Connecticut State Post-Employment Benefits Commission

Final Report

October 28, 2010

Table of Contents

EXECUTIVE SUMMARY **4**

LIABILITIES AND COSTS RELATED TO CONNECTICUT'S RETIREMENT SYSTEMS 4
CAUSES OF UNFUNDED LIABILITY FOR SERS AND STATE OPEB PLAN 5
STRATEGIES FOR FOR CONSIDERATION FOR ADDRESSING CONNECTICUT'S POST EMPLOYMENT BENEFIT LIABILITIES AND COSTS 6

INTRODUCTION **9**

COMMISSION MEMBERS 10

COMMISSION'S APPROACH **11**

BACKGROUND **12**

LEGAL AND COLLECTIVE BARGAINING FRAMEWORK RE STATE EMPLOYEE RETIREMENT SYSTEMS 12
2009 STATE AND SEBAC AGREEMENT 12
DESCRIPTIONS AND DEFINITIONS OF ACTUARIAL LIABILITIES AND CALCULATIONS 13

STATE ADMINISTERED PENSION PLANS **15**

OVERVIEW OF STATE ADMINISTERED PENSION PLANS 15
State Employee Retirement System (SERS) *15*
Teachers Retirement System (TRS) *17*
Judicial Retirement System (JRS) *17*
Alternate Retirement Program *17*
FUNDING HISTORY AND FUTURE PROJECTIONS FOR SERS 18
June 30, 2008 SERS Actuarial Valuation; Projection for June 30, 2010 ..... *18*
Actuarial Accrued Liability among Tiers for SERS *18*
CAUSES OF GROWTH IN SERS UNFUNDED LIABILITY AND LACK OF FUNDING PROGRESS 18
PENSIONS: COMPARISONS TO OTHER STATES, MUNICIPALITIES AND PRIVATE SECTOR 25
Connecticut's Pension Funding Ratios *25*
Connecticut's Pension Plan Provisions *25*
Connecticut Municipal Pension Plans *26*
Private Sector Pension Plans *27*

STATE OTHER POST EMPLOYMENT BENEFIT (OPEB) PLANS **28**

OVERVIEW OF STATE ADMINISTERED OPEB PLANS 28
State Employee OPEB Plan *28*
Retired Teachers Health Plan (RTHP) *29*
STATE OPEB ACTUARIAL ACCRUED LIABILITY AND ARC AMOUNTS 29
BREAKDOWN OF OPEB ACTUARIAL ACCRUED LIABILITY 30
IMPACT OF STATE AND EMPLOYEE CONTRIBUTIONS ON DISCOUNT RATE AND TOTAL LIABILITIES 32
HEALTH CARE COSTS AND TRENDS 33
OPEB: COMPARISONS TO OTHER STATES, MUNICIPALITIES AND PRIVATE SECTOR 34
State OPEB Plans and Provisions *34*
Municipalities and the Private Sector *35*

IMPACT OF PENSION AND OPEB LIABILITIES ON STATE'S BUDGETARY AND FINANCIAL OUTLOOK AND CREDIT RATINGS **36**

STATE PENSION AND OPEB COSTS AS AN INCREASING PORTION OF STATE EXPENDITURES 36
IMPACT ON FINANCIAL OUTLOOK AND CREDIT RATINGS 39

ACTIONS TAKEN IN OTHER STATES REGARDING PENSION AND OPEB LIABILITIES **40**

POTENTIAL STRATEGIES TO ADDRESS PENSION AND OPEB LIABILITIES AND COSTS **41**

PENSION PLANS 41
Overall Strategy *41*
FUNDING STRATEGIES 42
Paying the Annual Required Contribution (ARC) *42*
Calculating the ARC *42*
Employee Contributions to the Fund *44*
Pension Obligation Bonds *45*
PLAN DESIGN AND BENEFIT MODIFICATION STRATEGIES 47
STATE OPEB PLAN 52
Overall Strategy *52*
Prefunding in a Trust Fund *52*

