

THE INVESTMENT COMMITTEE
OF THE
MARYLAND STATE RETIREMENT AND PENSION SYSTEM

MINUTES OF OPEN MEETING

February 15, 2022

The Investment Committee convened on Tuesday, February 15, 2022 at 9:00 a.m., via video-conference call with the host site at the Maryland State Retirement Agency, Truist Building, 120 East Baltimore Street, 16th Floor, Board Room, Baltimore, Maryland.

Committee Members	Michael K. Barry	Richard Norman
Attending:	David Brinkley, Vice-Chair	Douglas Prouty
	James Daley, Jr.	Anne L. Shelton
	Dereck Davis	Michael J. Stafford, Jr., Chairman
	Peter Franchot	Lamont Tarbox
	Sheila Hill	
Also Attending:	Jihwan Baek	Greg Kasten
	Michael Baker	Larry Katsafanas
	Anish Bedi	Michael Klos
	Frank Benham (Meketa)	Ratna Kota
	Jonathan Blicher	Charles Lee
	Colleen Bower	Michael McCord
	Tom Brandt, Jr. (Trustee)	Nitin Mathew
	Robert Burd, Deputy CIO	Kyongdo Min
	Alex Butler	Mary Mustard (Meketa)
	Antionette Butcher	Stephen Muturi
	Rachel Cohen, OAG	Minh Nguyen
	Melody Countess	Martin Noven, Exec. Director
	Michael Dalton (Quantum Energy)	MSRA Stream
	Jane Daniel	Ashu Pal
	Mike Fang	Andrew Palmer, CIO
	Eric Farls	Steven Pytlar
	David Ferguson	Stephen Reilly
	Mimi Forbes	Greg Ricci
	Anne Gawthrop	Joe Rice (CBIZ)
	Michael Golden	David Rongione, Internal Auditing
	Dimitri Grechenko	Dan Schick
	Kenneth Haines (Trustee)	Megan Schutz (Treasurer's office)
	Alex Harisiadis, OAG	Janet Sirkis
	John Harris (Meketa)	Kevin Slack
	Justin Hayes (Comptroller's office)	Frederick "Beau" Smith
	Angie Jenkins	Wil VanLoh (Quantum Energy)
	Dana Johns	Toni Voglino
	Danita Johnson	Jack Wheatley
	Faina Kashtelyan	

Mr. Palmer conducted a roll call to establish a quorum. Chairman Stafford called the meeting to order at 9:19 a.m.

Item 1: Ratification of Open Session Minutes

On a motion made by Ms. Hill and seconded by Mr. Prouty, the Investment Committee ratified the November 16, 2021 open meeting minutes.

Item 2: Investment Division Salary Scale Adjustments

Mr. Burd discussed proposed adjustments to the Investment Division's salary scale. He indicated that the System's compensation consultant, CBIZ, recommended a 3% adjustment based upon industry surveys and the employment cost index. Mr. Rice from CBIZ mentioned that it is considered best practice to annually adjust salary ranges to maintain pace with the industry between the more detailed salary studies.

Public Advisor Shelton asked whether recent inflation data was reflected when developing the recommended ranges. Mr. Rice replied that the data was compiled in the Fall of 2021 and it was based on the survey data collected prior to that period. He has observed that employment cost and inflation has increased substantially since the original guidance was developed. This new data and information will be reflected in the next recommendation.

On a motion made by Mr. Daley and seconded by Ms. Hill, the Investment Committee approved the recommended 3% adjustment to the salary range scale for Investment Division employees

Item 3: Public Advisor Position – Call for Nominations

Mr. Stafford discussed the call for nominations for the position of Public Advisor on the Investment Committee. He indicated that the term of Mr. Barry would expire as of June 30, 2022 and Mr. Barry has expressed his interest to be re-appointed.

Any member of the Committee wishing to submit nominations should provide the names to Martin Noven by Friday, March 4, 2022.

Item 4: Investment Division Budget Update

Mr. Palmer and Mr. Burd provided an update on the Investment Division's fiscal year 2023 budget. Mr. Burd noted that the Investment Division did not request any expenditures in relation to additional personnel at the September 2021 Investment Committee meeting as the team needed to make further assessments of its resource needs.

Mr. Burd noted that the team completed a resource assessment and he highlighted four permanent positions to be requested, in addition to the two intern positions in partnership with the United Negro College Fund. These include: 1) Analyst for the Real Assets team, in light of the increase in target allocation and changes in sub-asset class and strategy mix with elevated focus on private infrastructure; 2) Two Senior Portfolio Managers – one in Rate Sensitive, to support managing the securitized portfolio as well as enhanced cash management and currency hedging and one in Credit who would focus on private credit - Mr. Burd explained the need to have the flexibility to hire below these levels in case the situation warrants (i.e. up to two Analysts instead of two Senior Portfolio Managers); 3) Operations position who will focus on collateral management with the increased over-the-counter derivatives trading.

