



Pennsylvania's State Employees' Retirement System

Rate Spike and Plateau

Causes and Potential Options

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SERS — An Overview

A Defined Benefit Plan

SERS is a governmental, defined benefit pension plan.

As a governmental plan, SERS is not subject to the federal Employee Retirement Income Security Act (ERISA).

As a defined benefit plan, SERS provides benefits that are determined by a fixed formula that takes into account the employee's length of service, age, compensation and a legislatively determined accrual rate.

Employees who retire before reaching Normal Retirement Age incur an early retirement reduction.

SERS' primary "plan document" is the State Employees' Retirement Code, 71 Pa.C.S. §5101 et seq.

The Retirement Code also provides death benefits, a disability retirement benefit for qualified members and survivor benefits.

Actuarial calculations are used to establish the amount of employer contributions required to provide those benefits.



The benefit for current members is a debt of the Commonwealth backed by the full faith and credit of the Commonwealth.

In 1983 Commonwealth Court articulated a standard that remains the law in Pennsylvania today:

Any unilateral substantial change in public employee pension benefits that constitutes a "net detriment" to the employees is a constitutionally impermissible impairment of the employment contract.

SERS Structure

- Established in 1923
- Guided by an 11-member Board
 - six gubernatorial appointees
 - four appointed legislators
 - State Treasurer (ex officio)
- Managed by an Executive Director

As of 12/31/09

- Nearly 220,000 members
 - 110,107 Active Members
 - 109,639 Annuitants & Beneficiaries
- Assets of approximately \$24.4 billion
- Average age of Retirees was 73
(Normal Retirement only – does not include Disability or Early Retirements)

In 2009:

- Benefit payments totaled more than \$2.2 billion
- Approximately 90% of SERS members withdrew all or a portion of their Accumulated Deductions at retirement (member contributions plus 4% statutory interest on those contributions), also referred to as “Option 4 Withdrawal”

Retired Members by Type of Benefit:

Type of Benefit	Number	Avg. Age	Avg. Annual Pension
Normal Retirement	53,478	73	\$22,700
Early Retirement	38,624	62	\$15,000
Disability Retirement	7,674	61	\$13,000
Other (Beneficiary & Survivor)	9,863	75	\$9,000

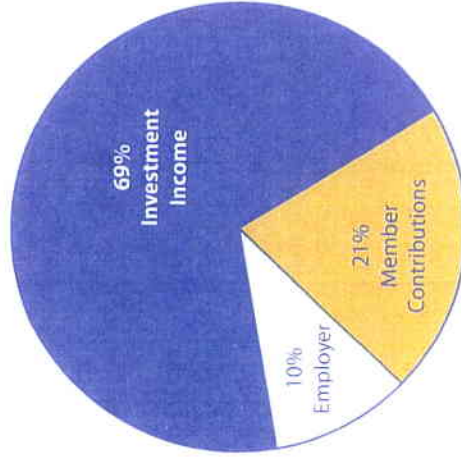
In addition to the Defined Benefit plan discussed here, SERS also administers a voluntary Deferred Compensation Plan for state employees.

Defined Benefit plans are designed to remain financially sound through regular funding each year from each of three funding sources:

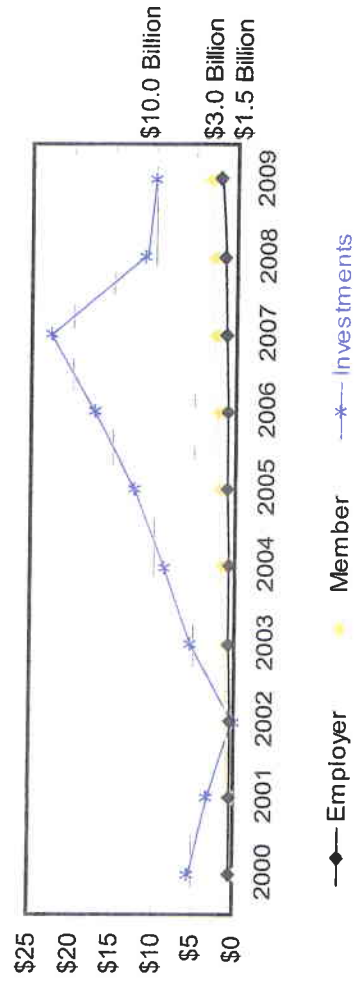
- Employee Contributions
- Employer Contributions
- Investment Earnings

Historically, investment earnings have been the primary source of funding for the System.

SERS Funding
(10-Year History 2000-2009)



Ten-Year Cumulative Additions
(*\$ billions*)



Employee Contributions

Most employees contribute 6.25% of their salary. This rate is fixed by statute, doesn't change year to year and cannot be unilaterally increased.

Investment Earnings

The currently assumed annual rate of return on investments is 8%. That is the rate the Board expects to earn long-term, not in any one year.

The Board establishes the assumed rate based on advice from the staff, investment consultant and actuary.

