

The logo for the SRPS Actuarial Section is centered on the page. It features the acronym "SRPS" in a large, bold, serif font. Below the acronym, the words "Actuarial Section" are written in a white, elegant, cursive script. The entire logo is set against a light gray square background that has a subtle, stylized pattern of vertical bars and circles.

SRPS
Actuarial Section



October 28, 2013

Board of Trustees
Maryland State Retirement and Pension System
120 East Baltimore Street
Baltimore, MD 21202

Dear Members of the Board:

At your request, we have performed our annual actuarial valuation of the Maryland State Retirement & Pension System as of June 30, 2013. The actuarial information provided herein should only be considered in conjunction with the entire actuarial valuation report dated October 28, 2013.

Funding Objective

The funding objective of the System is to establish contribution rates which, over time, will remain relatively level as a percent of payroll. In order to achieve this, a contribution rate has been determined which will provide for current cost (i.e., normal cost expressed as a level percent of payroll) plus a level percent of payroll amortization of the unfunded actuarial liability over a single 25-year closed period as of June 30, 2013. Maryland law contains provisions (i.e. a corridor approach) to mitigate annual fluctuations in contribution rates. Due to this funding approach, the contribution rates currently being appropriated for the Employees' and Teachers' Combined Systems are lower than the actuarially determined rates for GASB No. 27 accounting purposes. However, the corridor approach is being phased out over a 10-year period based on recent legislation.

Assumptions

The economic actuarial assumptions (e.g., investment rate of return) used in this years' valuation were adopted by the Board of Trustees based upon review of the System's experience completed during Fiscal Year 2011. The demographic actuarial assumptions (e.g., rates of retirement) used in this years' valuation were recommend by GRS and adopted by the Board of Trustees based upon the most recent review of the System's experience completed during Fiscal Year 2011.

The assumptions and methods used in performing this valuation meet the parameters set for disclosure presented in the financial section of the System's Comprehensive Annual Financial Report (CAFR) by Government Accounting Standards Board Statement No. 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans. A summary of these assumptions is presented in the financial section of the System's CAFR.

The results and conclusions of this report are only valid for the July 1, 2013 plan year and should not be interpreted as applying to future years. The actuarial assumptions reflect our understanding of the likely future experience of the plans in the program and the assumptions as a whole represent our best estimate for the future experience of the those plans. The accuracy of the results presented in this report is dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the plans could vary from our results.

Reliance on Others

In preparing our report, we have relied, without audit, on employee census data and financial information provided by Agency staff. Census data provided to us by the Agency has been reviewed for reasonableness and for consistency with the data certified by the System's auditors.

Supporting Schedules

Certain information presented in the System's June 30, 2013 CAFR was derived from our June 30, 2013 actuarial valuation report. In this regard, we were responsible for producing all supporting schedules to be found in the Actuarial Section. These schedules include the Summary of Valuation Results, UAAL and Actuarial Gain/Loss, Asset Gain/Loss, Assets/Liabilities Trend, Benefits vs. Contributions Trend, State Contribution Rate Trend, Accounting Statement Information, Summary of Unfunded Liabilities/Solvency Test, Summary of Retirees and Beneficiaries Added to and Removed from Rolls, Summary of Principal Results by System, and the Schedule of Active Membership by Plan.

Additionally, we were responsible for producing all data presented in the Schedule of Funding Progress, Schedule of Employer Contributions and Notes to the Required Supplementary Information shown in the Financial Section of the 2013 CAFR. Information pertaining to valuations prior to 2009 was determined by previous actuarial firms.

Certification

On the basis of the foregoing, we certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with Maryland's Annotated Code and generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice as promulgated by the Actuarial Standards Board. Brad L. Armstrong, Brian B. Murphy, and Amy Williams are independent from the plan sponsor and System and are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,

Brad L. Armstrong, ASA, MAAA
Consulting Actuary

Brian B. Murphy, FSA, MAAA
Consulting Actuary

Amy Williams, ASA, MAAA
Consulting Actuary

BOARD SUMMARY

This section presents the results of the June 30, 2013 annual actuarial valuation of the Maryland State Retirement and Pension System (MSRPS). The purposes of the annual valuations are as follows:

- Measure the financial position of MSRPS,
- Assist the Board in determining employer contribution rates (including reinvested savings) necessary to fund the benefits provided by MSRPS, as well as establishing statutory employer contribution rates,
- Indicate trends in the financial progress of the fund,
- Provide actuarial reporting and disclosure information for the System's financial report, and
- Analyze the experience of the System over the past year.

A summary of the primary valuation results as of June 30, 2013 is presented on the following page.

SUMMARY OF VALUATION RESULTS
 JUNE 30, 2013
 (\$ IN MILLIONS)
 (STATE AND MUNICIPAL)

