

New Hampshire Retirement System

A Component Unit of the State of New Hampshire

Comprehensive Annual Investment Report

For the Fiscal Year Ended June 30, 2018



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Table of Contents

Comprehensive Annual Investment Report

Appendix A

Investment Consultant's Letter

Investment Performance Review & Market Commentary

Investment Reports

Appendix B

Gabriel Roeder Smith & Company - Actuarial Opinion Letter

Appendix C

Investment Manual

NHRS Investment Philosophy

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December 6, 2018

The Honorable Christopher Sununu, Governor
 The Honorable Donna Soucy, President of the Senate
 The Honorable Stephen Shurtleff, Speaker of the House of Representatives

Annual Report 2018

The Independent Investment Committee (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, 2018, 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 2018 were \$8.8 billion, reflecting a \$0.6 billion increase compared to \$8.2 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 June 9, 2015, based on a recommendation of the Committee.

Asset Class	Target Allocation	Allocation Range	Actual Allocation at June 30, 2018*
U.S. Equity	30%	20 - 50%	31.5%
Non-U.S. Equity	20%	15 - 25%	17.4%
Fixed Income	25%	20 – 30%	23.3%
Real Estate	10%	5 – 20%	9.2%
Alternative Investments	15%	5 – 25%	18.6%

* 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, 2018 all asset classes were within the allocation ranges and close to the allocation targets.

The NHRS return was 8.9% net of fees for the Fiscal Year ended June 30, 2018 compared to the benchmark's return of 7.8%. The five-year annualized net of fees return was 8.7% compared to the benchmark return of 8.8%. The ten-year annualized net of fees return and benchmark return were 7.1% and 7.2%, respectively. 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 7% and 12% for the five and ten-year trailing periods, respectively. These rankings are based on the Investor Force Public Fund Defined Benefit Net Universe.

Over the long-term the twenty-five year annualized net of fees return was 8.0%. The System's actuarial assumed rate of return is 7.25%.

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

The Committee

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

The Committee meets monthly and is comprised of five members: three independent members appointed by the Governor and Executive Council; and two members of the Board of Trustees appointed by the Chair of the Board. All are required by statute to have significant experience in institutional investing or finance. As of June 30, 2018 the three independent members were Christine Clinton, CFA; David Jensen; and Keith Quinton. Subsequent to June 30, 2018 Daniel LaPlante joined the Committee, filling the vacancy created by David Jensen's retirement. The two Board members serving on the Committee are Maureen Kelliher, CFA (Chair); and Timothy Lesko. Brief biographies and photographs of the Committee members follow this report.

The Committee would like recognize two prior members for their contributions and dedicated service to the New Hampshire Retirement System: David Jensen and Patrick O' Donnell.

Mr. Jensen served over 8 years on the Committee between January 2009 and June 2018.

Mr. O' Donnell served over 8 years on the Committee between May 2009 and December 2017.

Investment Manual

The NHRS Investment Manual which provides governance and oversight of the pension fund assets is presented in Appendix C of this report and 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
- 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, 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.

Administrative Comments

The 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 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 Committee receives presentations from investment managers currently retained by NHRS as well as from prospective managers.

Lawrence A. Johansen is the System's Director of Investments. In this role, Mr. Johansen serves as the primary staff liaison on investment matters. In addition, he directs 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 brief biography of Mr. Johansen follows this report.

Each fiscal year, NHRS produces a Comprehensive Annual Financial Report (CAFR) 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. CAFR reports are available on the System's website, www.nhrs.org.

Overview of Significant Investment Committee Initiatives during the Fiscal Year:

- Reviewed the long-term performance of all current marketable investment managers against their respective benchmarks and renewed their contracts, where appropriate.
- Reviewed and renewed, where appropriate, service provider/other contracts.
 - Renewed the trading cost analysis agreement with Abel/Noser for an additional two-year period
 - Renewed the custody agreement with Bank of New York Mellon for an additional five-year period
 - Renewed the real estate investment management agreement with The Townsend Group for an additional two-year period
- Developed a plan to rebalance the domestic equity portfolio and began implementation.
- Reviewed and discussed the structure of the public markets portfolio.
- 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.
- Continued the expansion of the alternative investments program. New commitments of \$425 million in aggregate were made to three private equity and four private debt investment strategies totaling \$225 million and \$200 million, respectively.
- Adopted an annual real estate manager 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
Christine Clinton
David A. Jensen
Timothy Lesko
Keith Quinton

George P. Lagos, Executive Director
Lawrence A. Johansen, Director of Investments



Maureen Kelliher has more than three 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. In addition to being a member of the Board of Trustees of the New Hampshire Retirement System, Maureen holds the Chartered Financial Analyst designation and is a member of the CFA Institute.



Christine Clinton has been working in the investment management industry for more than a decade after co-founding Bluestone Wealth Management LLC. Prior to Bluestone, she worked as a Corporate Controller for several hi-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.



David Jensen is currently self-employed as a health care consultant. He had a long career in the health care and insurance industries throughout the country. Among his positions he has served as CEO or President of such industry leaders such as Anthem Blue Cross Blue Shield of New Hampshire and Healthsource Management, Inc.



Tim Lesko is a Partner and Portfolio Manager at Granite Investment Advisors. He joined the firm in 1999. Along with the other Partners, he is responsible for the management of Granite Investment Advisors and the High Net Worth team. His 22 years of vast industry experience began with positions at Merrill Lynch and NationsBanc Montgomery Securities. Tim has had numerous television appearances as a trusted research specialist with CNBC, NPR Nightly Business Review and Fox Business News.



Keith Quinton is a 30+ year investment industry veteran with broad and deep experience managing complex multi-billion dollar institutional and mutual fund portfolios. He held a variety of positions at well-known firms including: Drexel Burnham, Putnam Investments, MFS and Fidelity. He is currently a lecturer at the Tuck School at Dartmouth.



Lawrence A. Johansen has more than four decades of experience with investment and administration of public pensions. He held progressively more responsible positions at the New York State Teachers' Retirement System. His most recent positions at the New York State Teachers' Retirement System were Managing Director, Securities Investment Officer and Actuary.

Appendix A

Investment Consultant's Letter

Investment Performance Review & Market Commentary

Investment Reports

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KEVIN M. LEONARD
PARTNER

October 5, 2018

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

Dear NHRS Fiduciaries:

NEPC, LLC (NEPC) is pleased to introduce this overview of the New Hampshire Retirement System (NHRS) investment program for the fiscal year ended June 30, 2018.

The overall objective of NHRS is to provide service, disability, death and vested retirement benefits, and other postemployment benefits to members and their beneficiaries. To ensure a solid foundation for the future of the System, NHRS plans and implements an investment program designed to achieve the maximum rate of return over the long term, while prudently managing the risk of the portfolio. Additionally, the NHRS investment program is administered in accordance with sound governance practices and applicable statutes. The Board of Trustees (Trustees) established an Investment Policy which includes asset allocation targets and acceptable ranges as well as asset class benchmarks for performance measurement. The Trustees retain the services of actuaries and consultants to provide guidance regarding actuarial matters, asset allocation, and investment policy. The Independent Investment Committee (Committee) manages the investment program pursuant to the investment policy, develops asset class guidelines, monitors and evaluates performance, and makes determinations regarding the retention of managers. Professional investment managers are selected by the Committee to manage portfolios in accordance with investment management agreements. 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 2018.