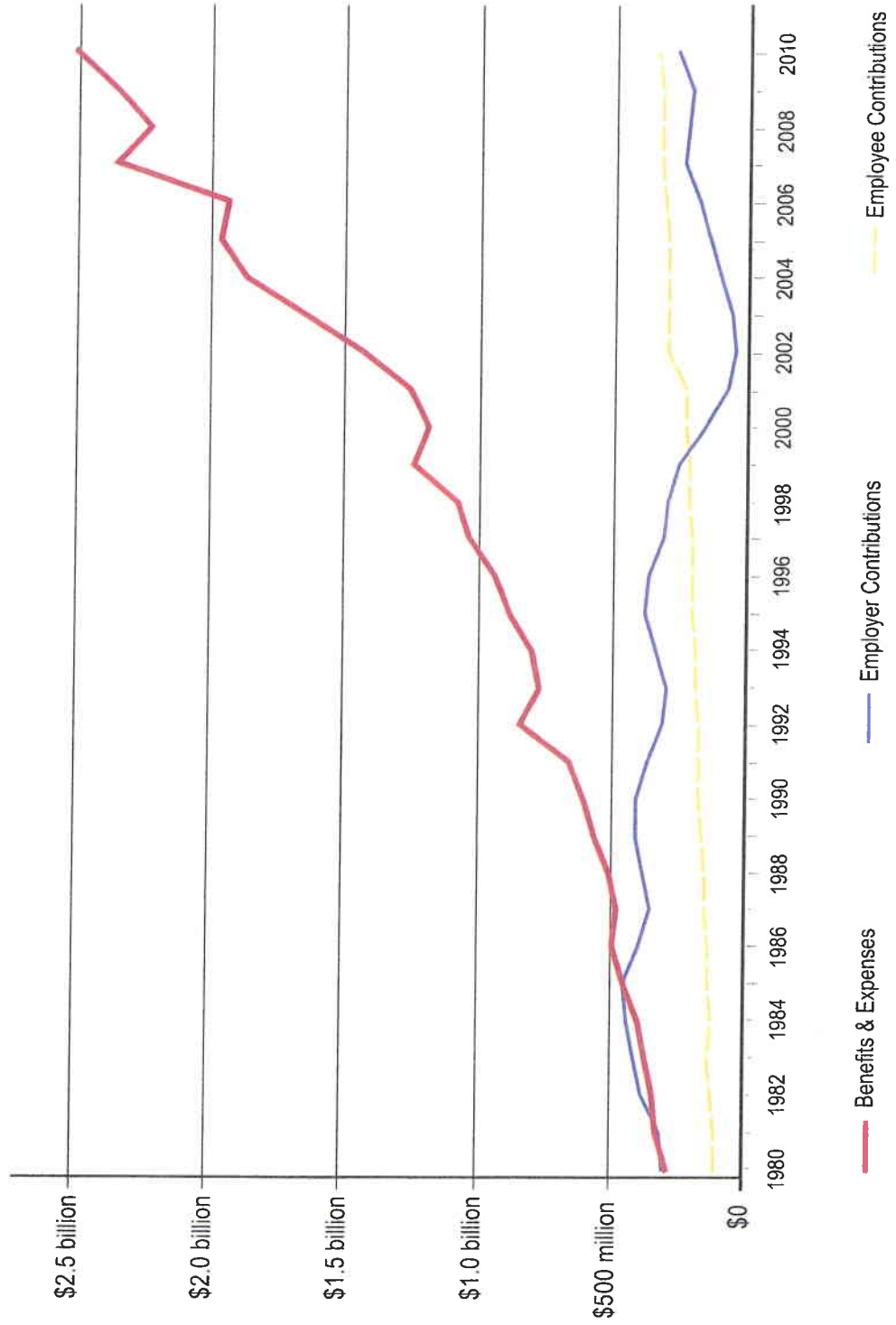
In April 2009, the Board lowered the assumed rate from 8.5% to 8%, believing the lower number to be a more realistic long-term assumption given the current market environment and the Fund's anticipated future cash flow needs.

Employer Contributions

It is impossible to know how much investments will earn in any given year. The Retirement Code recognizes this and deals with it by creating a linkage between investment earnings and employer contributions. The Board adjusts the employer contribution rate each year based on actual investment returns and actuarial experience. When investment earnings exceed the 8% actuarially assumed return and the System is well funded, the Board may be able to reduce the employer contribution rate. Conversely, when investment earnings fall short of assumptions and the System is underfunded (as now), the Board may find it necessary to increase the employer contribution rate.

SERS Benefit Payments Vs. Contributions

SERS' annual benefit payments have increased seven-fold over the last 30 years, and the amount employees contribute has tripled. But employers are paying almost \$20 million per year **less** today than they did in 1980: an expected \$284 million in 2010 versus \$305.5 million in 1980.



