investment return assumption, our analysis is based on forward-looking measures of expected investment return outcomes for the asset classes in the System's current investment policy.

For purposes of this analysis, we have analyzed the System's investment policy with the capital market assumptions from twelve nationally recognized investment firms and the 2023 GRS Capital Market Assumption Modeler (CMAM). The capital market assumptions in the 2023 CMAM are from the following investment firms (in alphabetical order): Aon Hewitt, Blackrock, BNY Mellon, Callan, Cambridge, JPMorgan, Meketa, Mercer, NEPC, RVK, Verus, and Wilshire. Eleven of these firms provide capital market expectations for a 10-year horizon, seven of them provide expectations for longer horizons of 20-30 years. Capital market expectations can vary significantly from year to year and often are contrarian. The financial markets at the end of 2022 were not particularly strong resulting in higher expectations in 2023 than in prior years. To adjust for year-to-year fluctuations, we also compare results to the three-year average of GRS CMAMs.

Our analysis is based on the GRS 2023 CMAM. The purpose of the CMAM is to assess the reasonability of the assumed rate of return for use in the actuarial valuations for the plan. In our professional judgment, the CMAM has the capability to provide results that are consistent with this purpose. We performed tests to ensure that the model reasonably represents that which is intended to be modeled. We are relying on the GRS actuaries and Internal Software, Training, and Processes Team who developed and maintain the model.

Actuarial Opinion:

For the June 30, 2023 valuation, the actuarial assumed rate of return is made up of a price inflation assumption of 2.00% and a real rate of return assumption of 4.75% for a total of 6.75% per year, net of investment expenses. This assumption was adopted by the Board to be effective in the June 30, 2019 valuation based on the 2015-2019 Experience Study.

Based on our independent analysis using NHRS' target asset allocation and the 2023 CMAM, the median rate of return is 6.60% over a 10-year horizon. As discussed, this year's expectations are higher than prior years. The three-year average median over a 10-year horizon is 5.67%.

Over the longer horizon of 20-30 years, the median rate of return is 6.78%. The 3-year average median over the longer horizon is 6.46%. The current NHRS net investment rate assumption of 6.75% is reasonable when compared to our 2023 CMAM medians of 6.60% - 6.78% and Callan's 7.25% - 7.80% current estimates for the expected rate of return.

It should be noted that due to the methods utilized by the GRS CMAM, differences in the underlying inflation assumption between the actuarial valuation (2.0%) and Callan's (2.50%) result in expected returns that may not be directly comparable. For example, if Callan's inflation assumption of 2.50% was used in our analysis, the expected returns discussed above based on the 2023 GRS CMAM would be approximately 0.50% higher.

Differences between the expected rate of return in the System's Investment Policy and the actuarial assumed rate of return are attributable in part to the different objectives of the measurement. Key differences are:

- The Investment Policy focuses on asset allocation decisions and establishes benchmarks for manager performance. The assumed rate of return is a long-term assumption for funding policy.
- The Investment Horizon of 10 years in the Investment Policy is based on a shorter time frame than used to determine the assumed rate of return which can be 20-30 years or longer. When focusing on the 20- 30-year time horizon, the policy and the actuarial assumption produce similar expected returns.

Given the purpose and use of the different assumptions, different results are not uncommon. Under the current actuarial standard of practice, the current assumed rate of return for valuation purposes is reasonable and, therefore, meets the requirements of those standards.

Governmental Accounting Standards Board (GASB) Statement No. 67:

The statutory funding requirements of RSA 100-A:16 and the NHRS' Actuarial Funding Policy call for the NHRS pension unfunded actuarial accrued liability as of June 30, 2017 to be amortized through 2039. Each subsequent change in liability as calculated in odd-numbered years shall be separately amortized over a fixed period of no longer than 20 years. Based on this, the GASB discount rate will be equal to the assumed rate of investment return of 6.75%.

Jeffrey T. Tebeau, Heidi G. Barry, and Casey T. Ahlbrandt-Rains are independent of the plan sponsor, are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,
Gabriel, Roeder, Smith & Company

Jeffrey T. Tebeau, FSA, EA, FCA, MAAA

Heidi G. Barry, ASA, FCA, MAAA

Casey T. Ahlbrandt-Rains, ASA, MAAA

JTT/HGB/CTA:dj

Appendix C

Investment Manual

NHRS Investment Philosophy

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NEW HAMPSHIRE RETIREMENT SYSTEM

NHRS
New Hampshire Retirement System

Investment Manual

Table of Contents

SECTION I

Investment Policy

New Hampshire Retirement System
Investment Policy
Amended by NHRS Board of Trustees on June 14, 2022

I. Introduction to the Investment Policy

The purpose of this Investment Policy is to:

A. Fulfill the Board's and IIC's statutory duty to oversee the investments of NHRS in accordance with the basic fiduciary responsibilities. These duties include:

- Managing the fund with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character with like objectives.

- Making all decisions solely in the interest of, and for the exclusive purpose of providing benefits to the members, retirees, and their beneficiaries.

- Defraying reasonable administrative expenses.

B. Set forth the investment policies the Board and IIC judge to be appropriate, prudent and, in consideration of the Systems' needs, to comply with current laws and to direct the investment of the System's assets.

C. Ensure appropriate flexibility within the investment process to allow for the System to participate in prudent investment opportunities while also establishing risk parameters within which the portfolio will operate.

D. Establish criteria to evaluate the System's investment performance.

E. Communicate investment policies, objectives, asset class guidelines, and performance criteria to staff, external investment managers/advisors, consultants, custodians, and all other interested parties.

F. Serve as a review document to guide ongoing oversight of the System's investments for compliance with the laws of New Hampshire.

II. Responsible Parties and Their Duties

Key parties that participate in the investment decision-making and oversight process for NHRS include the:

- Board of Trustees
- Independent Investment Committee (IIC)
- Investment Staff
- Investment Consultants
- Investment Managers
- Custodian Bank
- Proxy Voting Service Provider

Board of Trustees:
The Board sets investment policy in accordance with applicable State and Federal laws, hires the investment consultant(s), and sets policy for establishing and modifying investment objectives. The Board also has responsibility to review quarterly and annual reports from the IIC.

Independent Investment Committee:
The IIC prepares for the Board's review and approval an investment policy statement, including investment objectives, an expected rate of return the System is attempting to earn, asset allocation targets and ranges, and identification of appropriate benchmarks. The IIC has the full power to hold, purchase, sell, assign, transfer, and dispose of any securities and investments, as well as the proceeds of such investments, in accordance with the policy set by the Board. The IIC has the responsibility to establish asset class guidelines and for selecting, monitoring, and terminating investment managers. The IIC is responsible for reporting to the Board on a quarterly and annual basis as directed by the statute.

Investment Staff:
The NHRS investment staff, led by the Director of Investments, is responsible for implementation of the investment decisions made by the Board of Trustees and/or the IIC. In general, the responsibilities of the investment staff include:

- Ensuring the asset allocation of the Fund is implemented in accordance with the policy approved by the Board, including rebalancing as necessary in accordance with the investment policy
- Monitoring policy and statutory compliance of the portfolio
- Assisting the IIC in developing investment policy recommendations to present to the Board for approval
- Monitoring investment managers and performing due diligence on new investment opportunities or managers as directed by the IIC
- Coordinating work with the investment consultant or any other investment-related service provider selected by the Board
- Conducting special research or analysis as directed by the Board, IIC, or Director of Investments

- Ensuring the Board and IIC receive appropriate reporting regarding the investment portfolio

Investment Consultant:
The investment consultant will perform those services as described in its contract. The investment consultant is hired by the Board, and is expected to work cooperatively and collaboratively with the Board, the IIC, as well as the investment staff. In general, the investment consultant's responsibilities include:

- Providing advice on asset allocation
- Assisting the Board, IIC, and staff with decision-making
- Providing reviews of investment policy, asset class structure, and investment managers
- Calculating performance
- Reporting and analyzing performance of the total portfolio, asset classes, and individual investment managers
- Performing research as needed
- Providing investment education to the Board, IIC and staff as requested
- Reports quarterly to the Board on investment consultant contract fulfillment actions
- Reports to the Board quarterly on recommendations made to the IIC and the status of their recommendations.

Investment Managers:
The investment managers hired by the IIC have the duty to manage the assets allocated to them as fiduciaries and in accordance with the Investment Management Guidelines established for their accounts and their individual contracts. Investment managers must execute all transactions for the benefit of NHRS and update NHRS regarding any major changes to the portfolio management team, investment strategy, portfolio structure, ownership, organizational structure, or other changes relevant to the account.

Custodian Bank:
The duties of the custodian bank are set forth by their contract with NHRS. In general, the custodian's responsibilities include:

- Safekeeping of NHRS assets
- Settling investment transactions and collecting income
- Preparing monthly and year-end accounting statements
- Serving as the "book of record" for investment transactions and valuations
- Properly recording and reporting investment activities, transactions, income, and valuations

When selecting the custodian bank the IIC will use the current industry standards appropriate for evaluating the qualifications of a custodian bank.

Proxy Voting Service Provider:
The duties of the proxy voting service provider are set forth by their contract with NHRS. In general, those responsibilities include:

- Voting proxies on behalf of NHRS per the Proxy Voting Policy
- Providing research reports
- Preparing monthly and year-end summaries
- Alert staff to issues not covered by the NHRS Proxy Voting Policy
- Recommending revisions to the NHRS Proxy Voting Policy
- Assisting in revising the NHRS Proxy Voting Policy

The Accountability Matrix adopted by the Board on April 10, 2012 and incorporated herein by reference further summarizes key responsibilities and duties of the Board; IIC; Director of Investments and Investment Staff; Internal Legal Staff; Investment Consultant(s); and Actuary. Additional responsibilities are also detailed in the Board's governance manual, contracts, and NHRS's position descriptions for staff.

III. Investment Objectives

In light of the purpose of the System, the Board, based on the recommendation of the IIC, has adopted the following investment objectives:

- Efficiently allocate and manage the assets of the Fund so that beneficiaries will receive promised benefits.

- Manage the portfolio on a total return basis, which recognizes the importance of the preservation of capital, as well as the fact that reasonable and varying degrees of investment risk are generally rewarded over the long-term.

- Work towards achieving and then maintaining a fully funded pension status.

- Exceed the Policy benchmark on a net of fees basis over a full market cycle.

IV. Risk Management

The Board's role in risk management is to approve the asset allocation targets and ranges for each asset class of the Fund. The Board recognizes that in order for the Fund to achieve its investment objectives, a reasonable level of risk must be present within the investment portfolio. Risk is referenced both in terms of absolute risk (the risk of loss) and volatility (the variability of returns). The Board will seek to minimize the risk of loss by approving an asset allocation that includes an appropriate level of diversification of Fund assets. The Board will periodically review the level of risk as represented by the asset allocation targets and ranges within the Fund and each asset class to ensure it is reasonable and within its tolerance for risk. Equity volatility (risk) is among the highest for any asset class. Other risks that the Board will consider when approving investment policy include benchmark risk, timing risk, market risk, credit risk, currency risk, liquidity risk, and any other risk it determines is relevant.

The Board acknowledges that the IIC also has a responsibility to consider risk when recommending asset allocation, and to monitor risks within the portfolio. The IIC will consider market risk, credit risk, currency risk, liquidity risk, and any other risk it believes to be relevant when it determines an asset allocation to recommend to the Board. The IIC is responsible for risk management at the manager level as it decides upon the number and types of managers to utilize within each asset class portfolio. When making decisions, the IIC will consider idiosyncratic risk (firm specific risk), benchmark risk, timing risk, market risk, credit risk, liquidity risk, interest rate risk, operational risk, concentration risk or any other risk it determines relevant as it makes its decisions.

The investment managers are responsible for risk management within the portfolio they manage on behalf of NHRS. Investment managers will consider those risks most relevant to their portfolio, which could include market risk, credit risk, currency risk, liquidity risk, inflation risk, geo-political risk, political risk, interest rate risk, and operational risk.

Descriptions of major types of risk follow:

A. Credit Risk: The risk of default of a party owing cash to the System as the result of a transaction. These parties may include, but are not limited to, the counterparty and the issuer.

B. Counterparty risk (default risk): The risk to each party of a contract that the counterparty will not live up to its contractual obligations. Counterparty risk is a risk to both parties and should be considered when evaluating a contract.

C. Liquidity Risk: There are two types of liquidity risk: market liquidity risk and funding liquidity risk. Market liquidity risk is the risk of being unable to purchase or liquidate a security quickly enough (or in requisite quantities) at a fair price. Market liquidity risk differs from market risk (defined below). Market liquidity risk only reflects realized price changes, while market risk reflects both realized and unrealized price changes. Funding liquidity risk relates to the relative ease of the organization to meet its cash flow needs as they come due.

D. Market Risk: The risk of unexpected change in market price (amount or direction). Price changes in securities can result from movements in equity markets, interest rates, and currency exchange rates, in addition to various other factors. Market risk incorporates both realized and unrealized price changes.

E. Systemic Risk: Risk that affects an entire financial market or system, and not just specific asset classes. Systemic risk cannot be avoided through diversification.

F. Absolute Risk: Risk of loss of capital.

G. Volatility Risk: The variability of returns often used as a proxy for risk.

H. Operational Risk: The risk of inadequate controls against fraud, incorrect market valuation, failure to record or settle a deal, settlement with the wrong counterparty, failure to collect amounts due, failure of the computer system, or enforceability of contracts. The implications of operational risk include both financial loss and loss of reputation.

I. Geo-Political Risk: The risk of the occurrence of an unanticipated international and/or domestic incident such as war, assassination, terrorism or energy shock that adversely affects global and capital markets resulting in the re-pricing of securities.

J. Political Risk: The risk of nationalization or other unfavorable government action.

K. Idiosyncratic Risk: Firm specific risk or the risk of the change in price of a security due to the unique circumstances of that security.

L. Benchmark Risk: The risk that an investment may outperform or underperform its target return.

M. Interest rate risk: The risk of an investment losing value (such as bonds) when interest rates rise. Rising interest rates increase the cost of doing business for most companies and can also, thereby, raise market risk.

N. Inflation risk: The risk that rising inflation may erode the value of income and/or assets.

O. Currency risk: The risk that currency movements will negatively impact an investment's return. If the value of the U.S. dollar rises in relation to other currencies, the value of foreign stock shares translates into a smaller number of U.S. dollars for investors who hold those shares. Put another way, a "strong" dollar can buy more foreign goods, including foreign stocks. Conversely, if the dollar falls in relation to other currencies, the value of foreign stock shares rises, as more "weak" dollars are needed to buy a given amount of foreign stock.

P. Timing risk: The risk that the market will not move in the anticipated direction when an investment is made (upward for long positions, and downward for short positions).

Q. Concentration risk: The risk that the System does not appropriately and effectively diversify the assets within an asset class. An example of concentration risk is having too large a percentage of System assets with a single investment manager.

V. Asset Allocation

The Board approves the asset allocation targets and ranges for each asset class of the Fund (the allowable asset classes and the distribution of assets among those asset classes) based on recommendations from the IIC. As fiduciaries, the Board and the IIC have a duty to diversify the investments of the System to reduce risk, while maximizing the investment return. Approximately ninety percent (90%) of the long-term total return stems from the asset allocation decision. The remaining ten percent (10%) is expected to be attributable to either the selection of individual assets or timing. Accordingly, asset allocation is one of the most important fiduciary decisions. The Board adopts an asset allocation based on recommendations from the IIC, which relies upon the advice from the Director of Investments and the investment consultant to formulate its recommendations to the Board.

The asset allocation approved by the Board will reflect the results of an Asset Liability Study performed at least once in every five year period, or more often, as recommended by the IIC, System staff, and investment consultant.

The Asset Liability Study identifies a mix of investments, by asset class, which is expected to produce the return required to meet future funding requirements at the lowest level of risk, given all of the assumptions made and employing a mean-variance optimization model.

The asset allocation chart, which follows, lists the approved asset classes in the portfolio and the target percentages and ranges, at market value, of the System's assets to be invested in each. Due to fluctuations of market values, positioning within a specified range is acceptable and constitutes compliance with the policy. Based on the approved asset allocation, recommendations from the System's consulting actuary, IIC, investment managers and staff, the Board adopts an assumed rate of return, which is subject to periodic change and which is the long-term return that can be expected from this combination of assets. As of June 9, 2020, the assumed rate of return was 6.75%.

Asset Class	Target Allocation	Allocation Range
Domestic Equity	30%	20 – 40%
Non-U.S. Equity	20%	15 – 25%
Fixed Income	25%	20 – 30%
Real Estate	10%	5 – 20%
Alternative Investments	15%	5 – 25%

The Board has approved the use of the above listed asset classes for the following reasons:

Domestic Equity: The allocation to domestic equity serves to expose the fund to the largest economy of the world. An allocation to domestic equity should allow for return enhancement and principal appreciation.

Non-U.S. Equity: The allocation to non-U.S. equity, both developed and emerging markets, will serve as potential for return enhancement and principal appreciation. A secondary consideration is the diversification it provides from the U.S. market. While the U.S. and non-U.S. markets are considerably correlated, they are not perfectly correlated. Assets that are not perfectly correlated serve to reduce volatility over the long term.

Fixed Income: The investment in fixed income will serve to reduce volatility experienced in the equity markets, as well as offer an opportunity for return enhancement by investment in selected securities (for example, investment grade corporates and high yield). A portion of the fixed income allocation is expected to be invested in Treasury or other government-related issues, which will serve to reduce risk within the portfolio.

Real Estate: The investment in real estate will serve as an inflation hedge, return enhancement opportunity, income generator, and diversification source and will include investments within core, value-added, and opportunistic opportunities.

Alternative Investments: Alternative investments are nontraditional investments, not covered by another investment class. In general, alternative investments are incorporated into the NHRS asset allocation to enhance the portfolio's risk-adjusted return (private equity/private debt) or to diversify volatility (opportunistic strategies). While the risk associated with these types of investments is higher than that of other asset classes, the expected return is also higher. Strategies the IIC may use in private equity/private debt may include, but are not limited to: Buyouts; Distressed Opportunities; Energy-focused; Growth Equity; Infrastructure; Mezzanine; Direct Lending; Secondaries; Special Situations; and Venture Capital. Strategies the IIC may use for opportunistic strategies include: Credit Linked; Equity Linked; Event Driven; Trading; and Multi-Strategy.