The U.S. economy continued its near historically long growth streak as the Federal Reserve Bank maintained its path of methodically tightening monetary policy through increasing interest rates while the Tax Cuts and Jobs Act of 2017 provided fiscal stimulus and expectations of further economic growth. Global capital markets continued to be largely driven by accommodative Central Bank policy in addition to Central Bankers indicating that stimulative monetary policy may persist into 2019 and perhaps beyond. U.S. Equities, as a result, posted their ninth consecutive year of positive returns and outperformed international equities. Volatile global markets became a mainstay in the year ending June 30, 2018 as concerns over anti-establishment political change, historically low and broadly negative real interest rates and fears over U.S. trade policy caused uncertainty to enter into investor sentiment. Uncertainty related to these risks was reflected in market volatility, yet these risks were largely shrugged off by markets, resulting in U.S. equities posting a robust 14.4% return as measured by the S&P 500 Index. International developed-markets equities performed well but underperformed domestic equities by 7.6% as measured by the

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MSCI EAFE Index. Underperformance in international developed-markets was driven by political and economic growth uncertainty in Europe. Emerging markets equities underperformed U.S. and outperformed developed-international equities though volatility saw an uptick toward the end of the year as markets reacted to U.S. Dollar strength and trade policy uncertainty. Driven by increasing interest rates, U.S. high quality fixed income investments produced a negative return for the second consecutive year, returning -0.4% as measured by the Bloomberg Barclays U.S. Aggregate Bond Index.

For the fiscal year ended June 30, 2018, the NHRS Total Fund returned +8.9% on a net-of-fees basis, outperforming the Total Fund custom benchmark return of +7.8% and ranking in the 20th percentile (1% being the highest, 100% being the lowest) relative to other investors in the InvestorForce Public Defined Benefit Net Universe (universe). During the following periods the NHRS Total Fund provided strong annualized net-of-fees returns relative to the universe: For the trailing three years ending June 30, 2018, the NHRS Total Fund return of +7.7% ranked in the 8th percentile of the universe; For the trailing five years ending June 30, 2018 the NHRS Total Fund return of +8.7% ranked in the 7th percentile of the universe; For the trailing ten year period ending June 30, 2018, the NHRS Total Fund returned +7.1% and ranked in the 12th percentile of the universe; For the trailing twenty-five year period ending June 30, 2018, the NHRS Total Fund returned +8.0%, exceeding the current assumed rate of return of 7.25%, and ranking in the 17th percentile of the universe.

During fiscal year 2018, the Committee continued to implement the expansion of the alternative investment portfolio.

NEPC provides NHRS with quarterly economic and investment market updates and performance reviews, investment manager monitoring and selection advice, and related investment services for traditional and non-traditional asset classes. Investment performance analysis and comparisons produced by NEPC have been calculated using standard performance evaluation methodologies and are consistent with industry standards. Performance results are calculated using a time-weighted return methodology and are reported on a net-of-fees basis.

Sincerely,

A handwritten signature in black ink, appearing to be "L. M. L.", written in a cursive style.

Investment Performance Review – Fiscal Year 2018

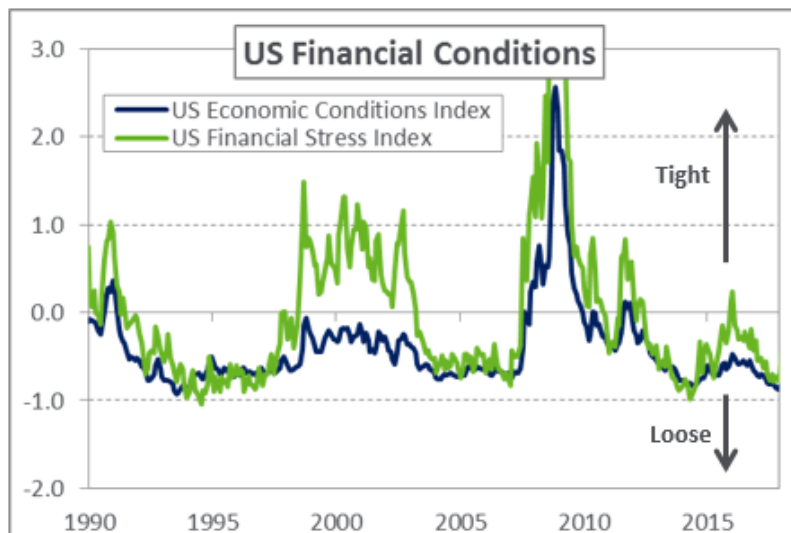
Overview

The U.S. economy continued its near historically long growth streak over the fiscal year ending June 30, 2018. U.S. equities posted their ninth consecutive year of positive returns, and outperformed international equities with the S&P 500 index gaining 14.4% versus 6.8% for the MSCI EAFE Index. Foreign equity markets were impacted by anti-establishment political trends and fears over U.S. trade policy changes. Emerging market equities underperformed the U.S. but outperformed developed international equities, though volatility saw an uptick toward the end of the fiscal year as the markets reacted to U.S. Dollar strength and trade policy uncertainty. The large cap domestic equity market, as measured by the S&P 500 Index capped off the fiscal year with a 14.4% return with all smaller cap domestic equity indices posting even greater returns. The domestic bond market, as measured by the Barclays Aggregate Bond Index, returned -0.4% over the same period. The global equity market, as measured by the MSCI All Country World Index (net), returned 10.7% for the fiscal year, and emerging markets posted slightly lower returns with the MSCI EM Index returning 8.2% over the fiscal year ending June 30, 2018.

As it relates to NHRS, the Fund returned +8.9% (net of fees) for the fiscal year, outperforming the Total Fund Custom Index return of +7.8% by 110 basis points ranking in the 20th percentile of the InvestorForce Public Defined Benefit Universe. NHRS' longer-term performance remains strong as the Fund returned +7.1% (net of fees) for the trailing ten-year period which ranked in the 12th percentile of the universe, and +8.0% (net of fees) for the trailing twenty-five-year period which ranked in the 17th percentile within the universe.

