Joint Committee on Pensions

2019 Interim Report

Annapolis, Maryland
January 2020

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MARYLAND GENERAL ASSEMBLY

JOINT COMMITTEE ON PENSIONS

December 12, 2019

The Honorable Thomas V. Mike Miller, Jr., 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 2019 interim activities and legislative recommendations. The joint committee met three times during the 2019 interim and addressed legislative proposals requested by the Board of Trustees for the State Retirement and Pension System. The joint committee made recommendations on these items at its final meeting for the 2019 interim. The joint committee also had its annual briefings on the actuarial valuation of the system and the system's investments, as well as a briefing about the Maryland Transit Administration Pension Plan. The joint committee also received an update from the Department of Budget and Management on the implementation of Senate Bill 946 of 2019. The committee was also provided with a report on the structure, powers, and membership of the Board of Trustees for the State Retirement and Pension System.

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, Matthew B. Jackson, and Cathy Cox of the Department of Legislative Services and the staff of the Maryland State Retirement Agency for their assistance.

Sincerely,

Senator Melony Griffith
Senate Chair

Delegate Benjamin S. Barnes
House Chair

MG:BSB/PSA:MBJ/ekc

Enclosure

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Maryland General Assembly
Joint Committee on Pensions
2019 Interim
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Keith E. Haynes
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Brooke E. Lierman
Patrick G. Young, Jr.

Committee Staff

Phillip S. Anthony
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Joint Committee on Pensions
2019 Interim Report

Over the course of three meetings during the 2019 interim, the Joint Committee on Pensions (JCP) had a briefing on legislative proposals requested by the Board of Trustees for the State Retirement and Pension System (SRPS). The joint committee also had its annual briefings on the actuarial valuation of the system and the system's investments, a briefing on the Maryland Transit Administration Pension Plan, and an update by the Department of Budget and Management (DBM) on the implementation of Senate Bill 946 of 2019. The joint committee was also provided with a report on the structure, powers, and membership of the Board of Trustees for the SRPS.

Results of the 2019 Actuarial Valuation and Fiscal 2021 Contribution Rates

From fiscal 2018 to 2019, SRPS's funded status (the ratio of projected actuarial assets to projected actuarial liabilities) improved from 71.6% at the end of fiscal 2018 to 72.3% at the end of fiscal 2019 (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 2018 to 2019, the total State unfunded liability increased marginally from $19.038 billion to $19.053 billion.

Fiscal 2021 Contribution Rates

Exhibit 1 shows that the employer contribution rate with reinvestment savings for the Teachers' Combined Systems will decrease from 16.30% in fiscal 2020 to 15.65% in fiscal 2021, and the contribution rate for the Employees' Combined Systems will increase from 20.22% in fiscal 2020 to 21.36% in fiscal 2021. The aggregate contribution rate, including contributions for public safety employees and judges, decreases from 18.54% in fiscal 2020 to 18.46% in fiscal 2021. Based on projected payroll growth and other factors, the SRPS actuary estimates that total employer pension contributions will increase from $1.991 billion in fiscal 2020 to $2.038 billion in fiscal 2021. The fiscal 2021 contribution rates are the actuarially determined contribution rates and reflect the Board of Trustees' decision to lower the investment return assumption from 7.45% to 7.40% and incorporate the results of the system's 2014 through 2018 experience study. 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 2020 and 2021
($ in Millions)

	2020		2021	
Plan	**Rate**	**Contribution**	**Rate**	**Contribution**
Teachers' Combined	16.30%	$1,166.5	15.65%	$1,154.1
Employees' Combined	20.22%	670.2	21.36%	722.7
State Police	80.58%	84.7	79.03%	88.6
Judges	44.44%	22.1	40.27%	20.6
Law Enforcement Officers	42.40%	47.9	43.93%	52.5
Aggregate	**18.54%**	**$1,991.3**	**18.46%**	**$2,038.4**

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, 2019 Actuarial Valuation for Fiscal Year 2021

State Retirement and Pension System Investment Performance

SRPS investment return for the fiscal year that ended on June 30, 2019, was 6.46%, failing to exceed the assumed rate of return of 7.45%. System assets grew to a market value of $54.2 billion, as of June 30, 2019. Investment returns were below the assumed rate of investment return for the first time in three years, with returns exceeding the assumed rate of return in only two of the last five years. The system as a whole underperformed its policy benchmark by 0.63% (63 basis points). Total system return for fiscal 2015 through 2019 is 5.62%, which is 0.26% (26 basis points) above the plan return benchmark for that period. Total system return for the past 10 years is 8.61%, which is 0.57% (57 basis points) above its benchmark for that period.

Board Requested Legislation

Death Benefits for Children – Age

Over the last several years, provisions of the State Personnel and Pensions Article have been amended to provide that a child of a deceased member or retiree who is receiving death benefits from the several systems may receive benefits until the child reaches age 26. The State Retirement Agency (SRA) found statutory provisions that were not included in previous legislation and still state that certain children of deceased members or retirees will cease receiving death benefits at age 18. The Board of Trustees for the SRPS recommended legislation that would amend these provisions to provide a consistent age cutoff of 26 for death benefits across all systems.

The joint committee will sponsor the requested legislation.

Teachers' Retirement and Pension Systems – Obsolete Reemployment Provisions

The reemployment provisions for the Teachers' Retirement and Pension Systems provides an earnings offset exemption for retired teachers and principals if they are reemployed by a public school that is not making adequate yearly progress or is a school in need of improvement under the federal No Child Left Behind Act of 2001. SRA notes that this Act was repealed in 2015. The board recommended repealing the reemployment provisions in the State Personnel and Pensions Article that reference this Act.

The joint committee will sponsor the requested legislation.

Reemployment Earnings Offset – Clarification

Each of the several systems (except the Law Enforcement Officers' Pension System) include provisions that address the amount by which the board may reduce a retiree's allowance when the retiree is subject to a reemployment earnings limitation. These sections of law also provide that a retiree's allowance may not be reduced to an amount that would be less than what is required to be deducted for the retiree's monthly medical insurance premiums. The board recommended legislation to clarify these provisions. Any change made to the provisions is intended to be nonsubstantive.

The joint committee will sponsor the requested legislation.

Modification of Municipal Pension Surcharges

The 2011 legislative reforms substantially revised the benefit provisions and employee contribution rates for the SRPS Municipal Employees' Combined System. The board noted that plan changes such as the 2011 reforms affect different participating governmental units (PGUs) differently, with a benefit to some PGUs and a systematic detriment to other PGUs. The 2011 reforms caused the pooled employer cost to decrease by about 2% of pay. Most of that decrease was due to the increase in employee contribution rates for the Alternate Contributory Pension Selection participants, from 5% to 7%. PGUs with participants subject to the Non-Contributory Pension Benefit (NCPB) or the Employees' Contributory Pension Benefit (ECPB) (nine PGUs) benefitted from a decrease in pooled municipal employer contribution rates although there was no offsetting increase in employee contributions from their NCPB and ECPB participants. This was the result of a specific provision included in the 2011 reforms that exempted these nine employers from having to participate in the Reformed Contributory Pension Benefit (RCPB), as participation in the RCPB would have resulted in a benefit enhancement for their participating employees.

The board recommended the establishment of a new surcharge of 2% of pay for each of the nine employers participating in the NCPB or ECPB. Because of the magnitude of the proposed changes to the employer contribution rate and the impact on these nine PGUs, the board also recommended these changes be implemented over a period of five years. The proposed five-year phase-in would begin with the December 2021 billing and would be fully implemented by the December 2025 billing.

The joint committee decided to hold the requested legislation so that more detailed information on the impacts of the legislation can be obtained.

Overpayment of Pension Benefits

SRA recently identified 34 retirees and beneficiaries who have been receiving a monthly benefit in excess of what their benefit would be under the statutory provisions of the Employees' and Teachers' Retirement and Pension Systems. SRA reports the total overpayment amount for the 34 annuitants is $104,296.06 through May 31, 2019. Since discovering these overpayments, staff have researched the issue to determine how this issue evolved.

The annual basic allowance for a retiree of the several systems who is receiving a normal service retirement is calculated in accordance with a statutorily provided benefit formula for the appropriate system. The formula (with the exception of the Judges' Retirement System) is the product of multiplying the member's annual average final compensation, creditable service, and benefit multiplier for the member's system. A member's annual basic allowance as calculated above, will be reduced if the member selects an optional allowance providing survivorship benefits to a designated beneficiary.

A member's retirement allowance is funded from both the member's and employer's contributions made on behalf of the member that are separately accounted for in the "annuity reserve" and "pension reserve" funds, respectively. Sections 20-101(f) and (gg) of the State Personnel and Pensions Article define these terms as the present value of an annuity and pension computed on the basis of actuarial assumptions adopted by the board. To calculate the present value of the annuity reserve portion of the member's retirement allowance, SRA determines the member's total member contributions and interest and divides this amount by an actuarially determined annuity factor based primarily on the life expectancy of the member at the time of retirement. SRA then determines the pension reserve portion of the retirement allowance by reducing the statutorily calculated retirement allowance by the portion of the retirement allowance allocated to the annuity reserves. The system's actuary acknowledges these practices as acceptable calculations for determining the annuity and pension reserves for members at the time of retirement. While most accounts have an annuity reserve and a pension reserve component in calculating their retirement allowance, there are occasional instances where the present value of the annuity reserve is greater than the statutorily determined benefit.

The 34 accounts in question currently have annuity reserves in excess of their statutorily determined benefit. Prior to July 1, 2010, and continuing through today, the first three steps of that process generally include: (1) calculating the member's statutorily determined benefit; (2) determining the member's annuity reserve; and (3) determining the member's pension reserve, if any. Prior to July 1, 2010, if the member's annuity reserve exceeded the statutorily determined benefit, the member's benefit was capped at the value of the statutorily determined benefit. Beginning July 1, 2010, based on these calculations, the Maryland Pension Administration System (MPAS) was programmed to perform the basic allowance calculation different from the statutorily provided basic allowance calculation for those accounts with only an annuity reserve component to their benefit. The MPAS programming provided that in instances where a member's annuity reserves exceeded the member's basic allowance calculated on years of service, average final compensation, and benefit multiplier, the benefit would not be capped using the statutorily provided benefit formula for the appropriate system. Instead, in instances where the annuity reserve was in excess of the statutorily determined benefit, the retiree's allowance was based solely on the member's annuity reserves. In other words, the programming provided that a member's annuity reserves as determined at the time of retirement, will be the minimum benefit a member will receive at retirement.

Legislative Remedies

To address the overpayments and miscalculations for the 34 retirees and beneficiaries affected by the 2010 MPAS programming and any future similarly situated accounts, the board noted the joint committee may wish to introduce legislation that would codify this type of benefit calculation for instances when a member's annuity reserve exceeds the statutorily provided benefit formula for the appropriate system at the time of retirement. SRA consulted with the system's actuary about the MPAS benefit calculation that was implemented for these 34 accounts. The system's actuary informed the staff that this calculation for accounts with annuity reserves in excess of the statutorily provided benefit conforms to many other public plans. The system's actuary believes that legislation to conform the law to the 2010 MPAS programming would have a minimal impact to the plan. This is due in part to the initial benefit that is being paid under these circumstances is being funded entirely by the member's accumulated contributions, excluding any cost of living adjustments (COLA). The employer contributions that were made on behalf of the member remain with the system, in effect subsidizing (in very small part) the retirement benefits of the retirees whose annuity reserve does not exceed the statutorily defined benefit. The actuary would likely consider this a *de minims* gain.

Should the joint committee choose to sponsor legislation codifying the practice that payment of the retirement allowance in excess of the statutorily calculated benefit is appropriate in instances where a member's annuity reserve exceeds the statutorily calculated benefit, consideration should be given as to what, if any, adjustments would be necessary for those individuals who retired prior to July 1, 2010, and whose annuity reserve component of their retirement allowance was capped at the statutorily calculated benefit. SRA reports it is in the process of identifying these individuals.

As an alternative approach, the board noted the joint committee may wish to maintain the current statutory calculation for all members, regardless of whether a member's annuity reserve is greater than the member's statutorily provided benefit. In that case, the board would recommend introducing legislation that would authorize the board to not recover the overpayments directly from these annuitants that have already been made to these 34 retirees and beneficiaries. Additionally, such proposed legislation would not alter the retiree's or beneficiary's monthly retirement allowance but would, instead, suspend any annual COLAs until the individual's current allowance equals or exceeds the corrected reduced allowance, including any suspended annual COLAs. Such legislation would be similar to legislation that the board requested the joint committee to sponsor in 2010 to address an overpayment issue for retirees and beneficiaries of the Maryland School for the Deaf (MSD). In that situation, the overpayment was due to an error by MSD in their reporting of salaries for a group of their employees. This misreporting resulted in increased benefits for that group. The legislation that was ultimately sponsored by the joint committee provided that SRA would not correct the individuals' monthly retirement allowances, and would suspend any annual COLAs until the allowance each affected retiree or beneficiary is entitled to receive (including any suspended annual COLAs) equals or exceeds the allowance the individual was receiving when the overpayment was identified in 2010. The board notes parallels can be drawn between the two groups. In each case, the affected retirees and beneficiaries in each group all received overpayments for the same reason (either misreporting by their employer or unique MPAS programming of their benefit), and all were or will be subject to the same remedy.

SRA noted there is a distinction between the two groups related to the funds that were and would be addressed through legislation. In the case of MSD, the overpayments received by the retirees and beneficiaries were funds to which they were never entitled. However, in the present case of the individuals with greater annuity reserves than the statutorily provided benefit, the overpayment they received was from the funds in their annuity reserves, which is their accumulated contributions. Current provisions of the State Personnel and Pensions Article provide that upon terminating membership, a member is always entitled to a return of their accumulated contributions.

The joint committee will sponsor legislation to provide that a retiree's basic allowance may not be less than the present value of the retiree's annuity reserve.

Recording of Member Service Division – Automated Callbacks

Chapter 214 of the Acts of 2009 authorized the board to adopt regulations allowing managers to monitor and record incoming telephone conversations to employees of the Member Services Division of SRA for training and quality control purposes. Following enactment of Chapter 214, Code of Maryland Regulations (COMAR) 22.01.13, Member Services Unit – Telephone Recording or Monitoring, was adopted by SRA. Specifically, COMAR 22.01.13.02 states that SRA may only record or monitor incoming calls to the Automated Call Distribution System (ACDS), within the Member Services Division. Additionally, this regulation also states that SRA may not record or monitor calls to or from direct individual lines in SRA.

In 2015, SRA began providing members and retirees who call into ACDS and are faced with long wait periods to "lock in" their place in the call-in queue. By doing this, members and retirees are not required to wait on hold for an available counselor but instead can disconnect the call, while still maintaining their place in the queue. When their position in the queue moves to the second spot, ACDS will automatically reconnect the call with the individual. It is important to note that, throughout this entire process, no counselor from the Member Services Division is personally returning the individual's initial phone call. Because of this, staff had not considered this feature an actual outbound phone call. However, legal counsel for SRA recently reviewed the issue and expressed concern that despite ACDS reconnecting the original call, it could be interpreted as an outbound telephone call and, therefore, SRA would not have the authority to record these types of telephone calls. Section 9-602 of the Criminal Law Article provides that a State official or employee may not directly or indirectly monitor or record in any manner a telephone conversation made to or from a State unit. This section of the law further provides that a person who violates this section is guilty of a misdemeanor and on conviction is subject to a fine not exceeding $1,000. Such a conviction is also grounds for immediate dismissal from State employment. As a result, SRA has stopped recording these types of outbound telephone calls.

Nevertheless, SRA believes that recording these calls would provide staff with a valuable tool for training and quality control of the counselors in its Member Services Division. Therefore, the board recommended that current provisions of the State Personnel and Pensions Article be amended to permit SRA to record outbound calls from the Member Services Division that are placed through the agency's ACDS.

The joint committee will sponsor the requested legislation.

Additional Topics

State Retirement and Pension System – Board of Trustees

Chapter 727 and 728 of 2018 granted the SRPS board additional authority in carrying out the functions of its Investment Division. In light of that expanded power, the 2019 *Joint Chairmen's Report* requested that the Department of Legislative Services (DLS) study the structure, powers, and membership of the SRPS board. On October 29, 2019, DLS submitted its report to JCP. The report studied over 70 separate boards across the nation and gave an overview of several studies on pension board governance. Based on the information gathered, DLS provided several observations about the SRPS board, including the size of the board and its Investment Committee, the financial and expertise qualifications of board members, and board meeting length and frequency.

Briefing on Implementation of Senate Bill 946 of 2019

Chapter 397 of 2011 eliminated State prescription drug coverage for Medicare-eligible retirees beginning in fiscal 2020, with the intent of reducing the State's significant financial liabilities associated with Other Post Employment Benefits (OPEB). At the time, the State's OPEB liability decreased from $16.1 billion to $9.7 billion. In response to the federal Bipartisan Budget Act of 2018 that accelerated the closing of the Medicare Part D coverage gap (also known as the "donut hole") to January 1, 2019, the Maryland General Assembly passed legislation (Chapter 10 of 2018) to realign the transition of retirees to Medicare Part D to the new date, with the additional clarification of continuing coverage to non-Medicare-eligible spouses and dependents of Medicare-eligible retirees and requiring notification of the change to impacted retirees by July 1, 2018.

