



# Commission on Government Forecasting and Accountability

**NOVEMBER 2012**

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## SPECIAL PENSION BRIEFING

### STATE RETIREMENT SYSTEMS OVERVIEW

Dan Hankiewicz, Pension Manager

CGFA staff has reviewed the State-funded retirement systems' FY 2012 actuarial reports, which were issued earlier than in past years after the enactment of P.A. 97-0694, the State Actuary Law. Under the State Actuary Law, the systems must annually submit a proposed certification for the following fiscal year prior to November 1st of the current year. The State Actuary then must issue a preliminary report concerning the systems' proposed certification by January 1st. The State Actuary's report must identify any recommend changes in actuarial assumptions based upon the review of the retirement systems' actuarial assumptions.

Using the actuarial (smoothed) value of assets, the total unfunded liabilities of the State systems totaled \$94.6 billion on June 30, 2012, led by the Teachers' Retirement System (TRS) whose unfunded liabilities amounted to \$52.1 billion. As the largest of the State systems, TRS accounts for over half of the total assets and liabilities of the five State systems combined. Table 1 below provides a summary of the financial condition of each of the five State retirement systems, showing their respective liabilities and assets as well as their accumulated unfunded liabilities and funded ratios.

### INSIDE THIS ISSUE

**SPECIAL PENSION BRIEFING:** State  
Retirement Systems Overview

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TABLE 1

Summary of Financial Condition State Retirement Systems Combined Assets at Actuarial Value / <b>With Asset Smoothing</b> Public Act 96-0043 FY 2012 (\$ in Millions)				
System	<u>Accrued Liability</u>	<u>Actuarial Assets</u>	<u>Unfunded Liability</u>	<u>Funded Ratio</u>
TRS	\$90,024.9	\$37,945.4	\$52,079.5	42.1%
SERS	\$33,091.2	\$11,477.3	\$21,613.9	34.7%
SURS	\$33,170.2	\$13,949.9	\$19,220.3	42.1%
JRS	\$2,021.7	\$601.2	\$1,420.5	29.7%
GARS	\$303.5	\$56.1	\$247.4	18.5%
<b>TOTAL</b>	<b>\$158,611.5</b>	<b>\$64,029.9</b>	<b>\$94,581.6</b>	<b>40.4%</b>

A much more realistic valuation of the true financial position of the State retirement systems would be based upon the market value of the assets, as shown in Table 2 below. Based upon the market value of assets, the total unfunded liabilities of the State systems totaled \$96.8 billion on June 30, 2012. The Teachers' Retirement System (TRS), whose unfunded liabilities amounted to \$53.5 billion, again represents over 50% of the combined total unfunded balance. Table 2 provides a summary of the financial condition of each of the five State retirement systems, showing their respective liabilities and assets as well as their accumulated unfunded liabilities and funded ratios.