In addition to the four full-time positions, staff also requested two new services and products. The first is an automated trade matching service to make the middle office functions more efficient, at a cost of \$40k - \$45k per year. Also, he requested an enhanced model of the services currently provided by State Street. The current service level from State Street involves monthly reconciliation but the Investments team is

interested in a daily reconciliation model, which would add \$250k per year to State Street's current annual recordkeeping fee of \$2.7 million.

Mr. Burd noted that the total cost of these additional positions and products is roughly \$834,000. When this cost is added to the budget approved in September 2021 of \$18.4 million, the new budget for FY2023 will increase to \$19.3 million. This amount represents 2.73 bps on the total fund.

Trustee Daly inquired whether the cost estimates for the new positions also incorporated the additional costs beyond salaries - to include estimates for benefits, training, new equipment, etc. Mr. Burd responded that those items are included in the annual budgets, but the data exhibited in Table 1 in the memo only shows salaries. He estimated that the cost associated with benefits would be an additional 30%. Trustee Daly requested more data points beyond the cost of salary and benefits in relation to hiring new employees and Messrs. Palmer and Burd noted that they will follow-up with greater detail regarding the budgetary impact.

Chairman Stafford added that it would be helpful to review the evolution of the Investment Division's budget comparing the costs before the internal management initiative to the current cost structure. Mr. Palmer noted that staff will provide an analysis of how the budget has changed over the past several years, and include the impact of internal management.

Chairman Stafford asked what would cause an increase in the trade volume that might trigger the need for the trade matching system. Mr. Burd responded that a transition to more enhanced passive and active management strategies could lead to increased trading volume, which could result in the need for an automated trade matching system.

On a motion made by Trustee Daly and seconded by Trustee Hill, the Investment Committee unanimously approved the requested additions to the fiscal year 2023 budget.

Mr. Burd provided an update to the fiscal year 2022 budget related to the renovation of the 12th floor. He indicated that the costs associated with new office furniture, equipment and a trading desk would be roughly \$551k. It is expected that most of this cost can be absorbed by the current budget for fiscal year 2022, as several items like travel, consultant fees and custody services will be less than the amount appropriated.

Item 5: Report from CIO

Mr. Palmer gave a report on performance for the quarter- and calendar year- ending December 31, 2021. The plan fell 11 basis points below the policy benchmark for the trailing year. Mr. Palmer indicated this underperformance is due to a shift in equity markets away from growth towards energy and value stocks.

Most of the cash flow activity for the quarter reflected shuffling assets within asset classes to manage exposure. On the private side, \$1.3b of capital calls were funded during the quarter. This amount was fully funded by distributions with a surplus totaling \$124m.

Mr. Daley asked who would make the decision to move from growth into value stocks. Mr. Palmer indicated that the portfolio managers for each asset class have discretion to move between managers and exposures.

Mr. Daley also asked who is responsible for the performance numbers of each asset class. Mr. Palmer indicated that each team is responsible for their own asset class performance.

Mr. Palmer introduced Jihwan Baek as a new Accountant Lead Specialized. She previously worked for a Johns Hopkins affiliate and brings the accounting team to full staff for the first time since the end of 2019.

Ms. Shelton asked how frequently issues are found during fee reconciliations. Mr. Palmer replied that it does not happen frequently, but he would gather more specific information.

Mr. Palmer explained that the Division is currently evaluating candidates for the Senior Governance Manager position. He also indicated that staff is working with Lenox Park, an outside consultant, to evaluate diversity among the System's managers. Mr. Stafford asked when a report from Lenox Park is expected. Mr. Palmer indicated that September or October would be a reasonable expectation. Mr. Palmer added that staff has engaged with Anne Arundel Community College to assist with a skills assessment and workforce management program.

Mr. Palmer noted that the Investment Policy Manual allows staff a range of implementation for each asset class. He added that staff typically stays very close to these targets but is evaluating whether it would be appropriate to take greater advantage of the permitted ranges. In particular, he is working with the risk group to develop a risk based program to fully incorporate the commodity sector into the investment program.