	2013						2012		% Change
	TCS	ECS	State Police	Judges	LEOPS	CORS ¹	Total	Total	
A. Demographic Information									
1. Active Number Counts	104,028	84,677	1,320	288	2,407	90	192,810	192,994	-0.1%
2. Active Payroll	\$ 6,185	\$ 4,030	\$ 80	\$ 40	\$ 138	\$ 5	\$ 10,478	\$ 10,337	1.4%
3. Retired Number Counts	66,390	67,193	2,428	378	1,518	18	137,925	132,493	4.1%
4. Annual Benefits for Retired Members ²	\$ 1,759	\$ 978	\$ 110	\$ 27	\$ 50	\$ 1	\$ 2,923	\$ 2,812	3.9%
5. Deferred / Inactive Number Counts	23,555	27,651	84	10	251	1	51,552	51,230	0.6%
6. Total Number Counts	193,973	179,521	3,832	676	4,176	109	382,287	376,717	1.5%
B. Assets									
1. Market Value (MV)	\$ 24,470	\$ 13,670	\$ 1,189	\$ 362	\$ 656	\$ 17	\$ 40,363	\$ 37,179	8.6%
2. Rate of Return on MV ³							10.44 %	0.28 %	
3. Funding Value (FV)	\$ 23,846	\$ 13,327	\$ 1,164	\$ 355	\$ 643	\$ 17	\$ 39,351	\$ 37,248	5.6%
4. Rate of Return on FV							7.49 %	4.42 %	
5. Ratio of FV to MV							97.5%	100.2%	
C. Actuarial Results									
1. Normal Cost as a % of Payroll	12.62%	11.12%	33.28%	36.18%	21.89%	14.60%	12.42%	12.58%	
2. Actuarial Accrued Liability (AAL)									
a. Active	\$ 14,626	\$ 8,539	\$ 339	\$ 152	\$ 393	\$ 9	\$ 24,058	\$ 23,661	1.7%
b. Retired	20,216	11,728	1,532	284	728	9	34,498	32,779	5.2%
c. Deferred/Inactive	688	780	11	2	22	0	1,504	1,429	5.2%
d. Total	\$ 35,530	\$ 21,047	\$ 1,883	\$ 439	\$ 1,143	\$ 18	\$ 60,060	\$ 57,869	3.8%
3. Unfunded AAL (UAAL)	\$ 11,685	\$ 7,720	\$ 718	\$ 84	\$ 500	\$ 1	\$ 20,709	\$ 20,621	0.4%
4. Funded Ratio	67.11 %	63.32 %	61.84 %	80.87 %	56.22 %	92.10 %	65.52 %	64.37 %	
D. Contribution Rates⁴									
	STATE PORTION ONLY								
	FY 2015						FY 2014		
1. Pension Contributions									
a. Employer Normal Cost	5.64%	4.77%	25.28%	29.93%	15.25%		5.72%	5.89%	
b. Member Contribution Rate	6.98%	6.72%	8.00%	6.25%	7.00%		6.70%	6.69%	
c. UAAL Contribution Rate	<u>11.78%</u>	<u>14.55%</u>	<u>57.78%</u>	<u>12.81%</u>	<u>26.12%</u>		<u>13.19%</u>	<u>15.53%</u>	
d. Total	24.40%	26.04%	91.06%	48.99%	48.37%		25.61%	28.11%	
2. Total Actuarial Employer Rate (1.a + 1.c)	17.42%	19.32%	83.06%	42.74%	41.37%		18.91%	21.42%	
3. Total Employer Budgeted Rate									
a. Prior Year Budgeted Rate	14.71%	14.05%							
b. 28% * (2 - 3a.)	<u>0.76%</u>	<u>1.48%</u>							
c. Employer Budgeted Rate	15.47%	15.53%	83.06%	42.74%	41.37%		16.41%	15.43%	
d. Reinvested Savings Rate	<u>3.17%</u>	<u>2.77%</u>	<u>5.00%</u>	<u>0.00%</u>	<u>5.19%</u>		<u>3.07%</u>	<u>3.11%</u>	
e. Total Employer Budgeted Rate	18.64%	18.30%	88.06%	42.74%	46.56%		19.48%	18.54%	

¹Includes CORS Municipal only. State CORS included in ECS.

²Retiree benefit amounts include the cost-of-living-adjustment granted July 1, 2013 and July 1, 2012, respectively.

³Actuarial calculations may differ from figures reported by State Street.

⁴Contribution rates shown in the "Total" column are for informational purposes only and are not used for funding purposes. Totals may not add due to rounding.

ACTUARY’S COMMENTS

The System’s assets earned **10.44%**¹ for the year ended June 30, 2013, which is more than the 7.75% assumed rate of investment return. Recognized asset losses from fiscal years 2009 and 2012 offset recognized asset gains from fiscal years 2010, 2011, and 2013 in the actuarial value of assets as of June 30, 2013. This resulted in a loss under the asset smoothing method.

**UAAL and Actuarial Gain/(Loss)
State and Municipal (\$ in Millions)**

Unfunded Actuarial Accrued Liability (UAAL) as of June 30, 2012	\$20,621
Expected UAAL as of June 30, 2013 before changes	21,144
Changes in benefit provisions:	-
Changes in methods and assumptions:	57
Expected UAAL as of June 30, 2013 after changes	21,201
Actual UAAL as of June 30, 2013	20,709
Net actuarial gain (loss)	492
Actuarial gain (loss) by source:	
Actuarial investment experience	(98)
Actuarial accrued liability experience	590

In relative terms, the overall System funding ratio of actuarial value of assets to liabilities increased from 64.37% in 2012, to **65.52%** this year. If market value of assets were the basis for the measurements, the plan would have increased from 64.25% to 67.20% funded. The market value of assets exceeds the retiree liabilities by about 17% in total, an increase from 13% last year. This is referred to as a short condition test and is demonstrated in the chart at the bottom of the page. It is looking at the current retiree liabilities as the benefits that will be paid the soonest since these benefits are already in pay status. Active liabilities and deferred vested liabilities do not have associated immediate cash flow requirements. Although the market value of assets exceeds the current retiree liabilities in total, this is not true for two of the smaller systems. For State Police and LEOPS, the market value of assets is less than the retiree liabilities.

Summary of Contribution Rates by State System (\$ in Millions)							
	TCS	ECS	State Police	Judges	LEOPS	CORS	Total
Market Value of Assets (MVA)	\$22,502	\$24,470	\$ 13,670	\$ 362	\$ 656	\$ 17	\$40,363
Retiree Liability	19,248	20,216	11,728	284	728	9	34,498
MVA as % of Retiree Liability	117%	121%	117%	128%	90%	191%	117%

¹ Actuarial calculations may differ from figures reported by State Street.

