SPECIAL MEETING OF THE INVESTMENT COMMITTEE OF THE BOARD OF TRUSTEES

MARYLAND STATE RETIREMENT AND PENSION SYSTEM

MINUTES OF MEETING

June 20, 2017

The Investment Committee held a special meeting on Tuesday, June 20, 2017 at 9:02 a.m. in the 16th Floor Board Room of the State Retirement Agency, SunTrust Building, 120 E. Baltimore Street, Baltimore, MD.

Members

Eric Brotman

Linda Herman, Vice Chairman

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David Brinkley

Sheila Hill

Attending: James Bush, Jr.
James "Chip" DiPaula

Larry E. Jennings, Jr. Charles Johnson

Peter Franchot Kenneth Haines James Harkins Nancy K. Kopp Theresa Lochte Richard Norman

F. Patrick Hughes, Chairman

Members Not

Michael Barry

Attending:

David Hamilton

Stefan Strein

Also Attending:

Frank E. Benham, Meketa

Colleen Bower

Alan Bowser, Bridgewater

Susanne Brogan

Robert Burd, Deputy CIO

Elizabeth Burton Antionette Butcher Rachel Cohen, OAG

Eric Farls

David Ferguson

Jeff Gardner, Bridgewater

Anne Gawthrop Michael Golden

Dimitri Grechenko Alex Harisiadis, OAG

Keith Johnson, FAS / Cutter

(Reinhart)

Ken Johnson, FAS / Cutter

Faina Kashtelyan Dean Kenderdine Anne Keys, FAS / Cutter

Colleen Kraw, Alex Brown Jon Lukomnik, FAS / Cutter Alec MacGillis, Pro Publica

Michael McCord

Randy Miller, FAS / Cutter Mary Mustard, Meketa Jennifer O'Dell, Liuna Andrew Palmer, CIO

Stephen Reilly

Michael Rubenstein, MLIS

Dan Schick

Jody Shaw, OAG

Frederick "Beau" Smith

Shankar Subramanian, FAS /

Cutter

Dana Tagalicod, MLIS

Toni Voglino

Pat Wild

Kathleen Wherthey, OAG

Mr. Hughes called the meeting to order at 9:02 a.m.

Item 1: Minutes

On a motion made by Ms. Lochte and seconded by Mr. Brotman, the Investment Committee unanimously approved the May 16, 2017 open meeting minutes.

Item 2: CIO Report

Mr. Palmer introduced the interns (Sydney Coleman and Luke Brown).

Mr. Palmer indicated that he would discuss three items 1) performance, 2) real asset carbon exposure and 3) Asset Allocation.

On performance, Mr. Palmer discussed the total fund performance as noted on the tear sheet in the agenda. He informed the Committee that, as of May 31, 2017, the System was up 10.5% for the one-year and up 9.6% for the fiscal year-to-date. Month-to-date as of June 19, 2017, the System was up over 10% for the fiscal year. He also noted that relative performance against the policy benchmark was about 13 basis points behind the benchmark fiscal year-to-date. Mr. Palmer explained that the currency hedging program acted as a drag on performance as the dollar had weakened over the last quarter.

In discussing real asset carbon exposure, Mr. Palmer indicated that the document provided to the Committee was for informational purposes and reflected a continuation of staff's work to evaluate how to respond to the Paris Accord agreement and climate change more broadly. He discussed how carbon exposure was present in the allocations to natural resources, infrastructure, and commodities. He indicated that the changes contemplated in the asset allocation review would have little impact on the carbon footprint of the System's investments, but would change the nature of the types of carbon risk the System faces at the margin.

Mr. Palmer then provided some introductory comments on asset allocation, explaining that the asset allocation process was only one of the ways the System is engaged to improve returns. He cited the work the Investment Division staff was doing to lower fees and cost. Mr. Palmer mentioned the work of the internal management task force, introduced representatives from Cutter Associates and Funston Advisory Services, and explained how they were helping with the project. Mr. Palmer then explained that the additional exhibit on asset allocation provided to the Committee was procued to strengthen the staff's conviction around the policy recommendations. He indicated that there were a lot of positive aspects of option C that could be incorporated and that the staff took the suggestions of the Committee to develop policy B1 through B5.

Item 3: Report from Bridgewater Associations

Mr. Alan Bowser initially discussed the strategies that Bridgewater Associates manage for the System before introducing Mr. Jeff Gardner to give a presentation on leverage with reference to the exhibit provided to the Committee. Mr. Garner discussed how to add returns with modest amounts of leverage and the benefits and risks of leverage. Mr. Garner pointed out that the System already used leverage in the portfolio, even in public equities.

In discussing page 2 of the document, Mr. Garner explained Bridgewater's view that the System has few choices in the current investment environment: to accept the lower returns, to take on more risk, or to use leverage to create more diversification. Mr. Gardner discussed page 3 and explained how cash returns have changed over the years, requiring investors to take on more risk to make higher returns. Mr. Garner then discussed, with reference to page 4, how leverage is embedded in all asset classes, and illustrated, with reference to page 5, how investors take on more risk for higher returns. He discussed how each asset class has a correlation of risk and return. On page 10, Mr. Garner illustrated how the System's portfolio would have performed with an overlay of bonds to add leverage. It would have added about 50 bps and had a modest negative effect in down times.

Ms. Herman asked if Mr. Gardner could go over the difference between accounting leverage and economic leverage. He explained that economic leverage is taking on more risk, and accounting leverage is when an investor has exposure to more than what the investor own.

