Joint Committee on Pensions

2020 Interim Report

Annapolis, Maryland
January 2021

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THE MARYLAND GENERAL ASSEMBLY
ANNAPOLIS, MARYLAND 21401-1991

JOINT COMMITTEE ON PENSIONS

December 18, 2020

The Honorable Bill Ferguson, Co-Chair
The Honorable Adrienne A. Jones, Co-Chair
Members of the Legislative Policy Committee

Ladies and Gentlemen:

The Joint Committee on Pensions herewith submits a report of its 2020 interim activities and legislative recommendations. The joint committee met twice during the 2020 interim and addressed a legislative proposal requested by the Board of Trustees for the State Retirement and Pension System and a legislative proposal regarding system administration of death benefits related to COVID-19. The joint committee made recommendations on these items at its final meeting for the 2020 interim. The joint committee also had its annual briefings on the actuarial valuation of the system and the system's investments.

We thank the joint committee members for their diligence and attention to the work of the committee. Also, on behalf of the committee members, we thank Phillip S. Anthony, June Chung, and Katylee Cannon of the Department of Legislative Services and the staff of the Maryland State Retirement Agency for their assistance. Additionally, on behalf of the joint committee, we congratulate R. Dean Kenderdine on his announced retirement and extend our thanks for his more than 14 years of faithful service as the Executive Director of the State Retirement Agency.

Sincerely,

Senator Sarah K. Elfreth
Senate Chair

Delegate Michael A. Jackson
House Chair

SKE:MAJ/PSA:JC/kmc

Enclosure

cc: Ms. Victoria L. Gruber
Mr. Ryan Bishop
Mr. Jake Weissmann
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2020 Interim
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Joint Committee on Pensions
2020 Interim Report

Over the course of two meetings during the 2020 interim, the Joint Committee on Pensions had a briefing on one legislative proposal requested by the Board of Trustees for the State Retirement and Pension System (SRPS) and an additional briefing on COVID-19-related death benefits. The joint committee also had its annual briefings on the actuarial valuation of the system and the system's investments.

Results of the 2020 Actuarial Valuation and Fiscal 2022 Contribution Rates

From fiscal 2019 to 2020, SRPS's funded status (the ratio of projected actuarial assets to projected actuarial liabilities) improved from 72.3% at the end of fiscal 2019 to 73.6% at the end of fiscal 2020 (these figures exclude funding for local governments that participate in the State plan). Several combined factors set the system up for continued improvement in its funding status, including the increasing number of new members entering the system under the reformed benefit structure enacted in 2011, the elimination of the corridor funding method, and continued supplemental contributions. From fiscal 2019 to 2020, the total State unfunded liability increased from $19.053 billion to $19.104 billion.

Fiscal 2022 Contribution Rates

Exhibit 1 shows that the employer contribution rate with reinvestment savings for the Teachers' Combined Systems will decrease from 15.65% in fiscal 2021 to 15.33% in fiscal 2022, and the contribution rate for the Employees' Combined Systems will decrease from 21.36% in fiscal 2021 to 21.12% in fiscal 2022. The aggregate contribution rate, including contributions for public safety employees and judges, decreases from 18.46% in fiscal 2021 to 18.18% in fiscal 2022. Based on projected payroll growth and other factors, the SRPS actuary estimates that total employer pension contributions will increase from $2.038 billion in fiscal 2021 to $2.106 billion in fiscal 2022. The fiscal 2022 contribution rates are the actuarially determined contribution rates and reflect an investment return assumption of 7.40%. The funding rates and contribution amounts are inclusive of the $75 million supplemental contribution required by Chapter 489 of 2015.

Exhibit 1
State Pension Contributions
Fiscal 2021 and 2022
($ in Millions)

	2021		2022	
Plan	**Rate**	**Contribution**	**Rate**	**Contribution**
Teachers' Combined	15.65%	$1,154.1	15.33%	$1,184.0
Employees' Combined	21.36%	722.7	21.12%	751.6
State Police	79.03%	88.6	76.16%	92.8
Judges	40.27%	20.6	41.93%	22.8
Law Enforcement Officers	43.93%	52.5	43.18%	55.3
Aggregate	**18.46%**	**$2,038.4**	**18.18%**	**$2,106.4**

Note: Except for the Teachers' Combined System (TCS), contribution rates and dollar amounts reflect State funds only, excluding municipal contributions. For TCS, it reflects the combined total of State and local contributions. Figures also reflect the $75 million supplemental contribution required by Chapter 489 of 2015.

Source: Gabriel, Roeder, Smith, & Co., Preliminary Results of the June 30, 2020 Actuarial Valuation for Fiscal Year 2022

State Retirement and Pension System Investment Performance

SRPS's investment return for the fiscal year that ended on June 30, 2020, was 3.57%, failing to exceed the assumed rate of return of 7.40%. System assets grew to a market value of $54.8 billion as of June 30, 2020. Investment returns were below the assumed rate of investment return for the second consecutive year, with returns exceeding the assumed rate of return in two of the last five years. The system as a whole outperformed its policy benchmark by 0.43% (43 basis points). Total system return for fiscal 2016 through 2020 is 5.80%, which is 0.03% (3 basis points) below the plan return benchmark for that period. Total system return for the past 10 years is 7.57%, which is 0.40% (40 basis points) above its benchmark for that period.

Board Requested Legislation

Fiduciary Bond

Provisions of the State Personnel and Pensions Article require the State to purchase a bond for each system fiduciary in accordance with Title 9, Subtitle 17 of the State Government Article,

which establishes a committee on bonding of State officers and employees, and provides for the State Treasurer to purchase bonds required by law and any additional bonds specified by the committee. Specifically, § 21-210 of the State Personnel and Pensions Article provides that a system fiduciary "may not exercise custody or control of System assets" unless bonded.

To address the statutory bond requirement, the State Treasurer's Office (STO) has purchased a $1 million employee theft policy for the system, covering direct loss or damage to money, securities, or other property caused by theft or forgery committed by an State Retirement Agency (SRA) employee or member of the Board of Trustees, whether identified or not, acting alone or in collusion with other parties. The policy also covers losses due to computer fraud.

SRA and STO recently undertook a review of the bonding provisions and evaluated the availability of fidelity bonds through the Treasurer's insurance broker. On review, it did not appear that the fidelity bonds available in the marketplace would afford effective protection to the system, as these bonds covered assets held by plans subject to the Employee Retirement Income Security Act (ERISA) of 1974, while governmental plans such as the system are exempt from ERISA's requirements. Additionally, an informal query of peer plans did not reveal any other governmental plan overseen by a board of trustees that is subject to a statutory bond requirement for its fiduciaries.

For these reasons, the board recommended that § 21-210 be amended to provide that the State may satisfy the requirement to purchase a bond through the purchase of an insurance policy for the system to cover losses due to theft.

The joint committee will sponsor the requested legislation.

Other Issues Presented to the Joint Committee

Line-of-Duty Death Benefits for COVID-19

Existing law provides a benefit for a line-of-duty death of a member of one of the several systems. These benefits are found under Title 29, Subtitle 2 of the State Personnel and Pensions Article. Generally, if an employee dies or is killed in the performance of their duty, their surviving family members can receive a benefit of an allowance of two-thirds of the member's average final compensation and payment of the member's contributions.

A question arose as to how a death related to COVID-19 would be treated for purposes of the line-of-duty death benefits available under current law for system members. While current law would not on its face prohibit the survivors of a member from applying and receiving a line-of-duty death benefit, clarification on how these claims should be administered by the system would provide equitable administration of claims by establishing a uniform policy on when a member would be considered eligible for a line-of-duty death benefit and the types of information that should be submitted in support of a claim for the benefit. The joint committee was briefed on

actions taken or pending in other states, and on relevant policy considerations for potential legislation regarding whether any clarifications or presumptions would be needed or helpful in effecting the plan design providing for line-of-duty death benefit claims regarding the death of a member as a result of contracting COVID-19.

The joint committee will sponsor legislation to clarify the administration of line-of-duty death benefits. The legislation will establish a presumption of eligibility for death benefits for deaths caused or contributed to by COVID-19 for system members who contract COVID-19 within 14 days of reporting to work. The legislation will have a one-year sunset, specify documentation that shall be acceptable in verifying a death was caused by COVID-19, and will apply retroactively back to the beginning of the State of Emergency.

Appendix 1
Maryland State Retirement and Pension System – 2020 Actuarial Valuation and Fiscal 2022 Contribution Rates

Maryland State Retirement and Pension System

Results of the June 30, 2020
Actuarial Valuation for Fiscal Year 2022

November 12, 2020 Meeting of the
Joint Committee on Pensions

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Background

Purpose of the Actuarial Valuation

- Measure the financial position of MSRPS
- Provide the Board with State and PGU contribution rates for certification
- Provide disclosure information for financial reporting
  - Provided by separate GASB 67 and 68 valuations
- Analyze aggregate experience over the last year

Funding Objectives

1. Benefit Security
   - Plan sponsor commitment, strong governance, effective administration, and accommodated by sources of revenue.
2. Stable pattern of contribution rates
   - Average State Actuarial Contribution rate decreased by 0.25% of payroll this year.
3. Intergenerational equity with respect to plan costs
   - This is a long term goal. We will only know in hindsight if it is achieved. The break with corridor funding was a step in the right direction.
4. Stable or increasing ratio of assets to liabilities
   - Funded ratio improved this year on an actuarial value of assets basis and on a market value basis.

2011 Benefit Reform Scorecard

	Projected June 30, 2020 Results Based on June 30, 2010 Valuation		Actual Results
	Before Reforms	**After Reforms**	**2020 Valuation**
FY 2022 Contribution Rates No Reinvestment (% of Pay)			
ECS (State)	23.46%	19.44%	20.50%
TCS	22.30%	18.43%	14.67%
All State Plans	23.85%	19.86%	17.50%
June 30, 2020 Funded Ratio No Reinvestment			
All State Plans	69.0%	68.9%	70.4%
June 30, 2020 Funded Ratio Reinvestment			
All State Plans	69.0%	73.0%	72.9%

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 a 25 year closed amortization of UAAL ending in FY 2039. Elimination of the corridor funding method resulted in a large contribution increase for ECS State. The change was very small for TCS.
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 overall favorable experience since 2010 (except ECS) which decreased actuarial contribution rates and increased funded ratios.

Variables Affecting Valuation Results

- Benefits (Retirement, Disability, Survivor)
- Actual past experience
- Legislative Changes
  - 2020 General Assembly passed HB 588
    - Member contributions cease upon reaching maximum benefit for State Police (28 yrs.) and LEOPS (32.5 yrs.)
  - 2018 General Assembly passed HB 1042 and 1049
    - Increased LEOPs maximum benefit and extended State Police DROP participation
  - 2017 General Assembly passed HB 28
    - Amended provisions of HB 72, below.
    - Beginning in FY 2021 and continuing until the System is 85% funded, 25% of the budget surplus in excess of $10 million, up to a maximum of $25 million, would be made as an additional contribution to SRPS.
  - 2016 General Assembly changed amortization policy for Municipal ECS
  - 2015 General Assembly passed HB 72
    - For FY 2017-2020, 50% of the budget surplus in excess of $10 million, up to a maximum of $50 million, would be made as an additional contribution to SRPS.
    - $50 million was received in FY 2017.
    - These excess funds were eliminated in the FY 2018 and FY 2019 budgets.
  - 2011 General Assembly reforms result in a gradually decreasing normal cost rate, also increased participant contribution rates for most people

Primary Assumptions

- Actuarial assumptions based on the 2014-2018 experience study (first used in 2019 Valuation)
  - Economic Assumptions
    - 7.40% investment return; 3.10% payroll growth; 2.60% CPI
    - 2.19% COLA, 2.57% COLA, 2.60% COLA for service where COLA is capped at 3%, 5% or not capped, respectively
    - 1.42% COLA for service earned after July 1, 2011 where COLA is capped at 2.5% in years when the System earns at least the investment assumption or capped at 1% in years when the System earns less than the investment assumption
  - Demographic Assumptions
    - Public Sector mortality tables with generational mortality projection using scale MP-2018
      - Calibrated to MSRPS experience
    - Retirement, termination, disability and seniority and merit salary increase rates based on plan experience
- Reinvested Savings assumed to be $0 in FY 2021. To continue according to current schedule ($75 Million per year) thereafter.
  - Increased the State's FY 2022 contribution rates slightly (0.05% to 0.08% depending on system)

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Funding Policy

- Entry Age Actuarial Cost Method
- 5-year asset smoothing/20% market value collar
- Amortization policy
  - State Systems
    - Single period closed amortization ending in FY 2039 (18 years remaining in 2020 valuation)
  - Municipal Systems
    - ECS: Single period closed amortization period ending in FY 2043. Phased-in at 25 years in 2020 valuation (FY 2022) grading down to 20 years for the 2022 valuation (FY 2024).
    - LEOPS: Single period closed amortization period ending in FY 2040
    - CORS: Single period closed amortization period ending in FY 2047
  - Level % of payroll (except for first few years of Municipal ECS phase-in).
  - Needs to be reconsidered to control volatility once remaining period falls below about 10-15 years.