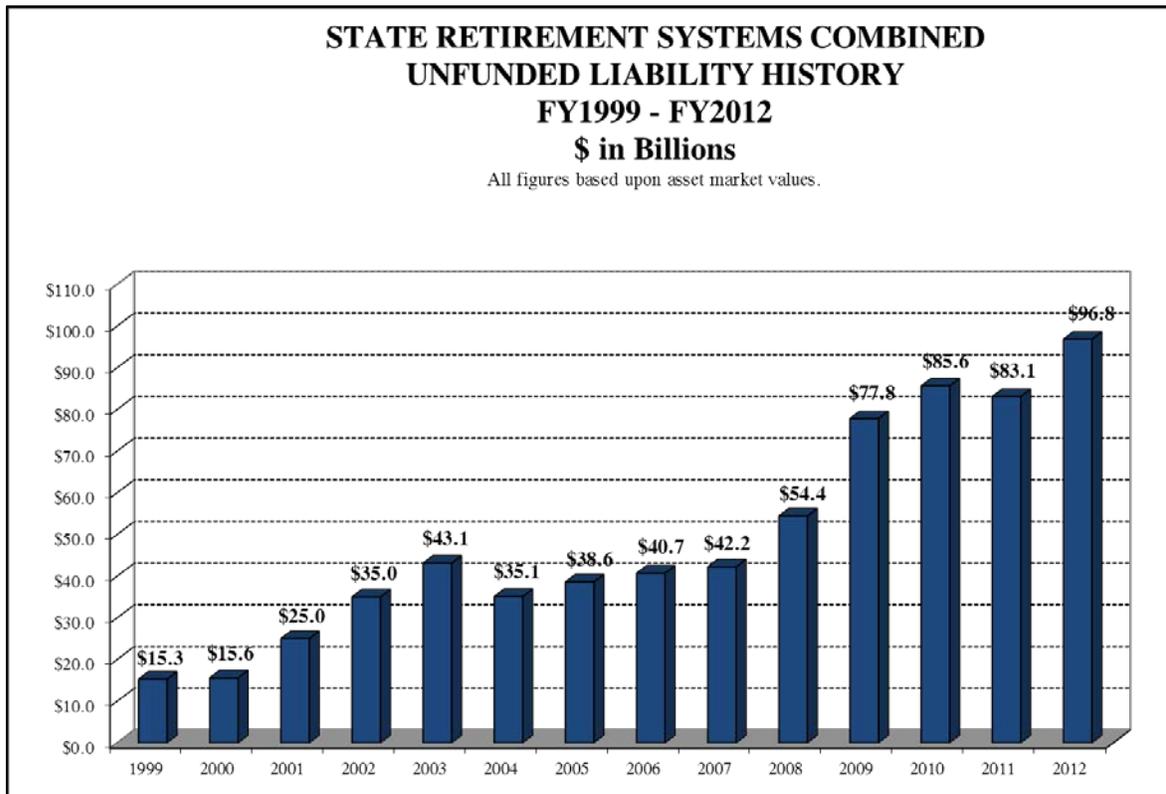
TABLE 2

Summary of Financial Condition State Retirement Systems Combined Assets at Market Value / <b>Without Asset Smoothing</b> FY 2012 (\$ in Millions)				
System	<u>Accrued Liability</u>	<u>Net Assets</u>	<u>Unfunded Liability</u>	<u>Funded Ratio</u>
TRS	\$90,024.9	\$36,516.8	\$53,508.1	40.6%
SERS	\$33,091.2	\$10,960.7	\$22,130.5	33.1%
SURS	\$33,170.2	\$13,705.1	\$19,465.1	41.3%
JRS	\$2,021.7	\$578.0	\$1,443.7	28.6%
GARS	\$303.5	\$52.7	\$250.8	17.4%
TOTAL	\$158,611.5	\$61,813.3	\$96,798.2	39.0%

The funded ratios for each of the five State retirement systems may be compared to the aggregate funded ratio of 39.0% for the five systems combined. Although the Judges' Retirement System and the General Assembly Retirement System have the poorest funded ratios, these two systems are much smaller and their unfunded liabilities are thus more manageable than the three larger systems.

Chart 1 below shows a 14-year history of the cumulative unfunded State pension liability and is based upon calculations performed by the retirement system actuaries using the market value of assets for all years, including FY 2012. The historic investment losses sustained by the systems in FY 2009 were the main reason for the significant jump in unfunded liabilities over FY 2008.

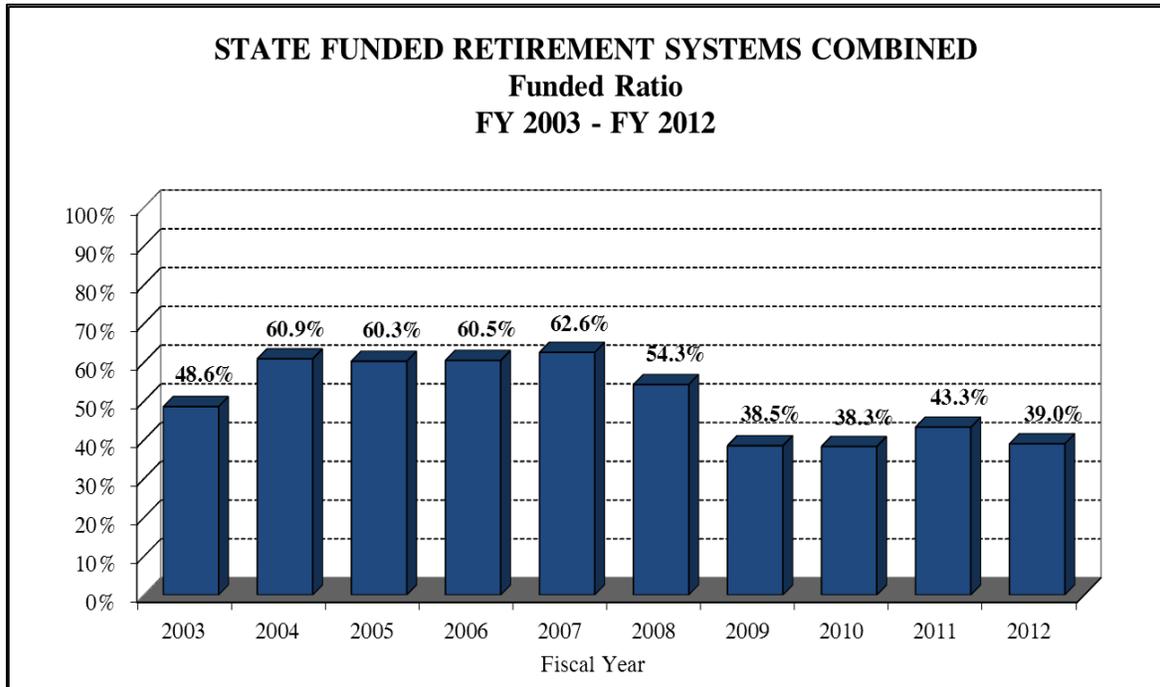
CHART 1



SURS, SERS, and JRS scaled back their respective investment return assumptions in FY 2010, and this change, along with actuarially insufficient contributions by the State, served to drive up the combined FY 2010 unfunded liability to \$85.6 billion. The systems experienced exceptionally strong investment returns in FY 2011, which caused the unfunded liability to drop slightly to \$83.1 billion. Three factors accounted for the significant spike in unfunded liabilities in FY 2012 – investment losses that fell far short of actuarial assumptions, TRS’ interest rate reduction from 8.5% to 8.0%, and actuarially insufficient contributions by the State.

Chart 2 below shows a history of the combined funded ratio for all five State systems:

CHART 2



NOTE: All of the funded ratios shown in Chart 2 are based upon market value of assets without asset smoothing.