VI. Rebalancing

The actual asset class allocation of the Fund will be continuously reviewed by staff relative to the asset class policy targets. Market movements or cash flow requirements may require the actual allocations in the portfolio to deviate from the target allocations. Staff shall seek to maintain the Fund's actual asset allocation within allocation ranges at all times. When rebalancing is required, the staff will develop a rebalancing plan that, when possible, minimizes transaction costs. The plan will identify whether the assets will be rebalanced to a point within the allowable range, or to the allocation target. Staff will give due consideration to market environments, costs and risks of implementation, potential impacts on manager-level performance, and other relevant factors. The staff will report to the IIC and the Board regarding rebalancing activities that have occurred.

VII. Equity Investment in Another Entity

When the System makes an equity investment in another entity, the underlying assets of such other entity will be deemed "assets" of the System for purposes of Section 100-A15, I-b of the RSA except with respect to investments in the following entities:

(a) Publicly-offered securities

(b) An investment company registered under the Investment Company Act of 1940

(c) A Company primarily engaged, either directly or through majority-owned subsidiaries, in the production and/or sale of goods and/or services (other than the investment of capital) ("Operating Company")

(d) A private equity fund whose primary objective is to invest in Operating Companies in which it has contractual rights to influence company management

(e) A private investment fund whose primary objective is to invest in real estate with respect to which it has the right to participate directly in the development or management

(f) A government mortgage pool guaranteed by the United States or an agency or instrumentality thereof

(g) An investment fund or entity in which:

(1) (i) private U.S. employee benefit plans subject to Part 4 of Subtitle B of Title 1 of the Employee Retirement Income Security Act of 1974 ("ERISA Plans"), (ii) plans subject to Section 4975 of the Internal Revenue Code ("4975 Plans"), and (iii) other entities deemed under ERISA to hold assets of such ERISA Plans and 4975 Plans (together with ERISA Plans and 4975 Plans, "Benefit Plan Investors"), hold less than 25% of any class of equity interests and

(2) the System holds less than 25% of the total equity interests

(h) An insurance company general account to the extent that the non-guaranteed policy portion of such account is less than 25% held by Benefit Plan Investors and less than 25% held by the System.

It is the intention of the Board that in settling any ambiguity regarding this section of policy, the Board shall look to available guidance under ERISA to settle such ambiguity.

VIII. Liquidity

Currently, each fiscal year, the member benefit payments paid by the System exceed the employer contributions received by the System. As a result, maintaining appropriate liquidity is critical to the System's operations and the System's ability to meet its financial obligations. The staff will be responsible for ensuring the System maintains the appropriate liquidity for the payment of member benefits, fund expenses and capital calls from its General Partners.

IX. Active and Passive Management

The IIC may implement the Board's approved asset allocation through the use of both passive and active management. The use of active and passive management is detailed in the guidelines for each asset class. The goal of passive management is to gain diversified exposure to the desired asset class while incurring minimal expense and seeking a performance return comparable to the asset class benchmark. The goal of active management is to exceed the performance of the appropriate index on a net-of-fees basis at a commensurate level of risk over a full market cycle.

X. Benchmarks

The following benchmarks represent the standards of measurement to be used for the various investment asset classes of the New Hampshire Retirement System as determined by the Board and IIC.

Asset Class	Benchmark
Domestic Equity	Russell 3000 Index
Non-U.S Equity	MSCI All Country World Ex-U.S. Index
Fixed Income	Bloomberg Barclays Capital U.S. Universal Bond Index
Real Estate	NCREIF NFI-ODCE Index (net of fees)
Alternative Investments:	
Private Equity	Russell 3000 Index + 2.0%
Private Debt	(50% S&P/LSTA U.S. Leveraged Loan 100 Index and 50% Bloomberg High Yield Index) + 1.0%
Total Fund	Total Fund Custom Benchmark

The Total Fund Custom Benchmark is a weighted average return comprised of the respective asset class benchmarks in the same proportion as the target asset allocation.

As performance results may vary under different economic conditions and market cycles, an effective period for measuring performance would span three to five years or more. Performance returns are expected to meet or exceed the relevant benchmark on a net-of-fees basis over time.

The IIC has responsibility for identifying appropriate benchmarks for each investment in the Fund.

Definitions of the benchmarks are listed below:

A. The Russell 3000 Index measures the performance of the largest 3,000 U.S. companies, representing approximately 98% of the investable U.S. equity market.

B. The MSCI ACWI (All Country World Index) is a free-float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The term “free float” refers to the number of shares of stock publicly owned and available for trading.

C. The Bloomberg Barclays Capital U.S. Universal Index represents the union of Bloomberg Barclays Capital’s U.S. Aggregate Index (see below), U.S. Corporate High-Yield, Investment Grade 144A Index, Eurodollar Index, U.S. Emerging Markets Index, and the non-ERISA eligible portion of the CMBS Index. The index covers USD-denominated, taxable bonds that are rated either investment grade or below investment grade.

D. The Bloomberg Barclays Capital U.S. Aggregate Index is an unmanaged, market-value-weighted index of taxable investment-grade fixed-rate debt issues, including government, corporate, asset-backed and mortgage-backed securities, with maturities of one year or more.

E. The National Council of Real Estate Investment Fiduciaries (NCREIF) Fund Index Open-End Diversified Core (NFI-ODCE) is a composite comprised of primarily Core open-end funds widely used by institutional investors for exposure to domestic private market real estate. An open-end fund is a large pool of properties held in a commingled fund structure where investors have redemption rights (typically quarterly right to make capital deposits or withdrawals). Because of quarterly purchase or redemption of fund shares, open-end funds have some of the best valuation disciplines in private market real estate. The funds report performance quarterly to NCREIF. Nearly all open-end funds are designed to be perpetual life vehicles, with many having history dating back to the 1970s.

F. The S&P/LSTA U.S. Leveraged Loan 100 Index (LL100) is a daily tradable index for the U.S. market that seeks to mirror the market-weighted performance of the largest institutional leverage loans. The constituents are drawn from a universe of syndicated leveraged loans representing over 90% of the leveraged loan market.

G. The Bloomberg High Yield Index measures the USD-denominated, high-yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below.

XI. Reporting to the Board

Pursuant to RSA 100-A:15, II-a, the IIC will report to the Board at least quarterly on the management, investment, and reinvestment activities of the IIC, and may delegate such reporting as it deems appropriate. The quarterly report will include:

- A report on the investment performance of the assets of the System
- Changes, if any, in the investment managers of the System
- Changes, if any, in the investment guidelines for each of the asset classes
- Rebalancing activities, if any

Pursuant to RSA 100-A:15, VII, the IIC will prepare, for Board approval, a comprehensive annual investment report for the Board. The annual report will include:

- A description of the IIC's philosophy for investing the assets of the System
- An analysis of the return on investment, by category
- An annual investment policy statement
- Any suggested changes in legislation which the Board may seek in order to better serve the members of the system

After Board approval, the comprehensive annual investment report is submitted to the president of the senate, the speaker of the house, and the governor.

The investment staff, investment consultant(s), custodian bank, and other parties will also provide reporting to the Board as requested or needed.

XII. Manager Selection, Monitoring, and Termination

The IIC, with the assistance of the investment staff and the investment consultant, will establish a process by which to select investment managers. Criteria for each manager search will be tailored to the search underway and NHRS' specific needs and requirements. Examples of criteria include:

- Organizational stability
- Investment staff, experience and tenure
- Investment process
- Ownership
- Fees
- Performance

Manager searches will be conducted in a fair and transparent manner. During a manager search, a "no contact policy" will be in effect. During this time, only staff designated by the Director of Investments will have any contact with potential candidates. Trustees, IIC members, and other staff members will refrain from discussing the search with candidate firms or potential candidate firms. This policy does not preclude existing managers from carrying out their normal business requirements with NHRS.

The IIC has delegated selected manager monitoring efforts to the investment staff and the investment consultant. Any significant changes to a manager's investment philosophy, fees, personnel, ownership or organizational structure will be summarized and reported to the IIC. The IIC will receive quarterly and annual reporting regarding the performance of the investment managers within the fund.

The IIC has the right to terminate any investment manager at any time. Grounds for termination may include, but are not limited to:

- Changes in asset allocation that require re-structuring of the portfolio
- Failure to comply with investment management agreements
- Underperformance
- Significant process, organizational, ownership or personnel changes
- Unethical behavior
- Loss of confidence in the organization
- Unresponsiveness or inability to satisfy reporting requests

XIII. Private Equity Fund Advisory Board/Committee Participation

The primary purpose of a private equity fund advisory board/committee is to (1) provide "checks and balances" on the general partner's power and authority to operate the fund; and (2) act as a "sounding board" for matters where the interests of all the fund's partners may not be aligned. The System has determined that the benefits of staff participating on advisory boards/committees far outweigh the risks or potential risks of not participating on advisory boards/committees. As a result, it is appropriate for System staff to represent the System as a member of an advisory board/committee, with the approval of the IIC and provided that there are appropriate protections for such members (e.g., with respect to fiduciary duty/standard of care, indemnification, confidentiality, etc.).

XIV. Use of Derivatives

Derivatives may only be used to modify risk/return characteristics of the portfolio, implement asset allocation changes in a cost-effective manner, or reduce transaction costs or taxes. Derivatives may not be used for speculation or leverage (borrowing).

Contracts with separate account managers will identify the types of derivatives that may be used, consistent with this Manual and prudent discretion. Managers must notify the Director of Investments of modifications in the types of derivatives used and obtain the Director of Investments' approval of such modifications. The System's Non-U.S. Equity managers generally have authorization for broader use of derivatives; however, their actions will be monitored for excessive risk.

Investments in commingled funds are open to other investors; therefore, it is not possible for the System to insist that the managers of such funds abide by System policy regarding the use of derivatives; however, their actions will be monitored for excessive risk. The Director of Investments will monitor a manager's use of derivatives on an ongoing basis to determine whether continued investment in a fund is prudent.

XV. Prohibited Transactions

The following transactions will be prohibited unless stated otherwise in the investment manager guidelines:

- "Prohibited transactions" as defined under the Employee Retirement Income Security Act of 1974 (ERISA).
- Transactions that involve a broker acting as a "principal", where such broker is also the investment manager who is making the transaction.
- Any or all investment activities forbidden by SEC or other applicable governing bodies.

The exposure for options, when permitted by contract, must be based on an appropriate options pricing model.

XVI. Review of Investment Policy

The IIC will review the investment policy at least annually to ensure it remains appropriate and to determine whether any modifications are needed and make a recommendation to the Board for changes, if any, to the investment policy. The Board will review the recommendations of the IIC regarding the investment policy and review the policy at least annually.

XVII. Glossary of Common Investment Terms

Investment in any particular instrument or security remains subject to applicable law and circumstances then prevailing. Notwithstanding, the most common investments are cited below:

A. <u>Alternative Investments</u> are non traditional investments, not covered by another investment class (e.g. private equity/private debt and opportunistic strategies)

B. <u>American Depositary Receipts (ADRs)</u> are receipts for the shares of a foreign-based corporation held in the vault of a U.S. bank and entitling the shareholder to all dividends and capital gains. These are traded on various U.S.-based exchanges and are available for hundreds of stocks from numerous countries.

C. <u>Commercial Mortgage Backed Securities (CMBS)</u> are multi-class bonds backed by pools of commercial mortgages.

D. Commercial Mortgage Lending investments are notes and bonds secured by a mortgage or deed of trust providing first lien on real estate.

E. Derivatives are financial instruments such as forwards, futures, options, or other instruments whose values are “derived” from another financial instrument.

F. Domestic Equity Securities for System purposes typically consist of corporate common stock. These stocks must be registered on a national securities exchange or must be otherwise registered as provided in the Securities Exchange Act of 1934 as amended, with price quotations furnished through a nationwide automated quotations system approved by the National Association of Securities Dealers, Inc. (NASD). Domestic Equity Securities also include stock in corporate real estate investment trusts (REITs), which are traded on a national exchange and acquired as part of an index fund or by one of the System’s domestic equity managers.

G. Domestic Fixed Income Securities are U.S. Treasury or Government agency obligations; equipment trust certificates; corporate, industrial, or utility bonds; U.S. dollar denominated Euro or Yankee bonds, including Canadian obligations payable in U.S. dollars; residential and commercial mortgage-backed securities; and pass-through certificates. For System purposes, Domestic Fixed Income Securities primarily consist of instruments with maturities in excess of twelve (12) months at time of purchase.

H. Emerging Market Equities are common or preferred stocks and investment shares which are registered on exchanges outside the U.S. Emerging market countries are the developing international countries which have a relatively low per capita Gross National Product. There is wide variety of economic, regulatory, and market development among the emerging countries.

I. Equity Real Estate Investments are any investments in real property, either made directly or through the use of pooled vehicles such as limited partnerships, open or closed-end commingled funds, Real Estate Investment Trusts (REITs) including publicly traded REIT securities, and Real Estate Operating Companies (REOCs).

J. Non-U.S. Equity Securities are common or preferred corporate stocks and investment trust shares. Only stocks registered on recognized exchanges outside the U.S. are to be considered Non-U.S. Equity Securities.

K. Real Estate Mezzanine Funds are investments in funds or partnerships whose portfolios consist of junior loans secured by real estate or partnership interests in real estate ownership.

L. Repurchase Agreements are agreements between a seller and a buyer, whereby the seller agrees to repurchase the securities at an agreed upon price and, usually, at a stated time.

M. Securities Lending occurs when a lender transfers a security to a borrower for cash or non-cash collateral pursuant to an agreement to return the collateral for an identical security in the future.

N. Short Term Investments (Cash Equivalents) include, but are not limited to, interest bearing or discount instruments such as money market funds; U.S. Treasury Bills; corporate-issued commercial paper; bank-issued Certificates of Deposit; bankers' acceptances; and fully collateralized repurchase agreements. For System purposes, short-term investments consist primarily of instruments maturing in twelve (12) months or less at time of purchase.

Proxy Voting Policy

New Hampshire Retirement System
Proxy Voting Policy

INTRODUCTION

A proxy is a written power of attorney given by a shareholder of a corporation, authorizing a specific vote on the shareholder's behalf at corporate meetings. A proxy will normally pertain to election of members of the corporation's board of directors, or to various resolutions submitted for shareholder approval. The System's Proxy Voting Policy has been established to protect the System's long-term investment interests and to promote responsible corporate policies and activities which enhance a corporation's financial prospects.

U.S. PROXY VOTING GUIDELINES

I. OPERATIONAL ITEMS

Adjourn Meeting

Generally vote **against** proposals to provide management with the authority to adjourn an annual or special meeting absent compelling reasons to support the proposal.

Vote **for** adjournment proposals that relate specifically to soliciting votes for a merger or transaction if supporting that merger or transaction. Vote **against** such proposals if the wording is too vague or if the proposal includes "other business."

Amend Quorum Requirements

Proposals to amend quorum requirements for shareholder meetings are evaluated based on several factors which include: market norms, the company's reasons for the change, and the company's ownership structure.

Amend Minor Bylaws

Generally, vote **for** proposals to make bylaw or charter changes that are of a housekeeping nature (updates or corrections) unless the proposed changes are believed to be detrimental to shareholder value.

Change Company Name

Generally, vote **for** proposals to change company name unless the reasons behind the change and necessity of the change have not been clearly provided by the company.

Change Date, Time, or Location of Annual Meeting

Generally, vote **for** management proposals to rotate the time or place of annual meetings unless the proposed change is unreasonable and motivation is unclear.

Generally, vote **against** shareholder proposals to rotate the time or place of annual meetings unless the current scheduling or location is unreasonable and change is determined to be in the best interests of the company and its shareholders.

Ratifying Auditors

Generally, vote **for** proposals to ratify auditors unless:

- More than 20 percent of total fees paid to the auditors are attributable to nonaudit, but not including, SEC-related work. Nonaudit fees should be calculated by adding financial information systems design and implementation fees and all other fees.
- An auditor has a financial interest in or association with the company, and is therefore not independent
- There is reason to believe that the independent auditor has rendered an opinion which is neither accurate nor indicative of the company's financial position
- Poor accounting practices are identified that rise to a serious level of concern, such as: fraud; misapplication of GAAP; and material weaknesses identified in Section 404 disclosures

Vote **for** shareholder proposals that request the company rotate its auditors, taking into account the length of rotation specified in the proposal.

Vote **for** shareholder proposals that request the board adopt a policy stating that the company’s independent accountants will only provide audit services to the company and no other services.

Vote **for** shareholder proposals requesting the company submit the ratification of its auditors to a shareholder vote.

Transact Other Business

Vote **against** management proposals asking for authority to vote at the meeting for "other business" not already described in the proxy statement.