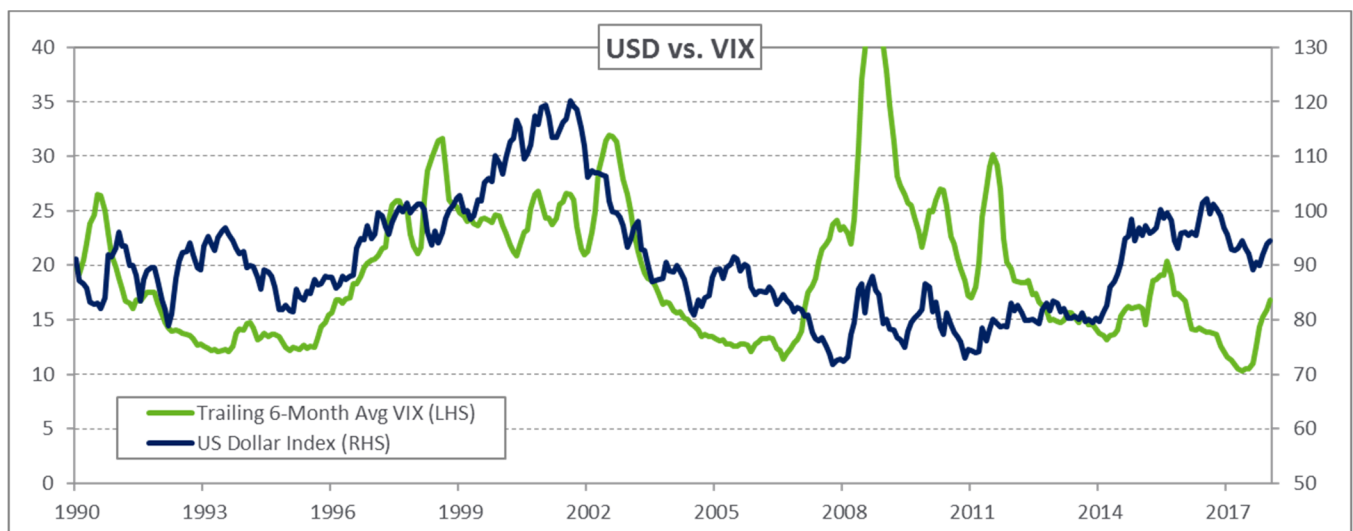
U.S. Equity Markets

The U.S. economy continued its near historically long growth streak as the Federal Reserve Bank maintained its path of methodically tightening monetary policy through increasing interest rates while the Tax Cuts and Jobs Act of 2017 provided fiscal stimulus and expectations of further economic growth. U.S. Equities posted their ninth consecutive year of positive returns. Across the spectrum all returns were positive- value, growth and core. Large cap indexes were all positive for the year ending in June, however smaller cap stocks posted greater returns with Russell 2000 Growth and Value returning 21.9% and 13.1%, respectively. Large cap growth substantially outperformed large cap value with the Russell 1000 Growth up 22.5% compared to 6.8% for the Russell 1000 Value as technology stocks remain the big winners. Growth stocks continued to widen the lead over value stocks in the 2018 fiscal year for both large and small cap stocks.



Non-U.S. Equities

Volatile global markets became a mainstay in the year ending June 30, 2018 as concerns over anti-establishment political change, historically low and broadly negative real interest rates and fears over U.S. trade policy caused uncertainty to creep up in investor sentiment. Uncertainty related to these risks was reflected in market volatility. Despite this, international developed-markets equities were up +6.8% as measured by the MSCI EAFE benchmark, but underperformed domestic equities by a margin of 7.6%. Underperformance in international developed-markets was driven by political and economic growth uncertainty in Europe. Emerging market equities experienced a similar trajectory due to initial fears and negative sentiment associated with U.S.-China trade tensions. Emerging markets equities underperformed the U.S. but outperformed developed-international equities though volatility saw an uptick toward the end of the fiscal year as markets reacted to U.S. Dollar strength and trade policy uncertainty. The MSCI EM Index was down 6.7% in the 2018 calendar year to date but returned 8.2% on the fiscal year ending June 30, 2018.



Fixed Income Markets

The U.S. Treasury yield curve continued to flatten over the fiscal year as the second Fed rate hike of 2018 pushed short-term interest rates higher. Higher interest rates resulted in a second year of negative returns for U.S. high quality fixed income, with the Bloomberg Barclays US Aggregate Bond Index declining by 0.4%. The Federal Reserve signaled two more possible increases in the 2018 calendar year, reflecting its optimistic outlook on the U.S. economy. Emerging market debt issues experienced negative results during the fiscal year as emerging currencies weakened and the JPM GBI-EM Global Diversified Index returned -2.3%.

Real Estate and Alternative Investments

The real estate market continued to post positive returns in fiscal year 2018. The NCREIF NFI ODCE Index Non-Lagged (representing 36 open-end commingled funds pursuing a core investment strategy) generated a +7.5% net return.

Alternative investments posted positive returns for the fiscal year-end. Private equity investments led the way, outperforming real estate, private debt, and absolute return investments. The NHRS had approximately 18.6% of plan assets in alternative investment strategies as of June 30, 2018.

Asset Class Highlights

NHRS Asset Class	Fiscal Year Return
Total Fund	8.9%
Total Fund Custom Index	7.8%
Total Domestic Equity	14.6%
US Equity Index	14.4%
Total Non-US Equity	7.8%
Non-US Equity Index	7.3%
Total Fixed Income	0.2%
Fixed Income Benchmark	-0.3%
Total Real Estate	10.5%
Real Estate Blended Benchmark	7.5%
Total Alternatives	10.9%
Alternative Assets Benchmark	9.4%

The NHRS Total Domestic Equity portfolio returned +14.6% (net) outperforming the U.S. Equity Index return of +14.4% by 20 basis points. The Domestic Equity portfolio benefitted from its small/smld-cap exposure as smaller companies outperformed their large counterparts over the fiscal year.

The NHRS Total Non-U.S. Equity portfolio, which is comprised of actively-managed portfolios with exposures to both developed and emerging countries, net returned +7.8%. The Non-U.S. Equity portfolio outperformed its benchmark by 50 basis points this fiscal year.

The NHRS Total Fixed Income portfolio is comprised of broadly-diversified actively-managed portfolios, and includes domestic and international exposures. This aggregate portfolio generated a net +0.2% return, outperforming the Total Fixed Income Index return of -0.3% by 50 basis points.

The NHRS Real Estate portfolio returned +10.5% outperforming its benchmark of +7.5% by 300 basis points. Real Estate comprised approximately 9.2% of total plan assets as of June 30, 2018.

Lastly, for fiscal year 2018, the Alternative Investment portfolio generated a return of +10.9 outperforming its benchmark by 150 basis points. The Investment Committee has built the Alternative Investment portfolio over the last several years and has achieved the long-term target allocation of 15.0%.

Investment Market Update (sorted by asset type)

Index Summary (6/30/2018)	1 Year	3 Year	5 Year	10 Year
Equity				
S&P 500	14.4%	11.9%	13.4%	10.2%
Russell 1000	14.5%	11.6%	13.4%	10.2%
Russell 1000 Growth	22.5%	15.0%	16.4%	11.8%
Russell 1000 Value	6.8%	8.2%	10.3%	8.5%
Russell 2000	17.6%	11.0%	12.5%	10.6%
Russell 2000 Growth	21.8%	10.6%	13.6%	11.2%
Russell 2000 Value	13.1%	11.2%	11.2%	9.9%
Russell 2500	16.2%	10.3%	12.3%	10.7%
Russell 3000	14.8%	11.6%	13.3%	10.2%
MSCI ACWI	10.7%	8.2%	9.4%	5.8%
MSCI ACWI ex US	7.3%	5.1%	6.0%	2.5%
MSCI EAFE	6.8%	4.9%	6.4%	2.8%
MSCI EAFE SC	12.4%	10.1%	11.3%	6.8%
MSCI Europe	5.3%	4.2%	6.2%	2.4%
MSCI Japan	10.5%	6.2%	7.4%	3.5%
MSCI Emerging Markets	8.2%	5.6%	5.0%	2.3%
Fixed Income				
BC Aggregate 1-3 Year	0.2%	0.7%	0.9%	1.7%
BC Aggregate	-0.4%	1.7%	2.3%	3.7%
BC TIPS	2.1%	1.9%	1.7%	3.0%
BC High Yield	2.6%	5.5%	5.5%	8.2%
S&P LSTA Leveraged Loan	4.4%	4.2%	4.0%	5.2%
BC Global Agg	1.4%	2.6%	1.5%	2.6%
BC Muni High Yield	7.1%	6.7%	5.6%	6.0%
JPM EMBI Global Diversified	-1.6%	4.6%	5.1%	6.7%
JPM GBI-EM Global Diversified	-2.3%	2.0%	-1.4%	2.6%
Other				
Bloomberg Commodity Index	7.3%	-4.5%	-6.4%	-9.0%
GSCI Commodity Index	25.9%	9.3%	-5.1%	-2.4%
Alerian MLP Index	-4.6%	-5.9%	-4.1%	6.4%
NAREIT Composite Index	4.9%	9.4%	8.9%	8.3%