In September 2018, a lawsuit was filed in the Baltimore City Circuit Court to challenge the planned transition beginning in January 2019. In October 2018, a federal judge granted a temporary restraining order and preliminary injunction to delay the transition to Medicare Part D pending a decision on the lawsuit. During the 2019 session, Senate Bill 946 (Chapter 767) was passed to establish prescription drug out-of-pocket (OOP) reimbursement or catastrophic coverage programs for specified Medicare-eligible State retirees or dependents. Depending on certain eligibility requirements, the programs would cover OOP costs that exceed limits in the existing State plan, reimburse OOP costs after the participant enters catastrophic coverage under Medicare, or reimburse OOP costs for a life-sustaining drug covered under the State plan but not under the participant's Medicare prescription plan. However, Chapter 767 delays implementation of the three plans while the injunction is pending and requires that there be at least nine months before open enrollment before Chapter 767 is implemented. These provisions mean that the earliest Chapter 767 would be implemented would be January 1, 2021. The legislation also included a provision expressing the intent of the General Assembly that DBM attend at least one meeting of the JCP each year to provide an update on the implementation of Chapter 767. DBM appeared before the JCP at the October 29, 2019 meeting and provided an update, which included clarifying the date by which an individual would be considered retired for purposes of eligibility for the programs established by Chapter 767. The remainder of the department's update was limited, with DBM noting that as the litigation was still pending, the State has been prohibited from discontinuing the existing State prescription benefit plan for Medicare-eligible retirees. With the litigation still pending, the new programs created by Chapter 767 are not offered at this time.

Briefing on Maryland Transit Administration Pension Plan

During the 2018 session, concerns were raised regarding the underfunding of the Maryland Transit Administration (MTA) pension plan, which provides a defined benefit for unionized workers. In fiscal 2017, the MTA pension plan had a funded ratio of only 40.9%, and MTA budgeted only 70.9% of the actuarially determined contribution. These concerns led to a request in the 2018 *Joint Chairmen's Report* for MTA to brief the joint committee on the features of the MTA pension plan, the actions that MTA intends to take to improve the funded status of the pension plan, and a projected timeline for the actions. The briefing request recognized that oversight of the MTA pension plan is complicated by the need to negotiate changes to the plan with the unions and that binding arbitration provisions present additional challenges. The State would lose a significant amount of federal transit funds if the State took away the right of MTA employees to collective bargaining with binding arbitration.

MTA briefed the joint committee on the actions it intends to take to improve the funded status of the pension plan. As of the July 1, 2019 valuation, the plan funded ratio was 43%. MTA employee contributions for its largest cohort of employees will increase from 2.0% to 4.0% by fiscal 2021. During the years employee contributions would increase, MTA would match the increased employee contribution dollar for dollar. MTA has also consolidated its existing amortization bases to be paid over 25 years, effective July 1, 2019. Under this amortization schedule, the plan is projected to be at full funding by the fiscal 2036 valuation. The change in amortization resulted in a decrease in the MTA employer contributions.

The joint committee will continue to monitor the financial health of the MTA pension plan. The joint committee is hopeful that actions to improve the funded status of the MTA pension plan will be implemented soon.

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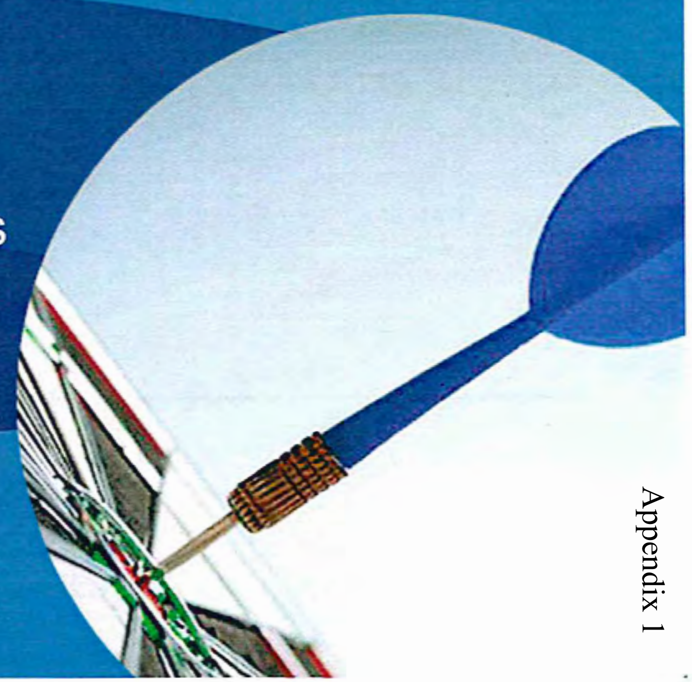
Maryland State Retirement and Pension System

Results of the June 30, 2019 Actuarial Valuation for Fiscal Year 2021

November 20, 2019 Joint Committee on Pensions



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BACKGROUND

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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

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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 Contribution rate decreased by 0.08% 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.

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2011 Benefit Reform Scorecard

	Projected June 30, 2019 Results Based on June 30, 2010 Valuation: Before Reforms	After Reforms	Actual Results 2019 Valuation	
FY 2021 Contribution Rates No Reinvestment (% of Pay)				
ECS (State)	22.67%	18.84%	20.71%	
TCS	22.19%	18.40%	14.96%	
All State Plans	23.21%	19.35%	17.75%	Better
June 30, 2019 Funded Ratio No Reinvestment				
All State Plans	67.4%	67.3%	71.2%	Better
June 30, 2019 Funded Ratio Reinvestment				
All State Plans	67.4%	71.0%	72.2%	Better

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.

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Variables Affecting Valuation Results

- Benefits (Retirement, Disability, Survivor)
- Actual past experience
- Legislative Changes
  - 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
- Assumption changes since last valuation
  - Pursuant to 2014-2018 Experience Study (see next slide)

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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 to continue according to current schedule ($75 Million per year).

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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 (19 years remaining in 2019 valuation)
  - Municipal Systems
    - ECS: Single period closed amortization period ending in FY 2043. Phased-in at 30 years in 2019 valuation (FY 2021) 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				
	2019			2018	
Number Counts	**State**	**PGU**	**Total**	**Total**	**% Chg**
Active Members	167,508	25,950	193,458	192,431	0.5%
Vested Former Members	43,720	6,526	50,246	52,301	-3.9%
Retired Members	145,642	19,250	164,892	160,374	2.8%
Total Members	356,870	51,726	408,596	405,106	0.9%
Total Valuation Payroll ($ in Millions)	$10,655.0	$1,250.5	$11,905.5	$11,566.2	2.9%
Active Member Averages					
Age	45.9	48.8	46.3	46.3	0.0%
Service	12.5	11.4	12.3	12.4	-0.5%
Pay	$ 63,609	$ 48,188	$ 61,540	$ 60,106	2.4%
Total Retiree Benefits ($ in Millions)	$3,687.5	$294.4	$ 3,981.8	$ 3,791.2	5.0%
Average Retiree Benefit	$ 25,319	$ 15,292	$ 24,148	$ 23,640	2.1%

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ASSET DATA

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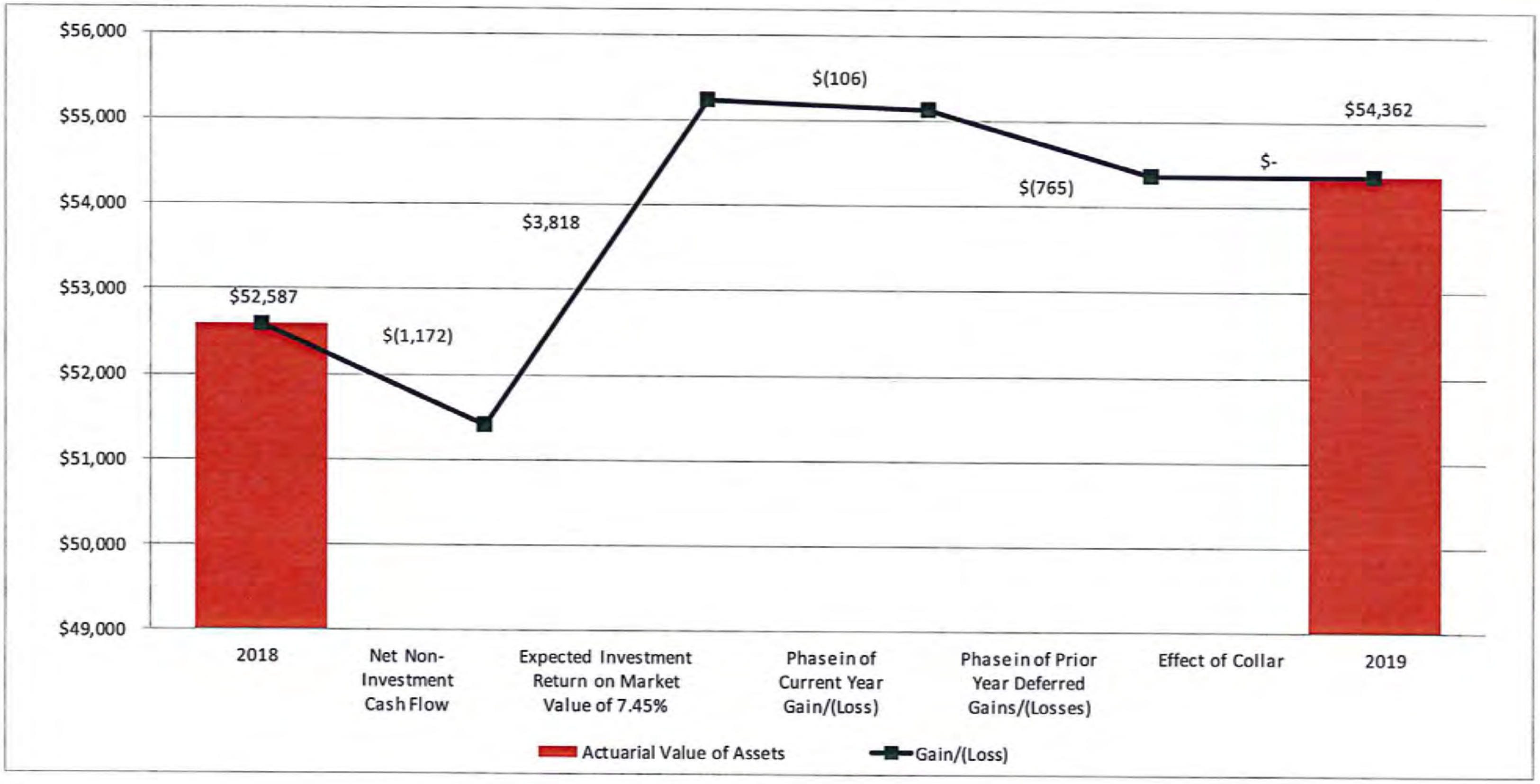
Actuarial Value of Assets - ($ Millions)



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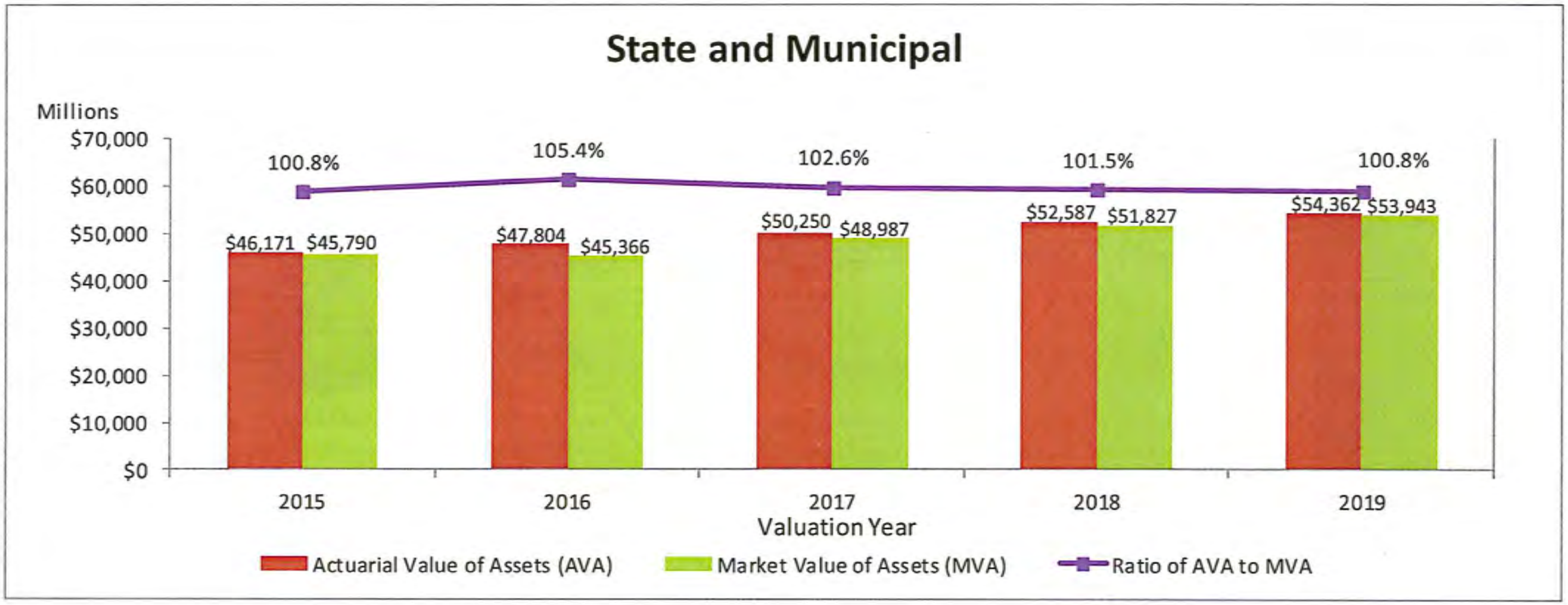
Actuarial Value of Assets - ($ Billions)



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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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Slight Net Increase in State Rates

Downward Forces

- More Members in Reformed Systems
- FY 2020 COLA below assumption (2.443% vs. 2.60% for unlimited; 1.00% v. 1.46% for Reformed)
- Individual Pay Increases below assumptions

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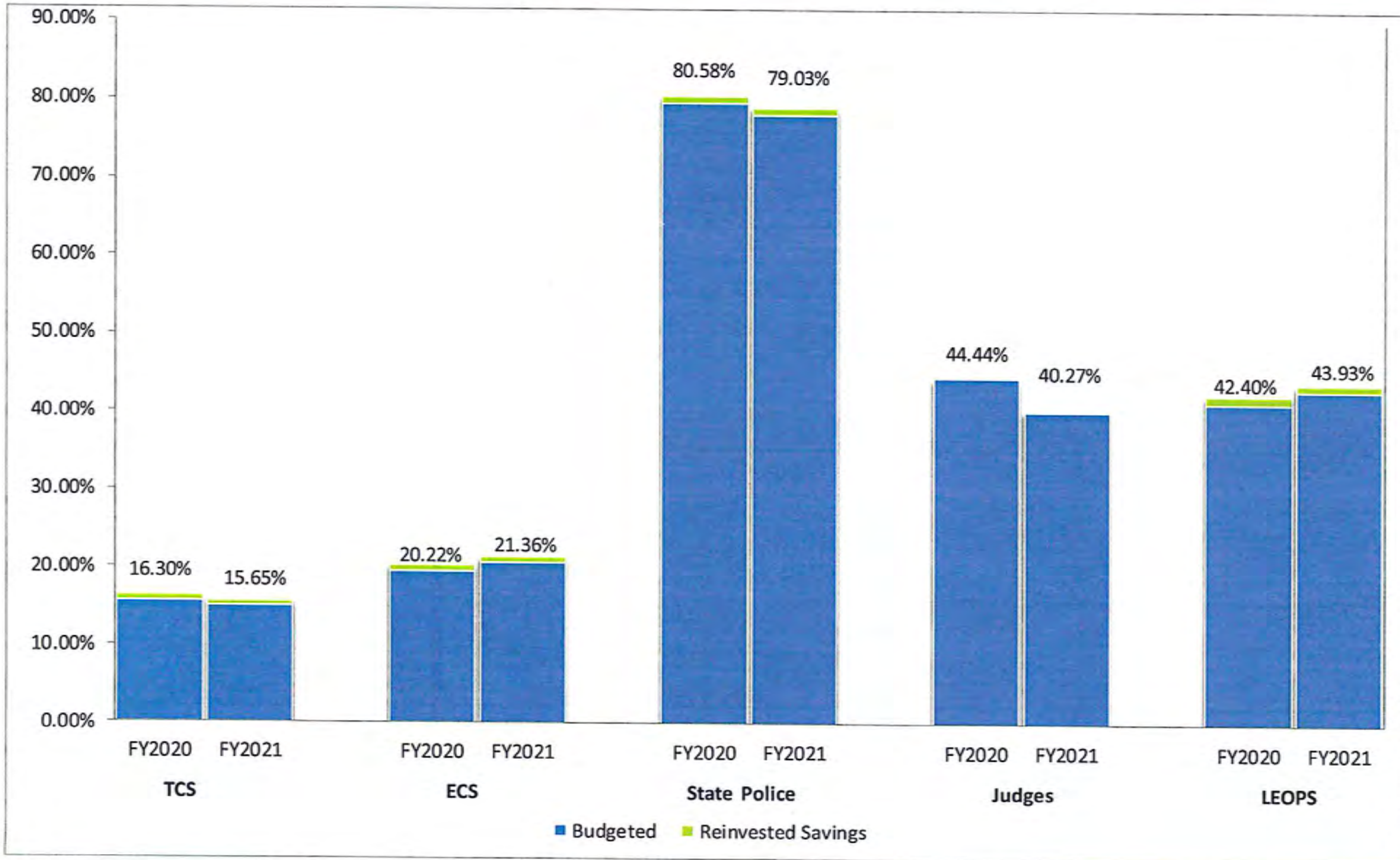
Upward forces

- Payroll increase of 2.8%, vs. 3.10% assumed (affects UAAL rate)
- Less Investment Return (5.67% actuarial, 6.42% market[1]) than 7.45% assumed
- FY 2020 COLA above assumption (2.443% v. 2.23% for 3% Cap)

[1] *Rate shown is based on actuarial estimation method and differs modestly from figures reported by State Street.*

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 2021 Contr. Rate (w. Reinv. Savings)	15.65%	21.36%	79.03%	40.27%	43.93%	18.46%
FY 2020 Contr. Rate (w. Reinv. Savings)	16.30%	20.22%	80.58%	44.44%	42.40%	18.54%
FY 2021 Actuarial Contribution Rate	14.96%	20.71%	78.09%	40.27%	42.96%	17.75%
FY 2020 Actuarial Contribution Rate	15.59%	19.56%	79.58%	44.44%	41.37%	17.82%
2019 Actuarial Value of Assets	$ 33,060	$ 13,796	$ 1,522	$ 494	$ 731	$ 49,604
2019 Unfunded Actuarial Liability	$ 10,312	$ 7,487	$ 779	$ 66	$ 409	$ 19,053
2018 Unfunded Actuarial Liability	$ 10,794	$ 6,986	$ 782	$ 80	$ 397	$ 19,038
Funded Ratios						
2019	76.2%	64.8%	66.2%	88.2%	64.1%	72.3%
(Including Municipal)		*68.3%*			*64.8%*	*72.9%*
2018	74.8%	65.8%	65.3%	85.7%	63.7%	71.6%
(Including Municipal)		*69.4%*			*64.4%*	*72.5%*

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Municipal Actuarial Value of Assets of $4,758 Million and Municipal Unfunded Actuarial Liability of $1,111 Million are also included in the development of the Total Funded Ratio of 72.9%. Contribution rates are percent of pay. Contribution rates are percent of pay.

