

THE INVESTMENT COMMITTEE
OF THE
MARYLAND STATE RETIREMENT AND PENSION SYSTEM

MINUTES OF OPEN MEETING

May 15, 2018

The Investment Committee convened on Tuesday, May 15, 2018 at 9:17 a.m. in the 16th Floor Board Room of the State Retirement Agency, SunTrust Building, 120 E. Baltimore Street, Baltimore, MD.

Committee Members	Michael K. Barry	Larry E. Jennings, Jr.
Attending:	David Brinkley	Charles W. Johnson
	Eric Brotman	Stephen Kitsoulis
	Peter Franchot	Nancy K. Kopp
	David Hamilton	Theresa Lochte
	James Harkins	Richard Norman
	Linda A. Herman, Vice-Chair	Douglas Prouty
	Sheila Hill	Michael J. Stafford, Jr.
	F. Patrick Hughes, Chairman	
Also Attending:	Susanne Brogan	Dean Kenderdine
	Antionette Butcher	Andrew Palmer, CIO
	Justin Hayes	

Mr. Hughes, Chairman, called the Investment Committee meeting to order at 9:17 a.m.

Item 7: Ratification of Open Session Minutes

On a motion made by Ms. Hill and seconded by Mr. Prouty, the Investment Committee ratified the February 20, 2018 open meeting minutes.

Item 8: Review of the Criteria for the Chief Investment Officer's Evaluation CIO Evaluation Form

After a brief discussion, and on a motion made by Ms. Lochte and seconded by Mr. Johnson, the Investment Committee unanimously approved the CIO Evaluation Form.

CLOSED SESSION

On a motion made by Ms. Hill and seconded by Ms. Lochte, the Investment Committee voted without objection to meet in closed session at 9:21 a.m. for the purposes of: (a) interviewing candidates for the position of Public Advisor to the Investment Committee, pursuant to General Provisions Art., Section 3-103(a)(1)(i), the exercise of an administrative function and General Provisions Art., Section 3-305(b)(1)(i), the appointment, employment, assignment, promotion, discipline, demotion, compensation, removal, resignation, or performance evaluation of appointees, employees, or officials over whom it has jurisdiction; (b) selecting a candidate for the position of Public Advisor to the Investment Committee for recommendation to the Board of Trustees, pursuant to General Provisions Art., Section 3-103(a)(1)(i), the exercise of an administrative function and General Provisions Art., Section 3-305(b)(1)(i), the appointment, employment, assignment, promotion, discipline, demotion, compensation, removal, resignation, or performance evaluation of appointees, employees, or officials over whom it has

jurisdiction; (c) receiving advice from counsel regarding a proposed policy on political contributions and placement agents in the Investment Policy Manual, pursuant to General Provisions Art., Section 3-305(b)(7), to consult with counsel to obtain legal advice; and (d) reviewing the closed session Investment Committee minutes, pursuant to General Provisions Art., Section 3-103(a)(1)(i), the exercise of an administrative function.

On a motion made by Mr. Brotman and seconded by Mr. Norman, the Investment Committee returned to open session at 11:05 a.m.

OPEN SESSION

Committee Members
Attending:

Michael K. Barry
David Brinkley
Eric Brotman
Peter Franchot
David Hamilton
James Harkins
Linda A. Herman, Vice-Chair
Sheila Hill
F. Patrick Hughes, Chairman

Larry E. Jennings, Jr.
Charles W. Johnson
Stephen Kitsoulis
Nancy K. Kopp
Theresa Lochte
Richard Norman
Douglas Prouty
Michael J. Stafford, Jr.

Also Attending:

Victor Adekoya
Phillip Anthony (MLIS)
Anish Bedi
Frank E. Benham (Meketa)
Susanne Brogan
Robert Burd, Deputy CIO
Elizabeth Burton
Antionette Butcher
Craig Chaikin (Segal)
Rachel Cohen, OAG
James DiGiuseppe (Wellington Mgmt.)
Eric Farls
David Ferguson
Anne Gawthrop
Michael Golden
Dimitri Grechenko
Will Green (Loop Capital)
Alex Harisiadis, OAG
Justin Hayes
Levar Hewlett
Dana Johns
Faina Kashtelyan

Gregory Kasten
Dean Kenderdine
Colleen Kraw (Alex Brown)
Michael McCord
Mary Mustard (Meketa)
Stephen Muturi
Sylvia Owens (Aksia)
Andrew Palmer, CIO
Stephen Reilly
David Rongione, Chief Internal Auditor, Internal Auditing Div.
Michael Rubenstein, (MLIS)
Dan Schick
Jody Shaw, OAG
Frederick "Beau" Smith
Toni Voglino
Jim Vos (Aksia)
Laura Vykol (MLIS)
Patricia Wild
Jennifer Wildeman (Aksia)
Alex Zlotnikov

Item 9: Review of the Optional Retirement Program

Mr. Burd, along with Craig Chaikin from Segal Marco Advisors, presented recommended changes to the investment options in the Optional Retirement Program (ORP).