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PARTICIPANT DATA

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Demographic Data

	Statistics as of June 30				
	2020			2019	
Number Counts	**State**	**PGU**	**Total**	**Total**	**% Chg**
Active Members	169,687	26,164	195,851	193,458	1.2%
Vested Former Members	42,565	6,337	48,902	50,246	-2.7%
Retired Members	148,098	19,546	167,644	164,892	1.7%
Total Members	360,350	52,047	412,397	408,596	0.9%
Total Valuation Payroll ($ in Millions)	$11,182.8	$1,318.6	$12,501.4	$11,905.5	5.0%
Active Member Averages					
Age	45.9	48.8	46.3	46.3	0.0%
Service	12.4	11.3	12.2	12.3	-1.0%
Pay	$ 65,903	$ 50,398	$ 63,831	$ 61,540	3.7%
Total Retiree Benefits ($ in Millions)	$3,832.1	$308.5	$ 4,140.6	$ 3,981.8	4.0%
Average Retiree Benefit	$ 25,875	$ 15,785	$ 24,699	$ 24,148	2.3%

Asset Data

Actuarial Value of Assets - ($ Millions)

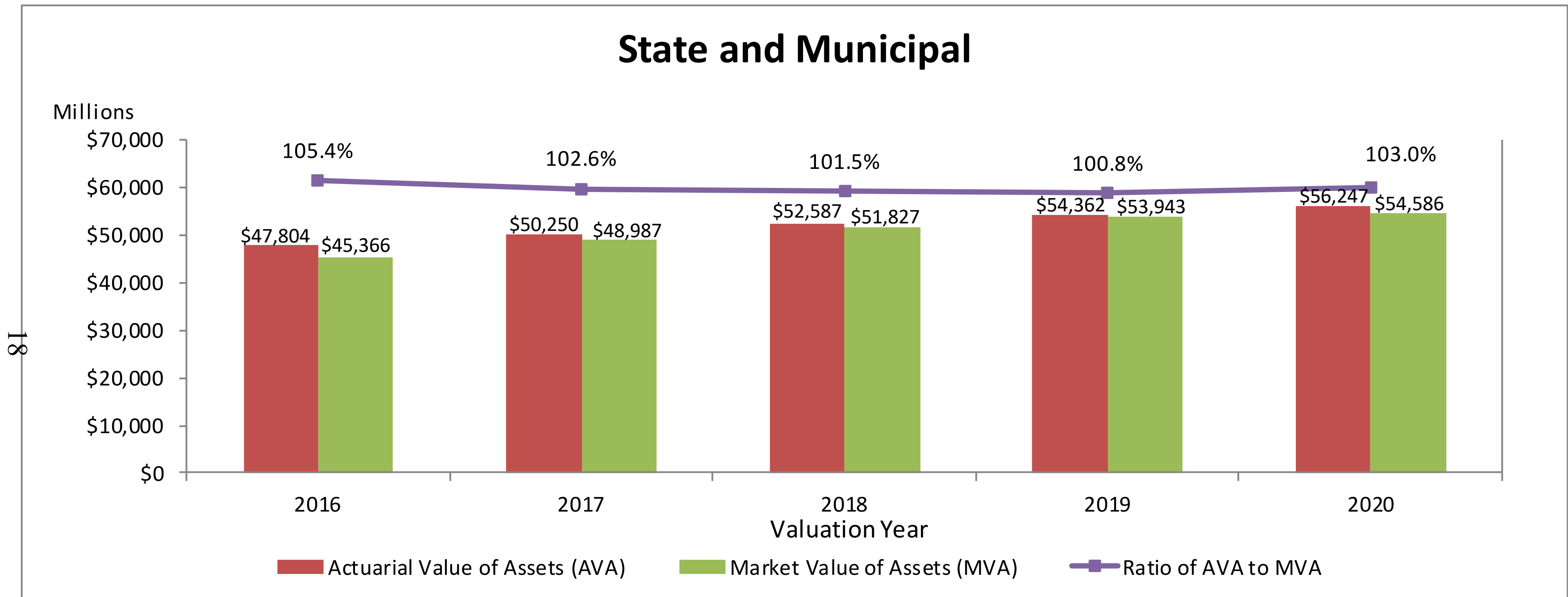
$58,000
$57,000
$56,000
$55,000
$54,000
$53,000
$52,000
$51,000

$54,362
$(1,224)
$3,947
$(416)
$(422)
$-
$56,247

2019
Net Non-Investment Cash Flow
Expected Investment Return on Market Value of 7.40%
Phase in of Current Year Gain/(Loss)
Phase in of Prior Year Deferred Gains/(Losses)
Effect of Collar
2020

Actuarial Value of Assets
Gain/(Loss)

Actuarial Value of Assets - ($ Millions)



The actuarial valuation is not based directly upon market value, but rather uses a smoothed value of assets that phases in each year's gain or loss above/below the investment return assumption over 5 years.

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STATE RESULTS

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Net Decrease in State Rates

- More Members in Reformed Systems
- FY 2021 COLA below assumption (1.812% vs. 2.60% for unlimited or 2.19% for 3% Cap;)
- Payroll increase of 5.0% vs. 3.10% assumed (affects UAAL rate)

- Less Investment Return (5.78% actuarial, 3.50% market[1]) than 7.40% assumed
- Individual Pay Increases above assumptions
- FY 2021 COLA above assumption (1.812% v. 1.42% for Reformed)

[1] Rate shown is based on actuarial estimation method and differs modestly from figures reported by the System.

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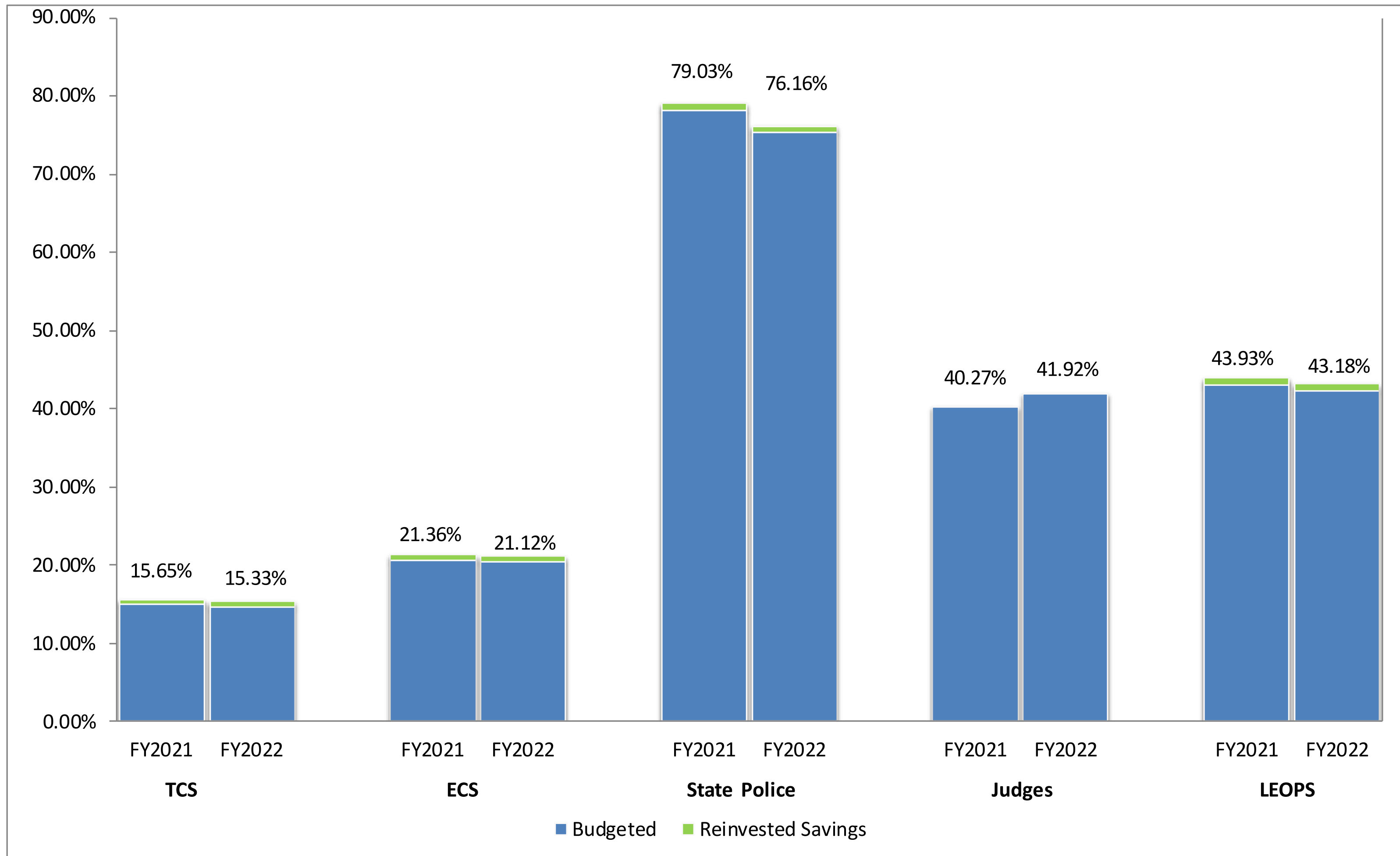
Actuarially Determined Contribution Rates (% of Pay)



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Year to Year Comparison of Results: STATE Systems

(STATE ONLY except as noted, $ in Millions)

	Teachers' Combined System	Employees' Combined System	State Police	Judges	LEOPS	Total
FY 2022 Contr. Rate (w. Reinv. Savings)[1]	15.33%	21.12%	76.16%	41.92%	43.18%	18.18%
FY 2021 Contr. Rate (w. Reinv. Savings)[1]	15.65%	21.36%	79.03%	40.27%	43.93%	18.46%
FY 2022 Actuarial Contribution Rate[2]	14.67%	20.50%	75.30%	41.92%	42.28%	17.50%
FY 2021 Actuarial Contribution Rate[3]	14.96%	20.71%	78.09%	40.27%	42.96%	17.75%
2020 Actuarial Value of Assets	$ 34,229	$ 14,212	$ 1,582	$ 512	$ 769	$ 51,305
2020 Unfunded Actuarial Liability	$ 10,228	$ 7,601	$ 780	$ 77	$ 418	$ 19,104
2019 Unfunded Actuarial Liability	$ 10,312	$ 7,487	$ 779	$ 66	$ 409	$ 19,053
Funded Ratios						
2020	77.0%	65.2%	67.0%	86.9%	64.8%	72.9%
(Including Municipal)[4]		*68.7%*			*65.9%*	*73.6%*
2019	76.2%	64.8%	66.2%	88.2%	64.1%	72.3%
(Including Municipal)		*68.3%*			*64.8%*	*72.9%*

[1]Contribution rates with Reinvested Savings are illustrative only and are shown to facilitate comparison when including the $75M as a percent of payroll.
[2]FY 2022 Actuarial Contribution Rate assumes Reinvested Savings of $0 will be contributed in FY 2021.
[3]FY 2021 Actuarial Contribution Rate assumes Reinvested Savings of $75 will be contributed in FY 2020.
[4]Municipal Actuarial Value of Assets of $4,942 Million and Municipal Unfunded Actuarial Liability of $1,120 Million are also included in the development of the Total Funded Ratio of 73.6%.