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Reconciliation of Employer Contribution Rates (% of Pay)

(STATE ONLY)

	Teachers' Combined System	Employees' Combined System	State Police	Judges	LEOPS	Total
FY 2020 Actuarial Contribution Rate	**15.59%**	**19.56%**	**79.58%**	**44.44%**	**41.37%**	**17.82%**
Change due to Investment Return	0.59%	0.55%	1.90%	1.31%	0.78%	0.60%
Change due to Demographic and Non-Inv. Exp.	-0.10%	0.14%	1.23%	-0.46%	0.64%	-0.01%
Change due to Assumption Changes	-1.02%	0.34%	-2.16%	-5.21%	1.07%	-0.62%
Change due to Total Payroll Experience	0.00%	0.16%	-1.83%	0.01%	-0.70%	0.04%
Change due to Other	-0.10%	-0.04%	-0.63%	0.18%	-0.20%	-0.08%
FY 2021 Actuarial Contribution Rate	**14.96%**	**20.71%**	**78.09%**	**40.27%**	**42.96%**	**17.75%**
Reinvested Savings Rate	0.69%	0.65%	0.94%	0.00%	0.97%	0.71%
Final FY 2021 Total Budgeted Contr. Rate	**15.65%**	**21.36%**	**79.03%**	**40.27%**	**43.93%**	**18.46%**

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Contributions for FY 2020 were based upon the June 30, 2018 valuation.

Sources of change due to demographic experience are described on slide 11.

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Allocation of Contribution to Local Employers (Boards of Education)

Teachers Combined System

FY2021 Contribution ($ in Millions)

	% of Pay	Total	Local 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

FY2020 Contribution ($ in Millions)

	% of Pay	Total	Local Employers	State
Employer Normal Cost	4.38%	$ 313.4	$ 288.6	$ 24.8
UAAL Amortization	11.21%	802.2	-	802.2
Reinvested Savings	0.71%	50.8	-	50.8
Total	16.30%	$ 1,166.4	**$ 288.6**	$ 877.8

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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 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**
FY 2020 Contributions						
Illustrated Dollar Contributions	$ 1,115.7	$ 648.2	$ 83.6	$ 22.1	$ 46.7	$ 1,916.3
TCS Local Employer Contributions	$ (288.6)	$ -	$ -	$ -	$ -	$ (288.6)
Reinvested Savings	$ 50.8	$ 22.0	$ 1.1	$ -	$ 1.2	$ 75.0
State Total Illustrated Contribution	**$ 877.9**	**$ 670.2**	**$ 84.7**	**$ 22.1**	**$ 47.9**	**$ 1,702.7**
State Year over Year Change	$ (17.6)	$ 52.5	$ 3.9	$ (1.5)	$ 4.6	$ 41.9

 # Based on Calculations from June 30, 2011 Valuation.

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 2020 Contribution based on payroll as of June 30, 2018, projected to FY 2019 for TCS and FY 2020 for all other systems. FY 2020 and FY 2021 Contributions for TCS would be $1,201 Million and $1,189 Million, respectively, if payroll was projected in the same manner as for the other systems (based on payroll projected one additional year to FY 2020 and FY 2021, respectively).

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MUNICIPAL RESULTS

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Year-to-Year Comparison of Results: MUNICIPAL Systems

(MUNICIPAL ONLY, $ in Millions)

	Employees' Combined System	LEOPS	CORS	Total
FY 2021 Basic (Pooled) Contribution Rate	6.71%	34.93%	9.67%	**8.24%**
FY 2020 Basic (Pooled) Contribution Rate	5.85%	32.22%	10.26%	**7.25%**
2019 Actuarial Value of Assets	$ 4,411	$ 322	$ 26	$ 4,758
2019 Unfunded Actuarial Liability	$ 947	$ 162	$ 2	$ 1,111
2018 Unfunded Actuarial Liability	$ 797	$ 151	$ 1	$ 950
Funded Ratios				
2019	82.3%	66.5%	92.5%	**81.1%**
2018	84.3%	66.1%	94.3%	**82.9%**

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The increase in the ECS pooled rate from FY 2020 to FY 2021 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.

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RISK/MATURITY MEASURES

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Risk Measures Summary

State and Municipal ($ in Millions)

Valuation Date (6/30)	(10) Market Value Funded Ratio[1]	(11) RetLiab / AAL[2]	(12) AAL / Payroll[3]	(13) Assets / Payroll[3]	(14) Non-Investment Cash Flow	(15) NICF / Assets[4]
2014	72.4%	57.6%	579.5%	419.7%	$ (729)	-1.6%
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%

[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.

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CONCLUSION

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Recommended Budgeted Contributions Fiscal Year 2021: STATE

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	Fiscal 2021		Prior Year	
System	Budgeted Rate	Illustrated Dollars (Millions)	Budgeted Rate	Illustrated Dollars (Millions)
TCS	**14.96%**	$1,103	15.59%	$1,116
ECS	**20.71%**	701	19.56%	648
State Police	**78.09%**	87	79.58%	84
Judges	**40.27%**	21	44.44%	22
LEOPS	**42.96%**	51	41.37%	47
Total	17.75%	$1,963	17.82%	$1,916
TCS Local Employer Portion		294		289
Total State Only Portion		$1,669		$1,628

Reinvested savings of $75 Million are to be added to the amounts above. The final Illustrated State Total for FY 2021 is therefore $1,744 Million plus any amounts resulting from the sweeper amendment. Contribution rates are percent of pay.

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Recommended Basic Contributions Fiscal Year 2021: MUNICIPAL

System	FY 2021	FY 2020
ECS	**6.71%**	5.85%
LEOPS	**34.93%**	32.22%
CORS	**9.67%**	10.26%

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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 2019 which led to higher FY 2021 employer contribution rates, before reflecting assumption changes.
- After reflecting assumption changes, the aggregate State employer contribution rates went down slightly, but the illustrated dollars went up from FY 2020.
- Upward pressure on contribution rates expected through FY 2025 due to deferred asset losses.
- State Systems on a path to reach a 100% funded ratio by 2039.

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Disclosures

- This presentation is intended to be used in conjunction with the June 30, 2019 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 (Brad Armstrong and Jeff Tebeau) 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.

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 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, 2019.

- 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 2019

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 3.0%. The inflation-related objective compares the investment performance against the rate of inflation as measured by the Consumer Price Index (CPI) plus 3.0%. 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:*** long-term government bonds, securitized bonds, corporate bonds, and inflation-linked bonds;
- ***Credit:*** high yield bonds and bank loans and emerging market debt;
- ***Real Assets:*** real estate and natural resources and infrastructure investments; and
- ***Absolute Return:*** consists of investments that are expected to exceed U.S. treasuries with 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, 2019.

Exhibit 1

State Retirement and Pension System Asset Allocation

Asset Class	Target Allocation	Actual June 30, 2019
Growth/Equity	50.0%	50.4%
Rate Sensitive	19.0%	18.1%
Credit	9.0%	8.9%
Real Assets	14.0%	13.3%
Absolute Return	8.0%	7.4%
Multi Asset	0.0%	1.3%
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, 2019

The system's asset allocation is reflective of a decision to restructure the portfolio in fiscal 2008 and 2009. As of June 30, 2019, the public equity allocation is 36.4%, with domestic public equity comprising 12.2% of fund assets. The allocation for private equity − one of the system's strongest performing asset classes − was 14.0% as of June 30, 2019. The overall strategy for public equity allocations is part of an approach by the board to decrease risk through diversification in the wake of the 2008 financial crisis, while 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. Within the real estate class, the allocation target for real estate investment trusts (REIT) is 0 to 30%. In June of fiscal 2019, the system began liquidating its investments in REITs within the real estate asset class. The system will still have some REIT holdings through other asset classes, such as within the system's public equity and hedge fund holdings. 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.

DLS requests SRA to comment on the liquidation of REITs from the system's asset holdings within the real estate asset class.

Investment Performance

The system's investment return for fiscal 2019 was 6.46% net of management fees, failing to exceed the assumed rate of return for the first time in three years. The system failed to exceed its policy benchmarks for the system as a whole, as well as within most individual asset classes. System performance was driven primarily by growth equity returns, which made up 50.4% of the portfolio and returned 6.40% for the fiscal year. As shown in **Exhibit 2**, the system's assets totaled \$54.2 billion as of June 30, 2019, which was an increase of \$2.4 billion over fiscal 2018.

Exhibit 2

State Retirement and Pension System of Maryland

Fund Investment Performance for Periods Ending June 30, 2019
($ in Millions)

	Assets	% Total	Time Weighted Total Returns 1 Year	5 Years	10 Years
Growth Equity					
Public Equity	$19,713.1	36.4%	3.89%	6.30%	10.60%
Private Equity	7,604.2	14.0%	13.65%	14.52%	14.92%
Subtotal	***$27,317.3***	***50.4%***	***6.40%***	***7.98%***	***11.50%***
Rate Sensitive					
Nominal Fixed Income	$7,642.3	14.1%	10.84%	4.11%	5.31%
Inflation Sensitive	2,172.7	4.0%	4.84%	2.36%	4.07%
Subtotal	***$9,814.9***	***18.1%***	***9.42%***	***3.73%***	***5.11%***
Credit	**$4,840.8**	**8.9%**	**6.50%**	**3.98%**	**7.92%**
Real Assets					
Real Estate	$5,071.6	9.4%	5.98%	9.07%	10.66%
Natural Resources and Infrastructure	2,150.4	4.0%	3.52%	0.82%	n/a
Subtotal	***$7,222.0***	***13.3%***	***5.27%***	***2.13%***	***4.50%***
Absolute Return	**$4,021.8**	**7.4%**	**2.97%**	**1.43%**	**3.74%**
Multi Asset	**$725.1**	**1.3%**	**4.39%**	**n/a**	**n/a**
Cash and Cash Equitization	**$263.3**	**0.5%**	**10.11%**	**5.65%**	**4.16%**
Total Fund	**$54,204.6**	**100.0%**	**6.46%**	**5.62%**	**8.61%**

Note: Returns beyond 1 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, 2019.

As shown in **Exhibit 3**, the system as a whole performed 0.63% (63 basis points) below the benchmark. Private equity and nominal fixed income were the only assets that had returns above the assumed rate of return of 7.45%, though nominal fixed income performed slightly below its benchmark. Within public equity, the domestic equity return of 8.16% was the only sub-asset class to return above the assumed rate of return, though that return was also below its benchmark.

Exhibit 3

State Retirement and Pension System of Maryland

Benchmark Performance for Year Ending June 30, 2019

	Return	Return Benchmark	Excess
Growth Equity	6.40%	6.55%	-0.15%
Public Equity	3.89%	4.65%	-0.76%
Private Equity	13.65%	10.87%	2.79%
Rate Sensitive	9.42%	9.81%	-0.39%
Nominal Fixed Income	10.84%	11.10%	-0.26%
Inflation Sensitive	4.84%	4.88%	-0.05%
Credit	6.50%	7.34%	-0.84%
Real Assets	5.27%	6.23%	-0.96%
Real Estate	5.98%	7.68%	-1.70%
Natural Resources and Infrastructure	3.52%	2.10%	1.42%
Absolute Return	2.97%	3.09%	-0.12%
Multi Asset	4.39%	7.09%	-2.70%
Cash and Cash Equitization	10.11%	2.30%	7.82%
Total Fund	**6.46%**	**7.09%**	**-0.63%**

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, 2019

With the exceptions of private equity and nominal fixed income, none of the sub-asset classes had fiscal year benchmarks above the assumed rate of return of 7.45%. The system's cash and cash equitization program (comprising only 0.5% of plan assets) had the best performance relative to its benchmark, returning 10.11% against a benchmark of 2.30%. Real estate and multi asset had the largest underperformance relative to their benchmarks. Absolute return once again returned below its benchmark, though only by 12 basis points.

DLS requests SRA to comment on the fiscal 2019 return performance in relation to the policy benchmarks and for any asset classes and asset sub-classes that underperformed the benchmark, to comment on the factors that led to the underperformance, whether those factors are expected to negatively affect performance in fiscal 2020, and to comment on what actions are being taken to mitigate those factors impacting the fiscal 2020 returns.

Additionally, SRA should comment on any changes to policy benchmarks that impacted the performance of an asset class relative to its policy benchmark.

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 2019 total fund investment performance was rated in the 60th 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 years. The long-term relative performance rankings typically place SRPS' relative total fund performance in the bottom quartile. The TUCS rankings are based on returns gross of fees.

Exhibit 4

TUCS Percentile Rankings for Periods Ending June 30

Fiscal 2016-2019

	2016	2017	2018	2019
1 Year	57	95	75	60
3 Years	95	91	94	92
5 Years	95	87	84	88
10 Years	95	100	94	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 fiscal 2019 as well as 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.

Exhibit 5
TUCS Percentile Rankings for Periods Ending June 30, 2019

Asset Class	1 Year	3 Year	5 Year	10 Year
Total Equity	87	76	70	68
U.S. Equity	59	48	51	52
International Developed	47	55	47	80
International Emerging	63	47	n/a	n/a
Fixed Income	8	68	23	44
Private Equity	21	19	16	21
Real Estate	67	47	50	16

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 will result in more stable employer contribution rates. 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, 2019, 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.

Investment Management Fees

As shown in **Exhibit 6**, SRPS incurred $372.5 million in investment management fees during fiscal 2019, a decrease from $374.2 million in fiscal 2018 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, management fees in fiscal 2019 were lower than in fiscal 2018 by 0.8 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.

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. 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.

Exhibit 6
Asset Management Fees Paid by Asset Class
Fiscal 2018-2019
($ in Millions)

	2018				2019			
Asset Class	Management Fee	Incentive Fee	Total	Fees as % of Asset	Management Fee	Incentive Fee	Total	Fees as % of Asset
Equity	$65.4	$0.6	$66.0	0.35%	$65.5	$0.9	$66.4	0.37%
Rate Sensitive	12.7	4.4	17.1	0.16%	12.5	1.2	13.7	0.14%
Credit	10.5	n/a	10.5	0.35%	5.4	n/a	5.4	0.17%
Private Equity	104.3	n/a	104.3	1.73%	110.1	0.3	110.4	1.64%
Real Estate	29.2	1.5	30.7	0.84%	34.3	1.9	36.2	0.84%
REITs	2.4	n/a	2.4	0.34%	2.5	n/a	2.5	0.36%
Real Return	16.6	2.3	18.9	1.44%	15.7	n/a	15.7	0.80%
Absolute Return	43.2	10.9	54.1	1.64%	51.9	21.0	72.9	1.77%
Multi Asset	1.3	n/a	1.3	0.17%	1.4	n/a	1.4	0.20%
Private Credit/Debt	19.3	3.1	22.4	1.66%	14.9	n/a	14.9	1.32%
Equity Long Short	18.2	18.7	36.9	2.58%	11.0	12.0	23.0	2.69%
Service Providers	9.6	n/a	9.6	n/a	10.1	n/a	10.1	n/a
Total Fund	**$332.8**	**$41.4**	**$374.2**	**0.73%**	**$335.2**	**$37.3**	**$372.5**	**0.72%**

REIT: real estate investment trust

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

Private Equity Fees

Management fees for private equity comprised nearly 30% of total management fees, despite only constituting 14% of system assets in fiscal 2019. Fees in private equity constituted 1.73% of private equity assets. The reason for the higher amount of fees in private equity involves a substantial degree of active management. Fee structures are similar to those used in hedge funds, with 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 the strongest performing sub-asset class in 2019, with a return of 13.65%. This return was 279 basis points above its benchmark, and was the only sub asset class to both exceed the system's assumed rate of return as well as exceed its benchmark. 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, 2019, were 13.65%, 16.55%, and 14.52%, respectively. Returns for those same periods also provided significant excess returns over the asset class benchmarks. Additionally, SRA has proposed utilizing co-investments in private equity. Such investments would be 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. While private equity markets have performed well for the system, opportunities to make profitable investments may decline as private equity markets mature. 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.

Recently, several public pension plans have released 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, due December 31, 2019, is required to include information for fiscal years 2015 through 2019.

DLS requests SRA to comment on how private equity returns are calculated, and how performance benchmarks are selected. SRA should also brief the committees on any risks associated with private equity and how other large pension funds' policies are evolving.

