
State Retirement and Pension System Funding Study

**Presented to the
Joint Committee on Pensions**

**Department of Legislative Services
Office of Policy Analysis
Annapolis, Maryland**

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State Retirement and Pension System Funding Study

Background

During the 2011 interim, the Board of Trustees for the State Retirement and Pension System (SRPS) made a proposal to the Joint Committee on Pensions (JCP) to change the amortization of unfunded pension liabilities and to phase out the corridor funding method. The board indicated that the proposal would return the system to an actuarially sound funding methodology. In addition, the board also noted that other components of its proposal related specifically to changes to the amortization policy of the system would significantly reduce the size of employer contributions to the pension system going forward. JCP has been supportive of the board's desire to move away from the corridor funding system, but the high cost of doing so has previously made any transition prohibitive. However, the new liability outlook provided by the 2011 pension reforms provides an opportunity to rework the funding policy. The 2012 *Joint Chairmen's Report* requires that the Department of Legislative Services (DLS) and the State Retirement Agency (SRA) examine the funding method, amortization of unfunded liabilities, and the actuarial assumptions of the SRPS.

Current Funding Policy

Corridor Funding Method

Chapter 440 of 2002 enacted a change to the funding of the SRPS with respect to the Teachers' and Employees' systems. The funding method, referred to as "corridor," made changes to the way in which the State's contribution rates to the Teachers' and Employees' systems are determined. The three smaller plans, the State Police Retirement System, the Judges' Retirement System, and the Law Enforcement Officers' Pension System, and the "municipal pool" of participating local units in the Employees' System are not subject to the corridor method. Under the corridor method, the State contribution rate for those systems remains static as long as the system has a funded status between 90 and 110%; the contribution rate for a given fiscal year is the same rate as it was for the prior fiscal year. When the funded status falls outside this corridor, the contribution rate is not the actuarially determined rate for that fiscal year but rather the rate used in the prior fiscal year plus 20% of the difference between the actuarial rate and the prior year's rate. Mathematically, this is equivalent to using 80% of the prior year's rate and 20% of the actuarial rate.

The corridor method began by freezing the contribution rates for the State Employees' and Teachers' System at fiscal 2002 levels, as long as the systems posted funded ratios between 90 and 110%. The timing of the corridor's implementation in fiscal 2002 was somewhat advantageous to the State in terms of contribution requirements given the investment climate that

Amortization of Unfunded Liabilities

To offset the impact of the switch, the board's proposal alters the amortization policy employed by the SRPS for its liabilities. Currently, the SRPS has two bases that must be amortized: the unfunded liability base extant as of July 2000 and the amount that has emerged in subsequent years. The pre-July 2000 portion is being amortized over a 20-year closed period. The liabilities for all subsequent years are amortized on separate 25-year closed periods with each year creating a new base. A closed amortization period sums all outstanding liabilities and sets an end date when all the liabilities included in the base must be paid off, including new liabilities generated in each year. The proposal suggested a switch to a new, unified 25-year closed amortization base for all past liability sets, essentially beginning the financing of past obligations anew. The savings associated with a change in the amortization make it possible to phase-out the corridor method while also reducing the employer contribution to a more manageable amount.

The prime reason that the board proposal is able to move away from the corridor method is that it leverages changes to the amortization schedules, as described above. This reamortization offsets the increased cost of paying a greater share of the actuarially determined rate each year by spreading payments due in the near-term under the current amortization structure across a new 25-year unified base. This change is powerful enough to produce a net reduction in employer contribution requirements, even as additional funding to eliminate the corridor system is provided. It has the added advantage of resolving an impending problem set to occur in the State Police system. When the pre-2000 amortization base reaches the end of its closed period in 2020, the employer contribution rates, which are already over 60% of payroll, will double. Such an outcome would effectively make the State's annual pension contribution for each police officer greater than his or her actual salary. Rolling these liabilities into a new base allows a gradual resolution of this system's required payment schedule.

Actuarial Assumptions

Another component of system funding is the actuarial assumptions used in the valuation of the system and for determining employer contributions. The system's actuarial assumptions create the rule set for how the SRPS values its assets and liabilities. These assumptions help determine the amount that the State is required to contribute in each year to meet its obligations. While both the corridor methodology and the amortization policy are dictated by statute, the actuarial assumptions are, by statute, exclusively under the purview of the board, and JCP does not have an opportunity to opine on the merit of alternative assumption levels. As such, any legislative changes made to the system funding would be guided by projections based on the current set of actuarial assumptions. Those assumptions could change as the board performs its statutory duty to regularly assess the actuarial assumptions and adjust them if warranted by fiduciary responsibilities.

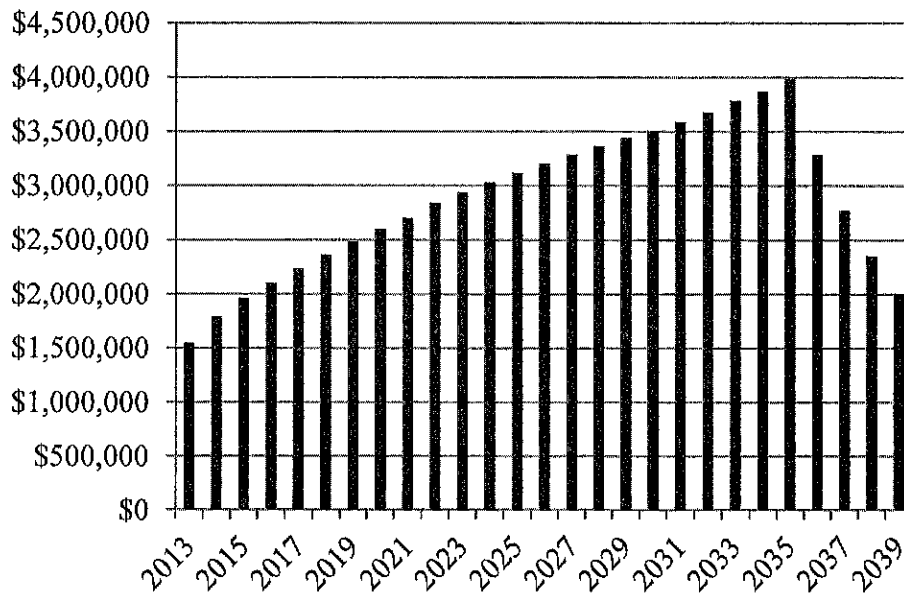
At least every five years, the board is required to conduct an actuarial study of the experience of the system, and if necessary, adopt appropriate changes to align the actuarial

current assumptions of 3.0% inflation and an investment return assumption of 7.75% but stated that it would revisit the discussion the following year for the 2013 system valuation.

Current System Projections

Exhibit 1 shows the projections for the current funding of the combined systems. The contribution rate for fiscal 2014 includes the reinvested savings overpayment of \$300 million for a total contribution of \$1.792 billion. The reinvestment overpayment for fiscal 2013 was \$190 million.