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

Index Summary (6/30/2018)	1 Year	3 Year	5 Year	10 Year
GSCI Commodity Index	25.9%	9.3%	-5.1%	-2.4%
Russell 1000 Growth	22.5%	15.0%	16.4%	11.8%
Russell 2000 Growth	21.8%	10.6%	13.6%	11.2%
Russell 2000	17.6%	11.0%	12.5%	10.6%
Russell 2500	16.2%	10.3%	12.3%	10.7%
Russell 3000	14.8%	11.6%	13.3%	10.2%
Russell 1000	14.5%	11.6%	13.4%	10.2%
S&P 500	14.4%	11.9%	13.4%	10.2%
Russell 2000 Value	13.1%	11.2%	11.2%	9.9%
MSCI EAFE SC	12.4%	10.1%	11.3%	6.8%
MSCI ACWI	10.7%	8.2%	9.4%	5.8%
MSCI Japan	10.5%	6.2%	7.4%	3.5%
MSCI Emerging Markets	8.2%	5.6%	5.0%	2.3%
Bloomberg Commodity Index	7.3%	-4.5%	-6.4%	-9.0%
MSCI ACWI ex US	7.3%	5.1%	6.0%	2.5%
BC Muni High Yield	7.1%	6.7%	5.6%	6.0%
MSCI EAFE	6.8%	4.9%	6.4%	2.8%
Russell 1000 Value	6.8%	8.2%	10.3%	8.5%
MSCI Europe	5.3%	4.2%	6.2%	2.4%
NAREIT Composite Index	4.9%	9.4%	8.9%	8.3%
S&P LSTA Leveraged Loan	4.4%	4.2%	4.0%	5.2%
BC High Yield	2.6%	5.5%	5.5%	8.2%
BC TIPS	2.1%	1.9%	1.7%	3.0%
BC Global Agg	1.4%	2.6%	1.5%	2.6%
BC Aggregate 1-3 Year	0.2%	0.7%	0.9%	1.7%
BC Aggregate	-0.4%	1.7%	2.3%	3.7%
JPM EMBI Global Diversified	-1.6%	4.6%	5.1%	6.7%
JPM GBI-EM Global Diversified	-2.3%	2.0%	-1.4%	2.6%
Alerian MLP Index	-4.6%	-5.9%	-4.1%	6.4%

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

Index Summary (6/30/2017-6/30/2018)	Benchmark Weight	Benchmark Return
Information Technology	26.0%	31.2%
Consumer Discretionary	12.9%	23.5%
Energy	6.3%	21.0%
Financials	13.8%	9.7%
Materials	2.6%	9.5%
Health Care	14.1%	7.1%
Industrials	9.5%	5.3%
Real Estate	2.9%	5.1%
Utilities	3.0%	3.4%
Telecommunication Services	2.0%	1.6%
Consumer Staples	7.0%	-4.0%

**Source InvestorForce*

Summary

For fiscal year 2018, NHRS generated a net of fee return of +8.9%. Asset class returns across the board have exceeded most investors' expectations in the fiscal year. As such, we maintain the belief that near-term market results are projected to be lower than long-term historical averages moving forward.

Furthermore, we believe that the asset allocation of the NHRS portfolio will benefit from its diversification as volatility may increase and central bank policy drives markets. Most importantly the long-term focus remains to reduce the volatility of the portfolio, achieve above-market returns, and position the portfolio to meet the objectives of the pension plan. This has certainly been the case for NHRS over the long-term as the net of fee twenty-five-year return, as of June 30 2018, is +8.0% annualized.

INVESTMENT REPORTS

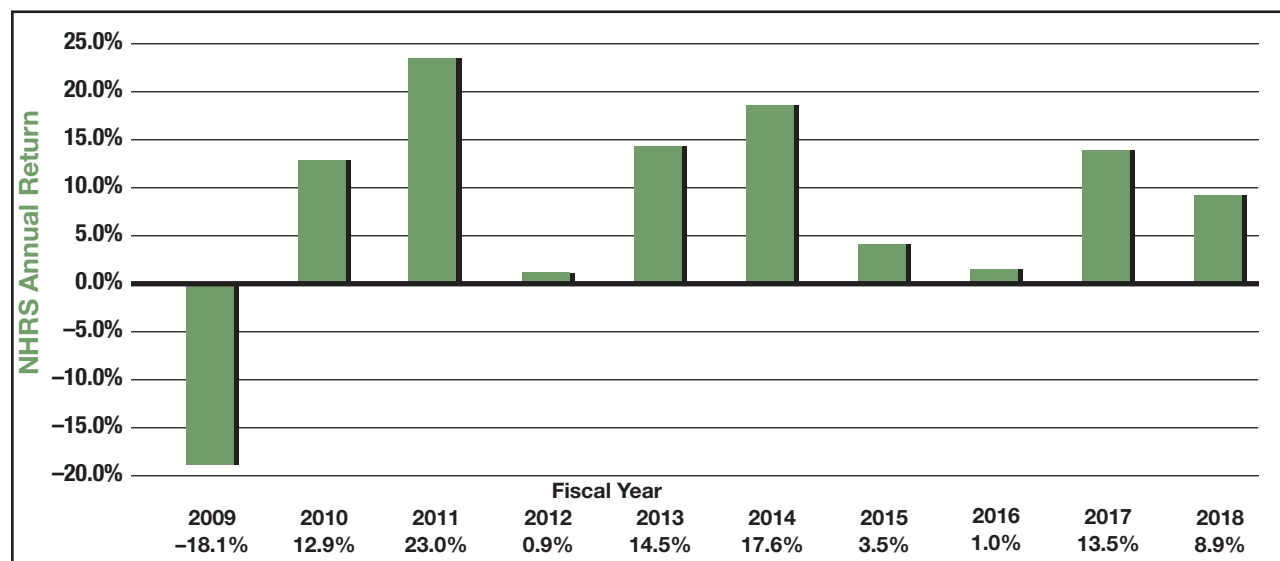
ANNUALIZED INVESTMENT RETURNS—ACTUAL VERSUS INDICES

	Current Year 2018	3 Year	Annualized 5 Year	10 Year
Total NHRS Fund	8.9%	7.7%	8.7%	7.1%
Total Fund Custom Index*	7.8	7.3	8.8	7.2
Domestic Equity	14.6	11.0	12.7	9.6
Total Domestic Equity Blended Benchmark*	14.4	11.9	13.5	10.3
Non-U.S. Equity	7.8	6.1	6.0	3.3
Total Non-U.S. Equity Blended Benchmark*	7.3	5.1	6.0	2.5
Fixed Income	0.2	2.8	2.9	5.1
Total Fixed Income Blended Benchmark*	-0.3	2.1	2.6	4.1
Real Estate	10.5	11.1	12.7	6.1
Total Real Estate Blended Benchmark*	7.5	8.4	10.1	6.6
Alternative Investments	10.9	8.4	8.5	3.1
Total Alternative Investments Blended Benchmark*	9.4	8.4	13.4	11.7
Cash Equivalents	1.4	0.8	0.5	0.4
90 Day T-Bills	1.4	0.7	0.4	0.3

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.