CONCLUSION **56**

APPENDICES **57**

Executive Summary

Governor M. Jodi Rell established the State Post-Employment Benefits Commission (the Commission) through Executive Order #38. Although Governor Rell recognized that pension and other post employment benefits (OPEB) consisting mainly of retiree health insurance, play an important role in attracting and maintaining a skilled and capable work force, she highlighted the growing impacts of the unfunded liabilities and costs related to these plans on the State's budget and finances. The Governor charged the Commission with delivering a report that:

- Identifies the amount and extent of unfunded liabilities for pensions and other post-employment benefits;
- Compares and evaluates the advantages and disadvantages of various approaches for addressing unfunded pension liabilities and post-employment benefits; and
- Proposes short and long-term plans for addressing unfunded pension liabilities and post-employment benefits.

The Commission reviewed actuarial valuations, collective bargaining agreements and other information regarding Connecticut's retirement systems as well as research reports and articles addressing these issues. The Commission also obtained actuarial estimates of liabilities and various approaches to how they may be addressed.

Liabilities and Costs Related to Connecticut's Retirement Systems

The State's pension plans include the Teachers Retirement System, the Judicial Retirement System, and the State Employees Retirement System (SERS) all of which are defined benefit plans. SERS covers the majority state employees and retirees as well as members of the General Assembly, constitutional officers and the Governor. Additionally, The State administers a defined contribution program for some higher education employees. The State also sponsors the State OPEB Plan (primarily health benefits) and the Retired Teacher Health Care Plan. The Commission focused on the SERS and State OPEB plans.

As of June 30, 2008, Connecticut's unfunded liability for SERS was $9.2 billion and $24.6 billion for OPEB, a total unfunded liability of $33.8 billion. Consider that Connecticut's current year general fund budget is $17.6 billion. Connecticut's 2008 funding ratio for its State-sponsored pension plans (plan assets as a percentage of plan liabilities), according to the Pew Center on the States, was the fifth lowest in the country. A November 2009 report by the Center for State and Local Government Excellence, indicated that Connecticut's unfunded OPEB liability was the third highest in the country

Connecticut's unfunded liabilities have lead to increasing costs consuming a growing percentage of state expenditures. In fiscal year 1992, the annual costs related to SERS, TRS and OPEB were 5.57 percent of state expenditures. They are projected to be 11.24 percent in the current fiscal year. If this trend continues, the percentages will grow to 13.7 percent in 2021 and almost 19 percent in 2032.

Causes of Unfunded Liability for SERS and State OPEB Plan

State Employee Retirement System (SERS)

The SERS plan has historically been underfunded, in part because, until the 1980's, it was funded on a pay-as-you-go basis. Indeed, the 2008 funding ratio of 51.9 percent is just slightly higher than the 1992 ratio of 51.4 percent, despite a decision to begin funding the Annual Required Contribution (ARC).

There are a number of reasons for a lack of progress with the SERS funding ratio. The Level Percent of Payroll method of calculating its ARC tends to have lower amortization amounts in the earlier years of the schedule. More importantly, interpretations applied to the 1995 and 1997 State and the State Employee Bargaining Agent Coalition agreements (SEBAC IV and V, respectively) have included annual reductions to the ARC. These reductions totaled over $105 million in fiscal year 2011. Moreover, reductions in the ARC payments of $314 million were included in the 2009 State and SEBAC agreement. The result is a heavy back-loading of the amortization schedule, resulting in a stagnant funding ratio and a growing annual ARC.

Some other reasons for a lack of funding progress include the 2009 and previous retirement incentive programs and the plan's assumed actuarial investment return. SERS, like most plans, was hurt by the severe market downturn in 2008, the main cause of the projected funding ratio decline to 46 percent as of June 30, 2010.

