July 18, 2017

The Board of Trustees for the Maryland State Retirement and Pension System met in the Board Room of the SunTrust Building, 120 East Baltimore Street, 16th Floor Board Room, Baltimore, Maryland beginning at 11:45 a.m.

The Trustees present included:

Nancy K. Kopp, Chairman, Presiding

Peter Franchot, Vice Chairman

David Brinkley

Eric Brotman (via phone)

James Bush, Jr. Kenneth Haines David Hamilton

James Harkins (via phone) Linda Herman (via phone)

Sheila Hill

F. Patrick Hughes Charles Johnson Theresa Lochte Richard Norman

Agency Staff members attending included: R. Dean Kenderdine, Executive Director/Board Secretary

Robert Burd

Angie Jenkins

Harvey Raitzyk

Melody Countess Anne Gawthrop

Van Lewis Michelle Lowery Ken Reott Ben Robb

Michael Golden

Kimberly O'Keeffe

David Rongione

Ira Greenstein

Andrew Palmer

Janet Sirkis

Assistant Attorneys General present included: Rachel Cohen, Jody Shaw and Kathleen Wherthey

Other attendees included: Susanne Brogan, John Kenney, Brad Armstrong, Brian Murphy, Phillip Anthony, Nathan Bowen, James McKitrick and Michael Rubenstein.

Consent Agenda

On a motion made by Ms. Hill and seconded by Mr. Hughes, the Board approved the consent agenda, which included the:

June 20, 2017 Open Meeting Board Minutes

FY2018 Committee Assignments

Chairman Kopp requested that the committee assignments be deferred until September, to allow her time to consult further with Vice-Chairman Franchot and members of the Board.

On a motion made by Ms. Hill and seconded by Mr. Norman, the Board deferred the approval of the FY2018 committee assignments until September.

Recommendation of the Investment Committee regarding the changes to the Investment Policy Manual Mr. Hughes, Chairman of the Investment Committee reported that the Committee voted to approve, for recommendation to the Board, changes to the Investment Policy Manual (IPM) concerning and in connection with the recent changes to the system's asset allocation. (See Attachment A - red-lined changes to the IPM).

On a motion made by Mr. Hughes and seconded by Mr. Haines, the Board approved the Investment Committee's recommended changes to the Investment Policy Manual concerning and in connection with the asset allocation.

July 18, 2017

Report from the Ad
Hoc Committee on
Actuarial
Valuations and
Economic
Assumptions
regarding the
System's Assumed
Rate of Return

Mr. Hughes, Chairman of the Ad Hoc Committee reported that the Committee met four times since August 30, 2016 and at its meeting on June 26, 2017, on the basis of all data inputs on inflation and real return, as well as the asset allocation decision of the Board, the Ad Hoc Committee voted to bring forward three options to present to the Board for discussion:

Option 1

Remain at 7.55%

Option 2

➤ Reduce discount rate over six years by 5 basis points (bps) per year, so System would reach 7.25% for the 2022 valuation/2024 budget year contribution rates; and maintain the inflation assumption at 2.70%.

Option 3

Reduce the discount rate over six years by 5bps per year, so System would reach 7.25% for the 2022 valuation/2024 budget year contribution rates; and reduce the inflation assumption from 2.70% to 2.65% for the 2017 valuation/2019 budget year contribution rate, and reduce again to 2.60% for the 2018 valuation/2020 budget year contribution rate and thereafter.

Brian Murphy and Brad Armstrong from Gabriel Roeder Smith & Company (GRS), the System's actuary presented to the Board several charts with projected contribution rates, employer contribution dollars, and funded ratios. The charts also provided probabilities of achieving each of the three options, as calculated by Meketa Investment Group.

Mr. Kenderdine commented that many of our peers have lowered their assumed rate of return, placing Maryland now above the median.

After further discussion, on a motion made by Mr. Brotman and seconded by Mr. Hughes, the Board voted to reduce the assumed rate of return by 5bps per year and reduce the inflation assumption from 2.70% to 2.65% for the 2017 valuation/2019 budget year contribution rate, and reduce again to 2.60% for the 2018 valuation/2020 budget year contribution rate, and revisit this issue no later than 2 years from implementation, in connection with the upcoming scheduled experience study. Ms. Herman opposed the motion.

Mr. Herman asked if it was a requirement for the Board to review the assumed rate of return every year.

