MARYLAND
STATE RETIREMENT
and PENSION SYSTEM

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Maryland State Retirement Agency

Testimony of R. Dean Kenderdine, Executive Director

Before the

House Appropriations Committee
February 22, 2019

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Senate Budget & Taxation Committee
February 26, 2019

Good afternoon, Chairman and members of the committee. As the Executive Director of the State Retirement Agency (SRA), it is my pleasure to present and discuss, on behalf of the System's Board of Trustees, the Agency's proposed budget for fiscal year 2020.

The SRA carries out two equally important business functions: the administration of member and retiree benefits, and the management of invested assets. The continued success of these two core processes is of critical importance to the more than 405,000 active, vested and retired State and local participating employees, teachers, police, judges, law enforcement officers, correctional officers and legislators whom we serve.

Investment Management

The Maryland State Retirement and Pension System earned a net investment return on invested assets of 8.06 percent in fiscal year 2018. In addition to exceeding the actuarial return target of 7.50 percent, the fund also surpassed the return of the policy benchmark by 0.46 percent. After the payment of benefits, the market value of invested assets increased by approximately $2.9 billion, from $49.1 billion on June 30, 2017 to $52.0 billion on June 30, 2018, resulting in a funded ratio of 72.5 percent (71.6 percent, excluding participating governmental units) as of June 30, 2018 compared to 71.8 percent (70.9 percent, excluding participating governmental units) at the end of fiscal year 2017. The top-performing asset class for the year was Growth Equity, which consists of both public and private equity.

Net Returns as of June 30, 2018

	1 year	3 year	5 year	10 year
Total Plan	8.06%	6.34%	7.15%	5.55%
Policy Benchmark	7.60%	6.33%	6.72%	5.04%

According to preliminary performance reports as of December 31, 2018, the System's total investment portfolio returned -2.63 percent, net of all fees and expenses, on investments for fiscal year-to-date, exceeding the policy benchmark by 21 basis points, or 0.21 percent. The market value of assets as of December 31, 2018 was approximately $50.0 billion.

The System's investment performance during fiscal year 2018 is summarized in the following exhibit:

	FY2018 SRPS Performance	FY 2018 Benchmark Performance	SRPS Allocation June 30, 2018
Public Equity	10.7%		37.5%
Custom Benchmark		10.6%	
U.S. Equity	15.1%		12.3%
Russell 3000		14.8%	
International Equity	7.8%		7.8%
MSCI World ex U.S.		7.0%	
Emerging Markets Equity	7.2%		9.4%
MSCI Emerging Markets		8.2%	
Global Equity	12.5%		8.0%
MSCI AC World Index		10.7%	
Private Equity	19.6%		12.5%
Custom State Street PE		15.9%	
Rate Sensitive	0.6%		19.9%
Custom Benchmark		0.4%	
BC U.S. Gov't Long Index		-0.1%	
BC U.S. TIPS Index		2.3%	
Credit/Debt Strategies	2.3%		8.0%
Custom Benchmark		2.3%	
BC High Yield		2.6%	
S&P LSTA Leveraged Loan		4.4%	
JP Morgan GBI EM GD		-2.3%	
JP Morgan EMBI GD		-1.6%	
JP Morgan CEMBI Broad		0.10%	
Real Assets	8.2%		11.9%
Custom Benchmark		9.4%	
NCREIF ODCE		8.1%	
FTSE EPRA NAREIT		5.6%	
Natural Resources and Infrastructure Custom Benchmark		16.3%	

Absolute Return	3.3%		8.4%
Custom Benchmark		5.2%	
Cash and Cash Equitization	8.8%		1.8%
Custom Benchmark		1.3%	
TOTAL FUND	**8.1%**	**7.6%**	**100%**

The **public equity portfolio** returned 10.7 percent, compared with a return of 10.6 percent for its blended benchmark. The program has three components: U.S Equity, International Developed Equity and Emerging Markets Equity.

The U.S. public equity portfolio returned 15.1 percent, exceeding the return of the Russell 3000 Index by 34 basis points. The international equity portfolio returned 7.8 percent compared to 7.0 percent for its benchmark, the Morgan Stanley Capital International (MSCI) World ex-U.S. Index. The emerging markets equity program returned 7.2 percent, trailing the 8.2 percent for its benchmark, the MSCI Emerging Markets Index, a broad measure of stock performance in emerging markets.