Reconciliation of Employer Contribution Rates (% of Pay)

(STATE ONLY)

	Teachers' Combined System	Employees' Combined System	State Police	Judges	LEOPS	Total
FY 2021 Actuarial Contribution Rate	**14.96%**	**20.71%**	**78.09%**	**40.27%**	**42.96%**	**17.75%**
Change due to Investment Return	0.55%	0.51%	1.65%	1.20%	0.74%	0.55%
Change due to Demographic and Non-Inv. Exp.	-0.52%	-0.21%	-1.07%	0.78%	-0.23%	-0.42%
Change due to Benefit Provisions	0.00%	0.00%	0.15%	0.00%	0.08%	0.00%
Change due to Total Payroll Experience	-0.17%	-0.34%	-2.74%	-0.32%	-1.04%	-0.24%
Change due to Other	-0.15%	-0.17%	-0.79%	-0.01%	-0.23%	-0.14%
FY 2022 Actuarial Contribution Rate	**14.67%**	**20.50%**	**75.30%**	**41.92%**	**42.28%**	**17.50%**
Reinvested Savings Rate	0.66%	0.62%	0.86%	0.00%	0.90%	0.68%
Final FY 2022 Total Budgeted Contr. Rate	**15.33%**	**21.12%**	**76.16%**	**41.92%**	**43.18%**	**18.18%**

Contributions for FY 2021 were based upon the June 30, 2019 valuation.

Sources of change due to demographic experience are described on slide 16.

Allocation of Contribution to Local Employers (Boards of Education)

Teachers Combined System

	FY2022 Contribution ($ in Millions)			
			Local	
	% of Pay	Total	Employers	State
Employer Normal Cost	4.17%	$ 322.1	$ 296.5	$ 25.6
UAAL Amortization	10.50%	811.1	-	811.1
Reinvested Savings	0.66%	50.8	-	50.8
Total	15.33%	$ 1,184.0	**$ 296.5**	$ 887.5

	FY2021 Contribution ($ in Millions)			
			Local	
	% of Pay	Total	Employers	State
Employer Normal Cost	4.33%	$ 319.3	$ 293.8	$ 25.5
UAAL Amortization	10.63%	783.9	-	783.9
Reinvested Savings	0.69%	50.8	-	50.8
Total	15.65%	$ 1,154.0	**$ 293.8**	$ 860.2

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Calculation of Contributions Attributable to Reinvestment Amounts

(STATE ONLY, $ in Millions)

	Teachers' Combined System	Employees' Combined System	State Police	Judges	LEOPS	Total
% of Total Pension Reform Savings#	67.7%	29.4%	1.4%	0.0%	1.5%	100.0%
Reinvested Savings	$ 50.8	$ 22.0	$ 1.1	$ -	$ 1.2	$ 75.0
FY 2022 Contributions						
Illustrated Dollar Contributions	$ 1,133.2	$ 729.6	$ 91.7	$ 22.8	$ 54.1	$ 2,031.4
TCS Local Employer Contributions	$ (296.5)	$ -	$ -	$ -	$ -	$ (296.5)
Reinvested Savings	$ 50.8	$ 22.0	$ 1.1	$ -	$ 1.2	$ 75.0
State Total Illustrated Contribution	**$ 887.5**	**$ 751.6**	**$ 92.8**	**$ 22.8**	**$ 55.3**	**$ 1,809.9**
FY 2021 Contributions						
Illustrated Dollar Contributions	$ 1,103.3	$ 700.7	$ 87.5	$ 20.6	$ 51.3	$ 1,963.4
TCS Local Employer Contributions	$ (293.8)	$ -	$ -	$ -	$ -	$ (293.8)
Reinvested Savings	$ 50.8	$ 22.0	$ 1.1	$ -	$ 1.2	$ 75.0
State Total Illustrated Contribution	**$ 860.3**	**$ 722.7**	**$ 88.6**	**$ 20.6**	**$ 52.5**	**$ 1,744.6**
State Year over Year Change	$ 27.2	$ 28.9	$ 4.2	$ 2.2	$ 2.8	$ 65.3

 # Based on Calculations from June 30, 2011 Valuation.

FY 2022 Contribution based on payroll as of June 30, 2020, projected to FY 2021 for TCS and FY 2022 for all other systems. FY 2021 Contribution based on payroll as of June 30, 2019, projected to FY 2020 for TCS and FY 2021 for all other systems. FY 2021 and FY 2022 Contributions for TCS would be $1,189 Million and $1,220 Million, respectively, if payroll was projected in the same manner as for the other systems (based on payroll projected one additional year to FY 2021 and FY 2022, respectively).

Municipal Results

Year-to-Year Comparison of Results: MUNICIPAL Systems

(MUNICIPAL ONLY, $ in Millions)

	Employees' Combined System	LEOPS	CORS	Total
FY 2022 Basic (Pooled) Contribution Rate	7.04%	34.21%	11.06%	**8.55%**
FY 2021 Basic (Pooled) Contribution Rate	6.71%	34.93%	9.67%	**8.24%**
2020 Actuarial Value of Assets	$ 4,557	$ 352	$ 33	$ 4,942
2020 Unfunded Actuarial Liability	$ 953	$ 162	$ 6	$ 1,120
2019 Unfunded Actuarial Liability	$ 947	$ 162	$ 2	$ 1,111
Funded Ratios				
2020	82.7%	68.5%	85.8%	**81.5%**
2019	82.3%	66.5%	92.5%	**81.1%**

The increase in the ECS pooled rate from FY 2021 to FY 2022 is partially driven by a legislated change in amortization policy. The change was designed to deal with an otherwise scheduled doubling of the rate from FY 2021 to FY 2022.
Contribution rates are percent of pay.

RISK/MATURITY MEASURES

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Risk Measures Summary

State and Municipal ($ in Millions)

	(10)	(11)	(12)	(13)	(14)	(15)
Valuation Date (6/30)	Market Value Funded Ratio[1]	RetLiab / AAL[2]	AAL / Payroll[3]	Assets / Payroll[3]	Non-Investment Cash Flow	NICF / Assets[4]
2015	69.1%	58.2%	599.1%	413.9%	$ (748)	-1.6%
2016	66.9%	58.7%	607.6%	406.7%	(921)	-2.0%
2017	70.0%	58.7%	612.9%	429.0%	(852)	-1.7%
2018	71.4%	59.6%	627.5%	448.1%	(1,059)	-2.0%
2019	72.4%	59.6%	626.0%	453.1%	(1,172)	-2.2%
2020	71.4%	59.3%	611.7%	436.6%	(1,224)	-2.2%

[1] The Funded ratio is the most widely known measure of a plan's financial strength, but the trend in the funded ratio is much more important than the absolute ratio. The funded ratio should trend to 100%. As it approaches 100%, it is important to re-evaluate the level of investment risk in the portfolio and potentially to re-evaluate the assumed rate of return.

[2] The ratio of retiree liabilities to total accrued liabilities gives an indication of the maturity of the system. As the ratio increases, cash flow needs increase, and the liquidity needs of the portfolio change. A ratio on the order of 50% indicates a maturing system.

[3] The ratios of liabilities and assets to payroll gives an indication of both maturity and volatility. Many systems have ratios between 500% and 700%. Ratios significantly above that range may indicate difficulty in supporting the benefit level as a level % of payroll.

[4] The ratio of Non-Investment Cash Flow to assets is an important measure of sustainability. Negative ratios are common and expected for a maturing system. In the longer term, this ratio should be on the order of approximately -4%. A ratio that is significantly more negative than that for an extended period could be a leading indicator of potential exhaustion of assets.

CONCLUSION

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Recommended Budgeted Contributions Fiscal Year 2022: STATE

System	Fiscal 2022		Prior Year	
	Budgeted Rate	**Illustrated Dollars (Millions)**	**Budgeted Rate**	**Illustrated Dollars (Millions)**
TCS	**14.67%**	$1,133	14.96%	$1,103
ECS	**20.50%**	730	20.71%	701
State Police	**75.30%**	92	78.09%	87
Judges	**41.92%**	23	40.27%	21
LEOPS	**42.28%**	54	42.96%	51
Total	17.50%	$2,031	17.75%	$1,963
TCS Local Employer Portion		297		294
Total State Only Portion		$1,735		$1,669

Reinvested savings of $75 Million are to be added to the amounts above. The final Illustrated State Total for FY 2022 is therefore $1,810 Million plus any amounts resulting from the sweeper amendment. Contribution rates are percent of pay.

Recommended Basic Contributions Fiscal Year 2022: MUNICIPAL

System	FY 2022	FY 2021
ECS	**7.04%**	6.71%
LEOPS	**34.21%**	34.93%
CORS	**11.06%**	9.67%

PGU Contributions consist of the basic pooled rate shown above, certain surcharges, deficits or credits related to pre-2001 ECS liability, and new entrant and withdrawal payments and credits, all of which are shown in the full report. Contribution rates are percent of pay.

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Concluding Comments

- Experience in total was unfavorable during FY 2020, however the larger than expected payroll led to lower FY 2022 employer contribution rates.
- Aggregate State employer contribution rates went down, but the illustrated dollars went up from FY 2021.
- Upward pressure on contribution rates expected through FY 2026 due to deferred asset losses.
- State Systems on a path to reach a 100% funded ratio by 2039.
  - We recommend that a comprehensive review of the funding policy and of the economic assumptions be scheduled for the Winter of 2021.

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Disclosures

- This presentation is intended to be used in conjunction with the June 30, 2020 actuarial valuation reports. This presentation should not be relied on for any purpose other than the purpose(s) described in the valuation reports.

- This presentation shall not be construed to provide tax advice, legal advice or investment advice.

- The actuaries submitting this presentation (Brian Murphy and Brad Armstrong) are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

- The purposes of the actuarial valuation are to measure the financial position of MSRPS, assist the Board in establishing employer contribution rates necessary to fund the benefits provided by MSRPS, and provide certain actuarial reporting and disclosure information for financial reporting. There is an additional report and documents with other actuarial reporting and disclosure information for financial reporting.

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Disclosures

- Future actuarial measurements may differ significantly from the current and projected measurements presented in this presentation due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

- This presentation was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

- This is one of multiple documents comprising the actuarial reports for the combined systems and the municipal corporations. Additional information regarding actuarial assumptions and methods, and important additional disclosures are provided in the Actuarial Valuations as of June 30, 2020.

- If you need additional information to make an informed decision about the contents of this presentation, or if anything appears to be missing or incomplete, please contact us before relying on this presentation.

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Annual State Retirement and Pension System Investment Overview

Presented to the
Joint Committee on Pensions

Department of Legislative Services
Office of Policy Analysis
Annapolis, Maryland

December 2020

Annual State Retirement and Pension System's Investment Overview

At the request of the Joint Committee on Pensions, the Department of Legislative Services (DLS) annually reviews the investment performance of the State Retirement and Pension System (SRPS) for the preceding fiscal year. This report is intended to provide an overview of SRPS performance, a comparison of this performance to its peers, and an identification of issues meriting further comment by the State Retirement Agency (SRA).

State Retirement and Pension System Investment Performance

Asset Allocation

The SRPS Board of Trustees sets the allocation of assets to each investment class and continuously monitors the appropriateness of the allocation in light of its investment objectives. The SRPS *Investment Policy Manual* sets forth the investment objectives:

> The Board desires to balance the goal of higher long-term returns with the goal of minimizing contribution volatility, recognizing that they are often competing goals. This requires taking both assets and liabilities into account when setting investment strategy, as well as an awareness of external factors such as inflation. Therefore, the investment objectives over extended periods of time (generally, 10 to 20 years) are to achieve an annualized investment return that:
>
> 1. In nominal terms, equals or exceeds the actuarial investment return assumption of the System adopted by the Board. The actuarial investment return assumption is a measure of the long-term rate of growth of the System's assets. In adopting the actuarial return assumption, the board anticipates that the investment portfolio may achieve higher returns in some years and lower returns in other years.
>
> 2. In real terms, exceeds the U.S. inflation rate by at least 3%. The inflation-related objective compares the investment performance against the rate of inflation as measured by the Consumer Price Index (CPI) plus 3%. The inflation measure provides a link to the system's liabilities.
>
> 3. Meets or exceeds the system's Investment Policy Benchmark. The Investment Policy Benchmark is calculated by using a weighted

average of the board-established benchmarks for each asset class. The Policy Benchmark enables comparison of the system's actual performance to a passively managed proxy and measures the contribution of active investment management and policy implementation.

The assets allocation is structured into five categories:

- ***Growth Equity:*** public equity (domestic, international developed, and international emerging markets) and private equity investments;
- ***Rate Sensitive:*** investments in bonds, loans, or associated derivatives with an average portfolio credit quality of investment grade;
- ***Credit:*** investments in bonds, loans, or associated derivatives with an average portfolio credit quality of below investment grade;
- ***Real Assets:*** investments whose performance is expected to exceed the rate of inflation over an economic cycle; and
- ***Absolute Return:*** consists of investments that are expected to exceed the three-month U.S. Treasury bill by 4-5% over a full market cycle and exhibit low correlation to public stocks.

