COMMONWEALTH OF PENNSYLVANIA October 12, 2010

PUBLIC EMPLOYEE RETIREMENT COMMISSION

ACTUARIAL NOTE TRANSMITTAL

Bill ID: House Bill Number 2497, Printer's Number 3928, as amended by Amendment Number 09615

System: Public School Employees' Retirement System and State Employees' Retirement System

Subject: New Benefit Tiers and Modifications to Actuarial Funding Requirements

---

SYNOPSIS

House Bill Number 2497, Printer's Number 3928, as amended by Amendment Number 09615, would amend both the Public School Employees' Retirement Code and the State Employees' Retirement Code (Codes) to mandate the establishment of new benefit tiers applicable to most new members of both the Public School Employees' Retirement System (PSERS) and the State Employees' Retirement System (SERS), and modify the actuarial funding requirements of both PSERS and SERS.

The bill as amended would amend the Public School Employees' Retirement Code to:

1) Establish a new class of membership, known as "Class T-E." Any employee who becomes a member of the System after June 30, 2011, would become a member of Class T-E unless the member elects to become a member of the new optional membership class, known as "Class T-F." A Class T-E member would be eligible for an annuity based upon an annual benefit accrual rate of 2% and would have a corresponding employee contribution requirement equal to 7.5% of compensation;

2) Establish an optional new class of membership, known as "Class T-F." Any employee who becomes a member of the System after June 30, 2011, would have the option of electing Class T-F membership within 45 days of becoming a member of the System. A Class T-F member would be eligible for an annuity based upon an annual benefit accrual rate of 2.5% and would have a corresponding employee contribution requirement equal to 10.3% of compensation;

3) Increase the superannuation requirements for new members (Classes T-E and T-F) to age 65 with a minimum of three years of service credit, or any combination of age and service that totals 92 and at least 35 years of credited service;

4) Establish a variable employee contribution rate, known as the "shared risk contribution rate," applicable to new members (Classes T-E and T-F) that is linked to the investment performance of the pension funds;

SYNOPSIS (CONT'D)

5) Require new members who purchase most types of nonschool or nonstate service credit (other than intervening military service) to contribute an amount equal to the full actuarial cost of the service purchase;

6) Beginning July 1, 2011, re-amortize all of the unfunded actuarial accrued liabilities of PSERS over a 24-year period using level-percentage of pay amortization payments; including the costs of this bill;

7) Beginning July 1, 2011, extend from five years to ten years the asset smoothing period over which the fund's investment gains and losses are recognized;

8) Fund any increases in accrued liability enacted by legislation, other than the bill, subsequent to June 30, 2010, over a 10-year period using level percentage of pay amortization payments;

9) For the fiscal year beginning July 1, 2010, establish the total employer contribution rate as the "final contribution rate" of 5.0% of the total compensation for all active members, plus the premium assistance contribution rate;

10) Modify employer contribution requirements to PSERS by imposing limits, referred to as "collars" on the rate at which employer contributions may rise from year to year. For the fiscal years beginning July 1, 2011, July 1, 2012, and on or after July 1, 2013, establish a temporary collared contribution rate, that if the contribution rate is more than 3%, 3.5% and 4.5%, respectively, of total compensation of all active members greater than the prior year's final contribution rate, then the collared contribution rate shall be applied and equal to 3%, 3.5% and 4.5%, respectively, of total compensation for all active members;

11) For all other fiscal years in which the actuarially required contribution rate is less than the collared rate, establish the final contribution rate as the actuarially required contribution rate, provided that the final contribution rate is not less than the employer normal contribution rate;

12) Limit the maximum annual retirement benefit of Class T-E and Class T-F members to not more than 100% of final average salary;

13) Prohibit new members from purchasing Non-Qualifying Part-Time Service (NQPTS); and

SYNOPSIS (CONT'D)

14) Prohibit the use of pension obligation bonds for funding liabilities.

The bill as amended would amend the State Employees' Retirement Code to:

1) Establish a new class of membership applicable to most new members (including members of the General Assembly), known as "Class A-3," requiring all new members of the System, other than a member employed in a position for which a class of service other than Class A or Class AA is credited or could be elected, to become a member of Class A-3 beginning January 1, 2011 (or if a member of the General Assembly, beginning December 1, 2010), including an employee who is not an active member of the System (because membership is optional or prohibited), but who becomes a member of the System on or after January 1, 2011, unless the member elects to become a member of the optional membership class known as "Class A-4." Class A-3 members would be eligible for an annuity based upon an annual benefit accrual rate of 2% and would have a corresponding employee contribution requirement of 6.25% of compensation;

2) Establish an optional new class of membership, known as "Class A-4." An employee who becomes a member of the System on or after January 1, 2011, would have the option of electing Class A-4 membership within 45 days of becoming a member of the System. A Class A-4 member would be eligible for an annuity based upon an annual benefit accrual rate of 2.5% and would have a corresponding employee contribution requirement equal to 9.3% of compensation;

3) Increase the superannuation requirements for new members (Classes A-3, and A-4) to age 65 with a minimum of three years of service credit, or any combination of age and service that totals 92 and at least 35 years of credited service;

4) Establish a variable employee contribution rate, known as the "shared risk contribution rate," applicable to new members (Classes A-3 and A-4) that is linked to the investment performance of the pension funds;

5) Require new members who purchase most types of nonschool or nonstate service credit (other than intervening military service) to contribute an amount equal to the full actuarial cost of the service purchase;

6) Beginning July 1, 2010, re-amortize all of the unfunded actuarial accrued liabilities of SERS, including previously enacted supplemental annuities, over a 30-year period

SYNOPSIS (CONT'D)

using level-dollar amortization payments, instead of level percentage of pay amortization payments including the costs of this bill;

7) Maintain the current five-year smoothing period over which investment gains and losses are recognized;

8) Fund any increase in accrued liability enacted by legislation, other than the bill, subsequent to December 31, 2009, over a 10-year period using level-dollar amortization payments;

9) For the fiscal year beginning July 1, 2010, establish the total employer contribution rate as the "final contribution rate" of 5.0% of the total compensation for all active members;

10) Modify employer contribution requirements to SERS by imposing limits, referred to as "collars," on the rate at which employer contributions may rise from year to year. For the fiscal years beginning July 1, 2011, July 1, 2012, and on or after July 1, 2013, establish a temporary collared contribution rate, that if the contribution rate is more than 3%, 3.5% and 4.5%, respectively, of total compensation of all active members greater than the prior year's final contribution rate, then the collared contribution rate shall be applied and equal to 3%, 3.5% and 4.5%, respectively, of total compensation for all active members;

11) For all other fiscal years in which the actuarially required contribution rate is less than the collared rate, establish the final contribution rate as the actuarially required contribution rate, provided that the final contribution rate is not less than the employer normal contribution rate; and

12) Prohibit the use of pension obligation bonds for funding liabilities.

DISCUSSION

The Retirement Codes and Systems

The Public School Employees' Retirement Code and the State Employees' Retirement Code (Codes) are governmental, cost-sharing, multiple-employer pension plans. The designated purpose of the Public School Employees' Retirement System (PSERS) and the State Employees'

DISCUSSION (CONT'D)

Retirement System (SERS) is to provide retirement allowances and other benefits, including disability and death benefits to public school and state employees. As of June 30, 2009, there were approximately 754 participating employers, generally school districts, area vocational-technical schools, and intermediate units in PSERS, and approximately 107 Commonwealth and other employers participating in SERS.

