



Kentucky Employees' Retirement System 2013 Actuarial Valuation Results

December 5, 2013

➤ Basic Retirement Funding Equation

$$C + I = B + E$$

C = Contributions

I = Investment Income

B = Benefits Paid

E = Expenses (administration)



Combined Funded Status



Fund	June 30, 2013			June 30, 2012		
	Pension	Insurance	Combined	Pension	Insurance	Combined
KERS Non-Hazardous	23.2%	23.4%	23.2%	27.3%	14.3%	24.5%
KERS Hazardous	64.5%	96.2%	74.9%	66.1%	89.9%	74.1%
CERS Non-Hazardous	60.1%	66.6%	61.5%	60.7%	63.8%	61.3%
CERS Hazardous	57.7%	62.1%	59.1%	58.1%	60.7%	58.9%
SPRS	37.1%	61.3%	43.3%	40.1%	37.3%	39.1%



Pension Results



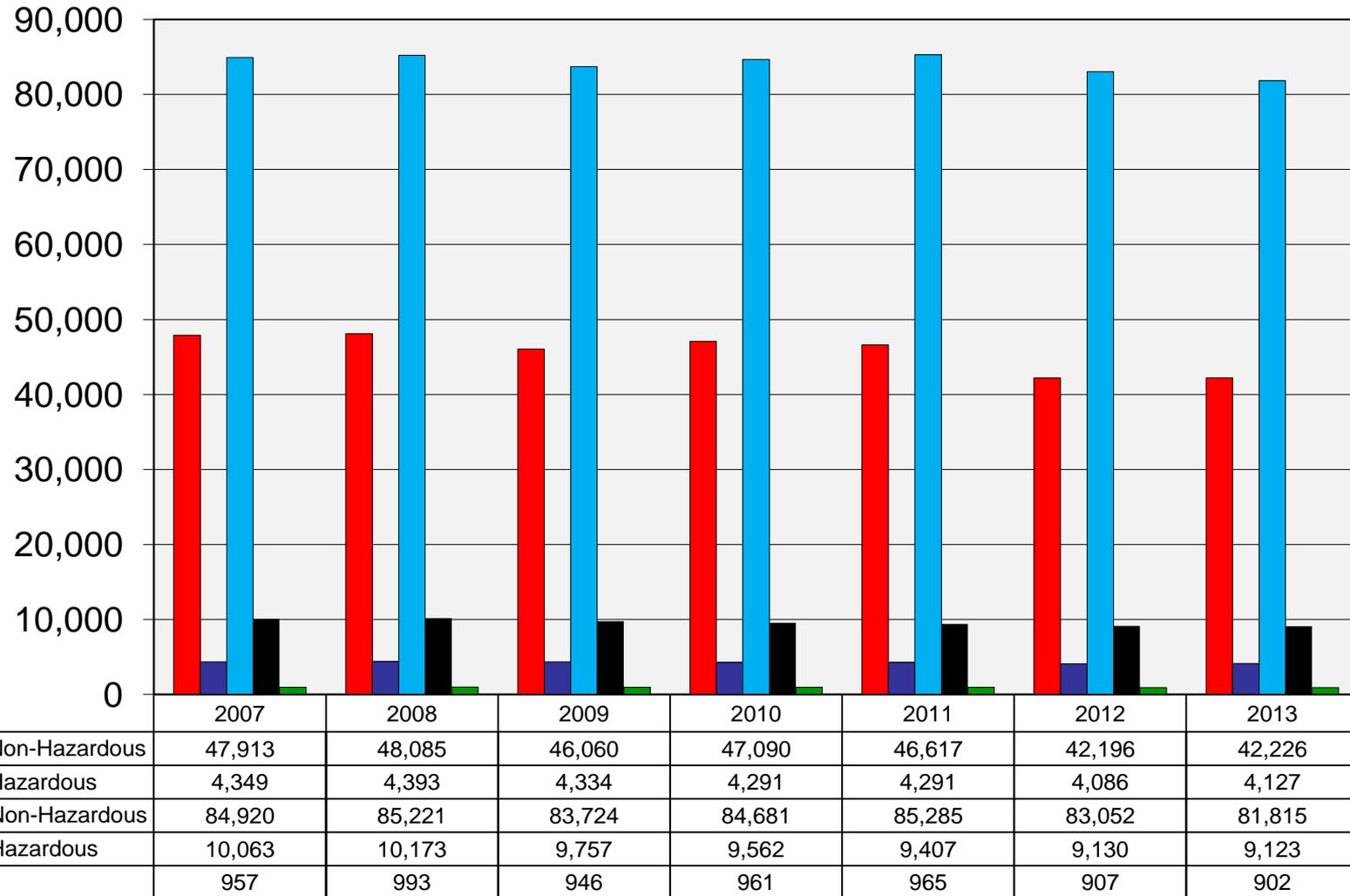
Comments on Pension Valuations



- Market value investment return was greater than anticipated for all Funds
- Actuarial value investment return was less than expected for all Funds
- Decline in funded ratios for all Funds
- Per statute, amortization period reset to 30 years
- Ad Hoc Cola's have been suspended