II. THE BOARD OF DIRECTORS

Voting on Director Nominees in Uncontested Elections

Votes on management proposals to elect director nominees are evaluated by taking the following factors into account: composition of the board and key board committees, attendance at board meetings, corporate governance provisions and takeover activity, long-term company performance relative to a market index, directors' investment in the company, whether the chairman is also serving as CEO, and whether a retired CEO sits on the board. However, there are some actions by directors that should result in votes being withheld. These instances include directors who:

- Attend less than 75 percent of the board and committee meetings without a valid excuse
- In cases of chronic poor attendance without reasonable justification, in addition to voting against the director(s) with poor attendance, generally vote against or withhold from appropriate members of the nominating/governance committees or the full board
- Implement or renew a dead-hand or modified dead-hand poison pill
- Adopts a long-term poison pill without shareholder approval. When it comes to the adoption of short-term poison pill, the nomination of directors will be assessed on a case-by-case basis.
- Ignore a shareholder proposal that is approved by a majority of the votes cast
- Are incumbent board members and the board implements an advisory vote on executive compensation on a less frequent basis than the frequency that received the majority of votes cast at the most recent shareholder meeting at which shareholders voted on the say-on-pay frequency
- Failed to act on takeover offers where the majority of the shareholders tendered their shares
- Are inside directors or affiliated outsiders and sit on the audit, compensation, or nominating committees
- Are inside directors or affiliated outsiders and the full board serves as the audit, compensation, or nominating committee or the company does not have one of these committees
- Are audit committee members and the non-audit fees paid to the auditor are more than 20 percent of total fees paid to the auditors
- Are audit committee members and the company receives an adverse opinion on the company's financial statements from its auditor
- Are audit committee members and poor accounting practices are identified that rise to a level of serious concern, such as: fraud; misapplication of GAAP; and material weaknesses identified in Section 404 disclosures

- Are audit committee members and the audit committee entered into an inappropriate indemnification agreement with its auditor
- Are inside directors or affiliated outside directors and the full board is less than majority independent
- Sit on more than two outside public company boards (i.e. more than three boards in total, including the board seat of the company for which the vote is being cast), or sit on more than one outside public company board if they are CEOs of public companies (i.e. more than two boards in total, including the seat for which the vote is being cast)
- Are on the compensation committee and potentially the full board when there is a recurring or egregious negative correlation between chief executive pay and company performance
- Are on the compensation committee and potentially the full board when the company has recurring or egregious problematic pay practices
- Are on the compensation committee and potentially the full board when the company exhibits a significant level of poor communication and responsiveness to shareholders
- Have failed to address the issue(s) that resulted in any of the directors receiving more than 50% withhold votes out of those cast at the previous board election
- Are incumbent board members and the board had material failures of governance, stewardship, risk oversight, or fiduciary responsibilities at the company

In addition, directors who enacted egregious corporate governance policies or failed to replace management as appropriate would be subject to recommendations to **withhold** votes.

If the board lacks accountability and oversight coupled with sustained poor performance relative to peers, any or all appropriate nominees may be held accountable.

If the board is classified and a continuing director responsible for a problematic governance issue at the board/committee level that would warrant a **withhold/against** vote recommendation is not up for election, any or all appropriate nominees may be held accountable.

Exception may be made for new nominees.

Term Limits

Generally, vote **against** term limits unless it is determined that the lack of new perspectives, resulting from insufficient turnover, may be unfavorable to long-term investment interests.

Board Size

Generally, vote **for** management proposals to determine board size.

Classification/Declassification of the Board

Vote **against** management proposals to classify the board.

Vote **for** shareholder proposals to repeal a classified board.

Cumulative Voting

Vote **against** proposals to eliminate cumulative voting.

Vote **for** proposals to restore or permit cumulative voting in those cases where shareholders have access to the board through their own nominations.

Director and Officer Indemnification and Liability Protection

Vote **for** indemnification proposals that only cover legal expenses when the officer acted in good faith in what he/she believed was the company's interest.

Vote **against** proposals that totally eliminate officers' liability.

A certain level of protection is desirable so as to attract and keep qualified candidates as directors and officers. This protection, however, must not go so far as to excuse officers from being accountable for their actions or for becoming negligent in their duties. The protection should only be effective when officers act in good faith, for the best interests of the company. Specifically, officers should be liable for:

a) breach of loyalty;

b) acts or omissions not in good faith or involving intentional misconduct or knowing violations of the law;

c) unlawful purchases or redemptions of stock;

d) payments of unlawful dividends; or

e) receipt of improper personal benefits.

Establish/Amend Nominee Qualifications

Generally, vote **for** management proposals to establish or amend director qualifications unless the proposed criteria are unreasonable and would have a demonstrable effect in precluding dissident nominees from joining the board.

Vote **against** shareholder proposals requiring two candidates per board seat.

Filling Vacancies/Removal of Directors

Vote **against** management proposals to allow for a director's removal from the board only for cause. Directors should be elected or removed by a simple majority vote of shareholders.

Vote **against** management proposals which provide that only continuing directors may fill vacancies on the board.

Vote **for** proposals which allow shareholders to fill vacancies on the board.

Vote **for** proposals to restore shareholder ability to remove directors with or without cause.

Independent Chairman (Separate Chairman/CEO)

Vote **for** shareholder proposals to separate the position of chairman of the board and CEO. The combination of the two positions creates an inherent conflict of interests.

Majority Vote Proposals

Vote **for** reasonably crafted proposals calling for directors to be elected with an affirmative majority of votes cast and/or the elimination of the plurality standard for electing directors (including binding resolutions requesting that the board amend the company's bylaws), provided the proposal includes a carve-out for a plurality voting standard when there are more director nominees than board seats (e.g. contested elections).

Majority of Independent Directors/Establishment of Committees

Generally, vote **for** shareholder proposals asking that boards be comprised of a majority of independent directors, unless it has been determined that the current board composition satisfies our independence threshold.

Vote **for** shareholder proposals asking that board audit, compensation, and/or nominating committees be comprised exclusively of independent directors.

Proxy Access to Nominate Directors

Management and shareholder proposals to enact provisions that give shareholders access to the proxy to nominate directors that are evaluated based on the long-term investment interests of the System, and are examined by considering the following factors:

- Company-specific factors; and

- Proposal-specific factors, including:
    - The ownership thresholds proposed in the resolution (i.e. percentage and duration);
    - The maximum proportion of directors that shareholders may nominate each year; and
    - The method of determining which nominations should appear on the ballot if multiple shareholders submit nominations

Open Access

Vote **for** any and all equal access proposals.

Equal access proposals generally relate to three major topics:

a) discussion of management nominees for the board of directors;

b) discussion of other management proposals;

c) discussion of shareholders' own proposals or nominees.

Shareholders should have the freedom to obtain information and discuss all of these topics. Only with sufficient information will they be able to vote their proxies wisely and maximize the value of their stock.

Management will often oppose these equal access proposals, seeing them as an infringement of its rights. Management will argue that the added cost and length of proxy statements is inefficient. The marginal cost of longer proxies, however, will be minimal, and the cost will be borne by the stockholders anyway.

Stock Ownership Requirements

Vote **for** shareholder proposals requiring directors to own company stock in order to qualify as a director, or to remain on the board.

Shareholder proposals asking that the company adopt a holding or retention period for its executives (for holding stock after the vesting or exercise of equity awards)shall be evaluated by taking into account any stock ownership requirements or holding period/retention ratio already in place and the actual ownership level of executives.

Plurality Vote Requirement for Director Nominees

Vote **for** proposals to elect director nominees by the affirmative vote of the majority of votes cast at an annual meeting of shareholders.

III. PROXY CONTESTS

Voting for Director Nominees in Contested Elections

Votes in a contested election of directors are evaluated based on the long-term economic interest of the System, and must be examined by taking the following factors into account:

- Past performance relative to its peers;
- Market in which fund invests;
- Measures taken by the board to address the issues;
- Past shareholder activism, board activity, and votes on related proposals;
- Strategy of the incumbents versus the dissidents;
- Independence of directors;
- Experience and skills of director candidates;
- Governance profile of the company;
- Evidence of management entrenchment.

Reimbursing Proxy Solicitation Expenses

Generally, vote **for** proposals to reimburse all appropriate proxy solicitation expenses when voting in conjunction with support of a dissident slate. We will also generally support shareholder proposals calling for the reimbursement of reasonable costs associated with nominating one or more candidates in a contested election where the following apply:

- The election of fewer than 50% of the directors to be elected is contested in the election;
- One or more of the dissident's candidates is elected;
- Shareholders are not permitted to cumulate their votes for directors; and
- The election occurred, and the expenses were incurred, after the adoption of this bylaw.

IV. ANTI - TAKEOVER MECHANISMS

Confidential Voting

Vote **for** a confidential voting policy.

Confidential voting would minimize the ability of management to influence proxy votes. It would allow shareholders the freedom to vote solely in their best interests, not considering actual or perceived pressure from management.

In order to maintain and monitor fiduciary responsibility, fiduciaries should still make their records available to clients after the confidential vote. Therefore, fiduciaries can still be held accountable for their votes.

Advance Notice Requirements for Shareholder Proposals/Nominations

Generally, vote **for** advance notice resolutions provided that the proposals seek to allow shareholders to submit proposals as close to the meeting date as reasonably possible and within the broadest window possible. A reasonable deadline for shareholder notice of a proposal/ nominations must not be more than 60 days prior to a meeting, with a submittal window of at least 30 days prior to the deadline.

Amend Bylaws without Shareholder Consent

Vote **against** proposals giving the board exclusive authority to amend the bylaws.

Vote **for** proposals giving the board the ability to amend the bylaws in addition to shareholders.

Poison Pills

Vote **for** shareholder resolutions requiring that poison pills must be submitted for shareholder approval before going into effect.

Generally, vote **against** management proposals to approve or renew a poison pill unless the following factors are present:

1) 20 percent or higher flip-in
2) Two- to three-year sunset provision
3) No dead-hand or no-hand provision
4) Shareholder redemption feature: If the board refuses to redeem the pill 90 days after an offer is announced, ten percent of the shares may call a special meeting or seek a written consent to vote on rescinding the pill.

Shareholder Ability to Act by Written Consent

Vote **against** management proposals to restrict or prohibit shareholders' ability to take action by written consent.

Vote **for** shareholder proposals to allow or make easier shareholder action by written consent.

Shareholder Ability to Call Special Meetings

Vote **against** management proposals to restrict or prohibit shareholders' ability to call special meetings.

Vote **for** shareholder proposals to allow or make easier shareholders' ability to call special meetings.

Supermajority Vote Requirements

Vote **against** management proposals to require a supermajority vote to amend any bylaw or charter provision.

Vote **for** shareholder proposals to lower supermajority vote requirements to amend any bylaw or charter provision. However, at companies with shareholder(s) who have significant ownership levels, proposals to lower supermajority vote requirements should be analyzed on a case-by-case basis, taking into account the following:

- Ownership structure;
- Quorum requirements; and
- Vote requirements

Exclusive Venue

Management proposals seeking shareholder approval to limit shareholder litigation to the company's jurisdiction of incorporation are evaluated based on the long-term investment interests of the System, and are examined by considering the following factors:

- Whether the company has been materially harmed by shareholder litigation outside its jurisdiction of incorporation, based on disclosure in the company's proxy statement; and
- Whether the company has the following good governance features:
    - An annually elected board;
    - A majority vote standard in contested director elections; and
    - The absence of a poison pill, unless the pill was approved by shareholders.

Vote **for** shareholder proposals to remove or adjust exclusive venue proposals, unless:

- The company has sufficiently proven that it has been materially harmed by shareholder litigation outside its jurisdiction of incorporation; and
- The company has the following good governance features:
    - An annually elected board;
    - A majority vote standard in contested director elections; and
    - The absence of a poison pill, unless the pill was approved by shareholders.

V. MERGERS AND CORPORATE RESTRUCTURINGS

Appraisal Rights

Vote **for** shareholder proposals to provide rights of appraisal to dissenting shareholders.

Asset Purchases

Votes on asset purchase proposals are evaluated based on the long-term investment interests of the System, and are examined by considering the following factors:

- Purchase price
- Fairness opinion
- Financial and strategic benefits
- How the deal was negotiated
- Conflicts of interest
- Other alternatives for the business
- Noncompletion risk

Asset Sales

Votes on asset sales are evaluated based on the long-term investment interests of the System, and are examined by considering the following factors:

- Impact on the balance sheet/working capital
- Potential elimination of diseconomies
- Anticipated financial and operating benefits
- Anticipated use of funds
- Value received for the asset
- Fairness opinion
- How the deal was negotiated
- Conflicts of interest

Bundled Proposals

Vote **against** bundled proxy proposals.

Conversion of Securities

Votes on proposals regarding conversion of securities are determined based on the long-term economic interest of the System. When evaluating these proposals the investor should review the dilution to existing shareholders, the conversion price relative to market value, financial issues, control issues, termination penalties, and conflicts of interest.

Vote **for** the conversion if it is expected that the company will be subject to onerous penalties or will be forced to file for bankruptcy if the transaction is not approved.

Corporate Reorganization/Debt Restructuring/Prepackaged Bankruptcy Plans/Reverse Leveraged Buyouts/Wrap Plans

Votes on proposals to increase common and/or preferred shares and to issue shares as part of a debt restructuring plan are determined based on the long-term investment interest of the System, by taking into consideration the following:

- Dilution to existing shareholders' position
- Terms of the offer
- Financial issues
- Management's efforts to pursue other alternatives
- Control issues
- Conflicts of interest

Vote **for** the debt restructuring if it is expected that the company will file for bankruptcy if the transaction is not approved.

Formation of Holding Company

Votes on proposals regarding the formation of a holding company should be determined based on the long-term economic interests of the System, taking into consideration the following:

- The reasons for the change
- Any financial or tax benefits
- Regulatory benefits
- Increases in capital structure
- Changes to the articles of incorporation or bylaws of the company

Absent compelling financial reasons to recommend the transaction, vote **against** the formation of a holding company if the transaction would include either of the following:

- Increases in common or preferred stock in excess of the allowable maximum as calculated by the ISS Capital Structure model
- Adverse changes in shareholder rights

Going Private Transactions (LBOs and Minority Squeeze Outs)

Going private transactions are evaluated based on the long-term economic interest of the System, by taking into account the following: offer price/premium, fairness opinion, how the deal was negotiated, conflicts of interest, other alternatives/offers considered, and noncompletion risk.

Joint Ventures

Proposals seeking to form joint ventures are determined based on the long-term investment interests of the System, by taking into account the following: percentage of assets/business contributed, percentage ownership, financial and strategic benefits, governance structure, conflicts of interest, other alternatives, and noncompletion risk.

Liquidations

Proposals on liquidations are considered based on the long-term investment interests of the System, by taking into account the following: management’s efforts to pursue other alternatives, appraisal value of assets, and the compensation plan for executives managing the liquidation.
Vote **for** the liquidation if the company will file for bankruptcy if the proposal is not approved.

Mergers and Acquisitions/ Issuance of Shares to Facilitate Merger or Acquisition

Proposals to merge one company with another, or for one company to acquire another are determined based on the long-term economic interest of the System. When evaluating the proposals, shareholders should weigh the cost to the company, market reaction, strategic rationale, the immediate and long-term benefits to shareholders, conflict of interests, and the resulting corporate governance changes.

Private Placements/Warrants/Convertible Debentures

Votes on proposals regarding private placements should be determined based on the long-term investment interests of the System. When evaluating these proposals the investor should review: dilution to existing shareholders' position, terms of the offer, financial issues, management’s efforts to pursue other alternatives, control issues, conflicts of interest, and market reaction.

Vote **for** the private placement if it is expected that the company will file for bankruptcy if the transaction is not approved.

Spinoffs

Votes on spinoffs should be considered based on the long-term investment interests of the System, taking the following factors into account:

- Tax and regulatory advantages
- Planned use of the sale proceeds
- Valuation of spinoff
- Fairness opinion
- Benefits to the parent company
- Conflicts of interest
- Managerial incentives
- Corporate governance changes
- Changes in the capital structure

Value Maximization Proposals

Shareholder proposals seeking to maximize shareholder value by hiring a financial advisor to explore strategic alternatives, selling the company or liquidating the company and distributing the proceeds to shareholders should be evaluated based on the following factors: prolonged poor performance with no turnaround in sight, signs of entrenched board and management, strategic plan in place for improving value, likelihood of receiving reasonable value in a sale or dissolution, and whether company is actively exploring its strategic options, including retaining a financial advisor.

VI. STATE OF INCORPORATION

Control Share Acquisition Provisions

Vote **for** proposals to opt out of control share acquisition statutes unless doing so would enable the completion of a takeover that would be detrimental to shareholders.

Vote **against** proposals to amend the charter to include control share acquisition provisions.

Vote **for** proposals to restore voting rights to the control shares.

Control Share Cashout Provisions

Vote **for** proposals to opt out of control share cashout statutes.

Disgorgement Provisions

Vote **for** proposals to opt out of state disgorgement provisions, if maximizing shareholder value.

Fair Price Provisions

Vote **for** management proposals to adopt a fair price provision, as long as the shareholder vote requirement embedded in the provision is no more than a majority of the disinterested shares.

Vote **against** all other management fair price proposals.

Vote **for** shareholder proposals to lower the shareholder vote requirement embedded in existing fair price provisions.

Generally, vote **against** fair price provisions with shareholder vote requirements greater than a majority of disinterested shares.

Freeze Out Provisions

Vote **for** proposals to opt out of state freeze out provisions, if maximizing shareholder value.

Greenmail

Vote **for** proposals to restrict the company's ability to pay greenmail.

Reincorporation Proposals

Proposals to change a corporation's state of incorporation should be examined based on the long-term economic interest of the System, giving consideration to both financial and corporate governance concerns including the following:

- Reasons for reincorporation;
- Comparison of company's governance practices and provisions prior to and following the reincorporation; and
- Comparison of corporation laws of original state and destination state

Vote **against** proposals that seek to reincorporate the company outside of the jurisdiction of the United States.

Stakeholder Provisions

Vote **against** proposals that ask the board to consider nonshareholder constituencies or other nonfinancial effects when evaluating a merger or business combination.

VII. CAPITAL STRUCTURE

Adjustments to Par Value of Common Stock

Vote **for** management proposals to reduce the par value of common stock, if it will not adversely affect shareholder rights.

Common Stock Authorization

Votes on proposals to increase the number of shares of common stock authorized for issuance are determined based on the long-term economic interest of the System, using a model developed by ISS.

Vote **against** proposals at companies with dual-class capital structures to increase the number of authorized shares of the class of stock that has superior voting rights.
Vote **for** proposals to approve increases beyond the allowable increase when a company's shares are in danger of being delisted or if a company's ability to continue to operate as a going concern is uncertain.

Dual-Class Stock

Proposals to recapitalize a company into dual classes of voting stock must be examined based on the long-term economic interest of the System.

Vote **against** the creation of stock with supervoting privileges.

Vote **against** proposals that introduce nonvoting shares or exchange voting shares for nonvoting shares.

Vote **for** shareholder proposals asking that a company report to shareholders on the financial impact of its dual class voting structure.

Vote **for** shareholder proposals asking that a company submit its dual class voting structure for shareholder ratification.

Issue Stock for Use with Rights Plan

Vote **against** proposals that increase authorized common stock for the explicit purpose of implementing a shareholder rights plan (poison pill).

Preemptive Rights

Vote **against** proposals requesting the issuance of shares with or without preemptive rights which are excessive under local market best practice standards.