In the 2013 legislative session, the Legislature changed the method used to fund the State Systems of the MSRPS. The unfunded liability for each System is being amortized over a single closed 25-year period beginning July 1, 2014 and ending June 30, 2039. In addition, the corridor method used by the Teachers’ Combined System and the State portion of the Employees’ Combined System, which was established in 2001, is being phased-out over a ten-year period beginning in fiscal year 2015. Under the corridor funding method, the State appropriation is fixed at the prior fiscal year’s rate, but adjusted to reflect the cost of any legislative benefit changes, as long as the actuarial funded status of these Systems remains in a corridor of 90% funded to 110% funded. Once the ratio falls outside this corridor, the appropriated or budgeted rate will be adjusted 28% in fiscal year 2015 (36% in fiscal year 2016, etc.) of the way toward the underlying actuarially calculated rate, with the exception of the cost of/or the savings from legislative benefit changes, which

are fully recognized regardless of whether the Systems are within or outside of the corridor. The Teachers' Combined System (TCS) has remained out of the corridor since the June 30, 2005 valuation and the State portion of the Employees Combined System (ECS) remained out of the corridor since the June 30, 2004 valuation resulting in contribution rates for TCS and ECS that are less than actuarial rates.

In 2011, the General Assembly enacted pension reforms which were effective July 1, 2011, and affect both current actives and new hires. The member contribution rate was increased for members of the Teachers' Pension System and Employees' Pension System from 5% to 7%, and from 4% to 6% in fiscal year 2012 and 7% in fiscal year 2013 and beyond for LEOPS. In addition, the benefit attributable to service on or after July 1, 2011, is subject to different cost-of-living adjustments (COLA) that is based on the increase in the Consumer Price Index and capped at 2.5% or 1.0% based on whether the market value investment return from the preceding calendar year was higher or lower than the investment return assumption used in the valuation (currently 7.70%). There were also changes to the provisions for members hired on or after July 1, 2011. The valuation as of June 30, 2012, was the first valuation which included members covered under the Reformed Benefit Plans applicable to members hired on or after July 1, 2011.

In addition to the benefit provision changes, a portion of the savings from the pension reforms is to be reinvested in the State Systems. This amount is equal to \$300 million for fiscal years 2014 and after. The allocation of reinvested savings by System is in proportion to the savings from the pension reforms as measured in the actuarial valuation as of June 30, 2011.

On the following page is a summary by State System of the budgeted contribution rates, the actuarially determined contribution rates, and the GASB Annual Required Contribution (ARC) rates. The budgeted contribution rates use the corridor funding method for TCS and ECS.

The actuarially determined rates exclude the corridor funding method and are equal to the employer normal cost plus the unfunded actuarial accrued liability contribution rate. The unfunded actuarial contribution rate is equal to the payment resulting from amortizing the unfunded liability as a level percentage of pay over a single 25-year closed period as of June 30, 2013.

The GASB ARC rate is equal to the actuarially determined contribution rate plus the reinvested savings if the single equivalent amortization period for the unfunded liability is less than or equal to 30 years. If the single equivalent amortization period is more than 30 years, which is the maximum period under GASB 27, then the GASB ARC is equal to the employer normal cost plus 30-year open period amortization of the unfunded liability.

The budgeted rate for TCS is about 89% (91% with the addition of reinvested savings) of the actuarially determined rate and the GASB ARC rate, and the budgeted rate for ECS is about 80% (83% with the addition of reinvested savings) of the actuarially determined rate and the GASB ARC rate.

FY2014 Contribution Rates (State Portion Only)						
	TCS	ECS	State Police	Judges	LEOPS	Total
Budgeted Contribution Rate ¹	15.47%	15.53%	83.06%	42.74%	41.37%	16.41%
Actuarially Determined Rate ¹	17.42%	19.32%	83.06%	42.74%	41.37%	18.91%
Budgeted/Actuarially Determined Rate	88.81%	80.38%	100.00%	100.00%	100.00%	86.78%
Budgeted Contribution Rate with Reinvested Savings	18.64%	18.30%	88.06%	42.74%	46.56%	19.48%
GASB Annual Required Contribution Budgeted with Reinvested Savings/ GASB ARC Rate	20.59%	22.09%	88.06%	42.74%	46.56%	21.96%
	90.53%	82.84%	100.00%	100.00%	100.00%	88.72%

¹ Excludes reinvested savings.

The budgeted rates with reinvested savings are based on a projection of payroll. It is our understanding that the Retirement Agency will monitor contributions to ensure that the System receives the proper amount of reinvested savings during fiscal year 2015.

Beginning in fiscal year 2013, local employers contributed a portion of the statutory normal cost contribution for the Teachers Combined System. Normal cost contribution amounts for local employers for fiscal years 2013 through 2016 are defined by the statutes. Beginning in fiscal year 2017, local employers will contribute the full normal cost contribution on behalf of their employees.

Under the present circumstances, the corridor method results in contributions that are less than those determined actuarially and those needed to make sufficient progress toward funding the current unfunded liability. However, with the phasing out of the corridor method and the inclusion of reinvested savings, the return to actuarial funding is on the horizon.

The results of this valuation report disclose the actuarially determined rates which will be used for purposes of disclosing the Annual Required Contribution rate under Government Accounting Standards Board Statement (GASB) No. 25 unless the equivalent amortization period for amortizing unfunded actuarial liability is greater than 30 years. We recommend that the contribution rate be set at least equal to the GASB Annual Required Contribution. The analysis in this report will focus on the actuarially determined rate but will footnote the appropriated or budgeted rate where applicable.

PRIOR YEAR EXPERIENCE

Assets (State and Municipal)

Plan assets for this System are measured on both a market value and an actuarial or smoothed value basis. The actuarial smoothing method, described in detail in Appendix A, annually recognizes 20% of the difference between (a) the expected investment return if the market value of assets had earned the assumed rate of 7.75%, and (b) the actual investment return. In addition, there is a market value collar that constrains the actuarial value to be within 20% of the market value of assets. In periods of high returns, this method defers the amount of asset gains above the assumed return of 7.75%. Conversely, in periods of returns below the assumed rate, recognition of the losses is deferred. The primary advantage of this smoothing technique is contribution stability. The System does not immediately feel the full impact of lower (or higher) costs when asset values fluctuate dramatically. In the Teachers’ and Employees’ Systems, the impact is further reduced by the corridor method. In systems where both the corridor method and the asset collar are in effect, it can take 15 or more years to recognize a single year’s gain or loss.