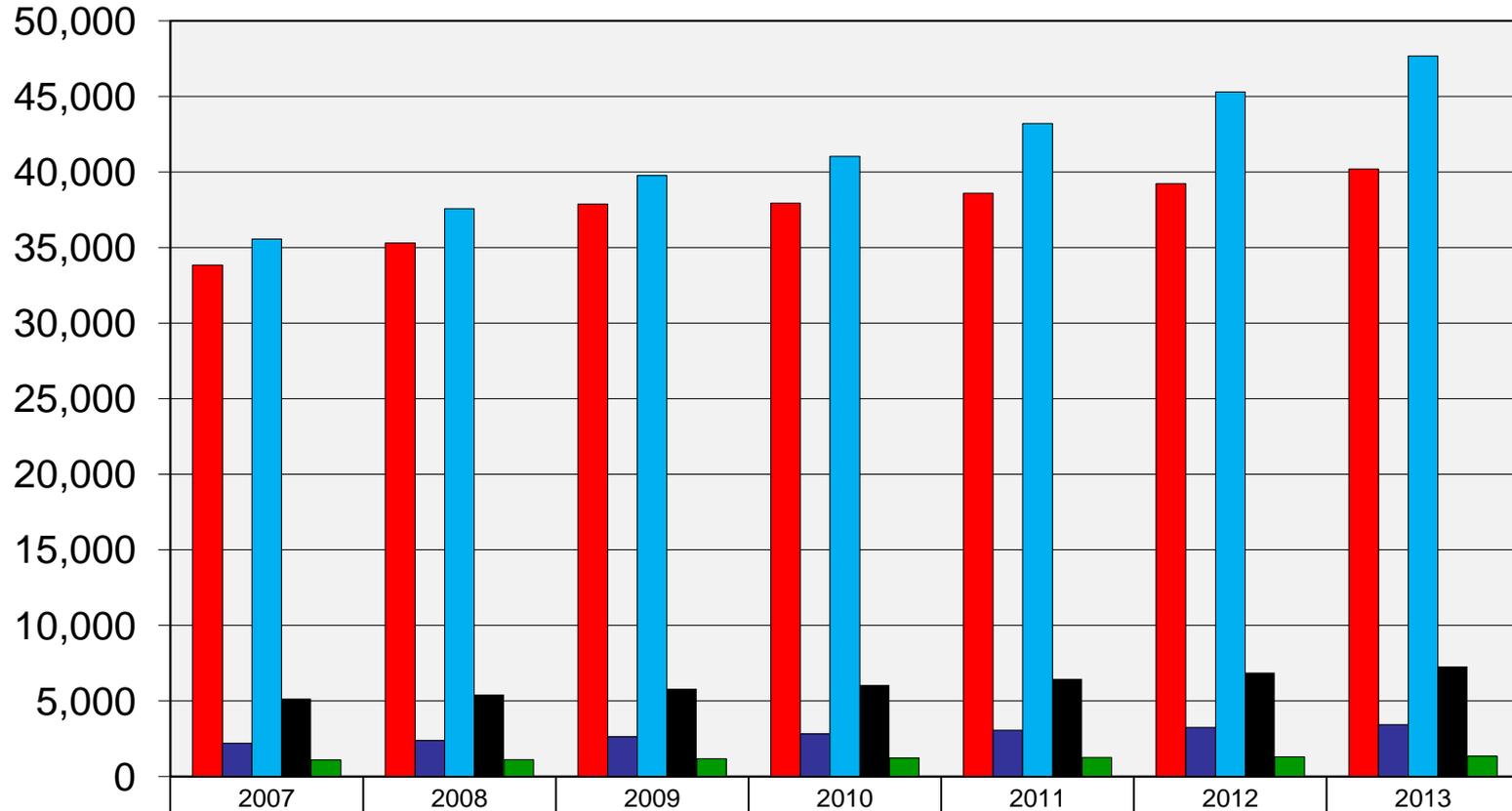


Active Membership





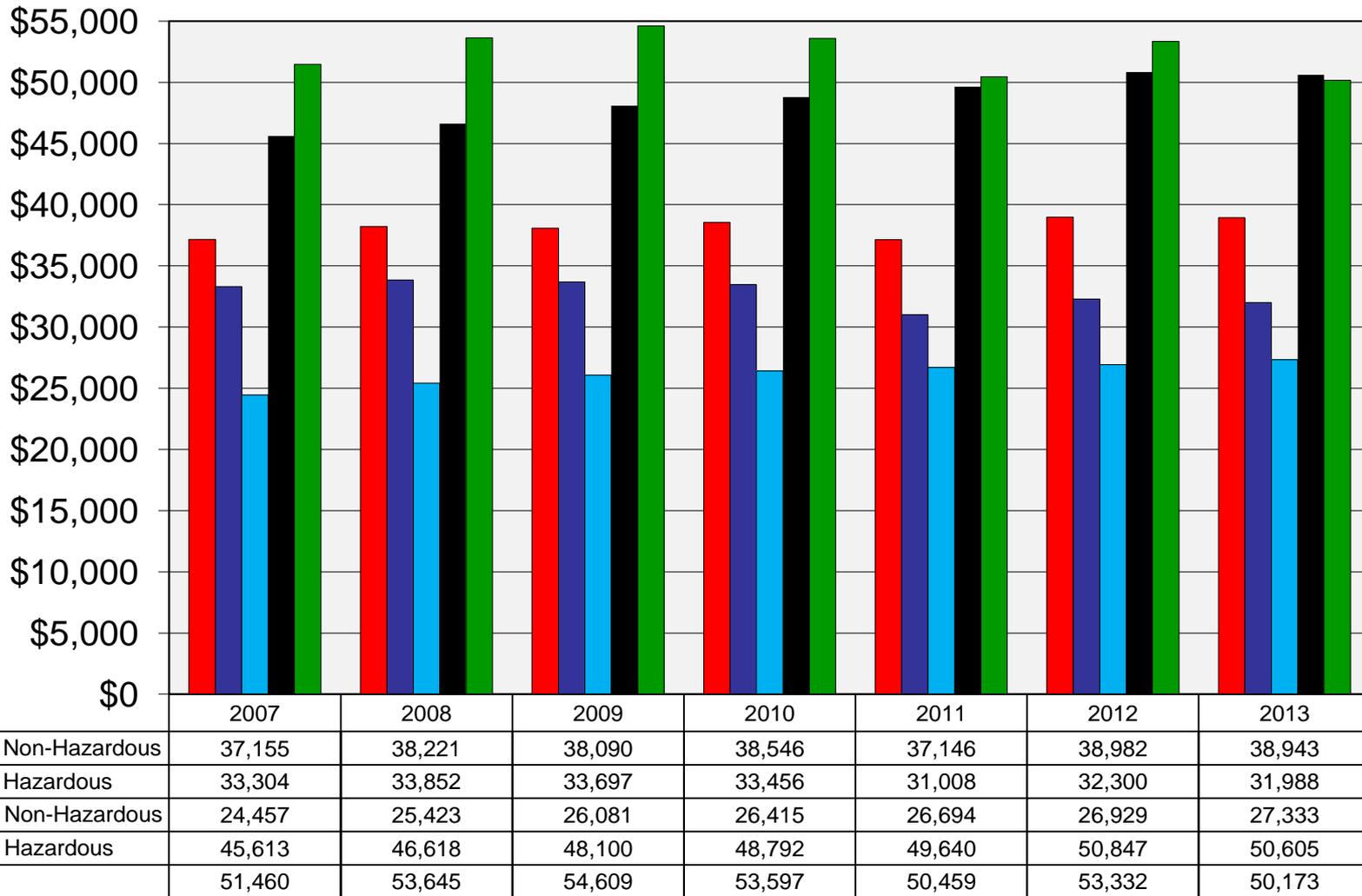
Retired Membership



	2007	2008	2009	2010	2011	2012	2013
■ KERS Non-Hazardous	33,849	35,307	37,883	37,945	38,597	39,226	40,194
■ KERS Hazardous	2,202	2,404	2,648	2,835	3,064	3,253	3,430
■ CERS Non-Hazardous	35,564	37,579	39,756	41,038	43,211	45,304	47,676
■ CERS Hazardous	5,159	5,422	5,808	6,068	6,468	6,878	7,293
■ SPRS	1,105	1,135	1,184	1,223	1,263	1,299	1,346