Exhibit 1
Current Funding
Fiscal 2013-2039
(\$ in Thousands)



Source: Gabriel Roeder Smith & Company, and State Retirement Agency

When compared to the contribution for fiscal 2014, employer contributions will have increased by 74.0% when the system reaches 80.0% funded status in fiscal 2025. Under the current system, the contribution rate as a percentage of payroll, peaks in fiscal 2022 at 22.75%. When the system reaches 100.0% funded status under the current funding policies and assumptions in fiscal 2033, the contribution is projected to be \$3.786 billion. The highest single year contribution amount is projected for fiscal 2035 at \$3.982 billion when the system is at 108.0% funding.

assumptions adopted by the board as well as potential economic assumption changes. Under the change to the amortization, all current unfunded liabilities would be amortized over a 25-year closed period. At the end of the 25-year period, all unfunded liabilities are expected to be paid off, with the system at 100% funded status.

The corridor method would be phased out over a 10-year period. The corridor currently requires the prior year's rate plus 20% of the difference between the prior year's rate and the actuarial rate. The first year of the 10-year phaseout would use the prior year's rate, plus 28% of the difference between the prior year's rate and the actuarial rate. After 10 years, the contribution rate would be the actuarially determined rate.

As previously discussed, the board updated the demographic assumptions over the interim, and these are incorporated into the projections run by the actuary. The board did not make any changes to the economic assumptions but did indicate that the matter would be taken up again for the 2013 valuation. In anticipation of any potential changes to the economic assumptions, the projections assumed that for the fiscal 2015 budget that the board would have lowered the inflation assumption to 2.80% to coincide with changes made by Social Security. Additionally, the projections assume that the board would lower the investment return assumption from 7.75 to 7.55% by five basis points over a four-year period. The projections also assume that any legislative changes to phase out the corridor methodology and the change the amortization would begin in fiscal 2015, to coincide with any changes to the economic assumptions.

Based on the actuary's projections, it is anticipated that a change to a 25-year amortization schedule, phasing out the corridor funding method over a 10-year period, and changes to the economic assumptions by lowering the assumed inflation rate and investment return assumption would yield significant reductions in employer contribution rates when compared to the current funding structure.

Reductions in single-year contribution amounts exceed \$1 billion in out-years when compared to the current funding structure. Additionally, such changes would not substantially affect the State's system funding status targets while preserving current benefit levels. While there would be a delay in reaching 80% funded status by 2 years, and 100% funded status by 6 years, there would also be substantial reductions in yearly employer contributions in reaching those targets. **Exhibit 2** illustrates the differences in contribution levels under the current funding policy and assumptions versus the contributions made under the new amortization, a 10-year phase out of corridor, and anticipated economic assumption changes.

that same 25-year period, under the DLS and SRA proposal, cumulative employer contributions total \$60.7 billion.

These calculations are based on the assumption that the Board of Trustees will make the assumed changes to the inflation rate and investment return assumption. In the event that those changes are not made by the board, a change to the amortization and a 10-year phase out of the corridor method still results in significant savings over the current system. The projections for the above proposal and the proposal without the board's economic assumption changes, are attached as **Appendices 2 and 3**, respectively. It is important to note that all projections are based upon all assumptions being realized exactly. Gains and losses to the system will affect out year projected numbers as they occur.

Findings

While the corridor method has previously resulted in reduced employer contributions, working the investment losses sustained since its inception through the corridor method will have significant impact on the employer contribution in out-years. A change to the amortization of unfunded liabilities along with a phasing out of the corridor will allow the corridor method to be ended and will reduce employer contributions. The expected changes that the Board of Trustees will make in the following year to the economic assumptions, would provide additional savings in the first few years while also adjusting the investment return assumption downward, consistent with actions taken by other plans across the country. The proposed changes result in substantial reductions to employer contributions, while preserving the goals of the 2011 pension reform.

**Projected Results Under Current Funding Policy
MSRPS – Combined State Systems**

Valuation Date	Interest Rate Assump.	Price Inflation Assump.*	Fiscal Year	Normal Cost	Contribution Rate ¹		Total	Total with Reinvested Savings	Illustrated Dollar Contribution Including Reinvestment (\$ in thousands) ¹	Projected Funded Ratios by Valuation Date	
					U.A.A.L	Total				Valuation Date	Funded Ratio
2010	7.75%	3.00%	2012	7.35%	13.47%	15.67%	14.47%	\$1,442,316	2010	63.4%	
2011	7.75%	3.00%	2013	4.79%	9.07%	13.86%	15.80%	1,548,983	2011	63.9%	
2012	7.75%	3.00%	2014	5.88%	9.59%	15.49%	18.54%	1,791,983	2012	63.5%	
2013	7.75%	3.00%	2015	5.71%	10.94%	16.65%	19.67%	1,958,258	2013	63.9%	
2014	7.75%	3.00%	2016	5.66%	11.99%	17.55%	20.47%	2,102,917	2014	65.9%	
2015	7.75%	3.00%	2017	5.41%	12.83%	18.24%	21.07%	2,234,865	2015	67.4%	
2016	7.75%	3.00%	2018	5.35%	13.60%	18.85%	21.59%	2,365,611	2016	68.0%	
2017	7.75%	3.00%	2019	5.12%	14.19%	19.31%	21.96%	2,485,682	2017	69.5%	
2018	7.75%	3.00%	2020	4.99%	14.65%	19.64%	22.21%	2,597,718	2018	71.1%	
2019	7.75%	3.00%	2021	4.86%	15.01%	19.87%	22.55%	2,703,411	2019	72.9%	
2020	7.75%	3.00%	2022	4.74%	15.61%	20.35%	22.75%	2,845,423	2020	74.7%	
2021	7.75%	3.00%	2023	4.62%	15.78%	20.40%	22.72%	2,940,712	2021	76.6%	
2022	7.75%	3.00%	2024	4.51%	15.88%	20.39%	22.63%	3,031,831	2022	78.6%	
2023	7.75%	3.00%	2025	4.41%	15.95%	20.33%	22.50%	3,119,442	2023	80.7%	
2024	7.75%	3.00%	2026	4.31%	15.93%	20.23%	22.32%	3,204,946	2024	83.0%	
2025	7.75%	3.00%	2027	4.21%	15.89%	20.10%	22.12%	3,288,296	2025	85.3%	
2026	7.75%	3.00%	2028	4.12%	15.80%	19.92%	21.87%	3,366,568	2026	87.7%	
2027	7.75%	3.00%	2029	4.04%	15.68%	19.71%	21.59%	3,442,311	2027	90.2%	
2028	7.75%	3.00%	2030	3.95%	15.45%	19.40%	21.22%	3,501,149	2028	92.8%	
2029	7.75%	3.00%	2031	3.88%	15.35%	19.23%	20.99%	3,584,807	2029	95.5%	
2030	7.75%	3.00%	2032	3.80%	15.30%	19.11%	20.80%	3,676,354	2030	98.4%	
2031	7.75%	3.00%	2033	3.75%	15.34%	19.07%	20.71%	3,786,363	2031	101.3%	
2032	7.75%	3.00%	2034	3.66%	15.22%	18.88%	20.47%	3,871,743	2032	104.5%	
2033	7.75%	3.00%	2035	3.60%	15.22%	18.82%	20.35%	3,981,978	2033	107.8%	
2034	7.75%	3.00%	2036	3.54%	11.24%	14.77%	16.25%	3,289,274	2034	111.2%	
2035	7.75%	3.00%	2037	3.48%	8.34%	11.82%	13.25%	2,773,923	2035	114.9%	
2036	7.75%	3.00%	2038	3.42%	6.06%	9.48%	10.87%	2,552,359	2036	118.0%	
2037	7.75%	3.00%	2039	3.37%	4.27%	7.63%	8.98%	2,007,693	2037	120.8%	