Membership in PSERS and SERS is mandatory for most school and state employees. Certain other employees are not required but are given the option to participate. As of June 30, 2009, there were 279,701 active members and 177,963 annuitant members of PSERS, and as of December 31, 2009, there were 110,107 active members and 109,639 annuitant members of SERS.

For most members of both Systems, the basic benefit formula used to determine the normal retirement benefit is equivalent to the product of 2.5% multiplied by the member's years of accumulated service credit ("eligibility points") multiplied by the member's final average (highest three years) salary. Since the passage of Act 9 of 2001 (which increased the accrual rate for most members from 2.0% to 2.5%), most members of PSERS are Class T-D members and contribute 7.5% of pay to the System, while most members of SERS are Class AA members and contribute 6.25% of pay to the System. Within both Systems, there are a number of additional membership classes with corresponding benefit accrual and employee contribution rates that differ from the majority of school and state employees.[1]

Under the Codes of both Systems, superannuation or normal retirement age is that date on which a member may terminate service with the public employer and receive a full retirement benefit without reduction. Under the Public School Employees' Retirement Code, superannuation or normal retirement age is age 62 with at least one full year of service, age 60 with 30 or more years of service, or any age with 35 years of service. Under the State Employees' Retirement Code, superannuation or normal retirement age for most members is age 60 with at least three years of service or any age with 35 years of service, while age 50 is the normal retirement age for members of the General Assembly and certain public safety employees.

[1] Both PSERS and SERS utilize a number of "membership classes," each with its corresponding "class of service multiplier" that is multiplied by a base accrual rate to determine the member's benefit, rather than a simple accrual rate applied to all members. The exception is PSERS membership Class T-D, for which the accrual rate is specified as 2.5% annually. (See PSERS Code Section 8102, definition of "Standard Single Life Annuity" and "Class of Service Multiplier." See SERS Code Section 5102, definition of "Class of Service Multiplier.")

DISCUSSION (CONT'D)

Prior to the passage of Act 9 of 2001, the annual benefit accrual rate applicable to most members of PSERS and SERS was 2.0%. Act 9, through the creation of several new classes of membership in the Systems (Class T-D in PSERS; Class AA and Class D-4 in SERS), effectively increased the benefit accrual rates for most PSERS and SERS members from 2.0% to 2.5% (for members of the General Assembly who elected membership in Class D-4, the annual benefit accrual rate increased to 3.0%). Because Act 9 was applicable to all periods of school and State service, both retrospective and prospective, the effect of the increased benefit accruals was to enhance the value of most members' retirement benefits by 25% (50% for D-4 members of the General Assembly).

New Benefit Tiers

The bill as amended would mandate the establishment of new benefit tiers applicable to new members of both Systems through the creation of additional membership classes. The bill as amended would amend each retirement Code in the following manner:

1) The Public School Employees' Retirement Code, effective July 1, 2011, to create two new classes of membership for school employees, known as "Class T-E," and "Class T-F." New members of the System would become members of Class T-E beginning July 1, 2011. Class T-E members would be eligible for an annuity based upon an annual benefit accrual rate of 2% and would have a corresponding employee contribution requirement of 7.5% of compensation. Additionally, the bill as amended would create an optional new class of membership, known as "Class T-F." Any employee who becomes a member of the System after June 30, 2011, would have the option of electing Class T-F membership within 45 days of becoming a member of the System. A Class T-F member would be eligible for an annuity based upon an annual benefit accrual rate of 2.5% and would have a corresponding employee contribution requirement equal to 10.3% of compensation. A member who fails to elect Class T-F within 45 days of becoming a member of the System would automatically become a member of Class T-E. Current Class T-D members of the System who have a future break in service would remain members of Class T-D upon their return.

2) The bill as amended would amend the State Employees' Retirement Code, effective January 1, 2011, to create two new classes of membership for State employees (including members of the General Assembly), known as "Class A-3," and "Class A-4." Most new members of the System, other than a State Police officer or a member employed in a position for which a class of service other than Class A or Class AA

DISCUSSION (CONT'D)

is credited or could be elected, would become members of Class A-3 beginning January 1, 2011 (or if a member of the General Assembly, beginning December 1, 2010), including an employee who is not an active member of the System (because membership is optional or prohibited), but who becomes a member of the System on or after January 1, 2011. Class A-3 members would be eligible for an annuity based upon an annual benefit accrual rate of 2% and would have a corresponding employee contribution requirement of 6.25% of compensation. Additionally, the bill as amended would create an optional new class of membership, known as "Class A-4." An employee who becomes a member of the System on or after January 1, 2011, would have the option of electing Class A-4 membership within 45 days of becoming a member of the System. A Class A-4 member would be eligible for an annuity based upon an annual benefit accrual rate of 2.5% and would have a corresponding employee contribution requirement equal to 9.3% of compensation. A member who fails to elect Class A-4 within 45 days of becoming a member of the System would automatically become a member of Class A-3. Current Class AA members of the System who have a future break in service would remain members of Class AA upon their return.

The bill as amended would amend the Codes of both PSERS and SERS as follows:

1) **Vesting**: Increase the vesting requirements for new members from 5 years to 10 years.

2) **Superannuation**: Increase the superannuation requirements for new members (Classes A-3, A-4, T-E, and T-F) to age 65 with a minimum of three years of service credit, or any combination of age and service that totals 92 and at least 35 years of credited service. In the case of PSERS members, the option of superannuating at age 60 with 30 years of service would be eliminated for new members. Members of the General Assembly who become members of Class A-3 or A-4 on or after December 1, 2010, would become eligible for a superannuation annuity at age 55. For all other members (including State police officers) who currently superannuate at age 50, superannuation for Class A-3 and Class A-4 members would increase to age 55. For park rangers and Capitol police officers who currently superannuate at age 50 with 20 years of park ranger or Capitol police officer service, superannuation would increase to age 55 with 20 years of park ranger or Capitol police officer service.

DISCUSSION (CONT'D)

3) **Shared Risk Contribution Rate**: Establish a variable employee contribution rate, known as the "shared risk contribution rate" applicable to new members (Classes A-3, A-4, T-E, and T-F). The shared risk contribution rate is tied to the investment performance of each System's pension fund and would be added to the basic contribution rate of each membership class under certain conditions. For PSERS, beginning with the annual actuarial valuation performed for the period ending June 30, 2014, and for SERS, beginning with the December 31, 2013, valuation, and every 3 years thereafter, each System will compare the actual investment rate of return, net of fees, to the actuarial assumed rate of return for the previous 10-year period. If the actual rate of return is less than the assumed rate by 1% or more, the total member contribution rate will increase by ½% per year, up to a maximum total increase of 2.0%. If the actual rate is equal to or more than the assumed rate, the total member contribution rate will decrease by ½%. New hires will contribute at the rate in effect when they are hired. The additional shared risk contributions will be used to reduce the unfunded accrued liabilities of the Systems. If the System is fully funded at the time of the comparison, then the shared risk rate will be zero for that period. For any year in which the employer contribution rate is lower than the final contribution rate, the employee contribution rate would be the basic contribution rate. There would be no increase in the employee contribution rate where there has not been an equivalent increase to the employer contribution rate over the previous three year period. Until there is a full 10-year "look back" period, the look back period will begin as of the effective date of the act.

4) **Purchase of Service**: Require new members of both PSERS and SERS who purchase most types of nonschool or nonstate service credit (other than intervening military service for SERS, and both intervening and nonintervening military service for PSERS) to contribute an amount equal to the full actuarial cost of the service purchase.

