Minutes of the meeting held on March 2, 2022

Present: Francis Murphy - Chair, Jim Monagle, Michael Gardner, Nadia Chamblin-Foster, John Shinkwin, Ellen Philbin, Rafik Ghazarian and Chris Burns.

The meeting was called to order at 11:42 AM. The meeting was conducted entirely via Webex videoconference and was digitally recorded.

The Director stated that she had received written confirmation that Gardner has been officially appointed to another term on the Retirement Board.

Agenda Item # 1 – 2021 Performance Review
Ghazarian reviewed Segal Marco's written analysis of investment performance for the period ending December 31, 2021. US and International equities performed well in 2021 while Emerging Market Equities struggled. Fixed income also performed poorly due to rising interest rates. Real Estate saw strong returns. Private Equity was by far the best performing asset class.

Ghazarian reviewed the system's current asset allocation. As of December 31, the system was somewhat overallocated to equities and under allocated to fixed income and real estate. Ghazarian stated that the system was in the process of making several moves to rebalance the portfolio. The Private Equity sleeve is now overallocated because of the historically strong returns from that asset class. The investments with PRIT returned nearly 60% in 2021.

Reviewing Cambridge's returns in 2021, the total fund was valued at $1.839 billion, representing a gain of 4.3% in the last quarter. For the full year, the fund returned 16.9%, which outperformed the policy index return of 13.2%. Ghazarian stated that he was comfortable with the long term returns from all managers in the portfolio. Gardner noted that PineBridge has significantly underperformed over the last year. Ghazarian stated that rising interest rates have been difficult for this asset class, and he stated that he would forward a paper from his research department. Chamblin-Foster asked about the impact of rising oil prices on currency markets. Ghazarian stated that the Euro countries were facing a difficult situation due to their reliance on oil imported from Russia.

Bernard Horn and Michael Schantz represented RBC Global Asset Management. A written portfolio review was submitted to the Board. There have been no changes to the investment strategy or portfolio management over the last year. Schantz reported that the firm is starting to shift work functions back to their office, with employees working fewer days from home. Horn discussed the portfolio's guiding philosophy, and the importance of focusing on a firm's cash flow. In 2021, the fund underperformed the benchmark, returning 9.96% net of fees, vs. the MSCI-EAFE Index at 11.78%. Horn reviewed several stocks which detracted from performance in 2021. He described the holding of Cineworld, a theater operator which was hurt when movie theaters were shut down. He stated that historically, theaters have outperformed during tough economic times and theater attendance has rebounded strongly in China and Japan. He also reviewed the holding of Jazz Pharmaceuticals, which has introduced a new drug for the treatment of Narcolepsy but also faces competition from generics. Popular Inc, I Puerto Rican bank, was one of the top performers as it benefitted from large stimulus programs in Puerto Rico. Banks performed well overall, and Sparebank, a Norwegian bank was another top contributor to performance. Another strong performer was D'leteren Group, a Belgian auto distributor. Kia Motors performed well, as they had sufficient inventory to avoid problems with microchip shortages which hurt other carmakers. The portfolio is now overweighted to Financials and Materials stocks. The fund has no direct investments in Russia. He did note that some firms in the portfolio could be hurt by an extended conflict with Russia as they either buy raw materials there or sell their products there. Energy firms have benefitted from higher prices following Russia's invasion of Ukraine.

Fred Sweeney and Teresa Woo represented Loomis Sayles. A written portfolio review was submitted to the Board. There have been no changes to the portfolio team or investment strategy. Woo reported that Jae Park retired as CIO and was succeeded by David Waldman. Also, Paul Sherba retired as CFO and was replaced by Susan Sieker. The firm was now hired a Diversity, Equity and Inclusion Officer, Marques Benton. Woo described the firm's mentorship and internship program. Over the last year, the portfolio returned 3.98% net of fees, vs. the BARC High Yield Index at 5.26%. Sweeney stated that the main reason for the underperformance was issue selection. The portfolio has taken a position within certain convertables, which performed poorly. The companies were Dish Networks, T-Mobile, Teladoc, and Southwest Air. Sweeney stated this was a high conviction position. Southwest saw significantly reduced demand during the Omicron wave, but it now appears to be picking up again. The positions appear likely to rally over the next year, and the portfolio has added to these positions. Most managers have positioned their portfolios for significant interest rate rises over the next year. Sweeney stated that, given the shock of the Russia-Ukraine conflict, it is possible that the Fed will be more moderate in raising rates. He stated that he does not foresee a likelihood of increased defaults in the near future. Energy was the best performing sector, although the portfolio has not taken any significant sector bets and is positioned fairly close to the benchmark. The best performing credit in the portfolio was Uber Technologies. Yields have increased sharply in the last two months. The yield to worst in the portfolio was 4.52% as of December 31, 2021 and is now 5.58%.