The funded ratio at any single point in time is less important than the trend over time. In FY 2004, the State sold \$10 billion in pension obligation bonds and used part of the proceeds to pay all of the contributions for FY 2004. The bond sale generated \$7.3 billion to reduce unfunded liabilities of the state-funded retirement systems. In the wake of the bond sale, the funded ratio remained relatively stable from FY 2004 through FY 2007.

In FY 2008 and FY 2009, the funded ratio fell significantly due to much lower-than-expected investment revenues and actuarially insufficient employer contributions. The funded ratio remained relatively stable in FY 2010 due in large part to higher-than-expected investment returns. FY 2011 also saw exceptionally strong investment returns, which caused the funding ratio to increase, however these gains were largely erased by poor investment returns in FY 2012. As was previously mentioned, actuarially insufficient State contributions and TRS' change in investment return assumption from 8.5% to 8.0% played a significant role in lowering the FY 2012 cumulative funded ratio of the five State systems to 39%.

Charts 3 and 4 below show the factors that have caused the unfunded liability to change over a given period of time. Chart 3 outlines the growth in the unfunded liability for FY 2012 only, whereas Chart 4 shows the growth in unfunded since the enactment of P.A. 88-593 in FY 1996, which created the 50-year funding plan that governs annual State contributions to the five State systems.

CHART 3

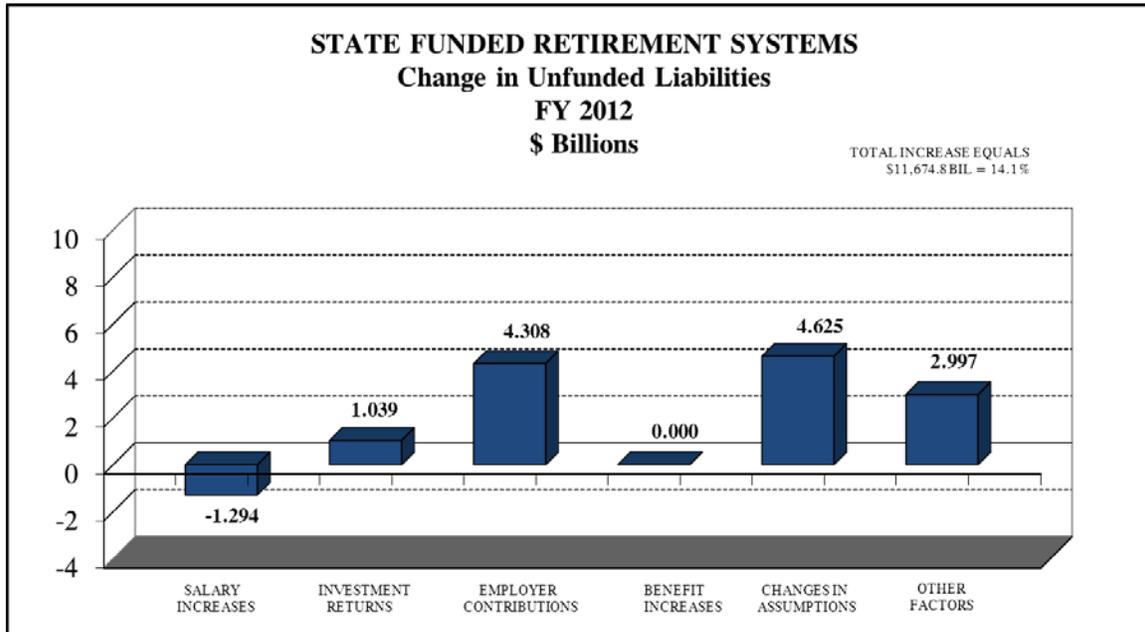
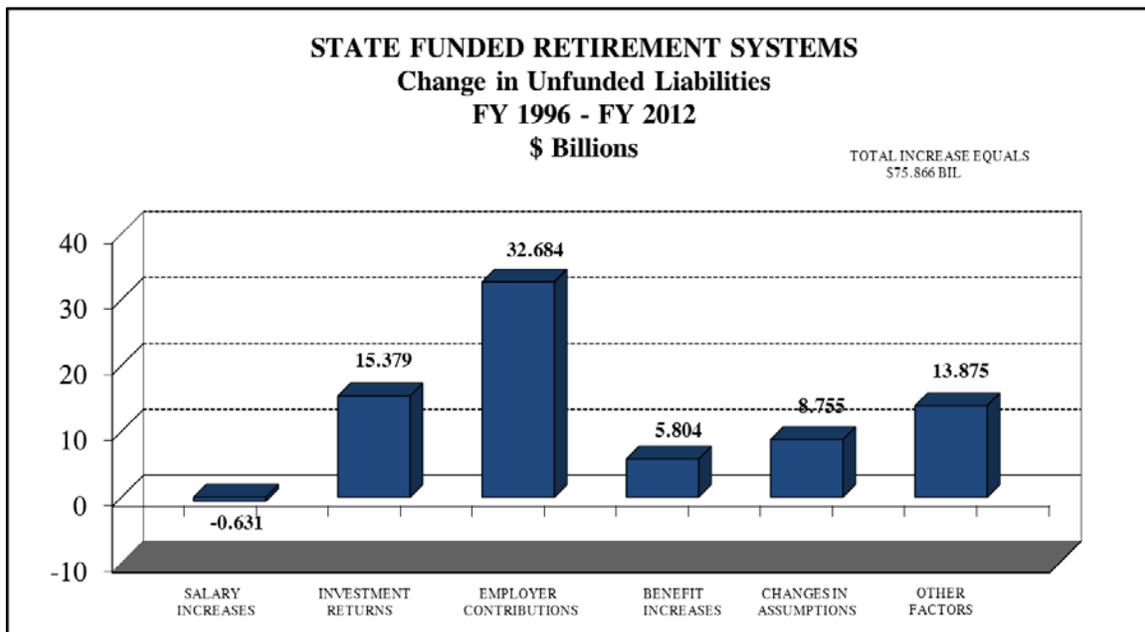


CHART 4



The following pages show pension funding projections for the five State retirement systems based on the laws in effect on June 30, 2012. These projections were generated by the retirement systems' respective actuaries.