Mr. Hughes commented that some Committee members were concerned about adding accounting leverage.

Item 4: Asset Allocation Recommendation

Mr. Benham presented Meketa's recommended asset allocation. He directed the Committee to page 12 of the document provided to the Committee and pointed out that it now shows Option B, which was the original recommendation, along with options B1 through B5, which incorporates the suggestions of the Committee members.

Mr. Benham then discussed page 35 which outlined how the current policy would have done during positive financial scenarios, and that the current policy would be the least best option for capturing the upside of these positive historical events. Mr. Benham indicated that Meketa continues to recommend policy option B.

Mr. Palmer indicated that policy option B5 would focus on return with an eye on risk because it had many of the attributes of policy C, but did not use leverage explicitly. He also indicated that staff recommended policy option B5, but would support any of the other policies presented as

they reflected the risk tolerance of the Board. He believed that option B5 would be most appropriate to maintain a balance.

Mr. Hughes asked Mr. Palmer to comment on leverage in policy B5 compared to B. Mr. Palmer indicated that he thought there was room for more intentional use of leverage.

Mr. Brotman commented that he was having trouble getting comfortable adding more U.S. equity exposure after a nine-year run and that anything that would perform poorly under rising interest rates should not be increased. He indicated that adopted B5 would be doing what the Fed was warning investors against.

Ms. Herman stated that Investment Division staff should come back to the Committee with more information on zero coupon bonds and the effect on the portfolio in different scenarios, and then the Committee should vote on the allocation later, unless the Committee feels comfortable voting now.

Mr. Jennings commented that there was more leverage imbedded in the System's fund than discussed. He wanted to have more information about that leverage. He also stated a concern about increasing fixed income given that the Fed was likely to raise rates.

Mr. Hughes asked for a motion. Mr. Brotman pointed out page 37 and 12. He indicated that B2 provided the lowest level of standard deviation and moving to B5 would be poorly timed. He would suggest holding absolute return and not increase US equities advocated for B2. Mr. Brotman then moved to adopt policy option B2, and Comptroller Franchot seconded. Discussion followed.

Mr. Jennings said he would agree and noted that B2 and B5 both had interesting attributes. B5 offered more downside protection, and he questioned whether it was the right time to implement B5.

Mr. Palmer responded that staff would take advantage of the flexibility of the portfolio allocation with the targets and if needed to add U.S. equities.

Ms. Lochte commented that she did not see any change between B2 and B5.

Mr. Brinkley was concerned that the System would be increasing public equities, and Mr. Brotman explained that B2 would increase exposure to emerging markets and private equity, not U.S. equities.

Mr. Jennings asked if the CIO could add leverage without an asset allocation change.

Mr. Palmer discussed what he could do per the Investment Policy Manual, which has targets in each asset class. He explained that he could add leverage, but also felt constrained to maintain exposures within the range achievable through an unlevered portfolio equivalent.

The Committee, and the motion voted and all were in favor of B2 except Mr. Hughes, Ms. Herman and Mr. DiPaula.

Ms. Herman moved that staff provide additional information about leverage at the next Investment Committee meeting. The motion was seconded by Mr. Brinkley and passed unanimously.

Ms. Mary Mustard discussed the proposed benchmark changes on page 23. She indicated that the percentages would need to be tweaked due to the selection of policy B2.

On a motion made by Mr. Bush and seconded by Mr. Brotman, the Committee voted to accept the recommended benchmarks.

Item 5: Closed Session

On a motion made by Ms. Herman and seconded by Mr. Norman, the Committee voted to meet in closed session at 10:54 a.m. in the Board Room of the SunTrust Building at 120 East Baltimore Street for the purpose of reviewing the closed session Investment Committee minutes, pursuant to General Provisions Art., Section 3-103(a)(1)(i), the exercise of an administrative function.

Members	Eric Brotman David Brinkley	Linda Herman, Vice Chairman Sheila Hill
Attending:	James Bush, Jr.	Larry E. Jennings, Jr.
Attenumg.	James "Chip" DiPaula	Charles Johnson
	Peter Franchot	Nancy K. Kopp
		Theresa Lochte
	Kenneth Haines	
	James Harkins	Richard Norman
	F. Patrick Hughes, Chairman	
Members Not Attending:	Michael Barry David Hamilton	Stefan Strein
Also Attending:	Frank E. Benham, Meketa	Faina Kashtelyan
	Colleen Bower	Dean Kenderdine

Michael McCord

Stephen Reilly

Dan Schick

Mary Mustard, Meketa

Andrew Palmer, CIO

Susanne Brogan

Elizabeth Burton

Antionette Butcher

Rachel Cohen, OAG

Robert Burd, Deputy CIO

Eric Farls
David Ferguson
Anne Gawthrop
Michael Golden
Dimitri Grechenko
Alex Harisiadis, OAG

Jody Shaw, OAG Frederick "Beau" Smith Toni Voglino Pat Wild Kathleen Wherthey, OAG

During closed session, the Investment Committee took action on the following matter:

On a motion made by Ms. Lochte and seconded by Mr. Bush, the Investment Committee unanimously approved the May 16, 2017 meeting closed session minutes.

On a motion made by Mr. Bush and seconded by Mr. Brotman, the Investment Committee motioned to come out of closed session and return to open session at 10:55 a.m.

Adjourn Meeting

On a motion made by Mr. Johnson and seconded by Ms. Lochte, the Investment Committee adjourned at 10:55 a.m.

Respectfully submitted,

Chief Investment Officer