5) **Waiver of Contributions**: Restrict new members from waiving their member contributions if the Maximum Single Life Annuity benefit is greater than or equal to 110% of the member's highest year salary.

6) **Option 4:** Eliminate members' eligibility to withdraw their accumulated deductions in a lump sum at retirement under retirement Option 4.

Both current and new members of the judiciary will be unaffected by the benefit changes. Officers of the Pennsylvania State Police who become members of SERS on or after January

DISCUSSION (CONT'D)

1, 2011, would receive Class A-3 service credit and benefits until they become eligible for the enhanced State Trooper retirement benefits upon attaining 20 years of credited service. A current Class D-4 member of the General Assembly who leaves service and later returns to the General Assembly will retain Class D-4 membership.

The bill as amended would not affect the retirement benefit rights of current active members of the Systems. Instead, the bill as amended seeks to create new benefit tiers within PSERS and SERS applicable only to employees who become members of PSERS and SERS on or after July 1, 2011, in the case of PSERS and January 1, 2011, in the case of SERS.

In Pennsylvania, public employee retirement benefits are recognized as deferred compensation for work already performed, which confers upon public employees certain contractual rights protected by the Pennsylvania Constitution (Article I section 17).[2] *Police Officers of Hatboro v. Borough of Hatboro,* 559 A.2d 113 (Pa. Cmwlth 1989); *McKenna v. State Employees' Retirement Board,* 495 Pa. 324, 433 A.2d 871 (1981); *Catania v. State Employees' Retirement Board,* 498 Pa. 684, 450 A.2d (1982). These contractual pension rights become fixed upon the employee's entry into the retirement system and cannot be subsequently unilaterally diminished or adversely affected, regardless of whether (1) the member is vested; or (2) the devaluation is necessary for actuarial soundness. *Association of Pa. State College and University Faculties v. State System of Higher Education,* 505 Pa. 369, 479 A.2d 962 (1984). See also *Hughes v. Public School Employees' Retirement Board*, 662 A.2d 701 (Pa. Cmwlth. 1995), *alloc. denied,* 542 Pa. 678, 668 A.2d 1139 (1995) (member has property interest in pension benefit).

By creating new benefit tiers applicable only to school or State employees who become members of PSERS or SERS, the bill as amended avoids impairing the contractual retirement benefit rights of current members of the Systems, while having the effect of creating a new contractual relationship between the public employer and new members of the Systems.

Section 8328 of the PSERS Code and Section 5508 of the SERS Code specify similar methods to be used by the actuaries of the respective systems to determine the "employer normal contribution rate" or employer normal cost and the total employer contribution rate, which consists of both the normal cost and the contributions required to fund the accrued liabilities of each plan, plus any amortization contribution requirement.

[2] The Pa. Constitution provides: "No ex post facto law, nor any law impairing the obligations of contract, … shall be passed."

DISCUSSION (CONT'D)

Both the PSERS and SERS Codes require the normal cost to be determined using "... a level percentage of the compensation of the average new active member...." However, the Systems apply different interpretations to the language. Using the SERS interpretation, the average new member, or entrant, to the Systems currently earns a benefit at the 2.5% annual accrual rate. However, if enacted, the bill would require new entrants to the Systems to earn benefits at a reduced 2.0% accrual rate. This would result in a diminished normal cost calculation that would tend to understate the true cost of SERS, because in the early years of the reduced benefit tier, the majority of members would remain in a benefit class entitling them to an annual benefit accrual of 2.5%. In the short term, the understated normal cost could generate an unfunded actuarial accrued liability in SERS. This would occur because reducing the benefit accrual rate for new members only would not affect the present value of benefits for current members, but would affect the normal cost calculation.

The traditional method would be to develop the normal cost rate based upon current active members and the benefits to which each member is entitled. This method would be based upon a blending of accrual rates attributable to all active members, rather than new entrants only, and would result in a normal cost calculation that more closely approximates the normal costs of the Systems. The traditional method would also help to achieve the presumed cost reduction goals of the bill by both reducing the normal cost of the Systems and preventing the creation of the unfunded actuarial accrued liabilities that would otherwise result from enactment of the bill. According to the Commission's consulting actuary, PSERS is currently using the traditional normal cost method.

Members' Retirement Options

The maximum single life annuity is the basic retirement benefit entitlement for members of PSERS and SERS. The maximum single life annuity provides the largest monthly pension payment to which an eligible member is entitled for the member's retired lifetime. When a member who has elected to receive benefit payments in the form of the maximum single life annuity dies, that member's designated beneficiaries are entitled to receive a death benefit in an amount equal to the member's total accumulated deductions, less any accumulated deductions withdrawn by the member at retirement and any retirement benefit payments that the member received prior to death. The member's "accumulated deductions" are the total of the member's employee contributions to the retirement system that have accrued over the member's working lifetime, plus accumulated interest at the statutory rate of four percent. If the total amount of benefit payments the member received prior to death exceeds that member's accumulated deductions, no death benefit will remain to be paid to the member's designated beneficiaries.

DISCUSSION (CONT'D)

In addition to the maximum single life annuity, the retirement Codes of both PSERS and SERS provide additional member options intended to provide members with flexibility in deciding the manner in which members' benefits are disbursed and to ensure that members who choose to do so have the ability to provide a reliable benefit stream to their designated survivor beneficiaries. Within limitations and subject to approval by the Boards of the Systems, Option 4 permits a member to develop a payment plan of the member's own design. Any plan the member designs must be determined by the Systems' Boards to be actuarially sound and consist of level monthly payments. Annuities for designated survivor beneficiaries may not be greater than one and one-half times the annuity payable to the member. Option 4 also permits a retiring member to withdraw all or a portion of the member's accumulated deductions. A member may elect to receive this withdrawal in one lump sum or in up to four installment payments. The installments continue to earn interest at the statutory rate of four percent per year until they are paid to the member. A member who elects to withdraw his or her accumulated deductions is entitled to a lifetime monthly pension benefit that is smaller than under either the maximum single life annuity or Options 1 thru 3, because the benefit will be computed on the present value of the member's benefit entitlement less the amount of the accumulated deductions that were withdrawn.

Under the bill as amended, the election to withdraw the member's accumulated deductions under Option 4 would be eliminated as an option for new members of PSERS and SERS who otherwise would be eligible to receive retirement benefits. Members of Class T-E , T-F, A-3 and A-4 who terminate service before vesting would continue to be entitled to withdraw their accumulated deductions plus the interest earned on those contributions upon termination of service, in lieu of any claim to other benefits.

Unfunded Liabilities and Amortization Periods

Generally, the overall funding objective of a public employee pension plan is to provide reserves sufficient to fund the benefits of plan members when those benefits become due and to fund, over time, any unfunded liability through installment payments. As the funded ratio (ratio of assets to liabilities) of a pension plan declines below 100%, the plan's assets represent an increasingly smaller portion of the System's accrued liabilities. A pension trust fund in which the value of the actuarial accrued liabilities exceeds the actuarial value of assets is said to have an unfunded actuarial accrued liability. This funding shortfall may occur for many reasons, including benefit liberalizations, unfavorable investment or other actuarial experience, changes in major economic or demographic assumptions, or underfunding of the System by the employer. Based upon the June 30, 2009, actuarial valuation for PSERS, the retirement System reported unfunded actuarial accrued liabilities totaling $15.7 billion, representing a

DISCUSSION (CONT'D)

funded ratio of 79.2%. Based upon the December 31, 2009, actuarial valuation for SERS, the retirement System reported unfunded actuarial accrued liabilities totaling $5.6 billion, representing a funded ratio of 84.4%.

