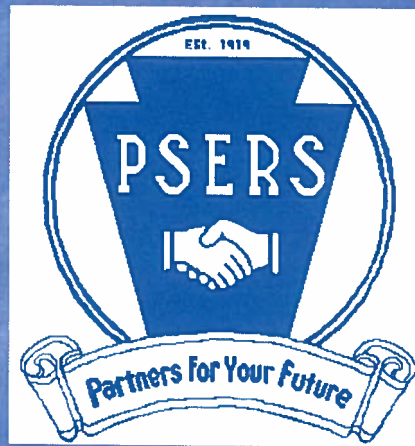


An Update on PSERS

Rate Spike/Plateau Presentation



**Joint Senate and House Policy Committee
Public Pension Hearing
Breinigsville, PA**

March 25, 2010

www.psers.state.pa.us

PSERS' Overview



March 25, 2010

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PSERS' Overview

- The Public School Employees' Retirement System (PSERS) is a governmental, (non ERISA), mandatory, multi-employer, defined benefit pension plan for Pennsylvania school employees
- PSERS was established on July 18, 1917 and thus is one of the oldest public pension plans in the United States
 - PSERS principal plan document" is the Public School Employees' Retirement Code, 24 Pa.C.S. §8101 *et. seq.*
- PSERS is governed by a 15 person Board of Trustees, and has a complement of 310 employees
- PSERS serves over 547,000 members

PSERS manages assets of approximately \$46.7 billion as of December 31, 2009

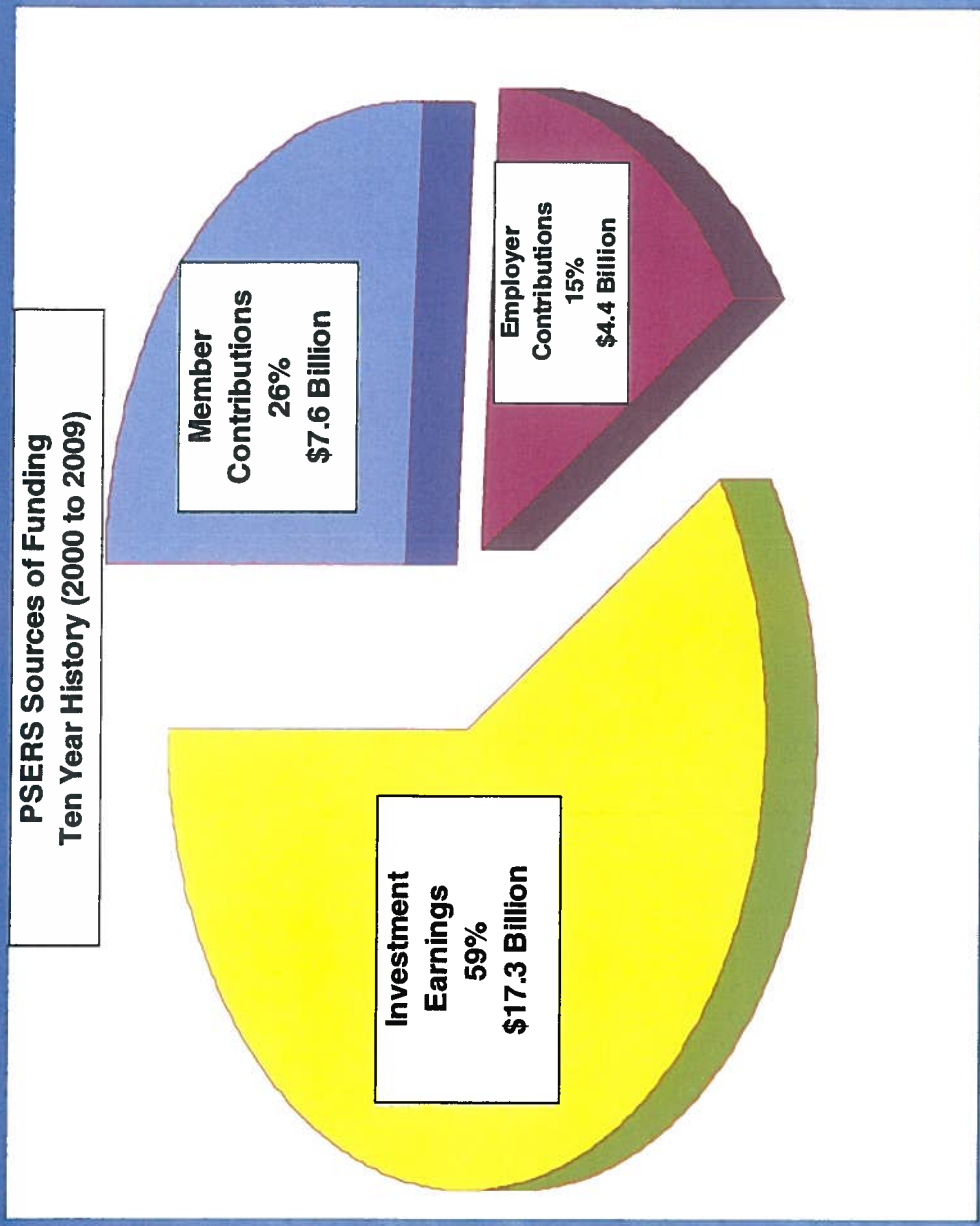
PSERS is the 17th largest state-sponsored defined benefit pension fund in the nation according to *Pensions and Investments Magazine*