Historically, Connecticut has responded to concerns about unfunded liabilities by creating new tiers, as opposed to modifying existing tiers. SERS consists of three tiers: Tier I for those hired before July 1, 1984; Tier II for those hired from July 1, 1984 to June 30, 1997; and Tier IIA for those hired on or after July 1, 1997. According to the June 30, 2008 actuarial valuation, $14.3 billion of SERS total actuarial accrued liabilities of $19.2 billion are attributable to current retirees and Tier I active employees. This portion of the plan's liabilities would likely not be impacted by plan modifications given the legal issues involved.

Compared to other New England states, the annual payments as a percentage of final average salaries are lower for Tier II and IIA plans than the other states. The required employee contributions are lower in Connecticut as well. Connecticut's reductions in benefits related to early retirement are generally less than found in other New England states.

State Other Post Employment Benefit Plan (OPEB)

The challenge with OPEB for Connecticut and many other states is that the difference between the ARC and the pay-as-you-go amount (which is the amount Connecticut has been paying) is very difficult to fund from a budgetary standpoint. In 2008, the ARC was $1.65 billion. The actual amount paid for benefits was $.464 billion. Difficult as it is, continuing along the pay-as-you-go path will subject the state to continuing growth in these costs as a result of health inflation and a growing number of retirees. From fiscal year 1999-00 to 2008-09, these costs increased from $173.9 million to $452.0 million, or 11.2 percent per year.

As noted, Connecticut's OPEB liabilities are high compared to other states. The three main reasons for differences in per capita OPEB liability amounts are: 1) benefits levels and plan costs; 2) population covered; and 3) funding policy. In Connecticut, a high cost state, employees who work at least ten years are eligible to receive full comprehensive health care coverage for themselves and their dependants when they begin receiving retirement benefits, with 55 being the early retirement age for non-hazardous duty employees. The premium shares are minimal, ranging from zero to a maximum of three percent. Unlike pensions, once vested, the level of benefits received is not tied to the number of years of service. The Rule of 75 (years of service plus age) in the 2009 SEBAC agreement will delay when affected employees (those with less than ten years of service as of July 1, 2009) can begin receiving retiree health insurance.

In regard to funding, most states, like Connecticut have zero or few assets in their OPEB plans. The 2009 SEBAC agreement, however, included a provision that involved a 3 percent of salary employee contribution during the first ten years of service. These contributions are projected at $23 million in the current year. These contributions, by staying in the OPEB trust and not being used for current costs, will decrease the plan's actuarial liabilities and ARC.

Strategies for Consideration for Addressing Connecticut's Post Employment Benefit Liabilities and Costs

In light of the State's serious budgetary challenges over the next several years, and the pressure the growing costs of the State's retirement systems place on other budgetary needs, the Commission believes a number of approaches need to be considered to reduce the unfunded pension liabilities of the State. Consideration should be given to new funding strategies, financing alternatives, and plan design and benefit modifications. The issues and factors outlined in this report, among others, will need to be weighed when considering the strategies and approaches to be implemented in seeking to reduce these liabilities.

It is important to note that there are Commission members who did not agree with some of the strategies presented below in regard to the State pension and OPEB plans. Also, the Commission did not seek to prioritize these strategies. The main goal of this report has been to provide information and potential approaches to addressing these liabilities to policy-makers and stakeholders.

The State needs to develop a sound funding strategy for its retirement plans and have the fiscal discipline to carry it out. Timely analysis and multi-year actuarial projections are critical when policy makers are reviewing funding practices or making decisions impacting the plans. Policy makers need to question how a declining proportion of working-age citizens can fund Connecticut's unfunded liabilities for an increasing proportion of retirees.