The unfunded actuarial accrued liability existing in a pension trust fund must be amortized over time through installment payments. Under the Codes of both Systems, the permissible amortization periods are either 10 years or 30 years, depending upon the source of the liability. Subsequent to the passage of Act 40 of 2003, the amortization period for: 1) the increased liabilities of Act 9 of 2001; 2) the outstanding balances of the net actuarial losses incurred by PSERS in fiscal years 2000-01 and 2001-02 and by SERS in calendar year 2002; and 3) the gains and losses experienced in all future years is 30 years rather than 10 years, with the amortization contributions calculated as level-dollar payments. Amortization of the remaining balance of the pre-Act 9 of 2001 unfunded actuarial accrued liability, the future unfunded actuarial accrued liabilities attributable to benefit changes, including supplemental annuities, and in the case of PSERS, the gains and losses attributable to the change in the asset valuation methodology under Act 38 of 2002 continue to be amortized over 10 years on a level-dollar basis.

Based on current projections, the Commonwealth will experience large increases in employer contributions beginning in fiscal year 2012-2013, when the unfunded liability portion of the employer contribution rate begins to sharply increase. This employer contribution “rate spike” is the result of large unfunded liabilities generated by four major factors: 1) the two major market down turns during the past decade, from roughly 2001-2003 and again in 2008; 2) the benefit enhancement provided to active members of both PSERS and SERS by the passage of Act 9 of 2001; 3) the additional unfunded liability resulting from the two-tier cost-of-living adjustment provided to retired PSERS and SERS members by Act 38 of 2002; and 4) changes to funding methods resulting from the enactment of Act 38 of 2002 and Act 40 of 2003. Combined, Acts 38 and 40 had the effect of deferring the funding of liability. Of the two, Act 40 had the greatest impact by requiring PSERS and SERS to amortize certain gains and losses over different periods of time. Under Act 40, the recognition of pre-Act 9 gains was accelerated by amortizing these gains over a 10-year period, while the recognition of post-Act 9 losses was delayed by amortizing these losses over 30 years. The result was, in effect, a mismatch of the amortization of gains and losses, generating a 10-year credit that has suppressed the employer contribution rate and masked the true costs of the Systems. This 10-year credit will be fully amortized by fiscal year 2012-2013, which, not coincidentally, corresponds with the first year of the projected contribution rate spike.

DISCUSSION (CONT'D)

The bill as amended would restructure the amortization periods of both PSERS and SERS for the fiscal years beginning July 1, 2011, and July 1, 2010, respectively. The bill as amended would require the Systems to re-amortize all of the unfunded actuarial accrued liabilities of their pension trust funds. In the case of PSERS, the liabilities would be reamortized over a 24-year period using level-percentage of pay amortization payments. In the case of SERS, the liabilities would be reamortized over a 30-year period using level-dollar amortization payments. This "fresh start" of the amortization bases would have the effect of extending the amortization of the Systems' current pension liabilities, resulting in a reduction in the Systems' annual amortization contribution requirements.

For PSERS, the bill as amended would also require the use of a level-percentage of pay amortization method, rather than the level-dollar method currently used by both PSERS and SERS. Compared to the level-dollar amortization method, which results in level installment payments throughout the course of the amortization period, the level-percentage of pay method will produce amortization payments that are generally lower than would be the case under the level-dollar method in the early years of the amortization period, but steadily rise by a level percentage of pay using PSERS' assumed annual payroll increase assumption (4.0%). Although the level-percentage of pay amortization method has the advantage of helping reduce annual employer contribution requirements in the early years, this method will result in steadily escalating contribution requirements.

Additionally, increases in accrued liability caused by legislation enacted subsequent to June 30, 2010, for PSERS, and subsequent to December 31, 2009, for SERS, would continue to be amortized over a 10-year period, but in the case of PSERS, would use level percentage of pay amortization payments instead of level-dollar payments.

Asset Smoothing

In public pension systems, asset "smoothing" involves the gradual recognition of investment gains and losses over time and is part of the method used to determine the actuarial value of assets in a pension trust fund. One purpose of the various smoothing methods is to avoid large year-to-year fluctuations in employer contribution requirements that may otherwise result from volatility in the investment markets.

Both PSERS and SERS currently apply a 5-year smoothing period to recognize investment gains and losses. The bill as amended would preserve the 5-year smoothing period for SERS, but for PSERS, the bill as amended would extend from 5 years to 10 years the smoothing period applicable to investment gains and losses. The Actuarial Standards Board (ASB) is an

DISCUSSION (CONT'D)

entity within the American Academy of Actuaries (AAA) that establishes standards of practice for the actuarial profession in the United States. Actuarial Standards of Practice No. 44, *Selection and Use of Asset Valuation Methods for Pension Valuations*, requires that asset smoothing methods must recognize "*the differences from the market value of assets in a sufficiently short period*." It is the professional opinion of the Commission's consulting actuary that ten years is too long a time period over which to recognize investment gains and losses because such an extended smoothing period has the potential to produce actuarial values of assets that deviate greatly from market values of assets. While the extended smoothing period would have the effect of delaying the recognition of unfavorable investment experience, it would also have the consequence of delaying recognition of favorable investment experience in future years. In the short-term, the extended smoothing period would serve to mitigate the negative effects of the unprecedented investment losses suffered by PSERS in 2008 by extending the period over which those investment losses are recognized.

Modification of Employer Contribution Requirements

PSERS and SERS are funded through: 1) employer contributions, 2) employee contributions, and 3) returns on investments. The employer normal contribution rate represents the employer portion of the value or cost (normal cost) of the benefits earned during a given year, based upon the Systems' actuarial funding methods.

Like most large defined benefit public employee retirement systems throughout the United States, PSERS and SERS both utilize variations of the entry age normal actuarial cost method. The entry age normal cost method allocates the annual cost of all future benefits to be paid by the plan by spreading those costs over the entire period of a member's service from the date of entry to the member's anticipated date of retirement. These costs are expressed both as a dollar amount and as a percentage of actual or projected payroll. This method results in the calculation of two costs: 1) the annual contributions required to establish sufficient reserves to support future retirement benefits when made from entry age to normal retirement age is the normal cost; and 2) the aggregate normal cost of all members of the plan for prior years of service is the actuarial accrued liability. If assets of the plan are less than the accrued liability, then a deficit exists. This deficit is known as an unfunded actuarial accrued liability. Because this liability has not been accounted for or funded, it must be amortized through annual payments over a specified number of years, and the required annual payments are reflected in the total determination of employer annual cost.

The employer contribution requirements for both PSERS and SERS are determined using the employer portion of the employer normal cost, plus any amortization contribution requirements

DISCUSSION (CONT'D)

necessary to amortize the unfunded liabilities of the System over the statutorily specified amortization time periods as modified by the experience adjustment factor. The experience adjustment factor is a reference to the experience of the pension funds, most importantly, the investment experience of those funds. If gains from positive plan experience are greater than expected, employer contributions may be reduced. Conversely, losses from negative plan experience require additional employer contributions to compensate for those losses.