PSERS' Overview

- PSERS is funded by three sources:
 - Employee Contributions,
 - Employer Contributions, and
 - Investment Earnings

■ Investment earnings have been the primary source of funding for PSERS benefits, dwarfing the contributions from both school employers and PSERS active members



Over the last 25 years, 20% of PSERS' funding has come from school employers. Another 15% has come from PSERS' active members. All the rest – 65% – has come from investment earnings

PSERS Overview

- PSERS is a large economic engine in the Commonwealth
- PSERS paid out approximately \$4.9 billion in benefits in FY 2009
 - Since nearly 90% of PSERS' retirees reside in the Commonwealth, a substantial portion of PSERS' estimated \$4.9 billion annual payroll remains in Pennsylvania, thus benefiting the economy of the Commonwealth
- In addition PSERS has a continuing commitment to Pennsylvania companies by contracting with Pennsylvania-based investment advisor companies and by investing in Pennsylvania-based companies

PSERS Overview

The following is a table of Pennsylvania-based investments and other statistics at December 31, 2009 (\$'s in millions):

<i>Asset Class</i>	<i>Total PA Market Value (PSERS' Portion)</i>	<i>Total PA Market Value (Total Invested)</i>	<i># of People Employed</i>	<i>Payroll</i>
U.S. Equities	\$ 113.1	\$ 113.1	*	*
Fixed Income	47.3	47.3	*	*
Private Real Estate	218.4	2,578.6	1,357	\$ 32.2
Private Markets:				
Venture Capital	145.3	1,380.5	5,556	\$ 285.6
Private Equity	1,898.2	12,813.5	28,579	\$ 1,110.9
Private Debt	265.3	3,646.1	14,295	\$ 705.7
Total	\$ 2,687.6	\$ 20,579.1	49,787	\$ 2,134.4

* Statistics for publicly traded companies not included due to the difficulty in obtaining the information.

PSERS' Net Plan Assets as of:

June 30, 2002	\$43.6 Billion (audited)
March 31, 2003	\$38.3 Billion (unaudited)
June 30, 2003	\$42.5 Billion (audited)
June 30, 2004	\$48.5 Billion (audited)
June 30, 2005	\$52.1 Billion (audited)
June 30, 2006	\$57.0 Billion (audited)
June 30, 2007	\$67.5 Billion (audited)
June 30, 2008	\$62.7 Billion (audited)
September 30, 2008	\$54.7 Billion (unaudited)
December 31, 2008	\$45.4 billion (unaudited)
June 30, 2009	\$43.2 billion (audited)
December 31, 2009	\$46.7 billion (unaudited)