Absolute Return Fees

Absolute return comprises 7.4% of SRPS investments. Absolute return was among the lower performing asset classes in fiscal 2019, underperforming its benchmark by 12 basis points with a return of 2.97%. 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." Only four investments within the absolute return class achieved returns above the asset class benchmark, with a number of investments sustaining significant losses. Similar to private equity, absolute return fee structures typically include base fixed management fees and incentive compensation based on performance. Fees paid for absolute return were $72.9 million in fiscal 2019, which represents 1.64% of absolute return assets. This was almost 20% of all management fees. Absolute return has returned below benchmarks for the one-, three-, and five-year periods ending June 30, 2019. The 10-year and since inception returns did exceed benchmarks by 19 and 141 basis points, respectively, but returned only 3.74% and 3.20%, respectively.

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.

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.

The second purpose 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 significant savings opportunity through internal management of assets. SRA noted that fee savings of just 1 basis point would net the system approximately $5 million. However, DLS notes 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.

Previously, DLS 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. Personnel will need to be evaluated more stringently under higher compensation structures and given the higher expectations for internal asset management. At its annual education seminars, the board has received presentations on internal asset management. The presentations highlighted numerous considerations and best practices that should be included in implementation of internal management. The most recent update of the board's Investment Policy Manual incorporated provisions governing compensation for Investment Division staff, including the CIO

Chief Investment Officer

At the September meeting of the board, the committee amended the system's *Investment Policy Manual* with additional provisions regarding the compensation and incentive compensation of the CIO and division staff, effective July 1, 2019. The objective criteria for compensation of the CIO are as follows:

- base salary and total cash compensation market data at the 25th, 50th, and 75th percentile;
- comparisons to external survey data based on job description;

- education and certifications;
- employee salary range placement;
- fund returns relative to policy benchmarks.

The policy manual also states that "Adjustments to the CIO's base salary are to be based on fund returns relative to policy benchmarks. When the CIO's salary is at or above the salary range midpoint, an increase in compensation should only be considered in years when the fund meets or exceeds policy benchmarks. If the CIO's salary is below the salary range midpoint, an increase should be considered."

The board also adopted criteria for financial incentives for the CIO. The objective criteria for financial incentives to the CIO shall include objective benchmarks of investment performance that shall be met or exceeded, and objective criteria used by comparable public pension funds awarding financial incentives to chief investment officers. The amount of financial incentives to the CIO in a fiscal year may not exceed 33% of the CIOs compensation. The financial incentive performance metrics for the CIO are as follows:

- performance versus policy benchmark over a three-year period (50%);
- performance versus actuarial assumed rate of return (50%) over a three-year period (to be eligible for a payout under this metric, the fund must have a positive return relative to the policy benchmark over a three-year period).

The required performance to achieve the maximum incentive award for the 50% weighting to the performance versus policy benchmark is 0.40% (40 basis points). For the 50% weighting to performance versus the actuarial assumed rate of return is 0.20% (20 basis points). The evaluation period is three years (or the CIO's time in the position, if less than three years).

Investment Division Staff

The board also adopted criteria governing the compensation and incentive compensation for division staff. The objective criteria for compensation for division staff positions that involve discretion over investment-related decisions are as follows:

- base salary and total cash compensation market data at the 25th, 50th, and 75th percentile;
- comparison to external survey data based on job descriptions;
- education and certifications;

- employee salary range placement;
- fund return relative to benchmark

The policy manual also states that "When a position's salary is at or above the salary range midpoint, an increase in compensation should only be considered in years when the fund meets or exceeds policy benchmarks." The manual notes that if a position's salary is below the salary range midpoint, an increase to that position's compensation should be considered. For employees responsible for specific asset classes, performance must meet or exceed asset class benchmarks.

The board also adopted objective criteria for awarding incentive compensation to division staff, which was incorporated into the *Investment Policy Manual*. The provisions for financial incentive performance metrics for eligible Investment Division staff positions are as follows:

- performance versus policy benchmark over a three-year period;
- performance versus actuarial assumed rate of return over a three-year period (to be eligible for a payout under this metric, the fund must have a positive return relative to the policy benchmark over a three-year period);
- performance versus asset class over a three year period.

The policy manual identifies the eligible positions for incentive compensation, as only positions that involve discretion over investment-related decisions are eligible for incentive compensation under the law. The policy manual sets the caps on total incentive compensation that can be earned, with lower caps for lower level positions. In contrast to the CIO, who is responsible for the entire investment portfolio, division staff are assigned to work with specific assets. Accordingly, the incentive compensation provisions for division staff incorporate weighting for incentive compensation based on the performance of the assets being managed by individual staff. Additionally, the policy manual establishes asset specific performance thresholds for each asset class which that be met or exceeded to earn incentive compensation. The evaluation period is three years (or the individual's time in the position, if less than three years).

DLS requests SRA to provide an update on the utilization by the Board of Trustees of the authority granted to it under Chapters 727 and 728 to establish the qualifications and compensation of Investment Division staff, including compensation and incentive provisions incorporated into the system's *Investment Policy Manual*.

Additionally, 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 Investment Division will develop proficiency in internal management of particular asset classes before expanding into internal management of additional asset classes, and evaluate the performance of internal management compared to

available external management services.

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 remained steady at $2.6 billion in fiscal 2018 and 2019. As a proportion of total assets, Terra Maria decreased from 5.1% of total assets in fiscal 2018 to 4.9% in fiscal 2019. **Exhibit 7** provides an overview of the Terra Maria program by program manager and asset class.

Exhibit 7

Terra Maria Program Performance

Investment Performance for Periods Ending June 30, 2019
($ in Millions)

		Performance			
	Total Assets	Fiscal 2019 Actual	Fiscal 2019 Benchmark	Inception Actual	Inception Benchmark
Program Manager					
Acuitas	$95.1	-13.29%	-10.39%	-1.72%	5.58%
Attucks	428.3	-2.99%	1.29%	11.45%	7.79%
Capital Prospects	1,022.5	2.81%	2.82%	13.01%	12.85%
FIS Group	665.1	-1.92%	-2.46%	10.22%	10.00%
Leading Edge	421.6	-0.66%	1.29%	10.50%	7.79%
Asset Class					
U.S. Equity	$482.8	-5.11%	-5.20%	7.61%	7.83%
International Developed Equity	1,148.9	-2.79%	-1.02%	2.77%	1.46%
Emerging Market Equity	366.2	1.73%	1.21%	n/a	n/a
Rate Sensitive	583.4	7.19%	7.31%	3.16%	2.83%
Credit/Debt	51.4	1.77%	1.93%	2.39%	2.64%
Total	**$2,632.7**	**-0.53%**	**0.32%**	**5.27%**	**4.81%**

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, 2019

In fiscal 2019, the program experienced a negative return of -0.53% against a benchmark of 0.32%. Four of the five program managers experienced negative returns, and only one of the five had a return above the benchmark. Two of the program managers had negative benchmarks for fiscal 2019, with FIS Group mitigating losses by outperforming its benchmark of -2.46% with a return of -1.92%. Acuitas had the poorest performance, with a loss of -13.29% against a benchmark of -10.39%. However, despite the poor overall performance in fiscal 2019, returns for the second half of the fiscal year (the first half of calendar 2019) are significantly improved. As shown in **Exhibit 8**, all five managers had significantly improved positive returns, with four of the five managers achieving double-digit returns. Acuitas showed significant improvement in the second half of the fiscal year, with a return of 6.78%; however, it still had significant underperformance against its benchmark of 14.15%. Three of the five managers also outperformed their benchmarks for the first half of calendar 2019. Since inception, the program has achieved positive returns, including outperforming its benchmark by 0.46% (46 basis points).

Exhibit 8

Terra Maria Program Performance

Investment Performance for Six-month Period Ending June 30, 2019
($ in Millions)

		Performance	
	Total Assets	**Actual**	**Benchmark**
Program Manager			
Acuitas	$95.1	6.78%	14.15%
Attucks	428.3	13.20%	14.64%
Capital Prospects	1,022.5	10.01%	9.40%
FIS Group	665.1	13.05%	11.54%
Leading Edge	421.6	16.89%	14.64%
Asset Class			
U.S. Equity	$482.8	15.80%	15.78%
International Developed Equity	1,148.9	14.67%	13.84%
Emerging Market Equity	366.2	13.05%	10.58%
Rate Sensitive	583.4	5.71%	5.44%
Credit/Debt	51.4	n/a	n/a
Total	**$2,632.7**	**12.29%**	**11.62%**

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, 2019

Maryland Private Equity/Venture Capital Program

Legislation in 2016 authorized SRPS to engage in investments in Maryland private equity and venture capital. The legislation required the system to select a program investment manager and authorized the Maryland Technology Development Corporation as an option to fill this role. The enacting legislation specified that employer contributions in excess of the statutory required amount could be utilized in this program. In 2018, Chapters 727 and 728 authorized an additional $300 million to be included in the program by authorizing the annual $75 million supplemental contributions to the system to be utilized in the program. The program is subject to the fiduciary obligations and responsibilities of the system.

DLS requests SRA to comment on the status of the program.

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, 2019, the currency program added total value of $246.8 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.

2019 Board Requested Legislation Addendum

The following legislative proposal is offered by the Board of Trustees of the State Retirement and Pension System for consideration by the Joint Committee on Pensions to sponsor as legislation for the 2020 session.

Recordation of Outgoing Calls to Members and Retirees

Chapter 214 of the Acts of 2009 authorized the Board to adopt regulations allowing managers to monitor and record incoming telephone conversations to employees of the Member Services Division of the Agency for training and quality control purposes. Following enactment of Chapter 214, the Board of Trustees adopted COMAR 22.01.13, Member Services Unit — Telephone Recording or Monitoring. Specifically, COMAR 22.01.13.02 states that the Agency may only record or monitor incoming calls to the Automated Call Distribution System (ACDS), within the Member Services Division. Additionally, this regulation also states that the Agency must give a specifically worded notice that it is recording a call, and may not record or monitor calls to or from direct individual lines in the Agency.

In 2015, the Agency began allowing members and retirees who call into the ACDS and are faced with long wait periods to "lock in" their place in the call-in queue. By doing this, members and retirees are not required to wait on hold for an available counselor but instead can disconnect the call, while still maintaining their place in the queue. When their position in the queue moves to the second spot, the ACDS will automatically reconnect the call with the individual. It is important to note that throughout this entire process, no counselor from the Member Services Division is personally returning the individual's initial phone call. Because of this, staff had not considered this feature an actual outbound phone call. However, a review of this issue identified the concern that these "virtual callbacks" could be interpreted as outbound telephone calls, raising questions regarding the Agency's authority to record these types of telephone calls. Section 9-602 of the Criminal Law Article of the Maryland Annotated Code of Maryland provides that a State official or employee may not directly or indirectly monitor or record in any manner a telephone conversation made to or from a State unit. This section of the law further provides that a person who violates this section is guilty of a misdemeanor and on conviction is subject to a fine not exceeding $1,000. Such a conviction is also grounds for immediate dismissal from State employment. Current provisions of the State Personnel and Pensions Article authorize the Board of Trustees to adopt regulations providing for monitoring and recording telephone conversations "notwithstanding the provisions of § 9-602 of the Criminal Law Article," yet only under the statutorily specified conditions.

The Agency believes that recording these calls would provide staff with a valuable tool for training and quality control of the counselors in its Member Services Division. Therefore, it is recommended that current provisions of the State Personnel and Pensions Article be amended to explicitly permit the Agency to record both incoming and outbound calls from the Member Services Division that are placed through the Agency's ACDS, and continue to require the Agency to give appropriate notice.

2019 Board Requested Legislation

The following legislative proposals are recommended by the Board of Trustees for the State Retirement and Pension System (System) for the Joint Committee on Pensions' consideration for the 2020 legislation session. These legislative proposals are intended to clarify or correct perceived inconsistencies within existing law and remove obsolete provisions within the State Personnel and Pensions Article. In addition, some of these proposals will result in more freedom for staff to complete the tasks required to help the State Retirement Agency (Agency) and System run efficiently. Finally, one proposal would provide guidance to the Agency as to how it should proceed with regard to inadvertent overpayments that were made to a group of retirees and beneficiaries.

Technical and Clarifying Changes

Death Benefits for Children – Age

Over the last several years, provisions of the State Personnel and Pensions Article have been amended to provide that children of deceased members and retirees who are receiving death benefits from the several systems may receive these benefits until the children reach age 26. Staff has found provisions in the State Personnel and Pensions Article that were not included in the past legislation and still state that certain children of deceased members or retirees will cease receiving death benefits at age 18. Staff is recommending proposed legislation that would amend these provisions to increase the age to 26.

Obsolete Reemployment Provisions

A second technical change staff is recommending is found in the reemployment provisions for the Teachers' Pension and Retirement Systems. Current law reads that retired teachers or principals are exempt from the earnings limitation if they return to a public school that is not making adequate yearly progress or is a school in need of improvement under the federal No Child Left Behind Act of 2001. This Act was repealed in 2015. Therefore, staff is recommending repealing the reemployment provisions in the State Personnel and Pensions Article that reference this Act.

Reemployment Code Revision

Each of the several systems, except the Law Enforcement Officers' Pension System, include provisions that address the amount by which the Board may reduce a retiree's allowance when the retiree is subject to the reemployment earnings limitation. Specifically, these sections are intended to provide that a retiree's allowance may not be reduced to less than what is required to be deducted for the retiree's monthly State-approved medical insurance premiums. Staff for the Agency and the Department of Legislative Services (DLS) have long agreed that these provisions are not a model of clarity. Staff for the Agency is recommending working with DLS to clarify these provisions. Any change made to these provisions would be non-substantive.

Modification of Municipal Pension Surcharges

The 2011 legislative reforms substantially revised the benefit provisions and employee contribution rates for the MSRPS Municipal Employees' Combined System. When plan changes such as the 2011 reforms affect different PGUs differently, equity relationships can be affected to the systematic benefit of some and to the systematic detriment of others. It is recommended that legislation be introduced to convert or phase in a more equitable allocation of contribution requirements among the PGUs.

The 2011 reforms caused the pooled employer cost to decrease by about 2% of pay. Most of that decrease was due to the increase in employee contribution rates for the Alternate Contributory Pension Selection (ACPS) participants, from 5% to 7%. PGUs with participants subject to the Non-Contributory Pension Benefit (NCPB) or the Employees' Contributory Pension Benefit (ECPB) (nine employers) benefitted from the decrease in employer contributions although there was no offsetting increase in employee contributions from their NCPB and ECPB participants. This was the result of a specific provision included in the 2011 reforms that exempted these nine employers from having to participate in the Reformed Contributory Pension Benefit.

The Board of Trustees is recommending the establishment of a new surcharge of 2% of pay for each of the nine employers participating in the NCPB or ECPB. Because of the magnitude of the proposed changes to the employer contribution rate and the impact on these nine PGUs, the Board is also recommending these changes be implemented over a period of five years. This 5-year phase-in would begin with the December 2021 billing and would be fully implemented by the December 2025 billing.

Overpayment of Pension Benefits

Staff for the Agency recently identified 34 retirees and beneficiaries who have been receiving a monthly benefit in excess of what their benefit would be under the statutory provisions of the Employees' and Teachers' Retirement and Pension Systems. The total overpayment amount for the 34 annuitants is $104,296.06 through May 31, 2019. Since discovering these overpayments, staff has researched the issue to determine how this issue evolved.

The annual basic allowance for a retiree of the several systems who is receiving a normal service retirement is calculated in accordance with a statutorily provided benefit formula for the appropriate system. With the exception of the Judges' Retirement System, the formula is:

Annual average final compensation x Creditable service x Benefit multiplier for the member's system

A member's annual basic allowance as calculated above, will be reduced if the member selects an optional allowance providing survivorship benefits to a designated beneficiary.

The member's retirement allowance calculated above is funded from both the member's and employer's contributions made on behalf of the member that are separately accounted for in the "annuity reserve" and "pension reserve" funds, respectively. Sections 20-101(f) and (gg) of the State Personnel and Pensions Article define these terms as the present value of an annuity and pension computed on the basis of actuarial assumptions adopted by the Board of Trustees. To calculate the present value of the annuity reserve portion of the member's retirement allowance staff for the Agency determines the member's total member contributions and interest and divides this amount by an actuarially determined annuity factor based primarily on the life expectancy of the member at the time of retirement. Staff then determines the pension reserve portion of the retirement allowance by reducing the statutorily calculated retirement allowance by the portion of the retirement allowance allocated to the annuity reserves. The System's actuary acknowledges these practices as acceptable calculations for determining the annuity and pension reserves for members at the time of retirement.

While most accounts have an annuity reserve and a pension reserve component in calculating their retirement allowance, there are occasional instances where the present value of the annuity reserve is greater than the statutorily determined benefit. For situations where there may not be a pension reserve component to a member's benefit, the Joint Committee should consider the following example. At the time of retirement a member may have a statutorily calculated benefit equal to $1,000, annually. Based on the member's total accumulated contributions (member contributions and interest), the member's annuity reserve is determined to be $1,100, annually. In accordance with the accepted practices for determining the pension reserve, the statutorily calculated benefit is then reduced by the member's annuity reserve. This results in a pension reserve equal to -$100.

The 34 accounts in question currently have annuity reserves in excess of their statutorily determined benefit. The example provided above delineates the process for determining how a member's retirement allowance is calculated. Prior to July 1, 2010 and continuing through today, the first three steps of that process generally include: (1) calculating the member's statutorily determined benefit; (2) determining the member's annuity reserve; and (3) determining the member's pension reserve, if any. Prior to July 1, 2010, if the member's annuity reserve exceeded the statutorily determined benefit, the member's benefit was capped at the value of the statutorily determined benefit. Beginning July 1 2010, based on these calculations, the Maryland Pension Administration System (MPAS) was programmed to perform the basic allowance calculation different from the statutorily provided basic allowance calculation, for those accounts with only an annuity reserve component to their benefit. The MPAS programming provided that in instances where a member's annuity reserves exceeded the member's basic allowance calculated on years of service, average final compensation, and benefit multiplier, the benefit would not be capped using the statutorily provided benefit formula for the appropriate system. Instead, in instances where the annuity reserve was in excess of the statutorily determined benefit, the retiree's allowance was based solely on the member's annuity reserves. In other words, the programming provided that a member's annuity reserves as determined at the time of retirement, will be the minimum benefit a member will receive at retirement.

