NOTE: These minutes were approved and executed at the July 18, 2014 Independent Investment Committee meeting.

Independent Investment Committee June 20, 2014

Public Minutes

New Hampshire Retirement System 54 Regional Drive Concord, NH 03301

Committee Members: Harold Janeway, *Chair*; David Jensen; Patrick O'Donnell; and Hersh Sosnoff.

NHRS Trustees: Dean Crombie; Dick Gustafson, Ph.D; and Germano Martins.

Staff: Larry Johansen, *Director of Investments*; Jack Dianis, *Director of Finance*; and Scott Needham, *Investment Analyst.*

NEPC, LLC: Kevin Leonard, Partner and Senior Consultant; Sean Gill, Partner; and Charles Tedeschi, Senior Research Consultant.

Mr. Janeway called the meeting to order at 9:03 a.m. On a motion by Mr. Jensen, seconded by Mr. O'Donnell, the Committee unanimously approved the public and non-public minutes of the May 23, 2014 Investment Committee meeting, as presented.

Mr. Johansen referenced the "Investment Work Plan" dated May 27, 2014 and updated the Committee on several initiatives. He commented that NHRS was recently informed of the recent unexpected passing of Andrew Weiner, AllianceBernstein's ("AB") Director of Research for U.S. Small and Mid Cap Value. He indicated that staff has discussed the situation and AB's related succession plan in detail with both NEPC and AB. He noted that James MacGregor, AB's current Chief Investment Officer of Small and Mid Cap Value Equities previously served as Director of Research, and would assume those responsibilities on a temporary basis until AB appoints someone as Mr. Weiner's successor. Mr. Johansen referenced the depth of AB's research staff, and commented that the Value sleeve of the portfolio managed by AB on behalf of NHRS has outperformed its benchmark. He noted that staff and NEPC will continue to monitor the situation and will provide updates to the Committee as the situation develops.

Mr. Johansen provided an update on the status of the Non-U.S. Equity portfolio decisions approved by the Committee at its May meeting. He indicated that all of the affected managers have been notified of the Committee's decisions, and that the Investment Management Agreements ("IMAs") for the three new mandates are under review by the System's external legal counsel. He commented that portfolio transition activity will be executed upon conclusion of the IMA review and execution process.

Mr. Johansen reviewed investment returns through recent periods, referring to the NEPC Total Marketable Assets performance flash report for periods ending May 31, 2014. He discussed the returns of various managers and asset classes over multiple time periods.

Mr. Johansen informed the Committee that the investment management agreement between NHRS and BlackRock, who manages an S&P 500 Index portfolio on behalf of the System, is due for renewal. He referenced memos provided to the Committee from L. Johansen and NEPC which recommend that the investment management agreement between NHRS and BlackRock be renewed. After a brief discussion, on a motion by Mr. Jensen, seconded by Mr. Sosnoff, the Committee unanimously voted to renew the investment management agreement with BlackRock through July 2016. Mr. O'Donnell was not present for the vote.

The Committee discussed the presentation made by Fisher Investments ("Fisher") at the April Committee meeting, and the subsequent action take at the May Committee meeting with regard to the System's Non-U.S. Equity portfolio, which included the reduction of Fisher's portfolio mandate by 50%. Mr. Johansen referenced memos from L. Johansen and NEPC which recommend that the investment management agreement between NHRS and Fisher be renewed. After a brief discussion, on a motion by Mr. Sosnoff, seconded by Mr. Jensen, the Committee unanimously voted to renew the investment management agreement with Fisher through July 2016. Mr. O'Donnell was not present for the vote.

The Committee discussed the System's existing roster of investment managers and the sizing of individual manager portfolio mandates. They agreed to further discuss this subject as portfolio mandates are awarded and considered for renewal. Mr. Johansen commented that he has discussed a potential Micro Cap allocation within the U.S. Equity portfolio with NEPC and would like to understand the Committee's perspective on this matter. The Committee briefly discussed a potential Micro Cap allocation and agreed to discuss it further at a subsequent meeting.

Mr. Gill and Mr. Tedeschi presented an introduction of venture capital general partner Polaris Partners ("Polaris") and Polaris Partners VII ("Fund VII"). The Committee discussed the terms of a limited partnership interest in Fund VII.

Mr. Terry McGuire, Co-founder and General Partner; and Mr. Bryce Youngren, Principal, of Polaris provided a brief introduction of themselves and their firm. They referred to the "Polaris Partners VII" presentation. A lengthy discussion with the Committee followed.

In response to a question from the Committee, Mr. McGuire indicated that once Fund VII is launched, Polaris will no longer initiate new portfolio company positions in its prior fund ("Fund VI"), such that the two funds will not be in competition with each other for new investment ideas. He indicated that subsequent capital calls for Fund VI will be used to fund follow-on positions in the fund's existing holdings.