Financial Status

Benefit Payments & Contributions

SERS Benefit Payments Vs. Contributions (\$ in thousands)

Calendar Year	Benefits & Expenses	Employer Contributions	Member Contributions	Calendar Year	Benefits & Expenses	Employer Contributions	Member Contributions
1980	\$297,731	\$305,547	\$110,531	2000	\$1,198,094	\$168,002	\$231,667
1981	328,701	325,688	116,283	2001	1,266,016	76,710	240,528
1982	350,065	383,519	121,589	2002	1,450,273	50,831	304,233
1983	371,819	413,810	135,841	2003	1,655,992	68,669	308,014
1984	399,697	439,836	121,929	2004	1,880,499	106,703	309,923
1985	463,708	460,435	132,695	2005	1,966,347	148,375	305,624
1986	499,879	407,276	139,454	2006	1,943,294	196,420	317,790
1987	490,080	366,463	147,061	2007	2,361,116	243,936	333,818
1988	520,534	382,413	153,131	2008	2,231,299	235,288	336,833
1989	573,129	416,513	164,653	2009	2,298,000	245,000	348,000
1990	606,925	418,655	175,422	2010	2,507,000	284,000	347,000
1991	664,052	381,347	182,611	2011	2,659,000	436,000	358,000
1992	850,753	319,093	187,167	2012	2,812,000	1,139,000	370,000
1993	781,324	304,122	190,360	2013	2,965,000	1,894,000	382,000
1994	811,937	342,927	193,204	2014	3,121,000	2,026,000	395,000
1995	894,143	384,506	201,719	2015	3,274,000	2,050,000	408,000
1996	943,406	373,902	209,581	2016	3,434,000	2,094,000	421,000
1997	1,037,263	324,093	212,556	2017	3,587,000	2,131,000	435,000
1998	1,080,376	310,501	221,618	2018	3,741,000	2,163,000	449,000
1999	1,248,494	270,718	224,928	2019	3,893,000	2,191,000	464,000

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In the last decade the Fund had net investment earnings of \$10 billion and received \$4.6 billion in contributions. But payouts totaled more than \$18 billion so the Fund value declined.

Additions and Deductions to Plan Net Assets (\$ millions)

Calendar Year	Employer Contributions	Employee Contributions	Total Contributions	Investment Earnings	Benefits and Expenses	Market Value
2009 ^v	\$245	\$348	\$593	\$3,368	\$(2,298)	\$24,459
2008	235	337	572	(11,061)	(2,231)	\$22,796
2007	244	334	578	5,246	(2,361)	\$35,516
2006	196	318	514	4,730	(1,943)	\$32,053
2005	148	306	454	3,623	(1,966)	\$28,752
2004	107	310	417	3,568	(1,880)	\$26,641
2003	68	308	376	4,936	(1,656)	\$24,536
2002	51	304	355	(2,731)	(1,450)	\$20,880
2001	77	240	317	(2,225)	(1,266)	\$24,706
2000	168	232	400	585	(1,198)	\$27,880
10 Year Total	\$1,539	\$3,037	\$4,576	\$10,039	\$(18,249)	*

^v/2009 Unaudited

*Ten year net additions and deductions were \$(3,634).

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Financial Status

Projected Funded Status & Contributions

SERS Projected Funded Status & Employer Contributions

Assuming 8% Investment Return

Calendar Year	Payout Projection		Funding Status		Employer Contributions Projection			
	Benefits & Expenses (\$ in billions)	Funded Ratio	UAL (\$ in billions)	Fiscal Year	Employer Contribution Rate	Expected FY Payroll (\$ in millions)	Expected FY Contribution (\$ in millions)	
2008	\$2.2	89.0%	\$3.8	09/10	4.0%	\$5,660.3	\$226.4	
2009	2.3	84.6	5.5	10/11	5.4	5,847.1	315.4	
2010	2.5	79.0	7.7	11/12	7.8	6,040.1	472.7	
2011	2.7	72.1	10.6	12/13	26.9	6,239.4	1,676.1	
2012	2.8	65.9	13.1	13/14	29.5	6,445.3	1,903.5	
2013	3.0	67.2	12.9	14/15	28.1	6,658.0	1,869.5	
2014	3.1	67.9	13.0	15/16	27.8	6,877.7	1,913.5	
2015	3.3	68.8	12.9	16/17	27.5	7,104.7	1,950.4	
2016	3.4	69.8	12.8	17/18	27.0	7,339.1	1,981.6	
2017	3.6	70.9	12.6	18/19	26.5	7,581.3	2,009.6	
2018	3.7	72.0	12.4	19/20	26.0	7,831.5	2,037.9	
2019	3.9	73.1	12.1	20/21	25.6	8,089.9	2,066.6	
2020	4.1	74.2	11.8	21/22	25.1	8,356.9	2,095.9	
2021	4.2	75.3	11.5	22/23	24.6	8,632.7	2,126.0	
2022	4.4	76.3	11.2	23/24	24.2	8,917.5	2,157.1	
2023	4.6	77.4	10.8	24/25	23.8	9,211.8	2,189.1	
2024	4.8	78.5	10.4	25/26	23.4	9,515.8	2,222.2	
2025	5.0	79.6	10.0	26/27	23.0	9,829.8	2,256.4	
2026	5.2	80.7	9.5	27/28	22.6	10,154.2	2,291.7	
2027	5.5	81.8	9.0	28/29	22.2	10,489.3	2,328.2	
2028	5.7	83.0	8.4	29/30	21.8	10,835.5	2,365.9	
2029	5.9	84.3	7.8	30/31	21.5	11,193.0	2,404.8	
2030	6.2	85.5	7.2	31/32	21.2	11,562.4	2,445.0	
2031	6.5	86.9	6.5	32/33	19.0	11,944.0	2,272.8	
2032	6.7	88.0	5.9	33/34	18.0	12,338.1	2,221.7	
2033	7.0	88.9	5.4	34/35	17.5	12,745.3	2,235.6	