Brian Drainville, Earl McKennon, and Melissa Moesman represented Fidelity Institutional Asset Management. A written portfolio report was submitted to the Board.
McKennon reviewed the fixed income portfolio. There have been no changes to the portfolio management team, or investment strategy over the last year. Over the last year, the portfolio returned -0.46% net of fees vs. the Barclays US Aggregate at -1.54%. He noted that everything in the portfolio is investment grade, US Dollar-denominated bonds. McKennon stated that the US bond market has been stable following the Russian invasion of Ukraine. The portfolio has a strong record of outperformance since inception. Interest rates have moved up over the last year. McKennon stated that the markets have priced in the expectation for five interest rate increases in 2022, and two more likely in 2023. At present the fund holds 35.7% US Treasuries vs. the index at 38.8%. This represents a substantial increase from the position one year ago, as the portfolio was looking to trim risk. The portfolio continues to keep average duration tightly correlated with the benchmark. The portfolio maintains a slight overweight to corporate bonds, although this position has come down significantly over the last year. The portfolio has also largely eliminated the allocation to TIPS. Drainville noted that the holding of TIPS has been as high as 6%, but that they are no longer attractively priced.
Drainville reviewed the Emerging Markets Debt strategy. There have been no changes to the portfolio management team, or investment strategy over the last year. Over the last year, the portfolio returned -1.26% vs. the benchmark at -1.51. Virtually all of the outperformance was driven by holdings of corporate bonds. Holdings of state-owned energy firms in Mexico and Ghana performed especially well. The portfolio continues to overweight corporate bonds. Drainville reviewed the latest developments in the Russian invasion of Ukraine. Western governments have instituted severe economic sanctions against Russia, and Russia has responded by instituting currency controls and raising interest rates to 20%. The portfolio did hold some dollar-denominated Russian bonds. Drainville stated that these are still trading, and he was hopeful that interest payments on those bonds would continue. At the start of 2022, Drainville stated that he had a positive outlook on Ukraine and the portfolio maintains a slight overweight to Ukrainian bonds. Those bonds have now lost value. Over the first six weeks of the year, the portfolio reduced exposure to Russia from 3.5% to 2.5%, so they had an underweight position at

the time the invasion started. The value of the remaining bonds collapsed after sanctions went into effect. The portfolio's total exposure to Russia is now 0.7%. The portfolio has 3.1% of assets invested in Ukraine and due to market action, which has now fallen to 1.3%. He stated that it would be extremely difficult to sell out of any of the remaining holdings of Russian or Ukrainian bonds. There does appear to be enough trading volume in dollar-denominated securities to accurately gauge current prices. Looking ahead, the portfolio is also overweight to Brazil and Argentina. Argentina has reached an agreement with the IMF which should benefit them.

Matt O'Connell and Scott Pike represented Income Research & Management. A written portfolio report was submitted to the Board. There have been no changes to the portfolio management or strategy over the last year. The firm has expanded the investment team from 54 to 60 employees and may hire more in the coming year. The firm is now working on a hybrid model, with employees having the flexibility to work some days from home. O'Connell reviewed the firm's hiring practices, noting that IRM has increased its hiring of racial minorities in each of the last four years. Over the last year, the fund returned -1.65% net of fees, vs. the benchmark at -1.75%. Interest rates have increased over the last year, and O'Connell stated that he anticipated further rises in 2022. O'Connell stated that portfolio did see a gain due to having a shorter average duration than the benchmark, although IRM's strategy does not generally include predicting changes in interest rates. The portfolio also gained by an underweight position to treasuries in an environment which rewarded more risk. Pike reviewed the current composition of the portfolio. The portfolio maintains similar average ratings to the benchmark. The portfolio maintains an underweight to treasuries. TIPS now constitute 0.6% of the portfolio, down from 2.5% at the end of 2020. The portfolio sold out of TIPS as their valuations became less attractive. 25% of the portfolio is in securitized debt. Pike described the focus on the value of collateral in considering buying these bonds. Gardner asked for IRM's forecast on inflation over the next year. O'Connell stated that the outlook was unclear but noted that price increases were happening across all sectors of the economy, including transportation, housing, food, and energy.

Antonio Ballestas, Denise D'Entremont and Alex Ryer represented RhumbLine. A written portfolio report was submitted to the Board. D'Entremont stated that Wayne Owen will announce his retirement as CEO shortly. She also stated that Gina Berard was promoted to Director of Investment Operations. Rhumbline now manages two index portfolios for Cambridge, the Russell 1000 Pooled Index Fund and the MSCI EAFE Pooled Index Fund. The Russell 1000 has returned 20.29% in the last year, and 22.07% annually since inception. D'Entremont reviewed the firm's recent contract with State Street Bank for custodial services on pooled funds. This should result in lower administrative costs going forward. Ballestas reviewed the firms in the Russell 1000 portfolio, noting that technology firms now make up 30% of the index. The EAFE fund has returned 7.38% over the last year and 8.3% annually since inception. RhumbLine now has 17 investors in this fund, with Cambridge as the largest single investor. Ballestas noted that RhumbLine holds an ETF in each fund in order to smooth transactions. He also reminded the Board that the EAFE index has no exposure to Emerging Markets. Ghazarian stated he was not concerned about Cambridge having such an outsized role in the portfolio, although he might feel differently about an active manager. Ryer noted that RhumbLine has a number of large clients with separate accounts, although Cambridge is the largest investor in the pooled fund. D'Entremont stated that RhumbLine now has 35 Massachusetts Public Funds as clients.

Ghazarian reviewed a preliminary report on returns through January 31, 2022. The fund was down 3% for the month. In January, the fund completed the termination of Lazard, with their funds transferred to the Mellon Emerging Markets Index Fund. The fund also took $10 million from the PRIT Hedge Fund sleeve and moved it to the PRIT Real Estate Fund. The fund will

draw down an addition $20 million from equities over the next month and add that to the PRIT Real Estate fund.
Ghazarian stated that the Board was due to conduct several searches for managers who were last reviewed seven years ago. He said that he planned to first issue searches for an International Equity Manager (currently RBC) and an Emerging Markets Equity manager (currently Aberdeen). Gardner stated that when reviewing the RBC portfolio, he would be interested in knowing what succession plans are in place for Bernard Horn.

Monagle moved to adjourn at 2:45 PM.