Preferred Stock

Vote **against** proposals authorizing the creation of new classes of preferred stock with unspecified voting, conversion, dividend distribution, and other rights ("blank check" preferred stock).

Vote **for** proposals to create "declawed" blank check preferred stock (stock that cannot be used as a takeover defense).

Vote **for** proposals to authorize preferred stock in cases where the company specifies the voting, dividend, conversion, and other rights of such stock and the terms of the preferred stock appear reasonable.

Vote **against** proposals to increase the number of blank check preferred stock authorized for issuance when no shares have been issued or reserved for a specific purpose.

Votes on proposals to increase the number of blank check preferred shares are determined after analyzing the number of preferred shares available for issue given a company's industry and performance in terms of shareholder returns.

Recapitalization

Votes on recapitalizations (reclassifications of securities) are considered based on long-term investment interests of the System, taking into account the following: more simplified capital structure, enhanced liquidity, fairness of conversion terms, impact on voting power and dividends, reasons for the reclassification, conflicts of interest, and other alternatives considered.

Reverse Stock Splits

Generally, vote **for** management proposals to implement a reverse stock split provided that the number of authorized shares will be proportionally reduced or the effective increase in authorized shares is equal to or less than the allowable increase calculated in accordance with stock authorization model developed by ISS. In the event that a proportional reduction of authorized shares is not reciprocated, we will only support such proposals if:

- A stock exchange has provided notice to the company of a potential delisting;
- There is substantial doubt about the company's ability to continue as a going concern without additional financing; or
- The company's rationale or other factors as applicable merit support.

Share Repurchase Programs

Proposals to repurchase shares should be considered based on the long-term economic interest of the System. For example, if this is done because management believes the stock is undervalued then the measure should be approved. If the purchase is proposed as an antitakeover device, then it ought to be opposed. We generally vote **for** management proposals to institute open market share repurchase plans in which all shareholders may participate on equal terms.

Stock Distributions: Splits and Dividends

Vote **for** management proposals to increase the common share authorization for a stock split or share dividend, provided that the increase in authorized shares would not result in an excessive number of shares available for issuance as determined using a model developed by ISS.

Generally, vote **for** proposals to approve stock splits or share dividends unless it is determined that such authorities are detrimental to the long-term economic interest of the System.

Tracking Stock

Vote case-by-case on the creation of tracking stock, weighing the strategic value of the transaction against such factors as:

- Adverse governance changes;
- Excessive increases in authorized capital stock;
- Unfair method of distribution;
- Diminution of voting rights;
- Adverse conversion features;
- Negative impact on stock option plans; and
- Alternatives such as spin-off.

VIII. EXECUTIVE COMPENSATION

Vote **for** resolutions intended to improve the transparency of executive compensation by:

- Requiring a company to place a dollar value on all forms of compensation paid to a company's top-five executives and to include such monetarized disclosure in the summary compensation tables filed by the company with the SEC.
- Requiring a company to disclose to shareholders that compensation paid to a company's top-five executives that are not tax-deductible for federal income tax purposes, and to state the monetary value of the costs of such non-deductibility to the company.
- Requiring a company to disclose to shareholders those gains realized by a company's top-five executives in their exercise of stock options (or in the vesting of restricted shares for restricted share grants) and to report what fraction, if any, is attributable to company outperformance of its industry peers.

- Requiring a company to periodically disclose to shareholders equity investments received as compensation and unloaded by any of the company's top-five executives.

Vote **for** resolutions intended to improve the linkage of executive pay-for-performance by:

- Indexing the exercise price of a company's stock option grants to industry sector or broad market stock movements, or by linking the exercise price to changes in the stock price of firms among the company's industry peer group.
- Establishing executive bonus plans that would discount those improvements in a company's financial performance attributable to industry sector or broad market movements.
- Establishing executive bonus plans that would not utilize metrics based on a company's absolute increases in earnings, sales, or revenues, but rather based on the company's performance relative to its industry peer group.
- Prohibiting a company's top-five executives from unwinding equity-based incentive compensation received from the company.
- Prohibiting a company's top-five executives from hedging or employing any measure intended to eliminate their exposure to a decline in the company stock price.
- Requiring a company's top-five executives to publicly disclose, not less than ten days in advance, their intention to sell company stock, including the number of shares to be sold.
- Requiring "clawback" provisions in executive compensation arrangements that would result in a return to the company of executive over-payments based on performance metrics that are subsequently depressed upon a company's restatement of earnings.
- Requiring equity-based executive compensation arrangements to be "dividend neutral" – i.e., neither encouraging nor discouraging the payment of stock dividends to shareholders.
- Requiring executive stock option plans to adjust downward the exercise price of such options to reflect dividend payments made on company stock during the executive's holding period.
- Curtailing Supplemental Executive Retirement Plans (SERPs) for the top-five executives in the event a company terminates, "freezes", or otherwise curtails a defined benefit plan covering its rank-and-file employees.
- Reducing benefits provided under severance arrangements for a company's chief executive officer (CEO).
- Limiting the ratio of the sum of the compensation paid to a company's top-five executives to 8% of the company's aggregate earnings.

Advisory Votes on Executive Compensation (Say-on-Pay) Management Proposals
Generally, evaluate executive pay and practices based on the overall executive compensation structure's ability to effectively motivate participants to focus on long-term shareholder value and returns, while adhering to market law, disclosure and best practice standards.

Vote **against** management say on pay (MSOP) proposals, **against/withhold** on compensation committee members (or, in rare cases where the full board is deemed responsible, all directors including the CEO), and/or **against** an equity-based incentive plan proposal if:

- There is a misalignment between CEO pay and company performance (pay for performance);
- The company maintains problematic pay practices;
- The board exhibits poor communication and responsiveness to shareholders.

Frequency of Advisory Vote on Executive Compensation (Management "Say on Pay")

Vote **for** annual advisory votes on compensation, which provide the most consistent and clear communication channel for shareholder concerns about companies' executive pay programs.

Advisory Vote on Golden Parachutes in an Acquisition, Merger, Consolidation, or Proposed Sale

We will evaluate these proposals based on our existing policies related to severance packages and problematic pay practices.

Equity-Based and Other Incentive Plans

Proposals concerning director compensation are determined based on compensation methodology developed by ISS.

Vote **against** awarding stock option plans as compensation for directors.

Stock Plans in Lieu of Cash

Votes **for** plans which provide directors with the choice of taking all or a portion of their cash compensation in the form of stock or which provide a dollar-for-dollar cash for stock exchange.

Director Retirement Plans

Vote **against** retirement plans for non-employee directors.

Vote **for** shareholder proposals to eliminate retirement plans for non-employee directors.

Management Proposals Seeking Approval to Reprice Options

Vote **against** management proposals seeking approval to reprice options.

Shareholder Proposals Regarding Executive and Director Pay

Vote **for** shareholder proposals seeking additional disclosure of executive and director pay information, provided the information requested is relevant to shareholders' needs, would not put the company at a competitive disadvantage relative to its industry, and is not unduly burdensome to the company.

Vote **against** shareholder proposals seeking to set absolute levels on compensation or otherwise dictate the amount or form of compensation.

Vote **against** shareholder proposals requiring director fees be paid in stock only.

Vote **for** shareholder proposals to put option repricings to a shareholder vote.

All other shareholder proposals regarding executive and director pay are evaluated by taking into account company performance, pay level versus peers, pay level versus industry, and long term corporate outlook.

Qualified Employee Stock Purchase Plans

Vote **for** proposals to approve qualified employee stock purchase plans where all of the following are aligned with local market best practice standards:

- Purchase price;
- Offering period; and
- The number of shares.

Nonqualified Employee Stock Purchase Plans

Vote **for** proposal to approve nonqualified employee stock purchase plans where all of the following are aligned with local market best practice standards:

- Broad-based participation;
- Limits on employee contribution;
- Company matching contribution;
- No discount on the stock price on the date of purchase (since there is a company matching contribution).

In the event of excessive company matching contributions, we will evaluate the cost of plan against an allowable cap developed by ISS.

Employee Stock Ownership Plans (ESOPs)

Vote **for** proposals to implement an ESOP or increase authorized shares for existing ESOPs, unless the number of shares allocated to the ESOP is excessive (more than five percent of outstanding shares.)

401(k) Employee Benefit Plans

Vote **for** proposals to implement a 401(k) savings plan for employees.

Performance-Based Awards

Generally vote **for** shareholder proposals advocating the use of performance-based awards like indexed, premium-priced, and performance-vested options or performance-based shares, unless:

- The proposal is overly restrictive (e.g., it mandates that awards to all employees must be performance-based or all awards to top executives must be a particular type, such as indexed options)
- The company demonstrates that it is using a substantial portion of performance-based awards for its top executives

Pay-for-Superior-Performance Standard

Generally vote **for** shareholder proposals requesting to establish a pay-for-superior-performance standard whereby the company discloses defined financial performance criteria and a detail list of comparative peer group to allow shareholders to sufficiently determine the pay and performance correlation established in the plan. In addition, establish that no award should be paid out unless the company performance exceeds its peer's median or mean performance on the selected financial and stock price performance criteria.

Golden Parachutes and Executive Severance Agreements

Vote **for** shareholder proposals to require golden parachutes or executive severance agreements to be submitted for shareholder ratification, unless the proposal requires shareholder approval prior to entering into employment contracts.

Proposals to ratify or cancel golden parachutes are determined based on several qualifying factors. An acceptable parachute should include the following:

- The triggering mechanism should be beyond the control of management

- The amount should not exceed three times base amount (defined as the average annual taxable W-2 compensation during the five years prior to the year in which the change of control occurs)
- Change-in-control payments should be double-triggered, i.e., (1) after a change in control has taken place, and (2) termination of the executive as a result of a "change in control", meaning a change in the company ownership structure
- The agreements do not contain problematic features (*e.g.* excessive cash severance; excessive golden parachute payments)

Pension Plan Income Accounting

Vote **for** shareholder proposals to exclude pension plan income in the calculation of earnings used in determining executive bonuses/compensation.

Supplemental Executive Retirement Plans (SERPs)

Vote **for** shareholder proposals requesting to put extraordinary benefits contained in SERP agreements to a shareholder vote unless the company's executive pension plans do not contain excessive benefits beyond what is offered under employee-wide plans.
In addition, generally vote **for** shareholder proposals urging the board to limit the executive benefits provided under the company's supplemental executive retirement plan (SERP) by limiting covered compensation to a senior executive's annual salary and excluding of all incentive or bonus pay from the plan's definition of covered compensation used to establish such benefits.

Advisory Vote on Executive Compensation (Say-on-Pay)

Generally vote **for** shareholder proposals asking the board to propose an advisory resolution seeking to ratify the compensation of the company's named executive officers (NEOs) on an annual basis. The proposal submitted to shareholders should make it clear that the vote is non-binding and would not have an impact on compensation paid or awarded to any NEO.

Disclosure of Board or Company's Utilization of Compensation Consultants

Generally vote **for** shareholder proposals seeking disclosure regarding the Company, Board, or Board committee's use of compensation consultants, such as company name, business relationship(s) and fees paid.

IX. SOCIAL AND ENVIRONMENTAL ISSUES

Social issue proposals will be considered based on their potential impact on the long-term economic interests of the System. Generally, we will **abstain** absent clear effect of proposal on share value.

NON-U.S. PROXY VOTING GUIDELINES

I. OPERATIONAL ITEMS

Allocation of Income

Vote **for** approve of the allocation of income, unless:

- The dividend payout ratio has been consistently below 30 percent without adequate explanation; or
- The payout is excessive given the company's financial position.

Amend Minor Bylaws/Articles of Association

Generally, vote **for** proposals to make bylaw or charter changes that are of a housekeeping nature (updates or corrections) unless the proposed changes are believed to be detrimental to shareholder value or in absence of adequate information to evaluate the proposal per local market best practice standards.

Amend Quorum Requirements

Proposals to amend quorum requirements for shareholder meetings are evaluated based on several factors which include: market norms, the company's reasons for the change, and the company's ownership structure.

Change in Company Fiscal Term

Vote **for** proposals to change a company's fiscal term unless the company's motivation for the change is to postpone its annual general meeting.

Financial Statements/Director and Auditor Reports

Vote **for** proposals to approve financial statements and director and auditor reports, unless:

- There are concerns about the accounts presented or audit procedures used; or
- The company is not responsive to shareholder questions about specific items that should be publicly disclosed.

General Meeting Formalities

In some markets, shareholders are routinely asked to approve:

- the opening of the shareholder meeting
- acknowledge proper convening of meeting
- that the meeting has been convened under local regulatory requirements
- the presence of quorum
- the agenda for the shareholder meeting
- the election of the chair of the meeting
- the appointment of shareholders to co-sign the minutes of the meeting
- regulatory filings
- the designation of inspector or shareholder representative(s) of minutes of meeting
- the designation of two shareholders to approve and sign minutes of meeting
- the allowance of questions
- the publication of minutes
- the closing of the shareholder meeting
- authorize board to ratify and execute approved resolutions
- prepare and approve list of shareholders

As these are typically formalities associated with the convening of general shareholder meetings, generally vote **for** these and similar routine management proposals.

Lower Disclosure Threshold for Stock Ownership

Vote **against** proposals to lower the stock ownership disclosure threshold below 5 percent unless specific reasons exist to implement a lower threshold.

Stock (Scrip) Dividend Alternative

Generally, vote **for** stock (scrip) dividend proposals.

Vote **against** proposals that do not allow for a cash option unless management demonstrates that the cash option is detrimental to shareholder value.

Transact Other Business

Vote **against** other business when it appears as a voting item.

II. AUDITORS

Appointment of Auditors and Auditor Fees

Vote **for** the reelection of auditors and proposals authorizing the board to fix auditor fees, unless:

- There are serious concerns about the accounts presented or the audit procedures used;
- The auditors are being changed without explanation;
- The name(s) of the proposed auditors has not been published;
- The auditors are being changed without explanation;
- For widely-held companies, excessive fees for non-audit services as determined by local market best practice standards; or
- The lead audit partner(s) has been linked with a significant auditing controversy.

Vote **against** the appointment of external auditors if they have previously served the company in an executive capacity or can otherwise be considered affiliated with the company.

Appointment of Internal Statutory Auditors

Vote **for** the appointment or reelection of statutory auditors, unless:

- There are serious concerns about the statutory reports presented or the audit procedures used;
- Questions exist concerning any of the statutory auditors being appointed; or
- The auditors have previously served the company in an executive capacity or can otherwise be considered affiliated with the company.

Auditor Indemnification and Liability Provisions

Vote **against** proposals to indemnify auditors.

III. THE BOARD OF DIRECTORS

Voting on Director Nominees in Uncontested Elections (Non-U.S.)

Votes on management nominees in the election of directors are evaluated by observing relevant market listing rules and regulations, coupled with local market best practice standards. We will typically not support nominees if:

- Adequate disclosure has not been provided in a timely manner;

- There are clear concerns over questionable finances or restatements;
- There have been questionable transactions with conflicts of interest;
- There are any records of abuses against minority shareholder interests; or
- The board fails to meet minimum corporate governance standards.

Vote **for** individual nominees unless there are specific concerns about the individual, such as criminal wrongdoing or breach of fiduciary responsibilities.

Vote **against** individual directors if repeated absences at board meetings have not been explained (in countries where this information is disclosed).

Votes in a contested election of directors are evaluated based on the long-term economic interest of the System, and must be examined by taking the following factors into account:

- Past performance relative to its peers;
- Market in which fund invests;
- Measures taken by the board to address the issues;
- Past shareholder activism, board activity, and votes on related proposals;
- Strategy of the incumbents versus the dissidents;
- Independence of directors;
- Experience and skills of director candidates;
- Governance profile of the company;
- Evidence of management entrenchment.

Vote **for** employee and/or labor representatives if they sit on either the audit or compensation committee *and* are required by law to be on those committees. Vote **against** employee and/or labor representatives if they sit on either the audit or compensation committee, if they are not required to be on those committees.

Under extraordinary circumstances, vote **against** or **withhold** from directors individually, on a committee, or the entire board, due to:

- Material failures of governance, stewardship, or fiduciary responsibilities at the company; or
- Failure to replace management as appropriate; or
- Egregious actions related to the director(s)' service on other boards that raise substantial doubt about his or her ability to effectively oversee management and serve the best interests of shareholders at any company.

Board Structure

Generally, vote **for** management proposals to determine board size.

Director and Officer Indemnification and Liability Provisions

Votes on proposals seeking indemnification and liability protection for directors and officers are examined based on the indemnification and liability protections applicable in each respective market, provided that they are within reason. We will generally only support those proposals that provide directors and officers protection if they have acted in good faith on company business and were found innocent of any civil or criminal charges for duties performed on behalf of the company.

Discharge of Directors

Generally vote **for** the discharge of directors, including members of the management board and/or supervisory board, unless there is reliable information about significant and compelling controversies that the board is not fulfilling its fiduciary duties warranted by:

- A lack of oversight or actions by board members which invoke shareholder distrust related to malfeasance or poor supervision, such as operating in private or company interest rather than in shareholder interest; or
- Any legal issues (e.g. civil/criminal) aiming to hold the board responsible for breach of trust in the past or related to currently alleged actions yet to be confirmed (and not only the fiscal year in question), such as price fixing, insider trading, bribery, fraud, and other illegal actions; or
- Other egregious governance issues where shareholders will bring legal action against the company or its directors.

IV. PROXY CONTESTS

Voting for Director Nominees in Contested Elections

Votes in a contested election of directors are evaluated based on the long-term economic interest of the System, and must be examined by taking the following factors into account:

- Past performance relative to its peers;
- Market in which fund invests;
- Measures taken by the board to address the issues;
- Past shareholder activism, board activity, and votes on related proposals;
- Strategy of the incumbents versus the dissidents;
- Independence of directors;

- Experience and skills of director candidates;
- Governance profile of the company;
- Evidence of management entrenchment.

V. ANTI - TAKEOVER MECHANISMS

Anti-takeover/Entrenchment Devices

Generally vote **against** all antitakeover proposals, unless they are structured in such a way that they give shareholders the ultimate decision on any proposal or offer.

Depositary Receipts and Priority Shares

Generally vote **against** the introduction of depositary receipts and priority shares.

Issuance of Free Warrants

Generally vote **against** the issuance of free warrants.

