

**NEW YORK STATE  
TEACHERS' RETIREMENT SYSTEM  
INVESTMENT COMMITTEE MEETING  
October 25, 2017**

INVESTMENT COMMITTEE MEETING  
NEW YORK STATE TEACHERS' RETIREMENT SYSTEM

A meeting of the Investment Committee of the Retirement Board of the New York State Teachers' Retirement System was held in the Board Room at the System's office on October 25, 2017. Michael Masse, Acting Chair, called the meeting to order at 8:30 a.m.

ATTENDANCE

Investment Committee

Paul Farfaglia, Stephen Feehan, Michael Masse, Oliver Robinson, Nicholas Smirensky

Board Members

Jolene DiBrango, David Keefe

Staff

Thomas Lee, Sheila Gardella, John Cardillo, Kevin Schaefer, Beth Bonacquist, Margaret Andriola, Tony Chromczak, Tedd Johnson, Ken Kasper, Gerald Yahoudy, Laura Hotaling, Ben Lee, Matt Albano, Andrew Feldman, Paul Cummins, Noreen Jones, Joseph Indelicato Jr., Mike Wolfe, Aaron Vanderwiel, Dave Gillan, Kevin Maloney, Adrean Krieg, Richard Young, Fred Herrmann, Nathan Lee, Bryan Polovina, David Tessitore, Lei Zhang, Sam Silver, Chris Furman, Stacey Lesser Meehan

System Consultants

Aon Hewitt Investment Consulting – Brandon Patterson, Claire Shaughnessy

Callan Associates Inc. – Lauren Sertich, Barbara Bernard, Sally Haskins

Torrey Cove – Michelle Davidson

## Approval of Minutes

### A. Approval of Minutes of August 2, 2017 Investment Committee Meeting

Upon motion of P. Farfaglia, seconded by O. Robinson and unanimously carried, the minutes of the August 2, 2017 Investment Committee meeting were approved.

## Presentations

### A. Education Session

#### 1. Portfolio Turnover

T. Johnson gave a presentation on internal portfolio turnover ratios and the method used to calculate them.

#### 2. Why Active Global Equities

F. Herrmann introduced N. Lee and B. Polovina, members of the Public Equities staff, and they gave a presentation recommending that NYSTRS add active global equities to the portfolio which would lead to a slight overweight in international active exposure and a corresponding slight underweight in domestic active exposure, however, the overall passive/active split for Public Equities would remain 75%/25%.

Upon motion of P. Farfaglia, seconded by D. Keefe and unanimously carried, the Committee went into Executive Session at 9:20 a.m. to hear a Private Equity presentation.

### B. HarbourVest The Maple Fund

G. Yahoudy and L. Hotaling recommended an investment of up to \$600 million allocated \$200 million per year in the HarbourVest/Maple Fund, L.P. over a three

year period in passive and active investment tranches with a first aggregate investment of \$200 million. The fund is a separately managed account dedicated to deploying capital to active and passive co-investment opportunities. Ian Lane and Greg Stento from HarbourVest gave a presentation on the fund.

After brief discussion about the presentation and upon motion of O. Robinson, seconded by P. Farfaglia and carried, the Committee came out of Executive Session at 10:00 a.m.

C. Annual Update Real Estate Strategic Plans

S. Haskins, B. Bernard and L. Sertich from Callan provided an update on strategic plan recommendations for the Real Estate Equity and Debt portfolios.

E. Consultant Report – Aon Hewitt Investment Consulting

B. Patterson and C. Shaughnessy reviewed the manager and topical research undertaken on the System's behalf over the past year and provided a peer performance comparison.