For the plan year ending June 30, 2012, the System’s assets earned **0.28%¹** on a market value basis and **4.42%** on a smoothed or actuarial basis. The System experienced an investment loss of **\$2,790** million on a market value basis and a loss of **\$1,195** million on an actuarial basis. A reconciliation of market value and actuarial value of assets are presented below.

(STATE AND MUNICIPAL)

Item (In Millions)	Market Value	Actuarial Value
June 30, 2012 Value	\$ 37,179	\$ 37,248
June 30, 2012 Municipal Withdrawals /New Entrants	-	-
Employer Contributions	1,643	1,643
Member Contributions	711	711
Benefit Payments	(3,015)	(3,015)
Expected Investment Earnings (7.75%)	<u>2,856</u>	<u>2,862</u>
Expected Value June 30, 2013	\$ 39,374	\$ 39,449
INVESTMENT GAIN (LOSS)	(990)	(98)
June 30, 20123 Value	\$ 40,363	\$ 39,351
Figures may not add correctly due to rounding		

1 Actuarial calculation may differ from figures reported by State Street.

Trends (State and Municipal)

One of the best ways to measure or evaluate the financial condition of a pension plan is to examine the historical trends that are evolving. Below, we present three charts which present trend information from 1993 through the end of 2013, on the System's assets and liabilities, annual cash flows in and out of the fund, and the State contribution rate. Our comments on each follow.

Chart A:
Assets/Liabilities

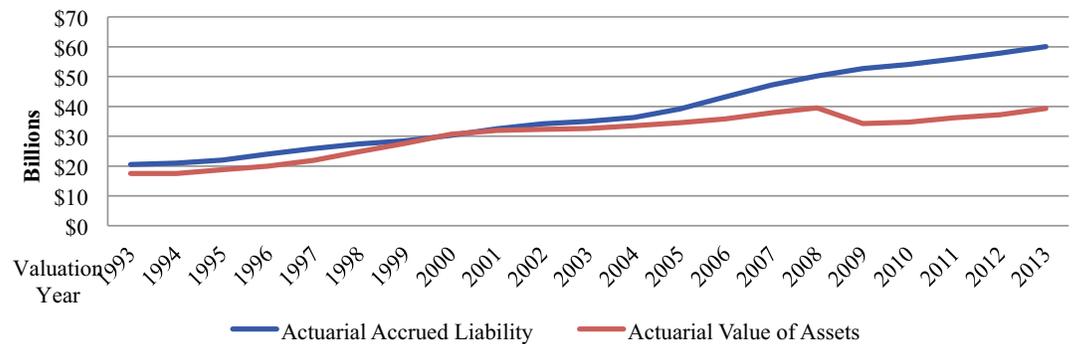


Chart B:
Benefits vs Contributions

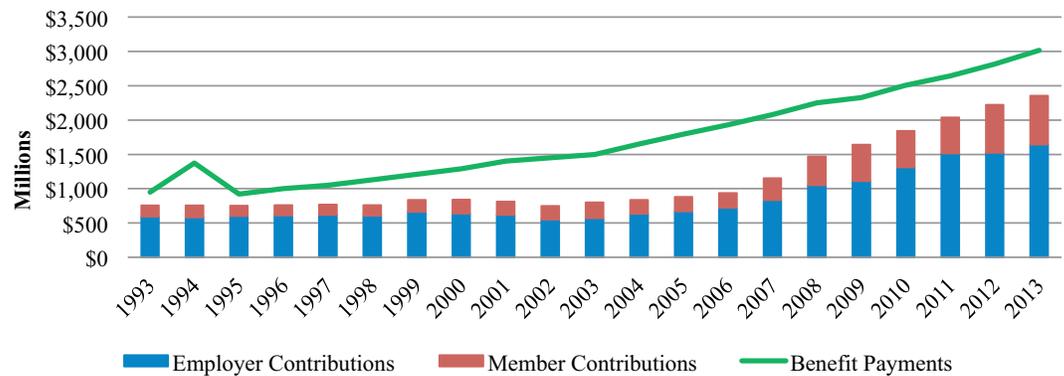
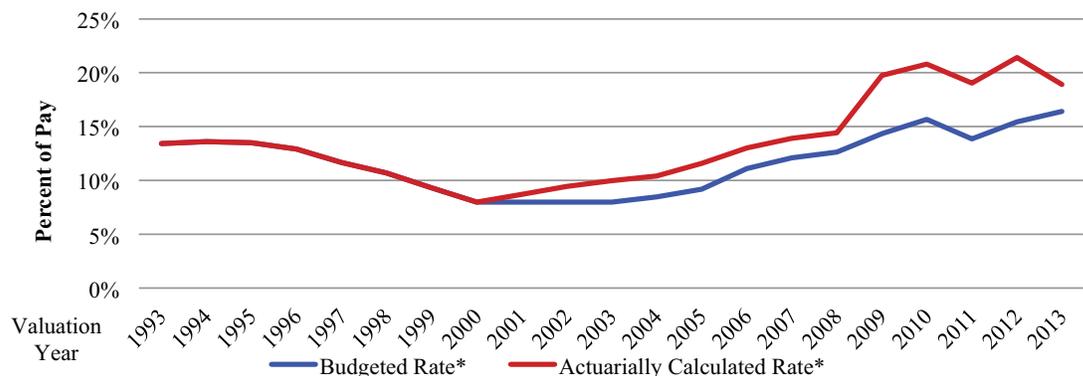


Chart C:
State Contribution Rate



Comments

Chart A displays a comparison of the actuarial value of assets and the actuarial accrued liability. As of June 30, 2013, the actuarial value of assets under the 5-year asset smoothing method are 97% of the market value of assets, compared with 100% as of June 30, 2012.