Mr. Kenderdine responded that the Board is required to review the economic as well as demographic assumptions every five years through an experience study.

July 18, 2017

Status Report on Benefits Administration Harvey Raitzyk presented to the Board of Trustees a performance report as of June 2017, which gave a detailed overview of the Benefits Administration unit.

Mr. Raitzyk reported that there were no new backlogs and that the division currently had ten vacation positions, six of which are in the Data Control Unit.

Chairman Kopp asked if the Agency was doing everything to fill vacancies.

Mr. Kenderdine responded that the Agency is in constant recruitment mode.

Chief Investment Officer's Report

Andrew Palmer provided the Board with a preliminary summary of the fund as of June 30, 2017, which indicated that the total fund value was \$49.0 billion.

Mr. Palmer reported that once he receives the final numbers, staff will post the updated report to Director's Desk.

Executive Director's Report

Mr. Kenderdine provided the Board with a preliminary agenda for the Board Education Session being held on Tuesday, August 15, 2017 at 8:30 a.m. at the Maritime Conference Center.

Mr. Kenderdine provided to the Board a memorandum concerning the Agency's Death Match process.

Mr. Kenderdine announced that the System has been awarded \$20,064,286.00 from a \$75 million settlement that was secured by the Maryland Office of the Attorney General (OAG) for Maryland governmental investors. The OAG's settlement resolved allegations against Bank of America and others for unlawfully packaging marketing, issuing and selling residential mortgage backed securities that contained toxic mortgages.

Mr. Kenderdine reported that Janet Sirkis had emailed the Board forms for the evaluation of the Chief Investment Officer and that hard copies were available.

Presentation of Resolutions

On behalf of the Board of Trustees, Treasurer Kopp and Comptroller Franchot presented Mr. Kenneth Haines with a Board resolution in recognition of his years of service as Trustee to the System.

On behalf of the Board of Trustees, Treasurer Kopp and Comptroller Franchot presented Mr. James Bush, Jr. with a Board resolution in recognition of his years of service as Trustee to the System.

July 18, 2017

On a motion made by Mr. Hughes and seconded by Ms. Lochte, the Board voted to meet in a Closed Session, beginning at 12:50 p.m., in the Board Room of the SunTrust Building at 120 East Baltimore Street, 16th Floor, for the purpose of:

- a. reviewing the closed session Board minutes, pursuant to General Provisions Art., § 3-103(a)(1)(i), the exercise of an administrative function;
- b. reviewing the Medical Board reports regarding the individual participants' claims for disability retirement benefits, pursuant to General Provisions Art., § 3-305(b)(13), to comply with a specific statutory requirement that prevents public disclosures about a particular proceeding or matter, namely, General Provisions Art., § 4-312 regarding the prohibition on disclosing retirement records, and General Provisions Art., § 4-329 regarding the prohibition on disclosing medical and psychological information;
- c. discussing the recommendation of the Investment Committee regarding the Request for Proposals for Optional Retirement Program Defined Contribution Plan Recordkeeping and Administrative Services, pursuant to General Provisions Art., § 3-305(b)(14), to discuss before a contract is awarded or bids are opened, a matter directly related to a negotiating strategy or the contents of a bid or proposal, if public discussion or disclosure would adversely impact the ability of the public body to participate in the competitive bidding or proposal process and General Provisions Art., § 3-305(b)(13), to comply with a specific statutory imposed requirement that prevents public disclosures about a particular proceeding or matter, namely, General Provisions Art., § 4-335, regarding the protection of confidential commercial information; and
- d. discuss overpayments of retirement benefits to individual participants, pursuant to General Provisions Art., General Provisions Art., § 3-305(b)(13), to comply with a specific statutory requirement that prevents public disclosures about a particular proceeding or matter, namely, General Provisions Art., § 4-312 regarding the prohibition on disclosing retirement records.