Legislative Remedies

To address the overpayments and miscalculations for the 34 retirees and beneficiaries affected by the 2010 MPAS programming and any future similarly situated accounts, the Joint Committee may wish to introduce legislation that would codify this type of benefit calculation for instances when a member's annuity reserve exceeds the statutorily provided benefit formula for the appropriate system at the time of retirement. Staff consulted with the System's actuary about the MPAS benefit calculation that was implemented for these 34 accounts. The System's actuary informed the staff that this calculation for accounts with annuity reserves in excess of the statutorily provided benefit conforms to many other public plans. The actuary believes that legislation to conform the law to the 2010 MPAS programming would have a minimal impact to the plan. This is due in part to the initial benefit that is being paid under these circumstances is being funded entirely by the member's accumulated contributions, excluding any cost of living adjustments. The employer contributions that were made on behalf of the member remain with the System, in effect subsidizing (in very small part) the retirement benefits of the retirees whose annuity reserve does not exceed the statutorily defined benefit. The actuary would likely consider this a de minimus gain.

Should the Joint Committee choose to sponsor legislation codifying the practice that payment of the retirement allowance in excess of the statutorily calculated benefit is appropriate in instances where a member's annuity reserve exceeds the statutorily calculated benefit, consideration should be given as to what, if any, adjustments would be necessary for those individuals who retired prior to July 1, 2010 and whose annuity reserve component of their retirement allowance was capped at the statutorily calculated benefit. The Joint Committee should note that staff is in the process of trying to identify these individuals.

Alternatively, the Joint Committee may wish to maintain the current statutory calculation for all members, regardless of whether a member's annuity reserve is greater than the member's statutorily provided benefit. In that case, the Board would recommend introducing legislation that would authorize the Board to not recover the overpayments directly from these annuitants that have already been made to these 34 retirees and beneficiaries. Additionally, this proposed legislation would not correct the retiree's or beneficiary's monthly retirement allowance, but would, instead, suspend any annual cost of living adjustments (COLAs) until the individual's current allowance equals or exceeds the corrected reduced allowance, including any suspended annual COLAs. This proposed legislation is similar to legislation that the Board requested the Joint Committee to sponsor in 2010 to address an overpayment issue for retirees and beneficiaries of the Maryland School for the Deaf. In that situation, the overpayment was due to an error by the School for the Deaf in their reporting of salaries for a group of their employees. This misreporting results in increased benefits for this group. The legislation that was ultimately sponsored by the Joint Committee provided that the staff for the Agency would not correct the individuals' monthly retirement allowances, and would suspend any annual COLAs until the allowance each affected retiree or beneficiary is entitled to receive (including any suspended annual COLAs) equals or exceeds the allowance the individual was receiving when the overpayment was identified in 2010.

Parallels can be drawn between the two groups in that in each case the affected retirees and beneficiaries in each group all received overpayments for the same reason (either misreporting by their employer or unique MPAS programming of their benefit) and all were or will be subject to the same remedy. However, the Joint Committee should note that there is a distinction between the two groups related to the funds that were and would be addressed through legislation. In the case of the School for the Deaf, the overpayments received by the retirees and beneficiaries were funds to which they were never entitled. Yet, in the present case of the 34 individuals with greater annuity reserves than the statutorily provided benefit, the overpayment they received was from the funds in their annuity reserves, which is their accumulated contributions. Current provisions of the State Personnel and Pensions Article provide that upon terminating membership, a member is always entitled to a return of their accumulated contributions.

Example of a Retiree Whose Annuity Reserve Exceeded the Retiree's Statutory Benefit

Benefit Multiplier		1.81818% (Teachers' Retirement System)
Service		137 months
Average Final Compensation	$	41,242
Member's Contributions and Interest at Retirement	$	94,454.33

To Calculate Statutory Benefit	Service (months)	times	Salary	times	Benefit Multiplier	Annual Basic Benefit	Monthly Basic Benefit
Basic Allowance	137	X	$41,242	X	1.81818%	$ 10,273.00	$ 856.08

To Calculate the Annuity Reserve				
Member's Contribution and Interest	$	94,454.33		
Divided by the Actuarially Determined Annuity Factor		5.189		
Annuity Reserve and Annual Benefit based on the Annuity Reserve	$	18,202.80	$ 18,202.80	$ 1,516.90

Calculation difference between the Statutory Benefit and calculation of the Annuity Reserv		
Difference (excludes annual cost of living adjustments)	$ 7,929.80	$ 660.82

Municipal ECS Surcharges and Equitable Comparisons Post-2011 Reforms

Anne Arundel County Economic Opportunity Commission

Location 6628

Bill Date (December)	Billing based on Current Surcharges (a)	Billing with Immediate Surcharge Change[2] (b)
2012	$ 83,958	$ 109,638
2013	87,412	109,974
2014	78,189	99,249
2015	52,523	70,065
2016	48,070	65,371
2017	11,070	14,745
2018	7,530	9,829
2019	5,189	6,671
2020	6,137	7,664

			PROSPECTIVE METHOD	
Bill Date (December)	Projected Billing based on Current Surcharges[1] (a)	NCPB/ECPB and RCPB New Surcharge Phase-In Percent	Projected Billing with Proposed Surcharges[3] (d)	Increase/ (Decrease) due to Proposed Surcharges (d) - (a)
2021	$ 6,978	20%	$ 7,293	$ 315
2022	7,291	40%	7,941	649
2023	7,668	60%	8,672	1,004
2024	7,905	80%	9,286	1,381
2025	8,044	100%	9,823	1,779
2026	9,172		11,006	1,834
2027	9,343		11,234	1,891
2028	9,516		11,466	1,950
2029	9,751		11,761	2,010
2030	10,053		12,125	2,073
2031	10,364		12,501	2,137

The surcharge amounts shown above exclude deficit/surplus/new entrant and administrative fee offset payments. Projected billings are illustrative only. Actual future billings will be based upon actual future payroll and other conditions in effect in the future. Actual future billings may differ materially from projected billings.

[1]Surcharge amounts are based on estimated payroll for years after 2019. The ECS Basic Rate is based on projections based on the June 30, 2018 valuation.

[2]Estimated using a surcharge on NCPB and ECPB payroll of 1.67%.

[3]See "Surcharges" tab for the proposed surcharge structure.

Municipal ECS Surcharges and Equitable Comparisons Post-2011 Reforms

North Beach, Town of

Location 6925

Bill Date (December)	Billing based on Current Surcharges (a)	Billing with Immediate Surcharge Change[2] (b)
2012	$ 25,516	$ 33,320
2013	31,955	40,203
2014	31,452	39,924
2015	25,305	33,757
2016	29,720	40,417
2017	37,230	49,590
2018	44,120	57,589
2019	47,941	61,626
2020	56,693	70,803

			PROSPECTIVE METHOD	
Bill Date (December)	Projected Billing based on Current Surcharges[1] (a)	NCPB/ECPB and RCPB New Surcharge Phase-In Percent	Projected Billing with Proposed Surcharges[3] (d)	Increase/ (Decrease) due to Proposed Surcharges (d) - (a)
2021	$ 64,461	20%	$ 67,370	$ 2,909
2022	67,357	40%	73,357	5,999
2023	70,834	60%	80,112	9,278
2024	73,030	80%	85,784	12,754
2025	74,310	100%	90,747	16,437
2026	84,732		101,678	16,946
2027	86,312		103,784	17,472
2028	87,909		105,922	18,013
2029	90,078		108,650	18,572
2030	92,871		112,018	19,147
2031	95,750		115,491	19,741

The surcharge amounts shown above exclude deficit/surplus/new entrant and administrative fee offset payments. Projected billings are illustrative only. Actual future billings will be based upon actual future payroll and other conditions in effect in the future. Actual future billings may differ materially from projected billings.

[1]Surcharge amounts are based on estimated payroll for years after 2019. The ECS Basic Rate is based on projections based on the June 30, 2018 valuation.

[2]Estimated using a surcharge on NCPB and ECPB payroll of 1.67%.

[3]See "Surcharges" tab for the proposed surcharge structure.

Municipal ECS Surcharges and Equitable Comparisons Post-2011 Reforms

Elkton, Town of

Location 7225

Bill Date (December)	Billing based on Current Surcharges (a)	Billing with Immediate Surcharge Change[2] (b)
2012	$ 9,983	$ 13,037
2013	12,758	16,051
2014	6,354	8,065
2015	5,291	7,059
2016	5,156	7,012
2017	5,757	7,668
2018	6,261	8,172
2019	7,030	9,037
2020	8,314	10,383

			PROSPECTIVE METHOD	
Bill Date (December)	Projected Billing based on Current Surcharges[1] (a)	NCPB/ECPB and RCPB New Surcharge Phase-In Percent	Projected Billing with Proposed Surcharges[3] (d)	Increase/ (Decrease) due to Proposed Surcharges (d) - (a)
2021	$ 9,453	20%	$ 9,880	$ 427
2022	9,878	40%	10,758	880
2023	10,388	60%	11,748	1,361
2024	10,710	80%	12,580	1,870
2025	10,897	100%	13,308	2,410
2026	12,426		14,911	2,485
2027	12,657		15,220	2,562
2028	12,892		15,533	2,642
2029	13,210		15,933	2,723
2030	13,619		16,427	2,808
2031	14,041		16,936	2,895

The surcharge amounts shown above exclude deficit/surplus/new entrant and administrative fee offset payments. Projected billings are illustrative only. Actual future billings will be based upon actual future payroll and other conditions in effect in the future. Actual future billings may differ materially from projected billings.

[1]Surcharge amounts are based on estimated payroll for years after 2019. The ECS Basic Rate is based on projections based on the June 30, 2018 valuation.

[2]Estimated using a surcharge on NCPB and ECPB payroll of 1.67%.

[3]See "Surcharges" tab for the proposed surcharge structure.

Municipal ECS Surcharges and Equitable Comparisons Post-2011 Reforms

Garrett County Roads Board

Location 7612

Bill Date (December)	Billing based on Current Surcharges (a)	Billing with Immediate Surcharge Change[2] (b)
2012	$ 22,660	$ 26,803
2013	26,739	30,986
2014	25,810	30,058
2015	22,009	26,320
2016	16,919	21,317
2017	18,136	22,534
2018	19,704	24,146
2019	15,983	20,546
2020	18,901	23,605

			PROSPECTIVE METHOD	
Bill Date (December)	Projected Billing based on Current Surcharges[1] (a)	NCPB/ECPB and RCPB New Surcharge Phase-In Percent	Projected Billing with Proposed Surcharges[3] (d)	Increase/ (Decrease) due to Proposed Surcharges (d) - (a)
2021	$ 21,491	20%	$ 22,461	$ 970
2022	22,457	40%	24,457	2,000
2023	23,616	60%	26,709	3,093
2024	24,348	80%	28,600	4,252
2025	24,775	100%	30,255	5,480
2026	28,249		33,899	5,650
2027	28,776		34,601	5,825
2028	29,308		35,314	6,006
2029	30,032		36,223	6,192
2030	30,963		37,346	6,384
2031	31,922		38,504	6,582

The surcharge amounts shown above exclude deficit/surplus/new entrant and administrative fee offset payments. Projected billings are illustrative only. Actual future billings will be based upon actual future payroll and other conditions in effect in the future. Actual future billings may differ materially from projected billings.

[1]Surcharge amounts are based on estimated payroll for years after 2019. The ECS Basic Rate is based on projections based on the June 30, 2018 valuation.

[2]Estimated using a surcharge on NCPB and ECPB payroll of 1.67%.

[3]See "Surcharges" tab for the proposed surcharge structure.

Municipal ECS Surcharges and Equitable Comparisons Post-2011 Reforms

Prince Georges County Government

Location 8111

Bill Date (December)	Billing based on Current Surcharges (a)	Billing with Immediate Surcharge Change[2] (b)
2012	$ 10,669,015	$ 13,893,559
2013	12,588,287	15,804,292
2014	12,032,046	15,258,043
2015	9,821,578	13,087,507
2016	8,888,622	12,075,634
2017	9,940,345	13,228,606
2018	11,294,960	14,733,567
2019	12,958,241	16,647,671
2020	15,321,596	19,125,395

			PROSPECTIVE METHOD	
Bill Date (December)	Projected Billing based on Current Surcharges[1] (a)	NCPB/ECPB and RCPB New Surcharge Phase-In Percent	Projected Billing with Proposed Surcharges[3] (d)	Increase/ (Decrease) due to Proposed Surcharges (d) - (a)
2021	$ 17,419,240	20%	$ 18,186,811	$ 767,571
2022	18,201,708	40%	19,801,717	1,600,009
2023	19,140,936	60%	21,624,254	2,483,318
2024	19,734,318	80%	23,154,172	3,419,853
2025	20,080,382	100%	24,492,448	4,412,066
2026	22,894,494		27,443,315	4,548,821
2027	23,321,795		28,011,610	4,689,815
2028	23,753,586		28,588,766	4,835,179
2029	24,339,850		29,324,899	4,985,049
2030	25,094,401		30,233,966	5,139,564
2031	25,872,344		31,171,213	5,298,869

The surcharge amounts shown above exclude deficit/surplus/new entrant and administrative fee offset payments. Projected billings are illustrative only. Actual future billings will be based upon actual future payroll and other conditions in effect in the future. Actual future billings may differ materially from projected billings.

[1]Surcharge amounts are based on estimated payroll for years after 2019. The ECS Basic Rate is based on projections based on the June 30, 2018 valuation.

[2]Estimated using a surcharge on NCPB and ECPB payroll of 1.67%.

[3]See "Surcharges" tab for the proposed surcharge structure.

Municipal ECS Surcharges and Equitable Comparisons Post-2011 Reforms

Prince Georges County Crossing Guards

Location 8135

Bill Date (December)	Billing based on Current Surcharges	Billing with Immediate Surcharge Change[2]
	(a)	(b)
2012	$ 85,988	$ 111,720
2013	94,240	118,565
2014	89,222	113,254
2015	71,647	95,577
2016	62,039	84,367
2017	62,055	82,658
2018	63,737	83,196
2019	79,676	102,421
2020	94,222	117,672

			PROSPECTIVE METHOD	
Bill Date (December)	Projected Billing based on Current Surcharges[1]	NCPB/ECPB and RCPB New Surcharge Phase-In Percent	Projected Billing with Proposed Surcharges[3]	Increase/ (Decrease) due to Proposed Surcharges
	(a)		(d)	(d) - (a)
2021	$ 107,132	20%	$ 111,967	$ 4,835
2022	111,946	40%	121,916	9,971
2023	117,724	60%	133,144	15,420
2024	121,374	80%	142,570	21,197
2025	123,501	100%	150,818	27,317
2026	140,821		168,985	28,164
2027	143,448		172,485	29,037
2028	146,102		176,039	29,937
2029	149,707		180,572	30,865
2030	154,348		186,170	31,822
2031	159,132		191,941	32,809

The surcharge amounts shown above exclude deficit/surplus/new entrant and administrative fee offset payments. Projected billings are illustrative only. Actual future billings will be based upon actual future payroll and other conditions in effect in the future. Actual future billings may differ materially from projected billings.

[1]Surcharge amounts are based on estimated payroll for years after 2019. The ECS Basic Rate is based on projections based on the June 30, 2018 valuation.

[2]Estimated using a surcharge on NCPB and ECPB payroll of 1.67%.

[3]See "Surcharges" tab for the proposed surcharge structure.

Municipal ECS Surcharges and Equitable Comparisons Post-2011 Reforms

Crisfield, City of

Location 8426

Bill Date (December)	Billing based on Current Surcharges (a)	Billing with Immediate Surcharge Change[2] (b)
2012	$ 66,615	$ 86,989
2013	81,937	103,087
2014	77,538	98,423
2015	62,925	83,941
2016	56,438	76,750
2017	60,624	80,751
2018	65,760	85,837
2019	61,948	79,633
2020	73,258	91,490

			PROSPECTIVE METHOD	
Bill Date (December)	Projected Billing based on Current Surcharges[1] (a)	NCPB/ECPB and RCPB New Surcharge Phase-In Percent	Projected Billing with Proposed Surcharges[3] (d)	Increase/ (Decrease) due to Proposed Surcharges (d) - (a)
2021	$ 83,296	20%	$ 87,055	$ 3,760
2022	87,038	40%	94,790	7,752
2023	91,531	60%	103,520	11,989
2024	94,369	80%	110,849	16,481
2025	96,022	100%	117,262	21,239
2026	109,489		131,387	21,898
2027	111,531		134,108	22,577
2028	113,595		136,871	23,276
2029	116,398		140,396	23,998
2030	120,006		144,748	24,742
2031	123,726		149,235	25,509

The surcharge amounts shown above exclude deficit/surplus/new entrant and administrative fee offset payments. Projected billings are illustrative only. Actual future billings will be based upon actual future payroll and other conditions in effect in the future. Actual future billings may differ materially from projected billings.

[1]Surcharge amounts are based on estimated payroll for years after 2019. The ECS Basic Rate is based on projections based on the June 30, 2018 valuation.

[2]Estimated using a surcharge on NCPB and ECPB payroll of 1.67%.

[3]See "Surcharges" tab for the proposed surcharge structure.