Projections are based on the valuation results as of June 30, 2012.
¹ Reinvested savings allocated among the State systems based on their proportionate share of the total savings measured as of June 30, 2011, as follows: TCS - 67.70%, ECS (State) - 29.36%, State Police - 1.49%, LEOPS (State) - 1.34%.
 * Wage inflation assumption is 50 basis points greater than price inflation assumption.

**Projected Results Under Current Funding Policy
MSRPS - Employees' Combined System (State)**

Valuation Date	Interest Rate Assump. ^a	Price Inflation Assump. ^a	Fiscal Year	Normal Cost	Contribution Rate ¹		Total with Reinvested Savings	Illustrated Dollar Contribution Including Reinvestment (\$ in thousands)	Projected Funded Ratios by Valuation Date	
					UAAL	Total			Valuation Date	Funded Ratio
2010	7.75%	3.00%	2012	6.47%	6.93%	13.40%	12.32%	\$403,540	2010	59.7%
2011	7.75%	3.00%	2013	4.17%	8.12%	12.29%	14.05%	446,711	2011	59.4%
2012	7.75%	3.00%	2014	4.90%	9.15%	14.05%	16.84%	532,078	2012	58.9%
2013	7.75%	3.00%	2015	4.74%	10.76%	15.50%	18.22%	589,633	2013	59.1%
2014	7.75%	3.00%	2016	4.58%	12.05%	16.65%	19.28%	639,956	2014	60.9%
2015	7.75%	3.00%	2017	4.43%	13.11%	17.54%	20.15%	685,616	2015	62.5%
2016	7.75%	3.00%	2018	4.29%	14.04%	18.33%	20.85%	729,648	2016	62.7%
2017	7.75%	3.00%	2019	4.15%	14.82%	18.97%	21.42%	770,561	2017	64.1%
2018	7.75%	3.00%	2020	4.02%	15.45%	19.47%	21.85%	808,457	2018	65.5%
2019	7.75%	3.00%	2021	3.90%	15.96%	19.86%	22.17%	844,326	2019	67.1%
2020	7.75%	3.00%	2022	3.79%	16.78%	20.57%	22.82%	894,744	2020	68.8%
2021	7.75%	3.00%	2023	3.68%	17.46%	21.14%	25.33%	942,458	2021	70.5%
2022	7.75%	3.00%	2024	3.58%	18.00%	21.58%	23.69%	987,391	2022	72.5%
2023	7.75%	3.00%	2025	3.48%	18.44%	21.92%	23.97%	1,030,575	2023	74.6%
2024	7.75%	3.00%	2026	3.39%	18.77%	22.16%	24.14%	1,071,732	2024	76.9%
2025	7.75%	3.00%	2027	3.31%	19.02%	22.55%	24.25%	1,111,843	2025	79.5%
2026	7.75%	3.00%	2028	3.24%	18.89%	22.13%	23.99%	1,156,281	2026	83.2%
2027	7.75%	3.00%	2029	3.17%	18.48%	21.65%	23.45%	1,147,877	2027	85.2%
2028	7.75%	3.00%	2030	3.10%	17.80%	20.90%	22.64%	1,145,578	2028	88.4%
2029	7.75%	3.00%	2031	3.04%	17.86%	20.90%	22.58%	1,181,270	2029	91.7%
2030	7.75%	3.00%	2032	2.99%	17.91%	20.90%	22.53%	1,218,429	2030	95.2%
2031	7.75%	3.00%	2033	2.94%	17.96%	20.90%	22.47%	1,257,062	2031	98.9%
2032	7.75%	3.00%	2034	2.89%	18.01%	20.90%	22.42%	1,297,265	2032	103.0%
2033	7.75%	3.00%	2035	2.85%	18.05%	20.90%	22.37%	1,339,045	2033	107.4%
2034	7.75%	3.00%	2036	2.81%	13.91%	16.72%	18.14%	1,123,628	2034	112.2%
2035	7.75%	3.00%	2037	2.78%	10.60%	13.35%	14.75%	945,617	2035	117.5%
2036	7.75%	3.00%	2038	2.75%	7.95%	10.70%	12.05%	797,742	2036	122.0%
2037	7.75%	3.00%	2039	2.72%	5.84%	8.56%	9.84%	675,597	2037	126.5%

Projections are based on the valuation results as of June 30, 2012.
¹ Reinvested savings allocated among the State systems based on their proportionate share of the total savings measured as of June 30, 2011, as follows: TCS - 67.70%, ECS (State) - 29.30%, State Police - 1.40%, LEOPIS (State) - 1.54%.
 * Wage inflation assumption is 50 basis points greater than price inflation assumption.

