NOTE: These minutes were approved and executed at the February 23, 2018 Independent Investment Committee meeting.

Independent Investment Committee Meeting
January 26, 2018

Public Minutes

New Hampshire Retirement System
54 Regional Drive
Concord, NH 03301

Committee Members: Maureen Kelliher, *Chair*; David Jensen; Tim Lesko; Christine Clinton. Keith Quinton; *absent*.

NHRS Trustees: Dr. Richard Gustafson; Germano Martins; Michael Milligan; 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*; Sean Gill, *Partner*; and Tim McCusker, *Chief Investment Officer*.

Ms. Kelliher called the meeting to order at 9:15 a.m.

Ms. Kelliher and Mr. Johansen welcomed newly appointed Independent Investment Committee members Christine Clinton and Tim Lesko. Ms. Clinton and Mr. Lesko each provided a brief introduction of themselves and their professional backgrounds.

On a motion by Mr. Jensen, seconded by Ms. Kelliher, the Committee unanimously approved the public minutes of the December 15, 2017 Investment Committee meeting, as presented.

Mr. Johansen reviewed investment returns through recent time periods, referring to the NEPC Total Fund performance flash report for periods ending December 31, 2017. 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, including a longer-term proposal to review and update the NHRS Investment Policy, as needed, and to consolidate the content in NEPC's Quarterly Investment Summary Report to include the most relevant information. He noted that the Work Plan for the fourth quarter of Fiscal Year 2018 had 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 Ms. Clinton, the Committee unanimously approved the Work Plan for the fourth quarter of Fiscal Year 2018, as presented.

Mr. Tim McCusker, Chief Investment Officer of NEPC, provided a brief introduction on the macroeconomic presentations that would be shared with the Committee during the meeting. He advised that the Committee could expect to hear a strong rhetoric on favorable near-term outlooks, an emphasis on consensus expectations of Federal Reserve policy in 2018, and fewer comments than in recent years on China and its shifting economic environment.

Mr. Douglas McNeely, Managing Director; Ms. Gargi Pal Chaudhuri, Director and Senior Global Fixed Income Strategist; and Ms. Jennifer Chruszcz, Vice President; of BlackRock provided a brief introduction of themselves and their firm. They referred to the presentation titled "Evolution of the Federal Reserve and Market Outlook for 2018" dated January 2018. A lengthy discussion with the Committee followed.

Ms. Chaudhuri began the discussion with a thorough overview of the changing composition and upcoming turnover of the Board of Governors of the U.S. Federal Reserve ("the Fed"), complimenting the efforts of current chairwoman Janet Yellen on effective communication and implementation of a gradual tightening policy without causing a "taper tantrum" in the financial markets. She broadly agreed with consensus views that incoming Fed Chairman Jerome Powell's oversight will largely be a continuation of Yellen's. Ms. Chaudhuri acknowledged the likelihood of a more hawkish Fed tone as a result of Board turnover in 2018 and mentioned that Trump's selection of Vice Chair will also have an influence over Fed Policy decisions in the near-term.

Responding to questions from the Committee, Ms. Chaudhuri shared her views on expected rate hiking activity and Treasury yields for 2018, as well as facilitated a robust discussion regarding the role of inflation in global markets going forward. She raised the question as to whether the 2% target level in several developed markets is appropriate, especially given the challenges that many global central banks experienced in achieving or failing to achieve this target following the most recent global recession. She advised that key themes to which she and her colleagues will monitor as the year and business cycle continue include the slowing of asset purchases by global central banks, especially the Fed and possibly the ECB later in the year, which should increase supply and apply upward pressure and steepen the yield curve; increased allocations, and therefore demand, to TIPS; increased global growth aided largely by the revised U.S. tax package; and a potential uptick in volatility as a result of reducing QE and easy financial conditions. After addressing inquiries from the Committee regarding the influence of oil prices in BlackRock's inflation expectations and their views on current default risks, the presentation concluded with a discussion of what Ms. Chaudhuri views as some of the largest risks to global markets, including the threat of increased U.S. protectionism, central bank surprises, and geopolitical risks abroad.