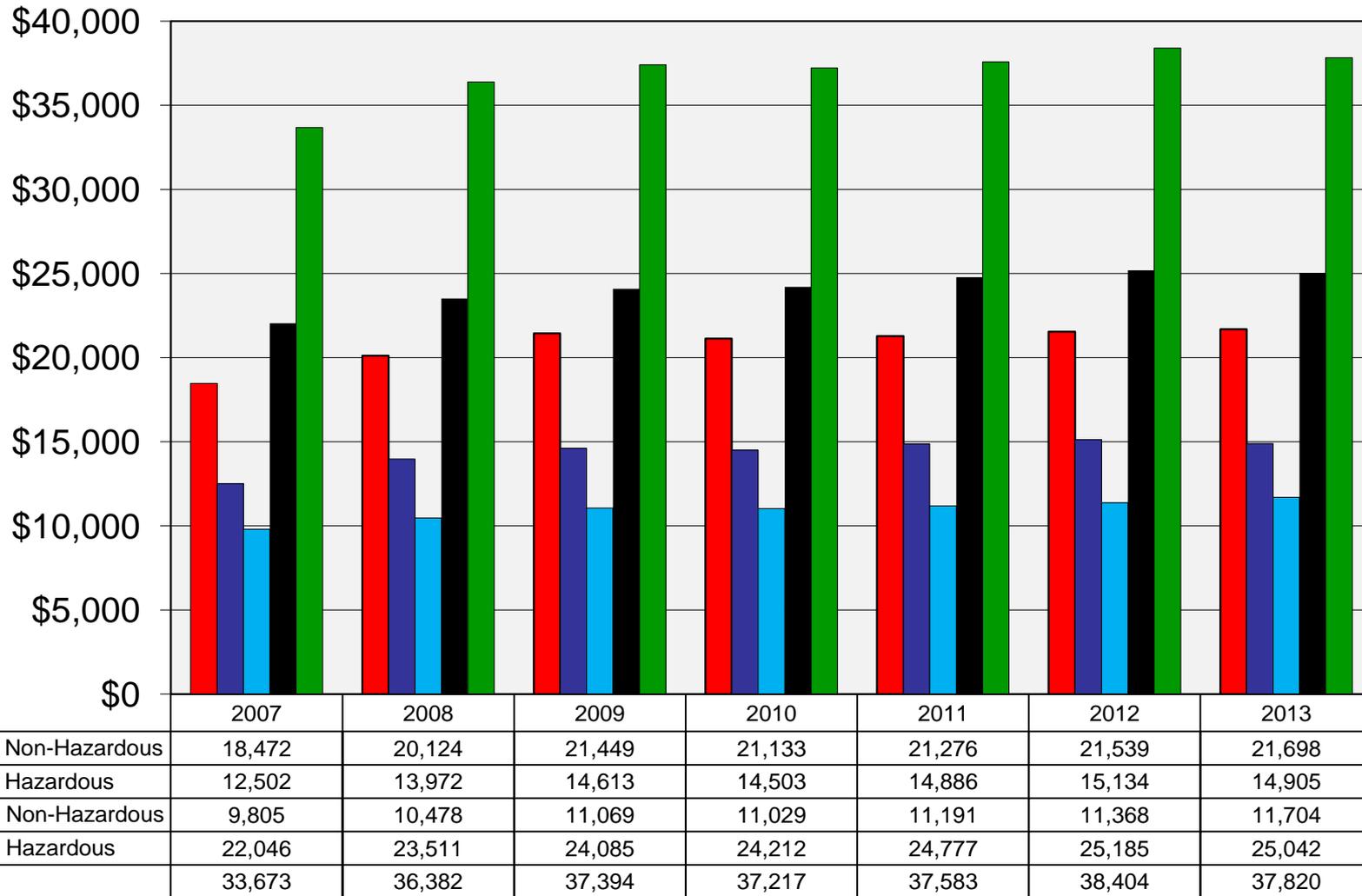


Average Salary



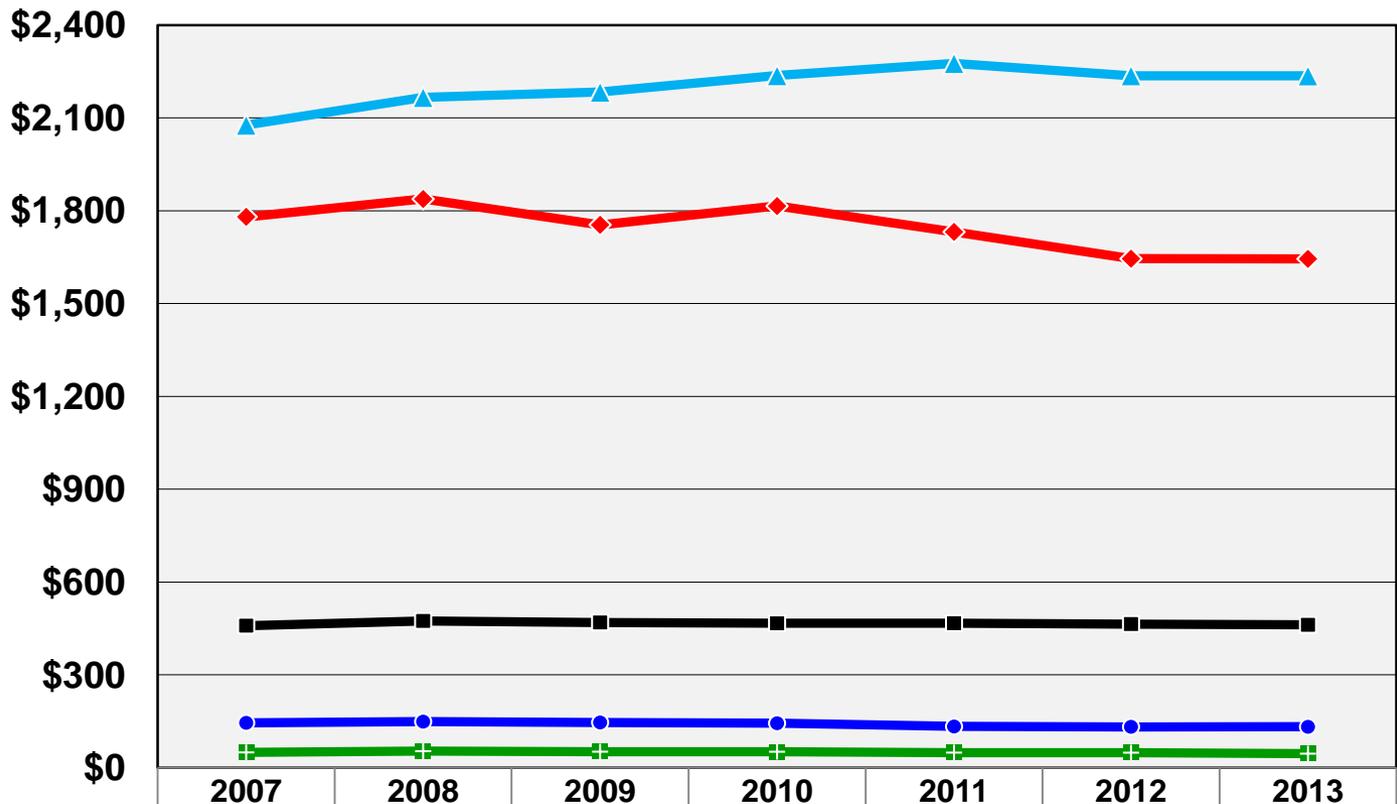


Average Benefits





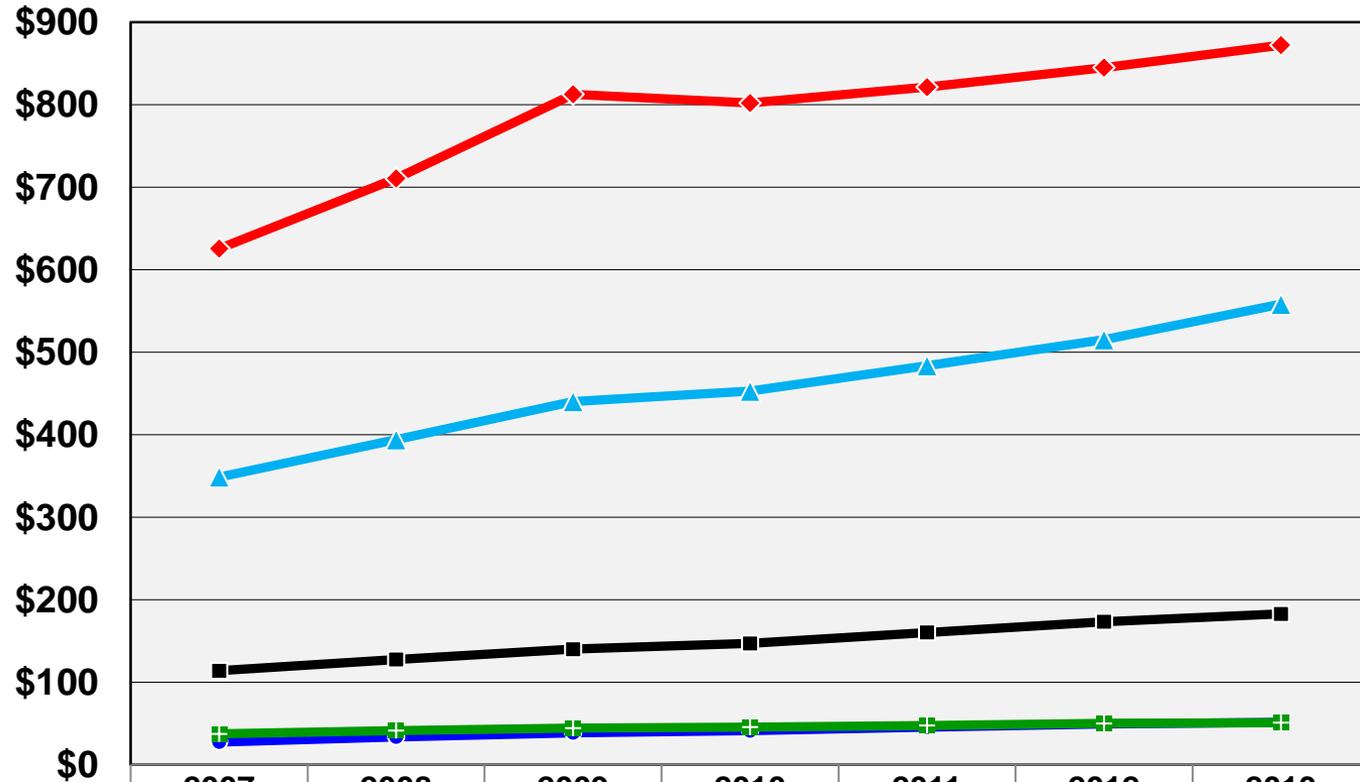
Payroll (\$ Millions)



KERS Non-Hazardous	\$1,780	\$1,838	\$1,754	\$1,815	\$1,732	\$1,645	\$1,644
KERS Hazardous	\$145	\$149	\$146	\$144	\$133	\$132	\$132
CERS Non-Hazardous	\$2,077	\$2,167	\$2,184	\$2,237	\$2,277	\$2,237	\$2,236
CERS Hazardous	\$459	\$474	\$469	\$467	\$467	\$464	\$462
SPRS	\$49	\$53	\$52	\$52	\$49	\$48	\$45



Benefits (\$ Millions)



KERS Non-Hazardous	\$625	\$711	\$813	\$802	\$821	\$845	\$872
KERS Hazardous	\$28	\$34	\$39	\$41	\$46	\$49	\$51
CERS Non-Hazardous	\$349	\$394	\$440	\$453	\$484	\$515	\$558
CERS Hazardous	\$114	\$127	\$140	\$147	\$160	\$173	\$183
SPRS	\$37	\$41	\$44	\$46	\$47	\$50	\$51