Mr. Stafford noted that the ORP investment line-up consists of equity and fixed income options, with no uncorrelated options, such as gold and REITs. He stated that it might make sense to offer options that exhibit different risk and return characteristics than stocks and bonds. Ms. Herman indicated that these non-traditional investment options can be accessed through the self-directed brokerage services offered by the two vendors. Mr. Palmer asked Mr. Chaikin what the experience has been with other plans that offer self-directed brokerage options. Mr. Chaikin replied that utilization rates are typically between 1-5%.

Treasurer Kopp asked if participants were notified of the self-directed brokerage service, and if participants are surveyed to determine product and service satisfaction levels. Mr. Burd replied that participants were notified of the new brokerage service in the fall of last year. He also indicated that a small number of participants from both Fidelity and TIAA were taking advantage of the self-directed brokerage. Mr. Burd also explained that Segal distributed satisfaction surveys to campus benefits coordinators, and not to participants due to the large size of the participant base.

The ORP recommendations are summarized below:

Fidelity Recommendations:

1. Approve the change in share class for the Fidelity Diversified International fund from existing ticker FDIKX to new ticker FKIDX.
 - a. Replacement is recommended due to the lower net expense ratio (0.60% vs. 0.62%).
 - b. Existing assets and future contributions should be mapped to the new share class FKIDX.
2. Replace the Franklin Mutual Global Discovery fund with the AQR Global Equity fund (AQGIX).
 - a. Replacement is recommended due to Franklin's lagging performance relative to the benchmark and peers.
 - b. Existing assets and future contributions should be mapped from the Franklin Mutual Global Discovery fund to the new AQR Global Equity fund (AQGIX).
3. Replace the Neuberger Berman Socially Responsive fund with the Vanguard FTSE Social Index Fund (VFTSX).
 - a. Replacement is recommended due to Neuberger Berman's lagging performance relative to the benchmark and peers.
 - b. Existing assets and future contributions should be mapped from the Neuberger Berman Socially Responsive fund to the new Vanguard FTSE Social Index Fund (VFTSX).

TIAA Recommendations:

1. Approve the change in share class for the Vanguard Inflation-Protected Securities fund from existing ticker VAIPX to new ticker VIPIX.
 - a. Replacement is recommended due to the lower expense ratio (0.07% vs. 0.10%).
 - b. Existing assets and future contributions should be mapped to the new share class VIPIX.
2. Remove the existing CREF Money Market Account from the fund line-up.
 - a. Replacement is recommended due to the higher net expense ratio of 0.13%, relative to the existing Vanguard Treasury Money Market fund, which has an expense ratio of 0.09%.

- b. Existing eligible assets and future contributions should be mapped to the existing Vanguard Treasury Money Market fund.
3. Remove the existing CREF Equity Index Account (Russell 3000) from the fund line-up.
 - a. Replacement is recommended due to the higher net expense ratio of 0.13%, relative to the existing Vanguard Institutional Index (S&P 500), which has an expense ratio of 0.04%.
 - b. Existing eligible assets and future contributions should be mapped to the existing Vanguard Institutional Index fund.
 - c. While the two funds do not manage to the same index, their compositions are similar, with the S&P 500 constituting roughly 80% of the Russell 3000.

Mr. Brotman made a motion to adopt all recommendations as presented; Mr. Johnson seconded the motion; the Committee voted unanimously in favor.

Item 10: Asset Allocation Review

Frank Benham from Meketa Investment Group provided a comparison of the current policy relative to peers. Mr. Benham noted that the System has more exposure to emerging markets equity; less to U.S. equity; more to Private Equity and more to absolute return strategies.

Mr. Benham discussed the efficient frontier, comparing the current graph to the one in 2009. He noted the change in the risk/return relationship over time, with the 2018 efficient frontier generally being lower than in 2009, which results in an environment of lower returns for the same or more risk. Mr. Benham stated that the risk the plan is taking today are not compensating the plan as well as they were in 2009.

Mr. Benham also discussed alpha potential in the various asset classes and the total fund using different assumptions about staff's ability to select skilled managers. He also discussed various measures of risk, including value at risk, scenario analysis, stress testing, factor exposures, and liquidity risk.