The **rate sensitive portfolio** returned 0.6 percent, compared to 0.4 percent for its blended benchmark: 53 percent Barclays US Government Long Bond Index, 13 percent Barclays US Investment Grade Corporate Index, 13 percent Barclays US Securitized Index, and 21 percent Barclays US TIPS Index.

The **credit/debt strategies portfolio** returned 2.3 percent compared to 2.3 percent for its blended benchmark. The portfolio has a blended benchmark of 78 percent U.S. (80 percent BC U.S. Corporate High Yield Index, 20 percent S&P LSTA Leveraged Loan Index), and 22 percent Non-U.S. (50 percent Bloomberg/Barclays Emerging Markets Local Government Index -30 basis points, 25 percent Bloomberg/Barclays Emerging Markets Hard Currency Sovereign Index, 25 percent Bloomberg/Barclays Emerging Markets U.S. Dollar Aggregate Corporate Index).

The **real assets portfolio** returned 8.2 percent, compared to 9.4 percent for its blended benchmark, which consists of 71 percent real estate (85 percent NCREIF ODCE Index, 15 percent FTSE EPRA/NAREIT Index) and 29 percent natural resources and infrastructure (60 percent S&P Global Natural Resources Index and 60 percent Dow Jones-Brookfield Infrastructure Index.

The **absolute return portfolio** returned 3.3 percent, trailing the 5.2 percent return of its customized benchmark, which is the Hedge Funds Research, Inc. (HFRI) Fund of Funds Conservative Index plus 1 percent.

The **private equity portfolio** returned 19.6 percent, compared to the 15.9 percent return of its customized benchmark, the State Street Private Equity Index (one quarter lag). The program is expected to produce returns in excess of the public equity markets.

The System's **Terra Maria** program is comprised of smaller investment management firms—including many that are minority and/or women owned—focusing primarily on equity and fixed income investments. For fiscal year 2018, the program returned 7.0 percent, compared to 7.03 percent for its customized benchmark. While annualized performance for the five years ending June 30, 2018 has been negative relative to it customized benchmark, the return since inception has added value. Since inception, the Terra Maria program has achieved an annualized return of 5.8 percent, compared to 5.2 percent for the benchmark. It should be noted that the Terra Maria program was restructured in the second half of FY 2017 and since the restructuring was completed, performance has improved.

The Investment Division regularly solicits input on investment opportunities and best practices from several sources. The System's investment consultants are broadly utilized across the total portfolio in assisting staff in sourcing new investment ideas that improve the risk/return efficiency of the fund. Consultants are also helpful in providing insight into new trends and ideas among other public pension funds. The System also belongs to several trade associations, and participates in selected investment conferences, that are useful in establishing peer contacts and gaining market insight. By attending conferences that focus on emerging managers, the System can meet, and provide access to, promising smaller managers that might not be identified in the normal search process. Existing and prospective investment managers are also a valuable source of information in terms of market trends and investment opportunities.

Chapter 728 of the Acts of 2018 (Senate Bill 899/House Bill 1012) grants the Board of Trustees broader authority in its management and oversight of the investment of System assets. The legislation authorizes the Board to set and approve the budget for the personnel and operational expenses of the Investment Division. The Board is now able to determine and create the type and number of investment positions necessary for carrying out the functions of the Investment Division. Chapter 728 also provides the Board with the authority to determine the qualifications, salary levels and performance incentives for Investment Division staff, subject to certain restrictions. For example, increases in compensation may not exceed 10 percent in any fiscal year. In addition, the Board may not grant any increases in compensation in a fiscal year in which state employees are subject to a furlough.

Chapter 728 also requires the Board to adopt objective criteria for setting the qualifications and compensation of positions within the Investment Division, as well as awarding financial incentives. In developing these objective criteria, the Board is required to form an Objective Criteria Committee. The role of the Objective Criteria Committee is to work with a third-party compensation consultant to recommend objective criteria to the Board. The Objective Criteria Committee consists of seven members: one member of the State Senate, one member of the House of Delegates, the State Treasurer, the Secretary of Budget and Management, two members of the Board of Trustees, and a public member with financial industry experience.