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Employer Contribution Rate

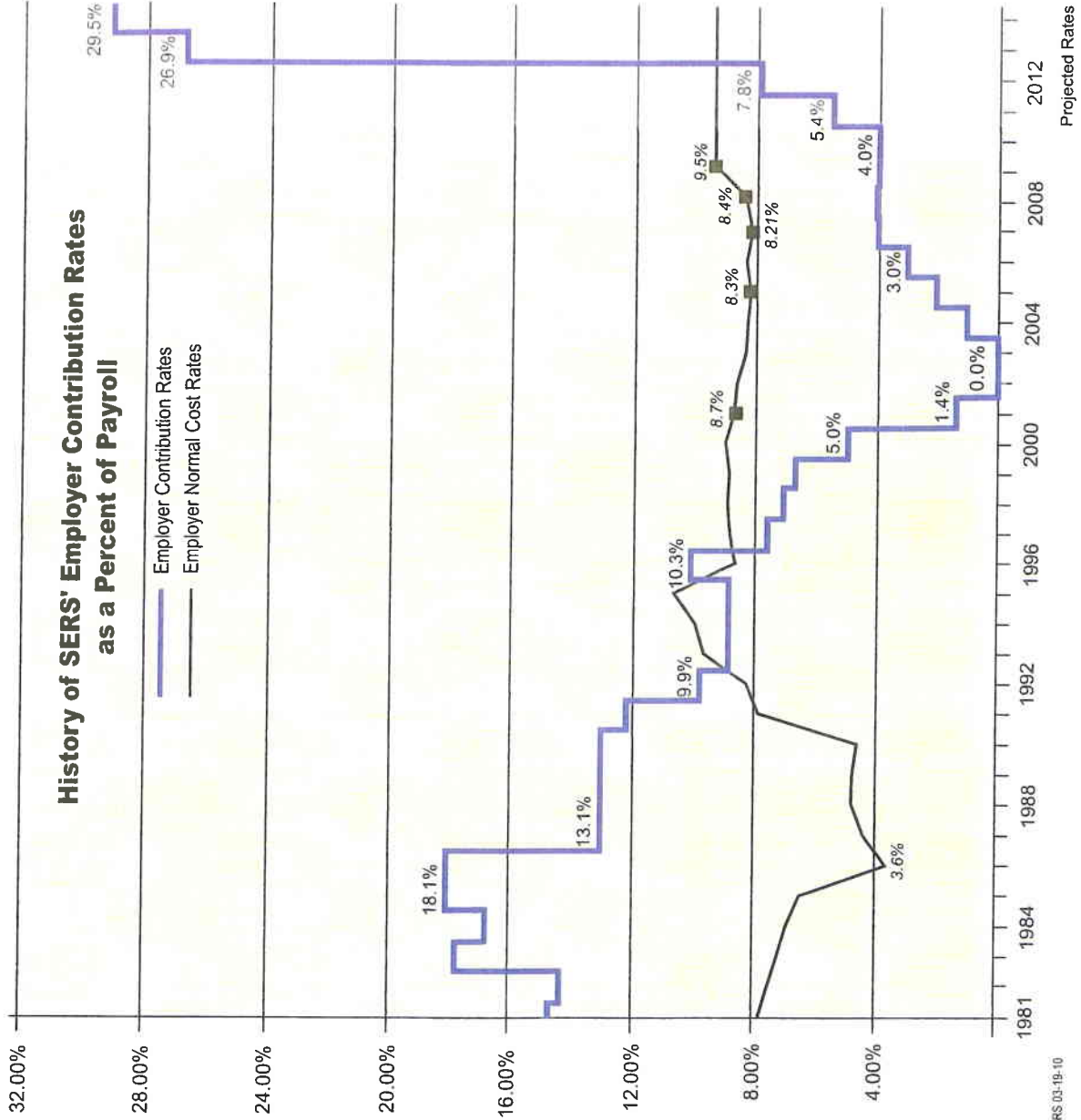
Rate History

The SERS composite employer rate, which had exceeded 12% as recently as 1990 and was as high as 18% in the early 1980s, dropped to zero for two years.

Since 2003, rates have been artificially suppressed by Act 40.

For 15 years, employers have contributed well below the Employer Normal Cost rate.

Now rates are about to spike.