The bill as amended would modify the methods currently used to determine the employer contribution requirements for both PSERS and SERS by imposing limits, referred to as "collars" on the rate at which employer contributions may rise from year-to-year. For the fiscal year beginning July 1, 2010, the total employer contribution rate for each System, referred to in the bill as the "final contribution rate," would be modified. In the case of PSERS, the modified contribution rate would be 5.0% plus the premium assistance contribution rate. In the case of SERS, the contribution rate would be fixed at 5.0%, plus the benefit completion plan contribution rate. For the fiscal years beginning July 1, 2011, July 1, 2012, and on or after July 1, 2013, the bill as amended would establish temporary collared contribution rates, equal to 3%, 3.5% and 4.5%, for each year respectively. The collars would apply only if the calculation of the employer contribution rate results in an actuarially required contribution rate that is greater than the collared rate. The effect would be to limit the year-to-year increase in the employer contribution rate by the percentage amounts specified for each year. Beginning with the July 1, 2013, fiscal year, and for each year thereafter, the bill as amended would limit the annual increase in employer contributions to no more than 4.5%, until such time as the actuarially required contribution rate calculated by the Systems' actuaries results in an increase in the employer rate that is less than the collared rate of 4.5%. At this point, the collared contribution limits would expire and a new employer contribution floor rate equal to each System's employer normal cost rate would be established.

As described previously, the fiscal challenges facing employers and the Commonwealth resulting from the much publicized pension "rate spike" are significant. However, it should be noted that the employer contribution collars proposed in the bill represent a departure from the norms of actuarial funding practice. The effect of the bill as amended would be to suppress the employer contributions to both PSERS and SERS resulting in significant underfunding of both retirement systems.

Establishment of Employer Normal Cost Rate as Minimum Employer Contribution Floor

Act 38 of 2002 first established a 1% minimum employer contribution rate for both PSERS and SERS. In 2003, the mandated rate was increased through the enactment of Act 40 of 2003 for

DISCUSSION (CONT'D)

both Systems. For PSERS, the minimum employer contribution rate was increased effective July 1, 2004, from 1% to 4% plus the premium assistance contribution rate. For SERS, the rate was increased from 1% to: 1) 2% beginning July 1, 2004; 2) 3% beginning July 1, 2005; and 3) 4% beginning July 1, 2006. Act 8 of 2007 extended and made permanent the 4% employer floor rate for SERS.

The bill as amended would establish the employer normal cost rate as the new employer contribution floor rate for all future years following expiration of the temporary collared contribution rates. By mandating payment of the employer normal contribution rate as the minimum or floor rate for all future years following expiration of the collared contribution rate, the bill as amended would ensure that employer contributions in future years will be adequate to fund the costs of benefits earned in that year. The bill as amended would not impact the cost of benefits already earned (accrued liability), nor would it directly affect the unfunded liabilities of the Systems.

Miscellaneous Provisions

Multiple Service: Multiple service membership involves the combining of PSERS service and SERS service for retirement credit purposes. An individual with prior service credit in one of the retirement systems who, due to a change in employment status, becomes a member of the other retirement system may elect to become a multiple service member. Act 9 of 2001 amended the Codes of both PSERS and SERS to expand the multiple service election period from 30 days to 365 days, requiring six changes to the existing statutes: three in the PSERS Code and three in the SERS Code. One of the changes to the SERS Code was inadvertently overlooked. The bill as amended would correct this technical oversight to make the language consistent with the clear intent of the General Assembly. In practice, SERS has been administering the multiple service provision based on a 365-day election period. The bill as amended also makes numerous changes to the Codes of both Systems that are of a technical, administrative, or editorial nature.

Non-Qualified Part-Time Service (NQPT): Under current law, active members of PSERS are permitted to purchase previous periods of part-time school service, referred to as Non-Qualified Part-Time Service (NQPT). The bill as amended would eliminate the service purchase entitlement for new members, however, the necessity for such purchases of service would also be eliminated by removing the annual membership qualification requirement currently in the PSERS Code. Under the bill as amended, once membership as a part-time employee is established, all future school service would be considered creditable service. Current members will have a three-year window within which to elect to purchase any

DISCUSSION (CONT'D)

previous NQPT service. Any T-C or T-D members who become active members following the effective date of the act will be afforded a one-year service purchase window.

Prohibition on use of Pension Obligation Bonds: The bill as amended would prohibit te issuance of pension obligation bonds as a means for funding the liabilities of PSERS and SERS.

SUMMARY OF ACTUARIAL COST IMPACT

With respect to the new benefit tiers established by the bill as amended, the Commission's consulting actuary has reviewed the bill and determined the actuarial cost impact based upon current statutory provisions of the PSERS and SERS Codes specifying the methods for calculating the employer normal contribution rate. For SERS, because the employer normal contribution calculation is based upon a level percentage of the compensation of the average new member, the resulting normal cost would tend to understate the employer normal cost. This is largely due to the fact that the majority of members in the early years would remain in the higher benefit accrual group (2.5%), while the normal cost calculation would be based upon the average new entrant who, under the bill, would receive a diminished annual benefit accrual (2.0%).

The Commission's consulting actuary has reviewed the bill as amended and the actuarial cost estimates provided to the Commission by the consulting actuaries for both PSERS and SERS. The results of these analyses are summarized in the following four tables. Table I shows the employer contribution rate and the employer contribution amount for PSERS for FY 2011 to FY 2044 under (1) current law and (2) under the bill as amended. Under the PSERS methodology, the projected appropriation payroll differs under the bill as amended because of the changes to superannuation age and vesting resulting in a different pattern of expected terminations and retirements.

Table II shows the employer contribution rate and the employer contribution amount for SERS for FY 2011 to FY 2044 under (1) current law and (2) under the bill as amended. Under the SERS methodology, there is no change in appropriation payroll as the payroll is assumed to increase 3.3% per year.

As indicated in Tables I and II, the anticipated spike in the employer contribution rate in FY 2013 under current law would be delayed if the bill as amended is enacted. Based on the projections provided by the Systems' actuaries, the increased contributions would be phased-in over time. The actuarially required contribution rate would be reached in FY 2016 for PSERS

SUMMARY OF ACTUARIAL COST IMPACT (CONT'D)

and FY 2017 for SERS and the collared contribution rates would expire. The employer contribution rate for PSERS increases to 24.2% in FY 2016 and then increases to between 25% and 27.8% for FY 2017 to FY 2035 before decreasing to 16% for FY 2036 and declines gradually reaching 5.1% in FY 2044. The employer contribution rate for SERS increases to 28.25% for FY 2017 and gradually declines to 17.3% in FY 2040 and then decreases further, reaching 7.60% in FY 2044.

The deferral in making actuarially required contributions and the changes in the amortization of the unfunded accrued liability is partially offset by the reduced benefits provided to new members. As shown in the tables, the total employer contributions for the entire period FY 2011 to FY 2044 would decrease by about 1% or $1.4 billion for PSERS and 2% or $1.5 billion for SERS from the existing law.

Table III for PSERS and Table IV for SERS compares the projected employer contribution rates for FY 2011 to FY 2042 for (1) the Commission's previous actuarial note on House Bill Number 2497, Printer's Number 3853, as amended by Amendment Number 07493 (which subsequently became House Bill Number 2497, Printer's Number 3928) and (2) House Bill Number 2497, Printer's Number 3928, as amended by Amendment Number 09615. In addition to the changes introduced by Amendment Number 09615, the projections for PSERS reflect the difference due to the FY 2010 investment return of 14.59% projected by PSERS. As the Tables III and IV clearly show, the difference in total employer contributions between the two versions of the bill is quite significant, amounting to a reduction of approximately $27.2 billion for PSERS and $5.8 billion for SERS.