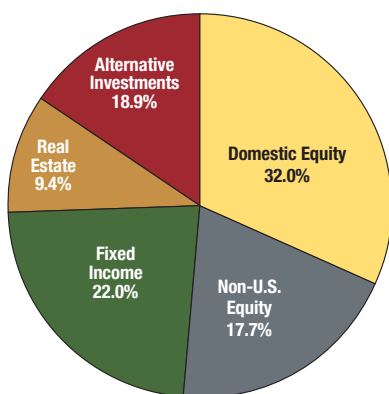
Ten Year History of Time-Weighted Total NHRS Fund Annual Returns



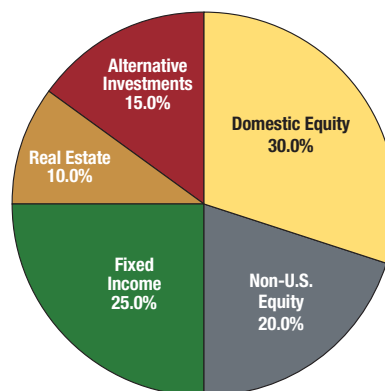
ACTUAL ASSET ALLOCATION VERSUS TARGET ASSET ALLOCATION

	Actual %	As of June 30, 2018 Target %	Target Range %
Domestic Equity	32.0%	30.0%	20 – 50
Non-U.S. Equity	17.7	20.0	15 – 25
Fixed Income	22.0	25.0	20 – 30
Real Estate	9.4	10.0	5 – 20
Alternative Investments	18.9	15.0	5 – 25
TOTAL FUND	100.0%	100.0%	

Actual Asset Allocation as of June 30, 2018



Target Asset Allocation as of June 30, 2018



TEN LARGEST STOCK HOLDINGS BY FAIR VALUE*

(in thousands)

	Shares	Stock	June 30, 2018 Fair Value
1	416,396	Microsoft Corp	\$41,061
2	210,915	Apple Inc	39,042
3	19,813	Amazon.com Inc	33,678
4	227,595	Johnson & Johnson	27,616
5	239,603	JPMorgan Chase & Co	24,967
6	556,307	Cisco Systems Inc	23,938
7	257,279	Exxon Mobil Corp	21,285
8	106,854	Mastercard Inc	20,999
9	86,232	Linde AG	20,579
10	18,441	Alphabet Inc	20,574

TEN LARGEST FIXED INCOME HOLDINGS BY FAIR VALUE*

(in thousands)

	Par**	Security	June 30, 2018 Fair Value
1	34,410,000	U.S. Treasury Note — Var Rate, 2019	\$34,442
2	23,361,000	U.S. Treasury Bond — 4.50%, 2036	28,564
3	26,897,000	U.S. Treasury Note — 1.750%, 2022	25,955
4	22,556,000	U.S. Treasury Note — 1.125%, 2021	21,491
5	15,275,000	United Kingdom Gilt Regs — 1.250%, 2018	20,175
6	20,000,000	U.S. Treasury Note — 0.750%, 2018	19,939
7	19,408,000	U.S. Treasury Bond — 3.000%, 2045	19,483
8	17,000,000	U.S. Treasury Note — 1.500%, 2019	16,929
9	305,000,000	Mexican Bonos — 7.750%, 2042	15,634
10	15,260,000	U.S. Treasury Note — Var Rate, 2019	15,273

*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, 2018		
	Assets Under Management (in thousands)	Fees (in thousands)	Average Basis Points
INVESTMENT MANAGEMENT FEES			
Equity Portfolios:			
Domestic	\$ 2,604,135	\$ 9,435	36
Non-U.S.	1,688,611	10,629	63
Fixed Income Portfolios	1,896,721	4,371	23
Alternative Investments*	1,633,707	—	—
Real Estate	813,001	2,126	26
Cash and Cash Equivalents**	155,057	—	—
TOTAL INVESTMENT MANAGEMENT FEES	\$ 8,791,232	\$ 26,561	30
INVESTMENT SERVICE FEES			
Custodial Fees	\$ 8,791,232	\$ 633	1
Investment Advisor Fees — External	8,791,232	750	1
Investment Professional Fees	8,791,232	288	1
Investment Administrative Expenses — Internal	8,791,232	645	1
TOTAL INVESTMENT MANAGEMENT AND SERVICE FEES	\$ 8,791,232	\$ 28,877	33

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

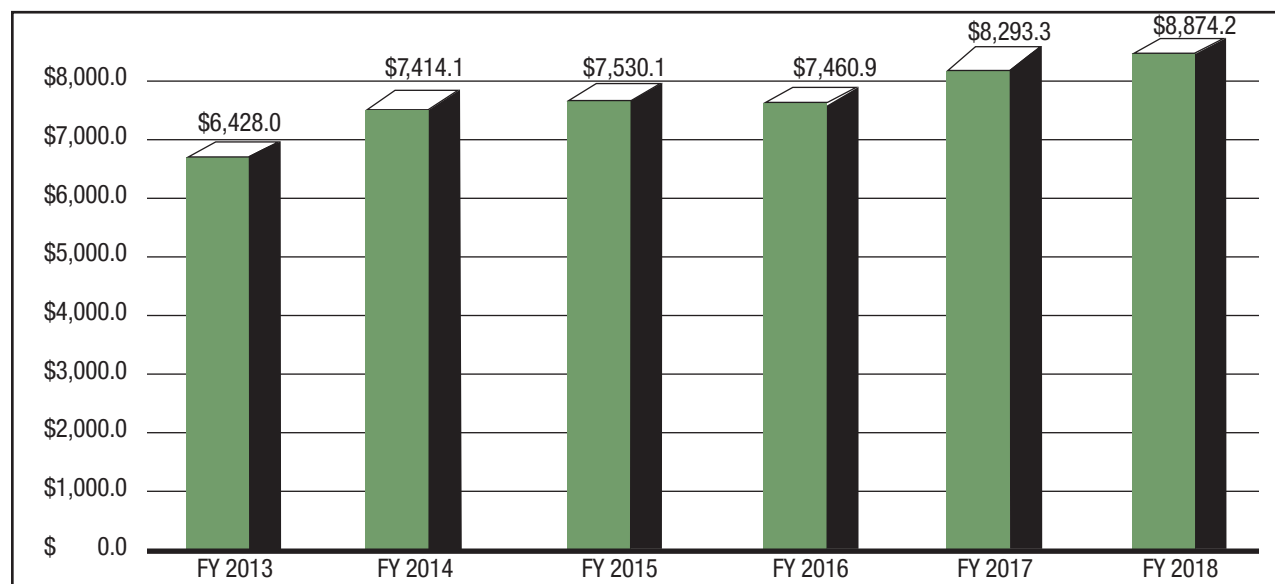
**Does not include cash and cash equivalents held in manager portfolios, only in designated cash portfolios.

