

Understanding State Pension Systems

Policy makers are focusing on the state's two public employee pension systems and the state's required contribution amount that will be part of the 2013/14 budget. The state's contribution amount should not be a surprise to anyone since the amount was established by law in 2010 to make up for poor investment returns below expectations during recessions, enhanced member benefits and artificially suppressed employer contributions (see charts on page 8). It is also worth noting that public employees have consistently fulfilled their contracted obligation by contributing 100 percent of their share toward the pension systems.

This document should help develop a common understanding of the state pension issues and help foster a lively and informed discussion.

INTRODUCTION

Attractive state retirement systems help recruit and retain talented employees needed to provide quality public services, such as teaching our children, policing our streets and highways, fixing our roads, protecting our environment, and prosecuting lawbreakers. Retirement systems also provide a secure income to these employees and boost local economies (see page 3).

The legislature and the governor recognize the challenges facing the commonwealth's public pension systems. There is no single reason for the systems' growing unfunded liabilities: the downturn in the investment markets from 2000-2002 (largely related to the collapse of the internet dot.com bubble) and the global economic crisis of 2008 which plunged the nation's economy into the worst recession since the Great Depression, are two main reasons. However, increasing members' benefits in 2001, cost-of-living adjustments for retired members in 2002, and accounting and actuarial changes in 2003, have also been key factors.

The commonwealth has two state-funded governmental defined benefit public pension systems: the Public School Employees' Retirement

System (PSERS) which includes teachers and school employees; and the State Employees' Retirement System (SERS) which includes state employees ranging

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1 in 12 Pennsylvania adults benefit from the two state pension systems.

PSERS and SERS represent 818,000 workers and retirees — that's <u>nearly 10 times larger</u> than the populations of Forest, Fulton, Juniata, Montour, and Potter counties combined.

from clerks to park rangers and nurses to state police troopers.

Together, these two systems support more than 818,000 workers and retirees and hold more than \$86 billion in assets under management. However, the two systems have unfunded pension liabilities estimated to be approximately \$44 billion based on the most recent actuarial assessments. Unfunded pension liabilities refer to the difference between what the pension plans promise to pay in retirement benefits and the funds set aside to meet those promises.

PSERS' unfunded liability is \$29.5 billion and is 66.4 percent funded, according to the latest actuarial valuation.

SERS' unfunded liability is \$14.7 billion and is 65.3 percent funded, according to the latest actuarial valuation.

Many pension experts consider a funded ratio (actuarial value of assets divided by actuarial accrued liabilities) of about 80 percent or better to be sound for government pensions, since governments operate in perpetuity and are unlikely to go out of business or cease operations as can happen with private sector employers, according to the Pew Center on the States and the Government Accountability Office. Conversely, overfunded pension plans (over 100 percent) can be politically unwise as these "excess" assets can become a target for advocates with other priorities or for those wishing to increase retiree benefits (as was done in Pennsylvania in 2001).

Who is Affected

Public pension plan stakeholders – employees (past, present, and future), employers, and taxpayers – share a common interest in seeing that public pensions are adequately funded and prudently financed.

It is important to remember that real people and families are connected to every fact, figure, number, chart, and every actuarial assumption discussed in conversations about public pensions.

Any proposed reform has immediate and direct consequences for hardworking and dedicated teachers, public safety officials, food inspectors, nurses, health care facility and child care center inspectors, corrections officers, park rangers, historians, librarians, accountants, and those who work with seniors, veterans, children and the disabled, among others. These public servants have done nothing wrong and contributed 100 percent of their share toward the two pension systems.

What is PSERS and SERS?

The Public School Employees' Retirement System (PSERS) is responsible for retirement counseling, collection and investment of member and employer retirement contributions and making benefit payments for all active and retired public school employees who are members of the system. PSERS administers a defined benefit pension plan, and two post-employment healthcare programs. The system was established in 1917 and is governed by a 15-member board; managed by an executive director, employs professional staff, partially manages assets internally and contracts for professional services.

State Employee Retirement System (SERS) is responsible for the management of the commonwealth's defined benefit pension plan for state employees and for a Deferred Compensation Program. While most of the system's members are state employees, membership is also available to other public, quasi-public, and non-state entities as permitted by the Retirement Code (i.e., employees of Penn State University, Pennsylvania Turnpike Commission). The system was established in 1923 and is governed by an 11-member board; managed by an executive director, employs professional staff, and contracts for asset management and other professional services.

Economic Impact of State Pensions

In Calendar Year 2011, disbursements to retirees from PSERS and SERS totaled nearly \$8.3 billion (\$5.6 billion from PSERS and \$2.7 billion from SERS), of this amount, approximately 90 percent, or \$7.6 billion, went directly into the state and local economies — roughly \$600 per capita statewide.

Pension benefits received by retirees are spent in the local community. This spending ripples through the economy, as one person's spending becomes another person's income, creating a multiplier effect.

State and local pension plan benefits supported nearly 100,000 jobs and provided nearly \$4.6 billion in wages and salaries to the Pennsylvania labor force, according to a recent study by National Institute on Retirement Security (NIRS) on the economic impact of defined benefit pension expenditures.

Additionally, pension payments provide \$1.2 billion in federal tax revenues and \$636 million in state and local tax revenues from taxable preretirement pension withdrawals. Roughly 75 percent of public sector retirees receiving pension disbursements are state retirees with the remainder coming from local pension plans. The report indicates that the income that these

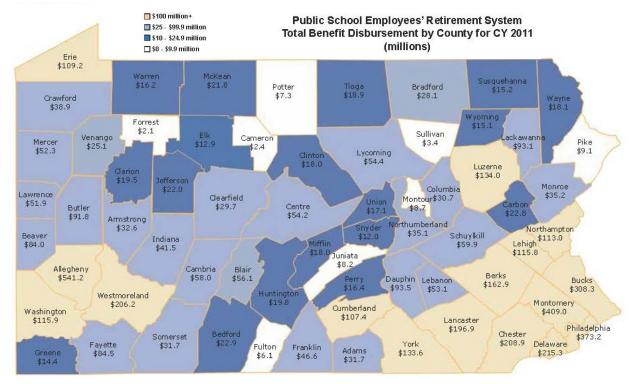
disbursements provide support thousands of jobs in industries such as:

- food services,
- private hospitals,
- real estate establishments,
- physicians, dentists, and other health practitioners,
- nursing and residential care facilities,
- retail,
- colleges, universities, and professional schools.