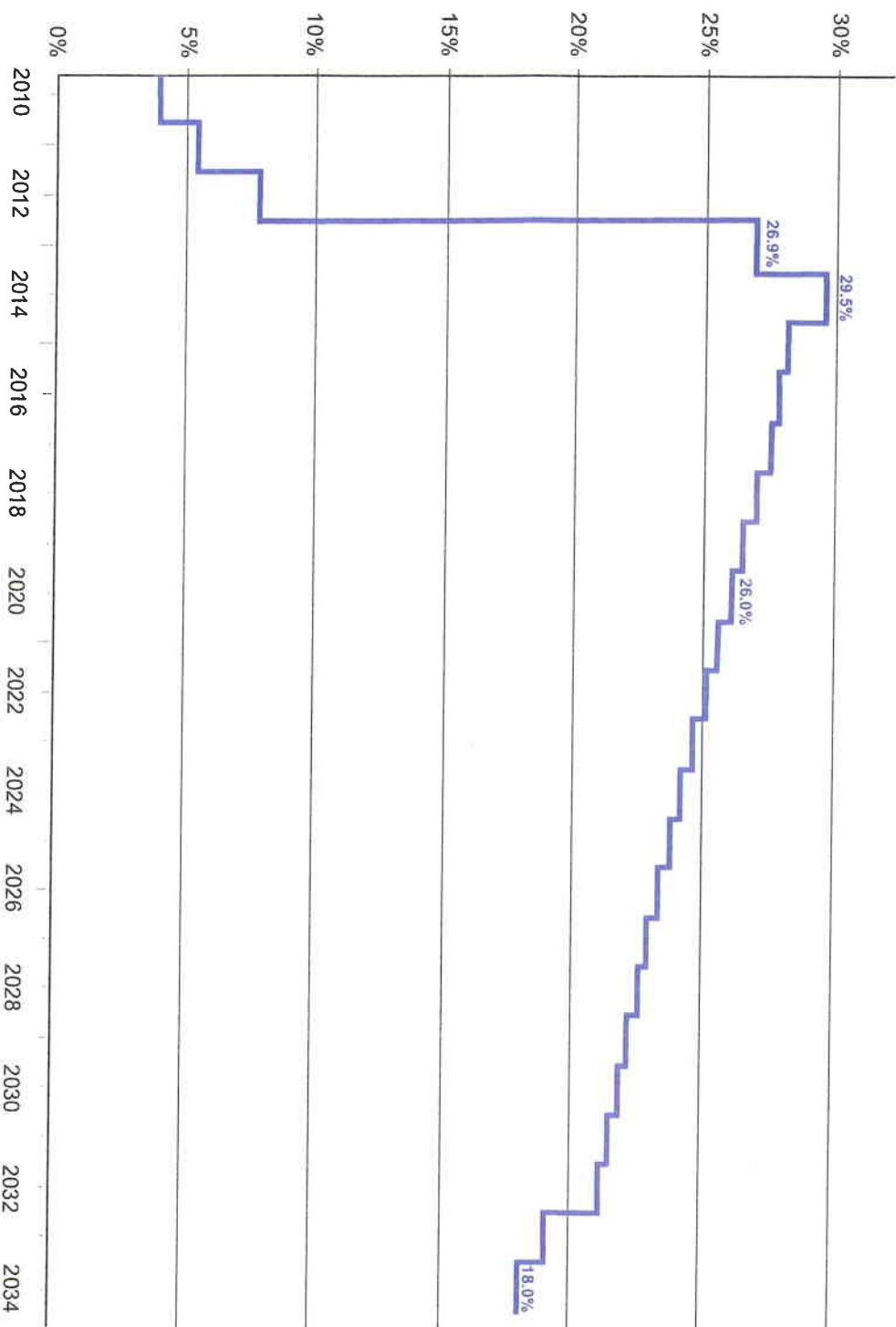


Employer Contribution Rate

Projected Rate Spike and Plateau Estimates

Contribution Rate
(percent of payroll)

SERS' Projected Employer Contribution Rates



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Rate Spike Development & Potential Options

Development

The projected sharp rise in SERS' employer contribution rate from 7.8% in FY 2011/12 to an estimated 26.9% in FY 2012/13 and then nearly 30% in FY 2013/14 is primarily the result of:

- **The unfunded liabilities created by:**
 - 2000-2002 down investment markets
 - Global economic downturn in 2008 resulting in -28.7% investment return
 - Act 2001-9 multiplier increase
 - Actuarial assumption changes
 - Act 2002-38 phased COLA
 - Demographic and salary experience

- **The change made by Act 2003-40 to SERS' actuarial funding methodologies**

Act 40

Delayed the payment of liabilities into the future to provide fiscal relief to the state. It artificially reduced employer contribution rates in the short-term by recognizing gains over 10 years, ending FY 2011/12, but recognizing liabilities over 30 years.

As the unfunded liabilities have grown through recent investment losses and benefit enhancements, Act 40 has postponed paying for those costs.

Due to Act 40, the current 4% Employer Contribution Rate is less than half the Employer Normal Cost.

Employer Normal Cost - the amount needed from 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 employers if the System's actual experience perfectly matched its economic and demographic operating assumptions **and** there was no unfunded liability.

Rate Spike Development & Potential Options

Current Rate Is Artificially Low

SERS Employer Contribution Rate Is Artificially Low

Multiple costs are calculated in determining SERS employer rate but all those costs are offset by the rate-suppressing effect of Act 40. Here is the calculation behind the current rate.