During the fall of 2018, the Objective Criteria Committee worked with the compensation consultant to develop the required objective criteria to recommend to the Board. The recommendations were approved by the Board in January 2019. To date, no compensation actions based on the approved objective criteria have been implemented.

Business Process Re-Engineering and Organizational Transition

Starting in January 2018, the Agency formally commenced the third phase of its Maryland Pension Administration System (MPAS) strategy, or "MPAS-3" – a multi-year initiative to re-engineer the retirement administration business function operations and implement supporting technologies (including a secure participant Internet portal), planned to conclude in FY22. MPAS-3 is a Major IT Development Project (MITDP) as directed by the General Assembly, under Department of Information Technology (DoIT) oversight.

To refresh the context, the first phase of the MPAS strategy migrated baseline batch-oriented computing, from 1970s-era technology running on the State's Annapolis Data Center mainframe, to a more agile and contemporary server-based technology running in the Agency's data center (and disaster recovery site). This new MPAS application technology became the Agency's system of record in August 2010 and has been operating solidly since. Its efficacy was proven when the application was successfully adapted to the pension reforms passed by the General Assembly in 2011 and implemented in 2011-13.

The second phase of the MPAS strategy consisted of "cleansing" of service and payroll records from all 150 employers for over 400,000 participants, going back to 1974. This cleansing was largely carried out as an Agency business initiative during fiscal years 2013 through 2016, and it achieved better results than anticipated, adjusting data where warranted and flagging other data for future review.

The Agency's IT Steering Committee, chaired by me and comprised of senior leadership positions, decided in August 2016 to begin MPAS-3 groundwork, and has been actively prioritizing and guiding MPAS-3's work. To spearhead MPAS-3 and all its components, a multi-year contract was awarded by the Agency to a business process consulting and project management firm with considerable public pension industry experience. During the first six months of the project, the Agency and the consultant examined over 50 business processes carried out by the Benefits Administration, Finance, and Information Systems divisions, and a strategy for re-engineering those processes was devised that includes considerable automation of Agency operations. Decisions have also been made to:

- Immediately begin work on the secure participant portal, branded *mySRPS*, which is scheduled to go into production status in September 2019;
- License and implement a customer relationship management (CRM) product, to become the core real-time application for internal staff use and workflow automation, based on a proof-of-concept conducted in 2018;
- Adapt an Agency application, already under development, to serve as the central document repository into the future, and significantly enhance its scanning and character/format recognition capabilities; and
- Optimally integrate business operations and technology across the Agency, including enhancements to existing voice and data technology.

MPAS-3 is currently on schedule, on budget, and on track to deliver the long-sought return on investment in terms of improving member service and increasing efficiency of Agency operations. The proposed FY20 budget will allow MPAS-3 to progress unabated toward completion.

Several Agency divisions will be impacted by this initiative, and budget-related considerations will be highlighted in sections that follow.

Information Systems

Since the last legislative session, the Agency's data and voice technology platforms have continued to operate reliably with virtually no production downtime. Most Agency IT staff are in-house; however, daily operations continue to be supported by two CATS+ Systems Development supplemental staffing task order contracts. Those two contracts also provide programmer and business analyst support for MPAS-3. The Agency requests approval of the baseline Information Systems operating budget submission.

Information Systems has significant involvement in MPAS-3, which imposes a considerable requirement for secure real-time computing on more complex hardware and software platforms. Information Systems is pursuing several MPAS-3 related tasks:

- Significant upgrades to data center infrastructure, at both the Agency's Baltimore primary data center and the disaster recovery site;
- Enhancements to data storage and back-up capabilities;

- Merging pre-existing IT efforts addressing document management (Member Document Storage, the successor to Folder Inquiry), employer payroll data reporting (EPDR), the deferred retirement option plan (DROP), automation of domestic relations orders (EDRO), and voice technology into MPAS-3;
- Configuring on-site servers and software to support a cloud-based commercial CRM package;
- Making major modifications to the MPAS application itself, together with the CRM package and its robust features. This combined "hybrid" on-premise/cloud-based application, labelled "MPAS+," requires creation of considerable data synchronization and failover protections to be managed ongoing by Information Systems; and
- Installing and configuring infrastructure to support systems development of *mySRPS*, which will be accessed from a newly-designed Agency public web site (described below). *mySRPS* will enable participants to securely view their respective service credit and salary information along with other baseline data, produce their own retirement benefits estimates in real-time, and permit them to transact business with the Agency online.