Chart B presents non-investment cash flow trend information that can have investment implications. Many statewide retirement systems, with the aging and retirements of the baby boom generation, are seeing payments to retirees on the increase. This is expected for mature retirement systems. Benefit payments, which is the total amount below the red line exceeds the total contributions, which is the total amount below the dark blue line. The amount needed to pay excess benefit payments over total contributions comes from investment return or current assets. If the difference between the total benefit payments and total contributions increases, a larger portion of investment return will be needed to pay benefits and may require a change in asset allocation. As long as cash into the fund, from employer and employee contributions, is increasing in a similar manner to benefit payments, the financial objectives of the System will continue to be met. The budgeted rates under the corridor funding method first became less than the actuarial rates in FY 2006 for ECS and in FY 2007 for TCS. The corridor method increased the extent of negative cash flows, which could affect the manner in which the assets are invested.

Finally, **Chart C**, looks at the composite actuarially determined and budgeted State contribution rates. The budgeted contribution rates by System determine the fiscal year State appropriation. It shows the impact of the 1990's decade's sustained investment gains, a continuous lowering of the rate until 2000. Effective with the 2001 valuation, the State appropriations were performed under a corridor funding method for the two largest plans. The appropriation remained essentially level for a few years before increasing with the 2004 valuation. In the absence of significant favorable investment and/or demographic experience, the contribution rates can be expected to increase to the level indicated if the corridor method had not been adopted. Without the corridor method, the State contribution in FY 2015 would be 2.50% of payroll higher than the amount to be budgeted under the corridor method. The actual contribution rate for FY 2015 is therefore 13% less than the actuarially determined rate.

Legislation enacted in 2013 is phasing out the corridor funding method for TCS and ECS over a 10-year period beginning with the valuation as of June 30, 2013. The budgeted rate is expected to increase and will converge with the actuarial rate for TCS and ECS at the end of the 10-year period.

Chart C further indicates that since inception, the corridor method had consistently acted to reduce the State's contribution. The new amortization method and the phasing out of the corridor with result in budgeted contribution rates that are equal to the actuarially determined ones within the next 10 years.

SUMMARY OF UNFUNDED ACTUARIAL
(STATE AND

Valuation Date June 30,	Actuarial Liabilities For			Total Liabilities	Actuarial Value of Assets
	Active Member Contributions	Retirees, Term Vested and Inactives	Active Members Employer Fin. Portion		
2004	\$ 2,064,065,193	\$ 19,041,901,524	\$ 15,219,737,348	\$ 36,325,704,065	\$ 33,484,656,570
2005	2,148,065,879	20,975,329,441	16,010,054,447	39,133,449,767	34,519,500,395
2006	2,217,897,868	22,086,452,920	18,939,141,669	43,243,492,457	35,795,025,134
2007	2,489,643,667	25,790,846,645	18,863,863,688	47,144,354,000	37,886,935,596
2008	2,787,163,875	27,224,603,428	20,232,279,697	50,244,047,000	39,504,284,202
2009	2,959,415,829	28,914,824,184	20,854,931,317	52,729,171,330	34,284,568,617
2010	3,389,265,622	29,900,015,751	20,795,799,745	54,085,081,118	34,688,345,696
2011	3,732,934,034	31,901,090,890	20,283,517,888	55,917,542,812	36,177,655,993
2012	4,274,269,025	34,208,190,190	19,386,686,257	57,869,145,472	37,248,400,780
2013	4,818,674,217	36,001,888,558	19,239,528,603	60,060,091,378	39,350,969,353

SUMMARY OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS
(STATE AND MUNICIPAL)

Fiscal Year Ended	Added to Rols		Removed from Rols		Rols-End of Year		% Increase in Annual Allowances	Average Annual Allowance
	Number	Annual Allowance	Number	Annual Allowances	Number	Annual Allowances		
2004	6,822	\$ 152,664,871	2,745	\$ 38,223,588	94,880	\$ 1,592,533,229	7.74%	\$ 16,785
2005	8,179	179,497,068	2,863	41,696,122	100,196	1,730,334,175	8.65%	17,269
2006	6,822	164,369,688	3,247	34,799,179	103,831	1,859,904,684	7.49%	17,913
2007	5,967	177,884,598	1,443	17,852,392	108,355	2,019,936,890	8.60%	18,642
2008	7,310	205,072,079	3,243	48,851,264	112,422	2,176,157,700	7.73%	19,357
2009	6,700	218,347,411	3,115	56,523,577	116,007	2,337,981,534	7.44%	20,154
2010	6,908	147,419,991	2,668	50,510,952	120,247	2,434,890,574	4.14%	20,249
2011	8,639	226,843,465	1,715	55,062,716	127,171	2,606,671,323	7.05%	20,497
2012	7,936	264,562,994	2,614	58,769,603	132,493	2,812,464,714	7.89%	21,227
2013	7,874	238,239,133	2,442	62,081,371	137,925	2,988,622,476	6.26%	21,668

Notes: Members added to rolls were estimated based on a retirement date/change date after June 30, 2011.

Annual allowances added to rolls include COLA increases for continuing members.

COLA increases were estimated based on the benefits for the continuing members.

