NOTE: These public minutes were approved and executed at the December 20, 2014 Independent Investment Committee meeting.

Independent Investment Committee Meeting November 21, 2014

Public Minutes

New Hampshire Retirement System 54 Regional Drive Concord, NH 03301

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

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

Staff: George Lagos, Executive Director; Larry Johansen, Director of Investments; Scott Needham, Investment Officer, and Greg Richard, Investment Officer.

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

Mr. Janeway called the meeting to order at 9:00 a.m.

On a motion by Mr. Jensen, seconded by Mr. Sosnoff, the Committee unanimously approved the public minutes of the October 24, 2014 Investment Committee meeting, as presented.

Mr. Johansen noted that the System has fully liquidated its position in the PIMCO Total Return Fund. He noted that the DoubleLine Capital portfolio was recently funded with \$50 million of the proceeds of the PIMCO redemption. He commented that the GAM Unconstrained Bond portfolio is also going to be funded with \$200 million of the PIMCO redemption proceeds, and that he anticipates this funding to occur prior to the end of the calendar year, upon conclusion of contract negotiations. He remarked that the remaining proceeds of the PIMCO redemption, \$200 million, would be used to the fund the global multi-sector fixed income portfolio mandate that the Committee is expected to award at today's meeting. Mr. Johansen commented that these transitions, when completed, will accomplish the Committee's goals of diversifying manager-specific risk and increasing return sources within the System's aggregate fixed income portfolio.

Mr. Johansen referenced the "Proposed 2015 Investment Committee Meeting Schedule" memo dated October 28, 2014. The Committee discussed the proposed schedule and agreed to move the semi-annual global macroeconomic presentations from the January 2015 meeting to the February 2015 meeting. The Committee expressed an interest in scheduling presenters for the February meeting that have contrarian outlooks compared to industry consensus. On a motion by Mr. O'Donnell, seconded by Ms. Kelliher, the Committee unanimously approved the 2015 Investment Committee meeting schedule, as presented.

Mr. Johansen provided an overview of the Work Plan and updated the Committee on several initiatives. He provided an update on the status of the liquidation of the absolute return portfolio managed by Arden Asset Management ("Arden"). He indicated that the portfolio has a remaining market value of approximately \$5 million, for which Arden anticipates a 5-year timeframe to fully unwind. The Committee agreed that Mr. Johansen should work to develop a potential portfolio exit transaction for the Committee's consideration.

The Committee discussed the presentations made by small/mid cap U.S. equity managers AllianceBernstein and Thompson, Siegel & Walmsley ("TSW") at the October Committee meeting. Mr. Johansen referenced memos from L. Johansen and NEPC which recommend that the investment management agreements with AllianceBernstein and TSW be renewed. The Committee briefly discussed the ability of active managers to add value over a benchmark index over the long-term.

On a motion by Ms. Kelliher, seconded by Mr. Jensen, the Committee unanimously voted to renew the investment management agreement with AllianceBernstein through November 2016. On a motion by Ms. Kelliher, seconded by Mr. Jensen, the Committee unanimously voted to renew the investment management agreement with TSW through November 2016.

Mr. Johansen and Mr. Gill provided a brief introduction of NGP Energy Capital Management ("NGP") and NGP Natural Resources XI, LP ("Fund XI"). Mr. Gill responded to questions from the Committee regarding fund structure, and NGP's prior funds. Mr. Gill commented that Fund XI is expected to draw capital over a 5-6 year period.

Mr. John Foster, Managing Director; and Mr. Scott Gieselman, Managing Director, of NGP; and Ms. Jessica Brennan, Managing Director of The Carlyle Group ("Carlyle"), presented a brief introduction of NGP. They referred to the "Presentation to New Hampshire Retirement System" presentation dated Fall 2014. A lengthy discussion with the Committee followed.