Mandatory Takeover Bid Waivers

Generally, vote **for** proposals to waive mandatory takeover bid requirements provided that the event prompting the takeover bid is a repurchase by the company of its own shares. During a buyback of shares, the relative stake of a large shareholder increases even though the number of shares held by the large shareholder has not changed. In certain markets, the mandatory bid rules require a large shareholder to make a takeover offer if its stake in the company is increased on a relative basis as a result of a share repurchase by the company. Companies in such markets may seek a waiver from the takeover bid requirement applicable to their large shareholder.

Renew Partial Takeover Provision

Generally vote **for** the adoption of this proposal as this article provides protection for minority shareholders by giving them ultimate decision-making authority based on their own interests.

VI. MERGERS AND CORPORATE RESTRUCTURINGS

Control and Profit Transfer Agreements

Generally vote **for** management proposals to approve control and profit transfer agreements between a parent and its subsidiaries.

Expansion of Business Activities

Vote **for** resolutions to expand business activities unless the new business takes the company into risky areas.

Mergers and Acquisitions/ Issuance of Shares to Facilitate Merger or Acquisition

Proposals to merge one company with another, or for one company to acquire another are determined based on the long-term economic interest of the System. When evaluating the proposals, shareholders should weigh the cost to the company, market reaction, strategic rationale, the immediate and long-term benefits to shareholders, conflict of interests, whether the transaction is contested, and the resulting corporate governance changes.

Vote **against** if the companies do not provide sufficient information upon request to make an informed voting decision.

Related-Party Transactions

Evaluate resolutions that seek shareholder approval on related party transactions (RPTs), considering factors including, but not limited to, the following:

- the parties on either side of the transaction;
- the nature of the asset to be transferred/service to be provided;
- the pricing of the transaction (and any associated professional valuation);
- the views of independent directors (where provided);
- the views of an independent financial adviser (where appointed);
- whether any entities party to the transaction (including advisers) are conflicted; and
- the stated rationale for the transaction, including discussions of timing.

If there is a transaction that NHRS deemed problematic and that was not put to a shareholder vote, we may recommend against the election of the director involved in the related-party transaction or the full board.

Reorganizations/Restructurings

Proposals to approve reorganizations and restructurings are evaluated based on the long-term economic interest of the System. When evaluating such proposals, shareholders should consider if there are clear conflicts of interest among the various parties, if shareholder rights' are being negatively affected, or if certain groups or shareholders appear to be getting a better deal at the expense of general shareholders.

VII. COUNTRY OF INCORPORATION

Reincorporation Proposals

Proposals to change a corporation's country of incorporation should be examined based on the long-term economic interest of the System, giving consideration to both financial and corporate governance concerns including the following:

- Reasons for reincorporation;
- Comparison of company's governance practices and provisions prior to and following the reincorporation; and
- Comparison of corporation laws of original country and destination country

VIII. CAPITAL STRUCTURE

Adjust Par Value of Common Stock

Vote **for** management proposals to reduce par value of common stock.

Capitalization of Reserves for Bonus Issues/Increase in Par Value

Vote **for** requests to capitalize reserves for bonus issues of shares or to increase par value.

Debt Issuance Requests

Votes on non-convertible debt issuance requests with or without preemptive rights are evaluated based on their individual merits, demonstrated need, and long-term investment interests of the company. We will examine the potential impact the proposed authority may have on the company’s debt ratio, and further compare the level with similar peers in the industry.

Vote **for** the creation/issuance of convertible debt instruments as long as the maximum number of common shares that could be issued upon conversion meets recommended guidelines on equity issuance requests.

Vote **for** proposals to restructure existing debt arrangements unless the terms of the restructuring would adversely affect the rights of shareholders.

Increases in Authorized Capital

Vote **for** non-specific proposals to increase authorized capital in line with local market best practice standards.

Vote **against** proposals to adopt unlimited capital authorizations.

Increase in Borrowing Powers

Votes on proposals to approve increases in a company's borrowing powers are evaluated based on their individual merits, demonstrated need, and long-term investment interests of the company. We will examine the potential impact the proposed authority may have on the company's debt ratio, and further compare the level with similar peers in the industry.

Pledging of Assets for Debt

Votes on proposals to approve the pledging of assets for debt are evaluated based on their individual merits, demonstrated need, and long-term investment interests of the company. We will examine the potential impact the proposed authority may have on the company's debt ratio, and further compare the level with similar peers in the industry.

Preferred Stock

Vote **for** the creation of a new class of preferred stock or for issuances of preferred stock up to 50 percent of issued capital unless the terms of the preferred stock would adversely affect the rights of existing shareholders.

Vote **for** the creation/issuance of convertible preferred stock as long as the maximum number of common shares that could be issued upon conversion meets ISS guidelines on equity issuance requests.

Vote **against** the creation of a new class of preference shares that would carry superior voting rights to the common shares.

Vote **against** the creation of blank check preferred stock unless the board clearly states that the authorization will not be used to thwart a takeover bid.

Votes on proposals to increase blank check preferred authorizations are evaluated based on the rationale for requested increase, the ability for the company to use the blank check preferred stock as a takeover defense, and whether the company has historically issued such stock for legitimate financing purposes.

Preemptive Rights

Vote **against** proposals requesting the issuance of shares with or without preemptive rights which are excessive under local market best practice standards.

Reduction of Capital

Vote **for** proposals to reduce capital for routine accounting purposes unless the terms are unfavorable to shareholders.

Generally, vote **for** proposals to reduce capital in connection with corporate restructuring, as opposition could lead to insolvency, which is not in the long-term economic interests of shareholders. Evaluation of this type of proposal should take a realistic approach to the company's situation and the future prospects for shareholders.

Reissuance of Repurchased Shares

Vote **for** requests to reissue any repurchased shares unless there is clear evidence of abuse of this authority in the past.

Share Repurchase Programs

Generally vote **for** share repurchase programs/market repurchase authorities, provided that the proposal meets local market best practice standards regarding:

- Maximum volume;
- Duration.

For markets that either generally do not specify the maximum duration of the authority or seek an excessive duration that is allowable under market specific legislation, we will assess the company's historic practice. If there is evidence that a company has sought shareholder approval for the authority to repurchase shares on an annual basis, we will support the proposed authority.

In addition, vote **against** any proposal where:

- The repurchase can be used for takeover defenses;
- There is clear evidence of abuse;
- There is no safeguard against selective buybacks;
- Pricing provisions and safeguards are deemed to be unreasonable in light of market practice.

We may support share repurchase plans with excessive volume under exceptional circumstances, such as one-off company specific events (e.g. capital restructuring). Such proposals will be assessed based on merits, which should be clearly disclosed in the annual report.

IX. EXECUTIVE COMPENSATION

Executive Compensation Plans

All compensation proposals will be reviewed based on local market best practice standards.

Director Remuneration and Compensation

Vote **for** proposals to award cash fees to non-executive directors unless the amounts are excessive relative to other companies in the country or industry.

Votes on non-executive director compensation proposals that include both cash and share-based components are determined based on whether the terms of the proposed compensation can effectively motivate participants to focus on long-term shareholder value and returns, while adhering to local market law, disclosure and best practice standards. However, we will typically vote **against** awarding stock option plans as compensation for non-executive directors.

Votes on proposals that bundle compensation for both non-executive and executive directors into a single resolution are determined based on whether the terms of the proposed compensation can effectively motivate participants to focus on long-term shareholder value and returns, while adhering to local market law, disclosure and best practice standards. However, we will typically vote **against** awarding stock option plans as compensation for non-executive directors.

Vote **against** proposals to introduce retirement benefits for non-executive directors.

Director and Statutory Auditor Retirement Plans

Vote **against** retirement plans for nonemployee directors and statutory auditors.

Vote **for** shareholder proposals to eliminate retirement plans for nonemployee directors and statutory auditors.

Remuneration Report

Management proposals seeking ratification of a company's remuneration policy are evaluated by considering a combination of local market law and best practice standards. We will typically oppose a company's remuneration policy if the proposed compensation policy/report was not made available to shareholders in a timely manner, or if the level of disclosure of the proposed compensation policy is below what local market best practice standards dictate.

X. SOCIAL AND ENVIRONMENTAL ISSUES

Social issue proposals will be considered based on their potential impact on the long-term economic interests of the company. Generally, we will **abstain** absent clear effect of proposal on share value.

Securities Lending Policy

New Hampshire Retirement System
Securities Lending Policy

This policy governs the System's direct lending program. The direct lending program covers securities directly owned by NHRS in separately managed accounts. This policy does not address indirect lending, where securities are lent from commingled investment funds.

Securities lending occurs when the System loans a security to a borrower, such as a broker-dealer or a bank, for cash or non-cash collateral pursuant to an agreement to return the identical security to NHRS in the future. Securities are borrowed for a number of reasons, including settlement of short sales and to cover hedges, options, arbitrage positions and settlement fails. Consequently, the borrower receives custody of the loaned security and has the right to resell it. The borrower, however, is obligated to return the exact same security at the end of the loan period and to make the System whole for dividends, interest, and other distributions as if the security remained in the System's portfolio during the loan period. The System does not retain the right to vote on any proxies for a given security during the period the security is on loan.

Due to the current relationship of risk to reward involved in securities lending, and the limited earning potential associated with this activity due to very low interest rates, the NHRS no longer participates in the practice of securities lending.

April 10, 2012

Securities Litigation Policy

New Hampshire Retirement System
Securities Litigation Policy
Amended by NHRS Board of Trustees on January 14, 2014

I. Purpose and Intent

This policy establishes the New Hampshire Retirement System's ("NHRS") policy regarding potential participation in securities class action lawsuits.

II. Policy

A. Background

To fulfill its fiduciary responsibilities to prudently invest and manage the assets of NHRS, NHRS purchases the stock of various public companies or issuers. Periodically, class action lawsuits are brought against the issuers, their directors and/or their officers for alleged violations of federal and state securities laws relating to various disclosure obligations and other breaches of fiduciary or other duties. As a shareholder, NHRS is often a member of the classes. Frequently, NHRS receives solicitations from attorneys who desire to represent NHRS as lead plaintiff in these class action lawsuits.

B. Appointment as Lead Plaintiff

Under the federal Private Securities Litigation Reform Act of 1995, federal courts are required to appoint one or more members of the class to serve as the lead plaintiff(s) in securities class action lawsuits. The Act provides a presumption that the lead plaintiff is to be the investor with the largest financial interest in the relief sought by the lawsuit. Typically, this means that those investors with the largest holdings in the defendant issuer's stock have the right to serve as the lead plaintiffs. Generally, in most class action lawsuits, several other investors with substantially larger assets than NHRS will hold more shares in the defendant issuer than NHRS and therefore have a larger financial interest in the relief sought. Accordingly, in most of these lawsuits, an investor other than NHRS will have the right to serve as the lead plaintiff.

C. Financial Risks of Serving as Lead Plaintiff

There are financial risks that result from serving as a lead plaintiff in a securities class action lawsuit. Serving as lead plaintiff may have financial risks if the litigation is unsuccessful. Unless the lead plaintiff successfully negotiates an allocation of potential financial risk with other named plaintiffs, the lead plaintiff could bear the costs, expenses or, potentially, attorneys' fees of the defendant if the litigation is unsuccessful or the court grants sanctions pursuant to Rule 11 of the *Federal Rules of Civil Procedure*. Regardless of the outcome of the lawsuit, other class members could potentially pursue claims against the lead plaintiff for inadequately representing their interests. In return for accepting these financial risks, the lead plaintiff does not receive any additional financial benefit from serving as the lead plaintiff, but, instead, shares any final judgment or settlement with all class members on an equal, per share basis. However, the lead plaintiff may also recover its attorneys’ fees, costs and expenses if the lawsuit is successful or a settlement is obtained.

D. NHRS Policy

Based on the issues enumerated above, it is the policy if NHRS not to serve as the lead plaintiff in securities class action litigation unless NHRS is among the largest shareholders of the defendant issuer and serving as the lead plaintiff is determined by the Board of Trustees to be in the best interest of NHRS.

Private Markets Disclosure Policy

New Hampshire Retirement System
Private Markets Disclosure Policy
Amended by NHRS Board of Trustees on June 13, 2017

I. Purpose and Intent

The New Hampshire Retirement System ("NHRS") is committed to providing the highest degree of public disclosure and transparency of its financial operations not in conflict with its paramount fiduciary duty to act solely in the interest of its members and beneficiaries and to prudently maximize a risk-adjusted return on NHRS assets for their exclusive benefit. With respect to those private market investments (including these asset types: all private equity, absolute return, and non-direct real estate funds) in which NHRS is invested, and recognizing its general public obligation to be transparent and accountable subject to that fiduciary duty of loyalty it owes to its members and beneficiaries, NHRS's disclosure policy is guided by the following principles:

1. The fiduciary duty of NHRS is to prudently maximize a risk-adjusted return on fund assets solely in the interest of and for the exclusive benefit of its members and beneficiaries.

2. NHRS's Board of Trustees and Independent Investment Committee (IIC) manage NHRS's investments with as much transparency as possible, recognizing it is a public body accountable in the first instance to its members and then also to the general public.

3. However, when the general policy favoring transparency is seen to conflict with the Board's and IIC's express fiduciary duty to act solely in the interest of and for the exclusive benefit of its members, it must act in the best interests of its members.

II. Policy

A. Quarterly Disclosure. On balance, and upon careful consideration, the Board has concluded that public disclosure of the periodic investment performance by asset type of those private market investment funds in which NHRS is invested would neither interfere with the operation of those funds nor impede the fiduciary duty owed to NHRS's members and beneficiaries. Accordingly, NHRS, on a quarterly basis, shall compile, post on its website, and make available for public inspection a report disclosing private market investment information, as outlined below:

1. Date of commitment and the total amount committed for each fund;

2. The type of fund (e.g. buyout, mezzanine, venture, real estate);

3. A column for relationship disclosure (any connection that investment staff or any Trustee or investment committee member has with a partnership or the general partners will be disclosed in detail in footnotes);

4. The asset type internal rate of return (IRR);

5. The asset type contribution amount;

6. The asset type distribution amount; and

7. The asset type market value.

These disclosures will provide substantial relevant information to members, their beneficiaries, and the public. They provide the financial extent of NHRS's private market program, and of each asset type, their scale relative to the total portfolio, the names and numbers of partnerships in which NHRS is invested, their type, whether NHRS is invested in more than one generation of a fund, where the program for each asset type stands relative to its allocation (over-invested or under-invested), how much over-commitment has been made to achieve the invested target (potential liability), what the quarterly cash flows are with regard to the program, the return (success, or lack thereof) of the program, and whether cash is being paid out (invested) or received, on balance. If any funds are bought or sold, that will also be apparent. All transactions, including other important information, are reported through the IIC and captured in the meeting minutes.

B. Nondisclosure. The following information will not be regularly disclosed by NHRS, subject to the exception provided below:

NHRS does not provide information publicly on the internal rates of return on individual partnerships in the portfolio and does not provide sufficient detail for the public to calculate it. This is consistent with the fact that NHRS does not provide returns on individual public investments such as common stocks or bonds held in portfolios. This level of detail is not needed for our constituents to evaluate the performance of the portfolio, or the program, and it distracts attention from the information NHRS does provide which is sufficient to assess success, risks and other relevant program metrics.

As to that additional information specifically concerning underlying investments or portfolio companies in NHRS private market investment portfolios, NHRS recognizes a material adverse effect on the ability of such funds to succeed in their investment activities, objectives, and negotiations that would result from public disclosure of such confidential and proprietary financial information. The business impairment of such compromised funds of course would immediately translate to a direct and negative impact on the economic interests of NHRS, its members and beneficiaries.

In addition to causing substantial harm to the competitive position of those funds and portfolio companies in which NHRS is invested, such public disclosure would likely result in degraded reporting to NHRS of that financial information and reduced opportunities to participate in future private market investments. Therefore, such confidential and proprietary information as may detail a fund's portfolio companies, underlying investments, investment management and sponsor fees, or otherwise exist outside the scope of those items included in the quarterly report described above are exempt from public inspection and may not be disclosed.

Exception: In the event of a valid Right to Know request submitted to NHRS pursuant to RSA 91-A, the Board of Trustees may authorize NHRS staff, after consultation with the IIC, to disclose any information that would otherwise not be subject to disclosure (as noted above) if NHRS staff either previously has or, in response to such an information request, subsequently does confirm and document through direct communication with the private market investment sponsor/manager that such information may be disclosed by NHRS.

SECTION II

Accountability Matrix

New Hampshire Retirement System
Accountability Matrix

Total Fund Investment Policy[1]

Function	Independent Investment Committee	Board	Director of Investments and Investment Staff	Legal Counsel	Investment Consultant	Actuary
1. Establishing (and modifying when necessary) investment policy, which includes risk tolerances and investment objectives	Recommends 100-A:14-b, III; A:15, I-a(b) & VII(c)	Decides 100-A:15, I; I-a(b) & (c) & VII(c)	Provides advice/analysis		Provides advice/analysis	Provides input
2. Establishing asset allocation targets and ranges	Recommends A:15, VII(c)(2)	Decides A:15, VII(c)(2)	Provides advice/analysis		Provides advice/analysis	
3. Determining Investment Committee's philosophy for investing assets	Decides A:15, VII(a)	Reviews A:15, VII(a)	Provides advice/analysis			
4. Rebalancing procedures	Decides A:15, I, II-a(b) & VII(c)(2)	Reviews A:15, I-a(c) & VII(c)(2)	Provides advice/analysis		Provides advice/analysis	
5. Monitoring policy compliance	Reviews and assigns responsibility A:15, I-a(a)	Reviews A:15, I-a(a)	Oversees		Serves as a double check	
6. Ensuring statutory compliance of investments parameters	Reviews quarterly A:15, I-a(a)	Reviews annually A:15, I-a(a)	Monitors compliance	Reviews for legal compliance	Abides by parameters	
7. Monitoring Total Fund performance	Reviews and reports to the Board quarterly A:15, II-a(c)	Reviews quarterly IIC reports A:15, II-a(c)	Provides advice/analysis		Provides advice/analysis	
8. Completing comprehensive annual investment report (as outlined in HB 1645)	Prepares A:15, VII	Approves A:15, VII	Provides assistance	Provides assistance	Provides assistance	Provides assistance

[1] Items in red are responsibilities dictated by statute.