<b>FUNDING PROJECTIONS FOR THE STATE RETIREMENT SYSTEMS</b>								
<b>All Five Systems Combined</b>								
<b>System Projections Based on Laws in Effect on June 30, 2012</b>								
<b>(\$ in millions)</b>								
<b>Fiscal Year</b>	<b>Annual Payroll</b>	<b>Total State Contribution</b>	<b>State Contribution as a % of Payroll</b>	<b>Total Employee Contribution</b>	<b>Accrued Liabilities</b>	<b>Actuarial Value of Assets</b>	<b>Unfunded Liabilities</b>	<b>Funded Ratio</b>
2013	18,678.8	5,867.1	31.4%	1,544.0	165,290.1	64,462.0	100,828.2	39.0%
<b>2014</b>	<b>18,767.8</b>	<b>6,833.0</b>	<b>36.4%</b>	<b>1,607.2</b>	<b>172,214.0</b>	<b>69,505.9</b>	<b>102,708.1</b>	<b>40.4%</b>
2015	19,385.9	7,033.2	36.3%	1,652.8	179,207.4	74,265.6	104,941.8	41.4%
2016	20,026.0	7,237.9	36.1%	1,699.4	186,250.2	77,497.8	108,752.4	41.6%
2017	20,706.5	7,498.4	36.2%	1,751.1	193,325.8	81,799.7	111,526.1	42.3%
2018	21,411.5	7,785.1	36.4%	1,815.9	200,422.2	86,223.3	114,198.9	43.0%
2019	22,150.0	8,055.7	36.4%	1,883.4	207,534.3	90,745.6	116,788.7	43.7%
2020	22,915.1	8,319.8	36.3%	1,946.2	214,643.7	95,347.9	119,295.8	44.4%
2021	23,714.5	8,598.1	36.3%	2,014.8	221,742.9	100,057.2	121,685.7	45.1%
2022	24,545.4	8,890.1	36.2%	2,082.4	228,817.9	104,882.0	123,936.0	45.8%
2023	25,405.7	9,195.1	36.2%	2,151.8	235,862.5	109,857.7	126,004.8	46.6%
2024	26,295.1	9,491.2	36.1%	2,238.1	242,873.5	114,985.8	127,887.7	47.3%
2025	27,202.6	9,794.0	36.0%	2,314.9	249,820.7	120,269.0	129,551.7	48.1%
2026	28,133.7	10,133.9	36.0%	2,394.7	256,723.8	125,756.0	130,967.7	49.0%
2027	29,093.2	10,487.2	36.0%	2,479.7	263,532.7	131,468.7	132,064.0	49.9%
2028	30,068.1	10,824.9	36.0%	2,590.8	270,300.6	137,457.4	132,843.2	50.9%
2029	31,047.4	11,168.5	36.0%	2,656.1	276,948.9	143,652.7	133,296.2	51.9%
2030	32,023.7	11,489.3	35.9%	2,738.8	283,451.6	150,066.8	133,384.8	52.9%
2031	32,988.4	11,812.9	35.8%	2,817.1	289,793.3	156,709.1	133,084.3	54.1%
2032	33,937.5	12,159.6	35.8%	2,913.8	295,922.1	163,613.4	132,308.8	55.3%
2033	34,833.3	12,513.6	35.9%	3,014.6	301,795.6	170,785.5	131,010.1	56.6%
2034	35,707.8	14,117.9	39.5%	3,094.3	307,403.0	179,566.1	127,836.9	58.4%
2035	36,568.3	14,460.3	39.5%	3,168.1	312,730.3	188,757.2	123,973.2	60.4%
2036	40,403.4	14,793.7	36.6%	3,248.2	317,747.4	198,381.4	119,366.0	62.4%
2037	38,216.8	15,118.4	39.6%	3,297.7	322,433.0	208,466.8	113,966.2	64.7%
2038	39,017.5	15,438.4	39.6%	3,380.1	326,781.5	219,067.7	107,713.8	67.0%
2039	39,795.9	15,749.4	39.6%	3,456.9	330,768.8	230,210.6	100,558.2	69.6%
2040	40,554.1	16,053.9	39.6%	3,513.3	334,377.3	241,926.0	92,451.3	72.4%
2041	41,303.9	16,355.6	39.6%	3,575.5	337,593.6	254,289.7	83,303.9	75.3%
2042	42,061.9	16,659.6	39.6%	3,617.8	340,448.5	267,408.2	73,040.3	78.5%
2043	42,836.1	16,969.7	39.6%	3,645.5	342,994.0	281,396.4	61,597.6	82.0%
2044	43,639.6	17,292.0	39.6%	3,648.6	345,300.9	296,411.0	48,889.9	85.8%
2045	44,491.3	17,634.6	39.6%	3,690.3	347,477.7	312,731.3	34,746.5	90.0%