Ms. Brennan responded to a question from the Committee regarding Carlyle's relationship with NGP. She indicated that Carlyle's investment in NGP offers NGP a sizeable back-office support system while NGP offers Carlyle a team with a strong history of successful energy investing. Mr. Foster indicated that Carlyle also offers NGP a large portfolio of global companies from which they can gain insights and information. Mr. Foster indicated that Carlyle receives 55% of the NGP's revenue stream, and 47.5% of carried interest. He noted that NGP retains 100% of its governance structure.

Responding to questions from the Committee, Mr. Gieselman described NGP's "buy and build" investment strategy, which he feels helps to align the interests of portfolio company management teams with NGP. He indicated that Fund XI will invest primarily in three spaces: upstream oil and gas; midstream energy opportunities; and oilfield services. He noted that NPG's prior fund featured a successful agricultural water investment, which was capped at 10% of the fund, but that Fund XI would not include such an investment. He indicated that NGP is not interested in pure exploration opportunities, given the high level of binary risk associated with such investments.

In response to questions from the Committee, Mr. Gieselman indicated that commodity prices are one of the factors that NGP considers to be among the least important when initiating investments. He commented that NGP hedges its commodity price exposure within the portfolio to the extent possible, and believes that the most important aspect of underlying portfolio company investments is the quality of the companies' management teams and their ability to increase production volume efficiently. Mr. Foster remarked that NGP's investment portfolio is split approximately 50/50 between oil and natural gas, which is consistent with the current North American energy profile.

Responding to questions from the Committee, Mr. Foster and Mr. Gieselman indicated that follow-on investments made by NGP into portfolio companies are typically allocated in an effort to increase the ownership level of successful portfolio companies and not as a means of increasing support to struggling portfolio investments. Mr. Foster reviewed the performance profile of NGP's prior funds, and how underlying portfolio company management teams have demonstrated the ability to add value through volume expansion, even in times that have featured longer periods of depressed commodity prices. Mr. Foster indicated that NGP's recent funds have begun returning capital to limited partners three years into the investment period.

The Committee discussed the presentation made by NGP and the investment opportunity presented by Fund XI. On a motion by Ms.

Kelliher, seconded by Mr. Jensen, the Committee unanimously agreed to commit \$75 million to Fund XI, subject to contract and legal review.

Mr. Johansen and Mr. Leonard provided a brief introduction of Manulife Asset Management ("Manulife") and Pyramis Global Advisors ("Pyramis"). They indicated that these two managers were selected by Staff and NEPC as finalist candidates to present to the Committee in conjunction with the global multi-sector fixed income manager search process. They referred to NEPC's "Global Multi Sector Manager Search Finalist Candidates" presentation dated November 21, 2014. The Committee discussed the differences between the portfolios managed by Manulife and Pyramis.

Mr. Daniel Janis III, Senior Managing Director and Senior Portfolio Manager; Mr. Thomas Goggins, Managing Director and Senior Portfolio Manager; and Ms. Nancy Irving, Managing Director, of Manulife presented an introduction of themselves and their firm and a detailed presentation on Manulife's Strategic Fixed Income Strategy. They referred to the "Strategic Fixed Income Strategy" presentation dated November 21, 2014. A lengthy discussion with the Committee followed.

In response to questions from the Committee, Mr. Janis noted the importance of focusing on managing the following risks in managing a global fixed income portfolio: credit risk; currency risk; interest rate risk; and liquidity risk. He expressed his opinion that Manulife's team in Asia is a significant competitive advantage; he cited the formal communications held three times per week with the Asia team in addition to less-formal daily communication, as well as quarterly visits to the team in Asia by Mr. Janis and Mr. Goggins.

Mr. Goggins responded to questions from the Committee by indicating that the strategy's three portfolio managers collaborate on portfolio decisions, and are not required to follow a firm-wide macroeconomic view. He noted that Mr. Janis holds the ultimate decision-making responsibility. Ms. Irving commented that the team's compensation considers the strategy's three and five-year returns, as well as the success of overall firm.

