NOTE: These minutes were approved and executed at the September 29, 2017 Independent Investment Committee meeting.

Independent Investment Committee Meeting
July 21, 2017

Public Minutes

New Hampshire Retirement System
54 Regional Drive
Concord, NH 03301

Committee Members: Maureen Kelliher, *Chair*; David Jensen; Patrick O'Donnell; and Keith Quinton.

NHRS Trustees: Dr. Richard Gustafson; Germano Martins; and David McCrillis.

Staff: George Lagos, *Executive Director;* Larry Johansen, *Director of Investments*; Greg Richard, *Senior Investment Officer*; Shari Crawford, *Junior Investment Officer;* and Ashley Lloyd, *Junior Investment Officer*.

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

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

On a motion by Mr. Quinton, seconded by Mr. O'Donnell, the Committee unanimously approved the public minutes of the June 16, 2017 Investment Committee meeting, as presented.

Ms. Kelliher read into the minutes the following Resolution of the Board of Trustees, unanimously adopted at the July 11, 2017 Board meeting:

THE BOARD OF TRUSTEES
OF THE
NEW HAMPSHIRE RETIREMENT SYSTEM

RESOLUTION – HERSHEL SOSNOFF

Whereas, Hershel ("Hersh") Sosnoff was appointed to the NHRS Board of Trustees ("Board") by Governor John Lynch in 2011; and

Whereas, Hersh was appointed to the Independent Investment Committee ("IIC") in 2012; and

> **Whereas**, Hersh was a knowledgeable, energetic, and dedicated Trustee; and
>
> **Whereas**, Hersh's macro-economic reports to the Board were legendary for being as entertaining as they were insightful; and
>
> **Whereas**, beyond his contributions to both the Board and the IIC, Hersh was a man of character, universally liked and respected as a gentleman and someone who could, and would, disagree without being disagreeable; and
>
> **Whereas**, Hersh passed from this life on Saturday, July 1, 2017,
>
> **NOW THEREFORE BE IT RESOLVED** that the Board of Trustees does hereby record in the minutes its gratitude and appreciation for the dedicated service and counsel provided to the New Hampshire Retirement System by their esteemed colleague, Hersh Sosnoff, on this Eleventh day of July, 2017.

The Committee respectfully requested to include in the permanent record of its minutes its expression of gratitude and appreciation for Mr. Sosnoff's years of dedicated service to the New Hampshire Retirement System.

Mr. Johansen reviewed investment returns through recent time periods, referring to the preliminary NEPC Total Fund performance flash report for periods ending June 30, 2017, emphasizing that the report is preliminary and will be finalized upon receipt of all private investment valuations. 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. Mr. Johansen noted that the Work Plan for the second quarter of Fiscal Year 2018 has been added for the Committee's consideration and approval, clarifying that the Work Plan remains flexible and subject to change as the Committee deems appropriate. On a motion by Mr. Jensen, seconded by Mr. Quinton, the Committee unanimously approved the Work Plan for the second quarter of Fiscal Year 2018, as presented.

Mr. Johansen reviewed the agenda for the day's meeting and briefly commented upon the tentative agenda for the next Committee meeting scheduled for September, as the Committee had previously discussed cancelling its August meeting at the June Committee meeting, to which it unanimously agreed.

Mr. John Grybauskas, Head of Relationship Management; and Mr. Alexander Wolf, Senior Emerging Markets Economist; of Standard Life Investments ("Standard Life") provided a brief introduction of themselves and their firm. They referred to the "Geopolitics and Emerging Markets" presentation dated July 2017. A lengthy discussion with the Committee followed.

Mr. Wolf began his presentation by offering an overview comparing the current investment environments of both developed and emerging markets. His discussion continued with a primary focus on the influence of the Chinese economy as it relates to its emerging market peers, particularly with the structural inconsistencies that continue to arise as China rebalances its economy, the largest and most influential in the emerging markets. He added that those emerging markets with softer ties to China would experience less of an impact as this transition progresses. Addressing the Committee's concerns, Mr. Wolf suggested that the present time should be viewed as one of utmost importance to Chinese policymakers as it must be determined which long-term economic path will be pursued. To clarify this point, Mr. Wolf highlighted examples of China's regional developed market peers, discussing the economic paths selected by Taiwan, Korea, and Japan and their various outcomes.

Responding to questions from the Committee, Mr. Wolf discussed recent financial trends observed in China, including credit growth, wholesale funding, and interbank lending. He clarified that while the overall elevated level of interbank lending is not alarming, the pace at which it has risen is. Mr. Wolf concluded his comments with a discussion on the current geopolitical situation with North Korea and the role that China plays as an intermediary between North Korea and the U.S. He discussed potential consequences should relations weaken the U.S.-China relationship, specifically with regard to trade.

Ms. Rupal Bhansali, Chief Investment Officer and Portfolio Manager; and Mr. Malik Murray, Vice President of Institutional Marketing and Client Services; of Ariel Investments ("Ariel") provided a brief introduction of themselves and their firm. They referred to the "Power and Payoff of Non Consensus Investing" presentation. A lengthy discussion with the Committee followed.