SCHEDULE OF BROKERAGE COMMISSIONS PAID

Brokerage Firm	YEAR ENDED JUNE 30, 2018		
	Number of Shares Traded (in thousands)	Total Commissions (in thousands)	Commissions Per Share
Merrill Lynch & Company Inc.	7,244	\$ 123	0.02
Goldman Sachs & Company	8,519	121	0.01
Credit Suisse	4,956	78	0.02
UBS Securities/Warburg	5,336	75	0.01
J.P. Morgan	4,998	74	0.01
Morgan Stanley & Company Inc.	2,635	71	0.03
Liquidnet	4,339	69	0.02
Raymond James & Assoc., Inc.	1,985	59	0.03
Jefferies & Company, Inc.	2,361	56	0.02
Citigroup Global Markets Inc.	2,857	55	0.02
Investment Tech Group	3,487	54	0.02
Instinet, Inc.	3,550	48	0.01
Deutsche Bank	3,010	47	0.02
National Financial Services	1,989	46	0.02
Stifel Nicolaus	1,484	45	0.03
BTIG LLC	1,487	45	0.03
Bernstein Sanford C & Co, New York	2,962	41	0.01
RBC Capital Markets, LLC	2,491	40	0.02
Barclay's Capital Inc.	1,443	40	0.03
All Others (102 not listed separately)	26,589	594	0.02
TOTAL BROKERAGE COMMISSIONS PAID	93,722	\$ 1,781	0.02

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

**Net Position Held In Trust For Benefits
(in millions)**



SUMMARY OF INVESTMENTS

TYPE OF INVESTMENT	June 30, 2018	
	Fair Value (in millions)	Percent of Total Fair Value
FIXED INCOME		
Collateralized/Asset Backed Securities	\$ 143.6	1.7%
Corporate Bonds	596.9	7.0%
Government and Agency Bonds	648.0	7.6%
Doubleline Capital Floating Rate Fund	5.6	0.1%
Doubleline Capital Global Bond	2.8	0.0%
GAM	225.3	2.6%
Manulife	210.8	2.5%
TOTAL FIXED INCOME	\$1,833.0	21.5%
EQUITY		
Consumer Discretionary	\$ 438.5	5.2%
Consumer Staples	182.3	2.1%
Energy	212.4	2.5%
Financial Services	794.1	9.3%
Health Care	480.1	5.6%
Producer Durables	464.3	5.5%
Information Technology	593.4	7.0%
Materials	206.6	2.4%
Utilities	154.6	1.8%
Aberdeen Emerging Markets Smaller Companies Fund	90.0	1.1%
Ishares Russell 2000 ETF	10.2	0.1%
Neuberger Berman Emerging Markets Equity Fund	132.0	1.6%
Segall Bryant & Hamill Int'l Small Cap	138.6	1.6%
Wellington Emerging Markets Local Equity Fund	115.5	1.4%
LSV International Value Fund	224.3	2.6%
TOTAL EQUITY	\$4,236.9	49.8%
OTHER INVESTMENTS		
Alternative Investments	\$1,633.7	19.2%
Real Estate	805.2	9.5%
TOTAL INVESTMENTS	\$8,508.8	100.0%

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Appendix B

Gabriel Roeder Smith & Company Actuarial Opinion Letter

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October 8, 2018

Board of Trustees
New Hampshire Retirement System
54 Regional Drive
Concord, New Hampshire 03301-8509

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 are based on asset liability modeling and asset allocation recommendations from New England Pension Consultants (NEPC) adopted by the Board of Trustees in September 2012. We further understand that based on their 2018 capital market assumptions, NEPC has indicated the following expectations for NHRS' current asset allocation:

- During the next 5-7 year period:
 - The expected rate of return is 6.07%;
 - The standard deviation is 12.10%; and
 - The implicit price inflation rate is 2.50%.

- During the next 30-year period:
 - The expected rate of return is 7.34%; and
 - The implicit price inflation rate is 2.75%.

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, we use the building block method which determines the assumed rate of return as the sum of inflation and real return assumption. For actuarial valuation purposes, we focus more on the long term, which is similar to NEPC's 30-year period.

Actuarial Opinion:

For the June 30, 2018 valuation, the actuarial assumed rate of return is made up of a price inflation assumption of 2.50% and a real rate of return assumption of 4.75% for a total of 7.25% per year, net of investment expenses. This assumption was adopted by the Board to be effective in the June 30, 2015 valuation based on the 2010-2015 Experience Study.

Based on our independent analysis using NHRS' target asset allocation and current capital market assumptions from 12 nationally recognized investment consultants, we have calculated a mean arithmetic rate of return of 6.81% over a 5-10 year horizon and 7.48% over a 20-30 year horizon if we use 3 consultant's 20-30-year horizon expectations. The current NHRS net investment rate assumption of 7.25% is reasonable when compared to our 6.81% - 7.48% and NEPC's 7.34% current estimates for the expected rate of return.

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 5-7 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 the assumed rate of investment return of 7.25%.

David T. Kausch and Heidi G. Barry are independent of the plan sponsor and 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,



David T. Kausch, FSA, EA, FCA, MAAA



Heidi G. Barry, ASA, FCA, MAAA

DTK/HGB:sc



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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**
- **Proxy Voting Policy**
- **Securities Lending Policy**

Section II

- **Accountability Matrix**

Section III

- **Independent Investment Committee Charter**

Section IV

- **Investment Guidelines**
 - Domestic Equity
 - Non-U.S. Equity
 - Fixed Income
 - Real Estate
 - Alternative Investments

SECTION I

Investment Policy

<p style="text-align: center;">New Hampshire Retirement System Investment Policy Amended by NHRS Board of Trustees on June 14, 2016</p>
--

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

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 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 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 if you are going long, and downward if you are going short).
- 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 May 10, 2016, the assumed rate of return was 7.25%.

Asset Class	Target Allocation	Allocation Range
Domestic Equity	30%	20 – 50%
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	S&P 500 Index
Non-U.S Equity	MSCI All Country World Ex-U.S. Index
Fixed Income	Barclays Capital U.S. Universal Bond Index
Real Estate	NCREIF NFI-ODCE Index (net of fees)
Alternative Investments:	
Private Equity	S&P 500 Index + 3%
Private Debt	S&P/LSTA U.S. Leveraged Loan 100 Index
Opportunistic Strategies	1-month LIBID + 5%
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 S&P 500 Stock Index measures the total return of 500 large capitalization U.S. common stocks. The index tracks leading industries and is capitalization-weighted.
- 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 Barclays Capital U.S. Universal Index represents the union of Barclays Capital’s U.S. Aggregate Index, 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 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. LIBID (London Interbank Bid Rate) is the bid rate that banks are willing to pay for Eurocurrency deposits in the London interbank market.

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. Alternative Investments are non traditional investments, not covered by another investment class (e.g. private equity/private debt and opportunistic strategies)
- B. American Depositary Receipts (ADRs) 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. Commercial Mortgage Backed Securities (CMBS) 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

Vote **against** proposals to reduce quorum requirements for shareholder meetings below a majority of the shares outstanding unless there are compelling reasons to support the proposal.

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 every five years.