CLOSED SESSION

The Trustees present included: Nancy K. Kopp, Chairman, Presiding Peter Franchot, Vice Chairman

David Brinkley

Eric Brotman (via phone)

James Bush, Jr. Kenneth Haines David Hamilton James Harkins (via phone) Linda Herman (via phone)

Sheila Hill

F. Patrick Hughes Charles Johnson Theresa Lochte Richard Norman

Agency Staff members attending included: R. Dean Kenderdine, Executive Director/Board Secretary

Robert Burd

Angie Jenkins

Harvey Raitzyk

Melody Countess

Van Lewis

Kenneth Reott

Anne Gawthrop

Michelle Lowery

David Rongione

Michael Golden

Kimberly O'Keeffe

Janet Sirkis

Assistant Attorneys General present included: Rachel Cohen, Jody Shaw and Kathleen Wherthey

July 18, 2017

Other attendees included: Susanne Brogan and John Kenney

On a motion made by Mr. Haines and duly seconded, the Board returned to open session at 12:57 p.m. in the Board Room of the SunTrust Building at 120 East Baltimore Street, 16th Floor.

OPEN SESSION

During closed session, the Board of Trustees discussed and took action on the following matters:

Closed Session Minutes

The Board reviewed and approved the June 20, 2017 closed session

minutes.

Medical Board Reports

The Board reviewed and adopted the medical board reports from June

22, June 28, July 6 and July 12, 2017.

Recommendation of the Investment Committee regarding the Request for Proposals for Optional Retirement Program – Defined Contribution Plan Recordkeeping and The Board reviewed and approved the Investment Committee's recommendation regarding the selection of vendors to provide recordkeeping services for the Optional Retirement Program (ORP), subject to satisfactory completion of contract negotiations.

OPEN SESSION – APPEALS AND HEARINGS

The Trustees present included: Peter Franchot, Vice-Chairman, Presiding

Administrative Services

James Bush, Jr. Kenneth Haines

James Harkins (via phone)

Linda Herman (via phone)

F. Patrick Hughes Theresa Lochte Richard Norman

Agency Staff members attending included: R. Dean Kenderdine, Executive Director/Board Secretary
Angie Jenkins Harvey Raitzyk Janet Sirkis

Assistant Attorneys General attending included: Rachel Cohen, Carla Goldman Katzenberg, Jill R. Leiner and Kathleen Wherthey

Other attendees included: John Kenney

Brenda Hill

The Board considered the recommendation of the Administrative Law Judge in connection with the claim of Ms. Brenda Hill for <u>ACCIDENTAL DISABILITY</u> retirement benefits. The Administrative Law Judge's report, a report by the Medical Board, and all related documents submitted by the parties were presented.

July 18, 2017

Ms. Hill appeared to oppose the Agency's position and the Administrative Law Judge's recommendation. Carla Goldman Katzenberg, attorney for the Agency, addressed the Board and argued that the Board should adopt the Administrative Law Judge's recommendations.

Following discussion, the Board deferred further consideration to Closed Session.

Tyrone Hicks

The Board considered the recommendation of the Administrative Law Judge in connection with the claim of Mr. Tyrone Hicks for <u>DISABILITY</u> retirement benefits. The Administrative Law Judge's report, a report by the Medical Board, and all related documents submitted by the parties were presented.

Mr. Hicks appeared to oppose the Agency's position and the Administrative Law Judge's recommendation. Jill R. Leiner, attorney for the Agency, addressed the Board and argued that the Board should adopt the Administrative Law Judge's recommendations.

Following discussion, the Board deferred further consideration to Closed Session.

Janice Allen

The Board considered the recommendation of the Administrative Law Judge in connection with the claim of Ms. Janice Allen for DISABILITY retirement benefits. The Administrative Law Judge's report, a report by the Medical Board, and all related documents submitted by the parties were presented.

Bruce Bender, Esq. and Ms. Allen (via phone), appeared to oppose the Agency's position and the Administrative Law Judge's recommendation. Carla Goldman Katzenberg, attorney for the Agency, addressed the Board and argued that the Board should adopt the Administrative Law Judge's recommendations.

Following discussion, the Board deferred further consideration to Closed Session.

Ronald Dominique

The Board considered the recommendation of the Administrative Law Judge in connection with the claim of Mr. Ronald Dominique for ACCIDENTAL DISABILITY retirement benefits. The Administrative Law Judge's report, a report by the Medical Board, and all related documents submitted by the parties were presented.

Neither Mr. Dominique nor anyone authorized to represent the claimant appeared to oppose the Agency's position and the Administrative Law Judge's recommendation. Carla Goldman Katzenberg, attorney for the Agency, addressed the Board and argued that the Board should adopt the Administrative Law Judge's recommendations.