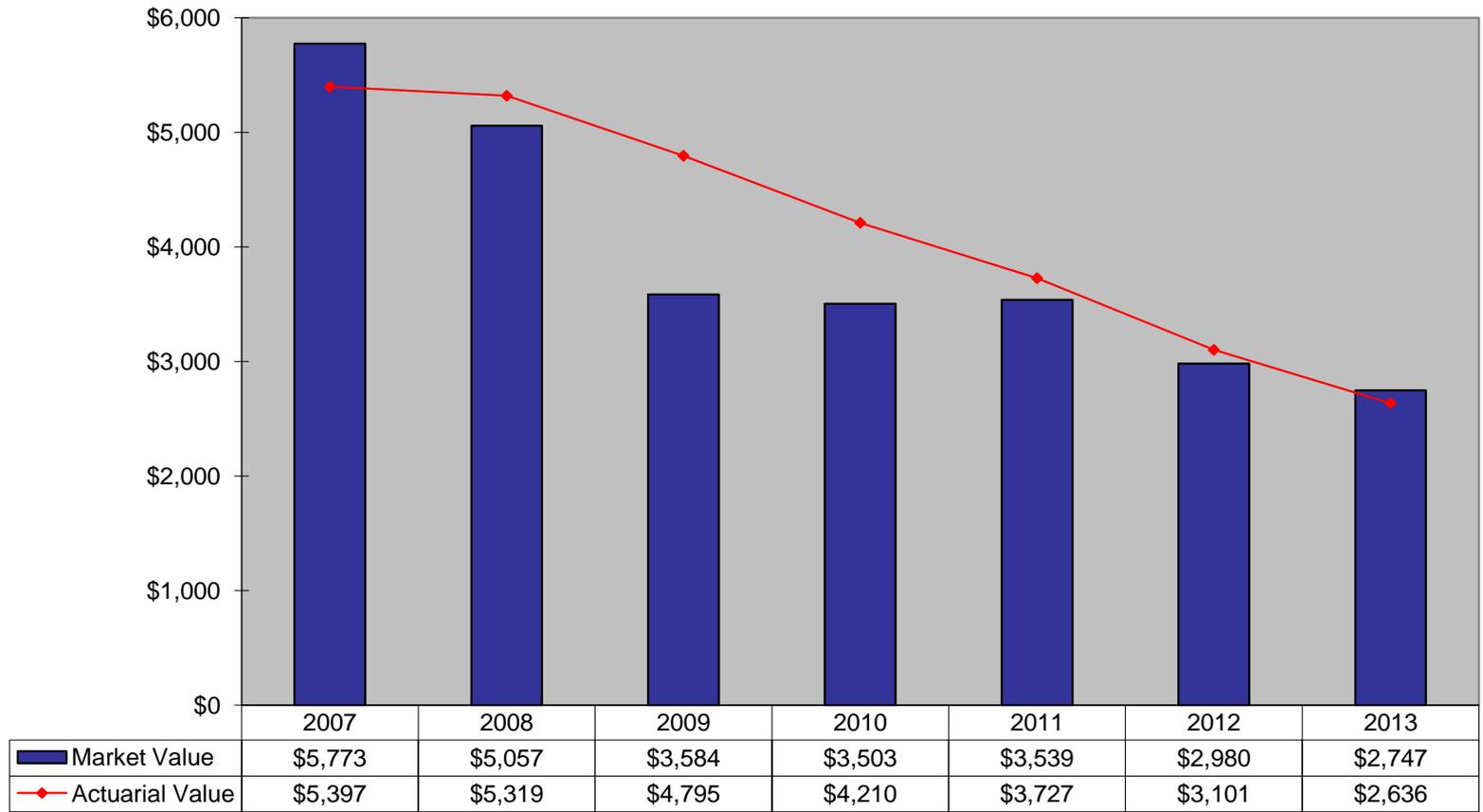
Average Age & Service June 30, 2013



	KERS		CERS		SPRS
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	
Average Age Actives	44.5	40.6	47.8	39.1	37.0
Average Service Actives	10.1	7.2	9.3	10.3	10.0
Average Age Retirees	67.4	62.9	69.2	60.6	61.8
Average Age Disabilities	64.3	58.3	64.0	54.5	56.3
Average Age Beneficiaries	70.5	63.0	68.1	55.1	63.9



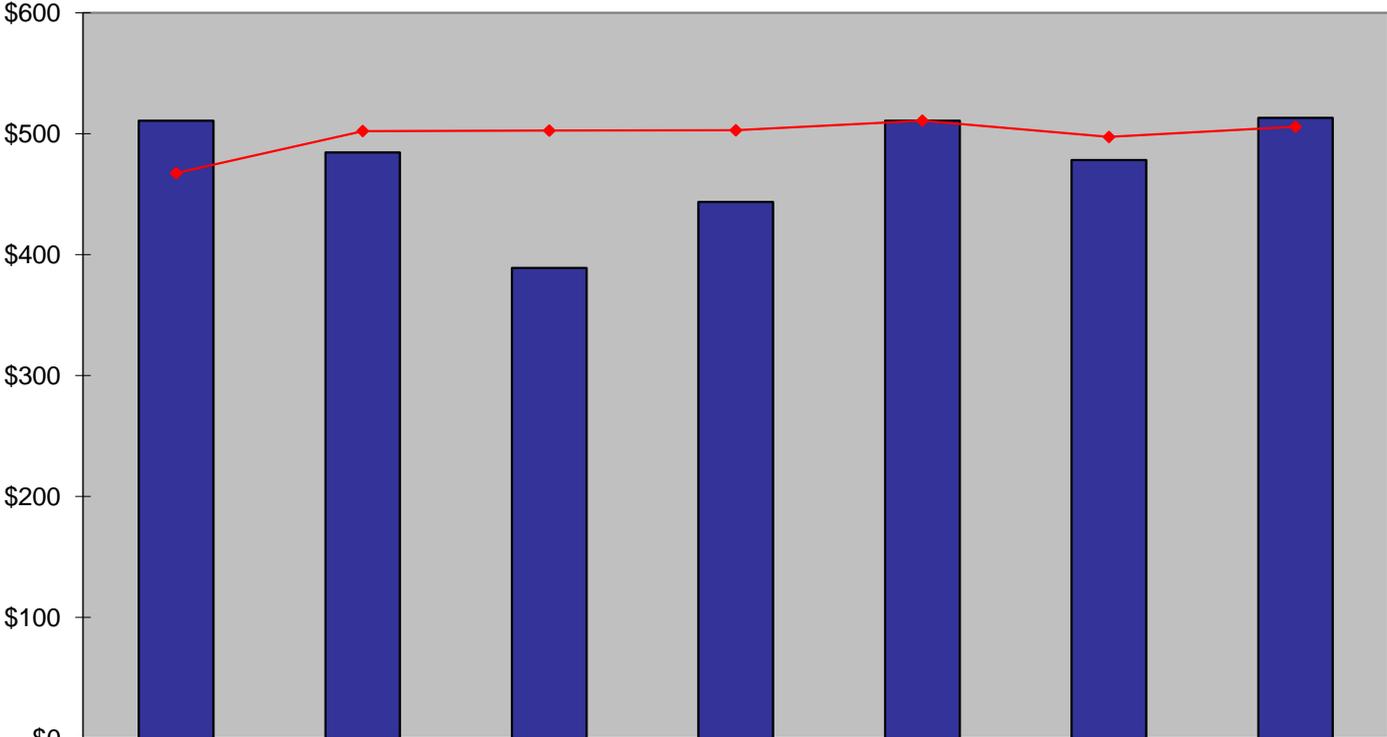
KERS Non-Hazardous Assets (\$ Millions)



Rate of Return	2007	2008	2009	2010	2011	2012	2013
Market Value	15.2%	(3.9)%	(18.3)%	16.1%	18.3%	0.6%	10.5%
Actuarial Value	8.9%	8.2%	1.7%	0.8%	2.3%	(1.1)%	2.4%



KERS Hazardous Assets (\$ Millions)