Rate-Suppressing Effect of Act 40

Costs expressed as a percent of employer payroll

Expenses

Cost of Benefits

Cost to pay for benefits employees are earning this year ("Normal Cost")

This year's cost of Act 9 retroactive benefits (30-year amortization)

This year's cost to pay off COLAs previously awarded:

Pre-2001 COLAs (COLAs granted as long ago as 1984 still have not been fully paid for)

2002/2003 COLA

This year's total cost of COLAs (10-year amortization)

This year's total cost to provide legislatively guaranteed benefits

Cost of Actuarial Adjustments Excluding Investments

This year's cost of reducing the assumed rate of return (30-year amortization)

This year's cost of other actuarial gains and losses (30-year amortization)

This year's total cost of these Actuarial Adjustments

Cost of post 2001 Investment Performance

This year's cost of post-2001 net Investment losses (5-year smoothing, 30-year amortization)

2009/10 Expenses Subtotal

Rate Suppression Offset (as of the Dec. 31, 2008 valuation)

Reduction in this year's rate dictated by Act 2003-40 accelerated recognition of pre-2001 gains (10-year amortization)

Net Actuarially Calculated Rate

Board Adopted Rate (Statutory Rate Floor)

Add To Rate

9.51%

3.78%

3.05%

1.73%

4.78%

18.07%

2.57%

-0.68%

1.89%

4.29%

24.25%

-20.62%

3.63%

4.00%

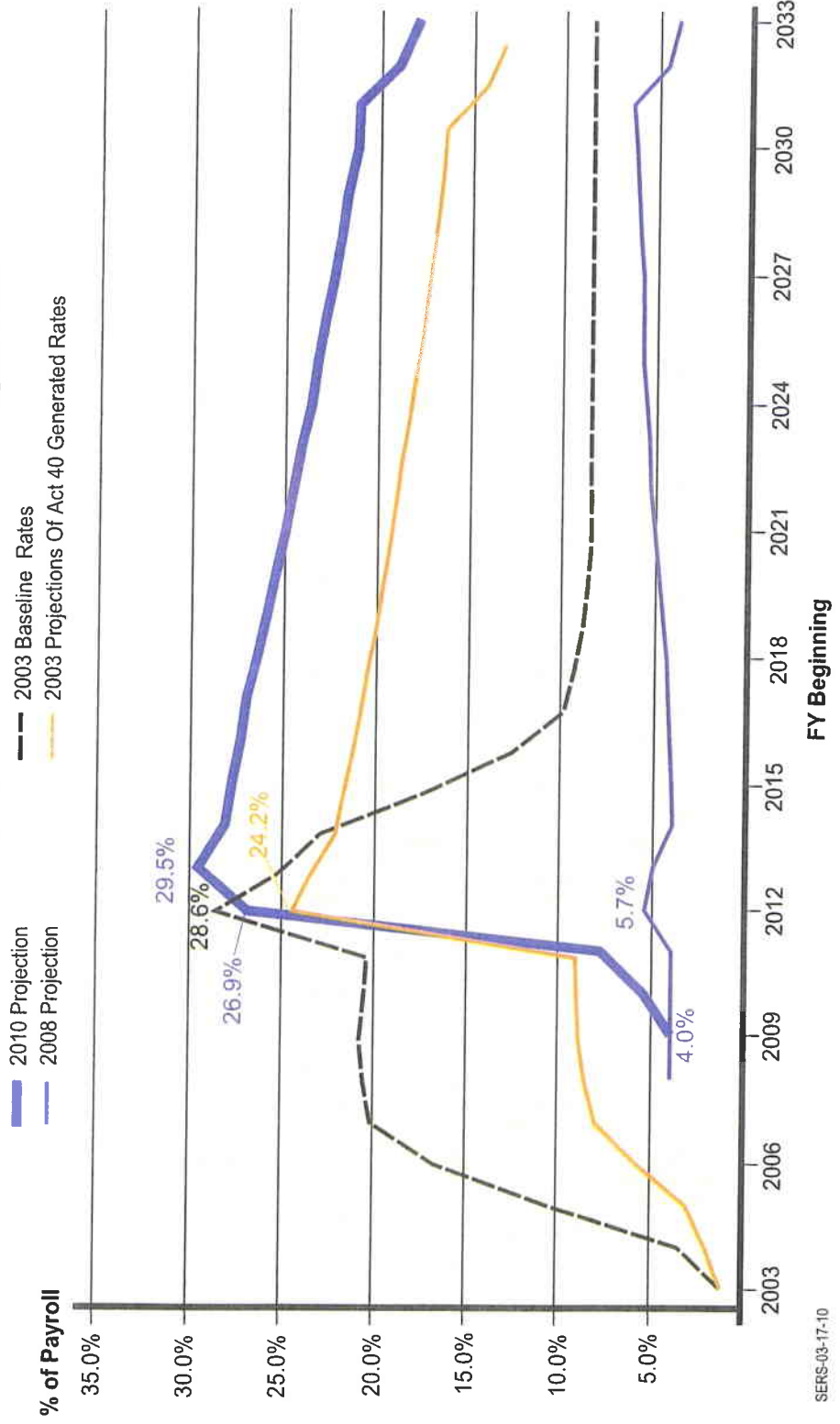
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Rate Spike Development & Potential Options

2003 Rate Spike Projection

The Commonwealth also was facing a SERS rate spike in 2003. Act 40 was passed as a way to postpone the spike, in hopes another bull market would close the funding gap. That was happening – until the 2008 global economic collapse caused the spike to return.