**S & P 500
Bear Markets/Bull Markets
This Decade**

<u>BEAR MARKET</u>	<u>PEAK</u>	<u>TROUGH</u>	<u>% CHANGE</u>
03/24/2000 → 10/09/2002	1,527.50	776.76	- 49.15%
<u>BULL MARKET</u>	<u>TROUGH</u>	<u>PEAK</u>	<u>% CHANGE</u>
10/09/2002 → 10/09/2007	776.76	1,565.15	+ 101.49%
<u>BEAR MARKET</u>	<u>PEAK</u>	<u>TROUGH</u>	<u>% CHANGE</u>
10/09/2007 → 3/09/2009	1,565.15	676.53	- 56.78%
<u>BULL MARKET</u>	<u>TROUGH</u>	<u>PEAK</u>	<u>% CHANGE</u>
3/09/2009 → 12/28/2009	676.53	1,127.78	+ 66.70%
<u>TOTAL PERIOD</u>	<u>BEGINNING</u>	<u>ENDING</u>	<u>% CHANGE</u>
12/31/1999 → 12/31/2009	1,469.25	1,115.10	- 24.10%

Historic Returns Stocks, Bonds, T-Bills

Historical Returns (%)				
1802-2009*	1926-2009	High Inflation 1970-1979	Bull Market 1980-1999	"Lost Decade" 2000-2009

Total Returns:

Stocks	8.0	9.8	5.9	17.8	-1.0
Bonds	4.9	5.7	7.2	10.0	6.3
T-bills	4.2	3.8	6.4	7.2	3.0
Inflation:	1.4	3.0	7.4	4.0	2.5

Returns minus Inflation:

Stocks	6.6	6.8	-1.5	13.8	-3.5
Bonds	3.5	2.7	-0.2	6.0	3.8
T-bills	2.8	0.7	-1.0	3.1	0.5
Stocks minus Bonds:	3.1	4.1	-1.3	7.8	-7.3

*Jeremy Siegal returns from 1802-2001 ("Stocks for the Long Run" McGraw-Hill 2002) updated with S&P 500 Index and Barclays Capital Aggregate Index
SOURCE: Wilshire Compass

PSERS' Investment Rates of Return as of:

- FY 1999/2000 - 11.9%
- FY 2000/2001 - (7.4)%
- FY 2001/2002 - (5.3)%
- FY 2002/2003 - 2.7%
- FY 2003/2004 - 19.67%
- FY 2004/2005 - 12.87%
- FY 2005/2006 - 15.26%
- FY 2006/2007 - 22.93%
- FY 2007/2008 - (2.82)%
- FY 2008/2009 - (26.54)%

Below PSERS' annual actuarial earnings assumption therefore resulting in an actuarial loss

Over the past 25 years the Fund earned an annualized rate of return of 9.23% which is above the Fund's actuarial rate of return for the same period

Current Employer Contribution Rate



Employer Contribution Rate

- Employer contribution rate for the current fiscal year 2009/2010 - ends June 30, 2010
 - The FY 2009/2010 rate is 4.78%
 - The 4.78% rate is composed of a 0.78% rate for health insurance premium assistance and a pension rate of 4.00%
 - School payroll for FY 2009-2010 is estimated to be \$12.9 billion
- Employer contribution rate for the next fiscal year 2010/2011 - begins on July 1, 2010
 - On December 11, 2009, PSERS Board certified the employer contribution rate for FY 2010-2011
 - The rate for FY 2010-2011 is 8.22% (0.64% for health insurance premium assistance and 7.58% for the pension rate)
 - School payroll for FY 2010-2011 is estimated to be \$13.5 billion
- The Commonwealth reimburses school employers for not less than 50% of the employer contribution rate
 - Statewide average is 55/45% split with the Commonwealth paying 55%