Included within these asset classes are sub-asset classes. The board approves adjustments to the asset allocations and sets transitional targets. The board also approves target ranges for sub-asset classes as well as constraints on hedge fund exposure, with total hedge fund investments capped across all asset classes. **Exhibit 1** shows system asset allocations in relation to the strategic targets in effect on June 30, 2020.

Exhibit 1

State Retirement and Pension System Asset Allocation

Asset Class	Target Allocation	Actual June 30, 2020
Growth/Equity	50.0%	50.4%
Rate Sensitive	19.0%	18.6%
Credit	9.0%	9.3%
Real Assets	14.0%	11.8%
Absolute Return	8.0%	7.8%
Multi Asset	0.0%	1.5%
Cash and Cash Equitization	0.0%	0.5%
Total Fund	**100.0%**	**100.0%**

Note: Columns may not add to total due to rounding. Target allocation is as of October 1, 2017.

Source: State Retirement Agency of Maryland – Quarterly Investment Update – Period Ending June 30, 2020

The system's asset allocation is reflective of a decision to restructure the portfolio in fiscal 2008 and 2009. The overall strategy is part of an approach by the board to decrease risk through diversification in the wake of the 2008 financial crisis. Increased investment in private equity has resulted in positive returns for the system with less experienced volatility than public equity. Lower allocations to public equity investments are expected to result in lower returns when public equities are in growth patterns. However, as public equity can be a highly volatile asset class, a more diverse investment allocation should reduce volatility to provide protection when equity markets perform poorly or decline. While mitigating volatility will result in not taking full advantage of highly performing public equity markets, more stable investment returns will also mitigate swings in employer contribution rates. The board of trustees and the investment committee monitor the allocation of assets and continue to discuss the appropriate allocation (in consultation with the system's investment staff and investment consultants) that will achieve the system's investment return needs. Given the certain nature of defined benefit payment obligations, prudent allocation strategy should consider both achieving positive returns as well as being positioned to avoid losses. While investment division staff have some authority to make tactical, short-term adjustments to asset allocations, the *Investment Policy Manual* states an objective of long-term investment strategy, acknowledging the system's long-term investment horizon may lead to short-term volatility.

The current asset allocation targets were put in effect on October 1, 2017. The target allocations to the growth equity class were increased to 50%, with increased target allocations to emerging markets and private equity and a decreased international equity target. The rate sensitive class target was set at 19%. Within the credit class, the allocation targets increased the allocation

to high yield bonds and bank loans and decreased the target allocation for emerging market debt. The system's *Investment Policy Manual* for the board of trustees for SRPS will reflect actions of the board altering the asset allocation and can be found on SRA's website.

Investment Performance

The system's investment return for fiscal 2020 was 3.57% net of management fees, failing to exceed the assumed rate of return in two of the last three years. The system did exceed its policy benchmarks for the system as a whole, driven by returns in the growth equity and rate sensitive asset classes. System performance was driven primarily by growth equity returns, which made up 50.4% of the portfolio and returned 2.09% for the fiscal year, which was 2.48 percentage points (248 basis points) above its benchmark.

The system was able to weather the volatility introduced into markets with the spread of the COVID-19 pandemic and the interruption of economic activity resulting from public health measures taken to curb the spread of the virus. For the period ending March 31, 2020, the system experienced significant losses of -6.41% in that one-month period, bringing the fiscal year return through that date down to -3.55% and total assets down to $51.1 billion. The system did participate in the market rebounds, returning 4.47% for the month of April, 0.77% in May, and 1.88% in June.

DLS requests SRA to comment on its plans for managing and responding to ongoing COVID-19 related market downturn and recovery impacts on system investments. Additionally, SRA should comment on how it plans to monitor and respond to any long-term structural economic changes resulting from the COVID-19 pandemic.

As shown in **Exhibit 2**, the system's assets totaled $54.8 billion as of June 30, 2020, which was an increase over the $54.2 billion in assets at the end of fiscal 2019.

Exhibit 2
State Retirement and Pension System of Maryland
Fund Investment Performance for Periods Ending June 30, 2020
($ in Millions)

			Time Weighted Total Returns		
	Assets	**% Total**	**1 Year**	**5 Years**	**10 Years**
Growth Equity					
Public Equity	$19,788	35.6%	2.00%	5.96%	9.23%
Private Equity	7,803	14.2%	2.46%	12.27%	13.69%
Subtotal	***$27,590***	***50.4%***	***2.09%***	***7.34%***	***10.14%***
Rate Sensitive					
Nominal Fixed Income	$7,733	14.1%	20.64%	7.67%	5.88%
Inflation Sensitive	2,454	4.5%	8.95%	4.01%	3.87%
Subtotal	***$10,186***	***18.6%***	***18.10%***	***6.82%***	***5.46%***
Credit/Debt	**$5,117**	**9.3%**	**-0.43%**	**4.05%**	**6.00%**
Real Assets					
Real Estate	$4,607	8.4%	1.31%	6.88%	10.42%
Natural Resources and Infrastructure	1,844	3.4%	-19.14%	n/a	n/a
Subtotal	***$6,473***	***11.8%***	***-5.42%***	***2.08%***	***2.74%***
Absolute Return	**$4,290**	**7.8%**	**-2.47%**	**0.77%**	**2.74%**
Multi Asset	**$841**	**1.5%**	**2.93%**	**n/a**	**n/a**
Cash and Cash Equitization	**$270**	**0.5%**	**0.85%**	**5.39%**	**3.99%**
Total Fund	**$54,767**	**100%**	**3.57%**	**5.80%**	**7.57%**

Note: Returns beyond one year are annualized. Returns are net of fees.

Source: State Street – State Retirement Agency of Maryland – Rates of Return – Net Mgr – Periods Ending June 30, 2020

As shown in **Exhibit 3**, the system as a whole performed 0.43% (43 basis points) above the benchmark. The growth equity and rate sensitive asset classes – including their sub-asset classes – achieved returns in excess of their benchmarks, while the remaining asset classes and sub-asset classes all performed below their respective benchmarks. The rate sensitive asset class was the only asset class to return above the system's assumed rate of return of 7.40%. The system's private equity assets had the most significant return relative to its benchmark, outperforming the benchmark of -1.94% with a return of 2.46%.

Exhibit 3
State Retirement and Pension System of Maryland
Benchmark Performance for Year Ending June 30, 2020

	Return	Return Benchmark	Excess
Growth Equity	**2.09%**	**-0.39%**	**2.48%**
Public Equity	2.00%	0.36%	1.64%
Private Equity	2.46%	-1.94%	4.41%
Rate Sensitive	**18.10%**	**17.15%**	**0.94%**
Nominal Fixed Income	20.64%	19.34%	1.30%
Inflation Sensitive	8.95%	8.74%	0.22%
Credit	**-0.43%**	**-0.06%**	**-0.37%**
Real Assets	**-5.42%**	**-2.30%**	**-3.12%**
Real Estate	1.31%	3.24%	–1.93%
Natural Resources and Infrastructure	-19.14%	-14.25%	-4.89%
Absolute Return	**-2.47%**	**0.61%**	**-3.07%**
Multi Asset	**2.93%**	**3.14%**	**-0.22%**
Cash and Cash Equitization	**0.85%**	**1.56%**	**-0.71%**
Total Fund	**3.57%**	**3.14%**	**0.43%**

Note: Columns may not add to total due to rounding.

Source: State Street – State Retirement Agency of Maryland – Rates of Return – Net Mgr – Periods Ending June 30, 2020

DLS requests SRA to comment on the fiscal 2020 return performance in relation to the policy benchmarks. For any asset classes and asset sub-classes that underperformed the benchmark, SRA should comment on the factors that led to the underperformance, whether those factors are expected to negatively affect performance in fiscal 2021, and to comment on what actions are being taken to mitigate those factors from impacting the fiscal 2021 returns.

Performance Relative to Other Systems

One method of evaluating the system's investment performance is to compare the system's investment performance with the performance of other systems. The Wilshire Trust Universe Comparison Service (TUCS) rankings are useful for providing a big picture, snapshot assessment of the system's performance relative to other large public pension plans. In the TUCS analysis, the one-hundredth percentile represents the lowest investment return, and the first percentile is the highest investment return. According to TUCS, the system's fiscal 2020 total fund investment performance was rated in the fifty-third percentile among the public pension funds with at least $25 billion in assets, as shown in **Exhibit 4**. As the system has historically had a low allocation to equity investments compared to its peers – and domestic equity in particular – the system's investment policy will have a low TUCS ranking when equity markets are experiencing strong performance, as has been the case for a number of recent years. The long-term relative performance rankings have placed SRPS' relative total fund performance in the bottom quartile, with improvement in recent years. The TUCS rankings are based on returns gross of fees.

Exhibit 4
TUCS Percentile Rankings for Periods Ending June 30
Fiscal 2017-2020

	2017	2018	2019	2020
1 Year	95	75	60	53
3 Years	91	94	92	60
5 Years	87	84	88	71
10 Years	100	94	87	87

TUCS: Wilshire Trust Universe Comparison Service

Note: Rankings for systems greater than $25 billion.

Source: Wilshire Trust Universe Comparison Service

Total system TUCS rankings will be driven by the asset allocation. TUCS rankings on their own offer limited insight into the manner in which a system's asset allocation drives performance. The total system performance rankings by themselves offer little by way of explaining why

Maryland's performance differs from that of other funds and might not reflect a clear picture of the investment volatility risks borne by a system. SRA has noted that in certain asset classes the system does outperform peers but that when the system as a whole is compared, the low allocation to public equity will drive down the system's overall ranking.

The impact of asset allocation on total system TUCS rankings can be seen in the system's TUCS rankings on performance within individual asset classes. While the system as a whole has experienced relative low rankings when compared to peer systems, the system has experienced better relative performance by asset class, as shown in **Exhibit 5**. The difference in relative rankings between the system as a whole and the system by asset class – particularly for the long-term rankings – indicates that the asset allocation has impacted the relative ranking of the total system return, with the system having lower allocations to public equity, and domestic public equity in particular. This effect can also be seen in the ranking for total equity. The system does not have a bias to U.S. equity, which had strong performance in recent years. While the system ranks well in its performance in U.S. equity, the lesser amount of assets in U.S. equity will impact the total equity ranking compared to peer systems with higher allocations in U.S. equity.

Exhibit 5

TUCS Percentile Rankings for Periods Ending June 30, 2020

Asset Class	1 Year	3 Year	5 Year	10 Year
Total Equity	40	77	79	64
U.S. Equity	38	45	45	46
International Developed	41	39	51	80
International Emerging	21	37	n/a	n/a
Fixed Income	1	1	5	32
Private Equity	22	12	9	1
Real Estate	53	50	57	56

TUCS: Wilshire Trust Universe Comparison Service

Note: Rankings for systems greater than $1 billion.

Source: Wilshire Trust Universe Comparison Service

As shown in Exhibits 4 and 5, SRPS' relative returns in individual asset classes generally outperform the system's performance as a whole. All things being equal, a system with a higher allocation to asset classes with the highest levels of returns in a particular time period would be expected to have performed better than SRPS.

Recent historical returns have seen strong returns in public equity, which can be a highly volatile asset class. Allocations that limit exposure to more volatile assets should result in more stable employer contribution rates over time. An allocation that would result in mitigating volatility of returns (whether excess gains, returns below the assumed rate of return, or investment losses) will also mitigate the impact to employer contributions from contribution rate increases. A system's asset allocation should be impacted by a number of considerations that reflect a system's risk tolerance. A system's maturity (ratio of retirees to active members), funded status, assumed rate of return, benefit structure, regularity of full contributions, and other considerations factor into a system's risk tolerance. The importance of these factors will vary from plan to plan leading to different tolerances for risk, variation in investment allocations, and differences in annual returns.

TUCS provides data on the risk-return profile of its members that shows that the system's level of risk over the three-year period ending June 30, 2020, was below the median for other public funds with assets greater than $25 billion. This is consistent with the system's comparatively lower allocation to public equity that can be a highly volatile asset class. The system's asset allocation strategy is intended to protect against more extreme losses in down markets. Due to the nature of the benefits that the system's investments ultimately fund, there is prudence in setting an asset allocation that achieves the necessary investment returns with the lowest level of risk capable of achieving those returns.

DLS requests that SRA comment on the relative TUCS performance rankings by asset class and how overall asset allocation impacts the total system's TUCS rankings.

Additionally, DLS requests that SRA comment on how the system's asset allocation impacted the investment strategy for responding to COVID-19 related market downturns and rebounds.