Top 10 Counties Based on Amount of Disbursements to Retirees from PSERS and SERS (CY 2011)

Rank	County	Disbursement		
1	Allegheny	\$668,700,000		
2	Montgomery	\$491,500,000		
3	Philadelphia	\$483,300,000		
4	Dauphin	\$351,800,000		
5	Bucks	\$341,400,000		
6	Cumberland	\$272,900,000		
7	Westmoreland	\$268,200,000		
8	Lancaster	\$260,600,000		
9	Delaware	\$258,700,000		
10	Chester	\$257,400,000		

Note: A county map of SERS disbursements and a full list disbursements by county is on page 4.



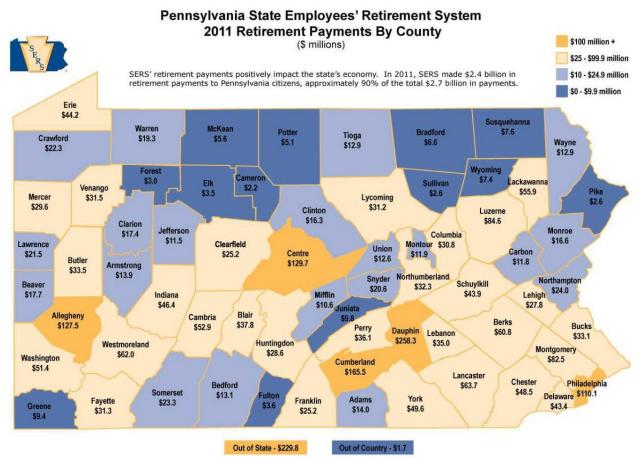
Economic Impact of State Pensions (Continued)

Local Economies Get \$7.6 billion Boost from PSERS & SERS Retirement Benefits in 2011

Rank	County	Disbursement
42	Adams	\$45,700,000
1	Allegheny	\$668,700,000
41	Armstrong	\$46,500,000
24	Beaver	\$101,700,000
44	Bedford	\$36,000,000
11	Berks	\$223,700,000
25	Blair	\$93,900,000
46	Bradford	\$34,700,000
5	Bucks	\$341,400,000
20	Butler	\$125,300,000
22	Cambria	\$110,900,000
67	Cameron	\$4,600,000
47	Carbon	\$34,600,000
13	Centre	\$183,900,000
10	Chester	\$257,400,000
43	Clarion	\$36,900,000
37	Clearfield	\$54,900,000
48	Clinton	\$34,300,000
33	Columbia	\$61,500,000
34	Crawford	\$61,200,000
6	Cumberland	\$272,900,000
4	Dauphin	\$351,800,000
9	Delaware	\$258,700,000

Rank	County	Disbursement
61	Elk	\$16,400,000
16	Erie	\$153,400,000
21	Fayette	\$115,800,000
66	Forest	\$5,100,000
31	Franklin	\$71,800,000
64	Fulton	\$9,700,000
56	Greene	\$23,800,000
40	Huntingdon	\$48,400,000
27	Indiana	\$87,900,000
49	Jefferson	\$33,500,000
60	Juniata	\$18,000,000
17	Lackawanna	\$149,000,000
8	Lancaster	\$260,600,000
30	Lawrence	\$73,400,000
26	Lebanon	\$88,100,000
18	Lehigh	\$143,600,000
12	Luzerne	\$218,600,000
28	Lycoming	\$85,600,000
55	McKean	\$27,400,000
29	Mercer	\$81,900,000
54	Mifflin	\$28,600,000
39	Monroe	\$51,800,000
2	Montgomery	\$491,500,000

Rank	County	Disbursement
59	Montour	\$20,600,000
19	Northampton	\$137,000,000
32	Northumberland	\$67,400,000
38	Perry	\$52,500,000
3	Philadelphia	\$483,300,000
63	Pike	\$11,700,000
62	Potter	\$12,400,000
23	Schuylkill	\$103,800,000
50	Snyder	\$32,600,000
36	Somerset	\$55,000,000
65	Sullivan	\$6,000,000
57	Susquehanna	\$22,800,000
51	Tioga	\$31,800,000
53	Union	\$29,700,000
35	Venango	\$56,600,000
45	Warren	\$35,500,000
15	Washington	\$167,300,000
52	Wayne	\$31,000,000
7	Westmoreland	\$268,200,000
58	Wyoming	\$22,500,000
14	York	\$183,200,000
	Total	\$7,556,000,000



Pennsylvania is Not Alone

Pennsylvania is not alone in facing under-funded pension systems and higher pension costs. For fiscal year 2010 all but one state (Wisconsin) are short of funding their pension promises by \$757 billion, according to a recent report issued by the Pew Center on the States. Pennsylvania is among 33 other states that are below the 80 percent funded pension threshold. The report concludes that this is a result of continued investment losses from the financial crisis of 2008 and states' inability to set aside enough money each year to adequately fund retirement promises.

The Pew report through 2009/10 indicates that a key driver for Pennsylvania's pension systems'

Understanding Public Employee Retirement Commission (PERC)

The PERC has three primary responsibilities:

- 1. monitor public retirement plans and assure their actuarial viability;
- 2. study the retirement needs of public employees to formulate principles, develop objectives, and recommend legislation; and
- 3. ensure that municipal pension systems are fulfilling their actuarial reporting requirements.

The PERC is required by Act 66 of 1981 to review all proposed legislation applicable to public employee pension systems and to attach actuarial notes to the proposed legislation within 20 legislative days of referral by either house of the General Assembly. However, in practice the exigencies of the legislative process frequently requires the commission to respond in substantially less time than is statutorily permitted.

PERC has a special role providing credible nonpartisan expertise to help the General Assembly understand and make informed decisions about pension related legislation. As a part of the FY 2012/13 executive budget proposal, Gov. Corbett recommended dismembering PERC and moving its operations under the General Government Operations appropriation for the Department of Community and Economic Development. The General Assembly rejected this recommendation.

State Guarantee

Pension system unfunded liabilities are debts that must be paid and are obligations of the commonwealth, pursuant to 24 Pa.C.S. §8531 (PSERS) and 71 Pa.C.S. §5951 (SERS).

unfunded liabilities is that PSERS and SERS employers did not pay the full annual pension contribution necessary to meet fund obligations from 2004/05 to 2010. Also because of adjustments made in Act 120 of 2010, the commonwealth did not make full pension payments in 2011 and 2012.