Mr. Benham discussed the System's current asset allocation, and noted that the expected return of the total fund was 7.73% at a risk level of 13.2%, which is lower than the 7.98% expected return using 2017 capital market assumptions. Given that nothing material has changed since the 2017 asset allocation review, Meketa did not propose any changes to the policy portfolio at this time. However, Meketa did recommend changes to two asset class benchmarks. Meketa proposed changing the strategic long-term policy benchmark of the Absolute Return portfolio from 3-month T-bill + 500 bps to 3-month T-bill + 400 bps to reflect the more defensive nature of the program structure. This change is also consistent with peer benchmarks for the asset class, as well as with Meketa's long-term expectations for a portfolio composed in the manner that staff intends to structure it. The implementation policy benchmark of HFRI Fund of Funds Conservative + 100 bps remains unchanged. Meketa also proposed changing the weights of the Real Return benchmark, using a static weight of 4.0% for the natural resources and infrastructure portions of the policy benchmark. The dynamic weighting scheme of the real estate component will not change.

On a motion made by Ms. Hill to adopt all recommendations as presented; and seconded by Mr. Johnson; the Committee voted unanimously in favor.

Item 11: Meketa Reports

Mr. Benham and Mary Mustard from Meketa Investment Group presented the first quarter of 2018 performance update and current market overview to the Committee. Ms. Mustard noted that the System returned 0.5%, net of fees, during the first quarter of 2018, outperforming the policy benchmark by 0.4%. For the quarter, active management within international emerging market equities and U.S. credit was additive to performance. An underweight to nominal fixed income, as well as active management, also added value. A slight overweight to international developed equity detracted from performance.

Meketa also presented a management fee analysis for the last three fiscal years that showed an increase in the effective management fee from 65 basis points in fiscal year 2015, to 67 basis points in fiscal year 2017. Mr. Benham noted that while staff has been actively negotiating management fees across both public and private market managers in order to generate fee savings, the changes to the asset allocation over this period has resulted in higher allocations to more expensive asset classes, such as private equity and emerging markets. Mr. Benham explained that while overall fees are little changed over the last three fiscal years, the System has increased its ability to generate higher returns.

Mr. Brotman asked if the 67 basis points is for the entire pension plan. Mr. Benham confirmed that was the case. Mr. Jennings asked if it is unusual to see higher absolute return fees going from 95 bps to 127 bps while returns are lower. Mr. Jennings stated that hedge funds are the most liquid alternatives asset class with regards to restructuring. Mr. Benham replied that some of the strategies in the portfolio in fiscal year 2015 were not considered hedge funds, and had a lower fee structure, while one manager even waived fees for a year. Mr. Palmer added that fund of funds only show the fund of funds fees, not the fees of underlying hedge funds, understating the fees. Mr. Hughes encouraged staff to continue restructuring fees where possible, as the portfolio is showing positive signs in terms of fee trends.

Item 12: Investment Policy Manual

The Committee was asked to approve changes to the Investment Policy Manual. Mr. Kitsoulis noted that the definition of cash in the proposed changes was inconsistent with current policy language. Mr. Palmer acknowledged the error and replied the language would be amended to consistently define the cash benchmark as 3-month Treasury bills. Mr. Palmer replied that staff is asking for approval for the eight items. However, he indicated that these items can be deferred if the Committee would like more information. Ms. Herman expressed interest in how staff would evaluate managers' ability to incorporate ESG issues in their investment process and how staff would compare the risk and return expectations for economically targeted investments to other similar investments.

Ms. Herman made a motion to approve all recommended updates to the IPM with the exception of items 5 (ETI Policy) and 6 (risk management) and with the correction noted by Mr. Kitsoulis; Ms. Hill seconded the motion; the Committee voted unanimously in favor.

Presentation of Resolution

On behalf of the Board of Trustees, Treasurer Kopp and Comptroller Franchot presented Mr. Larry E. Jennings, Jr. with a resolution of the Board of Trustees in recognition of his years of service as a member of the Investment Committee.

Item 13: Report from CIO

Mr. Palmer provided an update on Investment Division initiatives and presented an update of plan performance. Mr. Palmer stated that as of 04/30/2018, the plan had a total asset value of \$51.9 billion, and a fiscal year-to-date return of 7.7%, outperforming the policy benchmark.

Mr. Hughes stated he was pleased with the position of the plan today relative to where it was fourteen years ago, and that Senate Bill 899, which provides the Board with greater governance authority, is a positive change for meeting the objectives of the System.

Item 14: Update from Aksia

Sylvia Owens, Jim Vos, and Jennifer Wildeman of Aksia, along with Ms. Burton, presented a review of the Absolute Return portfolio.

Ms. Burton noted that over a full market cycle, the Absolute Return portfolio has beaten the benchmark, is diversified and has historically provided downside protection. Ms. Burton explained that the portfolio has lagged the benchmark over the last few years mainly due to the significant equity component found in the benchmark.