Investment Management Fees

As shown in **Exhibit 6**, SRPS incurred $364.1 million in investment management fees during fiscal 2020, a decrease from $372.5 million in fiscal 2019 fees. Management fees for the plan as a whole have grown substantially since the system adjusted its asset allocation to invest more heavily in alternative asset classes with higher fee structures. The shift of public equity assets to global and emerging market equity managers, which are almost all active managers, has also contributed to the growth in fees over the past few years. As a percent of assets under management, management fees in fiscal 2020 were lower than in fiscal 2019 by 4 basis points. SRA credits its ability to negotiate favorable fee arrangements as a contributing factor in mitigating the impact of management fees on system returns. Review of SRPS fees by the system's investment consultant has noted that SRPS has continued to be effective at negotiating more favorable fee arrangements than peer systems. Transitioning assets to internal management is also expected to result in significant fee savings to the system.

Exhibit 6
Asset Management Fees Paid by Asset Class
Fiscal 2019-2020
($ in Millions)

	2019				2020			
Asset Class	**Management Fee**	**Incentive Fee**	**Total**	**Fees as % of Asset**	**Management Fee**	**Incentive Fee**	**Total**	**Fees as % of Asset**
Equity	$65.5	$0.9	$66.4	0.37%	$69.4	$1.2	$70.7	0.39%
Rate Sensitive	12.5	1.2	13.7	0.14%	13.4	6.0	19.4	0.30%
Credit	5.4	n/a	5.4	0.17%	6.3	n/a	6.3	0.17%
Private Equity	110.1	0.3	110.4	1.64%	108.8	n/a	108.8	1.43%
Real Estate	34.3	1.9	36.2	0.84%	36.7	2.7	39.4	0.85%
Real Return	18.2	n/a	18.2	0.69%	16.2	n/a	16.2	0.87%
Absolute Return	51.9	21.0	72.9	1.77%	41.9	24.9	66.8	1.60%
Multi Asset	1.4	n/a	1.4	0.20%	1.5	n/a	1.5	0.18%
Private Credit/Debt	14.9	n/a	14.9	1.32%	15.1	n/a	15.1	1.36%
Equity Long Short	11.0	12.0	23.0	2.69%	8.6	3.8	12.5	1.99%
Service Providers	10.1	n/a	10.1	n/a	7.8	n/a	7.8	n/a
Total Fund	**$335.2**	**$37.3**	**$372.5**	**0.72%**	**$325.5**	**$38.6**	**$364.1**	**0.68%**

Note: Columns may not sum to total due to rounding. "Fees as % of Asset" column indicates fees as a percentage of the asset under management.

Source: State Retirement Agency

Active Management

While active management of assets results in higher overall fees, the system has benefited from active management by achieving excess returns over performance benchmarks. The system does utilize passive investment strategies where available, and through active management is able to add more diversification to system investments by investing in assets where active management can generate returns in assets where passive investment is not available or efficient. **Exhibit 7** shows the systems performance where active and passive management are utilized. Actively managed U.S. equities outperformed the passively managed assets during the economic rebound during the final quarter of fiscal 2020, as well as outperforming the passively managed assets for the whole fiscal year. Actively managed emerging market equities and U.S. nominal fixed income

investments also outperformed passively managed assets in the final quarter of fiscal 2020, though they did trail the passively managed assets for the fiscal year.

Exhibit 7
Active and Passive Management Performance
Periods Ending June 30, 2020
($ in Millions)

	Assets	1 Month	3 Months	FYTD
U.S. Equity				
Passive Management	$2,727.7	2.35%	21.34%	3.93%
Active Management	$3,560.3	2.94%	25.09%	5.92%
Emerging Market Equity				
Passive Management	$29.1	7.31%	18.02%	-2.65%
Active Management	$5,045.0	7.81%	20.26%	-3.68%
U.S. Nominal Fixed Income				
Passive Management	$2,011.6	0.71%	2.03%	20.52%
Active Management	$5,505.8	1.21%	4.70%	16.57%

FYTD: fiscal year-to-date

Note: Columns may not add to total due to rounding.

Source: State Street – State Retirement Agency of Maryland – Rates of Return – Net Mgr – Periods Ending June 30, 2020

Absolute Return Fees

Absolute return fee structures typically include base fixed management fees and incentive compensation based on performance. Fees paid for absolute return were $66.8 million in fiscal 2020, which represents approximately 18.3% of all management fees. Absolute return comprises 7.8% of SRPS investments. Absolute return was among the lower performing asset classes in fiscal 2020, underperforming its benchmark by 307 basis points with a return of -2.47%. The system's *Investment Policy Manual* describes the absolute return asset class as, "investments whose performance is expected to exceed the three month U.S. Treasury bill by 4-5% over a full market cycle and exhibit low correlation to public stocks." In fiscal 2020, only six managers achieved returns above the system's 7.40% assumed rate of return. Performance relative to

benchmarks was mixed within the asset class, with about half of the absolute return managers achieving returns above the asset class benchmark. A significant number of investments sustained losses with four underperforming their benchmarks by more than -20% and one underperforming by more than -60%. Absolute return has returned below benchmarks for the 1-, 3-, 5-, and 10-year periods ending June 30, 2020. Since inception, the returns have exceeded the benchmarks, but that return is only 2.73% against a benchmark of 1.69%. In contrast, the system's cash assets (0.5% of total system assets) have outperformed the absolute return assets over the 1-, 3-, 5-, and 10-year periods ending June 30, 2020. Additionally, the system's cash assets have had significant excess returns over their benchmarks with returns since inception of 3.82% against a benchmark of 0.58%.

Prior responses from SRA have indicated that the absolute return asset class is expected to perform better in times of volatile, chaotic markets, and that absolute return should provide competitive returns with downside protections when a drawdown in equities occurs. For the three-month period ending March 31, 2020, this was reflected in the returns for absolute return compared to the growth equity asset class. For that period when the severity of the COVID-19 pandemic was becoming evident, the growth equity asset class return was -15.39% with absolute return only being down -6.77% for that period. However, for that same period, the system's cash assets only experienced a loss of -1.34%.

Given the low rate of return, underperformance relative to benchmarks, and high management fee structures, DLS requests SRA to comment on the returns of the absolute return asset class, including the market conditions leading to the low level of returns and benchmark underperformance, and what market conditions would result in markedly improved returns for investments in the asset class.

Private Equity Fees

Management fees for private equity comprised nearly 30% of total management fees, despite only constituting 14.2% of system assets in fiscal 2020. The reason for the higher amount of fees in private equity involves a substantial degree of active management. Fee structures typically include a fixed base management fee, plus a portion of earnings referred to as "carried interest." The management fees only reflect the base fees, not carried interest. Because of the nature of private equity fee arrangements, carried interest fees are tied to performance. When the system pays higher carried interest fees, a higher return on investment is earned by the system. SRA indicates that private equity returns are reported net of management fees and carried interest.

While private equity does involve substantial management fees, the system's private equity portfolio was one of the strongest performing sub-asset classes in 2020. While the private equity return was only 2.46%, the benchmark was -1.94%. Private equity had the strongest outperformance of any asset class, exceeding its benchmark by 4.41%. Investment in private equity has resulted in positive returns for the system with less experienced volatility than public equity. Returns for the one-, three-, and five-year periods ending June 30, 2020, were 2.46%, 11.69%, and 12.27%, respectively. Returns for those same periods also provided significant excess returns over the asset class benchmarks. Private equity investment performance has also outperformed peer

systems consistently, as noted in Exhibit 5, with the system ranking 1 for its 10 year returns.

SRA has begun utilizing co-investments in private equity. Such investments are companion investments to private equity funds that SRPS is already investing in but would not carry the same associated fee structure. Under this approach, SRPS would effectively be reducing its fees for any private equity investments it co-invests by increasing the invested funds with the co-invested portion of the investment being subject to a lower fee structure. One potential risk in utilizing co-investing is that it can result in decreased diversification by consolidating private equity assets in fewer investments. Management of private equity assets will play a crucial role in the continued success of the asset class.

Legislation passed in the 2019 session (Chapter 202) requires SRA to provide more detailed information on carried interest on investments. In the past five years, calls for greater transparency in the reporting of carried interest have led to changes in the investment management industry. Carried interest is earned by investment managers in private markets (*e.g.*, private equity, private real estate) and is the amount that a general partner (investment manager) retains as an ownership interest in the investment profits generated by the partnership. Carried interest typically represents a percentage of the profits generated, with that proportion negotiated among the parties involved. As carried interest represents shared profits that are retained by the general partner rather than paid by the investor, it is not typically reported as investment management fees.

Several public pension plans have begun releasing reports showing carried interest earned by general partners managing investments on their behalf. In addition, the Institutional Limited Partners Association developed a reporting template that includes carried interest that has been endorsed by many investment managers and public pension funds (including SRPS). Chapter 202 requires the board's annual report on investment management services to include the amount of carried interest on any assets of the system. The first report, issued in January 2020, noted carried interest of $162.5 million for fiscal 2019, which also indicates an implied share of investment profit of $812.7 million for that fiscal year.

DLS requests SRA to provide an update on estimated carried interest for fiscal 2020.

Investment Division Staffing

Chapters 727 and 728 of 2018 granted the board authority to set the compensation of personnel in the SRA Investment Division and to establish positions within the division, subject to certain limitations. Investment Division staff are now to be "off-budget" and funded as system expenses. Investment positions are also now outside the State personnel system. The legislation included the creation of the Objective Criteria Committee (OCC) that is charged with making recommendations to the board on the objective criteria to be used for setting compensation and governing the payment of financial incentives to eligible investment division staff. OCC made recommendations to the board, and the board included provisions governing the compensation (including incentive compensation) for division staff.

The stated purpose of the legislation by SRA and the board was twofold. First, SRA's Chief Investment Officer (CIO) noted that the ability to create positions and set compensation would reduce compensation-related turnover in the division and help in recruitment to adequately staff the division to perform its existing functions. Testimony submitted in support of the legislation noted that the authority is expected to enhance system investment performance by maintaining and adding staff. The testimony noted that additional staffing resources will "enable the division to expand the universe of potential managers or investments to pursue, enhance the methodology of evaluating those opportunities, or design tactical strategies to adjust the mix of investments for intermediate-term performance." Additional staffing is also intended to free senior investment staff of administrative duties, resulting in increased focus on enhancing investments. The testimony noted that providing the board with authority over positions and compensation "will not result in paying the existing staff more money for doing the same job, but instead, will allow these positions to be more focused on the investment process rather than the administrative and reporting functions." The request for staffing authority contemplated SRA's need to expand its staff resources, as both the complexity of the fund assets and the size of the assets under management is expected to grow.

Since the passage of Chapters 727 and 728, SRA has been able to hire additional staff and move forward into internal management of assets. The board approved 8 additional positions for fiscal 2020 and has filled 5 of those positions. An additional 6 positions were approved for fiscal 2021, 2 of which have been filled and 3 of which are expected to be filled by January 2021.

Incentive Compensation

Fiscal 2020 is the first year in which investment division staff and the CIO are eligible for incentive compensation under Chapters 727 and 728. SRA reports that based on fiscal 2020 investment performance, 19 staff are eligible for incentive compensation under the guidelines incorporated into the system's *Investment Policy Manual*. However, due to restrictions included in the legislation on payment of incentive compensation in years in which State employees are subject to a furlough, the board deferred action on when the incentive compensation would be paid. In order to remain in compliance with the limitations on paying incentives in a year when a furlough might possibly be implemented due to COVID-19 related economic factors, the board's deferral was intended to ensure payment of earned incentives would not occur until there is greater clarity on whether or not there would be furloughs during the current fiscal year.