SUMMARY OF ACTUARIAL COST IMPACT (CONT'D)

TABLE I

Public School Employees' Retirement System
Projected Employer Contribution Rates
Fiscal Year 2011 to 2044
($ amounts in millions)

Fiscal Year	Current Law			House Bill 2497 as amended by Amendment 09615			Increase / (Decrease)	
Year Ending	Appropriation	Employer Contribution		Appropriation	Employer Contribution		Employer Contribution	
June 30	Payroll	Rate	Amount	Payroll	Rate	Amount	Rate	Amount
2011	$13,510	5.64%	$762	$13,510	5.64%	$762	0.00%	$0
2012	13,921	10.22%	1,423	13,921	8.72%	1,214	-1.50%	(209)
2013	14,345	28.71%	4,119	14,345	12.22%	1,753	-16.49%	(2,366)
2014	14,798	31.20%	4,617	14,791	16.71%	2,472	-14.49%	(2,145)
2015	15,280	32.35%	4,943	15,268	21.20%	3,237	-11.15%	(1,706)
2016	15,795	31.66%	5,001	15,777	24.24%	3,824	-7.42%	(1,177)
2017	16,341	31.13%	5,087	16,326	25.13%	4,103	-6.00%	(984)
2018	16,927	30.47%	5,158	16,905	25.92%	4,382	-4.55%	(776)
2019	17,558	29.71%	5,216	17,527	26.83%	4,703	-2.88%	(513)
2020	18,232	28.91%	5,271	18,194	27.55%	5,012	-1.36%	(259)
2021	18,948	28.11%	5,326	18,906	27.58%	5,214	-0.53%	(112)
2022	19,703	27.35%	5,389	19,659	27.68%	5,442	0.33%	53
2023	20,494	26.60%	5,451	20,439	27.73%	5,668	1.13%	217
2024	21,322	25.88%	5,518	21,258	27.75%	5,899	1.87%	381
2025	22,185	25.19%	5,588	22,115	27.75%	6,137	2.56%	549
2026	23,082	24.54%	5,664	23,006	27.70%	6,373	3.16%	709
2027	24,007	23.89%	5,735	23,925	27.63%	6,611	3.74%	876
2028	24,959	23.29%	5,813	24,865	27.56%	6,853	4.27%	1,040
2029	25,937	22.72%	5,893	25,831	27.49%	7,101	4.77%	1,208
2030	26,944	22.17%	5,973	26,826	27.41%	7,353	5.24%	1,380
2031	27,978	21.65%	6,057	27,849	27.32%	7,608	5.67%	1,551
2032	29,042	21.15%	6,142	28,902	27.23%	7,870	6.08%	1,728
2033	30,136	18.54%	5,587	29,978	27.17%	8,145	8.63%	2,558
2034	31,268	17.28%	5,403	31,091	27.09%	8,422	9.81%	3,019
2035	32,446	15.97%	5,182	32,251	26.99%	8,704	11.02%	3,522
2036	33,676	14.83%	4,994	33,464	15.65%	5,237	0.82%	243
2037	34,957	13.54%	4,733	34,728	14.45%	5,018	0.91%	285
2038	36,292	13.12%	4,762	36,038	12.64%	4,555	-0.48%	(207)
2039	37,691	13.91%	5,243	37,412	11.00%	4,115	-2.91%	(1,128)
2040	39,153	13.77%	5,391	38,852	9.58%	3,722	-4.19%	(1,669)
2041	40,680	12.47%	5,073	40,359	8.39%	3,386	-4.08%	(1,687)
2042	42,267	11.65%	4,924	41,924	7.32%	3,069	-4.33%	(1,855)
2043	43,915	10.59%	4,651	43,550	6.13%	2,670	-4.46%	(1,981)
2044	45,628	9.29%	4,239	45,239	5.11%	2,312	-4.18%	(1,927)
Total:			$170,328			$168,946		$(1,382)

SUMMARY OF ACTUARIAL COST IMPACT (CONT'D)

TABLE II

State Employees' Retirement System
Projected Employer Contribution Rates
Fiscal Year 2011 to 2044
($ amounts in millions)

Fiscal Year	Current Law			House Bill 2497 as amended by Amendment 09615			Increase / (Decrease)	
Year Ending	Appropriation	Employer Contribution		Appropriation	Employer Contribution		Emp loyer Contribution	
June 30	Payroll	Rate	Amount	Payroll	Rate	Amount	Rate	Amount
2011	$5,936	5.00%	$297	$5,936	5.00%	$297	0.00%	$0
2012	6,132	8.00%	491	6,132	8.00%	491	0.00%	0
2013	6,334	26.71%	1,692	6,334	11.50%	728	-15.21%	(964)
2014	6,543	29.27%	1,915	6,543	16.00%	1,047	-13.27%	(868)
2015	6,759	27.77%	1,877	6,759	20.50%	1,386	-7.27%	(491)
2016	6,982	27.51%	1,921	6,982	25.00%	1,746	-2.51%	(175)
2017	7,213	27.14%	1,957	7,213	28.25%	2,037	1.11%	80
2018	7,451	26.69%	1,989	7,451	27.79%	2,071	1.10%	82
2019	7,697	26.21%	2,017	7,697	27.15%	2,090	0.94%	73
2020	7,951	25.73%	2,046	7,951	26.52%	2,109	0.79%	63
2021	8,213	25.26%	2,075	8,213	25.91%	2,128	0.65%	53
2022	8,484	24.81%	2,105	8,484	25.31%	2,148	0.50%	43
2023	8,764	24.36%	2,135	8,764	24.73%	2,168	0.37%	33
2024	9,053	23.93%	2,167	9,053	24.17%	2,188	0.24%	21
2025	9,352	23.52%	2,199	9,352	23.63%	2,210	0.11%	11
2026	9,661	23.11%	2,233	9,661	23.10%	2,232	-0.01%	(1)
2027	9,979	22.72%	2,267	9,979	22.59%	2,255	-0.13%	(12)
2028	10,309	22.34%	2,303	10,309	22.10%	2,278	-0.24%	(25)
2029	10,649	21.98%	2,340	10,649	21.62%	2,302	-0.36%	(38)
2030	11,000	21.62%	2,379	11,000	21.16%	2,327	-0.46%	(52)
2031	11,363	21.28%	2,418	11,363	20.71%	2,353	-0.57%	(65)
2032	11,738	20.95%	2,459	11,738	20.28%	2,380	-0.67%	(79)
2033	12,126	18.86%	2,287	12,126	19.86%	2,408	1.00%	121
2034	12,526	17.86%	2,237	12,526	19.45%	2,436	1.59%	199
2035	12,939	17.40%	2,251	12,939	19.06%	2,466	1.66%	215
2036	13,366	15.90%	2,125	13,366	18.68%	2,496	2.78%	371
2037	13,807	15.42%	2,129	13,807	18.31%	2,528	2.89%	399
2038	14,263	15.49%	2,209	14,263	17.95%	2,560	2.46%	351
2039	14,733	16.45%	2,424	14,733	17.60%	2,594	1.15%	170
2040	15,220	14.94%	2,274	15,220	17.27%	2,628	2.33%	354
2041	15,722	14.16%	2,227	15,722	13.79%	2,167	-0.37%	(60)
2042	16,241	13.22%	2,147	16,241	11.13%	1,807	-2.09%	(340)
2043	16,777	12.02%	2,017	16,777	9.47%	1,589	-2.55%	(428)
2044	17,330	10.59%	1,835	17,330	7.60%	1,317	-2.99%	(518)
Total:			$69,444			$67,967		$(1,477)

SUMMARY OF ACTUARIAL COST IMPACT (CONT'D)