**FUNDING PROJECTIONS FOR THE TEACHERS RETIREMENT SYSTEM**

**System Projections Based on Laws in Effect on June 30, 2012**

**Actuarially Assumed Rate of Return: 8.00%**

**(\$ in millions)**

Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2013	9,932.8	2,702.3	27.2%	996.1	93,809.5	37,725.6	56,083.9	40.2%
<b>2014</b>	<b>9,982.1</b>	<b>3,438.6</b>	<b>34.4%</b>	<b>1,004.4</b>	<b>97,787.9</b>	<b>40,495.8</b>	<b>57,292.1</b>	<b>41.4%</b>
2015	10,346.1	3,547.2	34.3%	1,032.8	101,828.9	43,042.8	58,786.1	42.3%
2016	10,734.1	3,679.1	34.3%	1,063.6	105,934.8	44,714.6	61,220.2	42.2%
2017	11,145.7	3,853.2	34.6%	1,098.5	110,101.8	47,075.7	63,026.1	42.8%
2018	11,578.3	4,004.8	34.6%	1,146.4	114,338.1	49,537.7	64,800.4	43.3%
2019	12,033.8	4,165.6	34.6%	1,195.4	118,648.6	52,108.2	66,540.4	43.9%
2020	12,510.9	4,321.4	34.5%	1,239.4	123,031.4	54,781.8	68,249.6	44.5%
2021	13,010.5	4,487.2	34.5%	1,288.9	127,487.2	57,582.6	69,904.6	45.2%
2022	13,534.4	4,663.4	34.5%	1,337.1	132,021.4	60,528.4	71,493.0	45.8%
2023	14,082.5	4,850.2	34.4%	1,386.8	136,633.7	63,652.0	72,981.7	46.6%
2024	14,653.0	5,032.5	34.3%	1,453.2	141,332.8	66,965.6	74,367.2	47.4%
2025	15,240.4	5,223.7	34.3%	1,510.7	146,115.2	70,476.6	75,638.6	48.2%
2026	15,843.8	5,437.5	34.3%	1,570.0	150,972.5	74,217.3	76,755.2	49.2%
2027	16,466.4	5,660.0	34.4%	1,634.2	155,890.6	78,200.3	77,690.3	50.2%
2028	17,099.6	5,873.5	34.3%	1,724.5	160,851.5	82,413.6	78,437.9	51.2%
2029	17,727.5	6,087.2	34.3%	1,769.0	165,828.3	86,826.9	79,001.4	52.4%
2030	18,350.9	6,287.1	34.3%	1,829.5	170,794.7	91,450.4	79,344.3	53.5%
2031	18,954.2	6,482.3	34.2%	1,885.3	175,736.5	96,276.6	79,459.9	54.8%
2032	19,537.5	6,687.4	34.2%	1,959.4	180,623.1	101,328.0	79,295.1	56.1%
2033	20,090.5	6,897.6	34.3%	2,040.8	185,428.8	106,606.1	78,822.7	57.5%
2034	20,606.7	8,047.5	39.1%	2,099.8	190,112.8	113,090.9	77,021.9	59.5%
2035	21,094.3	8,237.9	39.1%	2,150.9	194,639.2	119,836.3	74,802.9	61.6%
2036	24,553.4	8,417.2	34.3%	2,207.2	198,972.7	126,838.0	72,134.7	63.7%
2037	21,990.9	8,588.0	39.1%	2,232.7	203,083.8	134,092.5	68,991.3	66.0%
2038	22,409.1	8,751.3	39.1%	2,290.8	206,948.8	141,613.7	65,335.1	68.4%
2039	22,796.4	8,902.6	39.1%	2,342.0	210,525.2	149,384.1	61,141.1	71.0%
2040	23,156.8	9,043.4	39.1%	2,372.5	213,777.4	157,384.8	56,392.6	73.6%
2041	23,498.1	9,176.7	39.1%	2,408.0	216,665.3	165,638.5	51,026.8	76.4%
2042	23,837.5	9,309.2	39.1%	2,423.0	219,188.5	174,189.5	44,999.0	79.5%
2043	24,184.5	9,444.7	39.1%	2,422.0	221,373.8	183,092.0	38,281.8	82.7%
2044	24,555.0	9,589.4	39.1%	2,396.0	223,266.9	192,442.9	30,824.0	86.2%
2045	24,970.8	9,751.8	39.1%	2,409.4	224,960.2	202,464.2	22,496.0	90.0%