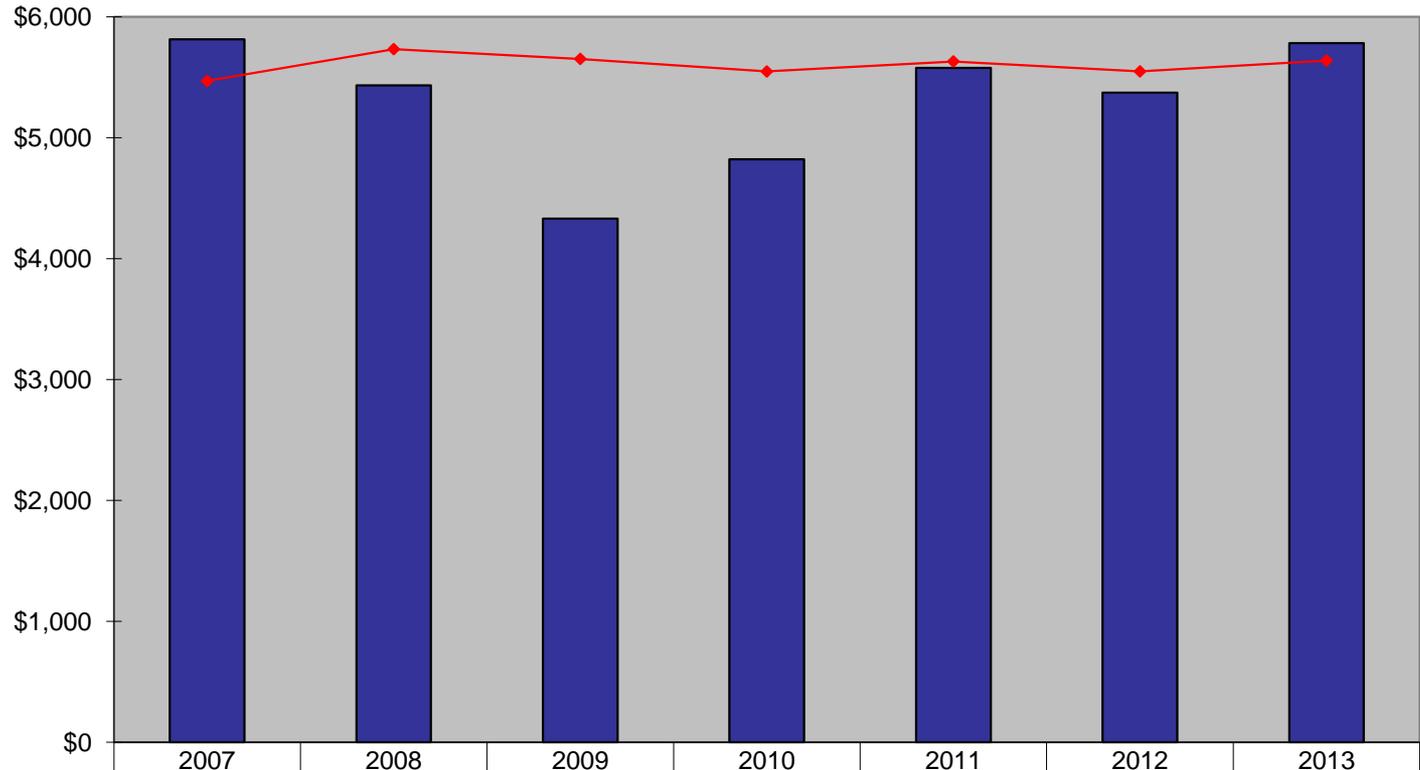


	2007	2008	2009	2010	2011	2012	2013
Market Value	\$511	\$484	\$389	\$444	\$511	\$478	\$513
Actuarial Value	\$467	\$502	\$503	\$503	\$511	\$497	\$506

Rate of Return	2007	2008	2009	2010	2011	2012	2013
Market Value	18.1%	(4.0)%	(17.6)%	17.1%	18.9%	(1.9)%	10.3%
Actuarial Value	10.4%	8.8%	2.4%	2.6%	5.1%	2.2%	4.9%



CERS Non-Hazardous Assets (\$ Millions)

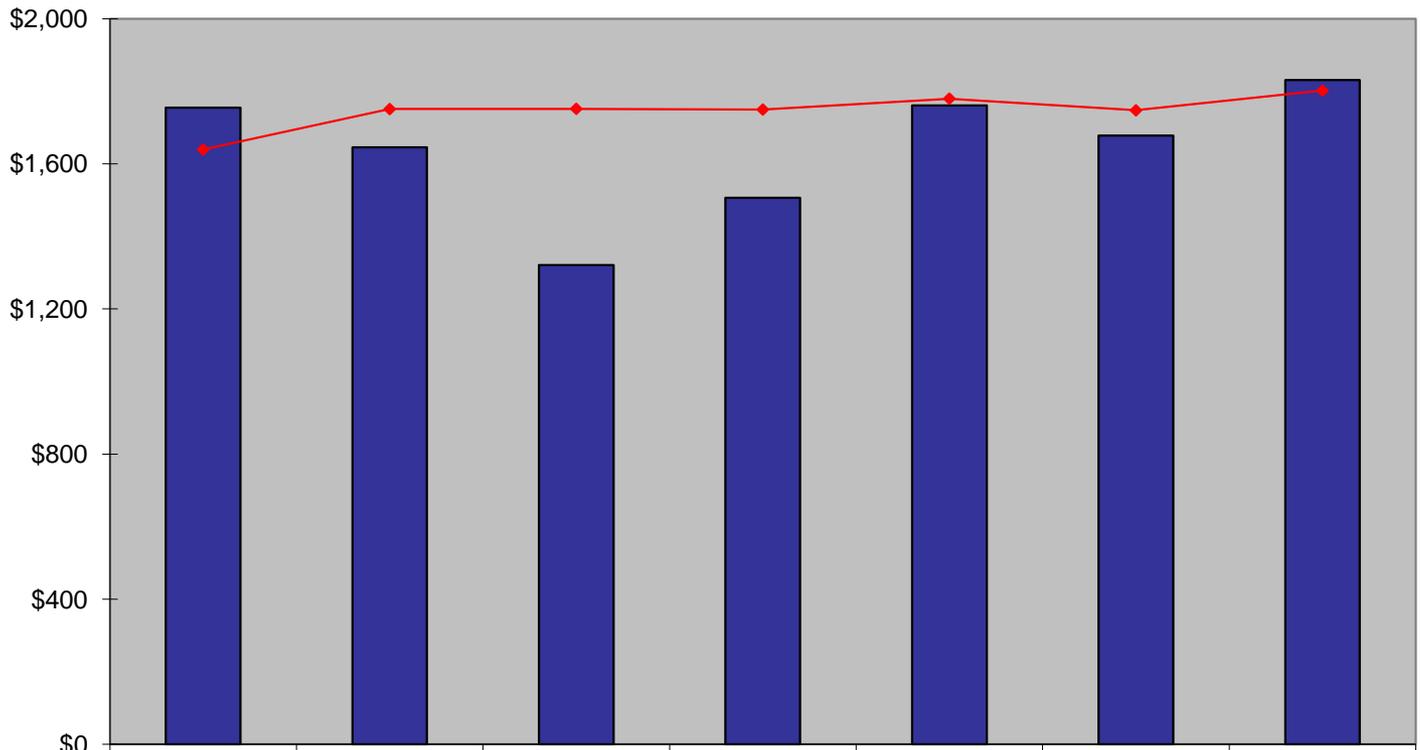


Market Value	\$5,813	\$5,432	\$4,331	\$4,820	\$5,577	\$5,373	\$5,781
Actuarial Value	\$5,468	\$5,732	\$5,651	\$5,547	\$5,630	\$5,547	\$5,637

Rate of Return	2007	2008	2009	2010	2011	2012	2013
Market Value	15.0%	(3.9)%	(17.4)%	15.8%	18.6%	(0.3)%	10.9%
Actuarial Value	8.9%	7.8%	1.8%	1.7%	4.1%	2.2%	5.1%



CERS Hazardous Assets (\$ Millions)