Plans for *mySRPS* include commercially-available software to provide both basic and enhanced authentication of site users. The new portal will be tightly integrated with the MPAS databases in the Agency's Baltimore data center and requires considerable additional attention to IT security (to prevent member fraud in addition to its intrinsic application security requirements), high availability, and data integrity when integrated with MPAS+ described above. Using an Information Systems procurement currently in process, *mySRPS* will be subjected to independent application security testing prior to its opening for transactions over the Internet.

Aside from MPAS-3 related activity, Information Systems worked with the External Affairs Division to implement a new public web site. A competitive contract was awarded in February 2018 and initiated in March, to a developer with several other public pension industry clients. The new site has an open source operating system and content management system, supplemented by excellent tools from the developer that will enable in-house maintenance of content by non-technical Agency staff, along with routine site administration by Agency personnel. The much-improved new site went "live" on schedule on January 28th, and the Agency made a business decision to have the site hosted by the developer as part of its software maintenance program.

The Investment Division strategy to more directly manage segments of the investment portfolio also has a significant impact on Information Systems. The Agency anticipates that incremental improvements (including redundancy) will be required in Internet connection bandwidth, along with real-time server/application failover, auditability, and new network management tools, some of which will be housed at the Agency's data center and some acquired as cloud-based "(software/platform)-as-a-service" applications.

Expanding on a subject referenced above, IT security remains a major focus of Information Systems. The proposed FY 2020 budget submission will strengthen the Agency's regime of periodic independent testing of networks and applications (procurement in process, contract award anticipated in March 2019) in addition to a bolstered program of routine, regular testing by Agency IT security personnel. In the current fiscal year, staff conducted a proof-of-concept with a security information and event management (SIEM) product, in anticipation of applying it to internal Agency networks and *mySRPS*. In addition, staff have conducted a proof-of-concept on a dedicated Internet application firewall, which has not previously been required. Overall, in FY 2019 and continuing into the future, activities described above will significantly increase the Agency's technology risk profile.

Taking into account the enhanced and more complex infrastructure to be managed as a result of (1) MPAS-3 and Investment Division actions, (2) implementation of *mySRPS* and other applications with their increased IT risk exposure, and (3) evolution and adaptation of Agency computing to more real-time and integrated staff operations, the Agency has submitted a FY 2020 budget request for five new positions:

- Two IT security positions – this request has been deferred for several years in the past, and has now become of critical importance;
- One network engineer to adequately manage the additional infrastructure;
- One business analyst to support the ongoing maintenance and enhancement of considerable additional automation; and
- One senior level programmer to displace some existing contractor support, along with considerable data synchronization and failover protections needed for the new architecture.

Regarding the last item, the Agency recognizes that programmer recruitment has been a challenge reportedly throughout State government. In FY 2016, the General Assembly approved a request from this Agency for additional programmer positions, with the understanding that the Agency and DBM would assess how successful the effort would be. In the end, as reported to the General Assembly, one of the openings was filled by a competent individual from outside State government, and that individual remains a valued resource in the Information Systems unit. The Agency intends to pursue another programming resource at this time, to replace one of the approximately 20 contractor-supplied programmers and analysts (between normal Agency operations and MPAS-3) currently working at the Agency. Accordingly, the Agency requests approval of this FY 2020 over-the-target request for five new positions.

Benefits Administration

Active membership decreased slightly from 192,742 in fiscal year 2017 to 192,431 in fiscal year 2018. However, we continue to see steady and consistent increases in the number of annuitants. At the end of fiscal year 2018, the number of retirees and beneficiaries receiving benefits increased slightly more than 2.5 percent to 160,374 compared to 156,366 in the previous year. Over a ten-year period, the total number of annuitants has grown 38 percent from 116,007 in fiscal year 2009 to 160,374 in fiscal year 2018. Our current number of retirees and beneficiaries receiving monthly allowances is more than 163,000, as a result of new retirements since July 1, 2018.

