NOTE: These minutes were approved and executed at the March 22, 2019 Independent Investment Committee.

Independent Investment Committee Meeting February 22, 2019

Public Minutes

New Hampshire Retirement System 54 Regional Drive Concord, NH 03301

Committee Members: Maureen Kelliher, Chair; Christine Clinton; Daniel LaPlante; and Keith Quinton. Tim Lesko; absent.

Staff: George Lagos, Executive Director; Larry Johansen, Director of Investments; Gerard Murphy, Director of Finance; Greg Richard, Senior Investment Officer, and Ashley Lloyd, Junior Investment Officer.

NEPC: Sean Gill, Partner; and Chris Levell, Partner.

Ms. Kelliher called the meeting to order at 9:00 a.m.

On a motion by Mr. LaPlante, seconded by Mr. Quinton, the Committee unanimously approved the public minutes of the January 25, 2019 Investment Committee meeting, as presented.

Mr. Johansen reviewed investment returns through recent time periods, referring to the NEPC Marketable Investments performance flash report for periods ending January 31, 2019. He discussed the returns of various managers and asset classes over multiple time periods.

Mr. Johansen reviewed the Work Plan and updated the Committee on several initiatives. He provided an update on the liquidation status of the GAM Fund and added that GAM still plans to return 100 cents on the dollar for liquidated assets. Mr. Johansen provided an overview of the day's presenters, noting NEPC will present an Asset/Liability review and Liquidity Analysis which will be used as a foundation for the Asset Allocation review to be conducted at the March Committee meeting.

Mr. Clark Koertner, Director of Institutional Sales, Principal; and Mr. Scott Decatur, Ph.D., Director of Quantitative International Strategies, Principal; of Segall Bryant and Hamill ("SBH") provided a brief introduction of themselves and their firm. They referred to the "New Hampshire Retirement System" presentation dated February 22, 2019. A lengthy discussion with the Committee followed.

Mr. Decatur reviewed the philosophy of the SBH International Small Cap strategy, outlining the firm's process of identifying quality, inexpensive companies using a quantitative approach, which allows the company to invest in a wide range of companies. He discussed the International Small Cap team's investment process and described the functionality of the strategy's proprietary ranking process, noting that the multi-factor approach historically provides consistent long-term performance over various asset classes. He discussed the sectors in which he sees value, noting that the team forgoes wagers on sector and country exposures as it is difficult to get these calls right, which is why the team places its focus on stock picking without making sector bets. Mr. Decatur discussed performance since the portfolio's inception in January 2017, noting growth stocks have been growing rapidly, an unusual phenomenon in which expensive, lower quality companies have actually outperformed cheaper, higher quality companies over the period. He noted that the team is using the current environment as an opportunity to add inexpensive value names to the portfolio, noting that as growth stocks revert to the mean, value names are expected to outperform.

Mr. Daniel Janis, Head of Global Multi-Sector Fixed Income; Mr. David Zielinski, Managing Director and Client Portfolio Manager; and Ms. Nancy Irving, Managing Director; of Manulife Asset Management ("Manulife") provided a brief introduction of themselves and their firm. They referred to the "Strategic Fixed Income Strategy" presentation dated February 22, 2019. A lengthy discussion with the Committee followed.

Mr. Janis reviewed the organizational structure of the Global Multi-Sector Fixed Income team and discussed the fund's fundamentally driven philosophy and process, noting the goal of providing downside protection while also minimizing risk and providing liquidity. Mr. Zielinski provided an overview of the macro environment and highlighted interest rates, credit spreads, and currencies as main drivers of the fund's return. Further, he noted challenges associated with the volatile environment over the past 12 months and its impact on portfolio performance. Mr. Zielinski reviewed key investment themes within the portfolio, the firm's market outlook, and the ways in which their views on these themes have influenced portfolio positioning. Responding to a question from the Committee, Mr. Janis discussed market liquidity and the impact of the team's outlook on liquidity on security selection within the portfolio. He reviewed portfolio sector allocation in detail and provided an overview of his outlook for each sector as well as the team's global outlook for the nearterm.

Mr. Ian Leverich, Senior Vice President of Sales and Client Services of AbelNoser Corporation ("AbelNoser") provided a brief introduction of himself, his firm, and an overview of the services AbelNoser provides to the NHRS Independent Investment Committee February 22, 2019

System. He referred to the "New Hampshire Retirement System Transaction Cost Analysis" presentation for the calendar year 2018. A lengthy discussion with the Committee followed.

Mr. Leverich opened by providing a brief overview of AbelNoser's analysis methodology, noting that the firm segments the universe to identify each manager's trading style to obtain the most accurate trading cost comparisons. He noted the importance of monitoring trading cost and execution, adding that NHRS's monitoring directly factors into each manager's favorable performance. Mr. Leverich discussed AbelNoser's calculation of trading costs, adding that NHRS's active U.S. equity managers, passive U.S. equity manager, and active non-U.S. equity managers all outperformed their respective universe benchmarks for the year-ending December 31, 2018.

Mr. Chris Levell, Partner, Client Strategy of NEPC, referred to NEPC's presentations titled "Asset/Liability Study" and "Liquidity Analysis" dated February 2019. A lengthy discussion with the Committee followed.

Mr. Levell opened with an overview of the NEPC's asset allocation review process and the results of their "Asset/Liability Study" presentation. He reviewed the various proprietary tools NEPC uses in determining the most beneficial asset allocation for NHRS ("the System") and discussed the System's funded ratio, contribution rates, and asset growth expectations over the next ten years. He went through the current portfolio's volatility by asset class and discussed the expected performance of the portfolio over various scenarios and the ways in which those risks could be mitigated. He closed by referencing the "Liquidity Analysis" presentation, discussing performance assumptions of the System's current asset allocation under a base case and stressed case and the impact on System liquidity.

On a motion by Mr. LaPlante, seconded by Mr. Quinton, the meeting adjourned at 12:15 p.m.