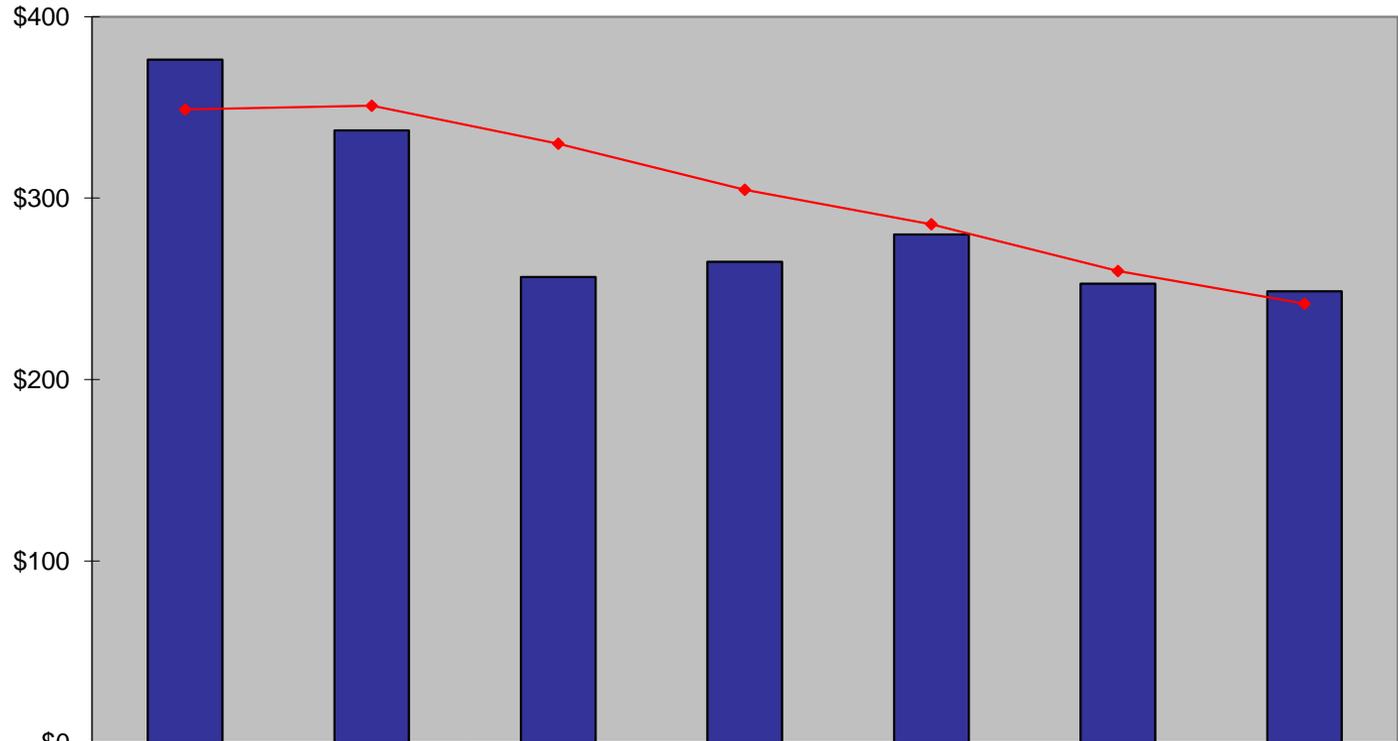


	2007	2008	2009	2010	2011	2012	2013
Market Value	\$1,755	\$1,645	\$1,321	\$1,507	\$1,761	\$1,678	\$1,831
Actuarial Value	\$1,639	\$1,751	\$1,751	\$1,749	\$1,780	\$1,747	\$1,802

Rate of Return	2007	2008	2009	2010	2011	2012	2013
Market Value	15.9%	(5.5)%	(18.5)%	15.7%	19.2%	(1.5)%	10.4%
Actuarial Value	9.3%	7.7%	1.4%	1.3%	4.5%	1.7%	4.7%



SPRS Assets (\$ Millions)



Market Value	\$376	\$337	\$257	\$265	\$280	\$253	\$249
Actuarial Value	\$349	\$351	\$330	\$305	\$286	\$260	\$242

Rate of Return	2007	2008	2009	2010	2011	2012	2013
Market Value	14.7%	(3.3)%	(15.9)%	16.9%	17.6%	0.6%	9.8%
Actuarial Value	9.4%	8.7%	2.7%	2.4%	4.9%	1.0%	4.4%



Pension Funding Results



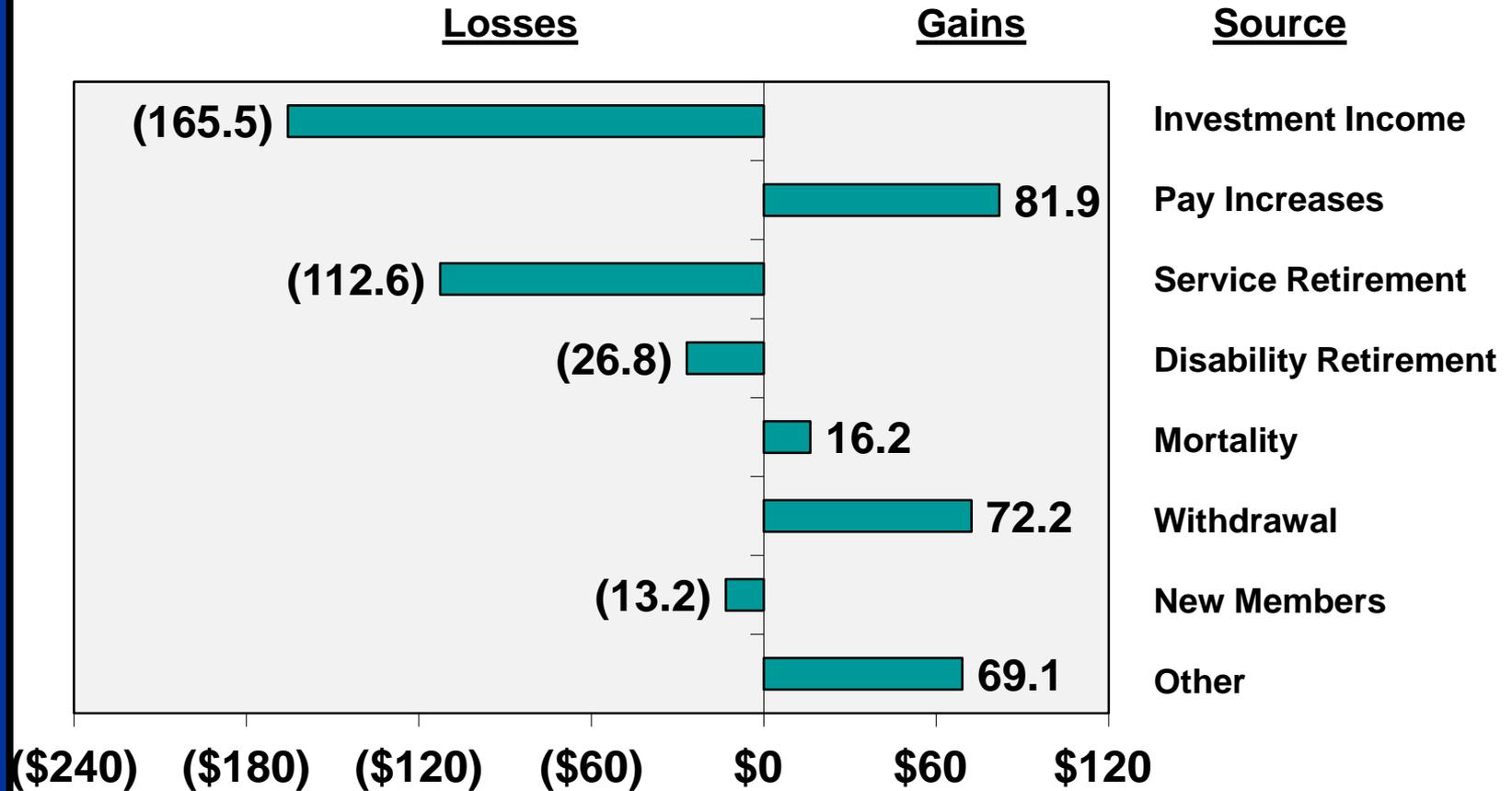
KERS				
	June 30, 2013		June 30, 2012	
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous
Total Normal Cost Rate	8.48%	13.24%	8.72%	13.42%
Less Member Rate	<u>5.00%</u>	<u>8.00%</u>	<u>5.00%</u>	<u>8.00%</u>
Employer Normal Cost Rate	3.48%	5.24%	3.72%	5.42%
Administrative Expenses	0.65%	0.55%	0.54%	0.67%
Rate to Amortize UAL	<u>26.71%</u>	<u>10.58%</u>	<u>28.31%</u>	<u>10.91%</u>
Total Employer Contribution Rate	30.84%	16.37%	32.57%	17.00%
Unfunded Accrued Liability (\$ millions)	\$8,750.5	\$278.3	\$8,259.7	\$255.5
Funded Ratio	23.2%	64.5%	27.3%	66.1%
Amortization Period	30	30	25	25