**Projected Results Under Current Funding Policy
MSRPS - Judges**

Valuation Date	Interest Rate Assump.	Price Inflation Assump.*	Fiscal Year	Normal Cost	Contribution Rate [†]		Total	Total with Reinvested Savings	Illustrated Dollar Contribution Including Reinvestment (\$ in thousands) [†]	Projected Funded Ratios by Valuation Date	
					U.A.A.L.	Total				Valuation Date	Funded Ratio
2010	7.75%	3.00%	2012	31.79%	28.58%	60.37%	60.37%	\$25,403	2010	64.9%	
2011	7.75%	3.00%	2013	33.31%	28.87%	61.18%	61.18%	25,002	2011	67.8%	
2012	7.75%	3.00%	2014	29.91%	21.01%	50.92%	50.92%	21,423	2012	78.4%	
2013	7.75%	3.00%	2015	29.79%	21.27%	51.06%	51.06%	22,219	2013	80.2%	
2014	7.75%	3.00%	2016	29.66%	20.52%	50.18%	50.18%	22,555	2014	82.6%	
2015	7.75%	3.00%	2017	29.70%	20.25%	49.95%	49.95%	23,189	2015	84.6%	
2016	7.75%	3.00%	2018	29.49%	20.78%	50.27%	50.27%	24,123	2016	85.2%	
2017	7.75%	3.00%	2019	29.41%	20.72%	50.13%	50.13%	24,864	2017	86.7%	
2018	7.75%	3.00%	2020	29.54%	20.65%	50.19%	50.19%	25,734	2018	88.3%	
2019	7.75%	3.00%	2021	29.47%	20.56%	50.03%	50.03%	26,555	2019	89.8%	
2020	7.75%	3.00%	2022	29.36%	14.34%	43.70%	43.70%	33,959	2020	91.5%	
2021	7.75%	3.00%	2023	29.22%	14.26%	43.48%	43.48%	24,648	2021	93.1%	
2022	7.75%	3.00%	2024	29.42%	14.19%	43.61%	43.61%	25,561	2022	94.2%	
2023	7.75%	3.00%	2025	29.32%	14.10%	43.42%	43.42%	26,320	2023	95.4%	
2024	7.75%	3.00%	2026	29.21%	14.01%	43.22%	43.22%	27,109	2024	96.6%	
2025	7.75%	3.00%	2027	29.25%	13.93%	43.18%	43.18%	28,011	2025	97.8%	
2026	7.75%	3.00%	2028	29.21%	12.48%	41.69%	41.69%	27,989	2026	99.1%	
2027	7.75%	3.00%	2029	29.12%	10.77%	39.89%	39.89%	27,702	2027	100.4%	
2028	7.75%	3.00%	2030	29.18%	9.43%	38.61%	38.61%	27,744	2028	101.7%	
2029	7.75%	3.00%	2031	29.19%	4.15%	35.32%	35.32%	24,767	2029	102.9%	
2030	7.75%	3.00%	2032	29.20%	2.71%	31.91%	31.91%	24,545	2030	104.0%	
2031	7.75%	3.00%	2033	29.18%	0.20%	29.38%	29.38%	23,388	2031	104.6%	
2032	7.75%	3.00%	2034	29.22%	0.12%	29.34%	29.34%	24,168	2032	105.2%	
2033	7.75%	3.00%	2035	29.22%	-4.18%	25.04%	25.04%	21,350	2033	105.6%	
2034	7.75%	3.00%	2036	29.23%	-12.85%	15.38%	15.38%	13,570	2034	105.9%	
2035	7.75%	3.00%	2037	29.25%	-15.84%	15.41%	15.41%	14,972	2035	105.9%	
2036	7.75%	3.00%	2038	29.28%	-12.21%	17.07%	17.07%	16,134	2036	105.0%	
2037	7.75%	3.00%	2039	29.27%	-4.17%	25.10%	25.10%	24,557	2037	104.1%	

Projections are based on the valuation results as of June 30, 2012.
[†] Reinvested savings calculated using the State systems based on their proportionate share of the total savings measured as of June 30, 2011, as follows: TCS - 67.70%, ECS (State) - 20.36%, State Police - 1.40%, LEOPD (State) - 1.54%.
 * Wage inflation assumption is 30 basis points greater than price inflation assumption.

MSRPS
 Exhibit 1 Summary
 Projected Results Under Current Funding Policy

	Sum of FY13-FY17 Contributions (\$000)	Sum of FY13-FY22 Contributions (\$000)	Year Funded Ratio Reaches 80%	Year Funded Ratio Reaches 100%
Combined State Systems	\$9,637,005	\$22,634,849	2023	2031
Teachers' Combined System	6,090,827	14,270,639	2022	2031
Employees' Combined System (State)	2,893,974	6,941,691	2026	2032
State Police	288,936	669,181	2027	2032
Judges	114,387	239,600	2013	2027
LEOPS (State)	248,880	513,738	2020	2029

Projected Results Under Alternate Economic Assumptions and Funding Policy: 25 Year Closed Amortization and 10 Year Corridor Phase Out Beginning June 30, 2013

MSRPS - Combined State Systems

Valuation Date	Interest Rate Assump.	Price Inflation Assump.*	Fiscal Year	Normal Cost	Contribution Rate ¹		Total	Total with Reinvested Savings	Illustrated Dollar Contribution Including Reinvestment (\$ in thousands) ¹	Projected Funded Ratios by Valuation Date	
					UAAL	Total				Valuation Date	Funded Ratio
2010	7.75%	3.00%	2012	7.53%	13.47%	15.67%	14.47%	\$1,442,316	2010	63.4%	
2011	7.75%	3.00%	2013	4.79%	9.07%	13.86%	15.80%	1,548,983	2011	63.9%	
2012	7.75%	3.00%	2014	5.88%	9.55%	15.44%	18.54%	1,791,983	2012	63.5%	
2013	7.70%	2.80%	2015	5.50%	10.67%	16.17%	19.19%	1,903,272	2013	65.2%	
2014	7.65%	2.80%	2016	5.48%	11.40%	16.88%	19.81%	2,023,424	2014	66.7%	
2015	7.60%	2.80%	2017	5.45%	12.04%	17.49%	20.34%	2,140,296	2015	67.7%	
2016	7.55%	2.80%	2018	5.41%	12.76%	18.17%	20.93%	2,270,722	2016	67.5%	
2017	7.55%	2.80%	2019	5.28%	13.12%	18.40%	21.08%	2,358,147	2017	68.9%	
2018	7.55%	2.80%	2020	5.15%	13.17%	18.32%	20.92%	2,413,406	2018	70.3%	
2019	7.55%	2.80%	2021	5.05%	13.03%	18.05%	20.57%	2,449,149	2019	71.8%	
2020	7.55%	2.80%	2022	4.91%	12.78%	17.69%	20.13%	2,473,847	2020	73.3%	
2021	7.55%	2.80%	2023	4.79%	12.51%	17.30%	19.66%	2,496,181	2021	74.8%	
2022	7.55%	2.80%	2024	4.68%	12.23%	16.91%	19.20%	2,517,599	2022	76.3%	
2023	7.55%	2.80%	2025	4.58%	11.97%	16.55%	18.77%	2,542,592	2023	77.8%	
2024	7.55%	2.80%	2026	4.48%	11.72%	16.19%	18.34%	2,567,241	2024	79.3%	
2025	7.55%	2.80%	2027	4.38%	11.46%	15.84%	17.91%	2,592,021	2025	80.8%	
2026	7.55%	2.80%	2028	4.30%	11.18%	15.48%	17.48%	2,614,733	2026	82.3%	
2027	7.55%	2.80%	2029	4.21%	10.89%	15.10%	17.04%	2,634,106	2027	83.8%	
2028	7.55%	2.80%	2030	4.13%	10.59%	14.72%	16.60%	2,649,794	2028	85.3%	
2029	7.55%	2.80%	2031	4.05%	10.27%	14.32%	16.14%	2,661,820	2029	86.9%	
2030	7.55%	2.80%	2032	3.98%	9.92%	13.90%	15.66%	2,667,181	2030	88.4%	
2031	7.55%	2.80%	2033	3.91%	9.53%	13.44%	15.15%	2,664,746	2031	90.0%	
2032	7.55%	2.80%	2034	3.84%	9.10%	12.94%	14.59%	2,650,082	2032	91.6%	
2033	7.55%	2.80%	2035	3.78%	8.58%	12.35%	13.95%	2,616,519	2033	93.2%	
2034	7.55%	2.80%	2036	3.71%	7.93%	11.65%	13.20%	2,554,120	2034	94.9%	
2035	7.55%	2.80%	2037	3.66%	7.05%	10.71%	12.21%	2,439,851	2035	96.5%	
2036	7.55%	2.80%	2038	3.60%	5.66%	9.26%	10.71%	2,208,867	2036	98.1%	
2037	7.55%	2.80%	2039	3.55%	2.40%	5.94%	7.35%	1,563,967	2037	99.6%	