Internal Management of Assets

The second purpose under Chapters 727 and 728 was that the authority over positions and compensation would be necessary to expand and begin moving externally managed assets to internal management by division staff. The timeline indicated for internal management contemplated beginning with passively managed assets toward the end of an initial 2-year phase-in. Internal management would be broadened in years 3 through 5 to types of assets directly managed, including co-investment in private assets. By year 10, as much as 50% of assets could be managed internally. One of the arguments for internal management is that it can reduce fees

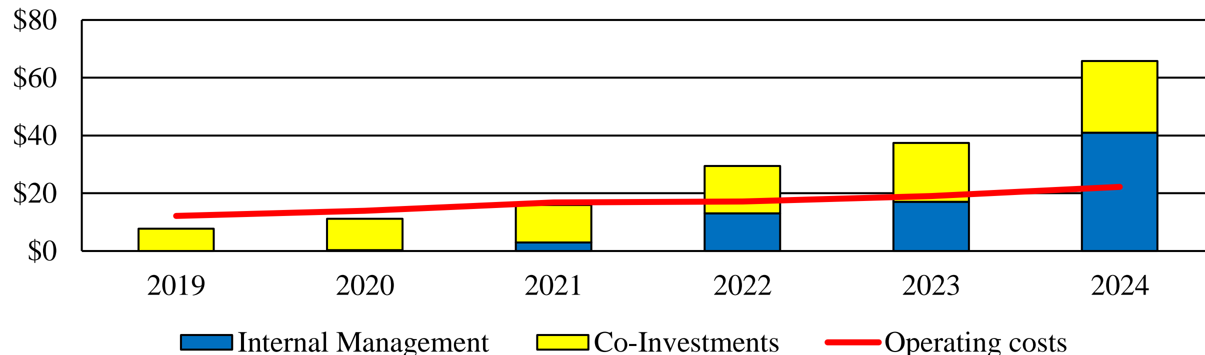
paid for asset management. SRA estimates savings opportunity through internal management of assets. SRA noted that fee savings of just 1 basis point would net the system approximately $5 million. DLS has previously noted that SRA has been effective at negotiating favorable fee arrangements with external managers, and external management provides SRPS with options to select asset managers and to diversify the management of assets among multiple managers. DLS also previously noted that a shift to internal management would require significant operational changes. Performance measures would need to be adopted to monitor and evaluate the effectiveness of internal management of system assets compared to external management. Additionally, guidelines and reporting requirements would need to be implemented to track the internal management of system funds as well as any expansion or reduction of internal management once implemented.

Since the passage of Chapters 727 and 728, the system has begun to move assets under internal management. As of June 30, 2020, there was $2.3 billion in U.S. treasury inflation protection securities and $1.3 billion in long government bonds under internal management. So far in fiscal 2021, an additional $500 million in a Russel 1000 portfolio was funded for October 1, 2020. The system is planning additional internal management functions in fiscal 2021 of:

- $500 million passive local currency emerging markets sovereign bond portfolio;
- $500 million passive investment grade corporate bond portfolio;
- $250 million passive small cap equity portfolio; and
- $100 million passive securitized bond portfolio.

The planned expansion into internally managed assets is estimated by SRA to result in net savings of over $50 million by fiscal 2024, when accounting for the increases to budgeted personnel and services expenses for the Investment Division. **Exhibit 8** shows the estimate of management fee savings to the system through the implementation of internally managing assets and through the use of co-investments in private equity. SRA projects fee savings of around $66 million by fiscal 2024. SRA estimates its Investment Division budget to increase from $8 million in fiscal 2018 to $22.2million by fiscal 2024, for a projected net increase to the division's budget of $14 million.

Exhibit 8
Internal Management Fee Savings
Fiscal 2019-2024
($ in Millions)



Note: Fiscal years 2022 through 2024 are projected.

Source: State Retirement Agency – November 17, 2020, Presentation to the State Retirement and Pension System Investment Committee

DLS requests SRA to provide an update on any Investment Division implementation of internal management of system assets and the development of necessary compliance and controls on the use of internal asset management. More specifically, SRA should comment on how the Investment Division:

- **has developed proficiency in managing assets currently being managed internally;**
- **will develop proficiency before expanding into internal management of additional asset classes;**
- **will evaluate the performance of internal management compared to available external management services; and**
- **will develop methodologies for determining fee savings achieved through internal management.**

Terra Maria Program

The Terra Maria program is the system's emerging manager program. One of the Terra Maria program's stated goals is to achieve returns in excess of benchmarks. The program has demonstrated the ability to achieve excess returns over benchmarks, with instances of

significant returns over benchmarks at times. Over the past few years, SRPS underwent reorganizing of the program to better utilize the asset diversification that the program can bring to SRPS. The program transition included eliminating mandates for allocations to large-cap domestic equity and increasing mandates for international small-cap and emerging markets. The program consolidated under five program managers. Program investments in domestic equity in recent years were tracking close to markets, making it more difficult to achieve excess returns in an asset class where it is already difficult to outperform the market, in addition to incurring active management fees. The program has maintained a diverse roster of managers through the transition.

Total assets devoted to the program decreased to $2.5 billion in fiscal 2020, down from $2.6 billion in fiscal 2019. As a proportion of total assets, Terra Maria decreased from 4.9% of total assets in fiscal 2019 to 4.5% in fiscal 2020. **Exhibit 9** provides an overview of the Terra Maria program by program manager and asset class.

Exhibit 9

Terra Maria Program Performance

Investment Performance for Periods Ending June 30, 2020
($ in Millions)

		Performance			
	Total Assets	**Fiscal 2020 Actual**	**Fiscal 2020 Benchmark**	**Inception Actual**	**Inception Benchmark**
Program Manager					
Attucks	$413.1	-3.53%	-5.42%	10.07%	6.58%
Capital Prospects	1,027.6	0.50%	1.68%	11.87%	11.84%
Xponance	590.6	-7.32%	-3.21%	8.58%	8.79%
Leading Edge	426.4	1.14%	-5.42%	9.66%	6.58%
Asset Class					
U.S. Equity	$352.7	-10.35%	-7.72%	6.14%	6.57%
International Developed Equity	1,099.3	-2.28%	-4.81%	2.36%	0.95%
Emerging Market Equity	330.9	-8.72%	-3.39%	n/a	n/a
Rate Sensitive	623.9	6.94%	7.72%	3.96%	3.86%
Credit/Debt	51.0	-0.81%	0.00%	1.18%	1.98%
Total	**$2,457.8**	**-2.32%**	**-2.07%**	**4.68%**	**4.28%**

Note: Actual returns are net of fees; returns beyond one year are annualized. Total assets may not sum to total due to rounding and outstanding payables from closed accounts.

Source: State Street – State Retirement Agency of Maryland – Rates of Return – Net Mgr – Periods Ending June 30, 2020

In fiscal 2020, the program experienced a negative return of -2.32%, underperforming against a benchmark of -2.07%. Two of the four program managers experienced negative returns, and two of the four had a return above the benchmark. Leading Edge had the strongest performance, with its return of 1.14% outperforming its benchmark by 6.56%. By asset class, only the rate sensitive asset class had a positive return, though its return of 6.94% was below its benchmark of 7.72%. Since inception, all four program managers have had returns above the system's assumed rate of return, with three of the four outperforming their benchmark.

Despite the poor overall performance in fiscal 2020, returns for the fourth quarter of the fiscal year were significantly improved, rebounding significantly after the initial economic impact of the pandemic. As shown in **Exhibit 10**, all four managers had significantly improved positive returns, with all managers achieving double-digit returns. Additionally, all four managers' returns exceeded the benchmarks for this final three months of fiscal 2020. Additionally, the program outperformed non-Terra Maria actively managed investments in U.S. equity and international developed equity, and also achieved greater excess returns compared to their benchmarks.

Exhibit 10
Terra Maria Program Performance
Investment Performance for Three-month Period Ending June 30, 2020
($ in Millions)

	Performance		
	Actual	**Benchmark**	**Excess**
Program Manager			
Attucks	18.50%	15.34%	3.16%
Capital Prospects	11.91%	9.69%	2.22%
Xponance	19.30%	19.26%	0.04%
Leading Edge	20.57%	15.34%	5.23%
Asset Class			
U.S. Equity	28.61%	24.99%	3.62%
International Developed Equity	19.64%	16.48%	3.16%
Emerging Market Equity	18.77%	18.08%	0.69%
Rate Sensitive	4.64%	2.70%	1.93%
Credit/Debt	6.71%	8.90%	-2.19%
Total	**16.17%**	**13.75%**	**2.41%**

Note: Actual returns are net of fees; returns beyond one year are annualized. Total assets may not sum to total due to rounding and outstanding payables from closed accounts. The current Credit/Debt asset class inception was March 1, 2019.

Source: State Street – State Retirement Agency of Maryland – Rates of Return – Net Mgr – Periods Ending June 30, 2020

Currency Program

Adopted in fiscal 2009, the program is designed to protect against losing value when the dollar appreciates relative to some foreign currencies in countries in which the system holds assets. During periods when the dollar is weak, the currency management program's cost manifests as a slight drag on international equity holdings. However, when the dollar appreciates, the program provides gains that help offset the currency losses generated by the strengthening dollar. As of June 30, 2020, the currency program added total value of $283.2 million since inception. Gains when the dollar is strong should outweigh losses when the dollar is weak, and the system has taken steps to lock in program gains. The primary objective of the program is to lower volatility related to currency fluctuations.

The currency hedging program has limited application and is only applied to a relatively small portion of the system's total assets. In addition, not all foreign currencies are included in the hedging program. Due to liquidity constraints and higher transaction costs in some currencies, the program is currently limited to the euro, Japanese yen, Swedish krona, Swiss franc, Canadian dollar, Australian dollar, and British pound.

Appendix 3
State Retirement Agency Investment Overview Responses

State Retirement Agency

Response to Questions Received from DLS

December 9, 2020

DLS requests SRA to comment on its plans for managing and responding to ongoing COVID related market downturn and recovery impacts on System investments. Additionally, SRA should comment on how it plans to monitor and respond to any long-term structural economic changes resulting from the COVID pandemic.

The Board of Trustees has not changed the System's asset allocation in response to the COVID-19 pandemic. While the Board reviews asset allocation on an annual basis, the investment strategy is meant to be long-term, and not reactive to short-term events. Going forward, the Board will review the asset allocation at least once in every four-year period. During the next review, scheduled for calendar 2021, the Board will consider changes to the outlook for the long term returns of asset classes, including those stemming from the current pandemic and its aftermath. The pandemic had a significant effect on the economy in the first half of 2020, with U.S. gross domestic product falling five percent in the first quarter, followed by a thirty-one percent decline in the second quarter. However, with the support of both monetary and fiscal stimulus packages, the economy experienced a robust recovery in the third quarter with a gain of thirty-three percent in GDP, technically ending the shortest recession in history. As a result of this recovery, as well as the promising vaccine data, stock markets are near all-time highs. Going forward, the main drivers of the economy will be the successful implementation and efficacy of a vaccine program, as well as continued monetary and fiscal support.

While it is difficult to determine any long-term structural changes to the economy due to the pandemic, the System has many resources at its disposal to monitor ongoing developments. In addition to consulting with outside managers and analyzing external research, the System also has access to expert third party consultants, including specialty firms focusing on specific asset classes like real estate, private equity and hedge funds. These consultants assist the Board and staff in developing investment strategies that incorporate and reflect current trends and economic data. An example of an asset class that will benefit from these consultant relationships is real estate. Because more people are working from home because of the pandemic, there is uncertainty regarding the long-term impact on office properties. The System, with input, data and advice from external managers and its real estate consultant, will monitor this sector closely over the coming months to determine an appropriate level of exposure given its market outlook.

DLS requests SRA to comment on the fiscal 2020 return performance in relation to the policy benchmarks. For any asset classes and asset sub-classes that underperformed the benchmark, SRA should comment on the factors that led to the underperformance, whether those factors are expected to negatively affect performance in fiscal 2021, and to comment on what actions are being taken to mitigate those factors from impacting the fiscal 2021 returns.

In fiscal year 2020, the System earned a net return of 3.57%. While this return did not meet the long-term actuarial return target, the relative performance versus the policy benchmark was very strong. The policy benchmark is a more appropriate benchmark when evaluating shorter-term performance. It is the weighted average of each of the individual asset class benchmarks and represents what the System would have returned if the asset class benchmark returns were achieved. The System outperformed its policy benchmark by 43 basis points, which equates to approximately $230 million in added value. Roughly 70% of the value of the total fund achieved excess returns over respective policy benchmarks, while 30% underperformed. The excess return of 43 basis points was a product of continued strong private equity performance, combined with outperformance in the public equity and rate sensitive portfolios. Over the past ten years, the System has achieved an average annualized return of 7.57%, beating the policy benchmark of 7.17% by 40 basis points annualized.

The Board of Trustees does not expect each asset class to outperform every year, but instead across economic cycles. Investment Division staff reviews the performance of underperforming asset classes to assess whether the performance is consistent with expectations, or a sign of a longer-term problem. In fiscal year 2020, three asset classes representing roughly 30% of the portfolio trailed the performance of their respective benchmarks – real assets, absolute return and credit.