Changes in SERS Employer Contribution Rate Projections



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Rate Spike Development & Potential Options

Investment Performance

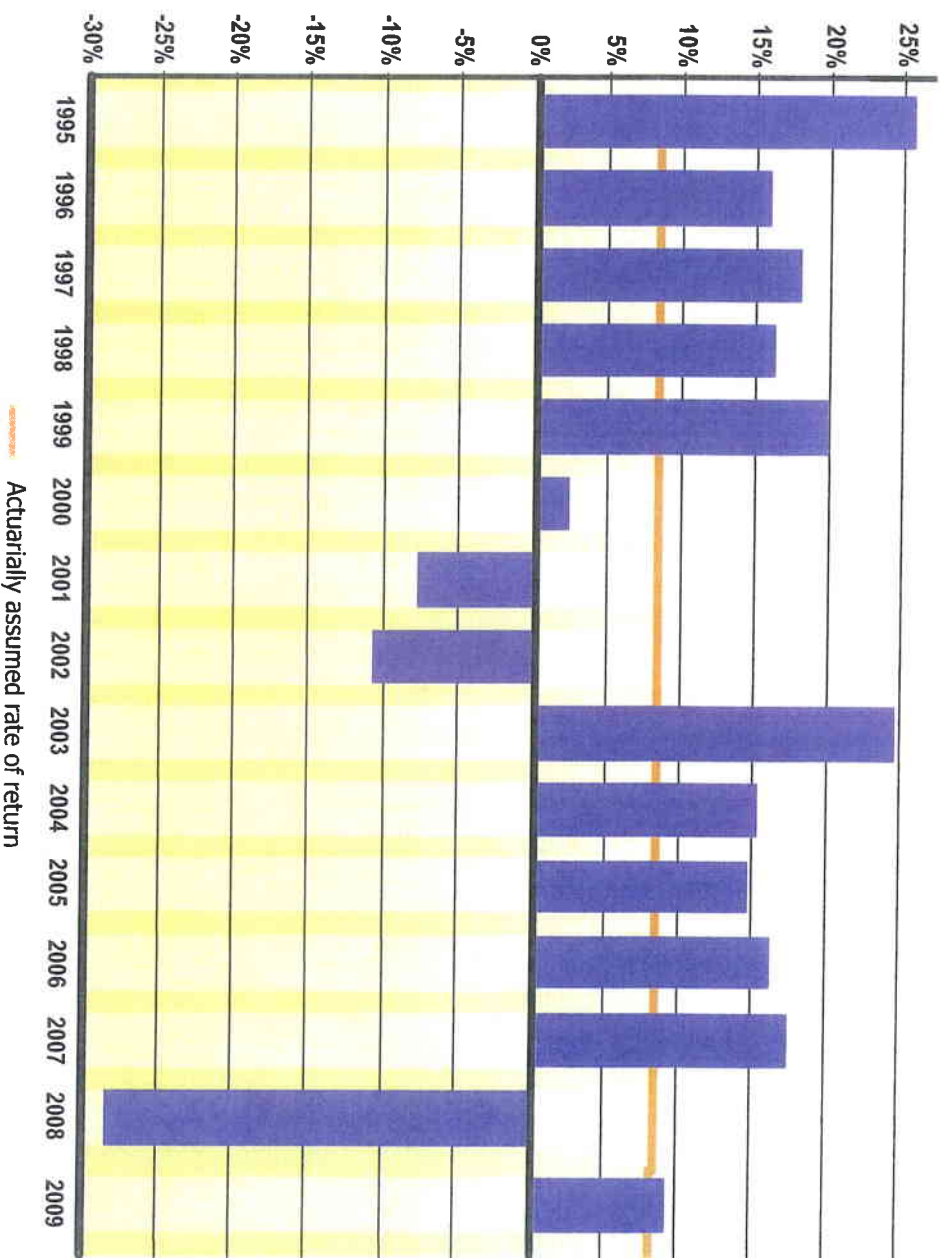
Investment performance varies widely year-to-year but long-term performance has closely matched expectations. SERS' 20-year annualized return is 8.6%.

In 10 of the 13 years prior to the global economic collapse of 2008, SERS' investment program resulted in returns in excess of the actuarial assumed rate of return, ranging as high as 25.2%.

That performance allowed the Fund to meet obligations while lowering employer contribution rates.

The global economic downturn of 2008, however, had a serious adverse impact on the Fund. The 2009 return once again exceeded the Fund's assumed long-term rate of return but it is not reasonable to expect future returns strong enough to eliminate the underfunding.