Summary of Strategies for Consideration for SERS and OPEB

Short Term Plan

- **Pre-Fund OPEB**
- **Pay the ARC, and Eliminate Any Adjustments to Such.**
- **Increased Member Contributions.** The State and SEBAC should consider additional employee contributions for reinvestment in the plans (with a 1 percent increase totaling about $32 million), while the State should consider enacting a provision that would dedicate, for example, a portion of future surpluses for the plans.
- **Increasing the Retirement Age or Incentives to Retire Later.** The State and SEBAC should consider raising the retirement age for those in Tiers II and IIA and increasing reductions related to early retirements, with any savings to be reinvested into the plans. For SERS, the projected savings totaled $135 million related to these changes in the first year, savings would increase going forward.
- **Other Plan Design Strategies.** The State and SEBAC should consider plan modifications to SERS and OPEB, with any savings to be reinvested in the plans. In terms of OPEB, the changes for consideration include increased premium sharing and additional eligibility changes for employees moving directly to retirement from state service.
- **Service Delivery Changes.** It is also critical to continue slowing health care inflation through plan and service delivery changes, including through the implementation of medical homes and other initiatives. A one percent reduction in the annual health inflation below the actuary's assumed level would lower the calculated actuarial liability from $26.6 billion to $22.1 billion.

Long Term Plan

- **ARC and Funding Strategies.** The State should commit to a funding strategy targeting funding ratio benchmarks (e.g. 55 percent by 2018 for SERS), and consider establishing a "floor" below which ARC will not go below.
- **Actuarial Analysis and Projections.** The biennial actuarial valuations should reflect projections for liabilities and ARC amounts for all remaining years of the amortization schedule (not just two years).
- **Future Changes**. No action, such as a retirement incentive program or plan changes, should be enacted without a full actuarial analysis.

Considerable discussion was dedicated to the pros and cons of closing the defined benefit plan and replacing with a defined contribution arrangement for new employees; however, no consensus was reached as to whether this change would be beneficial to the State overall. Those on the Commission who opposed a defined contribution plan for new employees believe that such a plan would be more costly to the state and would not address the current unfunded liability problem, while providing lower and less secure retirement benefits to its employees. Those on the Commission who believed that a defined contribution plan should be considered expressed significant concern that the problems and

issues associated with the defined benefit plan could be perpetuated going forward at a growing cost to the State, especially if the recommendations in this report are ignored.

The challenge for the State will be to balance the need to increase the funding ratio of its pension and OPEB plans with the need to manage its overall budgetary needs. These increasing costs could lead to crowding out additional investments in education, infrastructure, health care, and in other critical areas.

It is the Commission's hope that this report will provide useful information to the Governor, other elected officials, and the stakeholders in adding to the understanding of the State's liabilities and costs related to its retirement system and in assessing the options available to address these issues.

Introduction

Through Executive Order Number 38, dated February 3, 2010, Governor M. Jodi Rell established the State Post-Employment Benefits Commission. In establishing the Commission, Governor Rell indicated that pension and other post-employment benefits (OPEB), including retiree health insurance, play an important role in attracting and maintaining a work force capable of protecting the health and safety of the State and its residents. At the same time, Governor Rell recognized the growing budgetary challenges and impact on the State's finances, including its credit rating, associated with the unfunded liabilities and future costs related to these benefit plans.

The Governor created the Commission to assist her, other elected officials and stakeholders in developing and assessing short and long-term strategies for addressing these post-employment liabilities. Therefore, the Governor charged the Commission with delivering a report that:

- Identifies the amount and extent of unfunded liabilities for pensions and other post-employment benefits;
- Compares and evaluates the advantages and disadvantages of various approaches for addressing unfunded pension liabilities and post-employment benefits; and
- Proposes a short and long-term plan or plans for addressing unfunded pension liabilities and post-employment benefits.

The Governor originally requested delivery of the report by July 1, 2010, but additional time was provided given the challenges encountered in receiving necessary actuarial information reflecting, among other matters, the impact of the 2009 SEBAC changes. Most importantly, additional time was needed to thoroughly explore and discuss all of the issues and options associated with the State's pension and OPEB liabilities.