TABLE III

Public School Employees' Retirement System
Projected Employer Contribution Rates
Fiscal Year 2011 to 2042
($ amounts in millions)

Fiscal Year	House Bill 2497 as amended by Amendment 07493 with 5.64% employer contribution rate for FY 2011			House Bill 2497 as amended by Amendment 09615			Increase / (Decrease)	
Year Ending	Appropriation	Employer Contribution		Appropriation	Employer Contribution		Employer Contribution	
June 30	Payroll	Rate	Amount	Payroll	Rate	Amount	Rate	Amount
2011	$13,510	5.64%	$762	$13,510	5.64%	$762	0.00%	$0
2012	13,921	8.72%	1,214	13,921	8.72%	1,214	0.00%	0
2013	14,345	12.22%	1,753	14,345	12.22%	1,753	0.00%	0
2014	14,792	16.71%	2,472	14,791	16.71%	2,472	0.00%	0
2015	15,268	21.20%	3,237	15,268	21.20%	3,237	0.00%	0
2016	15,777	22.71%	3,583	15,777	24.24%	3,824	1.53%	241
2017	16,326	23.52%	3,840	16,326	25.13%	4,103	1.61%	263
2018	16,905	24.34%	4,115	16,905	25.92%	4,382	1.58%	267
2019	17,528	25.27%	4,429	17,527	26.83%	4,703	1.56%	274
2020	18,194	26.02%	4,734	18,194	27.55%	5,012	1.53%	278
2021	18,906	26.17%	4,948	18,906	27.58%	5,214	1.41%	266
2022	19,659	26.29%	5,168	19,659	27.68%	5,442	1.39%	274
2023	20,439	26.37%	5,390	20,439	27.73%	5,668	1.36%	278
2024	21,258	26.41%	5,614	21,258	27.75%	5,899	1.34%	285
2025	22,115	26.41%	5,841	22,115	27.75%	6,137	1.34%	296
2026	23,006	26.39%	6,071	23,006	27.70%	6,373	1.31%	302
2027	23,925	26.33%	6,300	23,925	27.63%	6,611	1.30%	311
2028	24,865	26.27%	6,532	24,865	27.56%	6,853	1.29%	321
2029	25,831	26.21%	6,770	25,831	27.49%	7,101	1.28%	331
2030	26,826	26.13%	7,010	26,826	27.41%	7,353	1.28%	343
2031	27,849	26.06%	7,258	27,849	27.32%	7,608	1.26%	350
2032	28,902	25.98%	7,509	28,902	27.23%	7,870	1.25%	361
2033	29,978	25.91%	7,767	29,978	27.17%	8,145	1.26%	378
2034	31,091	25.84%	8,034	31,091	27.09%	8,422	1.25%	388
2035	32,251	25.75%	8,305	32,251	26.99%	8,704	1.24%	399
2036	33,464	25.67%	8,590	33,464	15.65%	5,237	-10.02%	(3,353)
2037	34,728	25.59%	8,887	34,728	14.45%	5,018	-11.14%	(3,869)
2038	36,038	25.51%	9,193	36,038	12.64%	4,555	-12.87%	(4,638)
2039	37,412	25.42%	9,510	37,412	11.00%	4,115	-14.42%	(5,395)
2040	38,852	25.33%	9,841	38,852	9.58%	3,722	-15.75%	(6,119)
2041	40,359	25.22%	10,178	40,359	8.39%	3,386	-16.83%	(6,792)
2042	41,924	15.00%	6,289	41,924	7.32%	3,069	-7.68%	(3,220)
Total:			$191,144			$163,964		$(27,180)

SUMMARY OF ACTUARIAL COST IMPACT (CONT'D)

TABLE IV

State Employees' Retirement System
Projected Employer Contribution Rates
Fiscal Year 2011 to 2042
($ amounts in millions)

Fiscal Year	House Bill 2497 as amended by Amendment 07493			House Bill 2497 as amended by Amendment 09615			Increase / (Decrease)	
Year Ending	Appropriation	Employer Contribution		Appropriation	Employer Contribution		Employer Contribution	
June 30	Payroll	Rate	Amount	Payroll	Rate	Amount	Rate	Amount
2011	$5,936	5.00%	$297	$5,936	5.00%	$297	0.00%	$0
2012	6,132	8.00%	491	6,132	8.00%	491	0.00%	0
2013	6,334	11.50%	728	6,334	11.50%	728	0.00%	0
2014	6,543	16.00%	1,047	6,543	16.00%	1,047	0.00%	0
2015	6,759	20.50%	1,386	6,759	20.50%	1,386	0.00%	0
2016	6,982	22.51%	1,572	6,982	25.00%	1,746	2.49%	174
2017	7,213	22.73%	1,639	7,213	28.25%	2,037	5.52%	398
2018	7,451	22.82%	1,701	7,451	27.79%	2,071	4.97%	370
2019	7,697	22.88%	1,761	7,697	27.15%	2,090	4.27%	329
2020	7,951	22.94%	1,824	7,951	26.52%	2,109	3.58%	285
2021	8,213	22.99%	1,888	8,213	25.91%	2,128	2.92%	240
2022	8,484	23.04%	1,954	8,484	25.31%	2,148	2.27%	194
2023	8,764	23.08%	2,023	8,764	24.73%	2,168	1.65%	145
2024	9,053	23.13%	2,094	9,053	24.17%	2,188	1.04%	94
2025	9,352	23.17%	2,167	9,352	23.63%	2,210	0.46%	43
2026	9,661	23.22%	2,243	9,661	23.10%	2,232	-0.12%	(11)
2027	9,979	23.27%	2,322	9,979	22.59%	2,255	-0.68%	(67)
2028	10,309	23.31%	2,403	10,309	22.10%	2,278	-1.21%	(125)
2029	10,649	23.36%	2,487	10,649	21.62%	2,302	-1.74%	(185)
2030	11,000	23.40%	2,575	11,000	21.16%	2,327	-2.24%	(248)
2031	11,363	23.45%	2,665	11,363	20.71%	2,353	-2.74%	(312)
2032	11,738	23.50%	2,758	11,738	20.28%	2,380	-3.22%	(378)
2033	12,126	23.54%	2,855	12,126	19.86%	2,408	-3.68%	(447)
2034	12,526	23.59%	2,954	12,526	19.45%	2,436	-4.14%	(518)
2035	12,939	23.63%	3,058	12,939	19.06%	2,466	-4.57%	(592)
2036	13,366	23.68%	3,165	13,366	18.68%	2,496	-5.00%	(669)
2037	13,807	23.72%	3,276	13,807	18.31%	2,528	-5.41%	(748)
2038	14,263	23.77%	3,390	14,263	17.95%	2,560	-5.82%	(830)
2039	14,733	23.82%	3,509	14,733	17.60%	2,594	-6.22%	(915)
2040	15,220	23.86%	3,632	15,220	17.27%	2,628	-6.59%	(1,004)
2041	15,722	17.90%	2,814	15,722	13.79%	2,167	-4.11%	(647)
2042	16,241	13.43%	2,182	16,241	11.13%	1,807	-2.30%	(375)
Total:			$70,860			$65,061		$(5,799)

POLICY CONSIDERATIONS

In reviewing the bill as amended, the Commission identified the following policy considerations.