Following discussion, the Board deferred further consideration to Closed Session.

July 18, 2017

On a motion made by Mr. Hughes and duly seconded, the Board voted to meet in a Closed Session (2:13 p.m.) in the Board Room of the SunTrust Building at 120 East Baltimore Street, 16th Floor, for the purpose of:

1. considering the disability appeals pursuant to General Provisions Art., § 3-103(a)(1)(iii), the exercise of a quasi-judicial function.

CLOSED SESSION - APPEALS AND HEARINGS

The Trustees present included:
Peter Franchot, Vice-Chairman, Presiding
James Bush, Jr.
Kenneth Haines
James Harkins (via phone)

Linda Herman (via phone)
F. Patrick Hughes
Theresa Lochte
Richard Norman

Agency Staff members attending included: R. Dean Kenderdine, Executive Director/Board Secretary Angie Jenkins Harvey Raitzyk Janet Sirkis

Assistant Attorneys General attending included: Rachel Cohen and Kathleen Wherthey

Other attendees included: John Kenney

On a motion made by Mr. Hughes and seconded by Mr. Bush, the Board returned to open session at 2:16 p.m.

During closed session, the Board of Trustees discussed and took action on the following disability appeals:

The Board voted to <u>ADOPT</u> the Administrative Law Judge's Proposed Decision and <u>DENY</u> Brenda Hill's request for accidental disability benefits.

<u>Tyrone Hicks</u>
The Board voted to <u>AFFIRM</u> the Medical Board's Decision and <u>DENY</u> Tyrone Hicks' request for disability benefits.

<u>Janice Allen</u>
The Board voted to <u>AFFIRM</u> the Medical Board's Decision and <u>DENY</u> Janice Allen's request for disability benefits.

Ronald Dominique
 Dominique
 The Board voted to ADOPT the Administrative Law Judge's Proposed Decision and DENY Ronald Dominique's request for accidental disability benefits.
 Adjournment
 There being no further business before the Board, on a motion made by Mr.

There being no further business before the Board, on a motion made by Mr. Hughes and seconded by Mr. Bush, the meeting adjourned at 2:17 p.m.

Respectfully submitted,

R. Dean Kenderdine Secretary to the Board

INVESTMENT POLICY MANUAL

for the

Board of Trustees

of the

MARYLAND STATE RETIREMENT

and

PENSION SYSTEM

STATE RETIREMENT AGENCY

Policy Benchmark Effective October July 1, 20176 (1)

Asset Category	Policy Benchmarks ⁴		Percentage Contribution to Benchmark	Implementation Benchmarks(4)
Growth/Equity	Public Equity	434% Russell 3000 Index, 2733% MCSI World Ex- U.S., 3022% MSCI EM	3 <u>7</u> 6% ⁽²⁾	
	Private Equity	MSCI ACWI + 200 bp	131% (2)	State Street Private Equity Composite
Rate Sensitive	5348% Barclays Long-Term Government, 134% Barclays Securitized, 134% Barclays Corporate, 214% Barclays U.S. TIPS		1921% ⁽³⁾	Composite
	7867% U.S., 2233% Non-U.S.		9%	
	U.S. Credit	80% Barclays U.S. High Yield, 20% S&P/LSTA Leveraged Loan		
Credit	*	50% Bloomberg/Barclays EM Local Gov't -30bp, JP Morgan GBI-EM Global		
Crean	Non-U.S. Credit	Diversified, 25% Bloomberg/Barclays EM Hard Sovereign, JP Morgan EMBI Global Diversified,		
=		25% Bloomberg/Barclays EM USD Agg Corp JP Morgan CEMBI Broad		
Real Assets	7167% RE, 20% Commodities, 2913% NR/IS		145% (3)	Dynamically weighted: RE, Commodities and NR/IS
	Real Estate	85% NCREIF ODCE (1 quarter lag, gross), 15% FTSE APRA/NAREIT Developed (net)	±	and ITIVID
	Commodities	Bloomberg Commodity Index	*	
	Natural Resources & Infrastructure	CPI-U + 500 bps (10% cap)	,	6075% S&P Global Natural Resources, 4025% DJ-Brookfield Infrastructure
Absolute Return	3-Month T-Bill + 500 bps	500 bps3-Month-T-Bill+	8%	HFRI Fund of Funds Conservative + 100 bp

Notes:

- 1. These benchmarks are effective as of October July 1, 20176.
- 2. The uninvested portion of Private Equity will be allocated to Public Equity until the target allocation is reached.
- 3. The uninvested portion of Real Assets Estate will be allocated to the Rate Sensitive category until the target allocation is reached.
- 4. The Implementation Benchmark uses the System's target allocation for each asset class and compares it to the index that is the most appropriate benchmark for shorter-term tracking error. It should be used as a measure of Staff's ability to implement the System's policy benchmark. The Policy Benchmarks can be used to evaluate the asset allocation policy decisions made by the Board of Trustees.