The Investment Committee adjourned at 12:15 p.m. for lunch and reconvened at 1:00 p.m., at which time it reviewed the following information regarding the System's investments and performance:

Review of Investments

1. Risk Management Update (Appendix A, pp. 12-20)
2. Total Fund Summary and Performance (Appendix B, pp. 21-25)
3. Public Equities Update (Appendix C)
  - a. Public Equities Report (pp. 26-39)
  - b. Equity Holdings (p. 40)

4. Fixed Income Update (Appendix D)
  - a. Short-Term Bonds (p. 41)
  - b. Long-Term Bonds (p. 42)
  - c. Securities Lending Program (p. 43)
  - d. Bond Market Returns & Fixed Income Related Data (pp. 44-48)
5. Real Estate Update (Appendix E, pp. 49-80)
6. Private Equity Update (Appendix F, pp. 81-84)
7. Report of the Executive Director and Chief Investment Officer summarizing Investment Discretion Exercised for the period July-September 2017 (Appendix G, p. 85).

#### Policy Review and Action

1. Renew Consultants
  - a. Aon Hewitt Investment Consulting

Upon motion of M. Masse, seconded by P. Farfaglia, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to contract with Aon Hewitt Investment Consulting, Inc. an Aon Company to act as a general investment consultant and advise on (i) asset allocation, (ii) manager research & monitoring, (iii) governance and (iv) provide Board & staff education for a period of one year, commencing February 1, 2018, at an annual fee not to exceed \$524,300.

- b. Callan Associates Inc.

Upon motion of M. Masse, seconded by P. Farfaglia, the members of the Investment Committee voted unanimously to recommend the

following resolution to the Retirement Board:

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with Callan Associates, Inc. to serve as the System's real estate consultant and to perform such assignments as may be determined by the Executive Director and Chief Investment Officer or his designees in connection therewith, for the one year period commencing February 1, 2018 at an annual retainer not to exceed \$210,000 and at fees for individual fund due diligence not to exceed \$30,000 per domestic fund and \$40,000 per international fund, and for monitoring the System's external real estate securities managers on a quarterly basis not to exceed \$4,500 per manager for each investment strategy, plus expenses.

## 2. Renew Managers

Letters of renewal recommendation are attached as Appendix H, pp. 86-101, and the following actions were taken:

### a. Aberdeen Asset Management

Upon motion of M. Masse, seconded by O. Robinson, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with Aberdeen Asset Management to manage a portion of the System's equity portfolio as an active ACWI ex-US international manager for a period of one year, effective December 15, 2017.

### b. AQR Capital Management LLC

Upon motion of M. Masse, seconded by O. Robinson, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with AQR Capital Management, LLC to manage a portion of the System's assets as an

active MSCI ACWI Ex-US international equity manager for a period of one year, effective January 6, 2018.

c. BlackRock Institutional Trust Company, N.A.

Upon motion of M. Masse, seconded by O. Robinson, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with BlackRock Institutional Trust Company, N.A. to manage a portion of the System's assets as a passive ACWI ex-US international equity manager for a period of one year, effective December 12, 2017.

d. Dimensional Fund Advisors

Upon motion of M. Masse, seconded by O. Robinson, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with Dimensional Fund Advisors to manage a portion of the System's assets as an active emerging markets manager benchmarked to the MSCI Emerging Markets Index for a period of one year commencing February 19, 2018.

e. Goldman Sachs Asset Management

Upon motion of M. Masse, seconded by O. Robinson, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with Goldman Sachs Asset Management, L.P. to manage a portion of the System's assets as an active global bond manager benchmarked to the Bloomberg Barclays Global Aggregate Float Adjusted Bond Index

(f/k/a Barclays Capital Global Aggregate Float Adjusted Bond Index) in U.S. Dollars hedged to the U.S. dollar for a period of one year, effective November 12, 2017.

f. Loomis Sayles & Co.