Municipal ECS Surcharges and Equitable Comparisons Post-2011 Reforms

Crisfield Housing Authority

Location 8427

Bill Date (December)	Billing based on Current Surcharges (a)	Billing with Immediate Surcharge Change[2] (b)
2012	$ 38,673	$ 50,502
2013	46,561	58,578
2014	44,400	56,359
2015	34,110	45,503
2016	33,090	45,000
2017	31,913	42,508
2018	36,039	47,042
2019	40,496	52,056
2020	47,889	59,807

			PROSPECTIVE METHOD	
Bill Date (December)	Projected Billing based on Current Surcharges[1] (a)	NCPB/ECPB and RCPB New Surcharge Phase-In Percent	Projected Billing with Proposed Surcharges[3] (d)	Increase/ (Decrease) due to Proposed Surcharges (d) - (a)
2021	$ 54,451	20%	$ 56,908	$ 2,458
2022	56,897	40%	61,965	5,068
2023	59,834	60%	67,671	7,837
2024	61,689	80%	72,462	10,773
2025	62,770	100%	76,654	13,884
2026	71,573		85,888	14,315
2027	72,908		87,667	14,758
2028	74,257		89,473	15,216
2029	76,089		91,777	15,688
2030	78,448		94,622	16,174
2031	80,880		97,555	16,675

The surcharge amounts shown above exclude deficit/surplus/new entrant and administrative fee offset payments. Projected billings are illustrative only. Actual future billings will be based upon actual future payroll and other conditions in effect in the future. Actual future billings may differ materially from projected billings.

[1]Surcharge amounts are based on estimated payroll for years after 2019. The ECS Basic Rate is based on projections based on the June 30, 2018 valuation.

[2]Estimated using a surcharge on NCPB and ECPB payroll of 1.67%.

[3]See "Surcharges" tab for the proposed surcharge structure.

Municipal ECS Surcharges and Equitable Comparisons Post-2011 Reforms

Frostburg, City of

Location 6536

Bill Date (December)	Billing based on Current Surcharges (a)	Billing with Immediate Surcharge Change[2] (b)
2012	$ 133,505	$ 109,638
2013	163,428	109,974
2014	169,575	99,249
2015	135,990	70,065
2016	128,933	65,371
2017	143,793	14,745
2018	152,255	9,829
2019	168,757	6,671
2020	192,081	7,664

			PROSPECTIVE METHOD	
Bill Date (December)	Projected Billing based on Current Surcharges[1] (a)	NCPB/ECPB and RCPB New Surcharge Phase-In Percent	Projected Billing with Proposed Surcharges[3] (d)	Increase/ (Decrease) due to Proposed Surcharges (d) - (a)
2021	$ 213,002	20%	$ 216,559	$ 3,557
2022	190,086	40%	201,223	11,137
2023	199,437	60%	218,620	19,183
2024	205,620	80%	233,337	27,717
2025	209,543	100%	246,305	36,762
2026	236,253		274,155	37,902
2027	240,972		280,048	39,077
2028	247,099		287,387	40,288
2029	251,990		293,527	41,537
2030	259,802		302,626	42,824
2031	267,856		312,008	44,152

The surcharge amounts shown above exclude deficit/surplus/new entrant and administrative fee offset payments. Projected billings are illustrative only. Actual future billings will be based upon actual future payroll and other conditions in effect in the future. Actual future billings may differ materially from projected billings.

[1]Surcharge amounts are based on estimated payroll for years after 2019. The ECS Basic Rate is based on projections based on the June 30, 2018 valuation.

[2]Estimated using a surcharge on NCPB and ECPB payroll of 1.67%.

[3]See "Surcharges" tab for the proposed surcharge structure.

Municipal ECS Surcharges and Equitable Comparisons Post-2011 Reforms

Emmitsburg, Town of

Location 7531

Bill Date (December)	Billing based on Current Surcharges	Billing with Immediate Surcharge Change[2]
	(a)	(b)
2012	$ 51,666	$ 62,615
2013	58,933	70,003
2014	60,516	72,240
2015	54,470	66,730
2016	47,822	59,135
2017	56,004	68,558
2018	59,312	71,866
2019	65,277	78,459
2020	74,300	87,890

			PROSPECTIVE METHOD	
Bill Date (December)	Projected Billing based on Current Surcharges[1]	NCPB/ECPB and RCPB New Surcharge Phase-In Percent	Projected Billing with Proposed Surcharges[3]	Increase/ (Decrease) due to Proposed Surcharges
	(a)		(d)	(d) - (a)
2021	$ 82,392	20%	$ 83,768	$ 1,376
2022	73,528	40%	77,836	4,308
2023	77,145	60%	84,565	7,420
2024	79,537	80%	90,258	10,721
2025	81,054	100%	95,274	14,220
2026	91,386		106,047	14,661
2027	93,211		108,327	15,115
2028	95,581		111,165	15,584
2029	97,473		113,540	16,067
2030	100,495		117,060	16,565
2031	103,610		120,689	17,079

The surcharge amounts shown above exclude deficit/surplus/new entrant and administrative fee offset payments. Projected billings are illustrative only. Actual future billings will be based upon actual future payroll and other conditions in effect in the future. Actual future billings may differ materially from projected billings.

[1]Surcharge amounts are based on estimated payroll for years after 2019. The ECS Basic Rate is based on projections based on the June 30, 2018 valuation.

[2]Estimated using a surcharge on NCPB and ECPB payroll of 1.67%.

[3]See "Surcharges" tab for the proposed surcharge structure.

Municipal ECS Surcharges and Equitable Comparisons Post-2011 Reforms

Middletown, Town of

Location 7527

Bill Date (December)	Billing based on Current Surcharges (a)	Billing with Immediate Surcharge Change[2] (b)
2012	$ 47,958	$ 58,122
2013	52,831	62,755
2014	59,461	70,980
2015	52,596	64,434
2016	60,224	74,469
2017	61,177	74,890
2018	70,141	84,987
2019	73,492	88,333
2020	83,650	98,950

			PROSPECTIVE METHOD	
Bill Date (December)	Projected Billing based on Current Surcharges[1] (a)	NCPB/ECPB and RCPB New Surcharge Phase-In Percent	Projected Billing with Proposed Surcharges[3] (d)	Increase/ (Decrease) due to Proposed Surcharges (d) - (a)
2021	$ 92,761	20%	$ 94,310	$ 1,549
2022	82,781	40%	87,631	4,850
2023	86,853	60%	95,207	8,354
2024	89,546	80%	101,616	12,071
2025	91,254	100%	107,264	16,010
2026	102,886		119,392	16,506
2027	104,941		121,959	17,017
2028	107,609		125,154	17,545
2029	109,739		127,828	18,089
2030	113,141		131,791	18,650
2031	116,649		135,877	19,228

The surcharge amounts shown above exclude deficit/surplus/new entrant and administrative fee offset payments. Projected billings are illustrative only. Actual future billings will be based upon actual future payroll and other conditions in effect in the future. Actual future billings may differ materially from projected billings.

[1]Surcharge amounts are based on estimated payroll for years after 2019. The ECS Basic Rate is based on projections based on the June 30, 2018 valuation.

[2]Estimated using a surcharge on NCPB and ECPB payroll of 1.67%.

[3]See "Surcharges" tab for the proposed surcharge structure.

Municipal ECS Surcharges and Equitable Comparisons Post-2011 Reforms

Taneytown, Town of

Location 7128

Bill Date (December)	Billing based on Current Surcharges	Billing with Immediate Surcharge Change[2]
	(a)	(b)
2012	$ 57,352	$ 69,506
2013	65,778	78,134
2014	75,383	89,988
2015	63,823	78,188
2016	64,487	79,741
2017	69,008	84,477
2018	71,187	86,255
2019	79,987	96,139
2020	91,042	107,695

			PROSPECTIVE METHOD	
Bill Date (December)	Projected Billing based on Current Surcharges[1]	NCPB/ECPB and RCPB New Surcharge Phase-In Percent	Projected Billing with Proposed Surcharges[3]	Increase/ (Decrease) due to Proposed Surcharges
	(a)		(d)	(d) - (a)
2021	$ 100,958	20%	$ 102,644	$ 1,686
2022	90,096	40%	95,375	5,279
2023	94,529	60%	103,621	9,092
2024	97,459	80%	110,596	13,137
2025	99,319	100%	116,743	17,424
2026	111,979		129,943	17,964
2027	114,215		132,737	18,521
2028	117,119		136,215	19,096
2029	119,438		139,125	19,688
2030	123,140		143,438	20,298
2031	126,957		147,884	20,927

The surcharge amounts shown above exclude deficit/surplus/new entrant and administrative fee offset payments. Projected billings are illustrative only. Actual future billings will be based upon actual future payroll and other conditions in effect in the future. Actual future billings may differ materially from projected billings.

[1]Surcharge amounts are based on estimated payroll for years after 2019. The ECS Basic Rate is based on projections based on the June 30, 2018 valuation.

[2]Estimated using a surcharge on NCPB and ECPB payroll of 1.67%.

[3]See "Surcharges" tab for the proposed surcharge structure.

Municipal ECS Surcharges and Equitable Comparisons Post-2011 Reforms

Harford County Government

Location 7711

Bill Date (December)	Billing based on Current Surcharges (a)	Billing with Immediate Surcharge Change[2] (b)
2012	$ 5,761,889	$ 5,733,100
2013	6,612,153	6,553,792
2014	6,491,828	6,400,572
2015	5,240,671	5,122,428
2016	4,962,587	4,823,168
2017	5,506,124	5,334,653
2018	5,973,885	5,760,439
2019	6,241,131	5,991,040
2020	7,024,559	6,719,613

			PROSPECTIVE METHOD	
Bill Date (December)	Projected Billing based on Current Surcharges[1] (a)	NCPB/ECPB and RCPB New Surcharge Phase-In Percent	Projected Billing with Proposed Surcharges[3] (d)	Increase/ (Decrease) due to Proposed Surcharges (d) - (a)
2021	$ 7,730,329	20%	$ 7,432,275	$ (298,053)
2022	7,007,447	40%	6,609,568	(397,880)
2023	7,337,446	60%	6,818,972	(518,475)
2024	7,564,907	80%	6,905,490	(659,417)
2025	7,719,507	100%	6,899,126	(820,381)
2026	8,617,927		7,739,712	(878,215)
2027	8,800,139		7,864,257	(935,883)
2028	9,029,155		8,035,657	(993,498)
2029	9,218,768		8,167,597	(1,051,171)
2030	9,504,549		8,395,543	(1,109,007)
2031	9,799,190		8,632,081	(1,167,109)

The surcharge amounts shown above exclude deficit/surplus/new entrant and administrative fee offset payments. Projected billings are illustrative only. Actual future billings will be based upon actual future payroll and other conditions in effect in the future. Actual future billings may differ materially from projected billings.

[1]Surcharge amounts are based on estimated payroll for years after 2019. The ECS Basic Rate is based on projections based on the June 30, 2018 valuation.

[2]Estimated using a surcharge on NCPB and ECPB payroll of 1.67%.

[3]See "Surcharges" tab for the proposed surcharge structure.

State Retirement and Pension System – Study of the Board of Trustees

Department of Legislative Services
Office of Policy Analysis
Annapolis, Maryland

October 29, 2019

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Department of Legislative Services
Office of Policy Analysis
Maryland General Assembly

Victoria L. Gruber
Executive Director

October 29, 2019

Ryan Bishop
Director

The Honorable Melony Griffith, Senate Chair
The Honorable Benjamin S. Barnes, House Chair
Members of the Joint Committee on Pensions

Ladies and Gentlemen:

The Department of Legislative Services (DLS) prepared this report in response to narrative on page 58 of the 2019 *Joint Chairmen's Report* which states:

> The committees remain vigilant in their oversight of boards and commissions. Chapter 727 and 728 of 2018 granted the Board of Trustees for the State Retirement and Pension System (SRPS) the authority to determine and create positions necessary to carry out the professional investment functions of the Investment Division, which is charged with investing SRPS assets, and to set compensation for those positions, including incentive compensation. In light of this expanded authority the committees request that the Department of Legislative Services (DLS) study the structure, powers, and membership of the Board of Trustees for SRPS.

In this report, DLS provides a review of the current structure of the Board of Trustees for SRPS; research on the composition, structure, powers, and governance of over 70 separate boards across the nation; and an overview of several studies on pension board governance. Based on the information gathered, DLS then provides several observations about the Board of Trustees.

We trust that this report satisfies the aforementioned narrative requesting DLS study certain components of the Board of Trustees for SRPS. If you have any questions, please contact Phillip S. Anthony or Matthew B. Jackson at (410) 946-5530.

Sincerely,

Victoria L. Gruber
Executive Director

Ryan Bishop
Director

VLG:RB/PSA/ekc

Enclosure

cc: Treasurer Nancy K. Kopp
Mr. R. Dean Kenderdine

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State Retirement and Pension System – Study of the Board of Trustees

Introduction and Overview

The State Retirement and Pension System of Maryland (SRPS) provides retirement allowances and other benefits to State employees, teachers, police officers, judges, legislators, and employees of participating governmental units. As of June 30, 2019, the system had 193,458 active members, 164,892 retirees and beneficiaries, and 50,246 vested former members, for a total of 408,596 participants. The responsibility for the administration and operation of the system is vested in the 15-member Board of Trustees of the State Retirement and Pension System.

Chapters 727 and 728 of 2018 granted the board certain additional powers regarding its investment function. In 2019, the *Joint Chairmen's Report* on the Fiscal 2020 State Operating Budget and the State Capital Budget included the following narrative requesting a Department of Legislative Services (DLS) review of the board:

> The committees remain vigilant in their oversight of boards and commissions. Chapter 727 and 728 of 2018 granted the Board of Trustees for the State Retirement and Pension System (SRPS) the authority to determine and create positions necessary to carry out the professional investment functions of the Investment Division, which is charged with investing SRPS assets, and to set compensation for those positions, including incentive compensation. In light of this expanded authority the committees request that the Department of Legislative Services (DLS) study the structure, powers, and membership of the Board of Trustees for SRPS.

This report is in response to that narrative. The report will first discuss the powers, structure, composition, and organization of the board. The report will then explain the research that DLS conducted in compiling this paper and provide several observations. All of the information used in this report was the most recent information available at the time of its writing.

Board of Trustees of the State Retirement and Pension System

The board composition, qualifications, and other requirements are, for the most part, established under Title 21 of the State Personnel and Pensions Article. Policies regarding system investments are established by the board and updated annually in the Investment Policy Manual.

Powers and Structure

The board is vested, by statute, with responsibility for the management, general administration, and proper operation of the Employees' and Teachers' Retirement and Pensions

Systems, the State Police Retirement System (SPRS), the Correctional Officers' Retirement System (CORS), the Law Enforcement Officers' Pension System (LEOPS), the Judges' Retirement System (JRS), and the Local Fire and Police System. Subject to fiduciary duties, the board has full power to invest all assets of the several systems. The power to invest includes the authority to set the allocation of assets to each investment class, as well as set the actuarially assumed rate of return and benchmarks. The board is also vested with the power to adopt regulations providing for the administration and management of assets of the several systems as well as other responsibilities.

The board is not responsible for reviewing the benefit structure of the several systems except for the purpose of making technical corrections or considering benefit enhancements for any of the several systems.

Composition and Qualifications

The board is composed of 15 trustees. Under current law, 3 of the 15 board members are *ex officio* members: the State Comptroller; the State Treasurer; and the Secretary of Budget and Management. Seven members are appointed by the Governor to four-year terms, including 1 representative of participating local governmental units, 1 representative of the interests of county governments, and 5 representatives of the general public who must be private citizens knowledgeable in the administration and operation of pension systems.[1] Lastly, the law requires that 5 trustees be elected by the active members and retirees of specific retirement or pension systems as follows:

- The active members and retirees of the Employees' Pension System, the Employees' Retirement System, CORS, LEOPS, the Local Fire and Police System, JRS, and the Legislative Pension Plan elect:
    - 1 trustee who is an *active member* of one of those systems; and
    - 1 trustee who is a *retiree* of one of those systems.
- The active members and retirees of the Teachers' Pension System and the Teachers' Retirement System elect:
    - 1 trustee who is an *active member* of one of those systems; and

[1] Specifically, the five trustees (1) must represent the interests of the public; (2) are not members of any of the several systems; (3) are not employees, directors, partners, or officers of any of the external investment managers for the several systems; (4) do not have an ownership interest in any of the external investment managers of the several systems that is greater than 5% of the issued or outstanding stock; (5) are not directors, partners, or officers of any corporation or large organization in which any of the external managers for the several systems owns 10% or more of the issued or outstanding stock of the corporation or large organization; and (6) have at least 10 years of substantial experience overseeing similar pension systems, large foundations, or other similar large organizations with fiduciary responsibilities relating to different classes of participants.

- 1 trustee who is a *retiree* of one of those systems.

- The active members and retirees of SPRS elect 1 trustee who is *either an active member or a retiree* of SPRS.

In 2013, the total membership of the board increased from 14 to 15 members as a result of legislation that established a new position representing county governments. The trustee representing the interests of county governments must have at least 10 years of experience in fiscal management and oversight of county government budgets, and the Governor may appoint the trustee from a list submitted by the Maryland Association of Counties. The new position representing county governments was created in recognition of the new obligation for local school boards to pay a portion of teachers' pension costs beginning in fiscal 2013.

All trustees are required to complete at least eight hours of investment and fiduciary training, including training on fiduciary conduct and board governance during each calendar year.

Chairman

The board is required to annually select a chairman from its membership. There are no statutory qualifications to serve as chairman of the board. Historically, it has been the practice of the board to elect one of the two of its *ex officio* members – the State Treasurer or State Comptroller – and of those two, the office-holder with the longest tenure.

Meetings

The board has the authority to set the times and places of its meetings. Unless otherwise excused by the chairman or another officer of the board for good cause, each trustee is required to attend at least 80% of the board's meetings each calendar year.