Commission Members

The members of the Commission, appointed in accordance with Executive Order Number 38, are:

Member	Representing/Field
Michael J, Cicchetti, Chairman and Deputy Secretary of the Office of Policy and Management	State of Connecticut Office of Policy & Management
Thomas C. Woodruff, Ph.D., Director Healthcare Policy & Benefit Services, Office of the Comptroller	State of Connecticut, Office of the Comptroller
Christine Shaw *J.D., M.B.A.*, Director of Government Relations, Office of the Treasurer	State of Connecticut, Office of the State Treasurer
Sal Luciano, Executive Director, Council 4, American Federation of State, County and Municipal Employees	State Employees Bargaining Agent Coalition
Julie E. McNeal, CPA, Technical Activities Director, Connecticut Society of Certified Public Accountants	Certified Public Accountants
Gregory M. Stump, FSA, EA, FCA, MAAA, Vice President, EFI-Actuaries	Public Pension Actuary
J. Paul Mansour, Head of Municipal Research, Conning	Business Community
Other Participants	
Attorney Jamie Young, Governor's Legal Office	Office of the Governor
Judge Harry Calmar	State of Connecticut, Judicial Branch

Commission's Approach

The Commission's approach included reviewing numerous research reports and articles written about pension and OPEB issues. The Commission also reviewed significant amounts of information related specifically to Connecticut's plans, including past and most recent actuarial valuations, pension and retiree health plan provisions, investment reports related to plan assets, as well as original and subsequent modifications to the collective bargaining agreement between State and the State Employee Bargaining Agent Coalition (SEBAC) that establish, in part, retiree benefit plans. The Commission also received information and presentations regarding how actuarial liabilities related to pensions and OPEB plans are measured and how the annual Actuarial Required Contribution (ARC) is calculated. Many of the documents reviewed by the Commission are available on its website. http://www.ct.gov/opm/cwp/view.asp?a=2998&q=457846&opmNav_GID=1791

The Commission developed a list of potential solutions or approaches in terms of funding and plan design and benefits based on reports pertaining to actions taken by other governments or organizations or through the members own professional experiences. The Commission focused on the State Employee Retirement System (SERS) plan. The Commission did not spend as much time reviewing the Teachers Retirement System (TRS) because this plan recently received significant attention related to a 2008 issuance of Pension Obligation Bonds (POBs). As part of the POB issuance, some of the requirements related to funding the ARC and plan benefits were built into the bond indenture or State Statutes. Nonetheless, a number of the recommendations in this report may apply to the TRS plan as well as the Judicial Retirement System (JRS) administered by the State.

The Commission sought to create a baseline for the current plans and funding approaches against which potential changes could be compared. The Commission's approach was to obtain actuarial estimates that would provide projections of these liabilities and the potential impact of various approaches to addressing these obligations. Additional actuarial work and analysis may be needed as part of pursuing any of the changes recommended. As required by the Governor's executive order, this report contains a discussion of the advantages and disadvantages of approaches considered.

Background

Legal and Collective Bargaining Framework re State Employee Retirement Systems

The Commission reviewed the legal framework in which OPEB and pension benefits are provided to State employees and retirees. These retirement plans are provided largely in accordance with the collective bargaining agreement negotiated between the State and the State Employee Bargaining Agent Coalition (SEBAC). SEBAC is comprised of thirteen unions, and was recognized in 1986 by Public Act 86-411 to negotiate with the State on health benefits and retirement issues. The agreement also established the joint labor-management Health Care Cost Containment Committee. In 1997, the State and SEBAC negotiated a long-term health and retirement benefit agreement, which is effective through 2017. This agreement was most recently modified by the parties in 2009.

The Commission recognized that the ability to modify the benefits received by current retirees is limited, although there is current legal action in this regard in one or more states. In terms of active employees, most proposed benefit plan changes would have to be negotiated between the State and the coalition of bargaining units. As will be described, there have been some modifications to the 1997 agreement. The Commission also discussed the State's ability to make benefit changes related to a group of former employees, known as terminated vested employees. Terminated vested employees have left state services but are eligible to begin receiving pension and/or retiree health insurance at some future date.