2013 Pension Gain/Loss Analysis (\$ Millions)



KERS Non-Hazardous





2013 Pension Gain/Loss Analysis (\$ Millions)



KERS Hazardous





Pension Funding Results



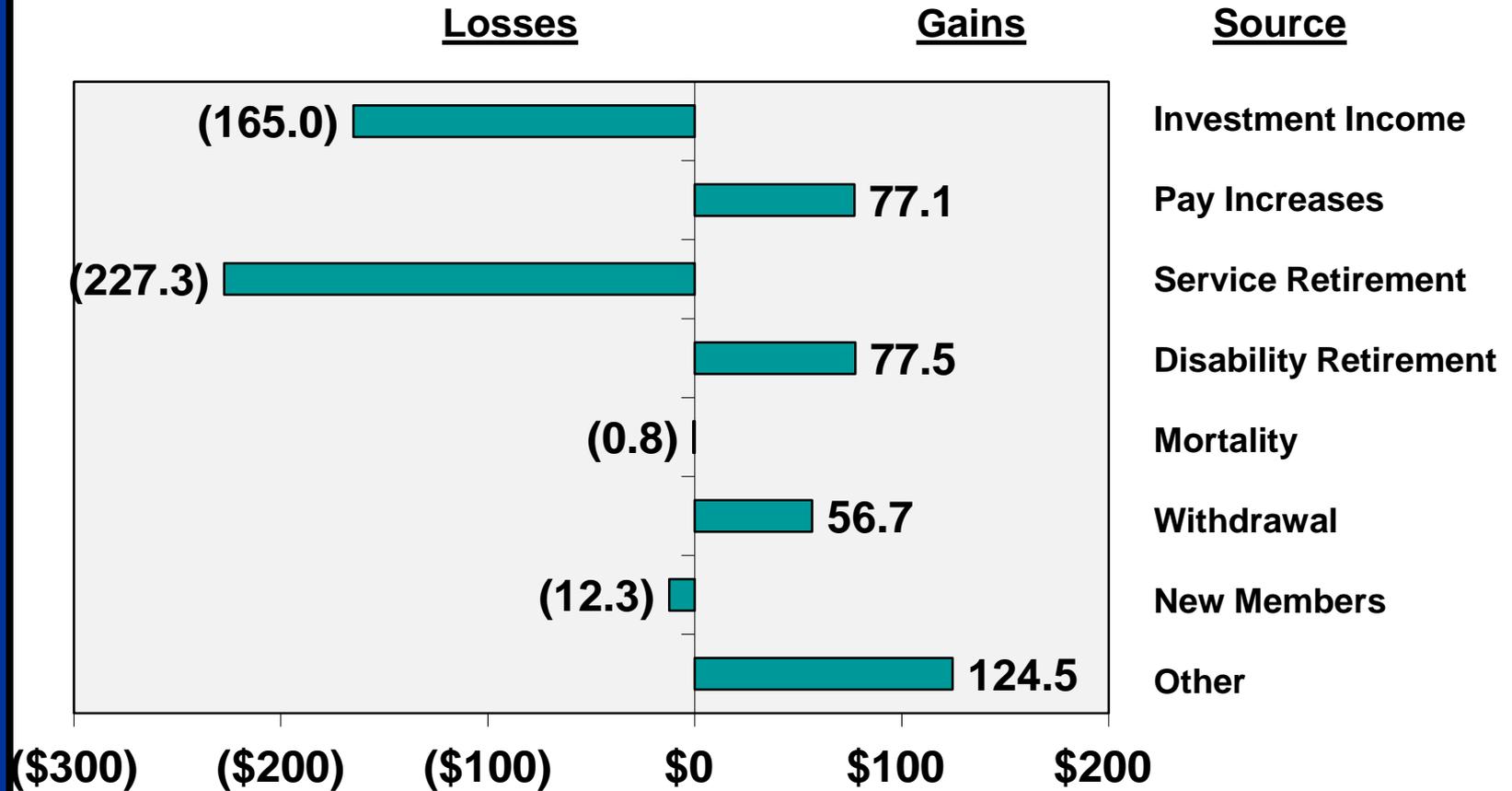
CERS				
	June 30, 2013		June 30, 2012	
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous
Total Normal Cost Rate	8.56%	14.09%	8.92%	14.15%
Less Member Rate	<u>5.00%</u>	<u>8.00%</u>	<u>5.00%</u>	<u>8.00%</u>
Employer Normal Cost Rate	3.56%	6.09%	3.92%	6.15%
Administrative Expenses	0.79%	0.26%	0.76%	0.29%
Rate to Amortize UAL	<u>8.40%</u>	<u>14.38%</u>	<u>9.06%</u>	<u>15.33%</u>
Total Employer Contribution Rate	12.75%	20.73%	13.74%	21.77%
Unfunded Accrued Liability (\$ millions)	\$3,741.8	\$1,322.5	\$3,592.3	\$1,262.6
Funded Ratio	60.1%	57.7%	60.7%	58.1%
Amortization Period	30	30	25	25