In response to questions from the Committee, Mr. Janis discussed the portfolio's current positioning and how the team's macroeconomic views are employed within the portfolio.

Mr. Ford O'Neil, Portfolio Manager; Mr. Christian Pariseault, Senior Vice President and Director of Bonds; and Mr. Arthur Greenwood, Senior Vice President and Relationship Manager, of Pyramis, presented an introduction of themselves and their firm and a detailed presentation on

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Pyramis' Tactical Bond strategy. They referred to the "Tactical Bond" presentation dated November 21, 2014. A lengthy discussion with the Committee followed.

In response to a question from the Committee, Mr. Pariseault indicated that the strategy's 70% non-investment grade limit has been in place since its inception; however the average non-investment grade portfolio weighting has been approximately 40%. He noted that the strategy's highest non-investment grade portfolio weighting has been 60% and the lowest weighting has been 15%.

Mr. O'Neil described the strategy's investment process, noting that Fidelity does not employ a chief economist that dictates the macroeconomic outlook for the firm's strategies, but rather the macroeconomic assessment that factors into the portfolio construction process is a result of the research and opinions of the portfolio management team in conjunction with the support of the firm's research analysts. He described the team's qualitative and quantitative risk-control process.

In response to questions from the Committee, Mr. O'Neil discussed the portfolio's current positioning and how that has been shaped by the team's macroeconomic views. He commented that the team feels that foreign currency valuations and interest rate moves are difficult to predict and that the team prefers to hedge foreign exposure back to the U.S. Dollar when they do not have a specific opinion on a given currency.

Responding to a question from the Committee, Mr. Greenwood commented that the recent promotion of Abigail Johnson to the position of CEO of Fidelity has been anticipated for some time, and that the team at Pyramis expects that Ms. Johnson will endeavor to continue to grow Pyramis' presence in the institutional marketplace.

The Committee discussed the presentations made by Manulife and Pyramis, and the investment opportunity presented by their respective global multi-sector fixed income strategies. They discussed the differences between the two strategies and firms.

The Committee discussed cash management strategies. Mr. Johansen proposed maintaining a cash account that invests 80% in 3-year Treasury securities and 20% in cash equivalents to fund liquidity needs, including the funding of alternative investment capital calls and monthly annuitant payroll needs. The Committee discussed potential funding sources and implementation methods for establishing a cash management account.

On a motion by Ms. Kelliher, seconded by Mr. Jensen, the Committee unanimously voted to redeem \$200 million from the large cap U.S. equity portfolio managed by Institutional Capital ("ICAP") to fund the cash management account. On a motion by Mr. Jensen, seconded by Mr. O'Donnell, the Committee authorized and instructed Mr. Johansen to establish a cash management account and fund the account with the proceeds of the ICAP redemption.

On a motion by Mr. Sosnoff, seconded by Ms. Kelliher, the Committee unanimously voted to retain Manulife to manage a \$200 million global multi-sector fixed income portfolio on behalf of NHRS, subject to contract and legal review.

The Committee reviewed the Draft Comprehensive Annual Investment Report ("CAIR") for the Fiscal Year Ended June 30, 2014. Mr. Johansen commented that the System's Public Information Officer has reviewed the draft CAIR and suggested some minor non-material changes that will be implemented in an effort to make the format and language of the document consistent with the System's Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2014.

The Committee held a lengthy discussion regarding the components of the CAIR's transmittal letter. They agreed to make modifications to the "Funding Status" section of the transmittal letter.

On a motion by Ms. Kelliher, seconded by Mr. Jensen, the Committee unanimously approved the Comprehensive Annual Investment Report for the Fiscal Year Ended June 30, 2014, subject to the minor non-material changes proposed by the System's Public Information Officer and the changes to the "Funding Status" section agreed upon by the Committee. The Committee directed Staff to submit the Report to the Board at the Board's December meeting, with a recommendation for approval.

On a motion by Mr. Jensen, seconded by Mr. O'Donnell, the meeting adjourned at 1:37 p.m.