As in previous fiscal years, the Benefits Administration Division has continued to experience a significant number of vacancies in most units. Recruitment challenges require constant re-allocation of staff within the production areas of the Division to ensure timely completion of critical tasks and to minimize delays and backlogs in less critical duties. Hiring and retaining qualified staff has remained a challenge for most units of the Division throughout the fiscal year.

Overall, the Member Services Unit's Call Center was able to meet our performance measures for fiscal year 2018. However, for fiscal year 2019 to date, we have not been able to meet our performance measures. Performance has varied dependent on the number of fully trained staff available. Factors affecting availability of staff include but are not limited to turnover, leave usage, and staff participation in the Agency's on-going initiative to reengineer our automated processing systems, which includes implementation of a CRM system. The Agency's Call Center performance measures for fiscal year 2018 are summarized below:

Performance Measure	Performance Goal	FY2018 Performance Average
Call Abandonment	Not to exceed 7.50%	6.50%
Average Wait Time	Not to Exceed 135 seconds	104 seconds

As previously discussed, the Agency has kicked off its MPAS-3 initiative and the Benefits Administration Division is also playing a critical role in that project. All of the division's major business processes are being documented, evaluated, and re-designed to take full advantage of current technologies. MPAS-3 will include automated workflows to speed up processing time, a CRM application to better manage the Agency's relationships with participants of the System, and a secure online portal where participants will be able to view their retirement account information and transact business with the Agency in a "real time" environment. A key and invaluable feature of *mySRPS* will be that individuals will be able to obtain real-time retirement benefit estimates using their actual work history data with projection.

2011 Benefit Reform Scorecard

Reforms enacted by the Maryland General Assembly in 2011 and in subsequent years continue to show positive results for the System and, in fact, continue to exceed earlier projections (see chart below). The System is on track to be 80% funded by 2026; 85% funded by 2030; and 100% funded by 2039.

Projected June 30, 2018 Results on June 30, 2010 Valuation			
	Before Reforms	**After Reforms**	**Actual Results 2018 Valuation**
FY 2020 Contribution Rates No Reinvestment			
EPS (State)	22.16%	18.51%	19.56%
TPS	21.82%	18.12%	15.59%
All State Plans	22.80%	19.06%	17.82%
June 30, 2018 Funded Ratio No Reinvestment			
All State Plans	65.8%	65.8%	70.7%
June 30, 2018 Funded Ratio Reinvestment			
All State Plans	65.8%	69.0%	71.6%

The 2010 valuation was the basis for the original estimates and projections related to potential effects of the 2011 reforms. Certain changes since implementation of reforms affect the comparability of the figures:

1) Systems are now receiving Actuarially Determined Contributions based on 25-year closed amortization of unfunded actuarial accrued liability (UAAL) ending in FY 2039. Elimination of the corridor funding method resulted in a large contribution increase for the Employees' Pension System (EPS). The change was very small for the Teachers' Pension System (TPS).
2) The General Assembly lowered reinvested savings to $75 million from the original $300 million in two steps beginning in FY 2014.

3) Both demographic and economic assumptions have changed since 2010 acting to increase contributions and decrease funded ratios.
4) There was an overall favorable experience since 2010 (except ECS) which decreased actuarial contribution rates and increased funded ratios.

Agency Responses to Operating Budget Recommended Actions and Analyst's Requests for Agency Comment

Agency Response to Operating Budget Recommended Actions:

The Agency concurs with all of the Operating Budget Recommended Actions.

Agency Response to Analyst's Requests for Agency Comment

Analyst's Comment: SRA should comment on the absolute return portfolio performance and discuss actions that the agency is taking to improve performance of these funds.

Agency response:

The objective of the System's Absolute Return asset class is to provide diversification and risk reduction to the total fund by having very little exposure to the common risk factors found in the rest of the portfolio. The return objective is to outperform a cash return by 4% over a full market cycle. Over the last several years, this return objective has not been met. There are several potential reasons for this underperformance:

- The very low volatility in markets that has persisted for the last several years;
- Below-median manager performance; and
- Concentrated set of strategies among the managers.