Employer Contribution Rate

- The pension component of the employer contribution rate has been below the employer normal cost for 13 years
 - The “employer normal cost” is the amount needed from the school employers to fund the benefits earned by the active members for that year
 - It can be thought of as the minimum payment that would be made by school employers if the System’s actual experience perfectly matched its economic and demographic operating assumptions
- **PSERS’ funded status is 79.2% as of June 30, 2009, down from 86.0% as of June 30, 2008**

LEADING/LAGGING EMPLOYER CONTRIBUTIONS FOR 2008 * (\$000)

10 Leading States

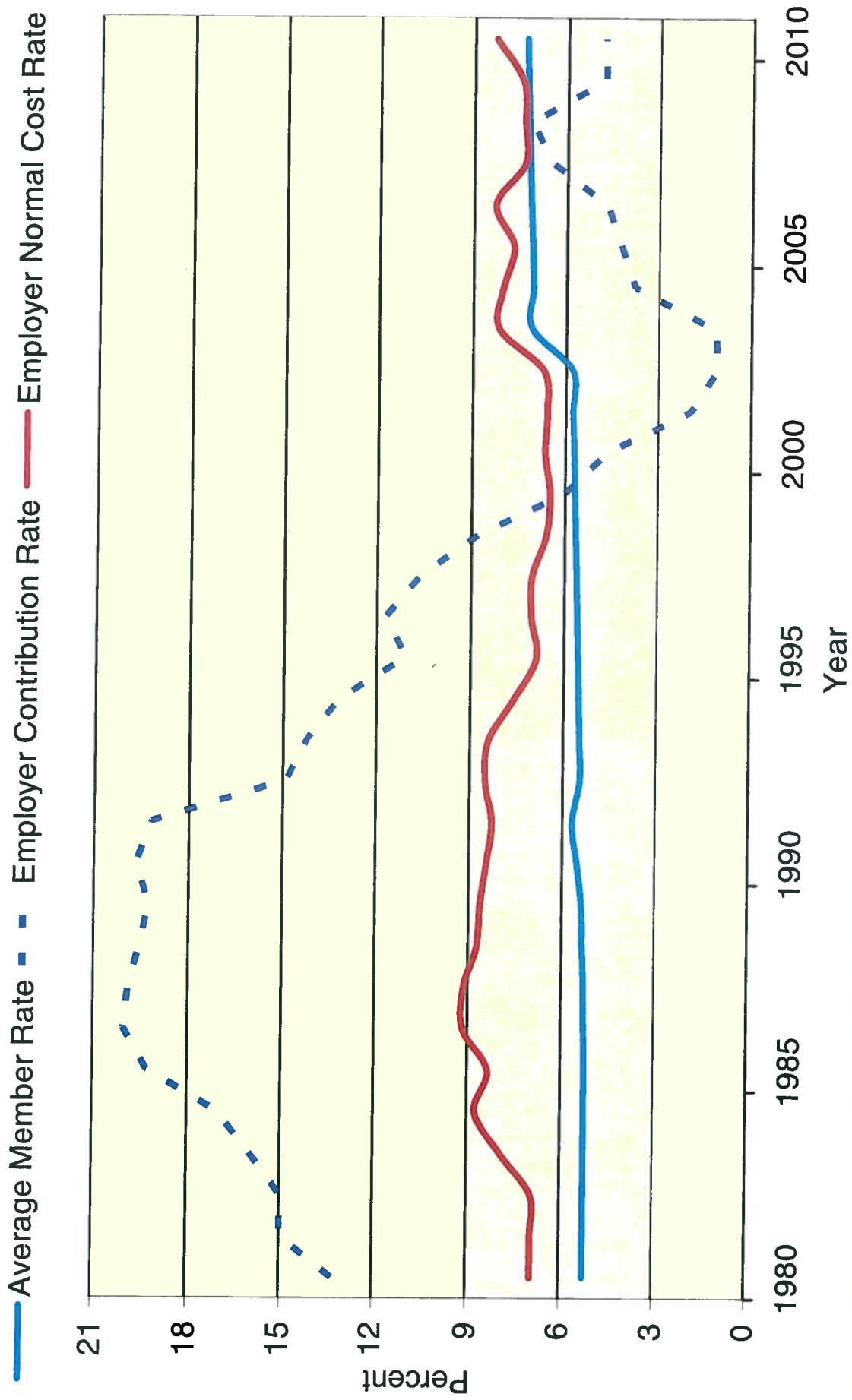
<u>State</u>	<u>Latest Liability</u>	<u>Latest Unfunded Liability</u>	<u>Annual Required Contribution</u>	<u>Latest Actual Contribution</u>	<u>Actual as a % Required</u>
Connecticut	\$41,311,400	\$15,858,500	\$1,248,860	\$3,243,647	259.7%
Louisiana	38,350,804	11,658,734	1,160,051	1,337,933	115.3%
Massachusetts	58,817,155	21,759,452	1,226,526	1,368,788	111.6%
Idaho	11,526,600	772,200	256,400	285,400	111.3%
Michigan	70,354,300	11,514,600	1,249,909	1,392,709	111.1%
Alaska	14,558,255	3,522,661	282,656	300,534	106.3%
West Virginia	13,642,584	4,968,709	481,703	510,258	105.9%
Montana	9,632,853	1,549,503	201,871	211,914	105.0%
Hawaii	16,549,069	5,168,108	488,770	510,727	104.5%
Florida	129,196,897	-1,798,789	3,055,387	3,130,378	102.5%