Responding to questions from the Committee, Mr. Youngren indicated that Polaris typically initiates a minority position in early stage companies while taking a larger and sometimes majority position in growth stage companies. Mr. McGuire and Mr. Youngren discussed the disappointing performance of Polaris' Fund III, and indicated that almost all of Fund VI's limited partners have committed to invest in Fund VII. They discussed the terms of a limited partnership interest in Fund VII.

In response to questions from the Committee, Mr. McGuire remarked that between 60-70% of Polaris' early stage Life Sciences portfolio investments have been successful and have made money. Mr. Youngren commented that for the Growth portfolio, only one of the 29 investment positions initiated has lost money. They explained Polaris' industry experience and relationships as beneficial to the firm's success.

The Committee discussed the investment opportunity presented by Fund VII. Mr. Gill and Mr. Tedeschi reviewed the returns of Polaris' prior funds. Mr. Johansen commented that the Committee has committed very little to venture capital funds since the Private Equity portfolio rebuild began in 2011, as there have not been many intriguing opportunities available in this market segment. Mr. Tedeschi reviewed the current market dynamics of the venture capital space. Mr. Jensen departed the meeting at this time.

Mr. Anthony Frammartino, Principal; and Mr. Tony Pietro, Assistant Portfolio Manager, of The Townsend Group ("Townsend") provided a brief introduction of themselves and their firm, an update on the Fiscal Year 2014 Investment Plan, and presented the Fiscal Year 2015 Investment Plan for the Committee's consideration. They referred to the "New

Hampshire Retirement System" presentation dated June 20, 2014. A lengthy discussion with the Committee followed.

In response to questions from the Committee, Mr. Pietro reviewed the ownership transfer of two direct property holdings in exchange for shares in an existing diversified real estate fund. Mr. Frammartino explained Townsend's methodology for classifying investments as either strategic or tactical. He commented that Townsend anticipates some moderation in the returns associated with core investments, with an anticipated threeyear forward return in the single-digits.

Responding to questions from the Committee, Mr. Frammartino indicated that bank and insurance company real estate loan volume has recovered and is robust in the U.S. primary markets, but not in international markets. He commented that loan securitization has also rebounded and that Townsend remains wary of supply overhang, but has not yet seen a return to exotic securitization structures.

On a motion by Mr. O'Donnell, seconded by Mr. Sosnoff, the Committee unanimously approved Townsend's Fiscal Year 2015 Investment Plan.

Mr. Rick Rieder, Managing Director; Mr. Matthew Marra, Managing Director; Mr. Doug McNeely, Managing Director; and Ms. Jillian Sandler, Analyst, of BlackRock provided a brief introduction of themselves and their firm. They referred to the "New Hampshire Retirement System" presentation dated June 20, 2014. A lengthy discussion with the Committee followed.

The BlackRock representatives and the Committee had a detailed discussion of the rationale supporting an allocation to unconstrained fixed income and the philosophy and investment process supporting the firm's Strategic Income Opportunities ("SIO") fund. They discussed the large debt overhang in the U.S. and other developed global markets in conjunction with the current low-rate environment, and BlackRock's expectation for U.S. rates in particular to drift higher over time.

In response to questions from the Committee, Mr. Rieder commented that although investors have begun to move cash reserves into equities, massive amounts of liquidity and investable cash remain on the sidelines. He reviewed the risk controls BlackRock employs with regard to the SIO fund, and the fund's credit quality and liquidity profile.

Mr. Tim Haywood, Investment Director; Mr. Jack Flaherty, Investment Director; Mr. Joseph Gieger, Managing Director; and Ms. Kristin Hovencamp, Director of Institutional Sales, of GAM provided a brief introduction of themselves and their firm. They referred to the "GAM

Unconstrained Bond Strategy" presentation dated June 20, 2014. A lengthy discussion with the Committee followed.

The GAM representatives discussed the philosophy and investment process supporting the firm's Unconstrained Bond Strategy with the Committee. In response to questions from the Committee, Mr. Gieger and Mr. Haywood described the strategy's emerging markets exposure and thoughts on the current emerging market investment environment.

The Committee reviewed the BlackRock and GAM presentations. The Committee held a lengthy discussion regarding the investment opportunity presented by unconstrained fixed income strategies in general and in the context of the System's existing fixed income portfolio. They had a detailed discussion of the pros and cons associated with the potential addition of an unconstrained fixed income portfolio to the System's existing fixed income portfolio structure. The Committee will continue the discussion of the structure of the fixed income portfolio at subsequent meetings.

The Committee discussed the Polaris presentation and decided not to pursue an investment in Fund VII at this time.

On a motion by Mr. O'Donnell, seconded by Mr. Sosnoff, the meeting adjourned at 1:46 p.m.