SERS Investment Performance
(In percent, net of fees)



Rate Spike Development & Potential Options

Potential Options

Fundamentally, there are only three ways to address the rate spike and plateau funding issues:

1. Increase Funding
2. Decrease Liabilities
3. Defer Liabilities

Rate Spike Development & Potential Options

Potential Options - Increase Funding

Increase Investment Returns

Unlikely under current market conditions

Current projections are based on long-term assumed return of 8% per year.

Increase Employee Contributions

- **Can only occur prospectively for new members entering the System**

The Courts have ruled that pension benefits are contracts with the existing members of the System, regardless of vesting, and subject to constitutional impairment of contract prohibition (Article I, Section 17)

- **Would not have an impact on existing unfunded liabilities of the System**

Increase Employer Contributions

- **Employer Rates are already projected to increase significantly in FY 2012/13 and are expected to stay above 20% well into the future**

Unlikely the state can afford even higher costs without significant and perhaps prohibitive tax increases

Rate Spike Development & Potential Options

Potential Options - Increase Funding

Seek Other Sources of Funding

- **Federal Stimulus Funds**

Unclear if these funds can legally be directly used to fund pension contributions

- **Dedicate revenue from an existing revenue source to supplement employer contributions**

- Example: HB 2307 (Barbin) Johnstown Flood Tax reallocation
- Disadvantage: Denies the General Fund of revenue

- **Pension Obligation Bond (POB)**

POBs are debt instruments through which the state borrows money from investors in the bond market. The lump sum the government receives from the sale of the bonds is then used to fund all or a portion of the Unfunded Liabilities of the pension System.

- Significant risk involved to the state if the pension plan's investment returns are less than the debt costs on the bond issue
- Potential legal issue whether the Commonwealth can issue a POB – may require the approval of the voters in a referendum

One-Time Cash Infusion Projections

Additional Infusion Required In 2009 To Reduce Contributions Below Target
(\$ in billions)

Target Percent of Payroll	Amount Needed (30-Yr Amortization)		Amount Needed (10-Yr Amortization)	
	To Keep 2012/13 Contribution Rate Below Target	To Keep All Future Contribution Rates Below Target	To Keep 2012/13 Contribution Rate Below Target	To Keep All Future Contribution Rates Below Target
<20%	\$4.5	\$6.3	\$2.7	\$10.6
<15%	\$7.6	\$9.5	\$4.5	\$12.9
<10%	\$10.6	\$13.0	\$6.4	\$15.3

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Rate Spike Development & Potential Options

Potential Options - Decrease Costs/Liabilities

SERS Future Cost Reductions & Resulting Rate Projections*

Applied to New Entrants Into the System

Year	Fiscal Year	Current Law	Ten-Year Vesting	2% Multiplier	1% Multiplier
2008	2009/2010	4.0	4.0	4.0	4.0
2009	2010/2011	5.4	5.4	5.2	4.7
2010	2011/2012	7.8	7.8	7.5	7.0
2011	2012/2013	26.9	26.8	26.5	25.9
2012	2013/2014	29.5	29.5	29.2	28.4
2013	2014/2015	28.1	28.1	27.7	26.8
2014	2015/2016	27.8	27.8	27.4	26.4
2015	2016/2017	27.5	27.4	26.9	25.9
2016	2017/2018	27.0	27.0	26.5	25.4
2017	2018/2019	26.5	26.5	25.9	24.7
2018	2019/2020	26.0	26.0	25.4	24.1
2019	2020/2021	25.6	25.5	24.9	23.6
2020	2021/2022	25.1	25.0	24.4	23.0
2021	2022/2023	24.6	24.6	23.9	22.4
2022	2023/2024	24.2	24.1	23.4	21.9
2023	2024/2025	23.8	23.7	23.0	21.4
2024	2025/2026	23.4	23.3	22.5	20.9
2025	2026/2027	23.0	22.9	22.1	20.4
2026	2027/2028	22.6	22.5	21.7	19.9
2027	2028/2029	22.2	22.1	21.3	19.4
2028	2029/2030	21.8	21.8	20.9	19.0
2029	2030/2031	21.5	21.4	20.5	18.6
2030	2031/2032	21.2	21.1	20.2	18.2
2031	2032/2033	19.0	19.0	18.0	16.0
2032	2033/2034	18.0	17.9	17.0	14.9
2033	2034/2035	17.5	17.5	16.5	14.3

*Assumes no future COLAs
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- Convert To A Defined Contribution or Hybrid Plan**
- **Can only occur prospectively for new members entering the System**
The Courts have ruled that pension benefits are contracts with the existing members of the System, regardless of vesting, and subject to constitutional impairment of contract prohibition (Article I, Section 17)
 - **Savings, if any, depend on benefit structure of new plan**
- Modify/Cut Benefit**
- **Can only occur prospectively for new members entering the System**
The Courts have ruled that pension benefits are contracts with the existing members of the System, regardless of vesting, and subject to constitutional impairment of contract prohibition (Article I, Section 17)
 - **Table (right) shows impact of reducing current 2.5%/year benefit accrual rate to 2% or 1%**
 - **Raising vesting period from 5 years to 10 often mentioned as a solution but has almost no impact on rates (see table)**
- Each would reduce the long-term liability of the System, but have no impact on the current unfunded liability.**