10 Lagging States

Minnesota	57,841,634	10,771,507	1,036,509	767,295	74.0%
North Dakota	4,193,600	546,500	80,928	59,900	74.0%
Colorado	55,625,011	16,813,048	1,141,081	779,644	68.3%
Kentucky	34,094,002	12,328,429	859,305	569,913	66.3%
Wyoming	6,989,764	1,444,353	163,994	108,017	65.9%
Kansas	20,106,787	8,279,168	607,662	395,588	65.1%
Washington	54,322,900	-179,100	1,545,600	967,900	62.6%
Illinois	119,084,440	54,383,939	3,729,181	2,156,267	57.8%
New Jersey	125,807,485	34,434,055	3,691,740	2,107,243	57.1%
Pennsylvania	105,282,637	13,724,480	2,436,486	986,670	40.5%

*Source: PEW Center on the States, 2010 (2008 Data)

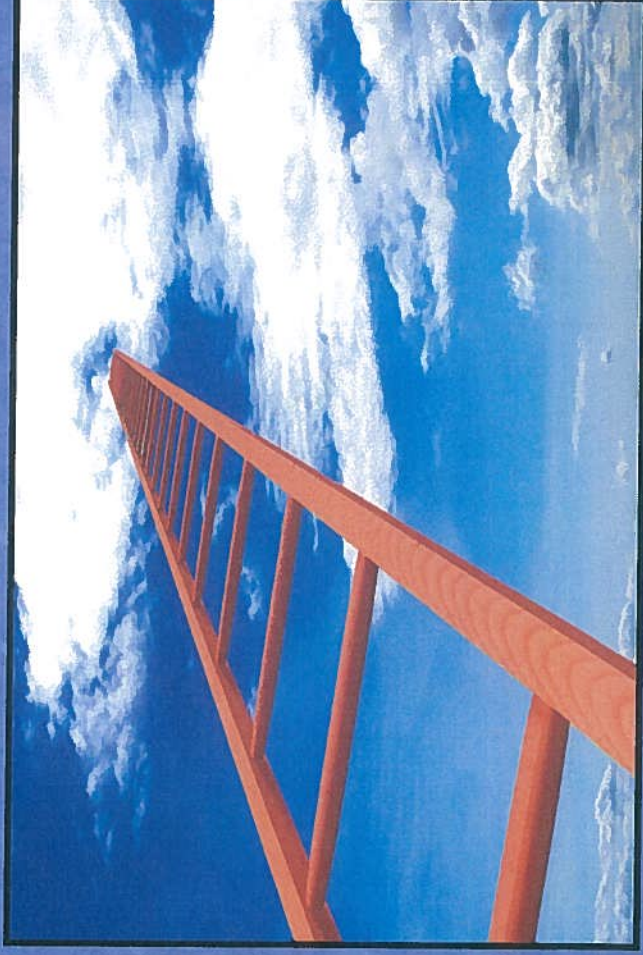
History of PSERS' Contribution Rates as a Percent of Payroll