Mr. Palmer discussed the three-year performance attribution, noting 34 basis points of outperformance came mostly from positive manager selection, with -1 basis point from allocation effect and -7 basis points from style effect. The largest attribution from selection is due to real estate

Mr. Barry noted that the Absolute Return and Real Estate portfolios appear to be underperforming their benchmarks and asked how this affects plan performance. Mr. Palmer noted that the Real Estate portfolio underperformance is due to a benchmark timing mismatch and long-term performance has been close to median. He added that Absolute Return has historically been roughly 1% below the benchmark, noting that the benchmark includes a 1% premium to the market, but provides the benefits of diversification and low correlation to the plan with low volatility. Mr. Palmer noted that Aksia will provide a deeper presentation on the Absolute Return portfolio at the May Investment Committee meeting.

Trustee Barry said that the allocation to Absolute Return should be re-evaluated in May given the ten-year underperformance. Ms. Shelton advised against extrapolating future expectations based on the last ten years' performance. She said that a forward-looking analysis would be more appropriate. She further noted that the Absolute Return team had experienced substantial turnover over its history.

Chairman Stafford noted that with Aksia presenting in May, it would be a good opportunity to discuss the allocation to Absolute Return since some of the System's peers have been cutting back in the area. Mr. Palmer mentioned that the Plan's allocation to Absolute Return had been reduced recently from 8% to 6% and the allocation to hedge funds had fallen by half in his time with the System

Items 6 & 7: Meketa Reports

Mr. Benham provided an update on Meketa's capital market assumptions. He explained that Meketa updates expected performance and capital market assumptions annually. The 20-year expected return for the portfolio increased from 7.11% to 7.26% and the 10-year return expectation decreased from 6.34% to 6.28%.

Chairman Stafford asked how expectations have changed for the Absolute Return asset class. Mr. Benham said that the 20-year capital market expectation was slightly increased from 4.3% to 4.4% since last year. Ms. Mustard gave an update on 4Q21 performance. She said that total performance lagged the benchmark by 11 basis points for the year and trailed by 34 basis points for the quarter.

The portfolio was in the 69th percentile relative to peers for the quarter December 31, 2021. She added that, on a risk-adjusted basis, the portfolio was top-decile for both 3-year and 5-year performance. Trustee Barry asked if it would be possible to show quartiles based on excess return and Ms. Mustard said Meketa would research the availability of that data.

Item 8: Climate Risk Update / Divestment Review

Mr. Palmer noted that he met with the Joint Committee on Pensions in October to discuss the System's efforts on evaluating climate risk and incorporating climate risk into portfolio management and the investment decision-making process.

Mr. Smith presented a report on assessing climate risk and a peer review on fossil fuel divestment as required by the Maryland Pension Risk Mitigation Act. He discussed the divestment policies of Baltimore City, Maine, New York City, New York Common, and New York State Teachers plans. He said that data quality is important for evaluating companies.

Trustee Daley asked if the data includes opportunity cost for not investing in the sectors. Mr. Smith said data quality focuses more on reliability of reporting for emissions data.

Mr. Barry said it would be helpful to see a report on portfolio company emissions data and to begin tracking the percentage of companies that report their emissions. He mentioned that engagement might push more companies to report on their emissions as well as disclose mitigation plans. Chairman Stafford asked if the engagement should be with both public and private companies and Mr. Barry suggested that the efforts should initially focus on public companies.

In response to a question about whether divestment handcuffs those who are looking to inspire change, Mr. Smith noted that some peer plans only divest if change at the company is not evident. It was mentioned that divestment only impacts the supply side and that the demand side can be addressed through engagement.

Mr. Palmer noted that the pending legislation would incorporate climate risk considerations as part of the System's fiduciary duty but would leave implementation to the Board rather than create a mandate to divest from fossil fuel companies. The planned addition of a governance position to staff will provide the resources to better engage with companies on these and other issues.

Chairman Stafford inquired if there were any limiting factors to engagement. Mr. Palmer indicated that engagement efforts must go through the Corporate Governance Committee. Ms. Shelton noted the need to evaluate the commodity allocation in the portfolio to understand its impact on climate risk and address how to incorporate commodities and futures trading within the overall climate strategy.

Item 9: Investing in Fossil Fuels

Mr. Palmer introduced Mr. VanLoh from Quantum Energy Partners, who gave a presentation on how energy asset investors approach climate risk and respond to divestment policies.

Mr. VanLoh said that he believes taking a proactive and engaging approach to climate risk is a much more appropriate way to usher in an energy transition than divesting. He said that energy demand will continue to grow in the coming decade, which will make it more difficult to achieve net-zero emissions. He pointed out that divesting from responsible producers may lead to more production in areas of the world where producers are less responsible. In addition, reduced investment in the sector would result in less capacity replacement and higher energy prices in the medium term.