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
- Implement or renew a dead-hand or modified dead-hand poison pill
- Adopts a poison pill with a term of more than 12 months ("long-term pill"), or renews any existing pill, including any "short-term" pill (12 months or less), without shareholder approval (Review such companies with classified boards every year, and such companies with annually-elected boards at least once every three years, and vote **against** or **withhold** votes from all nominees if the company still maintains a non-shareholder-approved poison pill)
- Make a material adverse change to an existing poison pill without shareholder approval
- 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

Vote **for** a fixed number of directors on the board.

Vote **for** management proposals to change the size of the board unless the request seeks to increase the board size to more than 12 total directors. Requests for board changes dealing with less than 12 directors will generally be supported.

Fixing the number of directors makes it more difficult for management to manipulate board size in order to advance its own interests. Adding members may be a ploy to dilute the power of opposition already on the board. Decreasing board size may be a ploy to remove opposition. Therefore, both measures should be opposed.

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
- Whether the transaction is contested

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, and conflicts of interest.

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** preemptive rights for shareholders:

Vote **against** proposals which request the issuance of shares with preemptive rights over a level 100 percent above currently issued capital.

Vote **against** proposals which request the issuance of shares without preemptive rights over a level 20 percent above currently issued capital.

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. 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; 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.

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

Votes **against** the creation of tracking stock.

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 nonemployee directors.

Vote **for** shareholder proposals to eliminate retirement plans for nonemployee 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 apply:

- Purchase price is at least 85 percent of fair market value;
- Offering period is 27 months or less; and
- The number of shares allocated to the plan is ten percent or less of the outstanding shares.

Nonqualified Employee Stock Purchase Plans

Vote **for** proposal to approve nonqualified employee stock purchase plans where all of the following apply:

- Broad-based participation (i.e., all employees of the company with the exclusion of individuals with 5 percent or more of beneficial ownership of the company);
- Limits on employee contribution, which may be a fixed dollar amount or expressed as a percent of base salary;
- Company matching contribution up to 25 percent of employee's contribution, which is effectively a discount of 20 percent from market value;
- No discount on the stock price on the date of purchase since there is a company matching contribution.

In the event that company matching contribution exceeds 25 percent of employee's contribution, 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.

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; or
- Non-audit-related fees are substantial or are routinely in excess of standard annual audit-related fees.

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

Vote **for** proposals to fix board size.

Vote **against** the introduction of classified boards and mandatory retirement ages for directors.

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 up to 100 percent over the current authorization unless the increase would leave the company with less than 30 percent of its new authorization outstanding.

Vote **for** specific proposals to increase authorized capital to any amount, unless:

- The specific purpose of the increase (such as a share-based acquisition or merger) does not meet recommended guidelines for the purpose being proposed; or
- The increase would leave the company with less than 30 percent of its new authorization outstanding after adjusting for all proposed issuances.

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 which request the general issuance of shares with preemptive rights over a level 100 percent above currently issued capital (33 percent for the UK, 50 percent for France).

Vote **against** proposals which request the general issuance of shares without preemptive rights over a level 20 percent above currently issued capital (five percent for the UK).

All requests for a specific issuance are evaluated based on their individual merits, demonstrated need, and long-term investment interests of the company.

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 the following parameters:

- Maximum volume: 10 percent for market repurchase within any single authority and 10 percent of outstanding shares to be kept in treasury ("on the shelf");
- Duration does not exceed 18 months.

For markets that either generally do not specify the maximum duration of the authority or seek a duration beyond 18 months 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 in excess of 10 percent 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, provided that following conditions are met:

- The overall balance of the proposed plan seems to be clearly in shareholders' interests;
- The plan still respects the 10 percent maximum of shares to be kept in treasury.

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.

SECTION II

Accountability Matrix

New Hampshire Retirement System Accountability Matrix

Total Fund Investment Policy¹

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.

Domestic Equity²

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. Equity³

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 Income⁴

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 Policy⁶

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	

⁶ Items in red are responsibilities dictated by statute.

Selection and Monitoring of Investment Managers⁷

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 Providers⁸

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 September 20, 2013 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 and participate in the Board’s annual evaluation of the investment consultant;

- 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 a one-year term, 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 allow for return enhancement and principal appreciation.

Allocation: The current target allocation to Domestic Equity is 30% of the Total Fund, with an allowable range of 20 – 50%. Domestic Equity currently includes monies earmarked for future deployment into alternative investments and real estate. As of June 30, 2011, the Total Fund’s actual allocation to Alternative Investments was 2.1%. Accordingly, funds will be redeemed from Domestic Equity over a multi-year period to build the Alternative Investments program to its 10% target allocation. As of June 30, 2011, the Total Fund’s actual allocation to Real Estate was 5.6%. Accordingly, funds will be redeemed from Domestic Equity over a multi-year period to build the Real Estate program to its 10% target allocation.

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 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. To similarly match the market capitalization structure of the domestic equity markets (as defined by the Russell 3000 Index), the target portfolio shall be constructed as follows:

Market Cap	Allocation Target*	Allocation Range
Large Cap		
Passive	55%	35 – 90%
Active	20%	0 – 30%
Active Small/Mid Cap	25%	10 – 35%

* As a percentage of Domestic Equity

Manager portfolios are established on a Core/Satellite basis. Core manager portfolios shall not represent greater than 10% of Total Fund assets. Satellite manager portfolios shall not represent greater than 5% of Total Fund assets. The S&P 500 passive index account is a well diversified portfolio not subject to the limitations of a core/satellite portfolio.

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 Investment Committee (IC) 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 IC relies on Staff and the Investment Consultant to assess and monitor the investment policies of any commingled fund used by the System.

Manager Guidelines: Portfolio-level guidelines are negotiated with each investment manager with the purpose of establishing agreed upon parameters for the management of the assets; are generally based on the guidelines for the respective manager's composite portfolio/investment style in which the IC has determined to be appropriate for investing; 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 being in effect.

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 both verbally and in writing as soon as it is discovered. 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 IC 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 and quoted on the National Association of Securities Dealers Automatic Quotation Service.

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 Depositary Receipts and Shares, warrants, and rights) of U.S. and foreign issuers
- European Depositary 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
- Specialized investment vehicles
- Direct investments in commodities
- Direct investments in real estate
- Venture Capital investments
- 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 not own more than 20% of any commingled investment fund
- The System shall not own more than 5% of any single security's outstanding shares

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 actively managed and broadly diversified across global economies, market sectors, capitalization, and securities to similarly match the market composition of the non-U.S. equity markets (as defined by the MSCI All Country World ex-U.S. Index), and shall be structured as follows:

Market	Allocation Target*	Allocation Range
Developed Markets	80%	60 – 100%
Core Non-US	65%	50 – 80%
Small Cap Non-US	7%	0 – 15%
Global	8%	0 – 15%
Emerging Markets (EM)	20%	0 – 40%
Core EM	16%	10 – 20%
Small Cap EM	4%	0 – 10%

* As a percentage of Non-U.S. Equity

Manager portfolios are established on a Core/Satellite basis. Core manager portfolios shall not represent greater than 10% of Total Fund assets. Satellite manager portfolios shall not represent greater than 5% of Total Fund assets.

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 Investment Committee (IC) 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 IC relies on Staff and the Investment Consultant to assess and monitor the investment policies of any commingled fund used by the System.