2013 Pension Gain/Loss Analysis (\$ Millions)



CERS Non-Hazardous

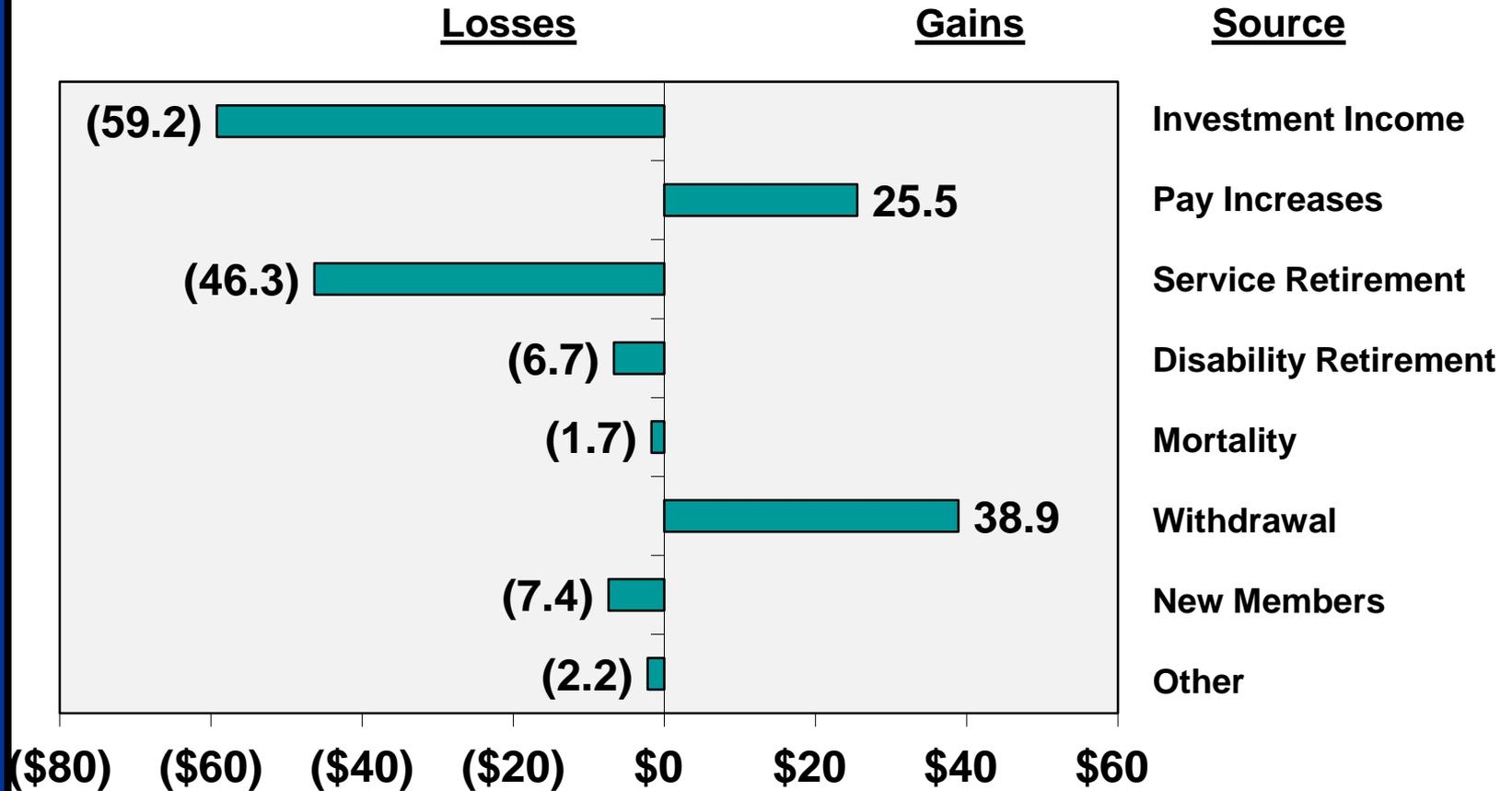




2013 Pension Gain/Loss Analysis (\$ Millions)



CERS Hazardous





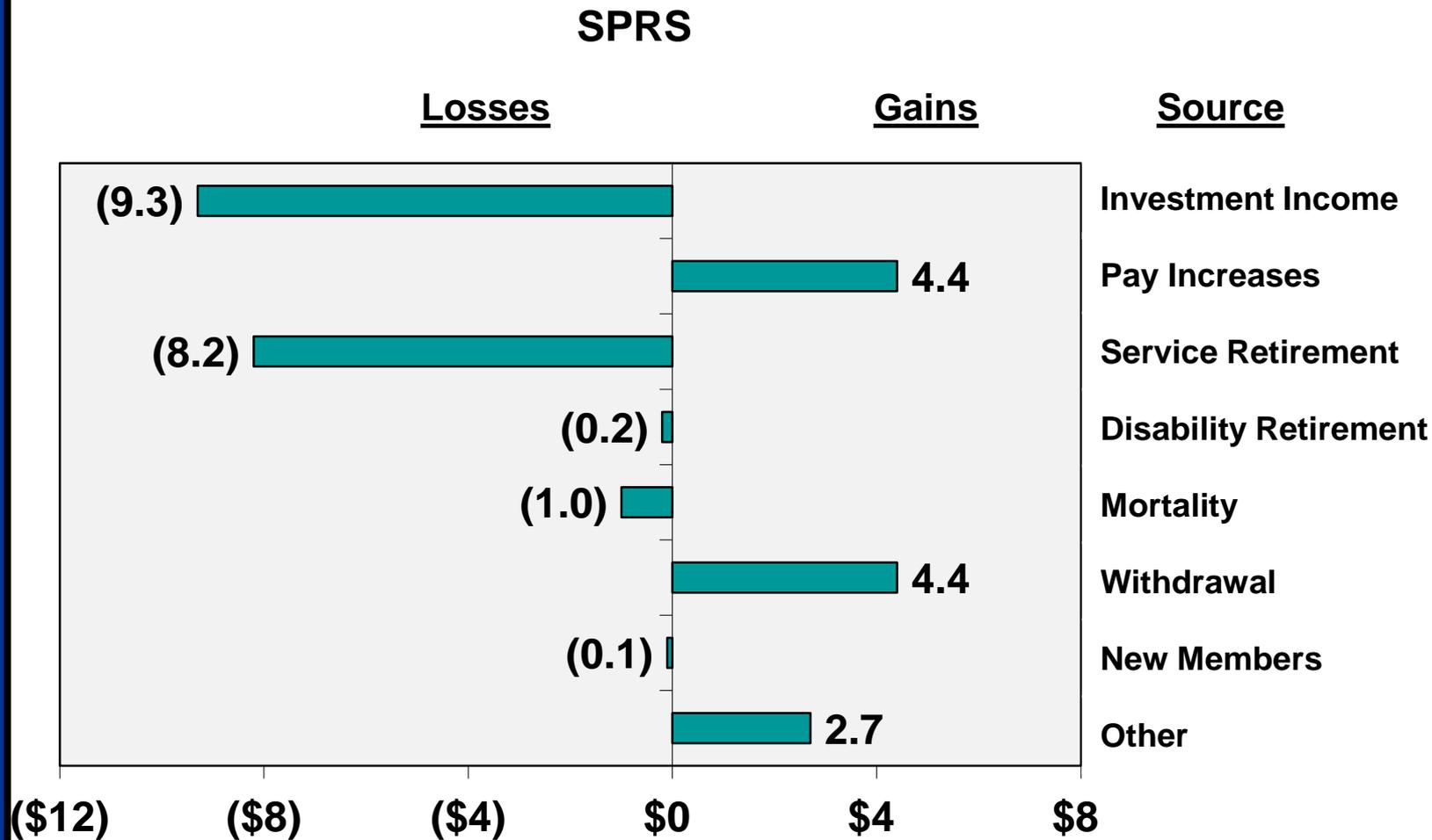
Pension Funding Results



SPRS		
	June 30, 2013	June 30, 2012
Total Normal Cost Rate	16.05%	15.98%
Less Member Rate	<u>8.00%</u>	<u>8.00%</u>
Employer Normal Cost Rate	8.05%	7.98%
Administrative Expenses	0.41%	0.16%
Rate to Amortize UAL	<u>45.44%</u>	<u>45.21%</u>
Total Employer Contribution Rate	53.90%	53.35%
Unfunded Accrued Liability (\$ millions)	\$409.8	\$387.9
Funded Ratio	37.1%	40.1%
Amortization Period	30	25



2013 Pension Gain/Loss Analysis (\$ Millions)





Insurance Results



Comments on Insurance Valuation



- Market value investment return was greater than anticipated for all Funds
- Actuarial value investment return was less than expected for all Funds
- Increase in funded ratios for all Funds
- Per statute, amortization period reset to 30 years
- KERS Non-Hazardous and SPRS reflect 7.75% fully-funded interest rate (previously used 4.50%)
- Investment rate of return assumption is now 7.75% for all Funds
- The total unfunded actuarial accrued liability has been reduced by \$1,014.4 million for KERS Non-Hazardous and \$117.0 million for SPRS due the change in discount rate from 4.50% to 7.75%



Comments on Insurance Valuation



Health Care Trend Assumption

Fiscal Year Ending	Under Age 65	Age 65 and Over
2014	8.5%	7.0%
2015	7.5%	6.5%
2016	6.5%	6.0%
2017	6.0%	5.5%
2018	5.5%	5.0%
2019 and beyond	5.0%	5.0%



Insurance Funding Results



KERS				
	June 30, 2013		June 30, 2012	
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous
Total Normal Cost Rate	2.89%	9.58%	6.06%	10.17%
Less Member Rate	<u>0.20%</u>	<u>0.31%</u>	<u>0.18%</u>	<u>0.24%</u>
Employer Normal Cost Rate	2.69%	9.27%	5.88%	9.93%
Administrative Expenses	0.26%	0.14%	0.31%	0.24%
Rate to Amortize UAL	<u>4.98%</u>	<u>0.56%</u>	<u>6.52%</u>	<u>1.67%</u>
Total Employer Contribution Rate	7.93%	9.97%	12.71%*	11.84%
Unfunded Accrued Liability (\$ millions)	\$1,631.2	\$14.7	\$2,679.2	\$39.0
Funded Ratio	23.4%	96.2%	14.3%	89.9%
Amortization Period	30	30	25	25

* "Full funding" contribution rate = 8.70%



Insurance Funding Results



CERS				
	June 30, 2013		June 30, 2012	
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous
Total Normal Cost Rate	3.55%	9.07%	3.63%	9.50%
Less Member Rate	<u>0.23%</u>	<u>0.17%</u>	<u>0.19%</u>	<u>0.13%</u>
Employer Normal Cost Rate	3.32%	8.90%	3.44%	9.37%
Administrative Expenses	0.20%	0.15%	0.24%	0.14%
Rate to Amortize UAL	<u>1.83%</u>	<u>5.92%</u>	<u>2.16%</u>	<u>6.51%</u>
Total Employer Contribution Rate	5.35%	14.97%	5.84%	16.02%
Unfunded Accrued Liability (\$ millions)	\$815.6	\$544.6	\$857.9	\$535.8
Funded Ratio	66.6%	62.1%	63.8%	60.7%
Amortization Period	30	30	25	25



Insurance Funding Results



SPRS		
	June 30, 2013	June 30, 2012
Total Normal Cost Rate	12.03%	25.52%
Less Member Rate	<u>0.12%</u>	<u>0.10%</u>
Employer Normal Cost Rate	11.91%	25.42%
Administrative Expenses	0.41%	0.42%
Rate to Amortize UAL	<u>9.54%</u>	<u>17.33%</u>
Total Employer Contribution Rate	21.86%	43.17%*
Unfunded Accrued Liability (\$ millions)	\$86.0	\$209.5
Funded Ratio	61.3%	37.3%
Amortization Period	30	25

* "Full funding" contribution rate = 23.35%



CERS Insurance Contribution Rates



- Continuation of ten-year phase-in from 2007 mandated by the Legislature last year.

Fiscal Year Ending June 30	Non-Hazardous Members (Full-funding Rate 5.35%)	Hazardous Members (Full-funding Rate 14.97%)
2015	4.92%	13.58%
2016	5.12%	14.23%
2017	5.32%	14.87%
2018 and later	5.52%	15.52%