April 10, 2012

Domestic Equity[2]

Function	Independent Investment Committee	Board	Director of Investments and Investment Staff	Legal Counsel	Investment Consultant
1. Determining domestic equity asset class guidelines (active vs. passive, style, limitations, etc.)	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
2. Setting and reviewing domestic equity benchmarks	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Provides Advice/Analysis		Provides advice/analysis
3. Determining number and types of managers for each asset class	Decides A:14-b, III; A:15, II-a(b)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
4. Selecting external investment managers	Decides A:14-b, III; A:15, II-a(b)	Monitors A:15, I-a(a)	Recommends	Reviews contracts	Influences/ recommends
5. Monitoring compliance with asset class strategy and guidelines	Reviews and assigns responsibility A:15, VII(c)(3)	Reviews A:15, I-a(a) & VII(c)(3)	Oversees		Serves as a double check
6. Reviewing asset class performance	Reviews and reports to the Board quarterly A:15, II-a(c)	Reviews quarterly IIC reports A:15, II-a(c)	Provides advice/analysis		Provides advice/analysis
7. Monitoring performance of external investment managers	Reviews on on-going basis A:14-b, III; A:15, VII(c)(3)	Reviews quarterly reports A:15, II-a(c)	Completes monitoring activities		Completes monitoring activities

2 Items in red are responsibilities dictated by statute.

Non-U.S. Equity[3]

Function	Independent Investment Committee	Board	Director of Investments and Investment Staff	Legal Counsel	Investment Consultant
1. Determining international equity asset class guidelines (active vs. passive, style, limitations, etc.)	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
2. Setting and reviewing international equity benchmarks	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Recommends		Provides advice/analysis
3. Determining number and types of managers for each asset class	Decides A:14-b, III; A:15, II-a(b)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
4. Selecting external investment managers	Decides A:14-b, III; A:15, II-a(b)	Monitors A:15, I-a(a)	Recommends	Reviews contracts	Influences/ recommends
5. Monitoring compliance with asset class strategy and guidelines	Reviews and assigns responsibility A:15, I-a(a)	Reviews A:15, I-a(a)	Oversees		Serves as a double check
6. Reviewing performance of the asset class	Reviews and reports to the Board quarterly A:15, II-a(c)	Reviews quarterly IIC reports A:15, II-a(c)	Provides advice/analysis		Provides advice/analysis
7. Monitoring performance of external investment managers	Reviews on on-going basis A:14-b, III; A:15, VII(c)(3)	Reviews quarterly reports A:15, II-a(c)	Completes monitoring activities		Completes monitoring activities

[3] Items in red are responsibilities dictated by statute.

Fixed Income[4]

Function	Independent Investment Committee	Board	Director of Investments and Investment Staff	Legal Counsel	Investment Consultant
1. Determining fixed income asset class guidelines (active vs. passive, style, limitations, etc.)	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
2. Setting and reviewing asset class benchmarks	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Recommends		Provides advice/analysis
3. Determining number and types of managers for each asset class	Decides A:14-b, III; A:15, II-a(b)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
4. Selecting external investment managers	Decides A:14-b, III; A:15, II-a(b)	Monitors A:15, I-a(a)	Recommends	Reviews contracts	Influences/ Recommends
5. Monitoring compliance with asset class strategy and guidelines	Reviews and assigns responsibility A:15, VII(c)(3)	Reviews A:15, VII(c)(3)	Oversees		Serves as a double check
6. Reviewing performance of asset classes	Reviews and reports to the Board quarterly A:15, II-a(c)	Reviews quarterly IIC reports A:15, II-a(c)	Provides advice/analysis		Provides advice/analysis
7. Monitoring performance of external investment managers	Reviews on on-going basis A:14-b, III; A:15, VII(c)(3)	Reviews quarterly reports A:15, II-a(c)	Completes monitoring activities		Completes monitoring activities

[4] Items in red are responsibilities dictated by statute.

Real Estate [5]

Function	Independent Investment Committee	Board	Director of Investments and Investment Staff	Legal Counsel	Investment Consultant
1. Determining real estate asset class guidelines (diversification, style, limitations, etc.)	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
2. Setting and reviewing asset class benchmarks	Decides A:14-b, III; A:15, VII	Reviews A:15, VII	Provides advice/analysis		Provides advice/analysis
3. Determining number and types of managers for the asset class	Decides A:14-b, III; A:15, II-a(b)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
4. Selecting external investment management firms	Decides A:14-b, III; A:15, II-a(b)	Monitors A:15, I-a(a)	Influences	Reviews contracts	Influences
5. Monitoring compliance with policy	Reviews and assigns responsibility	Reviews A:15, I-a(a)	Oversees		Serves as a double check
6. Reviewing performance of the asset class	Reviews and reports to the Board quarterly A:15, II-a(c)	Reviews quarterly IIC reports A:15, II-a(c)	Provides advice/analysis		Provides advice/analysis
7. Monitoring performance of external investment managers	Reviews on on-going basis A:14-b, III; A:15, VII(c)(3)	Reviews quarterly reports A:15, II-a(c)	Completes monitoring activities		Completes monitoring activities
8. Valuation of real estate	Reviews quarterly A:15, I-a(b)(3); A:15, VII(c)(3)	Monitors A:15, I-a(a)	Ensures valuations are completed		Assists as needed
9. Executing purchase and sale agreements on real estate	Reviews quarterly A:15, II-a(b) & VII(c)(3)		Ensures valuations are completed	Reviews contracts	

[5] Items in red are responsibilities dictated by statute.

Alternatives Investments Policy[6]

Function	Independent Investment Committee	Board	Director of Investments and Investment Staff	Legal Counsel	Investment Consultant
1. Determining alternative asset class guidelines (style, diversification, limitations, etc.)	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
2. Setting and reviewing asset class benchmarks	Decides A:14-b, III; A:15, VII	Reviews A:15, VII	Provides advice/analysis		Provides advice/analysis
3. Approving number and types of external managers	Decides A:14-b, III; A:15, II-a(b)	Monitors A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
4. Selecting external investment management firms	Decides A:14-b, III; A:15, II-a(b)	Monitors A:15, I-a(a)	Influences	Reviews contracts	Influences
5. Monitoring compliance with policy	Reviews and assigns responsibility A:15, VII(c)(3)	Reviews A:15, I-a(a)	Oversees		Serves as a double check
6. Reviewing performance of the asset class	Reviews and reports to the Board quarterly A:15, II-a(c)	Reviews quarterly IIC reports A:15, II-a(c)	Provides advice/analysis		Provides advice/analysis
7. Monitoring performance of external investment managers	Reviews on on-going basis A:14-b, III; A:15, VII(c)(3)	Reviews quarterly reports A:15, II-a(c)	Completes monitoring activities		Completes monitoring activities
8. Valuation of private equity	Reviews quarterly A:15, I-a(b)(3); A:15, VII(c)(3)		Ensures valuations are completed		Assists as needed
9. Executing partnership agreements on private equity	Reviews quarterly A:14-b, III; A:15, II-a(b)		Ensures agreements are executed	Reviews agreements	

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[6] Items in red are responsibilities dictated by statute.

Selection and Monitoring of Investment Managers[7]

Function	Investment Committee	Board	Director of Investments and Investment Staff	Legal Counsel	Investment Consultant
1. Selecting specific external investment management firms	Decides A:14-b, III; A:15, II-a(b)	Monitors A:15, I-a(a)	Influences	Reviews contracts	Influences
2. Conducting due diligence meetings and activities	Reviews staff/consultants A:15, I-a(a); A:15, VII(c)(3); A:15, (c)(3)		Oversees due diligence		Completes due diligence activities
3. Developing individual manager guidelines			Approves	Reviews	Provides advice/analysis
4. Executing investment manager contracts			Approves	Recommends	Provides assistance
5. Monitoring performance of external investment managers	Reviews on on-going basis A:14-b, III; A:15, VII(c)(3)	Reviews quarterly reports A:15, II-a(c)	Completes monitoring activities		Completes monitoring activities

[7] Items in red are responsibilities dictated by statute.

Selection of Other Service Providers[8]

Function	Independent Investment Committee	Board	Director of Investments and Investment Staff	Legal Counsel	Investment Consultant
1. Selecting (and periodically reviewing) custodian banks	Decides A:15, II-a(a)	Monitors A:15, I-a(a)	Influences	Reviews contract	Influences
2. Selecting (and periodically reviewing) general investment consultant	Recommends A:14-b, III	Decides A:15, II(c)	Provides input	Reviews contract	
3. Selecting (and periodically reviewing) specialty investment consultants	Recommends A:14-b, III	Decides A:15, II(c)	Provides input	Reviews contract	
4. Selecting (and periodically reviewing) the fund's actuary		Decides A:15, II(a)	Influences	Reviews contract	
5. Selecting (and periodically reviewing) outside legal counsel for investment issues		Decides A:15, IV	Influences	Recommends	
6. Selecting (and periodically reviewing) proxy voting service provider		Approves A:15, I-a(a)	Recommends	Reviews contract	Influences
7. Selecting (and periodically reviewing) transition managers	Decides A:14-b, III; A:15, II-a(b)	Reviews A:15, I-a(a)	Recommends	Reviews contract	Influences
8. Selecting (and periodically reviewing) transaction analysis provider	Decides A:15, II-a(b)	Reviews A:15, I-a(a)	Recommends	Reviews contract	Influences

[8] Items in red are responsibilities dictated by statute.

Proxy Voting

Function	Investment Committee	Board	Executive Director or Director of Investments	Legal Counsel	Investment Consultant
1. Setting (and modifying) proxy voting policy		Decides A:15, I-a(a)	Recommends	Provides input	Provides advice/analysis
2. Identifying proxy voting issues and positions		Decides A:15, I-a(a)	Provides advice/analysis	Provides input	Provides advice/analysis
3. Monitoring proxy voting activity		Reviews annually A:15, I-a(a)	Prepares		
4. Approving exceptions to the policy		Reviews annually A:15, I-a(a)	Oversees/ recommends	Provides input	Provides advice/analysis
5. Ensuring policy compliance		Reviews annually A:15, I-a(a)	Oversees	Provides input	Provides advice/analysis

Securities Lending

Function	Investment Committee	Board	Executive Director or Director of Investments	Legal Counsel	Investment Consultant
1. Setting (and modifying) securities lending policy	Provides Input A:15, I-a(a)	Decides A:15, I-a(a)	Provides advice/analysis	Provides input	Provides advice/analysis
2. Creating and updating securities lending guidelines	Approves A:15, I-a(a)	Reviews A:15, I-a(a)	Recommends	Provides input	Provides advice/analysis
3. Monitoring securities lending activity	Reviews and assigns responsibility A:15, I-a(a)	Reviews A:15, I-a(a)	Oversees	Provides input	Provides advice/analysis
4. Ensuring policy compliance	Reviews and assigns responsibility A:15, I-a(a)	Reviews A:15, I-a(a)	Oversees	Provides input	Provides advice/analysis

SECTION III

Independent Investment Committee Charter

New Hampshire Retirement System
Independent Investment Committee Charter

Revisions approved at the November 22, 2019 Independent Investment Committee meeting.

Purpose

The Independent Investment Committee (IIC) was established by Chapter 300 of the 2008 Session Laws with an effective date of January 1, 2009. The purpose of the IIC is to invest the funds of the New Hampshire Retirement System ("NHRS" or "System") in accordance with the policies approved by the NHRS Board of Trustees (the Board). The IIC will also make recommendations to the Board on investment policy, prepare a comprehensive annual investment report, and provide quarterly investment program updates to the Board.

As fiduciaries, the IIC members must exercise the highest degree of care, skill, prudence, and loyalty to beneficiaries of the trust funds.

Authority

The IIC is granted authority as outlined in statute, as may be amended from time to time, and as summarized below. The IIC has the authority to invest and reinvest fund assets in accordance with the policy set by the Board, and in recognition of the assumed rate of return set by the Board. Furthermore, the IIC has the authority to hire and terminate investment managers, and the custodian, and other related investment agents, consistent with statute.

The IIC has the authority to review research data, historical information, consultants' reports, and other documents it deems reasonably necessary to form an opinion on the capabilities of the investment managers and related agents, custodian, and investment consultant of the fund. The Committee is allowed to ask any questions of the firms that are relevant to the services they perform on behalf of the trust funds.

The IIC also has the authority to call upon the NHRS Executive Director, Director of Investments or his or her designee, legal counsel, investment consultant, actuary, and auditor to assist it in carrying out its responsibilities.

Implementation of IIC decisions and directives is delegated to NHRS staff.

Composition

The IIC consists of not more than 5 members. Three members, who shall not be members of the NHRS Board, will be appointed by the Governor with the consent of the Executive Council. Up to two members, who will be members the NHRS Board, will be appointed by the chairperson of the NHRS Board of Trustees. All members of the IIC shall have substantial experience in the field of institutional investments or finance (beyond experience as a trustee of the New Hampshire Retirement System).

Meetings

The IIC shall set an annual calendar and generally meet monthly. All committee members are expected to attend each meeting in person. Meetings will be held in accordance with New Hampshire open meeting requirements under RSA 91-A. The Committee may invite members of staff or others to attend meetings and provide pertinent information, as necessary. Meeting agendas will be prepared and provided in advance to Committee members, along with appropriate briefing materials. Minutes of the meeting discussions and decisions will be prepared by staff. Any Trustee may attend the Committee's meetings.

Staffing
The Director of Investments will act as staff liaison to the Committee. NHRS staff will assist the Committee in the discharge of its responsibilities.

Statutory Obligation to Act as Fiduciary (excerpts from RSA 100-A:15):
"I-a.(a) A trustee, independent investment committee member, or other fiduciary shall discharge duties with respect to the retirement system:

(1) Solely in the interest of the participants and beneficiaries;

(2) For the exclusive purpose of providing benefits to participants and beneficiaries and paying reasonable expenses of administering the system;

(3) With the care, skill, and caution under the circumstances then prevailing which a prudent person acting in a like capacity and familiar with those matters would use in the conduct of an activity of like character and purpose;

(4) Impartially, taking into account any differing interests of participants and beneficiaries;

(5) Incurring only costs that are appropriate and reasonable; and

(6) In accordance with a good-faith interpretation of the law governing the retirement system.

(b) In investing and managing assets of the retirement system pursuant to subparagraph (a), a trustee or independent investment committee member with authority to invest and manage assets:

(1) Shall consider among other circumstances:

(A) General economic conditions;

(B) The possible effect of inflation or deflation;

(C) The role that each investment or course of action plays within the overall portfolio of the retirement system;

(D) The expected total return from income and the appreciation of capital;

(E) Needs for liquidity, regularity of income, and preservation or appreciation of capital; and

(F) The adequacy of funding for the system based on reasonable actuarial factors;

(2) Shall diversify the investments of the retirement system unless the trustee or independent investment committee member reasonably determines that, because of special circumstances, it is clearly prudent not to do so;

(3) Shall make a reasonable effort to verify facts relevant to the investment and management of assets of a retirement system; and

(4) May invest in any kind of property or type of investment consistent with this section.

(c) The board of trustees shall adopt a statement of investment objectives and policy for the retirement system as provided in subparagraph VII(c).

I-b. Paragraph 1-a shall apply to all board members, independent investment committee members, and other fiduciaries, as well as staff and vendors to the extent they exercise any discretionary authority or discretionary control respecting management of the retirement system or exercise any authority or control respecting management or disposition of its assets, or they render investment advice for a fee or other compensation, direct or indirect, with respect to any monies or other property of the retirement system, or have any authority or responsibility to do so, or they have any discretionary authority or discretionary responsibility in the administration of the retirement system.

I-c. The fiduciary obligations of the members of the board of trustees and the independent investment committee are paramount to any other interest a trustee or independent investment committee member may have arising from another role or position that he or she holds, including the position which qualified the person for appointment to the board of trustees or independent investment committee."

Responsibilities of the Committee

The IIC has the following responsibilities:

- Determine the IIC's philosophy for investing the assets of the System;
- Recommend changes in the Investment Policy to the Board;
- Review, with the assistance of the investment consultant or Director of Investments or his or her designee, the performance of the fund, asset classes, and investment managers versus the benchmarks set forth in the Investment Policy;
- Select and, as appropriate, terminate the investment managers or related investment agents, consistent with statute;
- Develop appropriate benchmarks for investment managers;
- Appoint and periodically review a custodian bank for the assets;
- Report to the Board at least quarterly on the management, investment, and reinvestment activities of the IIC;
- Recommend an investment consultant to the Board;

- Prepare a Comprehensive Annual Investment Report as outlined in statute for review and approval by the Board;
- Suggest legislative changes to the Board; and,
- Maintain an orientation and education program for Committee members.

Responsibilities of the Committee Members
Individual Committee members have the following responsibilities:
- Discharge duties solely in the interest of the members and beneficiaries and for their exclusive benefit;
- Observe relevant policies and procedures of NHRS such as those covering Code of Ethics, disclosure, confidentiality, travel, and communications;
- Observe appropriate distinctions in roles and responsibilities with NHRS staff, service providers, IIC members and Trustees;
- Be informed about the System's investment policies and remain current on developments in the pension and public fund industry;
- Work constructively with other IIC members ;
- Interact appropriately with NHRS staff, outside service providers, and the full Board
- Be prepared and regularly attend IIC meetings;
- Respect open meeting laws by not convening meetings with fellow IIC members to discuss NHRS business outside the properly noticed meetings;
- Maintain co-fiduciary responsibility; and,
- Live up to high ethical standards and avoid the appearance of impropriety.

Reporting to the NHRS Board of Trustees
By statute the IIC is required to provide quarterly and annual investment reports to the Board.

The quarterly investment reports will be provided to the Board in advance of its scheduled meetings. They will include, at a minimum, the following:
- Review of the performance of the total fund, asset classes, and investment managers' versus benchmarks;
- Comparison of the fund's actual asset allocations versus target allocations, with explanation of deviations; and,
- Summary of actions taken which involved moving investment proceeds or assets during the period (such as liquidity events, rebalancing, manager hire or termination).