History of the Employer Contribution Rate from the Peak Rate in 1986

SCHOOL YEAR ENDED	TOTAL EMPLOYER CONTRIBUTION RATE		AVG. EMPLOYEE CONTRIBUTION RATE	
	1986	20.040%	5.27%	
1987	19.900%	5.29%		
1988	19.540%	5.34%		
1989	19.270%	5.37%		
1990	19.680%	5.53%		
1991	19.180%	5.69%		
1992	14.900%	5.46%		
1993	14.240%	5.48%		
1994	13.170%	5.51%		
1995	11.060%	5.55%		
1996	11.720%	5.59%		
1997	10.600%	5.62%		
1998	8.760%	5.65%		
1999	6.040%	5.69%		
2000	4.610%	5.72%		
2001	1.940%	5.77%		
2002	1.090%	6.43%		
2003	1.150%	7.10%		
2004	3.770%	7.08%		
2005	4.230%	7.12%		
2006	4.690%	7.16%		
2007	6.460%	7.21%		
2008	7.130%	7.25%		
2009	4.760%	7.29%		
2010	4.780%	7.32%		
2011	8.22%	7.34%		

Projected Employer Contribution Rate Spike



March 25, 2010

www.psers.state.pa.us

Public School Employees' Retirement System of Pennsylvania
Projection of Contribution Rates and Funded Ratios As of June 30, 2009

(The Board as its January 2009 meeting adopted to reduce the interest rate from 8.50% to 8.25% for the June 30, 2008 valuation and to 8.00% thereafter.)