**FUNDING PROJECTIONS FOR THE STATE EMPLOYEES RETIREMENT SYSTEM**

**System Projections Based on Laws in Effect on June 30, 2012**

**Actuarially Assumed Rate of Return: 7.75%**

**(\$ in millions)**

Fiscal Year	Annual Payroll	Total State Contribution*	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2013	4,369.0	1,659.6	38.0%	245.0	34,637.0	11,883.0	22,754.0	34.3%
<b>2014</b>	<b>4,326.0</b>	<b>1,743.9</b>	<b>40.3%</b>	<b>243.0</b>	<b>36,242.0</b>	<b>12,944.0</b>	<b>23,298.0</b>	<b>35.7%</b>
2015	4,480.0	1,757.0	39.2%	252.0	37,874.0	14,055.0	23,819.0	37.1%
2016	4,633.0	1,817.0	39.2%	260.0	39,523.0	14,946.0	24,577.0	37.8%
2017	4,791.0	1,874.0	39.1%	268.0	41,185.0	16,024.0	25,161.0	38.9%
2018	4,949.0	1,947.0	39.3%	276.0	42,850.0	17,130.0	25,720.0	40.0%
2019	5,114.0	2,012.0	39.3%	285.0	44,513.0	18,254.0	26,259.0	41.0%
2020	5,280.0	2,074.0	39.3%	294.0	46,164.0	19,385.0	26,779.0	42.0%
2021	5,454.0	2,139.0	39.2%	303.0	47,795.0	20,523.0	27,272.0	42.9%
2022	5,632.0	2,206.0	39.2%	312.0	49,391.0	21,660.0	27,731.0	43.9%
2023	5,811.0	2,274.0	39.1%	321.0	50,943.0	22,792.0	28,151.0	44.7%
2024	5,994.0	2,340.0	39.0%	330.0	52,441.0	23,910.0	28,531.0	45.6%
2025	6,175.0	2,406.0	39.0%	338.0	53,869.0	25,009.0	28,860.0	46.4%
2026	6,361.0	2,479.0	39.0%	347.0	55,225.0	26,095.0	29,130.0	47.3%
2027	6,553.0	2,555.0	39.0%	356.0	56,501.0	27,170.0	29,331.0	48.1%
2028	6,747.0	2,628.0	39.0%	365.0	57,697.0	28,235.0	29,462.0	48.9%
2029	6,949.0	2,705.0	38.9%	374.0	58,814.0	29,298.0	29,516.0	49.8%
2030	7,151.0	2,777.0	38.8%	384.0	59,853.0	30,361.0	29,492.0	50.7%
2031	7,359.0	2,854.0	38.8%	394.0	60,814.0	31,434.0	29,380.0	51.7%
2032	7,568.0	2,936.0	38.8%	404.0	61,672.0	32,511.0	29,161.0	52.7%
2033	7,750.0	3,012.0	38.9%	410.0	62,406.0	33,577.0	28,829.0	53.8%
2034	7,945.0	3,372.0	42.4%	417.0	63,041.0	34,953.0	28,088.0	55.4%
2035	8,153.0	3,460.0	42.4%	426.0	63,595.0	36,405.0	27,190.0	57.2%
2036	8,362.0	3,549.0	42.4%	436.0	64,070.0	37,947.0	26,123.0	59.2%
2037	8,569.0	3,637.0	42.4%	446.0	64,470.0	39,596.0	24,874.0	61.4%
2038	8,779.0	3,726.0	42.4%	456.0	64,809.0	41,377.0	23,432.0	63.8%
2039	8,993.0	3,816.0	42.4%	467.0	65,099.0	43,315.0	21,784.0	66.5%
2040	9,209.0	3,908.0	42.4%	478.0	65,350.0	45,438.0	19,912.0	69.5%
2041	9,426.0	4,001.0	42.4%	489.0	65,575.0	47,771.0	17,804.0	72.8%
2042	9,646.0	4,094.0	42.4%	500.0	65,787.0	50,344.0	15,443.0	76.5%
2043	9,869.0	4,188.0	42.4%	512.0	65,998.0	53,189.0	12,809.0	80.6%
2044	10,093.0	4,283.0	42.4%	524.0	66,221.0	56,337.0	9,884.0	85.1%
2045	10,317.0	4,379.0	42.4%	535.0	66,463.0	59,818.0	6,645.0	90.0%

\*Pursuant to P.A. 93-0589, FY 2014 State Contribution includes \$81.2 million of 2003 POB debt service collected through payroll deduction. State contribution amounts shown for FY 2015 - 2045 do not include projected debt service as these amounts are not known until the annual SERS certification letters are issued pursuant to P.A. 97-0694 (State Actuary Law).