Comptroller Franchot asked if Mr. VanLoh had emissions data specific to the state of Maryland. He did not but noted he did have United States-specific data.

When asked if plans that have divested have had better performance, Mr. VanLoh confirmed that has been the case over the past decade as the energy sector has underperformed.

Ms. Shelton asked if the transition might be accelerated with more investment. Mr. VanLoh said he agreed to an extent, but the transition will take years regardless of the level of investment. The overall demand for energy is growing as the standard of living is rising in much of the world and renewable energy will not just need to replace existing energy demand, but also meet the increased demand as well. He predicted it would take approximately 27 years for wind and solar energy to outproduce just the current demand for coal. Mr. VanLoh added that under the most ambitious assumptions, renewables would only make up 30% of energy needs by 2040. Since oil and gas will still be needed, investors should focus their capital in countries and companies with the best social and governance scores and the lowest methane intensity.

Item 10: Committee Led Discussion

Mr. Stafford stated that he had polled Board Members and identified several potential issues for future discussion by the Board:

- The effectiveness of internal management
- Inflation
- Staff culture and talent retention
- ESG considerations within Private Equity
- Valuation concerns
- Slowing down the growth of Private Equity
- Potentially streamlining reporting requirements to enhance the efficiency of staff
- The process for terminating external managers
- The process for hiring and working with the System's actuaries

Item 11: Investment Reports

The Committee received the following investment reports:

- State Street Performance Reports
- Terra Maria Performance Reports
- Private Markets Performance Reports
- Securities Lending Report
- Division's FY22 Travel Plan - Update
- Quarterly ORP Performance Report
- OPEB-PHBT Update
- New Hire Manager Report

On the Directors Desk:

- Broker Commission Reports
- Quarterly Manager Fee Report

Item 12: Motion by the Investment Committee to meet in Closed Session

On a motion made by Ms. Hill and seconded by Mr. Daley, the Investment Committee voted without objection to meet in Closed Session at 11:58 a.m. for the purposes of:

- (a) reviewing the closed session Investment Committee minutes, pursuant to General Provisions Art., § 3-103(a)(1)(i), the exercise of an administrative function, and General Provisions Art., § 3-305(b)(13), to comply with a specific statutory requirement that prevents public disclosure,

namely, General Provisions Art., § 3-306(c)(3)(ii), requiring that the minutes of a closed session be sealed and not be open to public inspection; and

- (b) considering proposed salary adjustments for employees of the Investment Division, pursuant to General Provisions Art., Section 3-305(b)(1)(i), to discuss the appointment, employment, assignment, promotion, discipline, demotion, compensation, removal, resignation, or performance evaluation of appointees, employees, or officials over whom it has jurisdiction.

CLOSED SESSION

Committee Members Attending:	Michael K. Barry David Brinkley, Vice-Chair James Daley, Jr. Dereck Davis Peter Franchot Sheila Hill	Richard Norman Douglas Prouty Anne L. Shelton Michael J. Stafford, Jr., Chairman Lamont Tarbox
Also Attending:	Tom Brandt, Jr. (Trustee) Rachel Cohen, OAG Kenneth Haines (Trustee) Angie Jenkins	Martin Noven, Exec. Director MSRA Stream Andrew Palmer, CIO

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

The Investment Committee reviewed and ratified the Closed Session minutes from the November 16, 2021 meeting.

The Investment Committee approved compensation recommendations for employees of the Investment Division.

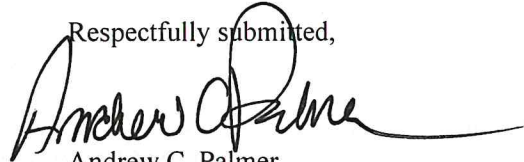
The Investment Committee approved a compensation recommendation for the CIO.

OPEN SESSION

Committee Members Attending:	Michael K. Barry David Brinkley, Vice-Chair James Daley, Jr. Dereck Davis Peter Franchot Sheila Hill	Richard Norman Douglas Prouty Anne L. Shelton Michael J. Stafford, Jr., Chairman Lamont Tarbox
Also Attending:	Tom Brandt, Jr. (Trustee) Rachel Cohen, OAG Kenneth Haines (Trustee) Angie Jenkins	Martin Noven, Exec. Director MSRA Stream

Item 16: Motion by the Investment Committee to adjourn meeting

Adjournment There being no further business before the Investment Committee, on a motion made by Mr. Norman and duly seconded, the meeting adjourned at 12:47 p.m.

Respectfully submitted,

Andrew C. Palmer
Chief Investment Officer