Fiscal Year Ending June	Appropriation Payroll (thousands)	Fiscal Year Market Rate of Return	Pension Rate Floor	Employee Contribution Rate	Employer Normal Cost	Unfunded Liability Rate	Preliminary Employer Pension Rate	Health Care Contribution	Total Employer Contribution Rate	Projected Total Employer Contribution (thousands)	Funded Ratio	Unfunded Accrued Liability (\$ Millions)
2008	\$ 12,881,244	(2.82) %	4.00 %	7.25 %	6.68 %	(0.24) %	6.44 %	0.69 %	7.13 %		86.0 %	\$ 9,923.0
2009	12,500,000	(26.54)	4.00	7.29	6.68	(3.37)	3.31	0.76	4.76		79.2	15,730.2
2010	12,899,000	8.00	4.00	7.32	7.35	(3.72)	3.63	0.78	4.78	\$ 616,572	73.4	20,898.6
2011	13,510,000	8.00	4.00	7.34	8.08	(0.50)	7.58	0.64	8.22	1,110,522	66.8	27,049.9
2012	13,920,859	8.00	4.00	7.37	8.02	1.85	9.87	0.72	10.59	1,474,219	58.3	35,213.4
2013	14,345,321	8.00	4.00	7.38	8.00	20.50	28.50	0.72	29.22	4,191,703	54.2	40,138.3
2014	14,797,664	8.00	4.00	7.40	7.96	23.42	31.38	0.71	32.09	4,748,570	55.1	40,732.8
2015	15,280,148	8.00	4.00	7.42	7.93	24.97	32.90	0.70	33.60	5,134,130	56.7	40,743.0
2016	15,794,512	8.00	4.00	7.43	7.91	24.68	32.59	0.68	33.27	5,254,834	58.5	40,443.9
2017	16,341,270	8.00	4.00	7.44	7.89	24.18	32.07	0.67	32.74	5,350,132	60.5	39,884.5
2018	16,926,735	8.00	4.00	7.45	7.87	23.54	31.41	0.65	32.06	5,426,711	62.6	39,149.0
2019	17,557,664	8.00	4.00	7.46	7.85	22.78	30.63	0.64	31.27	5,490,282	64.7	38,312.8
2020	18,232,076	8.00	4.00	7.46	7.84	21.97	29.81	0.61	30.42	5,546,198	66.8	37,388.2
2021	18,948,040	8.00	4.00	7.47	7.82	21.15	28.97	0.59	29.56	5,601,041	68.9	36,378.2
2022	19,703,172	8.00	4.00	7.47	7.81	20.35	28.16	0.59	28.75	5,664,662	71.0	35,282.2
2023	20,493,701	8.00	4.00	7.48	7.79	19.57	27.36	0.59	27.95	5,727,989	73.0	34,096.3
2024	21,321,539	8.00	4.00	7.48	7.78	18.81	26.59	0.59	27.18	5,795,194	75.0	32,814.5
2025	22,185,011	8.00	4.00	7.48	7.77	18.08	25.85	0.59	26.44	5,865,717	77.0	31,429.6
2026	23,081,835	8.00	4.00	7.48	7.77	17.38	25.15	0.59	25.74	5,941,264	79.0	29,933.6
2027	24,006,797	8.00	4.00	7.49	7.75	16.71	24.46	0.59	25.05	6,013,703	80.9	28,317.8
2028	24,958,599	8.00	4.00	7.49	7.74	16.07	23.81	0.59	24.40	6,089,898	82.8	26,572.8
2029	25,937,456	8.00	4.00	7.49	7.73	15.46	23.19	0.59	23.78	6,167,927	84.6	24,688.1
2030	26,943,962	8.00	4.00	7.49	7.72	14.88	22.60	0.59	23.19	6,248,305	86.5	22,652.6
2031	27,978,093	8.00	4.00	7.49	7.71	14.33	22.04	0.59	22.63	6,331,442	88.2	20,454.2
2032	29,041,527	8.00	4.00	7.49	7.70	13.81	21.51	0.59	22.10	6,418,177	90.0	18,080.0
2033	30,136,493	8.00	4.00	7.49	7.69	11.18	18.87	0.59	19.46	5,864,562	91.4	16,158.1
2034	31,268,441	8.00	4.00	7.49	7.68	9.89	17.57	0.59	18.16	5,678,349	92.7	14,357.1
2035	32,446,271	8.00	4.00	7.50	7.66	8.57	16.23	0.59	16.82	5,457,463	93.8	12,724.7
2036	33,675,824	8.00	4.00	7.50	7.64	7.42	15.06	0.59	15.65	5,270,266	94.7	11,242.6
2037	34,956,565	8.00	4.00	7.50	7.63	6.11	13.74	0.59	14.33	5,009,276	95.5	10,006.0
2038	36,292,078	8.00	4.00	7.50	7.62	5.67	13.29	0.59	13.88	5,037,340	96.2	8,748.9
2039	37,690,635	8.00	4.00	7.50	7.60	6.45	14.05	0.59	14.64	5,517,909	97.1	7,017.7