The employer's full annual pension contribution, or the annual required contribution (ARC), is the sum of two parts: the cost of the pension benefits earned during the year plus a "catch-up" payment on the unfunded liability. The Pew report indicates that keeping up with the ARC is perhaps the most effective way that states can responsibly manage their long-term liabilities for public sector retirement benefits to which employees already contribute. Pew's research shows that states that consistently make their full payments have better funded retirement systems and smaller gaps.

In testimony submitted to the commonwealth's Public Employee Retirement Commission (PERC) the Secretary of the Budget said, "the Corbett administration is reviewing options to propose a pension reform plan in the governor's 2013/14 Executive Budget." In December 2012, Gov. Corbett began meeting with newspaper editorial boards to explain his position on pensions and float ideas he thinks could address the issue, stating that he would introduce a proposal when the General Assembly's two-year session begins in January.

Today's Challenge

A challenge facing the General Assembly is determining how to meet the commonwealth's pension obligation while balancing the budget and maintaining core government services. The state's contributions for retirement expenses have more than tripled since 2006, growing from \$400 million to a budgeted level of \$1.5 billion in 2013 and are

one of the fastest growing obligations in the state budget.

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

- employee/member contributions;
- employer contributions; and
- investment earnings.

With the exception of consistent employee contributions, over the past decade, changes to employer contributions and investment earnings — planned or unexpected — contributed to the current funding challenge. The following discussion provides context to the overall health of the state pension plans.

Investment Earnings

Over the past 10 years (2002-2011), investment income generated 70 percent of revenues for



PSERS and 74 percent of revenues for SERS. Thus, the two financial crises in 10 years – the dot-com bubble and the financial crisis of 2008 – had devastating effects on each fund's investment performance. For example, during the 2008 crisis alone, PSERS net investment loss was \$19.5 billion, with a negative rate of return of minus 26.5 percent. For SERS the investment loss was \$12.7 billion, with a negative rate of return of minus 28.7 percent.

Member Contributions and Benefit Enhancements

Member contributions reflect the second largest revenue source to both pension systems.



SERS' funded ratio was above the recommended 80 percent threshold for 22 consecutive years (CY 1988 to 2009). For 12 of those years (CY 1992 to CY 2003) the system was funded above 100 percent.

For PSERS, the system's funded ratio was above the 80 percent threshold for 17 consecutive years (FY 1992 to 2008). For 6 of those years (FY 1997 to 2002), the system was funded above 100 percent.

It was during this period of funding above 100 percent that member benefit enhancements were

enacted. These benefit enhancements included increasing the pension benefit accrual factor from 2 to 2.5 percent and increased employee contribution rates (Act 9 of 2001). A year later, a two-step cost of living adjustment for retired members was provided (Act 38 of 2002). These policies drove expenditures that weren't fully funded with adequate revenues, decreased the amount of time money in the funds would accrued, and increased the amount of money being distributed out of the systems' funds.

Public employees consistently fulfilled their contracted obligation by contributing 100 percent of their share toward the two pension systems, providing one consistent funding stream.

Employer Contributions

Over the past 10 years (2002-2011), employers (the commonwealth and school districts) have



contributed 12 percent and 10 percent to the systems' funds for PSERS and SERS, respectively. As mentioned in the member contributions section, the long periods of prosperity for both systems enticed the commonwealth to implement policies that had unintended consequences.

During this period when both systems were adequately funded, cost deferral techniques were implemented which decoupled the amortization schedule of gains from losses, temporarily and artificially suppressing employer contribution rates. Act 40 of 2003 delayed the payment of liabilities into the future to provide fiscal relief to the state. This artificially reduced employer contribution rates in the short-term by recognizing gains over 10 years, ending in FY 2011/12, but recognizing liabilities over 30 years.

To quantify these effects, between 2005 and 2011, school districts and other PSERS' employers did not contribute nearly \$8 billion into the retirement system while SERS' employers did not contribute nearly \$2.8 billion.

Recalling Earlier Pension Crisis

This is not the first time the state pension systems were underfunded and facing



large unfunded liabilities. In 1983, both pension

systems were well below the 80 percent healthy funded ratio. PSERS' funding ratio was 49.3 percent; SERS' was at 59.4 percent.

To put it in context, remember that in the early 1980s, the U.S. economy was experiencing high inflation, slow growth, and high unemployment ("stagflation"). When the U.S. economy began its recovery, not only did both funds benefit from stronger investment returns, but also steady employer and employee contributions to each of the systems. Ten years later, PSERS' funded ratio was a healthy 81.7 percent. SERS took fewer than 5 years to reach a healthy funded ratio. The growth of both systems continued for the next 10 years.

The accumulation of assets exceeded liabilities for both systems until they both peaked in 2001 when PSERS' funded ratio was 123.8 percent; SERS' funded ratio was 132.4 percent.

Between 2000 and 2002, when the collapse of the Internet "dot-com" bubble was felt by both systems, the funded ratio for both systems began to drop. This drop is largely attributable to negative investment returns, but also from the artificial suppression of employer contribution rates and increased payout for member benefits. In 2008, when the global economic collapse occurred, both systems' funded ratios were driven below the healthy 80 percent level. Act 120 of 2010, addresses the unfunded liability and provides a roadmap to state pension system solvency. Act 120 is discussed in greater detail on page 11.

Impact on Pennsylvania's Borrowing Costs

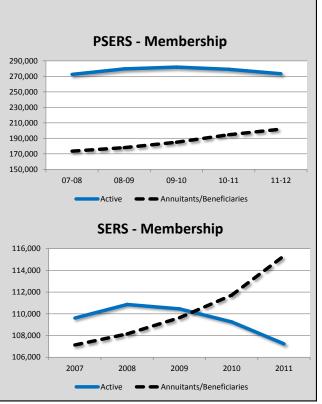
In July 2012, Moody's credit rating agency downgraded the commonwealth's general obligation rating to Aa2 from Aa1. The adjustment was prompted by moderate economic growth and, in part, from growing pension liabilities as measured by the credit agency. States rely on the ability to access the bond market on favorable terms to support critical long-term projects, such as bridges, water and sewer infrastructure, state buildings offices, etc.), and voter-approved (prisons, borrowing initiatives such as Growing Greener. The weaker a state's bond rating, the more expensive it is to borrow funds to support this infrastructure. However, according to Moody's, obligations rated Aa (such as Pennsylvania's) are judged to be of high quality and are subject to very low credit risk.