LIABILITIES / SOLVENCY TEST
MUNICIPAL)

Ratio of Assets to Actuarial Liabilities			Funded Ratio (Assets/Liab. Coverage)	Unfunded Actuarial Accrued Liability (UAAL)	Covered Payroll	UAAL as % of Covered Payroll
Active Member Contributions	Retirees Term Vested and Inactives	Active Members Employer Fin. Portion				
100.00%	100.00%	81.33%	92.18%	2,841,047,495	8,069,480,852	35%
100.00%	100.00%	71.18%	88.21%	4,613,949,372	8,603,760,761	54%
100.00%	100.00%	60.67%	82.78%	7,448,467,323	9,287,575,596	80%
100.00%	100.00%	50.93%	80.36%	9,257,418,404	9,971,012,066	93%
100.00%	100.00%	46.92%	78.62%	10,739,762,798	10,542,806,018	102%
100.00%	100.00%	11.56%	65.02%	18,444,602,713	10,714,167,517	172%
100.00%	100.00%	6.73%	64.14%	19,396,735,421	10,657,943,561	182%
100.00%	100.00%	2.68%	64.70%	19,739,886,819	10,478,799,565	188%
100.00%	96.39%	0.00%	64.37%	20,620,744,692	10,336,536,835	199%
100.00%	95.92%	0.00%	65.52%	20,709,122,025	10,477,544,241	198%

MARYLAND STATE RETIREMENT
ACCOUNTING STATEMENT
AS OF
(STATE AND

	Teacher's Combined System	Employee's Combined System
1. Actuarial Accrued Liability		
a. Employee Contributions	\$2,881,445,431	\$ 1,774,121,814
b. Retirees, Term Vesteds & Inactives	20,904,618,595	12,507,971,945
c. Active Members	11,744,376,750	6,764,638,874
2. Total Actuarial Accrued Liability (1(a)+1(b)+1(c))	35,530,440,776	21,046,732,633
3. Actuarial Value of Assets	<u>23,845,618,271</u>	<u>13,326,585,863</u>
4. Unfunded Actuarial Accrued Liability (2-3)	<u>\$ 11,684,822,505</u>	<u>\$ 7,720,146,770</u>
5. Funded Ratio	67.11%	63.32%
6. Annual Payroll	\$ 6,185,175,794	\$ 4,030,260,921
7. UAAL as % of Payroll	189%	192%
8. Annual Required Contributions (ARC) STATE ONLY	20.59%	22.09%
9. Illustrated ARC contribution Dollars STATE ONLY for FY 2014	\$ 1,317,464,402	\$ 703,347,958
10. Equivalent Single Amortization Period in Years - STATE ONLY for FY2014@	25.000	25.000

* Contribution rates shown in the "Total" column are for informational purposes only and are not used for funding purposes.

@ Reinvested savings are not reflected in the equivalent single amortization period.

AND PENSION SYSTEM
INFORMATION
JUNE 30, 2013
MUNICIPAL)

State Police	Judges	LEOPS	CORS	Total MSRPS*
\$ 73,770,082	\$ 27,212,316	\$ 60,690,190	\$ 1,434,384	\$ 4,818,674,217
1,543,397,648	286,476,497	750,070,600	9,353,273	36,001,888,558
265,333,621	125,147,564	332,393,208	7,638,587	19,239,528,603
1,882,501,351	438,836,377	1,143,153,997	18,426,244	60,060,091,378
<u>1,164,217,327</u>	<u>354,899,502</u>	<u>642,677,696</u>	<u>16,970,694</u>	<u>39,350,969,353</u>
<u>\$ 718,284,024</u>	<u>\$ 83,936,875</u>	<u>\$ 500,476,301</u>	<u>\$ 1,455,550</u>	<u>\$ 20,709,122,025</u>
61.84%	80.87%	56.22%	92.10%	65.52%
\$ 79,848,029	\$ 40,000,518	\$ 137,612,972	\$ 4,646,007	\$10,477,544,241
900%	210%	364%	31%	198%
88.06%	42.74%	46.56%		21.96%
\$73,984,139	\$ 17,988,538	\$ 41,511,458		\$2,154,296,495
25.000	25.000	25.000		25.000

REPORT OF THE ACTUARY ON THE VALUATION OF THE
TEACHERS' COMBINED SYSTEM OF THE STATE OF MARYLAND
Summary of Principal Plan Results

	Actuarial Valuation Performed		% Change
	June 30, 2013 (for FY2015)	June 30, 2012 (for FY2014)	
A. Demographic Information			
Active Number Count	104,028	103,694	0.3%
Retired Member and Beneficiary Count	66,390	63,699	4.2%
Vested Former Members Count	<u>23,555</u>	<u>23,033</u>	2.3%
Total Number Count	193,973	190,426	1.9%
Active Payroll	\$ 6,185,175,794	\$ 6,080,603,312	1.7%
Annual Benefits for Retired Members	\$ 1,758,581,907	\$ 1,657,508,543	6.1%
B. Actuarial Results			
Actuarial Accrued Liability	\$ 35,530,440,776	\$ 34,252,714,948	3.7%
Assets Value of Assets	<u>23,845,618,271</u>	<u>22,523,977,712</u>	5.9%
Unfunded Actuarial Accrued Liability (UAAL)	\$ 11,684,822,505	\$ 11,728,737,236	-0.4%
Funded Ratio	67.11%	65.76%	
C. Contribution Rates (State Portion Only)			
Employer Normal Cost Rate	5.64%	5.83%	
UAAL Amortization Rate	<u>11.78%</u>	<u>14.54%</u>	
Total Actuarial Employer Contribution Rate	17.42%	20.37%	
D. Corridor Contribution Rates (State Portion Only)			
Prior Year Corridor Rate	14.71%	13.29%	
28% for FY2015 (20% for FY2014) of Difference between Preliminary Funding Rate and Prior year Corridor Rate	<u>0.76%</u>	<u>1.42%</u>	
Employer Corridor Contribution Rate	15.47%	14.71%	
Estimated Employer Rate after Reinvestment of Savings	18.64%	17.94%	

REPORT OF THE ACTUARY ON THE VALUATION OF THE
EMPLOYEES' COMBINED SYSTEM OF THE STATE OF MARYLAND
(STATE AND MUNICIPAL)