Mr. John Grybauskas, Deputy Head of Institutional Relationship Management; and Mr. James McCann, Senior Global Economist; of AberdeenStandard provided a brief introduction of themselves and their firm. They referred to the "Economics House View" presentation dated January 2018. A lengthy discussion with the Committee followed.

Mr. McCann opened his presentation sharing thoughts on U.S. inflation expectations, stating that he expects it to rise gradually as a result of growth expectations and healthy labor markets, suggesting that the theory behind the Phillips curve still functions though perhaps less powerfully relative to historical standards. He clarified that positive global growth sentiment is demonstrated in both business and consumer confidence levels, the former supported by improved capex spending and the latter by stronger household spending. He communicated AberdeenStandard's house view that, while cautious, the current environment is supportive of risk assets.

Responding to questions from the Committee, Mr. McCann discussed various possible events that could alter the consensus view of a positive growth environment, including potential inflation surprises, fiscal policy changes, especially within Europe, and rising geopolitical tensions in the Korean peninsula or the materialization of a significant event involving the North Korean regime. Further addressing the Committee's concerns, a detailed discussion on Europe suggested that while the region is currently delivering robust, cyclical growth as a result of supportive monetary policy, uncertainty surrounding when and how the ECB will withdraw its QE and whether such action will have a halting effect remain a significant concern.

Addressing additional inquiries from the Committee, Mr. McCann touched upon the progress and the anticipated effects of Brexit, the role of Germany in the Eurozone, and the slowing credit growth in China. He closed by confirming that while many of AberdeenStandard's internal business cycle indicators do not portend a near-term economic downturn, modest short-term concerns will be monitored closely given the age of the current cycle.

Ms. Rahel Ayalew, Vice President; and Mr. Anthony Woodside, Senior Vice President; of Neuberger Berman provided a brief introduction of themselves and their firm. They referred to the "Neuberger Berman

Global Central Bank Outlook" presentation dated January 26, 2018. A lengthy discussion with the Committee followed.

Mr. Woodside echoed the positive synchronized global growth sentiment described in the preceding presentations, adding that Economic Surprise Indicators are currently measured at multi-year highs. He also provided a review of the structure of the Fed, most notably, highlighting the differences between Yellen and Powell's professional backgrounds and the different states of the U.S. economy upon which each began or will begin their respective terms as Fed Chair. He rose thought-provoking questions regarding the appropriateness of the current inflation target and whether an alternative method, such as price level targeting, would have a different impact with respect to monetary policy activity.

In response to questions from the Committee, Mr. Woodside shared that Neuberger Berman's research suggests that most global economies are in expansionary mode, and he described the Global Fixed Income Team's general investment thesis, positioning, and outlook across various fixed income asset classes across several global markets. Broad themes included short duration positions and applying hedges when increasing TIPS exposure, the expectation of modest spread-widening in high yield, and how central bank tightening conditions may trigger volatility, especially in equities. Mr. Woodside concluded by sharing his views on inflation expectations in the world's largest developed markets and the factors that uphold these views.

Mr. McCusker, referring to NEPC's presentation titled "Themes, Opportunities & Asset Class Assumptions" dated December 2017, summarized the presentations by BlackRock, AberdeenStandard, and Neuberger Berman and addressed the common theme of favorable near-term sentiment. He reminded the Committee of the importance of longer-term views and suggested that asset owners and investment managers should consider what may already be priced in in various securities markets and whether the opportunity to capitalize is actually present. He reviewed NEPC's Key Market Themes of the extended cycle in the U.S., global growth synchronization, U.S. monetary policy expectations, the Chinese economy, and potential impacts of or changes to global trade. In accordance with the System's longer-term investment horizon, Mr. McCusker discussed NEPC's asset class return expectations for the medium-term, including how these expectations have changed relative to the previous year.

On a motion by Mr. Jensen, seconded by Ms. Clinton, the meeting adjourned at 12:05 p.m.