Maturing of Funds Puts Pressure on Investment Returns

Another complicating factor is that there are fewer active employees to support a growing number of retirees and beneficiaries. For PSERS there are still more members contributing to the plan than are receiving benefits from it with a ratio of active members to retired members of 1.4:1. On the other hand, SERS is a more mature fund, with retirees receiving benefits outnumbering active members, with an active to retiree ratio of 0.9:1. For both plans combined, the ratio is 1.25 active members for every retiree.

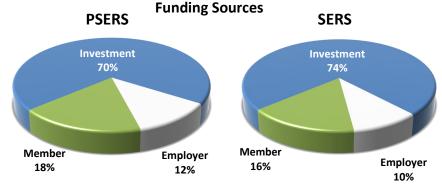
Defined benefit plans accommodate this gap by adjusting the assumed rate of return of the system and the actuarially calculated annual required employer contribution. Specifically related to the assumed rate of return, because more cash is needed to cover benefit expenditures, the systems must increase their assets' liquidity sacrificing higher returns generated from more cost-effective long-term assets.

Compounding matters is that retirees are living longer, so the time they are supported by their pensions is extended.



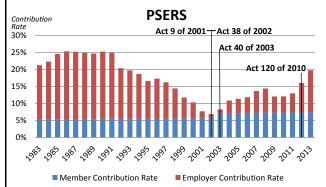
Investment Earnings and Member Contributions Outweigh Employer Funding

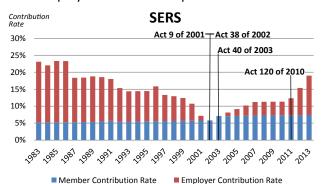
These pie charts show that over the past 10 years (2002-2011), for PSERS, investment income contributed 70 percent of the fund; while members contributed 18 percent and employers 12 percent. Over the same time, for SERS, investment income contributed 74 percent; while members contributed 16 percent and employers 10 percent.



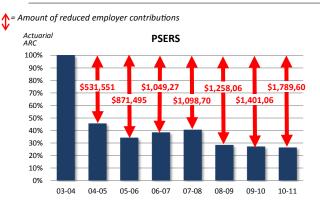
Employee and Employer Contributions Over Time

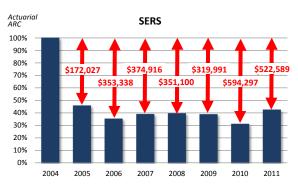
These charts reflect the employee and employer contributions to PSERS and SERS over the past 30 years. Employees contribute a fixed rate based on system class of service. Employer contributions are variable from year to year based primarily on funding ratios and investment returns. In the 1980s when funding ratios and investment returns were low, higher employer contributions were needed; as the funding ratios and investment returns improved in the 1990s, employer contributions were reduced. In the early 2000s when investment returns were strong and funding ratios were well above 100 percent, policies were applied to enhance benefits and artificially reduce employer contributions. Reduced investment returns following the economic collapse of 2008 threatened a spike in employer contributions starting in FY 2010/11. Act 120 was enacted to alleviate the employer contribution spike.





The charts above show the employee and employer contributions since 1983 and indicate the most significant pension changes. The impact of the artificially reduced employer contributions is shown in the chart below.





The charts above show that between FY 2004/05 through 2010/11 amounts employers' contributed were artificially reduced by nearly \$8 billion for PSERS; and nearly \$2.8 billion for SERS.



As a comparison, the market asset value of the PSERS fund is approximately the same as it was in 1999; for SERS, the market asset value is very close to what it was in 2003.

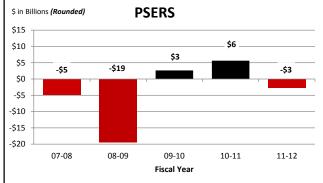
Systems' Assets

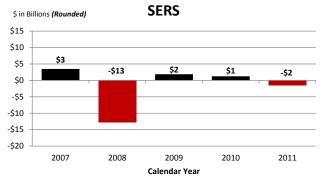
The bar charts below show the impact considerable economic changes had on plan assets in 2008. From FY 2008 through 2012, **PSERS**' total additions were \$6.7 billion, but its deductions were \$25.5 billion, yielding a **decrease of \$18.8 billion in assets** under management. For SERS, the same issues can be observed. From CY 2007 through 2011, total additions for **SERS** were \$4.4 billion, however deductions were \$12.1 billion, yielding a **decrease of \$7.7**

billion in assets under management. To cover the shortfalls, systems must sell assets (sometimes at deep discounts) to cover expenditures, thus reducing the principal balance of the funds, their ability to generate investment income, and requiring that active members fund not only their own pension liability, but also the cost of benefits for retired members.

Net Assets for Both State Pension Systems Fell During Recession







Defined Benefit Pension Plan: Basics

A defined benefit (DB) plan is designed so that the employer and employees fully fund employees' retirement benefits during their working lifetime. These plans define clearly how much monthly benefit employees will receive from the pension system when the employee retires based on retirement age, years of service, and final average salary. DB plans are designed to remain financially sound through regular funding each year from each of three funding sources:

- employee/member contributions;
- employer contributions; and
- investment earnings.