Investment Program

Prior to the start of fiscal 2008, the board had total and final responsibility for establishing and directing the system's investment program. However, Chapter 368 of 2007 gave the chief investment officer for SRPS the sole authority to hire and fire external managers to manage the system's assets, a responsibility that previously rested with the board. With the exception of this modification in responsibility, the board maintains all remaining administrative and fiduciary responsibility for the proper operation of the various plans and their subsystems, including establishing the asset allocation for the investment program. The board is responsible for ensuring that the assets of the systems are held exclusively for the purpose of providing benefits for the participants in the systems. As fiduciaries, the members of the board must exercise the care, skill, prudence, and diligence of a "prudent person" in seeing that the assets of the system are utilized in accordance with the law for the exclusive purpose of providing benefits for the participants.

As discussed above, Chapters 727 and 728 granted the board independent salary setting authority to determine and create positions necessary to carry out the professional investment functions of the Investment Division in the State Retirement Agency (SRA) and to set compensation for the positions, including incentive compensation. The legislation specified that compensation and operating expenses of the Investment Division are to be paid from the accumulation fund of each system instead of by participating employers and that those expenses are not subject to appropriation by the Governor and General Assembly. Incentive compensation for the chief investment officer for SRPS and other division staff must be based on objective criteria as set forth by an Objective Criteria Committee established in the bill. The Objective Criteria Committee must meet at least once every five years. Incentive compensation is subject to a cap, which is 33% of base salary. Other restrictions include prohibiting the payment of incentives over multiple years and payment of incentives after separation of employment.

Standing Committees

The board has four standing committees. The Investment Committee is the only standing committee required by statute.[2] The three standing committees established by board policy are the Administrative Committee, the Audit and Securities Litigation Committee, and the Corporate Governance Committee. As of the writing of this report, the board has also established two *ad hoc* committees on actuarial economic assumptions and strategic planning and governance.

The board is statutorily required to appoint an Investment Committee to advise the board on (1) matters pertaining to the investment program; (2) compliance of investment programs with board policy; (3) preparation of an investment policy manual; and (4) bonding requirements of employees of SRA. The Investment Committee must be composed of at least six members. Three members must be representatives of (1) the Employees' Pension System or the Employees' Retirement System; (2) the Teachers' Pension System or the Teachers' Retirement System; and (3) SPRS. Additionally, the board must appoint three members from the public who are not members or retirees of the system and who have experience in management and control of large investments and have at least 10 years of combined experience in specific capacities such as a portfolio manager or a chartered financial analyst. With the exception of the three public members, the members of the Investment Committee must be appointed from the board's own membership. As of September 2019, all 15 trustees were members of the Investment Committee.

By resolution, the board must designate a chairman of the Investment Committee. There are no statutory qualifications to serve as chairman of the Investment Committee.

Budget

The board is required to submit the budget for the several systems annually to the Governor for inclusion in the State budget. In fiscal 2019, the board operated with a working appropriation of $45.3 million and 205 regular positions. Of the $45.3 million, $12.6 million was nonbudgeted,

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[2] In 2019 the Board combined the Audit Committee and Securities Litigation Committee.

which accounted for costs associated with the Investment Division going off-budget in accordance with Chapters 727 and 728. Off-budget costs no longer count against the SRA's expense cap.

Maryland State Retirement Agency

SRA, which operates under the supervision of the board, is responsible for carrying out all administrative duties and business of the system. The agency is composed of the Office of the Executive Director and seven other divisions or offices: (1) Administration; (2) Finance; (3) Internal Audit; (4) Information Systems; (5) Business Operations; (6) External Affairs; and (7) Investment. Legal services are provided by assistant Attorneys General assigned from the State Attorney General's Office; however, the agency is responsible for paying the salaries of the assistant Attorney Generals.

Research

Overview

DLS considered a number of options to effectively comply with the budget committee narrative. DLS independently researched the composition, structure, powers, and governance of over 70 separate boards across the nation and also looked at a number of other analyses, including (1) the October 2018 SRPS Governance Policy Review by Funston Advisory Services LLC (Funston Report); (2) an August 2019 Center for Retirement Research at Boston College report on the relationship between investment performance and the composition of a pension board (Boston College Report); and (3) the board's October 2017 report on the governance and resourcing of the investment division (Investment Division Report).

Additionally, while DLS considered using investment return when comparing SRPS to other systems, investment return might not be the most practical comparison for two reasons. First, as DLS regularly notes in its SRPS Investment Overview presented to the Joint Committee on Pensions each year, SRPS's low allocation to equity investments, when compared to its peers, results in a comparatively low ranking when equity markets are experiencing strong performance, as has been the case in recent years. Ranking overall performance provides a broad view and can omit measured investment policy decisions particular to SRPS that cause Maryland's performance to differ from that of other funds. Focusing on overall performance relative to other systems might not reflect a clear picture of the increased investment volatility risks borne by a system with heavier investment volatility in public equity.[3] Second, some systems do not update their returns on a

[3] In sum, a low allocation to public equity drives down a system's overall ranking. To get a better understanding of a system's performance, it is best to look at relative performance by asset class that is discussed in the Observations section of this report.

regular basis or with consistent measure, such as time weighted, net of fees. As a result, the only publicly available returns for some systems were as old as June 2017.[4]

The Funston, Boston College, and Investment Division reports are briefly summarized in the following sections. **Appendix 1** contains information on the boards identified in the Funston and Investment Division reports as peer systems. Appendix 1 also includes those systems that have boards structured similar to Maryland – where a single board has control over the administration of benefits and management of investments of a state's several systems.

Summary of Cited Reports

Funston Advisory Services LLC Report

In 2018, the board requested Funston Advisory Services LLC to conduct a review of SRPS's governance policies and charters compared to peers and identify opportunities for improvement. Funston Advisory Services LLC submitted its final report, entitled *Maryland SRPS Governance Policy Review Final Report*, in October 2018. The Funston Report focused on the board's legislative and governance framework as well as trustee and SRA employee observations. Funston then juxtaposed those findings against its observations from a selection of peer systems. The board practices were graded on a scale that identified each practice as leading, prevailing, or lagging. A leading practice "helps increase beneficial impact on organization performance compared to other practices and is not common use among peers." A prevailing practice is a common practice among peers, while a practice is considered lagging if it "has not kept pace with prevailing practice." A practice may be a combination of leading, prevailing, or lagging practices.

Generally, the Funston Report found the board to be leading and/or prevailing in most of the 26 practice areas analyzed. Three of the board's practices were considered lagging only – board composition, decision making, and investment committee size. The board leadership, while considered leading, was also considered lagging because of the board's historic practice of only electing as chairman two of its *ex officio* members – the State Treasurer and State Comptroller. Finally, practices pertaining to fiduciary responsibilities and authorities, as well as priority and agenda setting, were considered a mix of prevailing and lagging.

The Funston Report concluded that the size of both the board and Investment Committee should be reduced. Specifically, with regard to the board, the Funston Report stated that, "with 15 members, the SRPS board is large compared to most peers" and should be reduced to 11 members. The Funston Report further stated that the Investment Committee is "very large, atypical and unwieldy" and should be reduced to 9, as "the average at large peer funds is 9 to 10, with some as small as 5 or 6." The Funston Report also highlighted trustee comments regarding the size of the Investment Committee, noting that "trustees expressed numerous concerns about the size of the Investment Committee as being too big and unwieldy."

[4] When investment returns for the late 2000s are no longer within the 10-year range, investment returns change dramatically.

Center for Retirement Research at Boston College Report

In August 2019, while this report was being compiled, the Center for Retirement Research at Boston College released a report entitled *Does Public Pension Board Composition Impact Returns?* As its title suggests, the Boston College Report, through a regression analysis, analyzed whether there is a relationship between investment performance and the features of a pension board. In making its findings, the report identified and summarized best practices, as recommended by governance experts, for board structure, size, representation, expertise, and tenure as follows:

- one fiduciary board for both investment and administrative oversight with a size of 6 to 10 members;
- at least one *ex officio* member and only 20% to 70% active and/or retired participants (*i.e.*, a combination that avoids over- or under-representation);
- at least 2 members with financial or actuarial experience; and
- 8 to 10 years of tenure, on average.

The Boston College report ultimately concluded that "a board designed purposefully and effectively can have positive and long-term benefits for public pension plans." Additionally, the report recommended that "public pension funds may be best served by taking a holistic view of the many aspects of a board that contribute to its effectiveness, rather than focusing on any single feature."

SRPS – Investment Division Report

In 2017, SRA was tasked by the budget committees with compiling a report to address a number of questions about the precursor legislation to Chapters 727 and 728. The report was presented to the Joint Committee on Pensions and, among other things, identified SRA peer systems that are systems of comparable size.

Observations

The observations in this section are based on DLS research, including the reports and overviews summarized above.

Powers and Structure

Observation: Maryland has the most common board structure; however, 12 other states give a single board authority over its several systems.

The structure of boards of trustees for pension systems varies widely from jurisdiction to jurisdiction – no single system is exactly the same; however, systems can be compiled into three basic categories: (1) systems where the board administers benefits and manages investments[5]; (2) systems where a board administers benefits and a separate, fiduciary board manages investments; and (3) systems that have a single trustee/fiduciary. Within these categories there are certain variations to board powers. Depending on the statutory framework governing the system, a board may not have the power to set asset allocations or to establish the actuarially assumed rate of return. Because these boards do not have the flexibility that is afforded the SRPS Board, the absence of those powers may, for instance, be offset by a board's authority to adjust the benefit structure of a system.

Maryland falls into the category where the board administers benefits and manages investments, which is the most common board structure. Approximately 74% of boards fall into this category. It is important to note, however, that only 12 states, other than Maryland, have a single fiduciary board that oversees the several systems within the State, as opposed to, for example, Alabama that has chosen to bifurcate its systems into a public employees system and teachers system with independent boards that have authority over their own benefits and investments. Information regarding the aforementioned 12 systems can be found in Appendix 1 as DLS identified peer systems.

Systems where a board administers benefits and a separate, fiduciary board manages investments, such as the Massachusetts State Employees Retirement System, make up 16% of the total. Systems with a sole fiduciary, like the New York Common Retirement System, make up 9% of the total.

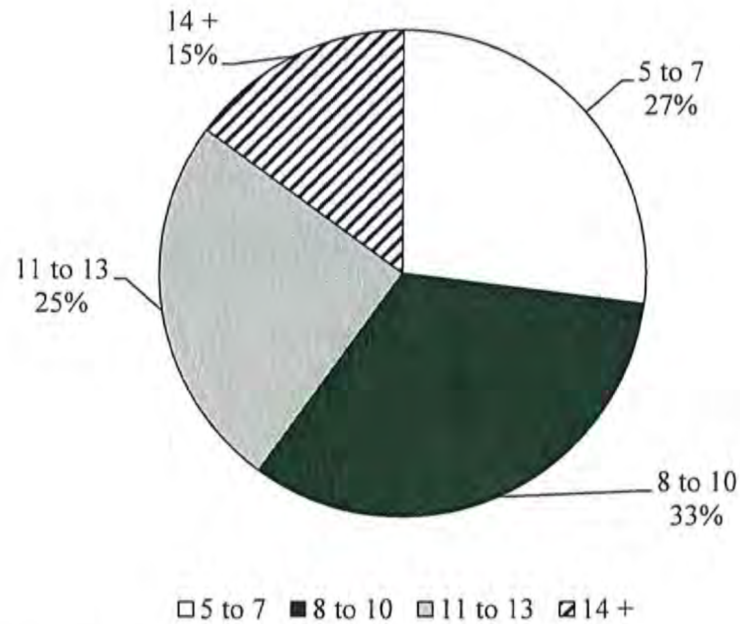
Board Size

Observation: The size of the board is large compared to both peer and non-peer systems.

As with the power and structure of various boards, the size of boards varies greatly. Some systems are governed by a board as large as 20 members, such as the Tennessee Consolidated Retirement System, or as small as 5 members, such as the West Virginia Public Employees Retirement System. Some systems are not governed by a board but by a single trustee, such as the New York Common Retirement System. Having 15 members, Maryland falls into the top 15% of board sizes – those systems that have boards with 14 or more members. **Exhibit 1** shows a breakdown of boards by size.

[5] DLS notes that some studies divide this particular category into two distinct structures based on whether the chief investment officer of the system reports directly to an executive director/chief executive officer or directly to the board. Maryland's chief investment officer reports to an executive director rather than reporting directly to the board. For the purposes of this paper, DLS does not address this distinction because it does not directly relate to the structure of a board of trustees.

Exhibit 1
Board Sizes



Source: National Association of State Retirement Administrators

Note: Excludes systems governed by a single trustee rather than a board.

The median board size of those shown in Appendix 1 is 10 members. The Funston Report concluded that the SRPS Board was too large when compared to peer systems and should be reduced to 11 members. The Boston College Report also noted that best practices prescribe a board size of not less than 6 and not more than 10 members. DLS notes, however, that board size is, to a certain extent, dictated by the number of systems consolidated under its control. A board that administers many systems will necessarily have more trustees to adequately represent the stakeholders of those systems.

Financial Expertise and Qualifications

Observation: Statutory requirements of the board's five gubernatorial appointees is in line with best practices.

The five gubernatorial appointees to the board must, among other requirements, have at least 10 years of substantial experience overseeing similar pension systems, large foundations, or other similar large organizations with fiduciary responsibilities relating to different classes of participants. The Boston College Report states that at least two members of a board should have financial or actuarial experience.

Observation: However, as written, the statutory requirements of the five gubernatorial appointees to the board do not allow for the appointment of a trustee that has a narrow yet valuable subset of experience directly related to the powers, duties, and operations of the board.

Among other requirements, the five gubernatorial appointees to the board must have at least 10 years of substantial experience overseeing similar pension systems, large foundations, or other similar large organizations with fiduciary responsibilities relating to different classes of participants. There are many facets to being a trustee on a public pension board and, as currently written, statute does not allow for the flexibility to make an appointment of an individual with a narrow subset of relevant, valuable experience. For example, a potential appointee that has substantial experience in securities litigation or auditing for a similar pension system, but not 10 years of general experience overseeing that pension system, would not be eligible to serve as a gubernatorial appointee.

Observation: There is no expertise requirement for the chairman of the SRPS Board.

Statute requires certain members of the board to have specified minimum qualifications, yet there are no statutory qualifications to serve as chairman of the board.

Stakeholder Representation

Observation: Stakeholder representation on the board is in line with best practices.

The board is composed of five active or retired members representing various employee or former employee groups that make up 33% of board membership. The Boston College Report states that best practices recommend 20% to 70% representation of active and/or retired participants. Additionally, one member representing participating governmental units and one member representing counties have seats on the board, further increasing stakeholder representation.

Tenure

Observation: The average tenure of board members is 6.75 years.

The board member tenure ranges from nearly 18 years (an *ex officio* member) to as little as a 1.5 years (an elected member). On average, board members have 6.75 years of experience, when factoring in current terms and former terms while serving on the board in another capacity.

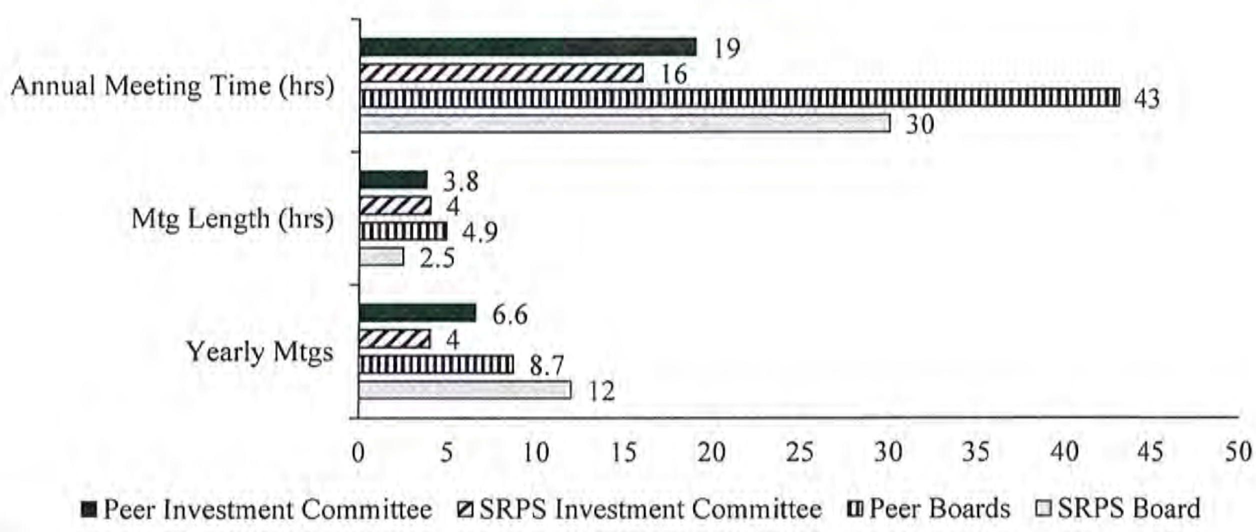
Meetings

Observation: The full board and the Investment Committee annually spend fewer hours meeting than peers.

While the board has established governance policies and charters regarding committee requirements, there are no statutory requirements for Investment Committee meetings. Historically, however, the Investment Committee has met at least quarterly – in February, May, September, and November.[6] Investment Committee activities at each meeting include reviewing investment performance, amending the statutorily required investment policy manual, reviewing the SRA Investment Division budget, and hearing from its financial advisors, such as Meketa Investment Group. Since September 2016, the Investment Committee has conducted its quarterly meeting on the same day as the full board, making it the only committee that does so exclusively.

The Funston Report noted that the board and the Investment Committee spent "somewhat less time" in meetings than its peers. Information about peer meetings and times are summarized in **Exhibit 2**.