New Benefit Tiers. **( )** The bill as amended would have the effect of reducing the annual benefit accrual rate to 2.0% from 2.5% for Class T-E members of PSERS and Class A-3 members of SERS. Individuals who elect to become members of Class T-F or Class A-4 will earn a higher annual benefit accrual rate of 2.5%, but will be required to make employee contributions of 10.3% and 9.3% of payroll respectively, nominally neutralizing the additional employer costs of providing the higher benefit levels. The bill as amended would also increase the normal retirement age to age 65 for most new classes of service, increase employee contributions relative to benefits earned and increase the service requirement for vesting. The combined effect of the proposed benefit changes will be to reduce the cost to employers of providing benefits earned in the future and increase employee cost sharing.

Employee Risk Sharing. **( )** The bill as amended would require the payment of additional member contributions to the Systems, referred to as the "shared risk contribution rate," during protracted periods of unfavorable investment performance. It would appear that the goal of this provision is to require members to share in the investment risks of the retirement systems.

Purchases of Service. **( )** Under the Codes of both PSERS and SERS, active members are entitled to purchase various types of previous non-school and nonstate service on terms that generally favor the member. These subsidized service purchases generally result in small, but measurable losses to the Systems. The bill as amended would alter the service purchase calculation by requiring new members to bear the full actuarial cost, as calculated by the Systems, for most purchases of nonschool and nonstate service.

Normal Cost Calculation. **( )** PSERS and SERS use dissimilar methods for calculating the normal cost rate. Under the SERS method, the normal cost is calculated based upon the average new entrant to the System, and under the bill as amended, this method will tend to understate the System's normal cost because that cost will be based on new members earning somewhat diminished benefits. In contrast, the method employed by PSERS, which is based on a more liberal reading of the statute than the SERS interpretation, the normal cost rate reflects the average cost as a percentage of pay from entry into the System reflecting the actual class of membership of each active member. This is the traditional method for calculating the normal cost under the entry

POLICY CONSIDERATIONS (CONT'D)

age normal actuarial cost method. Using this method, the PSERS' actuary develops a normal cost rate based on a blend of the 2.0% and 2.5% benefit accrual rates and member contribution rates of 5.25%, 6.25%, 6.5%, and 7.5%, depending on each member's date of hire and class of service. The Commission's consulting actuary has indicated that the PSERS' method would be the preferred approach for determining the normal cost for both PSERS and SERS. This is especially important if the reduced benefit classes are adopted for new members in order to avoid having a decrease in the normal cost for current members and an increase in the actuarial accrued liability. Under the PSERS' approach, the normal cost and unfunded actuarial accrued liability would not change for current members, but there would be a reduced normal cost for new members as they join the System. Thus the total normal cost of PSERS would gradually decline as new members are added and current members retire.

Potential for Additional Employer Costs. **( )** The higher member contribution rates for Class T-F and Class A-4 were specifically developed to offset, and in the aggregate, neutralize the effect of providing the higher benefit level. The analysis of the bill as amended was performed assuming that the demographics of the new members that elect Class T-F or A-4 are consistent with the demographics of new members that elect Class T-E or A-3, respectively. The actual cost of providing a choice of benefits will depend on a variety of factors, such as the extent to which adverse selection occurs, which could produce higher actual costs. When given a choice, individuals will tend to make decisions that they perceive to be in their best economic interests. In general, individual total normal costs increase as members age. Therefore, if a higher percentage of older members elect the 2.5% benefit accrual rate than do younger members, the potential exists for actual costs to exceed the additional member contributions required of Class T-F and A-4 members resulting in additional employer costs. Other factors that could contribute to additional costs include the extent to which actual plan experience differs from expected experience and the number and characteristics of the members who elect the higher benefit classes differing from the norm.

Elimination of Option 4. **( )** The ability of a retiring member to withdraw his or her accumulated deductions, with interest, is a significant and popular benefit afforded to members of both PSERS and SERS. According to the staff of both Systems, the utilization rate of Option 4 withdrawals currently exceeds 90%, meaning over 90% of eligible members elect to withdraw all or a portion of their accumulated deductions at retirement. The bill as amended would eliminate this retirement option for most new members of both Systems, resulting in an actuarial gain accruing to both Systems.

POLICY CONSIDERATIONS (CONT'D)

Appropriateness of Departure from Actuarial Funding Standards. **( )** The bill as amended would reduce the actuarially required contribution rate to both PSERS and SERS for several years, effectively delaying the anticipated spike in employer contribution rates projected to begin in 2013. The Commission is well aware of the fiscal challenges facing the Commonwealth resulting from the anticipated pension contribution spike. However, it must be noted that the temporary collared contribution rates proposed in the bill as amended do not follow generally accepted actuarial standards of practice. The short-term effect of the bill as amended would be to defer the payment of actuarially required contributions to both PSERS and SERS, resulting in the underfunding of both retirement Systems. The bill as amended appears to be intended to delay the anticipated contribution increases, spread those increases over many future years, but to determine contribution rates in an actuarially sound manner in the long term. The Commonwealth's policymakers must determine whether the temporary departure from actuarial funding proposed by the bill as amended is consistent with the Commonwealth's pension plan funding and fiscal management goals.

Re-amortization of Pension Liabilities. **(+)** The bill as amended would require PSERS and SERS to re-amortize all of the unfunded actuarial accrued liabilities of their pension trust funds over a 24-year period in the case of PSERS and over a 30-year period in the case of SERS. The re-amortization of pension plan liabilities is a legitimate actuarial technique.

Extended Smoothing Period. **( )** For PSERS, the bill as amended would extend from five years to ten years the smoothing period applicable to the investment gains and losses of the System. The Actuarial Standards Board (ASB) is an entity within the American Academy of Actuaries (AAA) that establishes standards of practice for the actuarial profession in the United States. Actuarial Standards of Practice No. 44, *Selection and Use of Asset Valuation Methods for Pension Valuations*, requires that asset smoothing methods must recognize "*the differences from the market value of assets in a sufficiently short period*." It is the professional opinion of the Commission's consulting actuary that ten years is too long a time period over which to recognize investment gains and losses because such an extended smoothing period has the potential to produce actuarial values of assets that deviate greatly from market values of assets. While the extended smoothing period would have the advantage of delaying the recognition of unfavorable investment experience, it would also have the consequence of delaying recognition of favorable investment experience in future years. In the short-term, the extended smoothing period would serve to mitigate the negative

POLICY CONSIDERATIONS (CONT'D)

effects of the unprecedented investment losses suffered by PSERS in 2008 by extending the period over which those investment losses are recognized.

New Employer Contribution Floor. (+) The bill as amended would establish the employer normal cost rate as the new employer contribution floor rate for all future years following expiration of the temporary collared contribution rates. Normal cost equates to the value or "cost" of benefits accrued by active members in a given year. By mandating payment of the employer portion of the normal cost rate as the minimum contribution rate for all future years following expiration of the collared contribution rate, the bill as amended would ensure that employer contributions in future years will be adequate to fund the costs of benefits earned in that year. The bill as amended would not impact the cost of benefits already earned (accrued liability), nor would it affect the unfunded liabilities of the Systems.

COMMISSION RECOMMENDATION

The Commission voted to attach the actuarial note to the bill as amended, recommending that the General Assembly and the Governor consider the policy issues identified above.

ATTACHMENTS

Actuarial Note provided by Katherine A. Warren and Timothy J. Nugent of Milliman, Inc.

Actuarial cost estimate provided by Buck Consultants, consulting actuary for the Public School Employees' Retirement System.

Actuarial cost estimate provided by the Hay Group, consulting actuary for the State Employees' Retirement System.

House Bill Number 2497, Printer's Number 3928.

Amendment Number 09615.