Projections are based on the valuation results as of June 30, 2012.

¹ Reinvested savings allocated among the State systems based on their proportionate share of the total savings measured as of June 30, 2011, as follows: TCS - 67.70%, ECS (State) - 29.36%, State Police - 1.40%, LEOPS (State) - 1.54%

* Wage inflation assumption is 50 basis points greater than price inflation assumption.

Impact of change in funding policy methodology first reflected in the June 30, 2013 valuation which affects the FY 2015 contribution rate. 25-year closed period begins in the 2013 valuation and phase out of corridor first occurs in the 2013 valuation using 72% of the prior year budgeted rate and 28% of the current year actuarial rate. The four year phase-in of the 7.55% interest rate is first reflected in the June 30, 2013 valuation which affects the FY 2013 contribution rate. The wage and price inflation assumption changes are first reflected in the June 30, 2013 valuation. The assumed actual interest rate credited to the assets is 7.55% beginning in the June 30, 2013 valuation.

Projected Results Under Alternate Economic Assumptions and Funding Policy: 25 Year Closed Amortization and 10 Year Corridor Phase Out Beginning June 30, 2013

MSRPS - Employees' Combined System (State)

Valuation Date	Interest Rate Assump. ^a	Price Inflation Assump. ^a	Fiscal Year	Normal Cost	Contribution Rate ¹		Total	Total with Reinvested Savings	Illustrated Dollar Contribution Including Reinvestment (\$ in thousands) ¹	Projected Funded Ratios by Valuation Date	
					UAAL	Total				Valuation Date	Funded Ratio
2010	7.55%	3.00%	2012	6.47%	6.93%	13.40%	12.32%	\$403,540	2010	59.7%	
2011	7.55%	3.00%	2013	4.17%	8.12%	12.29%	14.05%	446,711	2011	59.4%	
2012	7.55%	3.00%	2014	4.90%	9.15%	14.05%	16.84%	532,078	2012	58.9%	
2013	7.00%	2.80%	2015	4.54%	10.72%	15.26%	18.00%	579,487	2013	60.4%	
2014	7.65%	2.80%	2016	4.51%	11.92%	16.43%	19.10%	629,625	2014	61.7%	
2015	7.60%	2.80%	2017	4.47%	12.99%	17.46%	20.07%	677,745	2015	62.5%	
2016	7.55%	2.80%	2018	4.43%	14.03%	18.46%	21.00%	727,376	2016	62.3%	
2017	7.55%	2.80%	2019	4.30%	14.66%	18.96%	21.44%	761,699	2017	63.6%	
2018	7.55%	2.80%	2020	4.17%	14.89%	19.06%	21.48%	783,136	2018	65.0%	
2019	7.55%	2.80%	2021	4.05%	14.87%	18.92%	21.27%	796,813	2019	66.5%	
2020	7.55%	2.80%	2022	3.94%	14.70%	18.64%	20.93%	805,783	2020	68.1%	
2021	7.55%	2.80%	2023	3.83%	14.48%	18.31%	20.53%	813,245	2021	69.6%	
2022	7.55%	2.80%	2024	3.73%	14.24%	17.97%	20.13%	820,521	2022	71.1%	
2023	7.55%	2.80%	2025	3.64%	14.00%	17.64%	19.74%	828,479	2023	72.7%	
2024	7.55%	2.80%	2026	3.55%	13.76%	17.31%	19.35%	836,699	2024	74.2%	
2025	7.55%	2.80%	2027	3.47%	13.50%	16.97%	18.95%	844,646	2025	75.8%	
2026	7.55%	2.80%	2028	3.39%	13.24%	16.63%	18.55%	852,571	2026	77.4%	
2027	7.55%	2.80%	2029	3.32%	12.95%	16.27%	18.13%	859,572	2027	79.0%	
2028	7.55%	2.80%	2030	3.26%	12.63%	15.89%	17.69%	865,397	2028	80.7%	
2029	7.55%	2.80%	2031	3.20%	12.30%	15.50%	17.25%	870,400	2029	82.5%	
2030	7.55%	2.80%	2032	3.15%	11.92%	15.07%	16.76%	873,034	2030	84.3%	
2031	7.55%	2.80%	2033	3.10%	11.51%	14.61%	16.25%	873,566	2031	86.2%	
2032	7.55%	2.80%	2034	3.05%	11.05%	14.10%	15.69%	870,705	2032	88.2%	
2033	7.55%	2.80%	2035	3.01%	10.50%	13.51%	15.05%	862,370	2033	90.3%	
2034	7.55%	2.80%	2036	2.97%	9.82%	12.79%	14.28%	845,114	2034	92.4%	
2035	7.55%	2.80%	2037	2.94%	8.90%	11.84%	13.28%	811,884	2035	94.6%	
2036	7.55%	2.80%	2038	2.91%	7.45%	10.36%	11.75%	742,206	2036	96.9%	
2037	7.55%	2.80%	2039	2.88%	4.11%	6.99%	8.34%	543,926	2037	99.1%	

Projections are based on the valuation results as of June 30, 2012.

¹ Reinvested savings allocated among the State systems based on their proportionate share of the total savings measured as of June 30, 2011, as follows: TCS - 67.70%, ECS (State) - 29.36%, State Police - 1.40%, LEOPS (State) - 1.54%.

* Wage inflation assumption is 50 basis points greater than price inflation assumption.

Impact of change in funding policy methodology first reflected in the June 30, 2013 valuation which affects the FY 2015 contribution rate. 25-year closed period begins in the 2013 valuation and phase out of corridor first occurs in the 2013 valuation using 7.2% of the prior year budgeted rate and 28% of the current year actuarial rate. The four year phase-in of the 7.55% interest rate is first reflected in the June 30, 2013 valuation which affects the FY 2013 contribution rate. The wage and price inflation assumption changes are first reflected in the June 30, 2013 valuation. The assumed actual interest rate credited to the assets is 7.55% beginning in the June 30, 2013 valuation.