**FUNDING PROJECTIONS FOR THE STATE UNIVERSITIES RETIREMENT SYSTEM**

**System Projections Based on Laws in Effect on June 30, 2012**

**Actuarially Assumed Rate of Return: 7.75%**

**(\$ in millions)**

Fiscal Year	Annual Payroll**	Total State Contribution*	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2013	4,185.1	1,402.8	33.5%	285.0	34,429.8	14,200.0	20,229.8	41.2%
<b>2014</b>	<b>4,274.0</b>	<b>1,509.8</b>	<b>35.3%</b>	<b>341.9</b>	<b>35,684.0</b>	<b>15,345.6</b>	<b>20,338.4</b>	<b>43.0%</b>
2015	4,371.8	1,583.8	36.2%	349.7	36,921.3	16,379.8	20,541.5	44.4%
2016	4,468.6	1,595.2	35.7%	357.5	38,129.7	16,999.3	21,130.4	44.6%
2017	4,577.4	1,623.4	35.5%	366.2	39,301.6	17,806.1	21,495.5	45.3%
2018	4,690.0	1,683.2	35.9%	375.2	40,427.3	18,608.3	21,819.0	46.0%
2019	4,806.4	1,726.6	35.9%	384.5	41,501.7	19,385.8	22,115.9	46.7%
2020	4,926.7	1,771.5	36.0%	394.1	42,519.4	20,136.8	22,382.6	47.4%
2021	5,050.8	1,817.7	36.0%	404.1	43,480.6	20,864.3	22,616.3	48.0%
2022	5,178.4	1,865.2	36.0%	414.3	44,380.9	21,567.3	22,813.6	48.6%
2023	5,309.7	1,914.0	36.0%	424.8	45,223.3	22,252.2	22,971.1	49.2%
2024	5,443.5	1,961.2	36.0%	435.5	46,006.2	22,918.2	23,088.0	49.8%
2025	5,580.2	2,005.8	35.9%	446.4	46,729.0	23,565.0	23,164.0	50.4%
2026	5,719.5	2,057.1	36.0%	457.6	47,392.0	24,202.5	23,189.5	51.1%
2027	5,861.7	2,109.9	36.0%	468.9	47,996.9	24,837.1	23,159.8	51.7%
2028	6,006.4	2,159.4	36.0%	480.5	48,604.8	25,530.5	23,074.3	52.5%
2029	6,152.5	2,210.1	35.9%	492.2	49,162.3	26,234.6	22,927.7	53.4%
2030	6,299.7	2,257.1	35.8%	504.0	49,668.3	26,949.0	22,719.3	54.3%
2031	6,449.0	2,306.0	35.8%	515.9	50,121.1	27,679.1	22,442.0	55.2%
2032	6,601.3	2,362.2	35.8%	528.1	50,523.9	28,440.9	22,083.0	56.3%
2033	6,757.4	2,425.6	35.9%	540.6	50,880.2	29,251.1	21,629.1	57.5%
2034	6,915.4	2,509.9	36.3%	553.2	51,194.6	30,142.5	21,052.1	58.9%
2035	7,074.7	2,569.4	36.3%	566.0	51,469.9	31,101.4	20,368.5	60.4%
2036	7,235.7	2,629.6	36.3%	578.9	51,708.9	32,139.3	19,569.6	62.2%
2037	7,398.2	2,690.4	36.4%	591.9	51,915.2	33,269.4	18,645.8	64.1%
2038	7,563.9	2,752.7	36.4%	605.1	52,092.0	34,505.2	17,586.8	66.2%
2039	7,733.9	2,816.7	36.4%	618.7	52,245.1	35,864.2	16,380.9	68.6%
2040	7,908.2	2,882.4	36.4%	632.7	52,382.0	37,366.0	15,016.0	71.3%
2041	8,091.8	2,951.6	36.5%	647.3	52,515.6	39,036.9	13,478.7	74.3%
2042	8,282.2	3,023.5	36.5%	662.6	52,663.5	40,907.2	11,756.3	77.7%
2043	8,477.9	3,097.3	36.5%	678.2	52,838.4	43,003.7	9,834.7	81.4%
2044	8,677.9	3,172.9	36.6%	694.2	53,051.7	45,353.2	7,698.5	85.5%
2045	8,880.6	3,249.7	36.6%	710.4	53,312.2	47,981.0	5,331.2	90.0%

\* State Contribution Only - Excludes Estimated \$42 Million In Federal Funds in All Years Shown

\*\* Payroll projections include SMP payroll - 15% of new SURS members are assumed to enter SMP

**FUNDING PROJECTIONS FOR THE JUDGES RETIREMENT SYSTEM**

**System Projections Based on Laws in Effect on June 30, 2012**

**Actuarially Assumed Rate of Return: 7.00%**

**(\$ in millions)**

Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2013	177.0	88.2	49.8%	16.3	2,105.6	602.1	1,503.5	28.6%
<b>2014</b>	<b>171.2</b>	<b>126.8</b>	<b>74.1%</b>	<b>16.2</b>	<b>2,187.1</b>	<b>670.8</b>	<b>1,516.3</b>	<b>30.7%</b>
2015	172.9	130.6	75.5%	16.6	2,265.8	739.9	1,525.9	32.7%
2016	174.6	131.3	75.2%	16.6	2,341.1	792.7	1,548.4	33.9%
2017	176.2	132.0	74.9%	16.6	2,411.9	850.8	1,561.1	35.3%
2018	177.2	133.6	75.4%	16.4	2,477.9	906.4	1,571.5	36.6%
2019	178.2	134.4	75.4%	16.5	2,539.0	959.1	1,579.9	37.8%
2020	179.3	135.2	75.4%	16.6	2,594.3	1,008.2	1,586.1	38.9%
2021	180.2	135.8	75.4%	16.7	2,643.3	1,053.6	1,589.7	39.9%
2022	180.9	136.4	75.4%	16.7	2,686.1	1,095.0	1,591.1	40.8%
2023	182.0	137.1	75.3%	16.9	2,722.7	1,132.5	1,590.2	41.6%
2024	183.3	137.0	74.7%	17.0	2,753.0	1,165.3	1,587.6	42.3%
2025	184.8	137.3	74.3%	17.2	2,766.6	1,193.8	1,572.8	43.1%
2026	186.4	138.2	74.1%	17.5	2,793.5	1,218.4	1,575.1	43.6%
2027	188.2	139.3	74.0%	17.8	2,803.9	1,239.7	1,564.2	44.2%
2028	190.2	140.1	73.7%	17.9	2,807.9	1,257.4	1,550.5	44.8%
2029	192.6	141.3	73.4%	18.0	2,806.1	1,272.2	1,533.9	45.3%
2030	195.3	142.4	72.9%	18.2	2,798.8	1,284.6	1,514.2	45.9%
2031	198.3	143.8	72.5%	18.7	2,786.5	1,295.7	1,490.8	46.5%
2032	201.6	146.1	72.5%	18.9	2,769.6	1,306.7	1,463.0	47.2%
2033	205.2	149.2	72.7%	19.8	2,748.8	1,319.7	1,429.1	48.0%
2034	209.3	157.8	75.4%	20.6	2,724.6	1,341.2	1,383.5	49.2%
2035	213.6	161.0	75.4%	21.5	2,697.9	1,367.1	1,330.7	50.7%
2036	218.4	164.6	75.4%	22.3	2,669.0	1,398.8	1,270.2	52.4%
2037	223.5	168.5	75.4%	23.1	2,638.6	1,437.4	1,201.2	54.5%
2038	228.9	172.6	75.4%	23.9	2,607.3	1,484.2	1,123.0	56.9%
2039	234.6	176.9	75.4%	24.8	2,575.7	1,540.9	1,034.8	59.8%
2040	240.7	181.5	75.4%	25.6	2,544.3	1,608.7	935.7	63.2%
2041	247.1	186.3	75.4%	26.5	2,513.9	1,689.2	824.7	67.2%
2042	253.8	191.3	75.4%	27.3	2,484.9	1,784.1	700.9	71.8%
2043	260.7	196.6	75.4%	28.2	2,458.0	1,894.8	563.2	77.1%
2044	268.0	202.1	75.4%	29.1	2,433.6	2,023.3	410.4	83.1%
2045	275.6	207.8	75.4%	30.0	2,412.3	2,171.0	241.3	90.0%