2009 State and SEBAC Agreement

In addition to a Retirement Incentive Program (RIP), the 2009 SEBAC agreement contained a number of other modifications. Including:

- Increases in co-pays for prescription drugs and mandatory generic substitution except in cases of medical necessity certified by a member's physician;
- An increase in active employee premium shares of $350 per year with a prorated amount to be reflected in future premium share percentages;
- Reductions in preventive care co-pays;
- The application of the "Rule of 75" (combination of age and service must equal 75) for eligibility for retiree health insurance for those with less than ten years of service as of July 1, 2009; and
- A 3 percent of salary contribution up through ten years of state employment for those with fewer than five years of service as of July 1, 2010. Contributions prior to July 1, 2013, according to the agreement, are available to reduce budgeted General Fund payments for retiree health care.

The 2009 SEBAC agreement also allowed the State to defer a contribution of $14.5 million that was budgeted for OPEB in fiscal year 2008-09, as well as to reduce contributions to SERS by $50 million in fiscal year 2008-09, and by $64.5 million in fiscal year 2009-10, below the ARCs calculated for those two years. The agreement also contained a trigger permitting the State to reduce its contribution to

SERS by $100 million below the ARCs calculated for fiscal years 2009-10, and 2010-11, if revenues fell below a certain level. The total reductions included in State budgets related to SERS contributions were $314 million for the three-year period.

Descriptions and Definitions of Actuarial Liabilities and Calculations

Some of the terms used in this report are specific to actuarial calculations, and should be understood to appreciate the issues discussed herein.

What is an actuarial liability and how is it measured?

Employee benefits plans are generally defined in terms of three things:

- Who is entitled to receive benefits?
- Under what circumstances will they receive the benefits?
- What amount or level of benefits are they entitled to?

In the context of a pension or retiree healthcare plan, an actuarial liability is a dollar value that represents the present value of an expected benefit payment or stream of payments. The actuary takes into account a variety of actuarial assumptions, including life expectancy, expected retirement age, and projected future salaries and cost-of-living adjustments if appropriate. The most crucial assumption is the expected future return on plan assets. For most large pension funds, this assumption is around 8.0 percent annually. Based on anticipated future events, the assumptions are inevitably incorrect on a year-to year basis, creating *actuarial gains and losses*. A reliable set of assumptions; however, will reasonably represent the true experience of a plan over the long-term.

When plans are funded using actuarial principles, monies are contributed annually to an account as benefits are earned. The annual contribution is designed to cover benefits expected to be earned during the year, and past actuarial gains or losses. Generally, the desired outcome is a relatively predictable steady stream of contributions, typically measured as a percentage of payroll for covered members.

The *funding ratio* that is referred to most often in actuarial reports represents the ratio of two numbers: the value of benefits earned compared to the value of assets used to support those benefits. Ideally, this ratio would be consistently equal to or near 100 percent; however, the reality of economic cycles causes a great deal of volatility in such. Nonetheless, on average, over three-quarters of all statewide pension systems maintained a funding ratio between 75 percent and 125 percent, as reported in the annual surveys conducted by the National Association of Retirement Administrators (NASRA) from 2003 through 2008. Ratios for many of these systems have likely fallen below this range by 2010.

The funding ratio in Connecticut is now well below this range, for reasons discussed within this report. Improved funding can come about through a variety of strategies, but it is important to keep in

mind that pension funding and any improvements thereof, are long-term in nature and should be treated as such.

KEY DEFINITIONS

Actuarial Accrued Liability (AAL): The AAL represents a funding target equal to the present value of fully projected benefits earned or accrued as of the date of the actuarial valuation. The amount of the AAL is a result of a number of factors, including the level of benefits offered, eligibility requirements for benefits, the assumed rate of return on plan assets, and other actuarial assumptions (retirement age, longevity, etc).