POLICIES that GOVERN SELECTION and RETENTION of INVESTMENTS

I. ASSET ALLOCATION

A. Strategic Asset Allocation Policy

Policy Statement:

The Board shall manage investment risk and provide strategic guidance through asset allocation.

Policy Guidelines:

- 1. The Board shall review the System's asset allocation on an annual basis in order to determine if it is necessary to conduct a formal asset allocation study.
- 2. The Board shall review whether there have been significant changes with regard to (1) the economic environment, (2) the Board's objectives, and (3) other considerations affecting the current asset allocation.
- 3. The Board will conduct a formal asset allocation study at least every two years in order to determine its strategic asset allocation targets and ranges, as well as changes to overall policy.
- 4. The Board must adopt the asset allocation recommendation by a vote of the majority.
- 5. The formal asset allocation study shall incorporate both the asset and the liability sides of the equation. The Board shall weigh three competing liability-oriented objectives when making asset allocation determinations. The importance weightings assigned to each of these three objectives by the Board shall determine the risk profile of the System. The liability-oriented objectives are:
 - Achieve and maintain a fully funded pension plan.
 - Minimize contribution volatility year to year.
 - Achieve surplus assets.

These liability-oriented performance objectives recognize that liabilities must be paid in full and in a timely manner. The liabilities are the future claims of the System's participants. The actuarial rate of interest is used to discount the future value of the System's liabilities and to calculate the System's funded ratio.

As private market managers frequently have multiple years to invest committed capital and capital may well be returned to investors from recapitalizations or realizations over that period, the System will need to commit more than its total asset allocation to reach and maintain the targeted invested exposure in private markets. As it takes time for

7. The Board approved long-term strategic asset allocation targets, ranges and constraints effective October July 1, 20176 are as follows:

Asset Class	Target as of	Range (in Percentage	Constraints*
	10/1/171	Points)	
Growth/Equity	<u>50</u> 47%		Public Equity:
U.S. Equity	16%	+/- <u>7</u> 5	Hedge Funds: 0-20%
International Developed Equity	1 <u>0</u> 2%		Private Equity:
International Emerging Markets	118%		Buyout 60-90%
Private Equity	1 <u>3</u> 4%		Venture/Growth 10-25% Special Situations 10-30%
Rate Sensitive	1921%		
Long-Term Government Bonds	10%	+/- 5 ²	Long-Term Gov't: 30-70% Securitized/Corp: 10-50% Inflation-Linked: 0-40%
Securitized Bonds	2.53%		
Corporate Bonds	2.53%		
Inflation-Linked Bonds	45%		
Credit	9%	+/- 4	Hedge Funds: 0-30% Private Credit: 0-50%
High Yield Bonds & Bank	76 %		
Loans			
Emerging Market Debt	23%		
	145%		Commodity Hedge Funds:
Real Assets	10%	+/- 4 ²⁺	0-50%
Real Estate	3%		Real Estate:
Commodities	42 %		Core 50-80%
Natural Resources &			Value Add 0-25%
Infrastructure			Opportunistic 0-25%
initusti uotui e			REITs 0-30%
			Commodities 0-25%
Absolute Return	8%	+/- 4	
TOTAL ASSETS	<u>100%</u>		

¹ The target allocation noted is the long-term target after the transition period has been completed. The ranges for the Real Assets and Rate Sensitive asset categories are based on transitional targets until Real Estate reaches its target allocation.

The ranges for the Real Assets and Rate Sensitive asset categories are based on transitional targets until Real Assets reaches its target allocation.

^{*} The total exposure to Hedge Funds, as defined in Appendix B, is limited to 16% of the total fund. This cap is inclusive of the Hedge Funds in the Absolute Return asset class, as well as in the other asset classes.