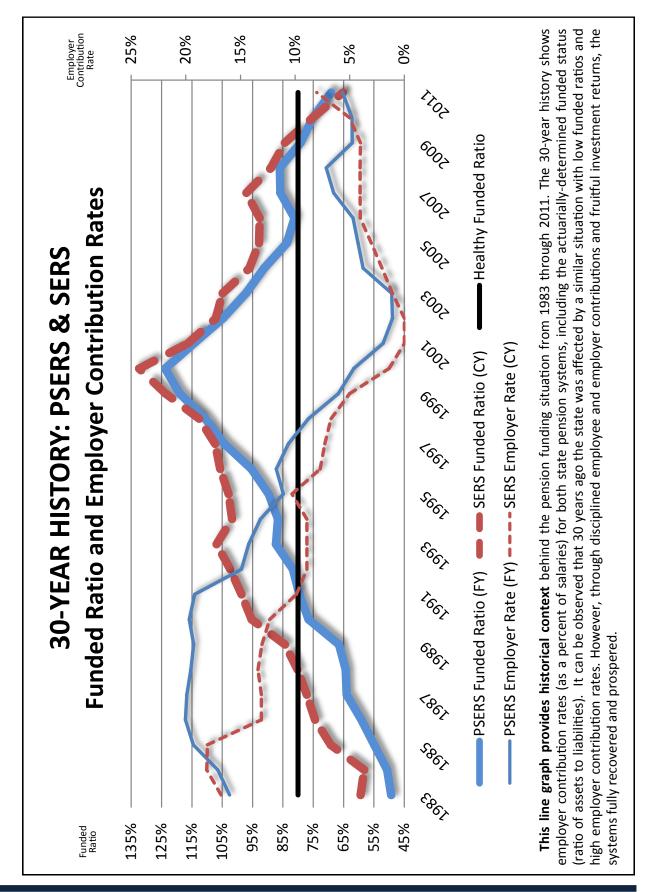
Employees contribute at a fixed rate that varies by pension system and class of service. Employer contributions are variable from year to year and are determined by a complex procedure in which the pension system actuary plays a vital role. However, simply stated, the employer rate provides what is necessary to fill the gap between the funds needed to

meet the retirement system obligations and those available from employee contributions and investment earnings on system assets.

Annual Required Contribution (ARC) is the employer's required contribution to a defined benefit plan. The ARC is the sum of two parts:

- the normal cost, which is the cost for benefits attributable to the current year of service, and
- (2) (2) an amortization payment, which is a catch-up payment for past service costs to fund the Unfunded Actuarial Accrued Liability (UAAL) over a period of time.

The Governmental Accounting Standards Board (GASB), which establishes public pension standards, does not require that employers actually pay the ARC each year, but the ARC does need to be calculated and disclosed in the public pension systems' annual financial statements.

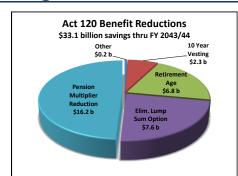


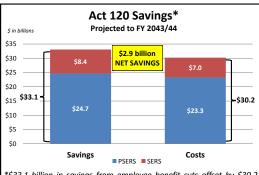
Pension Reform: Work in Progress

The global economic collapse of 2008, which resulted in severe investment losses by most institutional investors, including PSERS and SERS, negatively impacted the systems' fund balances.

Overlapping global the economic downtown was the taila period when of employer contributions to the state's pension systems were artificially reduced (see page 10). At the conclusion of this time period, the employer contribution rates pension were actuarially set to begin climbing in FY 2010/11 and then jump sharply in 2012/13, peak in 2013/14 for SERS, and then in 2015/16 for PSERS and high remain for

foreseeable future. This increase is often referred to as the **"rate spike."**





*\$33.1 billion in savings from employee benefit cuts offset by \$30.2 billion in costs related to deferred employer contributions.

roadmap signed into law in November 2010.

Act 120 was widely viewed as a responsible solution to a difficult situation in 2010. The design of the broadly-supported legislation allows for "rate collars" that establish predictable, moderated increases in employer funding in a

series of small steps over several years, rather than one huge step in 2012. It also reduces the cost of benefits by 60 percent for new employees in effect new members are paying for their own retirement benefits. As the chart on page demonstrates, each pension system will return to a healthy funded ratio before the torch handed the to next

Act 120 of 2010

In response to the pending employer contribution pension rate spike, an overwhelmingly bi-partisan majority of both House and Senate members approved Act 120 (HB 2497) – a pension reform

generation.

This is not the first time the state faced a significant pension funding issue. In the 1980s the outlook was possibly even more daunting, however through disciplined employee and employer contributions and fruitful investment returns boosted from economic recovery, both systems recovered and prospered (see chart on page 10).

Act 120 of 2010 Reform Generates \$33 billion in Savings

Act 120 of 2010 made significant benefit changes for **new employees**; giving them the option to contribute more than current employees and receive less in benefits, or contribute an even larger amount of their pay to offset the cost of receiving the same benefits that current employees were promised. The following benefit change measures will generate \$33.1 billion in savings through 2043/44:

- Reduced benefit multiplier from 2.5 to 2.0 percent of salary for each year of service for new employees
- Eliminated lump sum withdrawal of contributions and interest at retirement
- Increased normal retirement age by 5 years, from 60 to 65 for most people
- Extended vesting period from 5 to 10 years
- Created "shared risk" to allow increased employee contributions for investment underperformance
- Required that members purchase prior non-state service at full actuarial cost

Act 120 also put in place "rate collars" that capped the growth of employer contributions to 3 percent in FY 11/12; 3.5 percent in FY 12/13; and 4.5 percent thereafter until no longer needed. Deferring these costs into the future had a cost of \$13.1 billion.

The Act 120 reform roadmap provides a projected net savings of \$2.9 billion through FY 2043/44 for both systems, and includes a shared risk provision requiring workers to contribute more for investment underperformance over a period of time.

Overall, Act 120 will generate more than \$33 billion in savings from member benefit reductions and concessions through FY 2043/44.

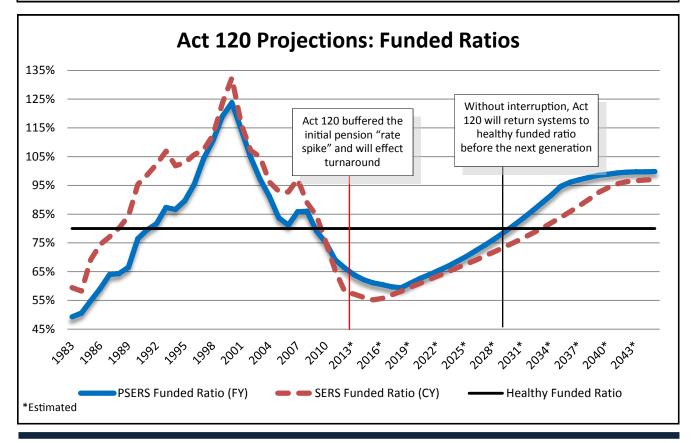
The immediate savings from Act 120 help alleviate the pension "rate spike" for employer contributions (i.e., the commonwealth, school districts, and other non-state participating employers). Since Act 120 was enacted, the application of rate collars has capped the growth of mandated employer contribution rates, reducing employer contributions by more than \$4.2 billion. Without the employee benefit savings in Act 120, employer contributions for next year would have jumped nearly \$2 billion — from \$4.6 billion in FY 2012/13 to \$6.5 billion in FY 2013/14.