In addition to the items above, supplemental information for the annual period ending June 30th will be provided to the Board. Each year the IIC will also present the Comprehensive Annual Investment Report. It will include, at a minimum, the following:
- A description of the IIC's investment philosophy, including a summary of any significant changes to that philosophy that have occurred since the last annual report;
- A review of the Investment Policy with any recommended changes, including asset class target allocations and allowable ranges;
- A summary of compliance with the Investment Policy, including an explanation for exceptions and steps taken to return to compliance;

- An analysis of returns on investment by investment category;
- Summary of changes to investment structure or portfolio managers;
- An assessment of the current asset structure to determine if it will allow the funds to reach its long range objectives, and any recommended changes;
- Statement of investment costs;
- Summary of any other relevant investment program developments, including those affecting securities lending, proxy voting, divestment, etc.;
- Any suggested changes in legislation which are requested to better serve the members of the System; and,
- Other items as required by statute

Upon approval of this Comprehensive Annual Investment Report by the Board, it will be submitted to the President of the Senate, the Speaker of the House, and the Governor.

As the IIC is also responsible for recommending an investment consultant to the Board of Trustees, the IIC will provide a report, upon request from the Board, which may include any of the following:

- An assessment of the current investment consultant;
- A recommendation to retain, competitively review, or terminate the investment consultant; and,
- An assessment of proposals from investment consultants, including a recommendation for an investment consultant.

Governance

The IIC will elect a chairperson for the term of the person on the IIC, or until a successor is chosen, from among the Committee members who will have the following responsibilities:

- Communicating with the chairperson of the NHRS Board of Trustees, the NHRS Executive Director, and the Director of Investments or his or her designee, on a regular basis;
- Setting the schedule and agendas for the meetings;
- Conducting the IIC meetings or appointing another IIC member to conduct them in his or her absence;
- Calling special or emergency meetings, when necessary;
- Enforcing the governing policies of the IIC; and,
- Scheduling and attending new member orientations.

SECTION IV

Asset Class Guidelines

Domestic Equity Investment Guidelines

Purpose: The allocation to Domestic Equity provides the assets of the System with participation in the largest economy of the world. A diversified allocation, across style and capitalization, to domestic equity should assist in maximizing long-term total returns.

Allocation: The current target allocation to Domestic Equity is 30% of the Total Fund, with an allowable range of 20 – 40%.

Structure: The Domestic Equity portfolio is structured to incorporate both active and passive management. Active management is focused where there is the greatest potential for alpha generation. Passive management is focused where alpha generation has been demonstrated to be difficult to obtain. Therefore, the goal of the passive allocation is to gain low-cost efficient beta exposure. The portfolio is focused to increase exposure to those areas of the capital markets where it is more likely that active management will add value.

Component	Allocation Target*
Large Cap, Passive	Minimum of 50%

* As a percentage of Domestic Equity

Custody: All Domestic Equity securities shall be maintained in the custody and safekeeping of the System's master custodial bank. Commingled fund assets, however, are held in custody at the discretion of the fund manager.

Use of Commingled Funds: Mutual funds and other types of commingled investment vehicles provide, under some circumstances, lower costs and better diversification than can be obtained with a separately managed account pursuing the same investment objectives. However, commingled investment funds cannot customize investment guidelines to the specific needs of individual clients. The Independent Investment Committee (IIC) is willing to accept the policies of such funds in order to achieve the lower costs and diversification benefits of commingled funds, as long as the commingled guidelines are consistent with the spirit of those specified herein and the underlying individual investment manager portfolio-level guidelines. The IIC relies on Staff and the Investment Consultant to assess and monitor the investment policies of any commingled fund used by the System.

Manager Guidelines for Separate Accounts: Portfolio-level guidelines are negotiated with each IIC-approved investment manager with the purpose of establishing agreed-upon parameters for the management of assets. These guidelines are generally based on the guidelines for the respective manager's composite portfolio and investment style; are reviewed by staff in collaboration with the System's Investment Consultant; and are subject to execution by the Director of Investments and the manager prior to implementation. Each manager will be granted full discretion within the context of their respective portfolio-level negotiated guidelines.

Managers are prohibited from deviating from their respective portfolio-level guidelines without prior written approval from the Director of Investments. Any guideline violation must be reported by the manager in writing as soon as it is discovered (within 24 hours). Recommendations for guideline revisions are to be provided to the Director of Investments in writing, and shall include the rationale for the changes and all relevant research. Any guideline revision requests are reviewed by the Director of Investments and the System's Investment Consultant prior to approval. All substantive changes to manager guidelines will be reported to the IIC at the next meeting.

Permissible Investments: All eligible securities shall be traded in domestic markets and be of a class listed on a national securities exchange or traded in the over-the-counter market.

Permissible investments are defined within individual manager portfolio-level guidelines, and generally include:

- Common stocks, preferred stocks, and securities with equity characteristics (including, but not limited to, American Depository Receipts and Shares, warrants, and rights) of U.S. and foreign issuers
- European Depository Receipts listed and traded on major U.S. exchanges and in over-the-counter markets
- Securities convertible into common stocks
- 144A securities
- Futures contracts
- Exchange traded funds and similar vehicles
- Closed-end funds
- Private placements, Secondary Offerings, IPO investments and offers for sale
- Real Estate Investment Trusts and Income Trusts
- Short-term fixed income securities and cash equivalents

Prohibited Investments: Any security or strategy not specifically permitted in the respective manager portfolio guidelines requires written permission from the Director of Investments prior to purchase.

Prohibited investments are defined within individual manager portfolio-level guidelines, and generally include:

- Short sales
- Margin transactions
- Use of leverage
- Stock in non-public corporations, private placements or other non-marketable issues
- Specialized investment vehicles
- Direct investments in commodities
- Direct investments in real estate
- Direct investments in Venture Capital
- Lettered stock
- Foreign securities other than those noted in *Permissible Investments* above
- Direct investments in oil, gas, or other mineral exploration or development programs

Concentration Limits:

- The System shall closely monitor instances where its investments represent a significant component of a commingled fund or total assets under management (AUM) at the strategy level. If the System's positions become more than 20% of any commingled investment fund, or total strategy AUM, Staff will notify the IIC and the investment will be monitored to see if any changes are warranted.

Non-U.S. Equity Investment Guidelines

Purpose: The allocation to Non-U.S. Equity serves to diversify the assets of the System across the world's economies. A diversified allocation, across style and capitalization, to Non-U.S. equity should assist in maximizing long-term total returns.

Allocation: The current target allocation to Non-U.S. Equity is 20% of the Total Fund, with an allowable range of 15 – 25%.

Structure: The Non-U.S. Equity portfolio is currently 100% actively managed and broadly diversified across global economies, market sectors, capitalization, and securities. Active management is focused where there is the greatest potential for alpha generation. Passive management is focused where alpha generation has been demonstrated to be difficult to obtain while also allowing the ability to gain low-cost efficient beta exposure. Passive management may be utilized if determined to be beneficial by the Independent Investment Committee (IIC).

Component	Allocation Target*
Developed Markets	The Lesser of: A 65% Minimum or The Index's Allocation

* As a percentage of Non-U.S. Equity as defined by the MSCI ACWI ex-U.S. Index

Custody: All Non-U.S. Equity securities shall be maintained in the custody and safekeeping of the System's master custodial bank. Commingled fund assets, however, are held in custody at the discretion of the fund manager.

Use of Commingled Funds: Mutual funds and other types of commingled investment vehicles provide, under some circumstances, lower costs and better diversification than can be obtained with a separately managed account pursuing the same investment objectives. However, commingled investment funds cannot customize investment guidelines to the specific needs of individual clients. The IIC is willing to accept the policies of such funds in order to achieve the lower costs and diversification benefits of commingled funds, as long as the commingled guidelines are consistent with the spirit of those specified herein and the underlying individual investment manager portfolio-level guidelines. The IIC relies on Staff and the Investment Consultant to assess and monitor the investment policies of any commingled fund used by the System.

Manager Guidelines for Separate Accounts: Portfolio-level guidelines are negotiated with each IIC-approved investment manager with the purpose of establishing agreed-upon parameters for the management of assets. These guidelines are generally based on the guidelines for the respective manager's composite portfolio and investment style; are reviewed by staff in collaboration with the System's Investment Consultant; and are subject to execution by the Director of Investments and the manager prior to implementation. Each manager will be granted full discretion within the context of their respective portfolio-level negotiated guidelines.

Managers are prohibited from deviating from their respective portfolio-level guidelines without prior written approval from the Director of Investments. Any guideline violation must be reported by the manager in writing as soon as it is discovered (within 24 hours). Recommendations for guideline revisions are to be provided to the Director of Investments in writing, and shall include the rationale for the changes and all relevant research. Any guideline revision requests are reviewed by the Director of Investments and the System's Investment Consultant prior to approval. All substantive changes to manager guidelines will be reported to the IIC at the next meeting.

Permissible Investments: All eligible securities shall be traded on globally recognized security exchanges or over-the-counter markets.

Permissible investments are defined within individual manager portfolio-level guidelines, and generally include:

- Common stocks; preferred stocks; securities convertible into or exchangeable for common stock; rights and warrants to acquire such securities; and substantially similar forms of equity with comparable risk, of companies domiciled, listed on exchanges, or having their principal activities in countries that comprise respective manager benchmarks.
- Global Depository Receipts, American Depository Receipts, and other depository arrangements
- Real Estate Investment Trusts and Income Trusts
- Exchange traded funds and similar vehicles
- Shares obtained through Initial Public Offerings
- 144A securities
- Forward exchange contracts/currency derivatives, when used to protect the U.S. Dollar value of the portfolio, dampen portfolio volatility, or to facilitate the settlement of securities
- Short-term fixed income securities and cash equivalents
- Equity index futures, equity linked notes and currency contracts

Prohibited Investments: Any security or strategy not specifically permitted in the respective manager portfolio guidelines requires written permission from the Director of Investments prior to purchase.

Prohibited investments are defined within individual manager portfolio-level guidelines, and generally include:

- Short sales
- Margin transactions
- Use of leverage
- Stock in non-public corporations, private placements or other non-marketable issues
- Specialized investment vehicles
- Direct investments in commodities
- Direct investments in real estate
- Direct investments in Venture Capital
- Lettered stock
- Derivative contracts, aside from those referenced above in *Permissible Investments*
- Direct investments in oil, gas, or other mineral exploration or development programs

Concentration Limits:

- The System shall closely monitor instances where its investments represent a significant component of a commingled fund or total assets under management (AUM) at the strategy level. If the System's positions become more than 20% of any commingled investment fund, or total strategy AUM, Staff will notify the IIC and the investment will be monitored to see if any changes are warranted.

Fixed Income Investment Guidelines

Purpose: The allocation to Fixed Income serves to provide income and potentially reduce volatility experienced in the equity markets, as well as offer an opportunity for return enhancement by investing in selected market sectors (for example, investment grade corporate bonds and high yield debt). A portion of the Fixed Income allocation is expected to be invested in U.S. Treasury securities or other government-related issues, which will potentially reduce risk within the portfolio.

Allocation: The current target allocation to Fixed Income is 25% of the Total Fund, with an allowable range of 20% – 30%.

Structure: The Fixed Income portfolio is currently 100% actively managed, as fixed income has been identified as an area in the capital markets where it is more likely that active management will add value. The portfolio is broadly diversified across global markets, sectors, securities and maturities. Active management is focused where there is the greatest potential for alpha generation. Passive management is focused where alpha generation has been demonstrated to be difficult to obtain while also allowing the ability to gain low-cost efficient beta exposure. Passive management may be utilized if determined to be beneficial by the Independent Investment Committee (IIC).

Component	Allocation Target*
Core	Minimum of 60%

* As a percentage of Fixed Income.

The Fixed Income Core component is defined as securities held within the Bloomberg Barclays U.S. Aggregate Index which measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market. The index includes U.S. Treasuries, government-related and corporate securities, mortgage backed securities, asset backed securities, and commercial mortgage backed securities. TIPS, 144a securities with registration rights and permanent 144a securities are also permitted.

Custody: All Fixed Income securities shall be maintained in the custody and safekeeping of the System's master custodial bank. Commingled fund assets, however, are held in custody at the discretion of the fund manager.

Use of Commingled Funds: Mutual funds and other types of commingled investment vehicles provide, under some circumstances, lower costs and better diversification than can be obtained with a separately managed account pursuing the same investment objectives. However, commingled investment funds cannot customize investment guidelines to the specific needs of individual clients. The IIC is willing to accept the policies of such funds in order to achieve the lower costs and diversification benefits of commingled funds, as long as the commingled guidelines are consistent with the spirit of those specified herein and the underlying individual investment manager portfolio-level guidelines. The IIC relies on Staff and the Investment Consultant to assess and monitor the investment policies of any commingled fund used by the System.

Manager Guidelines for Separate Accounts: Portfolio-level guidelines are negotiated with each IIC-approved investment manager with the purpose of establishing agreed-upon parameters for the management of assets. These guidelines are generally based on the guidelines for the respective manager's composite portfolio and investment style; are reviewed by staff in collaboration with the System's Investment Consultant; and are subject to execution by the Director of Investments and the manager prior to implementation. Each manager will be granted full discretion within the context of their respective portfolio-level negotiated guidelines.

Managers are prohibited from deviating from their respective portfolio-level guidelines without prior written approval from the Director of Investments. Any guideline violation must be reported by the manager in writing as soon as it is discovered (within 24 hours). Recommendations for guideline revisions are to be provided to the Director of Investments in writing, and shall include the rationale for the changes and all relevant research. Any guideline revision requests are reviewed by Staff and the System's Investment Consultant prior to approval. All substantive changes to manager guidelines will be reported to the IIC at the next meeting.

Permissible Investments: Permissible investments are defined within individual manager portfolio-level guidelines, and generally include:

- U.S. Treasuries and U.S. Treasury Inflation Protected Securities
- Obligations of U.S. Federal Agencies and Government Sponsored Enterprises (GSEs)
- Foreign Sovereign Debt
- Small Business Administration Securities
- Municipal Securities
- Corporate Obligations, including but not limited to, Convertible Bonds
- Foreign Sovereign Debt
- Structured Securities including Asset Backed Securities; Collateralized Mortgage Obligations; Commercial Mortgage Backed Securities; Residential Mortgage Backed Securities
- Zero Coupon Securities
- Non-Sovereign Government/Non-Supranational Debt
- Emerging Market Debt
- Forward exchange contracts/currency derivatives, when used to protect the U.S. Dollar value of the portfolio, dampen portfolio volatility, or to facilitate the settlement of securities
- Private Placements, including 144A securities
- Exchange traded funds and similar vehicles
- Common Stock (shall not exceed 5% of the market value of any individual manager)
- Preferred Stock (shall not exceed 20% of the market value of any individual manager)
- Capital Securities
- Trust Preferred Securities
- Real Estate Investment Trust debt
- Short-term fixed income securities and cash equivalents

Prohibited Investments: Any security or strategy not specifically permitted in the respective manager portfolio guidelines requires written permission from the Director of Investments prior to purchase.

Prohibited investments are defined within individual manager portfolio-level guidelines, and generally include:

- Short Sales
- Margin transactions
- Use of leverage
- Specialized investment vehicles
- Direct investments in commodities
- Direct investments in real estate
- Direct investments in Venture Capital
- Direct investments in oil, gas, or other mineral exploration or development programs

Concentration Limits:

- The System shall closely monitor instances where its investments represent a significant component of a commingled fund or total assets under management (AUM) at the strategy level. If the System's positions become more than 20% of any commingled investment fund, or total strategy AUM, staff will notify the IIC and the investment will be monitored to see if any changes are warranted.

Real Estate Investment Guidelines

Purpose: The primary objective of real-estate investing is to seek superior risk-adjusted returns. Secondarily, these investments have had a low to negative correlation with stock and bond returns, thus potentially reducing the volatility of the return of the Total Fund. Moreover, real-estate investments, like some other real assets, have historically been a hedge against inflation.

Allocation: The current target allocation to Real Estate is 10% of the Total Fund, with an allowable range of 5 – 20%. The allocation is measured based upon the net equity value (gross real estate assets less any debt) of the portfolio.

In order to reach and maintain the target allocation, capital commitments in excess of 10% of the Total Fund may be made. The primary reasons for permitting such an over commitment are the staged capital calls for new closed-end investments, finite offering periods, and anticipated returns of capital.

Structure: The Real Estate portfolio consists of Strategic and Tactical investments as defined below. NHRS will maintain a Strategic Portfolio to provide its "keel in the water", and a Tactical Portfolio in order to target expected superior risk adjusted returns.

Strategic Portfolio (Core/Core Plus): Strategic Portfolio investments are typically the lowest risk and return investments in the real estate sector and consist of commingled investment vehicles comprised of operating, substantially leased (typically 60% or more for Core Plus and 75% or more for Core) institutional quality properties. These investments include mostly well located traditional property types in developed markets. Traditional property types are office, apartment, retail, and industrial. These investments offer relatively high current income returns, and as a result, a greater predictability of total returns under normal market conditions. The income component typically represents a significant component of the expected total return.

Tactical Portfolio (Non-Core): Tactical Portfolio investments include those that have higher expected returns, and correspondingly higher expected risk, than the Strategic Portfolio. Examples of the higher return and risk strategies that may be included in the Tactical Portfolio include life cycle opportunities (e.g. leasing, renovation, development); business or operational opportunities (e.g. hotels, senior housing, investments in real estate operating companies); non-traditional property types (e.g. data centers, golf courses); and non-traditional formats (e.g. distressed assets, private-to-public market arbitrage). Opportunistic investment in real estate debt is also a permissible element of the Tactical Portfolio.

Real Estate Investment Trusts (REITs) may be included as part of the Strategic and/or Tactical portfolios.

Portfolio Component	Allocation Target	U.S.	Ex -U.S.
Strategic Portfolio	Minimum of 50%		
Tactical Portfolio	Maximum of 50%		
Total Portfolio	**100%**	**≥ 65%**	**≤ 35%**

Implementation: A manager ("Manager") has been retained as a "manager of managers" with full and complete discretion and authority with respect to the selection and management of investments. Currently, the Manager is Townsend Holdings LLC (d/b/a) The Townsend Group ("Townsend").