Unfunded Actuarial Accrued Liability (UAAL): The UAAL is the excess of the AAL over the actuarial value of plan assets. In other words, the UAAL is the present value of benefits earned to date that are not covered by current plan assets. A large UAAL is generally associated with plans that do not consistently receive ARC contributions.

Actuarially Required Contribution (ARC): The ARC is the annual employer contribution calculated by the actuary for a plan that is the sum of: (1) the employer "normal cost" of retirement benefits earned by active employees in the current year; and (2) the amount needed to amortize the existing unfunded liabilities over a period, not more than thirty years. Employee contributions are typically used to partially offset the employer's normal cost. The goal of the ARC is to help account for costs as they accrue and to reduce unfunded liabilities (or surpluses) over time.

Normal Cost: The Normal Cost, also known as the annual benefit cost, generally represents the portion of the cost of projected benefits allocated to the current plan year. The employer normal cost equals the total normal cost of the plan reduced by employee contributions.

State Administered Pension Plans

Overview of State Administered Pension Plans

State Employee Retirement System (SERS)

SERS is a single-employer defined-benefit pension plan covering most of the State's full-time employees. The plan also covers members of the General Assembly, constitutional officers and the Governor. According to the most recent actuarial valuation as of June 30, 2008, there were 38,093 retirees and beneficiaries receiving benefits, 1,592 terminated plan members entitled to, but not yet receiving benefits, and 53,196 active employee plan members. Subsequent to June 30, 2008, these numbers have changed through the normal course of business and, more significantly, the 2009 retirement incentive program agreed to by the State and SEBAC through which approximately 3,700 active SERS members retired. SERS is administered by the State Employees Retirement Commission and the State Comptroller's Office.

SERS consists of Tier I (Generally for those hired prior to July 1, 1984), Tier II (Generally for those hired on or after July 1, 1984 and prior to July 1, 1997), and Tier IIA (for those hired on or after July 1, 1997). Historically, Connecticut has created new tiers, as opposed to modifying existing plans, in reaction to concerns relative to the plan's unfunded liabilities. As discussed previously, the 1997 changes were part of a twenty year agreement, through 2017, regarding active employee health coverage and retiree healthcare benefits.

Provided below in Schedule 1 is a summary of plan provisions, with a more detailed description of these provisions provided in Appendix 2 of this report.

Schedule 1
SUMMARY OF KEY SERS PLAN PROVISIONS

Final Average Earnings (all tiers): Average of three highest paid years (including overtime for some units), with no one year being greater than 130% of average of two prior years.

Normal Retirement Eligibility:

- Tier I and II, IIA-Hazardous Duty: 20 years of service
- Tier I-Others: Age 55 with 25 years of service, age 60 with 10 years, or age 70 with 5 years
- Tier II and IIA: Age 62 with 10 years of service, age 60 with 25 years of service, age 70 with 5 years, or age 62 and 5 years for terminations on or after July 1, 1997

Normal Retirement Benefit:

- Tier I-Hazardous Duty: 50% of Final Average Earnings, plus 2% for each year over 20 years
- Tier II-Hazardous Duty: 2.5% of Final Average Earnings times up to 20 years, plus 2% for each year over 20 years
- Tier I-Others: Generally, 2% of Final Average Earnings times years of service.
- Tier II-Others: Generally, 1 1/3% of Final Average Earnings for each year of service, plus ½% of earnings in excess of breakpoint* (*$10,700 increased by 6% each year since 1982 but not greater than Social Security Compensation)

Early Retirement:

- Tier I-Hazardous Duty: None
- Tier I-Others: Age 55 with 10 years of service; benefit is normal retirement reduced for retirement prior to age 60 with 25 years of service
- Tier II and IIA: Age 55 with 10 years of service, benefit reduced ¼% per month prior to normal retirement.