Manager Guidelines: Portfolio-level guidelines are negotiated with each investment manager with the purpose of establishing agreed upon parameters for the management of

the assets; are generally based on the guidelines for the respective manager's composite portfolio/investment style in which the IC has determined to be appropriate for investing; 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 being in effect.

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 both verbally and in writing as soon as it is discovered. 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 IC at the next meeting.

Permissible Investments: All eligible securities shall be traded on globally recognized 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 investment in real estate
- Venture Capital investments
- 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 not own more than 20% of any commingled investment fund
- The System shall not own more than 5% of any single security's outstanding shares

Fixed Income Investment Guidelines

Purpose: The allocation to Fixed Income serves to provide income and reduce volatility experienced in the equity markets, as well as offers an opportunity for return enhancement by investing in selected market sectors (for example, investment grade corporate bonds and high yield). A portion of the Fixed Income allocation is expected to be invested in U.S. Treasury securities or other government-related issues, which will serve to 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 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.

Region	Allocation Target*	Allocation Range
Domestic	75%	65 – 100%
Non-U.S.	25%	0 – 35%

* As a percentage of Fixed Income.

Manager portfolios are established on a Core/Satellite basis. Core manager portfolios shall not represent greater than 10% of Total Fund assets. Satellite manager portfolios shall not represent greater than 5% of Total Fund assets.

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 Investment Committee (IC) 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 IC relies on Staff and the Investment Consultant to assess and monitor the investment policies of any commingled fund used by the System.

Manager Guidelines: Portfolio-level guidelines are negotiated with each investment manager with the purpose of establishing agreed upon parameters for the management of the assets; are generally based on the guidelines for the respective manager's composite portfolio/investment style in which the IC has determined to be appropriate for investing; are reviewed by Staff in collaboration with the System's Investment Consultant; and are subject to execution by the Director of Investments prior to being in effect.

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 both verbally and in writing as soon as it is discovered.

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 IC 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
- Venture Capital investments
- Direct investments in oil, gas, or other mineral exploration or development programs

Concentration Limits:

- The System shall not own more than 20% of any commingled investment fund
- The System shall not own more than 5% of any single security's outstanding shares.

Real Estate Investment Guidelines

Purpose: The primary objective of real-estate investing is to seek superior risk-adjusted returns. Secondly, 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 Range	U.S.	Ex -U.S.
Strategic Portfolio	Minimum of 50%	100%	0%
Tactical Portfolio	Maximum of 50%	30 – 50%	50 – 70%
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 Investment Committee will review and annually approve the Real Estate Investment Plan.

The Manager shall make presentations to the Investment Committee, 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 NHRS Investment Committee 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 NHRS Investment Committee 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.

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 NHRS Investment Committee 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. The NHRS Investment Committee may give prior approval to an investment in commingled funds in which the guidelines are not consistent with the spirit of those specified herein. The NHRS Investment Committee relies on Staff and the Manager to assess and monitor the investment policies of any commingled fund used by NHRS.

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. By design, 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

Prohibited Investments

- The Manager is prohibited from investing in structured mortgage-backed securities except with prior approval of the NHRS Investment Committee.

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. Secondly, these investments have had a low to negative 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 Committee 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 may include 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 minimal exposure to technology risk.
- *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.

- *Special Situations* – Generally have an open-ended investment objective and seek to capitalize on opportunities in a wide variety of sectors.
- *Venture Capital* – Implies early-stage financing 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 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 with a current yield of 10% above comparable U.S. Treasury bonds. 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* – An investment strategy involving subordinated debt (the level of financing tranche that is senior to equity but below senior debt). Capital supplied by mezzanine 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.

Opportunistic – The purpose of Opportunistic investments is to allow the Fund to invest in special market opportunities not specifically included in other asset classes and to take advantage of dislocations in the market in order to seek superior risk-adjusted returns. Such opportunistic strategies may contain positions across and among various asset classes.

Hedge Funds – The purpose of Hedge Funds is to enhance the long-term risk-adjusted returns by providing diversification benefits, while preserving capital and reducing volatility.

Sub-strategies include:

- *Credit Linked* – Managers seek to profit from the realization of a valuation discrepancy in the relationship between multiple credit-linked securities. Managers employ a variety of fundamental and quantitative techniques to establish investment valuations, and security types range broadly across fixed income, derivative or other security types. Fixed income

strategies are typically quantitatively-driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk-adjusted spread between these instruments represents an attractive opportunity for the investment manager. Examples of Credit Linked strategies include:

- Convertible Arbitrage
 - Capital Structure Arbitrage
 - Structured Credit
 - Corporate Credit
 - Private Issue/Regulation D
 - Yield Alternative
- *Event Driven* – Managers who hold positions in companies currently or prospectively involved in corporate transactions of a wide variety including, but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional derivative securities. Event Driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic company-specific developments. Investments are typically evaluated on fundamental characteristics, as opposed to quantitative metrics. Examples of Event Driven strategies include:
- Distressed/Restructuring Securities
 - Merger Arbitrage
 - Special Situations
 - Shareholder Activist strategies
- *Event Linked* – Managers maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques. Strategies can be broadly-diversified or narrowly-focused on specific sectors or geographies and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. Examples of Event Linked strategies include:
- Fundamental Long/Short equities
 - Sector-focused Long/Short equities
 - Equity Market Neutral equities
 - Short-Biased equities
- *Trading* – Managers trade a broad range of strategies predicated on movements in underlying economic variables and the impact these have on equity, fixed income, currencies and other derivative instruments. Managers employ a variety of techniques: both discretionary and systematic analysis; combinations of top-down and bottom-up views; quantitative and fundamental approaches and long- and short-term holding periods. Although some strategies employ relative value techniques (e.g. volatility

trading), derivative strategies are generally directional and focus on capturing the market beta of the manager’s view of a particular trade. Examples of Trading strategies include:

- Discretionary Thematic
 - Systematic Diversified
 - Volatility Trading
 - Derivative Trading
- *Multi-Strategy* – Managers in this strategy use any combination of the strategies noted above in an attempt to produce strong relative returns in various market conditions. While managers in this strategy use various techniques, they are generally categorized by their diversified use of many strategies and no one strategy dominates. They generally have different teams in the firm running different strategies according to their defined expertise. The portfolio managers of each team focus on selecting the best investments for their portfolio based on their expertise and agreed-upon portfolio constraints. The top-level portfolio managers focus on capital allocation among the various strategies in search of the highest risk-adjusted returns available in the markets.

Targets and Ranges:

Sub Strategy	Allocation Target*	Allocation Range
Private Equity	5%	0 – 7%
Private Debt	5%	0 – 7%
Opportunistic	5%	0 – 7%

* As a percentage of Total Fund

Custody: All assets, including Commingled fund assets, 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 NHRS Investment Committee 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. The NHRS Investment Committee may give prior approval to an investment in commingled funds in which the guidelines are not consistent with the spirit of those specified herein. The NHRS Investment Committee relies on Staff and the Manager to assess and monitor the investment policies of any commingled fund used by NHRS.

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 20% of a manager’s fund/assets except with prior approval of the NHRS Investment Committee.
 - The System shall not own more than 10% of in any single investment vehicle except with prior approval of the NHRS Investment Committee.
- 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 Committee for approval.
 - The Annual Strategic Plan will include a review of performance; cash flow and liquidity analyses; commitment pacing; and sub- strategy recommendations.

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.

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