Projected Results Under Alternate Economic Assumptions and Funding Policy: 25 Year Closed Amortization and 10 Year Corridor Phase Out Beginning June 30, 2013
MSRPS - Judges

Valuation Date	Interest Rate Assump.	Price Inflation Assump.*	Contribution Rate ¹			Total	Total with Reinvested Savings	Illustrated Dollar Contribution Including Reinvestment (\$ in thousands) ¹	Projected Funded Ratios by Valuation Date	
			Fiscal Year	Normal Cost	UAAL				Valuation Date	Funded Ratio
2010	7.75%	3.00%	2012	31.79%	28.58%	60.37%	60.37%	\$25,403	2010	64.9%
2011	7.75%	3.00%	2013	32.31%	28.87%	61.18%	61.18%	25,002	2011	67.8%
2012	7.75%	3.00%	2014	29.91%	21.01%	50.92%	50.92%	21,423	2012	78.4%
2013	7.70%	2.80%	2015	29.06%	12.16%	41.22%	41.22%	17,851	2013	82.0%
2014	7.65%	2.80%	2016	29.21%	11.33%	40.54%	40.54%	18,099	2014	83.9%
2015	7.60%	2.80%	2017	29.50%	11.51%	41.01%	41.01%	18,881	2015	84.3%
2016	7.55%	2.80%	2018	29.51%	12.60%	42.11%	42.11%	19,993	2016	83.4%
2017	7.55%	2.80%	2019	29.43%	12.63%	42.06%	42.06%	20,601	2017	84.0%
2018	7.55%	2.80%	2020	29.55%	12.55%	42.10%	42.10%	21,275	2018	84.7%
2019	7.55%	2.80%	2021	29.48%	12.46%	41.94%	41.94%	21,880	2019	85.4%
2020	7.55%	2.80%	2022	29.37%	12.34%	41.71%	41.71%	22,452	2020	86.1%
2021	7.55%	2.80%	2023	29.24%	12.21%	41.45%	41.45%	23,024	2021	86.8%
2022	7.55%	2.80%	2024	29.43%	12.09%	41.52%	41.52%	23,792	2022	87.5%
2023	7.55%	2.80%	2025	29.34%	11.98%	41.32%	41.32%	24,448	2023	88.2%
2024	7.55%	2.80%	2026	29.22%	11.85%	41.07%	41.07%	25,088	2024	88.9%
2025	7.55%	2.80%	2027	29.36%	11.71%	40.97%	40.97%	25,843	2025	89.6%
2026	7.55%	2.80%	2028	29.23%	11.55%	40.78%	40.78%	26,570	2026	90.3%
2027	7.55%	2.80%	2029	29.14%	11.39%	40.53%	40.53%	27,262	2027	91.1%
2028	7.55%	2.80%	2030	29.19%	11.20%	40.39%	40.39%	28,057	2028	91.9%
2029	7.55%	2.80%	2031	29.21%	11.01%	40.22%	40.22%	28,845	2029	92.7%
2030	7.55%	2.80%	2032	29.21%	10.80%	40.01%	40.01%	29,636	2030	93.5%
2031	7.55%	2.80%	2033	29.20%	10.54%	39.74%	39.74%	30,405	2031	94.3%
2032	7.55%	2.80%	2034	29.23%	10.25%	39.48%	39.48%	31,196	2032	95.1%
2033	7.55%	2.80%	2035	29.24%	9.90%	39.14%	39.14%	31,951	2033	96.0%
2034	7.55%	2.80%	2036	29.25%	9.47%	38.72%	38.72%	32,646	2034	96.9%
2035	7.55%	2.80%	2037	29.26%	8.87%	38.13%	38.13%	33,207	2035	97.7%
2036	7.55%	2.80%	2038	29.29%	7.86%	37.15%	37.15%	33,422	2036	98.6%
2037	7.55%	2.80%	2039	29.28%	5.48%	34.76%	34.76%	32,309	2037	99.5%

¹ Projections are based on the valuation results as of June 30, 2012.

² Reinvested savings allocated among the State systems based on their proportionate share of the total savings measured as of June 30, 2011, as follows: TCS - 67.70%, ECS (State) - 29.36%, State Police - 1.40%, LEOPIS (State) - 1.54%.

* Wage inflation assumption is 50 basis points greater than price inflation assumption.

Impact of change in funding policy methodology first reflected in the June 30, 2013 valuation which affects the FY 2015 contribution rate. 25-year closed period begins in the 2013 valuation and phase out of corridor first occurs in the 2013 valuation using 7.2% of the prior year budgeted rate and 28% of the current year actuarial rate. The four year phase-in of the 7.55% interest rate is first reflected in the June 30, 2013 valuation which affects the FY 2015 contribution rate. The wage and price inflation assumption changes are first reflected in the June 30, 2013 valuation. The assumed actual interest rate credited to the assets is 7.55% beginning in the June 30, 2013 valuation.

MSRPS
 Exhibit 5B Summary
 Projected Results Under Alternate Economic Assumptions and Funding Policy: 25 Year Closed Amortization and 10 Year Corridor Phase Out Beginning June 30, 2013

	Sum of FY13-FY17 Contributions (\$000)	Sum of FY13-FY22 Contributions (\$000)	Year Funded Ratio Reaches 80%	Year Funded Ratio Reaches 100%
Combined State Systems	\$9,407,958	\$21,373,229	2025	2038
Teachers' Combined System	5,901,123	13,268,876	2023	2038
Employees' Combined System (State)	2,865,647	6,740,453	2028	2038
State Police	325,643	727,983	2029	2038
Judges	101,255	207,456	2013	2038
LEOPS (State)	214,290	428,461	2025	2038

Projected Results Under Alternate Funding Policy: 25 Year Closed Amortization and 10 Year Corridor Phase Out Beginning June 30, 2013