Genesis of Rate Spike



March 25, 2010

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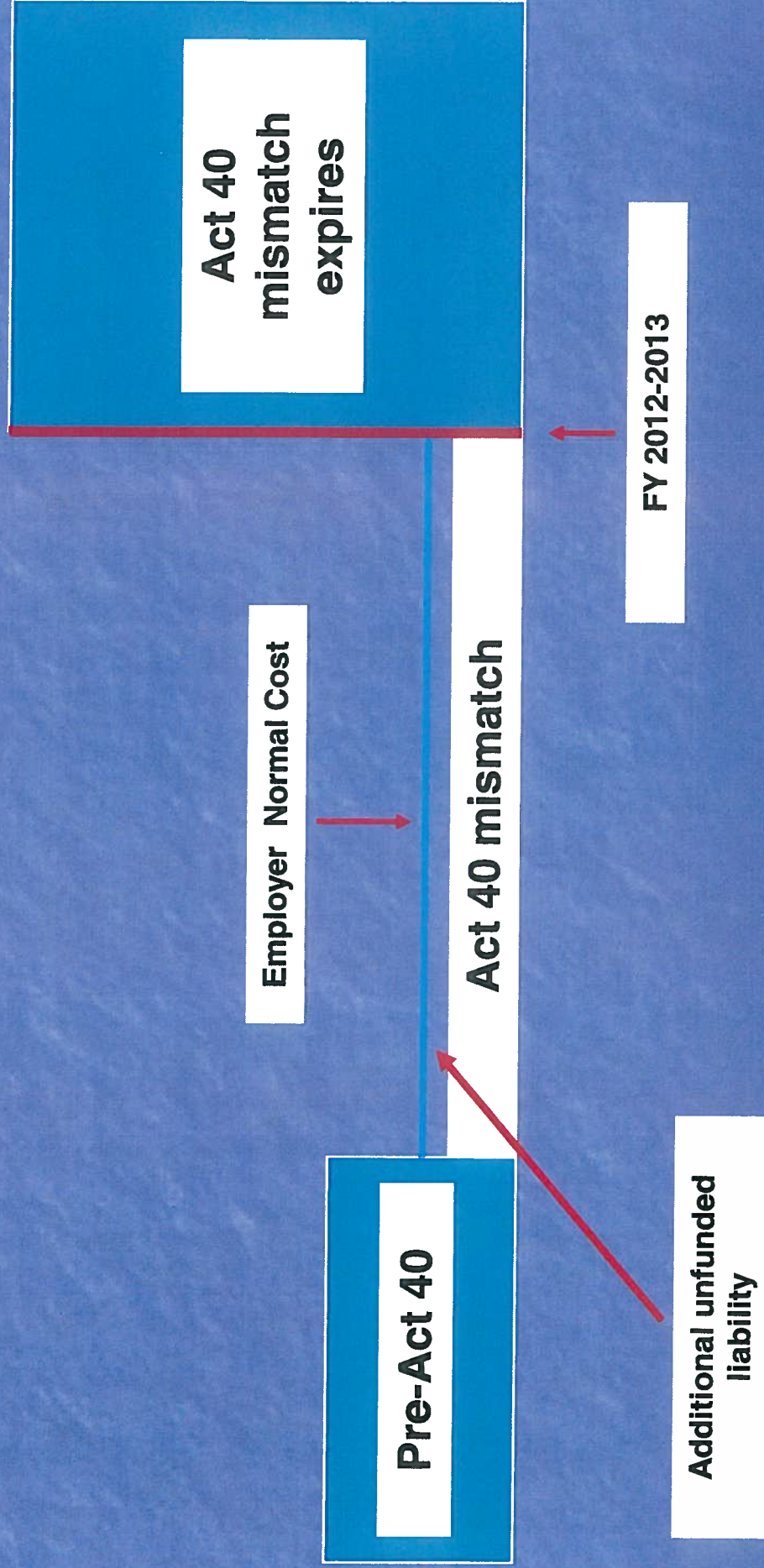
Employer Contribution Rate Spike

- The projected sharp rise in PSERS' employer contribution rate from 10.59% in FY 2011-2012 to an estimated 29.22% in FY 2012/2013 is primarily the result of:
 - The unfunded liabilities primarily created by
 - The FYs' 2001-2003, 2008-2009 down investment markets
 - Earnings assumption change
 - Cost of deferring contributions
 - Act 2001-9 multiplier increase
 - The Act 2002-38 phased COLA
- The actuarial funding changes made by Acts 2002-38 and 2003-40

Employer Contribution Rate Spike

- Without going into details about the funding changes of Act 38 and Act 40, each had the effect of pushing off liability to the future to provide fiscal relief to both the Commonwealth and School Employers during recessionary times
 - Of the two, Act 40 had the greatest impact as it created a mismatch of the amortization of PSERS' actuarial gains and losses for 10 years ending with the start of FY 2012-2013
 - This technique lowered the employer contribution rate below the employer normal cost notwithstanding the existence of unfunded liability
 - This artificial suppression has also resulted in additional unfunded liability for PSERS

Employer Contribution Rate Spike



History of PSERS' Employer Contribution Rate Spike in FY 2012-2013