Ms. Bhansali began the discussion by providing historical examples of the presence of contrarianism in modern society and how humanity benefitted as a result. She proposed the same approach could be successfully applied to investing, providing an overview of "Contrarian Intrinsic Value Investing", the thesis behind her investment perspective and process. She continued with several examples that reflect her unconventional investment strategy when conducting equity research and identifying attractive equity investments. Responding to the Committee's inquiries, she thoroughly described several areas that are frequently overlooked or largely misunderstood by the consensus, including the values of intellectual property, enterprise staples, international markets over U.S. markets, and liquidity.

In response to questions from the Committee, Ms. Bhansali offered her views on the active versus passive investment trend, bringing attention to potentially high exit costs given the growth of assets in passive funds as well as the absence of stress-tests within the passive space. She argued that "benchmark huggers" and "pseudo-active managers" distort the performance returns of active managers, misleading the consensus about the true skill of active managers. She closed the presentation describing the significant challenges presented when emphasis is placed upon seeking large payoffs rather than avoiding losses.

Mr. John Zito, Partner and Global Head of Liquid Opportunistic Credit; Mr. Robert Bittencourt, Managing Director of U.S. Opportunistic Credit; and Ms. Livia Carega, Principal; of Apollo Global Management ("Apollo") provided a brief introduction of themselves and their firm. They referred to the "Liquid Opportunistic Credit: Observations and Anomalies" presentation dated July 21, 2017. A lengthy discussion with the Committee followed.

In response to questions from the Committee, Mr. Zito offered a detailed overview of Apollo's investment views as they pertain to high yield ETFs, addressing fluctuations in the daily trading volumes of the market and its impact on investors' liquidity positions. Further, he highlighted the space's compound annual growth rate in assets since the bottom of the Great Financial Crisis in 2009, presented various risk and return expectations across several hypothetical market environments, and thoroughly discussed the sector composition of the high yield credit asset class, reviewing those sectors that appear to be in cyclical, regulatory, or structural decline and how those sectors may impact the asset class as a whole. Mr. Zito further commented upon the market capitalization and outstanding debt levels of some of the largest underlying securities held in high yield ETFs. He concluded his comments with an explanation of how Apollo's high yield investment research leads them to invest independently from the broader investment themes observed in current high yield credit markets.

Mr. Bittencourt addressed the Committee's inquiries regarding the current state of the retail industry in the U.S., reviewing the swift rise in retail store closures and Chapter 11 bankruptcies filed year-to-date. He thoroughly discussed the material effect of technological disruption within retail, describing the "Amazon effect" and the "S-Curve" pattern of consumers' adoption of innovation with the examples of digital cameras and e-books. Mr. Bittencourt advised that retailers recognize the benefit of increased scale and that M&A activity is likely to accelerate in the coming years. He also noted that those retailers that significantly differentiate their business models from their peers stand in a better position for survival, adding that those that outlive their peers should benefit with the inheritance of their former competitors' customer base. Responding to questions from the Committee, Mr. Bittencourt discussed Apollo's outlook of potential implications as a result of this disruption within the retail industry, commenting on potential effects on U.S. employment and the possibility for new or modified regulatory changes.

Mr. Will Kinlaw, Senior Managing Director and Head of State Street Associates; and Ms. Kathryn DeNitto, Vice President of Asset Owner Sector Solutions; of State Street provided a brief introduction of themselves and their firm. They referred to the "Asset Allocation: Fallacies, Challenges, and Solutions" presentation. A lengthy discussion with the Committee followed.

Responding to questions from the Committee, Mr. Kinlaw provided a detailed overview of his investment research and introduced several themes for which he holds dissenting views from the research of his industry peers, beginning with a discussion of the influence of asset allocation and how materially asset allocation decisions influence performance returns. He shared that a journal in financial analysis had conducted and published a linear regression analysis that suggested approximately 90 percent of performance returns can be attributed to asset allocation decisions. Mr. Kinlaw did not contest the importance of asset allocation, but rather suggested its impact on performance is likely not as extreme as the study suggests, underscoring that security selection is a more influential contributor than for which the study gives it credit.

Further addressing the Committee's questions, Mr. Kinlaw offered a detailed discussion on the theory of time diversification as it relates to loss probability, describing that said probability doesn't decrease over time, disputing the broad assumption that investing over longer time horizons is less risky than investing over shorter time horizons. Mr. Kinlaw also discussed inconsistencies related to common beliefs surrounding factor-based investment strategies, stating diversifying assets through the use of factors is no more lucrative or successful than diversifying using a traditional asset allocation approach. Mr. Kinlaw concluded the presentation sowing the idea that an optimal level of illiquidity for an investor's portfolio can be mathematically derived upon the determination of the weight drifts expected as the portfolio rebalances as well as identifying the liquidity demands and obligations of the asset owner.

The Committee discussed the macroeconomic presentations made by Standard Life, Ariel, Apollo, and State Street.

On a motion by Mr. Quinton, seconded by Mr. O'Donnell, the meeting adjourned at 12:47 p.m.