Ms. Burton indicated that staff intends to add geographic diversification and diversifying strategies that position the portfolio to potentially earn higher returns, such as in the private markets and via opportunistic strategies. Mr. Barry questioned the defensive, low volatility structure of the Absolute Return portfolio given the hedging characteristics of the System's long duration of the bond portfolio. Mr. Palmer replied that staff's primary objective is to try to build a lower risk portfolio that can meet the objectives of the portfolio, since higher risk tends to be more equity-based with unstable correlations.

Mr. Franchot asked if the System invested with Peloris Jack. Mr. Palmer confirmed that the System invested \$150 million with Peloris Jack as part of the equity long/short portfolio within the public equity portfolio. Mr. Smith added that this manager has been terminated and is currently in redemption.

Mr. Franchot asked how many managers the System has fired in the last two years, and if the System has experienced significant losses in the process of redeeming. Mr. Franchot asked for the names of the funds that were terminated. Ms. Burton replied with several examples, including Hutchin Hill, Pine River and Mellon all having been redeemed. Ms. Burton stated that all of these managers were recommended by the consultant at the time of hire.

Mr. Stafford asked if we have attribution for the hedge fund portfolio and why there are small positions such as in Rock Creek. Ms. Burton replied that these positions are from legacy managers that are still in the redemption phase.

Ms. Wildeman stated that Aksia's client mix is roughly split between advisory and research clients. Aksia employs 70 research professionals and 21 portfolio professionals. Aksia has a large team supporting the System in areas of investment research and operational due diligence. All the research is available to staff online.

The contract between Aksia and the State of Maryland was finalized in January 2018. Aksia has reconciled Maryland's Absolute Return program return history and reviewed the program goals and objectives, and collaborated with staff on portfolio construction.

Aksia has taken on full re-underwriting of Maryland's portfolio holdings, looking to provide a fresh view on the managers, as both Aksia and staff look to diversify the portfolio. The pipeline has been established going forward. Aksia has the resources to serve as an extension of the staff in repositioning the portfolio.

Mr. Vos stated the 2017 and the first quarter of 2018 investment flows into hedge funds have turned positive on tailwinds of stronger performance. Positive performance in 2017 was followed by net inflows in the first quarter of 2018, with the exception of equity long/short. Outflow themes continue to be the result of a low volatility environment last year, characterized by little asset price dispersion and a difficult

environment for the active managers, along with frustration over the level of fees in relation to returns. With market valuations stretched, spreads residing near record lows, and the Federal Reserve on a rate tightening path, volatility is expected to rise.

Mr. Vos stated that with the current backdrop, the System's Absolute Return program should focus on low beta strategies with limited directionality, diversifying the diversifiers by adding complementary strategies and remaining flexible, opportunistic and patient while awaiting market dislocations. Macro and Commodity Trading Advisor strategies drove underperformance. The relative value allocation was a small position, while event driven has been doing well recently. Staff, along with consultant, will look to decrease and diversify existing large allocations.

Mr. Vos noted that currently, the portfolio's exposure to macro and CTA strategies generate 82% of portfolio volatility and represent 40% of position weighting. These exposures are expected to be reduced.

Mr. Barry asked what the timeline is to reposition the Absolute Return portfolio. He encouraged staff to proceed quickly as the current low volatility environment will likely turn at some point. He noted that the great hedge funds are well known to everyone and may be appropriate to consider for the portfolio. Mr. Palmer replied that repositioning takes time, as the staff's diligence process is lengthy and even when funds are approved, the duration of the legal negotiation process is uncertain. Mr. Palmer indicated that the re-structuring process is targeted to be largely completed by the second quarter of 2019.

Mr. Vos stated that the key is diversification and return over target. The portfolio would benefit from more opportunistic investing and geographic diversification. He also stated that the most successful hedge funds typically do not offer fee concessions. As a result, management fees could increase.

OPEN SESSION

During closed session, the Investment Committee discussed and took action on the following matters:

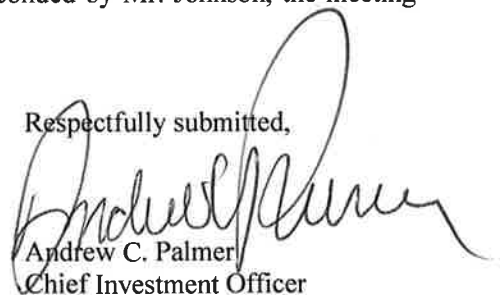
The Committee interviewed candidates for the position of public advisor and voted to recommend that the Board of Trustees appoint Kimberly Woods to serve as a public advisor of the Investment Committee.

The Committee received legal advice regarding a proposed political contributions and placement agents policy.

The Investment Committee reviewed and ratified the Closed Session minutes from the February 20, 2018 meeting.

Adjournment There being no further business before the Investment Committee, on a motion made by Mr. Brotman and seconded by Mr. Johnson, the meeting adjourned at 1:52 p.m.

Respectfully submitted,



Andrew C. Palmer
Chief Investment Officer