The Manager is responsible for the due diligence, selection, review, management and reporting of the Real Estate program. It will not acquire or manage assets directly but will select investments and provide oversight for assets managed by other third-party investment managers. The Manager shall prepare a periodic (annually at a minimum) Real Estate Investment Plan that shall set forth the implementation and management plans for the Real Estate allocation. The NHRS Independent Investment Committee (IIC) will review and annually approve the Real Estate Investment Plan.

The Manager shall make presentations to the IIC, at a minimum, on a semi-annual basis. In addition, the Manager will provide a formal update to Staff, at a minimum, on a quarterly basis.

Staff will provide oversight of the Manager and serve as a liaison between the IIC and the Manager. Staff is responsible for coordinating with the Manager, custodian, consultant(s) and legal counsel to implement and administer the Real Estate program, including the coordination of information between these parties and the management of funding relative to the investments. Staff will facilitate any other duties with the Manager relative to the NHRS Real Estate program, including the implementation of IIC actions.

Custody: REIT securities shall be maintained in the custody and safekeeping of the System's master custodial bank. All other assets, however, are held in custody at the discretion of the third-party investment managers.

As numerous studies indicate, distributing portfolio investments by certain attributes will reduce the risk in the real estate portfolio. The attributes by which investments should be distributed or diversified to most effectively reduce risk are:

1) Property type
2) Geographic location
3) Manager allocation and investment size
4) Leverage

As such, within the Real Estate allocation, the guidelines are as follows:

1) Property Type - The property type limit will ensure prudent diversification amongst property types while still being able to capitalize on opportunities caused by shifts in real estate and capital markets.

- No more than 40% of the allocation shall be invested in any one property type

2) Geographic Location – Investments within the Real Estate allocation will be distributed geographically for the purpose of attaining economic market diversification. A minimum of 65% will be located in the U.S. with a maximum of 35% invested outside the U.S.

3) Manager Allocation and Investment Size – Investments within the Real Estate allocation will be diversified both by individual investment exposure and manager exposure, as the System does not want the failure of a single investment to have a significant or material impact on the performance of the total Real Estate program.

- No more than 20% of capital committed to any investment in the Strategic Portfolio
- No more than 10% of capital committed to any investment in the Tactical Portfolio
- No more than 40% of capital committed to any single investment manager
- No more than 50% of ex-U.S. exposure to come from investments in emerging markets

4) Leverage

- The Strategic Portfolio loan-to-value ratio shall be no more than 50% at portfolio level
- The Tactical Portfolio loan-to-value ratio shall be no more than 75% at portfolio level

Alternative Investment Guidelines

Purpose: Alternative investments are non-traditional investment vehicles that do not fall within another investment asset class. The primary objective of alternative investments is to seek superior risk-adjusted returns. Secondarily, these investments have had a low correlation with broad stock and bond market returns, thus potentially reducing the volatility of the return of the Total Fund. Examples of alternative investments include private equity, private debt, opportunistic strategies, and hedge funds. As a result of the non-traditional, long-term and illiquid nature of alternative investments, an Annual Strategic Plan will be prepared and presented to the Independent Investment Committee (IIC) for approval.

Allocation: The current target allocation to Alternative Investments is 15% of the Total Fund, with an allowable range of 5 – 25%.

In order to reach and maintain the target allocation, capital commitments in excess of 15% of the Total Fund may be made. The primary reasons for permitting such an over commitment are the staged capital calls for new investments and anticipated returns of capital.

Structure: The Alternative Investment portfolio primarily includes the following:

Private Equity – The purpose of Private Equity is to earn risk-adjusted returns in excess of public equity markets. These investments are also expected to decrease the volatility of the System's assets through the diversification benefits of having lower correlations with other asset classes.

Sub-strategies include:

- *Buyouts/Corporate Finance* – Provides leveraged capital and business development capital to enable the restructuring of existing business and industries.

- *Energy* – Investments may include exploration & production, generation, storage, transmission, distribution, renewable energy sources, clean technologies, energy technologies and other similar investments.

- *Growth Equity* – Provides expansion capital for small, growing businesses that are generating cash flow and profits. Generally, these types of investments have reduced exposure to technology risk compared with venture capital.

- *Infrastructure* - Investments involve the purchase of critical service assets (i.e. toll roads, bridges, water treatment plants, etc.). Typically, infrastructure assets exhibit one or more of the following qualities: monopolistic or quasi-monopolistic, high barriers to entry, long-term assets, regulatory or permitting constraints.

- *Secondaries* – Private equity interests that are generally purchased at a discount from valuation from motivated sellers. The interests purchased are generally venture and buyout interests with limited exposure to unfunded capital commitments. The strategy also includes the purchase of direct interests in companies through the secondary market.

- *Distressed/Special Situations* – A strategy whereby a manager invests in the distressed debt of companies that likely will undergo some sort of financial and/or operational restructuring. A manager will usually build a controlling stake in a distressed company through the "fulcrum security" which is generally a high yield bond or bank debt. The investment team will then work actively to maximize the value of the investment through driving either an informal restructuring or a formal bankruptcy procedure. The balance sheet may be restructured; new management inserted; cost cutting implemented; as well as other operational improvements put in place. Distressed debt returns are generally comprised of a combination of a debt coupon; capital appreciation of the distressed security; and, participation in the upside of post-reorganization equity.

- *Venture Capital* – Implies early, late and balanced-stages of financing, as well as growth capital, of rapidly growing companies with an innovative/disruptive business idea for a proprietary product or service.

Private Debt – The purpose of Private Debt is to earn risk-adjusted returns in excess of public debt markets. These investments are also expected to decrease the volatility of the System's assets through the diversification benefits of having lower correlations with other asset classes.

Sub-strategies include:

- *Direct Lending* – An investment strategy involving senior or unitranche lending directly to companies that seek to generate high current income while focusing on preservation of capital.

- *Distressed* – Includes trading strategies through control positions. For trading strategies, distressed securities are defined as securities experiencing financial or operational distress, default, or are under bankruptcy. Investment instruments include publicly-traded debt securities, private debt, trade claims, mortgage debt, common and preferred stock and commercial paper. Control strategies involve companies with poorly-organized capital structures, turnaround situations and bankrupt companies. Long and short positions are commonly used as a technique to lock in profit or reduce risk.

- *Mezzanine/Junior Capital* – An investment strategy involving subordinated debt (the level of financing tranche that is senior to equity but below senior debt). Capital supplied by mezzanine or junior capital financing is used for various situations such as facilitating changes in ownership through leveraged buyouts or recapitalizations, financing acquisitions, or enabling growth. Venture lending and leasing is a subset of mezzanine financing that targets venture-backed companies. Revenue and Royalty interests are a subset of mezzanine financing that targets intellectual property, license agreements and other similar property that has the ability to restrict the rights to commercialization.

- *Structured Credit* – A private credit strategy which invests in assets such as pools of loans in the consumer, real estate and transportation space. Often, a manager of this strategy will originate or purchase a pool of loans; service them; and, in some cases, securitize them and sell securitized tranches to the market. Returns are driven by a combination of underlying loan coupon; value enhancement through servicing; and, upside through public market securitization.

- *Specialty Finance* – A private credit strategy which generally provides growth capital in the form of senior secured loans to loan origination platforms such as mortgage; consumer debt and transportation leasing. These loans are securitized by a pool of underlying loans which are placed in a bankruptcy remote structure and pay amortize over time. Specialty finance lenders' returns are generated by a combination of a coupon and, in some cases, equity kickers in the underlying borrower. These loan pools may be securitized and sold into the public market.

- *Royalty Finance* – A private credit strategy which provides debt financing to entities secured by the cash flow of royalty payments of a licensed product. For example, healthcare royalty strategies provide capital in the form of senior secured debt backed by predictable royalty payments from pharmaceutical or other medical devices. Music royalties' strategies, for example, provide debt which is backed by royalty payments from a particular portfolio of music recordings.

- *Litigation Finance* – A private credit strategy which lends money to corporations or law firms to fund the cost of prolonged litigation, often contingent on a favorable payout. Financings may be pre-settlement in which returns are driven by a combination of a debt coupon and upside participation in one, or a diversified pool of legal cases. Litigation funding in the form of a loan may also be provided post a legal settlement. This this type of funding is used to bridge a payment expected by the law firm or other entity entitled to litigation proceeds.

Targets:

Sub Strategy	Allocation Target*
Private Equity	10%
Private Debt	5%

* As a percentage of Total Fund

Custody: All assets are held in custody at the discretion of the fund manager.

Risk Management: Alternative investment strategies do not lend themselves to traditional quantitative measures of risk such as standard deviation and benchmark tracking error. Rather, risk is managed through a combination of quantitative and qualitative constraints. The following sections identify the unique risks with alternative investments and method of control:

- Industry – Typically, alternative investment funds are permitted to invest in a wide variety of industries with limited controls. Industry risk is controlled primarily through appropriate diversification across strategies and sub-strategies.

- Leverage – Many underlying alternative investment programs will utilize leverage. The intent of the System is to not rely on managers employing high degrees of leverage.

- Vintage – Vintage merely reflects the year of first capital draw and vintage risk refers to the variability of investment commitments over time. A long-term investment pacing schedule is developed which minimizes vintage risk while achieving targeted exposure.

- Concentration Limits –The System shall not own more than 10% of any single investment vehicle except with prior approval of the NHRS IIC.

- Due Diligence – Each potential investment will be evaluated for portfolio fit; organizational stability; investment staff; investment strategy; investment process; and fund economics.

- Annual Strategic Plan – Given the non-traditional, long-term and illiquid nature of alternative investments, an Annual Strategic Plan will be prepared and presented to the IIC for approval. The Annual Strategic Plan will include a review of performance; cash flow and liquidity analyses; commitment pacing; and sub-strategy recommendations.

Changes to the NHRS Investment Policy

This document outlines changes to the NHRS Investment Policy since the founding of the Independent Investment Committee (IIC) under RSA 100-A:14-b, on January 1, 2009.

Assumed Rate of Return

The Board of Trustees (Board) approved the following based on recommendations of the IIC. All changes were effective starting July 1 of the fiscal year subsequent to approval.

- May 10, 2011: 8.50% to 7.75%
- May 10, 2016: 7.75% to 7.25%
- June 9, 2020: 7.25% to 6.75%

Asset Allocation Targets and Ranges

The Board adopted the following changes based on recommendations of the IIC. All changes were effective at the start of the month subsequent to approval.

- July 13, 2010:
  - Domestic Equity allocation range changed from 26 - 43% to 20 - 50%.
  - Non-U.S. Equity target allocation increased from 15% to 20% and the 5% target allocation to Global Equity was removed. The Non-U.S. Equity allocation range changed from 11 - 19% to 15 - 25%.
  - Fixed Income allocation range changed from 26 - 34% to 25 - 35%.
  - Real Estate range changed from 5 - 15% to 0 - 15%.
- September 11, 2012:
  - Fixed income target allocation was reduced from 30% to 25%. The allocation range changed from 25 - 35% to 20 - 30%.
  - Alternative Investments target allocation was increased from 10% to 15%. The allocation range changed from 0 - 15% to 0 - 20%.
- June 9, 2015:
  - Real Estate allocation range changed from 0 - 15% to 5 - 20%.
  - Alternative Investments allocation range changed from 0 - 20% to 5 - 25%.
- May 14, 2019:
  - U.S. Equity allocation range changed from 20 - 50% to 20 - 40%.

Benchmark Changes
The IIC approved the following changes which were subsequently reviewed by the Board. All changes were effective starting July 1 of the fiscal year subsequent to approval.

- April 24, 2015:
  - The U.S. Equity benchmark changed from the Russell 3000 Index to the S&P 500 Index.
  - The Real Estate benchmark changed from the NCREIF Property Index + 50 basis points to the NCREIF NFI-ODCE Index.
  - The Alternative Investments benchmark changed from the S&P 500 Index + 5% or Consumer Price Index + 5% to the following:
    - 33.3% Private Equity: S&P 500 Index + 3%.
    - 33.3% Private Debt: S&P/LSTA U.S. Leveraged Loan 100 Index.
    - 33.3% Opportunistic:1-month LIBID + 5%.
- May 14, 2019:
  - The Opportunistic benchmark was eliminated and the Alternative Investments benchmark was changed to the following:
    - 66.7% Private Equity (S&P 500 Index + 3%).
    - 33.3% Private Debt (S&P LSTA Leveraged Loan 100 Index).
- June 18, 2021:
  - The U.S. Equity benchmark changed from the S&P 500 Index to the Russell 3000 Index.
- June 14, 2022:
  - The Private Equity benchmark was updated from the S&P 500 + 3% to the Russell 3000 +2%.
  - The Private Debt benchmark was updated from the S&P/LSTA U.S. Leveraged Loan 100 Index to a blend of (50% S&P/LSTA 100 Index and 50% Bloomberg High Yield Index) + 1%.

NHRS Investment Philosophy:

Adopted by the Investment Committee at the July 17, 2009 meeting

Purpose: The New Hampshire Retirement System ("NHRS" or "System") Investment Philosophy sets forth guiding principles for the management of the investment program.

Description of the Fund: The NHRS is a defined-benefit pension plan. Contributions to the plan are made by employees and employers participating in the System. These contributions are invested to support the payment of plan benefits and to pay reasonable expenses of administering the System.

The System's assets are invested pursuant to the Constitution of the State of New Hampshire and all applicable statutes and are managed in accordance with the NHRS Statement of Investment Policy for the exclusive purpose of providing plan benefits to members and beneficiaries. NHRS plan fiduciaries are beholden to a duty of loyalty and a standard of care as described in RSA 100-A:15. The Board of Trustees ("Board") and the Investment Committee ("Committee") seek the advice and assistance of internal and external professionals and shall exercise conscious discretion when making investment decisions. The Committee members recognize their fiduciary duty to invest the System's funds prudently and in continued recognition of the fundamental long-term nature of the System.

The NHRS investment program has a distinctive profile. The objective of supporting plan benefits is one primary differentiator from the goals of other types of institutional investors, for example, endowments or foundations. The NHRS also differs from other public pension plans because each plan has its own distinctive characteristics such as benefit structures and legislative mandates. The System has a high proportion of retirees relative to actively-contributing members. The demographics of a mature plan require more liquidity from the investment program because contributions into the plan do not fully offset the benefits paid. Additionally, the size of the NHRS investment program provides the System with the ability to invest in certain opportunities but may not provide the scale necessary to gain access to other opportunities. All of these factors guide the design of the NHRS investment program.

Investment Objectives: The NHRS pursues an investment strategy designed to support the long-term funding obligations of the plan. The Board adopts an assumed rate of return and sets asset-allocation policy. The Committee manages the components of the investment program with the goal of achieving the plan's objectives with a comprehensive understanding of risk. This involves designing a program that balances expected return and risk over long time periods through a range of market conditions. For the reasons previously mentioned, peer performance or universe comparisons are not the most appropriate measurements of the effectiveness of the NHRS investment program. Performance comparisons within the context of the stated investment objectives will promote alignment with the System's mission.

The primary objective of the Committee is to manage the investment program to support the payment of plan benefits over the long-term. A secondary objective is to exceed the policy benchmark on a net-of-fees basis over a three to five-year period.

NHRS Investment Philosophy:

Market View and Context: The Committee believes that financial markets are largely, but not entirely, efficient. This means that there is a central tendency to the markets and that in some developed and accessible segments it is difficult to gain an advantage relative to other investors. However, there are areas of the market in which inefficiencies exist due to more limited access, information, coverage, or other factors; and investors can benefit from participation in these areas. Investment opportunities emerge and evolve over time and the NHRS Committee, staff, and consultants will remain vigilant concerning market developments in order to identify these opportunities and to build a sustainable advantage.

Diversification: The Board and the Committee recognize that it is necessary to maintain broad diversification both among and within various asset classes. The asset allocation of the investment program will be reviewed monthly by staff relative to the asset-class policy targets and ranges established by the Board in the Statement of Investment Policy. Staff shall strive to maintain the System's asset allocation within policy ranges. When rebalancing assets already within ranges, staff will give due consideration to market conditions, costs and risks of implementation, potential impacts on manager-level performance, and other relevant factors.

Portfolio Structure and Implementation: The Committee may utilize a combination of passive and active management strategies. The goal of passive management is to gain diversified exposure to the desired asset class while incurring minimal expense and seeking performance returns comparable to the asset class benchmark. The goal of active management is to exceed the performance of the appropriate benchmark on a net-of-fees basis, measured across market cycles, at a commensurate level of risk. The Committee will structure the program and implement its philosophy through the use of external investment management firms.

Performance Measurement: The ultimate measurement of the pension plan is how well it achieves its funding objectives and supports plan benefits. This is a shared responsibility between the Board who set the assumed rate of return and also determines the contribution rates and the Committee who seek to augment those contributions with investment returns over the long term. Achievement of the plan objectives in absolute terms is contingent on sound return assumptions and the execution of a clear investment process which recognizes that market conditions will vary over time.

Relative investment performance can be an important measurement tool. The Board adopts specific benchmarks which represent the standards of measurement used for the various asset classes utilized by the NHRS. Individual managers are also measured relative to benchmarks. As a model for performance measurement of the investment program, the NHRS uses a plan-level policy benchmark comprised of index returns (or proxy asset returns in the case of illiquid assets) weighted to reflect the asset-allocation policy targets set by the Board. This provides insight into the ways in which the actual portfolio performs relative to a passively-managed representation of plan policy during various market conditions.

Since investment returns will vary under different economic conditions and market cycles, an optimal period for effectively measuring performance would span three to five years or more. NHRS returns are expected to exceed the relevant benchmark on a net-of-fees basis over time.

NHRS Investment Philosophy:

Risk: Risk must be viewed within the context of the total portfolio. Since most risks are not readily quantifiable, defining the appropriate level of risk and creating a portfolio that reflects a reasonable balance between potential risk and return is a matter of judgment. Risk comes in a variety of forms including the risk of the unknown, liquidity risk, valuation risk, regulatory risk, geopolitical risk, and volatility risk as well as excessive diversification, fraud, inconsistency of investment discipline, and the risk of the destruction of capital. The Committee takes a broad view of risk in its oversight and endeavors to mitigate risk through rebalancing, monitoring managers, and conducting strategic reviews of the portfolio.