The real assets portfolio achieved a return of -5.42%, trailing it benchmark return of -2.30% by 312 basis points. The largest component of this asset class is real estate, which represents 8.4% of the total fund. The other smaller part of this asset class is natural resources and infrastructure, making up 3.4% of the total fund. Real estate, represented by both open-end and closed-end funds, returned 1.31% for the fiscal year, compared to the benchmark return of 3.24%. Most of the underperformance can be attributable to nuances associated with the benchmark. The System reports returns net of all management fees, while the real estate benchmark in effect for fiscal year 2020 was gross of fees. The difference between the gross and net benchmark is roughly 90 basis points. To resolve this mismatch, the Board adopted a more appropriate net benchmark plus a spread of 40 basis points to better reflect the performance reporting of the System and to account for investments in non-core strategies. This policy benchmark is more consistent with peer practices and is effective for the 2021 fiscal year.

Another element contributing to the underperformance in real estate is the timing of benchmark reporting. Historically, the System used a one quarter delay in measuring the performance of the real estate benchmark but used the current performance for the System's open-ended funds, which constitutes roughly 75-85% of the real estate portfolio. To correct for this timing mismatch going forward, the one-year return for the benchmark in fiscal year 2020 included five quarters of return, while the System's return consisted of four quarters. If the oldest quarter was dropped from the benchmark return (better matching the return series measured in the portfolio), that would reduce the benchmark return by 100 bps.

The other segment of the real assets portfolio consists of natural resources and infrastructure investments. This portfolio returned -19.14% for the fiscal year, compared to -14.25% for the benchmark. This portfolio is difficult to benchmark, as it consists of roughly 42% private market investments, while the benchmark includes only publicly traded securities. This mismatch creates timing differences in performance reporting that can distort short-term returns. For example, publicly traded securities, which constitute the benchmark, rebounded sharply in the quarter ended June 30, 2020 after the precipitous first quarter drawdown related to COVID-19. The benchmark fully captured the strong second quarter return, while the portfolio's private

investments were still valued at the depressed first quarter levels. As a result, 42% of the portfolio was based on March 31, 2020 valuations, while 100% of the benchmark was using updated June 30, 2020 pricing. Staff is currently working with the Board and its consultants regarding portfolio construction and benchmarking for this relatively small portion of the total fund.

Portfolio construction also contributed to the underperformance in the natural resources and infrastructure portfolio. During the fiscal year, the System was overweight to the energy sector relative to the benchmark through its investments in private energy funds and master limited partnerships. This sector is heavily influenced by the prices of the underlying commodities and performed significantly worse than the benchmark, with oil and natural gas down 33% and 29% for the year, respectively. Going forward, the risk and return outlook for these investments has improved as the global economy continues to recover from the effects of the pandemic, and the supply and demand dynamics in the energy sector have become more balanced with greater cooperation on supply within OPEC members.

The absolute return segment also lagged its benchmark in fiscal year 2020, returning -2.47% versus the benchmark return of 0.61%. The portfolio held up well relative to the benchmark during the first quarter market decline, outperforming by 46 basis points and trailing by only 6 basis points through the first nine months of the fiscal year. The subsequent rally in equities and bonds from the lows in March hurt the portfolio, which has less sensitivity to public markets and is not expected to perform as well during strong equity markets. From April to June, the portfolio underperformed the benchmark by 2.9%.

The performance of the absolute return portfolio was below expectations primarily due to four managers employing macro and event driven strategies. The macro strategies within the absolute return portfolio are expected to be diversifying and provide outperformance when equity markets are struggling. While this segment worked well during the fourth quarter of 2018, it did not provide the same protection during the first quarter of 2020. To improve the portfolio, two macro-oriented managers were hired at the beginning of fiscal year 2021 to increase diversification. The event driven portfolio has more equity and credit risk and is expected to struggle when markets fall significantly. One manager struggled to adapt to the volatile market movements during the first quarter of 2020 and was terminated in April due to staff's lack of confidence in the manager's ability to perform going forward. Two other managers that contributed to the underperformance remain in the portfolio, one of which has fully recovered the losses and is now positive for the year through November of 2020.

For the year ending June 30, 2020, the credit asset class returned -0.43%, underperforming its benchmark return of -0.06% by 37 basis points. This underperformance was driven primarily by the timing mismatch created by private investments being benchmarked to public indices. Private credit investments represent roughly 21% of the total credit portfolio, while the benchmark includes only publicly traded securities. This mismatch creates timing differences in performance reporting that can distort short-term returns. For example, through March 31, 2020, the fiscal year-to-date performance of the credit portfolio was ahead of the benchmark by 303 basis points. However, this outperformance evaporated in the quarter ending June 30, 2020 as publicly traded credit securities, which constitute the benchmark, posted strong returns after the first quarter lows. The benchmark returned 5.59% for the June 30, 2020 quarter, while the portfolio's private investments recorded at return of -4.68%. Over time, these short-term distortions should be smoothed and reported returns should reflect more meaningful performance and allow for better analysis.

DLS requests that SRA comment on the relative TUCS performance rankings by asset class and how overall asset allocation impacts the total system's TUCS rankings.

As noted in the DLS Investment Overview, the System's one-year total fund performance compared against a peer group of other large public pension plans ranked near the median, or 53rd percentile. Peer group rankings are mainly driven by two factors – asset allocation and implementation of the asset allocation. Asset allocation refers to the way the fund assets are distributed to the various asset classes, and implementation refers to staff's ability to select skillful managers and tactically position the portfolio to take advantage of market opportunities.

An effective method to determine which of these factors is driving the total fund peer rankings is to analyze the peer ranking of each individual asset class. As noted in the DLS report, most of the System's asset classes have achieved above median returns. Private equity, the System's best-performing asset class, representing roughly 14 percent of total fund assets, has consistently ranked in the top quartile of the peer group over time. In fact, for the ten-year period ending June 30, 2020, the System's private equity portfolio is ranked in the 1st percentile. That the individual asset class rankings are higher than those of the total fund supports the notion that the mix of asset classes is mainly driving the results, and not the performance of the individual asset classes. For example, the System has higher target allocations to non-U.S. equities than the average peer in the universe. Over the past ten years, U.S. stocks have significantly outperformed foreign stocks. The System's relative underweight to U.S. stocks has resulted in a lower peer ranking than would be assumed based solely on rankings of individual asset classes.

The System typically reports its peer rankings against a relatively small universe of roughly thirty public pension plans on a gross-of-fee basis. Given the System's asset allocation, with a relatively higher allocation to private market investments like private equity, private credit and real estate, it might also be instructive to measure performance against a larger universe on a net-of-fee basis. Private investments typically do not report gross investment returns, but only performance net of all fees. As a result, the System's gross returns are a combination of gross and net, with the gross returns reflecting approximately 25 basis points of the roughly 65 basis points to total management fees incurred. To the extent the System invests more heavily in private investments, the difference between the gross and net numbers will be smaller relative to a peer plan that a higher allocation to traditional assets. This is illustrated in Table 1 below, which ranks the System's performance against a larger universe of seventy-one public pension plans after investment expenses have been netted out.

Table 1
Total System vs. Public Plans > $1 Billion Universe
(June 30, 2020 net of fees)

	1 Year	3 Years	5 Years	10 Years
Total System	**3.57%**	**6.01%**	**5.80%**	**7.57%**
Rank	**14**	**20**	**32**	**63**

* **Represents the InvMetrics Public Defined Benefit > $1 billion peer group**

The focus on investment performance tends to be on returns. However, the Board and staff recognize that risk is equally important. To get a more complete picture of the System's investment program, risk-adjusted returns should also be evaluated. The System's risk profile, as measured by the dispersion of returns around the mean, falls in the bottom quartile of the peer group. This lower risk posture has been achieved by targeting a lower relative weighting to public stocks versus the peer group. Sharpe ratio is another metric that accounts for risk in the assessment of investment performance, and represents risk-adjusted returns, or returns per unit of risk. Based on the Sharpe ratio measure, the System ranks in the top quartile over the last three and five years. This is illustrated in Table 2 below, which ranks the System's Sharpe ratio against a larger universe of seventy-one public pension plans after investment expenses have been netted out.

Table 2
Total System vs. Public Plans > $1 Billion Universe
Sharpe Ratio Comparison
(June 30, 2020 net of fees)

	3 Years	5 Years
Total System	**0.6%**	**0.8%**
Rank	**4**	**5**

Additionally, DLS requests that SRA comment on how the system's asset allocation impacted the investment strategy for responding to COVID related market downturns and rebounds.

As a mature pension plan in a negative annual cash flow position, the Board's primary objective is having sufficient liquidity to meet obligations. The System does not want to be in a position where it is forced to sell certain assets to fund these obligations, particularly during periods of market volatility. For example, during March of 2020 when stocks were down over 12% for the month, staff would not want to be forced to sell stocks at depressed levels to fund cash flow obligations.

To the contrary, market downturns present opportunities to rebalance into stocks at lower prices. However, to take advantage of these rebalancing opportunities, there must be assets that can be sold at attractive prices to fund the stock purchases.

As part of the regular asset allocation review process, the Board and staff analyze the liquidity profile of the fund to ensure an appropriate balance between the cash flow needs of the plan and the benefits private, illiquid investments offer. The current asset allocation strikes such a balance, with over 50% of plan assets providing the highest level of liquidity and the remaining assets requiring varying lengths of time to convert to cash. The most liquid assets of the plan include public stocks with a target allocation of 36%, and Treasury bonds with a target of 14% of plan assets. In addition to liquidity, these two asset classes also provide important diversification benefits. Stocks and Treasury bonds tend to have low correlation to each other, meaning they typically do not move in the same direction at the same time. When volatility spikes and stocks are experiencing a drawdown, Treasury bonds, particularly long-duration Treasury bonds, usually go up in price. This is exactly what happened in the first quarter of 2020 when fears associated with COVID-19 gripped the market. The S&P 500 experienced a loss of -19.6% while long-duration Treasuries were up 20.6%. During this period, the System would not sell stocks to raise cash to meet obligations, but instead would sell bonds which had appreciated in value. In addition, the rebalancing opportunity would be to sell Treasuries and buy stocks.

Given the low rate of return, underperformance relative to benchmarks, and high management fee structures, DLS requests SRA to comment on the returns of the absolute return asset class, including the market conditions leading to the low level of returns and benchmark underperformance, and what market conditions would result in markedly improved returns for investments in the asset class.

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, recognizing that shorter-term performance can deviate from this objective significantly. Over the last several years, this return objective has not been met. There are several reasons for this underperformance related to the market environment and exposure to common risk factors.

Hedge funds comprise most of 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. Fiscal year 2020 exhibited many of these characteristics, but with a sharp drawdown and quick reversal, which caused some managers to reduce risk at the wrong time. If high dispersion and uncertainty remain in the markets, and stocks and other risk assets do not move consistently higher, hedge funds are likely to do well.

The absolute return asset class has struggled to outperform its benchmark, which is the HFRI Fund of Funds Conservative Index plus 100 basis points. The HFRI benchmark is the best approximation available to capture the risk and return nature of the asset class, but it is comprised of funds of funds that have significant exposure to the direction of stocks. Most of the past underperformance can be attributed to purposeful portfolio design relative to this benchmark over a five-year period of rising equity prices. 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, running with less volatility than the benchmark and did not include an appropriate number of return drivers. It is important to note that the System is unique in adding 1% to a market index as a benchmark. As of fiscal 2019, 17 of the 30 largest U.S. public plans had absolute return/hedge funds as part of their asset allocation. Six of those used a benchmark of a positive spread over cash returns such as T-bills plus 3%. Of the remaining 11, Maryland was the only System to add a spread (1%) to its market benchmark. The addition of 1% improves the likelihood that the benchmark achieves the long-term return objectives buy carries an implied level of outperformance that does not exist in other asset classes.

The absolute return portfolio has been able to generate positive relative performance during equity drawdowns due to its lower risk posture and lower equity sensitivity. The fourth quarter of 2018 and first quarter of 2020 are examples of a market where absolute return outperformed by 2.2% and 0.5%, respectively. These periods demonstrate the diversifying characteristics of the portfolio to the plan, and potential for outperformance versus the benchmark during drawdowns. Going forward, the objective is to continue to preserve value when equity markets struggle but also keep pace during normal equity environments.

The absolute return portfolio has undergone a significant amount of change over the last several years. In 2020 alone, seven managers have been hired through December 1st, representing one billion dollars in committed value. Additionally, four managers have been terminated through this period. Staff has continued to improve fee arrangements for several new and existing managers to lower the base management fees and increase the incentive fees, improving alignment between the manager and the System. Staff is working on additional changes, including increasing the efficiency of the portfolio through improved cash management, increasing the exposure to attractive trades through low cost co-investments, and seeking higher return or diversifying mandates that will better position the portfolio in the future. The restructuring to date, in addition to what is planned for the near future, will result in a more diversified and balanced strategy allocation that should increase the volatility to a level closer to target, provide more consistent returns relative to the benchmark, and still provide diversification benefits to the plan during challenging market periods.