Shared Risk Implemented

Act 120 includes a shared risk provision that protects the funds from investment performance fluctuations by increasing or decreasing the member contributions as necessary. The pension plans partially base estimates for the long-tem fiscal health of the funds on an actuarial assumed rate of return — the estimated rate of growth in investments over the long-term. Under Act 120, each system will compare the actual investment rate of return (minus fees) with the actuarial assumed rate of return for the previous 10-year period. If the actual investment rate is less than the assumed rate by one percent or more, the total member contribution rates will increase by .5 percent. If the actual investment rate is equal to, or more than, the assumed rate of return, the total member contribution rate will decrease by .5 percent. These changes apply only to new employees. The new shared risk approach starts with the annual actuarial valuation at the end of FY 2013/14 and recurs every three years.

PSERS and SERS Provide Act 120 Summaries Online

PSERS: http://www.psers.state.pa.us/pfr/pfr.htm SERS: http://www.psers.state.pa.us/



PSERS & SERS Combined Employer Contributions As Projected by Act 120 through 2044

\$ in Billions

Fiscal Year	Pre-Act 120	Act 120	Employer Savings	Cumulative Savings	PSERS Funded Ratio	SERS Funded Ratio
2012	\$3.7	\$1.7	\$2.0	\$2.0	66%	58%
2013	4.6	2.4	2.2	4.2	64%	57%
2014	6.5	3.5	3.0	7.2	62%	56%
2015	6.8	4.6	2.2	9.4	61%	55%
2016	6.9	5.6	1.4	10.8	61%	56%
2017	7.0	6.1	0.9	11.7	60%	57%
2018	7.1	6.5	0.7	12.4	59%	58%
2019	7.2	6.8	0.4	12.8	61%	60%
2020	7.3	7.1	0.2	13.0	63%	61%
2021	7.4	7.3	0.1	13.1	64%	62%
2022	7.5	7.6	-0.1	13.0	65%	64%
2023	7.6	7.8	-0.2	12.7	67%	65%
2024	7.7	8.1	-0.4	12.3	69%	66%
2025	7.8	8.3	-0.6	11.8	70%	68%
2026	7.9	8.6	-0.7	11.0	72%	69%
2027	8.0	8.9	-0.9	10.2	74%	71%
2028	8.1	9.1	-1.0	9.2	77%	72%
2029	8.2	9.4	-1.2	8.0	79%	74%
2030	8.4	9.7	-1.3	6.7	81%	75%
2031	8.5	10.0	-1.5	5.2	84%	77%
2032	8.6	10.3	-1.6	3.5	86%	78%
2033	7.9	10.6	-2.7	0.9	89%	80%
2044	6.1	3.6	2.4	2.9	100%	97%

This table reflects the savings of Act 120 of 2010 to be roughly \$2.9 billion by FY 2044, as projected in the Actuarial Note endorsed by the Public Employee Retirement Commission (PERC), dated October 12, 2010. It also provides a reference to the projected funded ratios furnished by PSERS and SERS. Please note that FY 2012 and FY 2013 payroll and employer contribution rates have been updated to reflect new data, however the table assumes the final savings as calculated in the 2010 PERC cost note.

Pension Reform Proposals

Members in both chambers of the General Assembly made several proposals in the past two legislative sessions to make a multitude of changes to both state pension systems. Some of these scenarios implement defined contribution (DC) plans such as 401(k)-style plans and others create hybrid retirement plans such as cash balance plans and concurrent direct benefit (DB) and DC plans.

Hybrid Retirement Plans

Hybrid is a generic term and there is significant variation among these types of plans. Many of these plans create a defined contribution plan for employee contributions and maintain a defined benefit plan for employer contributions. Most plans strive to retain some level of mandatory participation by employees; employer/employee shared financing; pooled assets that are managed and invested by professionals; and a lifetime retirement benefit.

What Other States are Doing

Between 2009 and 2011, 43 states (including Pennsylvania with Act 120) enacted benefit cuts,

increased employee contributions, or both. The most common actions included:

- asking employees to contribute a larger amount toward their pension benefits
- increasing the age and years of service needed before retiring;
- limiting the annual cost of living increase; and
- changing the formula used to calculate benefits to provide a smaller pension check.

Potential Limitations to Alternative Retirement Plans

Converting the state's current defined benefit (DB) plans to 401(k)-style defined contribution (DC) plans does not solve the pension funding challenge and does nothing to resolve the unfunded liability. The table below provides a comparison of DB and DC pension plans. Following are some notable challenges associated with converting to DC plans or hybrid plans from DB plans.

 The current unfunded liability (\$44 billion) would remain unchanged because the future benefits of existing DB members cannot be unilaterally

Defined Contribution (DC)

Comparison of Defined Benefit and Defined Contribution Retirement Plans

Dofined Panefit (DP)

	Defined Benefit (DB)	Defined Contribution (DC)
	Traditional plans	401(k), 403(b), 457
Contributions		
Employee	Employee contributions are mandatory and are set at a fixed rate.	Employee contributions are voluntary and the maximum amount annually deferred is limited and is based on age.
Employer	Contributions are set at a variable rate that is annually calculated by an actuary.	The employer is not required to make contributions, however many employers choose to match their employees' contributions up to a certain percentage.
Investments	Contributions for all employees are pooled, and invested by professional asset managers in a diversified portfolio of assets.	Individual accounts for each employee; employees make all investment decisions themselves, and can choose from a range of investment options offered.
Amount of money in retirement	The monthly benefit is determined by a set calculation, usually based on years of service and pay at the end of one's career.	The money available in retirement is simply the amount that one has accumulated in the savings plan, through contributions and investment earnings.
Lifetime income	Payouts are provided as a monthly income stream that is guaranteed for the remainder of a retiree's life.	Plans are not required to offer a lifetime income option, and typically pay out benefits as a one-time lump sum.
Supplemental benefits	Spousal protections, disability benefits, and cost of living adjustments are common.	Supplemental benefits are not applicable and generally not available. If provided, they require extra contributions to some structure outside the DC plan.

rescinded. Case law has held that contract clauses prohibit benefit changes for existing employees (see "Contract Impairment" box below). Prohibited benefit changes include reductions in benefits agreed-to at the time of hire and increases in employee contributions to maintain the same level of agreed-to benefits. Benefit changes can only apply to employees hired after the change.