**FUNDING PROJECTIONS FOR THE GENERAL ASSEMBLY RETIREMENT SYSTEM**

**System Projections Based on Laws in Effect on June 30, 2012**

**Actuarially Assumed Rate of Return: 7.00%**

**(\$ in millions)**

Fiscal Year	Annual Payroll	Total State Contribution	State Contribution as a % of Payroll	Total Employee Contribution	Accrued Liabilities	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2013	14.9	14.2	95.0%	1.6	308.2	51.3	257.0	16.6%
<b>2014</b>	<b>14.5</b>	<b>13.9</b>	<b>95.5%</b>	<b>1.7</b>	<b>313.0</b>	<b>49.7</b>	<b>263.3</b>	<b>15.9%</b>
2015	15.1	14.6	96.7%	1.7	317.4	48.1	269.3	15.1%
2016	15.7	15.2	97.2%	1.8	321.6	45.2	276.4	14.1%
2017	16.3	15.8	97.2%	1.9	325.5	43.1	282.4	13.2%
2018	16.9	16.5	97.3%	1.9	328.9	40.9	288.1	12.4%
2019	17.6	17.1	97.4%	2.0	332.0	38.5	293.5	11.6%
2020	18.3	17.7	97.2%	2.1	334.6	36.1	298.5	10.8%
2021	19.0	18.4	96.9%	2.2	336.8	33.7	303.1	10.0%
2022	19.7	19.1	96.8%	2.3	338.5	31.3	307.2	9.2%
2023	20.5	19.8	96.7%	2.4	339.8	29.0	310.8	8.5%
2024	21.3	20.5	96.2%	2.5	340.6	26.7	313.9	7.8%
2025	22.1	21.2	95.9%	2.6	340.9	24.6	316.3	7.2%
2026	23.0	22.1	96.0%	2.6	340.8	22.8	317.9	6.7%
2027	23.9	23.0	96.3%	2.8	340.3	21.6	318.7	6.3%
2028	24.9	23.9	96.2%	2.9	339.4	21.0	318.5	6.2%
2029	25.9	24.9	96.2%	3.0	338.2	21.0	317.2	6.2%
2030	26.9	25.8	95.9%	3.1	336.8	21.8	315.0	6.5%
2031	27.9	26.7	95.8%	3.2	335.2	23.6	311.6	7.0%
2032	29.1	27.9	96.0%	3.3	333.5	26.8	306.7	8.0%
2033	30.2	29.2	96.6%	3.5	331.8	31.7	300.1	9.5%
2034	31.4	30.8	97.9%	3.6	330.0	38.5	291.5	11.7%
2035	32.7	32.0	97.9%	3.8	328.4	47.3	281.0	14.4%
2036	33.9	33.2	97.9%	3.9	326.8	58.3	268.6	17.8%
2037	35.2	34.5	97.9%	4.1	325.5	71.6	253.9	22.0%
2038	36.6	35.8	97.9%	4.2	324.4	87.5	236.9	27.0%
2039	38.0	37.2	97.9%	4.4	323.8	106.4	217.4	32.9%
2040	39.4	38.6	97.9%	4.5	323.6	128.5	195.1	39.7%
2041	40.9	40.1	97.9%	4.7	323.8	154.1	169.7	47.6%
2042	42.4	41.6	97.9%	4.9	324.6	183.4	141.1	56.5%
2043	44.0	43.1	97.9%	5.1	325.8	216.8	109.0	66.6%
2044	45.6	44.7	97.9%	5.3	327.7	254.6	73.1	77.7%
2045	47.3	46.3	97.9%	5.4	330.1	297.0	33.0	90.0%