DLS requests SRA to provide an update on estimated carried interest for fiscal 2020.

The System records carried interest earned by its managers on a calendar year basis to align with the reporting schedule for audited financial statements for most of the System's alternative investment vehicles. In calendar year 2019, the System's managers earned carried interest of $127.2 million. It is important to distinguish the difference between management fees and carried interest, or performance incentives, as many private market investors do not consider incentive fees to be management fees.

Management fees are contractual obligations that must be paid regardless of performance. Incentive fees, which primarily apply only to private market investments and not traditional asset classes, represent a portion of investment profits that is earned by a manager, and are only paid if performance thresholds are achieved. They are used to motivate the manager to make profitable investments, and to ensure alignment of interests. The percentage of profits that is allocated to the manager is substantially lower than the amount received by the System. Because of this disproportionate sharing of profits, the amounts realized by the System would far exceed any incentive fees paid to managers. Large amounts of carried interest should be considered a positive result, as this would imply much greater gains to the System at a level of roughly fourfold. While the System would like to see an improved profit-sharing allocation in favor of the investor, and negotiates contract terms aggressively where possible, the overall market, consisting of both managers and investors, establishes the sharing percentages. If the System avoided these investments based on the fee structure alone, it would not have experienced the superior net-of-fee returns provided by private equity relative to all other asset classes.

DLS requests SRA to provide an update on any Investment Division implementation of internal management of system assets and the development of necessary compliance and controls on the use of internal asset management. More specifically, SRA should comment on how the Investment Division:

- **has developed proficiency in managing assets currently being managed internally;**
- **will develop proficiency before expanding into internal management of additional asset classes;**
- **will evaluate the performance of internal management compared to available external management services; and**
- **will develop methodologies for determining fee savings achieved through internal management.**

The System has been working to develop its internal management capabilities since 2016. The initial efforts were geared to building the ability to execute trades internally. Elements of this process included establishing procedures to evaluate and select brokers, create operational processes to execute and communicate trades to the custodian and procure contracts with Futures Clearing Merchants. These processes supported the level of activity that was occurring historically and were necessary steps toward building an internal management process.

In 2019, staff worked with the Attorney General's office and external counsel to create policies and procedures for internal management including enhanced policies governing staffs' personal trading, conflicts of interests and handling of material non-public information. These policies and procedures were approved by the Board or codified in the Division's Operations Manual in early 2020. In 2020, the System procured a trade order management system to handle the processing of trades including pre-trade compliance and straight-through processing.

The proficiency of internal staff to manage internal portfolios has come in two ways. Existing staff had prior experience in managing assets directly and prior direct management experience was a major factor in the hiring process for new staff members.

The System has a rigorous product development process, the elements of which include:

1. Identify a potential product for internal management that staff expects to be able to execute as well or better than external managers
2. Develop guidelines that detail the performance objective, portfolio construction limits, and reporting requirements
3. Create portfolio management tools to execute the strategy
4. Manage a paper portfolio with pre-approval of every trade and creation of complete reporting package
5. Test the trading platform and provide training to middle and back office team as needed
6. Engage with the General Consultant for an independent operational due diligence evaluation and address any shortcomings identified
7. After demonstrating proficiency, present a full diligence memo to the internal investment committee and respond to questions and other follow up items
8. With internal investment committee approval, establish a portfolio inception date with the Chief Investment Officer including a source of funding

Through the third quarter of 2020, three portfolios have followed this process: U.S. TIPS, U.S. Long Government Bonds and Russell 1000 equity, all in passive forms.

The division has built a process that is designed to evaluate the internal products in a manner similar to the selection and oversight of external managers. This includes presenting the strategy to the internal investment committee in the same manner as external managers. It also includes independent annual evaluation of the product by the System's general consultant. The division has also created an Internal Management Oversight Committee to provide independent evaluation of the efficacy of the strategies and managers. This group exists so that the investment teams are not put in the position of evaluating their own products. Finally, each quarter, every asset class reports to the internal investment committee on the performance of the asset class including individual manager performance. At these meetings, the committee members often challenge the team on the efficacy of continuing to retain underperforming managers.

The Board and Investment Division have a three-pronged plan to enhance the ability of achieving the investment objectives of the plan. The first prong focuses on continual improvement in the asset allocation process. The second is improving implementation of that asset allocation through improved staffing and resourcing of the division and the third is to lower the cost of managing the assets through direct fee negotiations, direct management of public assets and direct management of private assets through co-investment. To evaluate the effectiveness of the cost improvement plan, the division is using 2017 as a baseline for the cost of the System's investment management program. As shown in Table 3 below, the System ended 2017 with a fee structure that was approximately 64 basis points (0.64%), or $317 million per year on an annual run rate. This figure does not include incentive fees or carried interest, as those are variable making year to year comparisons difficult to interpret and generally carried interest means the System has had a positive investment experience.

Through 2020, the System's asset allocation changed to include more higher cost asset classes (private equity, private real estate and emerging market stocks) so the fees should have moved higher to 69 basis points. In fact, the fees on the policy portfolio fell to 63.5 bps by the end of 2020, reflecting a combination of lower fees negotiated with managers and the growth of the co-investment portfolio and the small amount of assets being managed internally. The division will use this methodology to track its effectiveness in lowering the cost of managing assets over the ensuing years and expect an additional 17 bps of annual fee savings through 2029. The associated costs of achieving these savings are expected to be on the order of 2-3 basis points.

Table 3

Management Fee Model

Stylized Model of Fees (Excluding Incentives)		
	BPS	Dollars
2017 Actual Allocation and Actual Fees	64.0	$317
2017 Board Allocation and Actual Fees	64.0	$317
2029 Fees with 2017 Asset Allocation and Fees	64.0	$543
Impact of Board Asset Allocation Changes through 2020	4.9	$41
Impact of Fee Savings Achieved Through 2020	(5.4)	($46)
Impact of Fee Savings Projected to 2024	(10.0)	($84)
Impact of Fee Savings Projected to 2025 - 2029	(7.3)	($62)
2029 Fees	46.5	$393
Projected Annual Fee Savings	17.5	$150

Appendix 4

2021 Board Requested Legislation

The following legislative proposal is recommended by the Board of Trustees for the State Retirement and Pension System (System) for the Joint Committee on Pensions' consideration for the 2021 legislation session.

Fiduciary Bond

Provisions of the State Personnel and Pensions Article of the Annotated Code of Maryland, require the State to purchase a bond for each System fiduciary in accordance with Title 9, Subtitle 17 of the State Government Article, which establishes a committee on bonding of State officers and employees, and provides for the State Treasurer to purchase bonds required by law and any additional bonds specified by the committee. Specifically, § 21-210 of the State Personnel and Pensions Article provides that a System fiduciary "may not exercise custody or control of System assets" unless bonded. Although the statute does not specify the type of bond that must be provided, analysis contained in the bill file for the legislation in 1977 suggested that the legislature intended that the State provide a fidelity bond similar to the bond required for plans subject to the Employee Retirement Income Security Act of 1974 ("ERISA"). Under ERISA § 412, a fidelity bond must protect a plan against losses by reason of fraud or dishonesty, which encompasses all risks of loss that might arise through dishonest or fraudulent acts in the handling of funds, and generally includes larceny, theft, embezzlement, forgery, misappropriation, wrongful abstraction, wrongful conversion, willful misapplication or any other fraudulent or dishonest acts.

To address the statutory bond requirement, the State Treasurer's Office has purchased a $1 million employee theft policy for the System, covering direct loss or damage to money, securities, or other property caused by theft or forgery committed by a State Retirement Agency (Agency) employee or member of the Board of Trustees, whether identified or not, acting alone or in collusion with other parties. The policy also covers losses due to computer fraud.

The Agency and State Treasurer's Office recently undertook a review of the bonding provisions and evaluated the availability of fidelity bonds through the Treasurer's insurance broker. On review, it did not appear that the fidelity bonds available in the marketplace would afford effective protection to the System, as these bonds covered assets held by plans subject to ERISA, while governmental plans such as the System are exempt from ERISA's requirements. Additionally, an informal query of peer plans did not reveal any other governmental plan overseen by a board of trustees that is subject to a statutory bond requirement for its fiduciaries.

For these reasons, it is recommended that § 21-210 be amended to provide that the State may satisfy the requirement to purchase a bond through the purchase of an insurance policy for the System to cover losses due to theft.

Appendix 5
Additional Legislative Proposals

Joint Committee on Pensions 2020

Additional Legislative Proposals

Line-of-Duty Death Benefits for COVID-19

Existing law provides a benefit for a line-of-duty death of a member of one of the several systems. These benefits are found under Title 29, Subtitle 2 of the State Personnel and Pensions Article. Generally, if an employee dies or is killed in the performance of their duty, their surviving family members can receive a benefit of an allowance of two-thirds of the member's average final compensation and payment of member contributions.

A question has arisen as to how a death related to COVID-19 would be treated for purposes of the line-of-duty death benefits available under current law for system members. While current law would not on its face prohibit the survivors of a member from applying and receiving a line-of-duty death benefit, the committee and General Assembly may want to consider whether any clarifications or presumptions would be needed or helpful in effecting the plan design providing for line-of-duty death benefit claims regarding the death of a member as a result of contracting COVID-19. Clarification on how these claims should be administered by the system would provide equitable administration of claims by establishing a uniform policy on when a member would be considered eligible for a line-of-duty death benefit and the types of information that should be submitted in support of a claim for the benefit.

Other State Activity

To date, the Department of Legislative Services and SRA are only aware of legislation passed in New York that addresses the issue of COVID-19 line-of-duty death benefits. The New York legislation (Chapter 89 of 2020) provides accidental death benefits if:

- the member reported to their usual work location or to an alternate work location (but not including working from home), on the orders of their employer, on or after March, 1, 2020;
- the member contracted COVID-19 within 45 days of reporting to work, as evidenced by either a positive laboratory test or as diagnosed by a licensed, certified, registered, or authorized physician, nurse practitioner, or physician's assistant currently in good standing in any state or in the District of Columbia, or a physician, nurse practitioner, or physician's assistant authorized to practice in New York by executive order during the declared COVID-19 state of emergency;

- the member died on or before December 31, 2020; and

- COVID-19 caused or contributed to the member's death, as evidenced by either a death certificate showing the cause of death or as certified by a licensed, certified, registered or authorized physician, nurse practitioner, or physician's assistant currently in good standing in any state or in the District of Columbia, or a physician, nurse practitioner, or physician's assistant authorized to practice in New York by executive order during the declared COVID-19 state of emergency.

The New York legislation also applies to a member who was working as of March 1, 2020, and retired prior to July 1, 2020. The beneficiaries for these members may apply to convert the member's service retirement benefit to the accidental death benefit.

Legislation has also been introduced in New Jersey, which is substantively similar to the New York legislation. The proposed New Jersey legislation would provide an accidental death benefit when a member of their Teachers' Pension and Annuity Fund dies as a result of COVID-19 by deeming the death to have occurred as the result of an accident met in the actual performance of duty if:

- the member contracted COVID-19 during the state public health emergency declared by executive order;

- the member dies as a result of COVID-19; and

- the member's duties required the member to interact with other people within 14 days prior to the appearance of symptoms consistent with COVID-19, confirmed in writing by a licensed health care provider.

Policy Options

If the joint committee is interested in sponsoring legislation to clarify that a system member's death caused by COVID-19 can be eligible for a line-of-duty death benefit, the following policy considerations would be relevant:

- whether to establish a presumption that a member who is required to report to work and dies as a result of COVID-19 infection would be presumed to have contracted COVID-19 in the performance of the member's employment;

- whether to implement a sunset on any presumption that COVID-19 infection was the result of the performance of a member's employment;

- clarity on how a presumption would apply regarding the location of a member's reporting to work (*e.g.*, excluding from a presumption an employee who has teleworked and not reported to the usual office location or an alternative office location);

- establishing a window of time from when a member has reported to work to when the member has been diagnosed with COVID-19 or began experiencing symptoms of COVID-19;

- establishing acceptable methods of verifying that the member's death was caused by COVID-19 or that COVID-19 contributed to the member's death (*e.g.*, death certificate notation, medical records, statement from treating medical professional, *etc.*); and

- whether to apply any legislation retroactively (*e.g.*, back to the beginning of the state of emergency as declared by executive order or some other date).