- The current DB pension plans must be fully funded by the time the last member retires, because there are no new members joining the plan. It is estimated that the unfunded liability must be fully paid in about 35 years – Act 120 will have both plans above the 80 percent adequacy threshold in half this time.
- DB investment returns are higher than DC plans by anywhere from 0.8 to 2.7 percent per year, according to research by the National Institute on Retirement Security (NIRS). One reason DB plans are more successful is because professional asset managers make investment decisions. DB plans

- have broadly diversified portfolios and managers who follow a long-term investment strategy. Experience indicates that DC participants can fall short when it comes to making good investment decisions. For example, if \$10,000 is invested in both plans, a DB plan yielding only 1 percent greater than a comparable DC plan over 30 years can conservatively generate returns more than 30 percent higher than the DC plan.
- Having both a DB plan concurrently with a DC plan does not address the existing unfunded liability. Operating concurrent plans increases administrative costs. Maintaining two plans is more costly than one.
- If a DB plan is to be closed, as the DB plan winds down, fewer members are paying in, the employer share must be increased to compensate, and there is less time to make up for any potential market fluctuations. Therefore, the commonwealth's employer share of the existing debt would become intolerably volatile.

Case Law Prohibits Contract Impairment

The majority of states protect pensions under a contracts-based approach. Article I, Section 10 of the U.S. Constitution states, "No State shall pass any... Law impairing the Obligation of Contracts...," which is universally referred to as the "Contract Clause." The contracts clause was subsequently adopted by many, but not all, states. A similar provision can be found in the Pennsylvania Constitution (Article I, Section 17). To determine whether a state action is unconstitutional under the contracts clause, the courts generally apply a three-part test:

- determine if a contract exists,
- determine if the state action constitutes a substantial impairment of contract, and
- if the impairment is deemed substantial, the court must determine whether the action is justified by an important public purpose and if the action taken in the public interest is reasonable and necessary.

Simply because a state constitution contains a general contract clause, however does not mean that there actually is an immutable pension contract. While some states, like Illinois and New

York, have specific provisions prohibiting the reduction of benefits, the majority do not. Therefore, when dealing with both state and federal contract clauses, the task is to decide if a contract exists and why, when it was formed, what is protected, who enjoys its protections and how it can be changed, if at all, and under what circumstances.

In general, states where the contract is found to exist at the time a worker is hired have little flexibility to change benefits. States where the contract is found to exist at retirement have considerably more flexibility.

In Pennsylvania, a significant body of case law establishes that the contract clauses of the U.S. and Pennsylvania constitutions protect public retirement benefits from being changed in any way that may be interpreted as a "net detriment" to current employees. This prohibits not only reductions in already earned benefits but also reductions in the rate of future benefit accrual. A "net detriment" has been found in both reductions in benefits agreed-to at the time of hire and in increases in employee contributions in order to maintain the same level of agreed-to benefits.

Examples of Defined Contribution Plan Conversions

Rhode Island

In November 2011, Rhode Island passed a major pension reform bill that, at a minimum, moved all but public safety employees and judiciary employees to a hybrid pension plan consisting of the former DB plan and a newly created DC, or 401 (k)-style account benefit.

According to estimates performed by the Pew Center on the States, this legislation would significantly reduce benefits to future employees. For example, a hypothetical 25-year-old state worker, who begins working for Rhode Island in 2012, and assuming a final average salary of \$65,000, will have to work 5 more years to age 67 and receive a final annual benefit that is nearly 14 percent less (\$6,500) than under the old DB plan. This individual's co-workers who were hired earlier, will receive a higher benefit creating benefit inequity among cohorts of workers.

As of December, a ruling is expected from a

Providence Superior Court judge on whether lawsuits challenging the state's 2011 pension overhaul law should be dismissed.

West Virginia

In 1991, West Virginia closed its defined benefit (DB) plan and put all teachers into a defined contribution (DC) plan. Over a period of time, the state learned that: (1) its unfunded obligations were not reduced; and (2) the DC investment returns were much (1.6 percent) lower; having an average return over 10 years of 2.32 percent compared to the DB plan returns over the same period of 3.93 percent. In 2005, all new hires were moved back into the DB plan. In 2008, 78 percent of all teachers had opted into the DB plan. The state projected a \$1.2 billion savings over 30 years by moving new hires from the DC plan back into the DB plan, a savings of more than \$1,500 per household over 30 years.

Public Sector vs. Private-Sector Pension and Compensation

Pensions

Nationally, among U.S. workers with a DB pension plan, there are currently more private-sector employees with pensions than public sector employees. In 2007, 21 million private-sector workers had a workplace DB plan, while state and local pension plans served 14.2 million workers. DB plans have 88 percent participation among full-time public employees and 24 percent among full-time private-sector employees. Traditional DB pension coverage in the private sector is on the decline.

In 1975, 88 percent of private-sector workers were covered by a DB pension plan; by 2008 that number dropped to 24 percent. The lack of DB participation in the private-sector reflects significant regulatory changes to single-employer DB plans over the decades which had the unintended effect of making the DB plan less attractive to employers. many Further, technological changes in the private sector over the past several decades have contributed to DB coverage decline as well. This is because unionized industries such as manufacturing have declined, and have been replaced by newer industries such as information technology, which tends to employ nonunion and shorter-tenured employees. These

new industries have not taken up DB pension plans as much as the more established industries.

The public sector, by contrast, has been able to maintain DB coverage for the vast majority of its employees because each of the reasons for the private sector decline has little relevance to the public sector.

Compensation Parity

On average in Pennsylvania, 53 percent of full-time public workers hold at least a four-year college degree, compared to 32 percent of full-time private workers. However, state and local governments pay employees with a four-year degree 21 percent less, on average, than Pennsylvania private employers, based on a study conducted by the Economic Policy Institute using data from the U.S. Census Bureau and Bureau of Labor Statistics.

The study found that average annual wages and salaries of full-time state and local public employees in Pennsylvania are 12 percent less than those of comparable private employees. On an annual basis – when nonwage benefits such as health insurance and retirement are included – total compensation for public employees in Pennsylvania is 5.4 percent less than comparable private-sector employees.