Upon motion of M. Masse, seconded by O. Robinson, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with Loomis Sayles & Co. to manage a portion of the System's assets as an active global bond manager benchmarked to the Barclays Capital Global Aggregate Float Adjusted Bond Index for a period of one year, effective November 8, 2017.

g. Marathon Asset Management LLP

Upon motion of M. Masse, seconded by O. Robinson, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with Marathon Asset Management, LLP to manage a portion of the System's assets as an active EAFE international equity manager for a period of one year, effective January 24, 2018.

h. State Street Global Advisors

Upon motion of M. Masse, seconded by O. Robinson, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with State Street Global Advisors to manage a portion of the System's assets as a passive international equity manager, for a period of one year, effective February 18, 2018.



### 3. New Agreements

#### a. HarbourVest Maple Fund

Upon motion of M. Masse, seconded by N. Smirensky, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

RESOLVED, That, subject to the satisfactory completion of due diligence, the Executive Director and Chief Investment Officer is authorized to invest up to \$600 million in HarbourVest/Maple Fund, L.P. over a three year period in passive and active investment tranches with a first aggregate investment of \$200 million; and be it further

RESOLVED, That the Executive Director and Chief Investment Officer, or his designees, are authorized to execute such documents and to take such actions as may be necessary or required to implement the foregoing resolution.

### 4. Re-Appointments to the Investment Advisory Committee

#### a. Howard Bicker

Upon motion of M. Masse, seconded by P. Farfaglia, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

WHEREAS, The term of Howard J. Bicker, as a member of the Investment Advisory Committee expires on December 31, 2017; be it

RESOLVED, That the Retirement Board hereby reappoints Mr. Bicker to a three-year term as a member of the Investment Advisory Committee, effective January 1, 2018.

#### b. Daniel Bukowski

Upon motion of M. Masse, seconded by P. Farfaglia, the members of the Investment Committee voted unanimously to recommend the following

resolution to the Retirement Board:

WHEREAS, Daniel Bukowski was appointed to the Investment Advisory Committee in October of 2016 to fill a term vacated by Geoffrey Gerber with such term ending December 31, 2017; be it

RESOLVED, That the Retirement Board hereby reappoints Mr. Bukowski to a three-year term as a member of the Investment Advisory Committee effective, January 1, 2018.

5. Re-Appointments to Real Estate Advisory Committee

a. Paul Dolinoy

Upon motion of M. Masse, seconded by P. Farfaglia, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

WHEREAS, The term of Mr. Paul Dolinoy as a member of the Real Estate Advisory Committee expires on December 31, 2017; be it

RESOLVED, That the Retirement Board hereby reappoints Mr. Dolinoy to a three-year term as a member of the Real Estate Advisory Committee effective January 1, 2018.

b. Blake Eagle

Upon motion of M. Masse, seconded by P. Farfaglia, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

WHEREAS, The term of Mr. Blake Eagle as a member of the Real Estate Advisory Committee expires on December 31, 2017; be it

RESOLVED, That the Retirement Board hereby reappoints Mr. Eagle to a three-year term as a member of the Real Estate Advisory Committee effective January 1, 2018.

c. Jill Hatton

Upon motion of M. Masse, seconded by P. Farfaglia, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

WHEREAS, The term of Ms. Jill Hatton as a member of the Real Estate Advisory Committee expires on December 31, 2017; be it

RESOLVED, That the Retirement Board hereby reappoints Ms. Hatton to a three-year term as a member of the Real Estate Advisory Committee effective January 1, 2018.

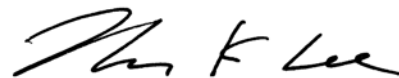
6. Update to Investment Policy Manual

Upon motion of M. Masse, seconded by O. Robinson, the members of the Investment Committee voted unanimously to recommend the following resolution to the Retirement Board:

RESOLVED, That the Investment Policy Manual, as presented to the Retirement Board reflecting changes through October 2017 is approved and accepted.

There being no other business and upon motion of M. Masse, seconded by O. Robinson and unanimously carried, the meeting adjourned at 1:30 p.m.

Respectfully submitted,



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Thomas K. Lee