Summary of Principal Plan Results

	Actuarial Valuation Performed		% Change
	June 30, 2013 (for FY2015)	June 30, 2012 (for FY2014)	
A. Demographic Information			
Active Number Count	84,677	85,174	-0.6%
Retired Members and Beneficiary Count	67,193	64,636	4.0%
Vested Former Member Count	<u>27,651</u>	<u>27,875</u>	-0.8%
Total Number Count	179,521	177,685	1.0%
Active Payroll	\$ 4,030,260,921	\$ 3,998,474,876	0.8%
Annual Benefits for Retired Members	\$ 1,043,095,661	\$ 978,515,407	6.6%
B. Actuarial Results			
Actuarial Accrued Liability	\$ 21,046,732,633	\$ 20,283,028,033	3.8%
Actuarial Value of Assets	<u>13,326,585,863</u>	<u>12,667,591,862</u>	5.2%
Unfunded Actuarial Accrued Liability (UAAL)	\$ 7,720,146,770	\$ 7,615,436,171	1.4%
Funding Ratio	63.32%	62.45%	
C. Contribution Rates (State Portion Only)			
Employer Normal Cost Rate	4.77%	4.90%	
UAAL Amortization Rate	<u>14.55%</u>	<u>16.20%</u>	
Total Actuarial Employer Contribution Rate	19.32%	21.10%	
D. Corridor Contribution Rates (State Portion Only)			
Prior Year Corridor Rate	14.05%	12.29%	
28% for FY2015 (20% for FY2014) of Difference between Preliminary Funding Rate and Prior year Corridor Rate	<u>1.48%</u>	<u>1.76%</u>	
Employer Corridor Contribution Rate	15.53%	14.05%	
Estimated Employer Rate after Reinvestment of Savings	18.30%	16.84%	

REPORT OF THE ACTUARY ON THE VALUATION OF THE
STATE POLICE RETIREMENT SYSTEM OF THE STATE OF MARYLAND

Summary of Principal Plan Results

	June 30, 2013 (for FY2015)	June 30, 2012 (for FY2014)	% Change
A. Demographic Information			
Active Member Count	1,320	1,332	-0.9%
Retired Member and Beneficiaries Count	2,428	2,387	1.7%
Vested Former Member Count	<u>84</u>	<u>85</u>	1.2%
Total Number Count	3,832	3,804	0.7%
Active Payroll	\$ 79,848,029	\$ 77,689,914	2.8%
Annual Benefits for Retired Members	\$ 109,850,900	\$ 105,974,605	3.7%
B. Actuarial Results			
Actuarial Accrued Liability	\$ 1,882,501,351	\$1,826,545,900	3.1%
Actuarial Value of Assets	<u>1,164,217,327</u>	<u>1,134,510,589</u>	2.6%
Unfunded Actuarial Accrued Liability (UAAL)	\$ 718,284,024	\$ 692,035,311	3.8%
Funding Ratio	61.84%	62.11%	
C. Contribution Rates (State Portion Only)			
Employer Normal Cost Rate	25.28%	25.40%	
UAAL Amortization Rate	<u>57.78%</u>	<u>41.31%</u>	
Total Actuarial Employer Contribution Rate	83.06%	66.71%	
Estimated Employer Rate after Reinvestment of Savings	88.06%	71.85%	

REPORT OF THE ACTUARY ON THE VALUATION OF THE
PENSION PLAN OF JUDGES AND THEIR SURVIVING SPOUSES

Summary of Principal Plan Results

	June 30, 2013 (for FY2015)	June 30, 2012 (for FY2014)	% Change
A. Demographic Information			
Active Number Count	288	294	-2.0%
Retired Members and Beneficiary Count	378	365	3.6%
Vested Former Members Count	<u>10</u>	<u>10</u>	0.0%
Total Number Count	676	669	1.0%
Active Payroll	\$ 40,000,518	\$ 39,955,368	0.1%
Annual Benefits for Retired Members	\$ 26,520,948	\$ 25,150,702	5.4%
B. Actuarial Results			
Actuarial Accrued Liability	\$ 438,836,377	\$ 421,286,047	4.2%
Actuarial Value of Assets	<u>354,899,502</u>	<u>330,153,704</u>	7.5%
Unfunded Actuarial Accrued Liability (UAAL)	\$ 83,936,875	\$ 91,132,343	-7.9%
Funding Ratio	80.87%	78.37%	
C. Contribution Rates (State Portion Only)			
Employer Normal Cost Rate	29.93%	29.91%	
UAAL Amortization Rate	<u>12.81%</u>	<u>21.01%</u>	
Total Actuarial Employer Contribution Rate	42.74%	50.92%	

REPORT OF THE ACTUARY ON THE VALUATION OF THE
LAW ENFORCEMENT OFFICERS' PENSION SYSTEM OF THE STATE OF MARYLAND
(STATE AND MUNICIPAL)

Summary of Principal Plan Results

	June 30, 2013	June 30, 2012	% Change
	(for FY2015)	(for FY2014)	
A. Demographic Information			
Active Number Count	2,407	2,410	-0.1%
Retired Members and Beneficiary Count	1,518	1,396	8.7%
Vested Former Member Count	<u>251</u>	<u>227</u>	10.6%
Total Number Count	4,176	4,033	3.5%
Active Payroll	\$ 137,612,972	\$ 135,185,336	1.8%
Annual Benefits for Retired Members	\$ 49,982,510	\$ 44,945,152	11.2%
B. Actuarial Results			
Actuarial Accrued Liability	\$ 1,143,1153,997	\$1,070,087,421	6.8%
Actuarial Value of Assets	<u>642,677,301</u>	<u>580,826,355</u>	10.6%
Unfunded Actuarial Accrued Liability (UAAL)	\$ 500,476,301	\$ 489,261,066	2.3%
Funding Ratio	56.22%	54.28%	
C. Contribution Rates (State Portion Only)			
Employer Normal Cost Rate	15.25%	15.39%	
UAAL Amortization Rate	26.12%	37.08%	
Total Actuarial Employer Contribution Rate	<u>41.37%</u>	<u>52.47%</u>	
Estimated Employer Rate after Reinvestment of Savings	46.56%	57.72%	