Outlook:

Bloomberg-Businessweek recently reported that investment gains raised returns for state and local government pensions with assets of more than \$1 billion to 8.2 percent for the 10-year period through Sept. 30, marking the first quarter since 2007 that funds of that size surpassed 8 percent in more than a decade.

PSERS

PSERS reports positive returns of 11.45 percent for the 1-year, 10.71 percent for the 3-year, and 8.78 percent for the 10-year period ended Sept. 30, 2012. PSERS reports long-term returns of 8.51 percent for the 25-year and 9.8 percent for the 30-year period. All of these returns exceeded the PSERS' long-term earnings assumption of 7.5 percent, but also its former assumed rates of return previously set by the board, 8 percent and 8.5 percent, respectively.

System funding challenges could be exacerbated by staffing reductions. Based on PSERS' 2012 actuarial valuation, it is estimated that payroll for active membership will decrease by \$577 million, an annual decrease of 4 percent.

SERS

SERS also reports positive returns of 10.5 percent for the 1-year, 9.6 percent for the 3-year, and 8.5 percent for the 10-year period ended Sept. 30, 2012. SERS reports long-term returns of 8.6 percent

for the 25-year and 9.9 percent for the 30-year period. As was the case for the system's sister agency, SERS' returns exceeded its long-term earnings assumption of 7.5 percent, but also its former assumed rates of return — 8 percent and 8.5 percent, respectively — previously set by the board.

National Retirement Risk Index

The Center for Retirement Research (CRR) of Boston College released an update of the National Retirement Risk Index (NRRI), which indicates working households who are "at risk" of being unable to maintain their pre-retirement standard of living in retirement. The CRR, based on newly released Survey of Consumer Finances (SCF) data, shows that over half of households may be unable to maintain their standard of living in retirement. The survey shows that the average retirement age hovers at 63 and life expectancy continues to rise. According to the 2010 SCF, median 401(k)/IRA balances for households approaching retirement were only \$120,000. Further, asset returns in general, and bond yields in particular, have declined over the past two decades so a given accumulation of retirement assets will yield less income. In addition to the contracting retirement income systems, households have been hit by the financial crisis and ensuing recession. The NRRI indicates that this nation needs more retirement saving.

GASB Rule Changes

In June 2012, the Governmental Accounting Standards Board (GASB) changed the accounting and financial reporting of pensions by state and local governments and pension plans starting in FY 2013/14. It is important to note that these are accounting changes, not funding changes.

The intent of these changes is to improve accountability and transparency of financial reporting and to improve the usefulness of information for the users of financial reports. The most significant change would prompt many states to use a lower assumed rate of return which would have the effect of increased liabilities. States

acknowledge these rules will cause funding ratios to drop, increasing reported pension plan shortfalls. In addition, the rules will require employers to reflect their portion of the pension liability on their financial statements.

Aspects concerning the implementation of these rules are still being determined, however it is anticipated that these changes could have a detrimental impact on employer borrowing costs. These changes take effect in FY 2013/14 for PSERS and SERS and then to employers (school districts, etc.) in the following year.

Glossary of Key Terms

Actuary is a professional adviser on financial matters involving the probabilities relating to mortality and other contingencies affecting pension plan financing.

<u>Amortization</u> is the paying off of debt in regular installments over a period of time rather than a lump sum payment.

Annual Required Contribution (ARC) is the employer's periodic required contribution to a defined benefit OPEB plan. The ARC is the sum of two parts: (1) the normal cost, which is the cost for OPEB benefits attributable to the current year of service, and (2) an amortization payment, which is a catch-up payment for past service costs to fund the Unfunded Actuarial Accrued Liability (UAAL) over the next 30 years. Under GASB 45, it is not required that entities actually pay the ARC each year, but it does need to be calculated and disclosed in the public employer's annual financial statements.

<u>Defined benefit (DB) plans</u> define clearly how much monthly benefit a participant will receive from their employer when the participant retires.

<u>Defined contribution (DC) plans</u> define clearly how much the sponsor and the participant can or must contribute to an individual account created for each participant. When the employee retires, retirement benefits are based on the total amount contributed plus investment gains, minus expenses and losses.

<u>Defined pension benefit</u> to be received by employees after retirement is predetermined by a formula that is based on years of service credit and salary history. This benefit is funded through three sources: employee contributions, employer contributions, and investment earnings on system assets.

GASB (Governmental Accounting Standards Board) is the independent organization that establishes and improves standards of accounting and financial reporting for U.S. state and local governments.

<u>Hybrid retirement plans</u> is a generic term and there is significant variation among these plans. As a general rule, these plans combine portions of a defined contribution plan for employee contributions and a defined benefit plan.

Normal cost is the amount required to be paid in any given year to fund the cost of pension benefits earned during the year.

Public Employee Retirement Commission (PERC) has three primary responsibilities: (1) monitor public retirement plans and assure their actuarial viability; (2) study the retirement needs of public employees to formulate principles, develop objectives, recommend legislation; and (3) ensure that municipal pension systems are fulfilling their actuarial reporting requirements. The PERC is required by Act 66 of 1981 to review all proposed legislation applicable to public employee pension systems and to attach actuarial notes to the proposed legislation within 20 legislative days of referral by either House of the General Assembly. However, in practice the exigencies of the legislative process frequently requires the Commission to respond in substantially less time than is statutorily permitted.

<u>Rate collar</u> is a term for the predictable, moderated increase in an employer pension contribution rate to reach the full actuarially determined contribution funding level in a budgetary sound manner and within a financially responsible period of time.

Rate Spike. Prior to the passage of Act 120 of 2010, this was a term used to describe the projected sharp rise in the employer contribution rates in FY 2013/14 for SERS and 2015/16 for PSERS.

<u>Shared Risk</u> is a provision in Act 120 of 2010 requiring new members of each respective system to contribute a set amount more to reduce each systems' unfunded liability created by investment underperformance.

<u>Superannuation</u> is the minimum qualifications for normal retirement, or the age at which you are eligible to receive an annuity that is not reduced by an early retirement reduction factor.

<u>Unfunded liability</u> is the excess of the pension system's actuarial liability over the value of its assets. Actuarial gains, or losses, occur when actual experience of the system differs from the actuarial assumptions used to project the pension system funding requirements.

House Appropriations Committee (D)

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