Exhibit 2
Board and Peer Meetings



Mtgs: Meetings
SRPS: State Retirement and Pension System

Source: Funston Report

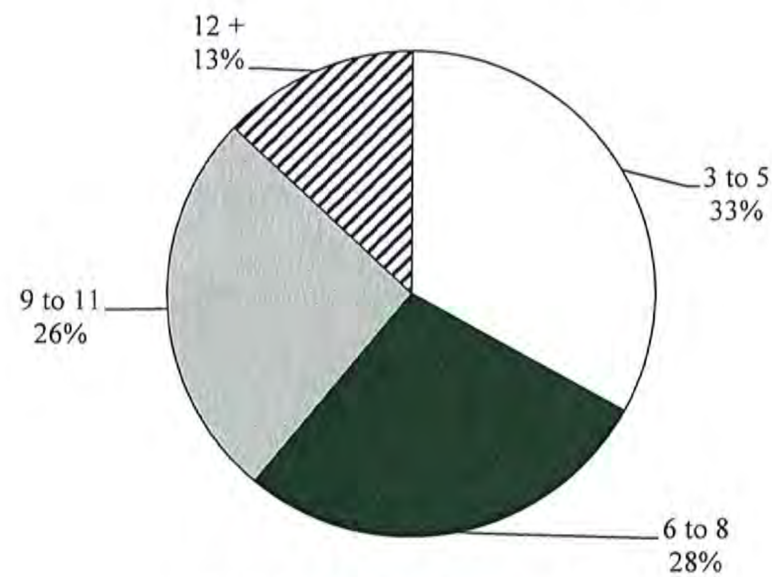
[6] DLS notes that, in its September 2019 meeting, the Investment Committee briefly discussed the addition of Investment Committee meetings to provide more opportunity to focus on specific asset classes.

Investment Committee

Observation: The size of the Investment Committee is large compared to both peer and nonpeer systems with a similar advisory body.

The Investment Committee, as mentioned above, is a statutorily required advisory committee of the board. It is required to have a minimum of 6 members; however, the Investment Committee has evolved into a committee of the whole. Accounting for the 3 outside investment experts required by law, the Investment Committee totals 18 members. The Funston Report noted that the size of the committee is unwieldy and recommended reducing its size to better expedite work. As shown in Appendix 1, the median size of a board investment committee is 8 members. **Exhibit 3** shows the size of 54 board-established investment committees throughout the nation.

Exhibit 3
Investment Committee Sizes



Source: Funston Report

DLS was not able to identify another investment committee of a board that was equal to or larger than that of the SRPS Investment Committee. Out of all of the systems and boards analyzed, only 6, excluding Maryland, have an investment board composed of more than 12 members.[7]

Observation: There is no investment expertise requirement for the chair of the Investment Committee.

As a statutorily required committee of the board, the Investment Committee serves an important function. The statute requires certain members of the Investment Committee to have specified minimum qualifications, yet there are no statutory qualifications to serve as chairman of the Investment Committee.

[7] Additionally, only 9 Investment Committees (excluding Maryland) have more than 10 members.

Appendix 1
Select Peer Systems

Name	Size			Composition					Power		Other Details			
System	Active	Annuitants	Assets*	Board Size	Elected	Appointed	Ex officio	Chair Selection	Administers Benefits	Manages Investments	Investment Committee	Investment Committee Size	Funded Ratio	Entity that ID'd System as a Peer
California Public Employees Retirement System	1,266,045**	696,890	$354.0	13	6	3	4 (Representative of State Personnel Board, Controller, Treasurer, Human Resources Department Director	Board elects	X	X	X	13	71.0%	Funston
California State Teachers Retirement System	449,595	364,780	$236.9	12	3	5	4 (Director of Finance, Controller, Superintendent of Public Instruction, & Treasurer)	Board elects	X	X	X	12	65.5%	Funston
Colorado Public Employees Retirement Association	252,947	146,157	$58.5	15	11	3	1 (Treasurer)	Board elects	X	X	X	7	59.8%	Funston, SRA, DLS
Delaware Public Employees Retirement System	47,107	33,754	$11.0	7	-	5	2 (Secretary of Finance and Office of Management and Budget Director	Governor appoints	X	X	X	6	86.0%	DLS
Hawaii Employees Retirement System	66,271	48,563	$16.7	8	4	3	1 (Director of Finance	Board elects	X***	X	X	8	55.2%	DLS
Idaho Public Employee Retirement System	71,163	52,332	$16.8	5	-	5	-	Governor appoints	X	X	-	-	91.2%	DLS
Illinois Municipal Retirement Fund	176,517	133,261	$38.8	8	8	-	-	Board elects	X	X	X	8	90.0%	SRA
Illinois Teachers Retirement System	160,859	122,423	$51.7	13	6	6	1 (Superintendent of Education)	Designated by law	X	X	X	11	45.7%	SRA
Indiana Public Retirement System	222,130	158,653	$30.4	9	-	8	1 (Office of Management & Budget Director)	Board elects	X	X	-	-	79.7%	DLS
Iowa Public Employees Retirement System	170,378	120,987	$32.3	11	-	10	1 (Treasurer)	Board elects	X	X	-	-	82.4%	SRA
Kansas Public Employees Retirement System	154,573	105,449	$21.7	9	2	6	1 (Treasurer)	Board elects	X	X	X	9	68.4%	DLS
Maine Public Employees Retirement System	51,522	45,287	$14.6	8	-	7	1 (Treasurer)	Board elects	X	X	X	6	81.4%	DLS
Maryland State Retirement and Pension System	192,431	160,374	$51.8	15	5	7	3 (Treasurer, Comptroller, Secretary of Dept. of Budget and Management)	Board elects	X	X	X	18	71.6%	
Massachusetts State Employees' Retirement System	87,822	63,194	$26.3	5	2	2	1 (Treasurer)	Treasurer by law	X	-	-	-	64.9%	SRA
Minnesota State Retirement System	57,130	45,892	$23.9	8	5	-	3 (One constitutional officer, Two State officials)	Board elects	X	-	-	-	90.6%	SRA
Mississippi (Public Employees' Retirement System of)	151,376	107,599	$29.1	10	8	1	1 (Treasurer)	Board elects	X	X	X	10	61.8%	DLS
Missouri Public Schools Retirement System	78,700	55,930	$43.8****	7	4	3	-	Board elects	X	X	-	-	84.0%	Funston, SRA

Nevada (Public Employees' Retirement System of)	107,649	67,163	$41.2	7	-	7	-	Board elects	X	X	X	7	74.7%	Funston, SRA, DLS
New York State Teachers Retirement System	264,590	160,049	$119.9	10	4	5	1 (Comptroller)	Board elects	X	X	X	6	97.7%	Funston
Ohio Public Employees Retirement System	303,920	212,953	$94.1	11	7	3	1 (Dept. of Administrative Services Director)	Board elects	X	X	X	11	78%*	Funston
Ohio State Teachers Retirement System	170,327	157,422	$78.6	11	7	3	1 (Superintendant of Public Instruction)	Board elects	X	X	X	5	75.5%	Funston
Oregon Public Employees Retirement System	279,923	153,177	$81.1	5	-	5	-	Governor Selects	X	-	-	-	80.1%	SRA
Pennsylvania Public School Employees Retirement System	443,626	444,709	$110.6	15	6	5	4 (Secretary of Education; Secretary of Banking and Securities; Treasurer; Executive Director of the Pennsylvania School Boards Association)	Board elects	X	X	X	15	56.4%	SRA, Funston
South Carolina Retirement Systems	219,673	165,517	$32.1	11	-	11	-	Board sets own policy regarding chair selection	X	-	-	-	55.0%	SRA
Texas (Teachers Retirement System of)	872,999	420,458	$154.6	9	-	9	-	Governor selects	X	X	X	5	76.9%	Funston
Utah Retirement System	99,696	66,057	$32.3	7	-	6	1 (Treasurer)	Board elects	X	X	X	7	87.4%	SRA, DLS
Virginia Retirement System	395,976	261,927	$96.0	9	-	9	-	Governor appoints	X	X	X	9	78.6%	DLS
Washington State Retirement Systems	342,832	199,853	$95.6	15	-	12	3 (Treasurer, Department of Retirement Systems Director, Department of Labor and Industries Director)	Board elects	-	X	-	-	86.0%	Funston
Wyoming Retirement System	61,635	30,214	$8.5	11	-	10	1 (Treasurer)	Board elects	X	X	X	5	74.5%*****	DLS

Information contained in this chart was the most up-to-date at the time of compilation.

*Assets reported in the billions

**Includes inactive members. CALPERS does not bifurcate active versus inactive membership.

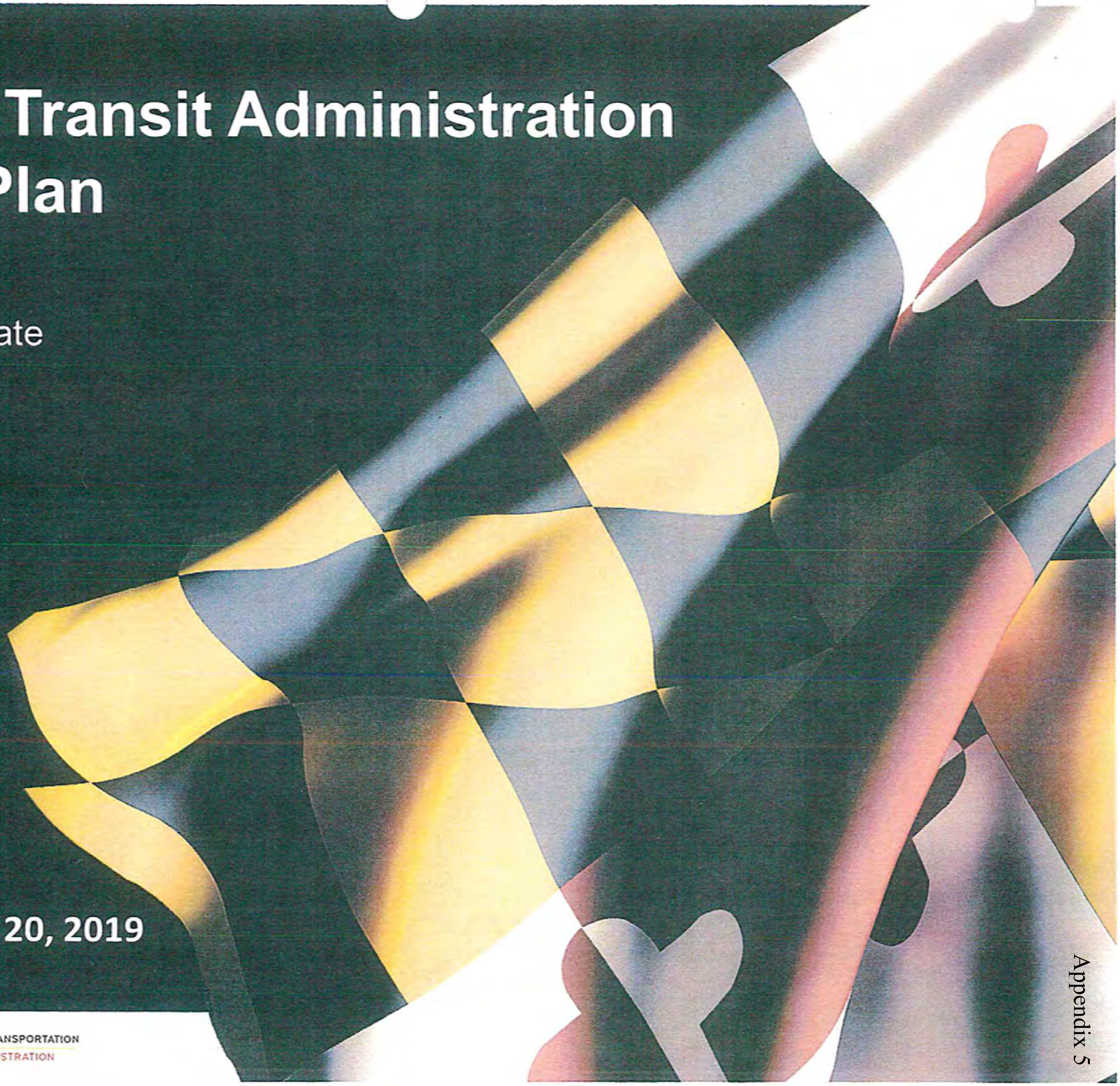
***Some benefits are administered through the Hawaii Department of Budget and Finance.

****Total assets includes the Missouri PEERS. Missouri reports assets of both systems in the aggregate.

*****Ratio only reflects Wyoming's largest plan for public employees. Wyoming does not report in the aggregate.

Maryland Transit Administration Pension Plan

Funding Plan Update



MTA – November 20, 2019

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION

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Appendix 5

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MTA's Plan to Improve Funding – Proposed (Before Negotiations Finalized)

<table>
<tr><th>Plan Provision</th><th>Description</th></tr>
<tr><td>Combine Outstanding Amortization Bases Effective July 1, 2019?</td><td>Yes</td></tr>
<tr><td>Assume Plan Bargains Retiree COLA's in Future Years?</td><td>No</td></tr>
<tr><td>Employee Contributions</td><td>Employee contributions for all employee groups are assumed to increase as follows:
<table>
<tr><th>Increase Date</th><th>For FYE</th><th>Contribution %</th></tr>
<tr><td>7/1/2018</td><td>2019</td><td>2%</td></tr>
<tr><td>7/1/2019</td><td>2020</td><td>4%</td></tr>
<tr><td>7/1/2020</td><td>2021</td><td>4%</td></tr>
<tr><td>7/1/2021</td><td>2022</td><td>6%</td></tr>
<tr><td>7/1/2022</td><td>2023</td><td>6%</td></tr>
<tr><td>7/1/2023</td><td>2024 and after</td><td>7%</td></tr>
</table></td></tr>
<tr><td>Expected Employer Contributions for FYE 2020 (July 1, 2019 – June 30, 2020) and Beyond</td><td>For plan years when the employee contribution is increasing from 2% to 7% (FYE 2020 through FYE 2024) the MTA will match the increased employee contribution dollar for dollar. For plan years after the employee contribution has reached 7% (FYE 2025 and afterward), the MTA contribution is assumed to increase at 1.5% per year until the plan attains 100% funding, at which point, the MTA will contribute the ADC annually.</td></tr>
</table>

MTA's Plan to Improve Funding - Actual (Local 1300 Ratified Changes)

Plan Provision	Description
Combine Outstanding Amortization Bases Effective July 1, 2019?	Yes
Assume Plan Bargains Retiree COLA's in Future Years?	Pensions of retirees and beneficiaries in Local 1300, excluding members who retire from deferred vested status, who have been receiving payments for at least 13 months shall be granted a COLA on each of the following dates: 8/1/2018, 8/1/2019, 8/1/2020, and 8/1/2021.
Employee Contributions	Employee contributions for The Local 1300 union increased as follows:

Increase Date	For FYE	Contribution %	Change vs. Proposed
7/1/2018	2019	2%	-
7/1/2019	2020	3%	(1%)
7/1/2020	2021	4%	-
7/1/2021	2022	4%	(2%)

Plan Provision	Description
Expected Employer Contributions for FYE 2020 (July 1, 2019 – June 30, 2020) and Beyond	For plan years when the employee contribution is increasing from 2% to 4% (FYE 2020 through FYE 2021) in lieu of increasing the employer contribution 1.50% annually, the MTA will match the increased employee contribution dollar for dollar (i.e. the employee contribution percent minus 2 percent times payroll, adjusted for inflation). For plan years after the employee contribution has reached 4% (FYE 2022 and afterward), the MTA will continue to seek increases through bargaining to reach 7% and will match the increased employee contributions dollar for dollar.

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Contribution Summary

FYE 2019 – 2021 Actual and Projected Contributions

Schedule of Plan Contributions (Dollar amounts in thousands)	7/1/2018 (FYE 2019) Actual	7/1/2019 (FYE 2020) Projected	7/1/2020 (FYE 2021) Projected
Employer Contribution	$ 41,597	$ 43,033	$ 44,514
Employee Contribution	3,006	4,524	6,145
Total Contribution	$ 44,603	$ 47,557	$ 50,659
Employee Contribution % - Local 1300	2%	3%	4%
Employee Contribution % - Local 2	2%	2%	2%
Employee Contribution % - Local 1859	2%	2%	2%
Local 1300 Percentage of Active Population	93%	93%	93%
Covered Payroll	$ 149,768	$ 154,411	$ 159,198

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All estimated future contribution amounts are based on 07/01/2019 payroll data, projected with annual increases of 3.10%. Only the Local 1300 Union group has ratified increases in the employee contribution percent over the projection period. Local 2 has not ratified changes and Local 1859 is currently under negotiation.

July 1, 2019 Actuarial Valuation Results

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Summary of Plan Results

	7/1/2018 (FYE 2019)	7/1/2019* (FYE 2020)
Discount Rate/Return on Assets	7.50%	7.45%
Participant Counts		
Active*	2,638	2,642
Participants Receiving a Benefit	1,933	1,950
Terminated Vested Participants	521	550
Total	5,092	5,142
Annual Pay of Active Members	$148,444,632	$149,767,952
Assets and Liabilities		
Actuarial Liability	735,810,303	789,044,109
Actuarial Value of Assets	316,454,023	339,002,828
Unfunded Actuarial Liability	419,356,280	450,041,281
Funded Ratio	43%	43%
Actuarial Determined Contribution		
Employer Normal Cost	8,614,037	8,831,433
Amortization Payment**	56,034,746	46,381,908
Actuarially Determined Contribution	64,648,783	55,213,341

*As of the 7/1/2019 valuation date, there were 2,448 active participants in the Local 1300 union (including management personnel) which is 93% of the total active population.

**Effective July 1, 2019, all existing amortization bases were consolidated to be paid over 25 years. This resulted in a decrease in the amortization payment of $10.4 million.

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Thank you

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