REPORT OF THE ACTUARY ON THE VALUATION OF THE
CORRECTIONAL OFFICERS' RETIREMENT SYSTEM OF THE STATE OF MARYLAND
(MUNICIPAL)

Summary of Principal Plan Results

	June 30, 2013 (for FY2015)	June 30, 2012 (for FY2014)	% Change
A. Demographic Information			
Active Member Count	90	90	0.0%
Retired Member and Beneficiary Count	18	10	80.0%
Vested Former Members Count	<u>1</u>	<u>0</u>	
Total Number Count	109	100	9.0%
Active Payroll	\$ 4,646,007	\$ 4,628,029	0.4%
Annual Benefits for Retired Members	\$ 590,551	\$ 370,305	59.5%
B. Actuarial Results			
Actuarial Accrued Liability	\$ 18,426,244	\$ 15,483,123	19.0%
Actuarial Value of Assets	<u>16,970,694</u>	<u>\$ 11,340,558</u>	49.6%
Unfunded Actuarial Accrued Liability (UAAL)	\$ 1,455,550	\$ 4,142,565	-64.9%
Funding Ratio	92.10%	73.24%	

SCHEDULE OF ACTIVE MEMBERSHIP VALUATION DATA BY PLAN

Teachers' Retirement

Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2004	7,197	\$ 502,487,678	\$ 69,819	3.05 %
2005	6,255	464,693,323	74,291	6.41
2006	5,449	413,849,937	75,950	2.23
2007	4,788	383,619,438	80,121	5.49
2008	4,125	352,954,397	85,565	6.79
2009	3,554	306,096,545	86,127	0.66
2010	3,111	269,775,400	86,717	0.68
2011	2,589	225,118,122	86,952	0.27
2012	2,040	178,541,246	87,520	-0.65
2013	1,630	145,207,003	89,084	1.79

Teachers' Pension

Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2004	88,765	\$ 4,113,119,415	\$ 46,337	4.08 %
2005	91,535	4,590,698,122	50,152	8.23
2006	94,869	4,855,335,579	51,179	2.04
2007	98,789	5,326,145,893	53,914	5.34
2008	101,836	5,764,636,027	56,607	4.99
2009	102,553	5,888,637,495	57,420	1.44
2010	103,162	5,984,872,410	58,014	1.03
2011	102,939	5,971,858,330	58,014	0.00
2012	101,654	5,902,062,066	58,060	0.08
2013	102,398	6,039,968,791	58,985	1.59

Employees' Retirement

(State and Municipal)

Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2004	10,489	\$ 438,455,277	\$ 41,801	2.65 %
2005	9,869	423,715,070	42,934	2.71
2006	10,121	467,808,791	46,222	7.66
2007	9,980	472,525,475	47,347	2.44
2008	9,740	472,800,066	48,542	2.52
2009	9,962	483,871,203	48,572	0.06
2010	9,665	463,375,639	47,944	-1.29
2011	9,189	432,469,190	47,064	-1.84
2012	9,113	421,320,077	46,233	-1.77
2013	8,976	417,020,134	46,459	0.49

SCHEDULE OF ACTIVE MEMBERSHIP VALUATION DATA BY PLAN
(continued)

Employees' Pension
(State and Municipal)

Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2004	75,955	\$ 2,964,093,317	\$ 39,024	2.68 %
2005	76,787	3,187,380,273	41,509	6.37
2006	76,979	3,325,316,541	43,198	4.07
2007	78,719	3,543,695,246	45,017	4.21
2008	79,462	3,692,212,569	46,465	3.22
2009	79,418	3,765,664,905	47,416	2.05
2010	77,660	3,674,098,155	47,310	-0.22
2011	76,264	3,595,340,448	47,143	-0.35
2012	76,061	3,577,154,799	47,030	-0.24
2013	75,701	3,613,240,787	47,730	1.49

Judges' Retirement

Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2004	283	\$ 33,149,832	\$ 117,137	1.36 %
2005	282	33,897,984	120,206	2.62
2006	296	35,939,104	121,416	1.01
2007	297	37,638,491	126,729	4.38
2008	286	37,943,327	132,669	4.69
2009	297	40,266,330	135,577	2.19
2010	294	39,960,883	135,921	0.25
2011	286	38,810,261	135,700	-0.16
2012	294	39,955,368	135,903	0.15
2013	288	40,000,518	138,891	2.20

State Police Retirement

Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2004	1,445	\$ 77,531,613	\$ 53,655	2.35 %
2005	1,439	77,610,367	53,934	0.52
2006	1,441	80,648,855	55,967	3.77
2007	1,416	83,190,937	58,751	4.97
2008	1,426	86,464,247	60,634	3.21
2009	1,408	85,585,708	60,785	0.25
2010	1,354	81,705,369	59,946	0.71
2011	1,295	75,551,283	58,341	-3.32
2012	1,332	77,689,914	58,326	-0.03
2013	1,320	79,848,029	60,491	3.71

SCHEDULE OF ACTIVE MEMBERSHIP VALUATION DATA BY PLAN
(continued)

Law Enforcement Officers' Pension

(STATE AND MUNICIPAL)

Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2004	1,675	\$ 78,628,672	\$ 46,942	0.07 %
2005	1,826	88,925,957	48,700	3.75
2006	2,063	106,668,684	51,706	6.17
2007	2,217	122,015,164	55,036	6.44
2008	2,327	133,445,391	57,347	4.20
2009	2,445	140,071,292	57,289	-0.10
2010	2,474	140,199,243	56,669	-1.08
2011	2,411	135,176,780	56,067	-1.06
2012	2,410	135,185,336	56,094	0.05
2013	2,407	137,612,972	57,172	1.92

Correctional Officers' Retirement System

(MUNICIPAL)

Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2009	68	\$ 4,047,633	\$ 59,524	NA
2010	66	3,956,462	59,946	0.71 %
2011	86	4,475,151	52,037	-13.19
2012	90	4,628,029	51,423	-1.18
2013	90	4,646,007	51,622	0.39