MSRPS - Combined State Systems

Valuation Date	Interest Rate Assump. ^a	Price Inflation Assump. ^a	Contribution Rate ¹			Total	Total with Reinvested Savings	Illustrated Dollar Contribution Including Reinvestment (\$ in thousands) ¹	Projected Funded Ratios by Valuation Date	
			Fiscal Year	Normal Cost	UAAL				Valuation Date	Funded Ratio
2010	7.75%	3.00%	2012	7.33%	13.47%	15.67%	14.47%	\$1,442,316	2010	65.4%
2011	7.75%	3.00%	2013	4.79%	9.07%	13.86%	15.80%	1,548,983	2011	63.9%
2012	7.75%	3.00%	2014	5.88%	9.55%	15.44%	18.54%	1,791,983	2012	63.5%
2013	7.75%	3.00%	2015	5.71%	10.71%	16.42%	19.44%	1,935,328	2013	63.9%
2014	7.75%	3.00%	2016	5.56%	11.62%	17.18%	20.10%	2,064,858	2014	65.9%
2015	7.75%	3.00%	2017	5.41%	12.25%	17.65%	20.48%	2,172,524	2015	67.4%
2016	7.75%	3.00%	2018	5.25%	12.78%	18.03%	20.77%	2,276,076	2016	67.9%
2017	7.75%	3.00%	2019	5.12%	12.97%	18.09%	20.74%	2,347,291	2017	69.3%
2018	7.75%	3.00%	2020	4.99%	12.92%	17.91%	20.47%	2,394,586	2018	70.8%
2019	7.75%	3.00%	2021	4.86%	12.73%	17.58%	20.06%	2,426,607	2019	72.3%
2020	7.75%	3.00%	2022	4.74%	12.47%	17.21%	19.61%	2,452,747	2020	73.8%
2021	7.75%	3.00%	2023	4.62%	12.20%	16.82%	19.14%	2,477,277	2021	75.3%
2022	7.75%	3.00%	2024	4.51%	11.93%	16.44%	18.68%	2,502,179	2022	76.7%
2023	7.75%	3.00%	2025	4.41%	11.68%	16.08%	18.25%	2,530,312	2023	78.2%
2024	7.75%	3.00%	2026	4.31%	11.42%	15.73%	17.82%	2,558,656	2024	79.6%
2025	7.75%	3.00%	2027	4.21%	11.17%	15.38%	17.40%	2,586,692	2025	81.1%
2026	7.75%	3.00%	2028	4.12%	10.90%	15.02%	16.97%	2,612,747	2026	82.6%
2027	7.75%	3.00%	2029	4.04%	10.62%	14.66%	16.54%	2,636,414	2027	84.0%
2028	7.75%	3.00%	2030	3.95%	10.33%	14.29%	16.10%	2,657,518	2028	85.5%
2029	7.75%	3.00%	2031	3.88%	10.02%	13.90%	15.66%	2,673,869	2029	87.0%
2030	7.75%	3.00%	2032	3.80%	9.69%	13.49%	15.19%	2,683,970	2030	88.6%
2031	7.75%	3.00%	2033	3.75%	9.31%	13.05%	14.69%	2,685,527	2031	90.1%
2032	7.75%	3.00%	2034	3.66%	8.89%	12.55%	14.14%	2,674,421	2032	91.7%
2033	7.75%	3.00%	2035	3.60%	8.39%	11.99%	13.53%	2,646,269	2033	93.3%
2034	7.75%	3.00%	2036	3.54%	7.78%	11.31%	12.80%	2,589,335	2034	94.9%
2035	7.75%	3.00%	2037	3.48%	6.94%	10.42%	11.85%	2,479,645	2035	96.5%
2036	7.75%	3.00%	2038	3.42%	5.60%	9.02%	10.41%	2,251,832	2036	98.0%
2037	7.75%	3.00%	2039	3.37%	2.48%	5.84%	7.19%	1,607,461	2037	99.6%

Projections are based on the valuation results as of June 30, 2012.

¹ Reinvested savings allocated among the State systems based on their proportionate share of the total savings measured as of June 30, 2011, as follows: TCS - 67.70%, ECS (State) - 29.36%, State Police - 1.40%, LEOPS (State) - 1.54%.

* Wage inflation assumption is 50 basis points greater than price inflation assumption.

Impact of change in funding policy methodology first reflected in the June 30, 2013 valuation which affects the FY 2015 contribution rate. 25-year closed period begins in the 2013 valuation and phase out of corridor first occurs in the 2013 valuation using 70% of the prior year budgeted rate and 30% of the current year actuarial rate.

Projected Results Under Alternate Funding Policy: 25 Year Closed Amortization and 10 Year Corridor Phase Out Beginning June 30, 2013
MSRPS - Employees' Combined System (State)

Valuation Date	Interest Rate Assump.	Price Inflation Assump.*	Fiscal Year	Normal Cost	Contribution Rate ¹		Total	Total with Reinvested Savings	Illustrated Dollar Contribution Including Reinvestment (\$ in thousands) ¹	Projected Funded Ratios by Valuation Date	
					UAAL	Total				Valuation Date	Funded Ratio
2010	7.75%	3.00%	2012	6.47%	6.93%	13.40%	12.32%	\$403,540	2010	59.7%	
2011	7.75%	3.00%	2013	4.17%	8.12%	12.29%	14.05%	446,711	2011	59.4%	
2012	7.75%	3.00%	2014	4.90%	9.15%	14.05%	16.84%	532,078	2012	58.9%	
2013	7.75%	3.00%	2015	4.74%	10.72%	15.46%	18.18%	588,339	2013	59.1%	
2014	7.75%	3.00%	2016	4.58%	12.11%	16.69%	19.34%	641,927	2014	60.9%	
2015	7.75%	3.00%	2017	4.43%	13.18%	17.61%	20.20%	688,001	2015	62.3%	
2016	7.75%	3.00%	2018	4.29%	14.04%	18.33%	20.85%	729,648	2016	62.7%	
2017	7.75%	3.00%	2019	4.15%	14.49%	18.64%	21.09%	758,689	2017	64.1%	
2018	7.75%	3.00%	2020	4.02%	14.62%	18.64%	21.02%	777,729	2018	65.5%	
2019	7.75%	3.00%	2021	3.90%	14.55%	18.45%	20.76%	790,634	2019	67.0%	
2020	7.75%	3.00%	2022	3.79%	14.37%	18.16%	20.41%	800,234	2020	68.6%	
2021	7.75%	3.00%	2023	3.68%	14.14%	17.82%	20.00%	808,279	2021	70.1%	
2022	7.75%	3.00%	2024	3.58%	13.90%	17.48%	19.59%	816,530	2022	71.6%	
2023	7.75%	3.00%	2025	3.48%	13.68%	17.16%	19.21%	825,909	2023	75.1%	
2024	7.75%	3.00%	2026	3.39%	13.44%	16.85%	18.81%	835,141	2024	74.6%	
2025	7.75%	3.00%	2027	3.31%	13.19%	16.50%	18.42%	844,555	2025	76.1%	
2026	7.75%	3.00%	2028	3.24%	12.91%	16.15%	18.01%	853,034	2026	77.7%	
2027	7.75%	3.00%	2029	3.17%	12.63%	15.80%	17.60%	861,511	2027	79.3%	
2028	7.75%	3.00%	2030	3.10%	12.33%	15.43%	17.17%	868,806	2028	80.9%	
2029	7.75%	3.00%	2031	3.04%	12.01%	15.05%	16.73%	875,281	2029	82.7%	
2030	7.75%	3.00%	2032	2.99%	11.65%	14.64%	16.27%	879,865	2030	84.5%	
2031	7.75%	3.00%	2033	2.94%	11.25%	14.19%	15.76%	881,757	2031	86.4%	
2032	7.75%	3.00%	2034	2.89%	10.80%	13.69%	15.21%	880,125	2032	88.3%	
2033	7.75%	3.00%	2035	2.85%	10.26%	13.11%	14.58%	872,776	2033	90.4%	
2034	7.75%	3.00%	2036	2.81%	9.61%	12.42%	13.84%	857,309	2034	92.5%	
2035	7.75%	3.00%	2037	2.78%	8.72%	11.50%	12.87%	825,126	2035	94.7%	
2036	7.75%	3.00%	2038	2.75%	7.32%	10.07%	11.40%	755,959	2036	96.9%	
2037	7.75%	3.00%	2039	2.72%	4.10%	6.82%	8.10%	556,172	2037	99.1%	

Projections are based on the valuation results as of June 30, 2012.