Hedge funds comprise most of the mandates in this asset class, and are characterized by active trading strategies that attempt to take advantage of relative value opportunities between different securities and asset classes. The most favorable environment for this type of trading is one where volatility is high, correlations are low and dispersion is high. Volatility is the degree to which asset prices fluctuate, correlation is the degree to which assets move in the same direction, and dispersion refers to the difference in asset price movements regardless of whether they are moving in the same direction. Essentially, hedge funds have historically performed best in more chaotic markets.

Over the last several years, markets have been very calm and volatility has hovered at all-time lows. Moreover, correlations have been high and dispersion has been low. A reason this condition has persisted may relate to the unconventional monetary policies adopted by global central banks to lower interest rates and stimulate economic growth. As central banks unwind these policies and raise interest rates, it may reverse the trend and create a more favorable environment for hedge funds. It is unlikely that the high public equity returns and low volatility that have been experienced since the financial crises will persist indefinitely. When conditions revert to normal levels or a drawdown in equities occurs, the Absolute Return asset class should provide competitive returns with downside protection.

The Absolute Return asset class has also underperformed its benchmark, which is the HFRI Fund of Funds Conservative Index plus 100 basis points. Most of this underperformance can be attributed to portfolio construction. The benchmark has more exposure to public equity than the System's portfolio, which has hurt relative performance as equity markets have risen over the last five years. In addition, the portfolio was overly concentrated in low volatility, low correlation Multi-Strategy Relative Value managers that were mostly focused on investing in the U.S. Essentially, the portfolio was too conservative and did not include an appropriate number of return drivers.

The Absolute Return portfolio has undergone a significant amount of change over the last three years. In fiscal 2016, both of the staff members assigned to this portfolio resigned from the System. The System was able to hire one replacement in July 2016 and another in October 2017. The team experienced additional turnover in August 2018, when the Managing Director resigned to accept a senior position at another public fund. This position was filled with an internal promotion. This turnover in personnel extended the timeline for improving portfolio performance.

Working with the CIO and staff members from other areas, the existing portfolio structure and managers have been re-evaluated. In addition, in 2017, the System hired a new consultant dedicated to assisting in portfolio construction and manager selection. The first phase of this evaluation reduced the size of the portfolio through manager terminations. This manager reduction focused assets in higher conviction managers, but had the effect of magnifying the importance of any one manager's performance. Since November 2017, the portfolio has experienced fifty percent turnover, with thirteen managers added and eight terminated. The restructuring has resulted in more diversified and balanced strategy allocations that should increase the volatility closer to target and provide more consistent returns. Staff is also working with the consultant to add more international strategies, which should better position the portfolio to earn higher returns and achieve its objectives.

While still too early to evaluate the effectiveness of these changes, the calendar 2018 performance of the portfolio is encouraging. For the twelve months ending December 2018, the Absolute Return portfolio had a positive return of 1.75%. While this return is below the long-term target of cash plus 4%, it was significantly better than the portfolio benchmark, which was only up 0.13%. In addition, the positive absolute performance helped protect the value of System assets in a year when total plan performance was negative. This is reflected in the System's twelve-month peer ranking, which places the System in the top third of public plans of similar size.

Analyst's Comment: SRA should discuss the recent decision of the board to lower the assumed rate of return to 7.45% and what lowering the assumed rate of return means for employer contributions in the near future.

Agency response:

The Board's decision to adjust the economic actuarial assumptions increased State dollar contributions by roughly $8M per year over the two years it was implemented, or $16M total based on actuarial projections performed at the time the decision was reached in 2017. Going forward, the impact on State contributions will be roughly $500 thousand per year, and that amount will decline over time.

It should be noted that the assumed rate of return was not the only economic assumption adjusted two years ago. Inflation assumptions were lowered at the same time from 2.70% to 2.60% which softened the impact of the assumed rate reduction. Pension benefits are calculated based on years of service and salary, so a lower inflation assumption implies that salaries are growing slower than before, lowering projected benefits and total liability. The Board's objective is to set the assumed rate of return commensurate with its asset allocation and current investment expectations.

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