¹ Reinvested savings allocated among the State systems based on their proportionate share of the total savings measured as of June 30, 2011, as follows: TCS - 67.70%, ECS (State) - 29.36%, State Police - 1.40%, LEOPS (State) - 1.54%.

* Wage inflation assumption is 50 basis points greater than price inflation assumption.

Impact of change in funding policy methodology first reflected in the June 30, 2013 valuation which effects the FY 2015 contribution rate. 25-year closed period begins in the 2013 valuation and phase out of corridor first occurs in the 2013 valuation using 70% of the prior year budgeted rate and 30% of the current year actuarial rate.

Projected Results Under Alternate Funding Policy: 25 Year Closed Amortization and 10 Year Corridor Phase Out Beginning June 30, 2013

MSRPS - Judges

Valuation Date	Interest Rate Assump.	Price Inflation Assump.*	Contribution Rate ¹			Total	Total with Reinvested Savings	Illustrated Dollar Contribution Including Reinvestment (\$ in thousands) ¹	Projected Funded Ratios by Valuation Date	
			Fiscal Year	Normal Cost	UAAL				Valuation Date	Funded Ratio
2010	7.75%	3.00%	2012	31.79%	28.58%	60.37%	60.37%	\$24,403	2010	64.9%
2011	7.75%	3.00%	2013	32.31%	28.87%	61.18%	61.18%	25,002	2011	67.8%
2012	7.75%	3.00%	2014	29.91%	21.01%	50.92%	50.92%	21,423	2012	78.4%
2013	7.75%	3.00%	2015	29.79%	15.46%	43.25%	43.25%	18,821	2013	80.2%
2014	7.75%	3.00%	2016	29.66%	12.22%	41.88%	41.88%	18,824	2014	82.6%
2015	7.75%	3.00%	2017	29.70%	11.82%	41.52%	41.52%	19,283	2015	83.8%
2016	7.75%	3.00%	2018	29.49%	12.38%	41.87%	41.87%	20,092	2016	83.7%
2017	7.75%	3.00%	2019	29.41%	12.32%	41.73%	41.73%	20,698	2017	84.4%
2018	7.75%	3.00%	2020	29.54%	12.20%	41.74%	41.74%	21,401	2018	85.1%
2019	7.75%	3.00%	2021	29.47%	12.10%	41.57%	41.57%	22,046	2019	85.8%
2020	7.75%	3.00%	2022	29.56%	11.98%	41.34%	41.34%	22,665	2020	86.5%
2021	7.75%	3.00%	2023	29.22%	11.86%	41.08%	41.08%	23,287	2021	87.2%
2022	7.75%	3.00%	2024	29.42%	11.73%	41.15%	41.15%	24,110	2022	87.8%
2023	7.75%	3.00%	2025	29.37%	11.63%	40.95%	40.95%	24,822	2023	88.5%
2024	7.75%	3.00%	2026	29.21%	11.48%	40.70%	40.70%	25,520	2024	89.2%
2025	7.75%	3.00%	2027	29.25%	11.34%	40.59%	40.59%	26,331	2025	89.9%
2026	7.75%	3.00%	2028	29.21%	11.20%	40.41%	40.41%	27,130	2026	90.6%
2027	7.75%	3.00%	2029	29.12%	11.03%	40.15%	40.15%	27,882	2027	91.4%
2028	7.75%	3.00%	2030	29.18%	10.83%	40.01%	40.01%	28,750	2028	92.1%
2029	7.75%	3.00%	2031	29.19%	10.65%	39.84%	39.84%	29,614	2029	92.9%
2030	7.75%	3.00%	2032	29.20%	10.44%	39.64%	39.64%	30,490	2030	93.7%
2031	7.75%	3.00%	2033	29.18%	10.19%	39.37%	39.37%	31,340	2031	94.5%
2032	7.75%	3.00%	2034	29.22%	9.88%	39.10%	39.10%	32,207	2032	95.3%
2033	7.75%	3.00%	2035	29.22%	9.54%	38.76%	38.76%	33,048	2033	96.1%
2034	7.75%	3.00%	2036	29.23%	9.10%	38.33%	38.33%	33,820	2034	97.0%
2035	7.75%	3.00%	2037	29.25%	8.49%	37.74%	37.74%	34,462	2035	97.8%
2036	7.75%	3.00%	2038	29.28%	7.48%	36.76%	36.76%	34,744	2036	98.7%
2037	7.75%	3.00%	2039	29.27%	5.09%	34.36%	34.36%	33,617	2037	99.5%

Projections are based on the valuation results as of June 30, 2012.

¹ Reinvested savings allocated among the State systems based on their proportionate share of the total savings measured as of June 30, 2011, as follows: TCS - 67.70%, ECS (State) - 29.36%, State Police - 1.40%, LEOPS (State) - 1.54%.

* Wage inflation assumption is 50 basis points greater than price inflation assumption.

Impact of change in funding policy methodology first reflected in the June 30, 2013 valuation which effects the FY 2015 contribution rate. 25-year closed period begins in the 2013 valuation and phase out of corridor first occurs in the 2013 valuation using 70% of the prior year budgeted rate and 10% of the current year actuarial rate.

**MSRPS
 Exhibit 3B Summary
 Projected Results Under Alternate Funding Policy: 25 Year Closed Amortization and 10 Year Corridor Phase Out Beginning June 30, 2013**

	Sum of FY13-FY17 Contributions (\$000)	Sum of FY13-FY22 Contributions (\$000)	Year Funded Ratio Reaches 80%	Year Funded Ratio Reaches 100%
Combined State Systems	\$9,513,675	\$21,410,984	2025	2038
Teachers' Combined System	5,965,435	13,284,929	2023	2038
Employees' Combined System (State)	2,897,056	6,753,990	2028	2038
State Police	331,068	732,364	2029	2038
Judges	103,352	210,255	2013	2038
LEOPS (State)	216,766	429,446	2025	2038