Deferred Retirement:

- Tier I: May be deferred
- Tier II and IIA: May be deferred; Benefit is based on salary and service to actual retirement.

Vesting:

- Tier I: 10 years of service
- Tier II & IIA: Effective July 1, 1997, 5 years of actual state service, 10 years of vesting service, or age 70 with 5 years of service.

Member Contributions:

- Tier I-Hazardous Duty: 4% of earnings, plus 5% of earnings above Social Security Taxable Wages
- Tier I: 2% of earnings, plus 5% of earnings above Social Security Taxable Wages (Plan B); 5% of earnings (Plan C)
- Tier II: None
- Tier II-Hazardous Duty: 4% of earnings; Tier IIA-5% of earnings
- Tier IIA-All Others: 2% of earnings

Cost of Living:

- For employees retiring after June 30, 1999, adjustment not less than 2.5% and no greater than 6%, calculations based on percentage of CPI

Teachers Retirement System (TRS)

The Teachers' Retirement System, administered by the Teachers Retirement Board, is a single-employer defined-benefit pension plan covering any teacher, principal, superintendent or supervisor engaged in service to public schools in Connecticut. The plan provides retirement, disability and death benefits and annual cost-of-living adjustments to plan members and their beneficiaries. As of June 30, 2008, there were 28,787 retirees and beneficiaries receiving benefits, 1,394 terminated plan members entitled to, but not yet receiving benefits, and 81,919 active plan members.

For many years the State's actual contributions to the TRS fell short of the calculated ARC, with fiscal year 2005-06 being the first year in which the actual contribution met the calculated ARC. Going forward, the bond indenture related to the TRS pension obligation bonds issuance requires that the state contribute the calculated ARC. There are provisions that would lift this requirement temporarily, if certain criteria related to severe budgetary problems are met. The current budgetary difficulties have not yet reached the thresholds established.

As with SERS, the ARC for the TRS plan is calculated using the level percent-of-payroll method, meaning that the ARC, even if all actuarial assumptions were to be realized, will continue to increase each year.

In the most recent actuarial valuation for the TRS plan for the period ending June 30, 2008, the total liability for the plan is $21.8 billion with plan assets of $15.3 billion, resulting in a funding ratio of 70.05%. This is up from a funding ratio of 62.99% in 2006, largely resulting from issuance of $2.0 billion in POBs in 2008. As is projected for SERS, the 2008 funding ratio likely will drop in the 2010 valuation as the 2008 market losses are gradually recognized. Funding ratios are also affected by, among other factors, differences between the actual retirement ages, mortality, and population demographics experienced and the actuarial assumptions used in conducting valuations.

Judicial Retirement System (JRS)

The Judicial Retirement System is a single-employer defined-benefit pension plan covering any appointed judge or compensation commissioner in the state. The plan provides retirement, disability and death benefits and annual cost-of-living adjustments to plan members and their beneficiaries. As of June 30, 2008, there were 225 retirees and beneficiaries receiving benefits, 1 terminated plan member entitled to, but not yet receiving benefits, and 220 active plan members.

Alternate Retirement Program

The State also sponsors the Alternate Retirement Program (ARP), a defined-contribution plan available to unclassified employees at any units of the Connecticut State System of Higher Education. Plan members are required to contribute 5 percent of their annual salaries, with the State contributing 8 percent of covered salary. During fiscal year 2009, plan members and the State contributed $35.3 million and $21.7 million, respectively.

Funding History and Future Projections for SERS

June 30, 2008 SERS Actuarial Valuation; Projection for June 30, 2010

The most recent actuarial valuation completed for the SERS plan was as of June 30, 2008, which indicated that the plan's Actuarial Accrued Liability (AAL) was $19.243 billion, with assets valued at $9.990 billion, for a funding ratio of 51.92 percent. This funding ratio is among the lowest in the nation, for statewide plans.

Actuarial Accrued Liability among Tiers for SERS

According to the actuarial valuation as of June 30, 2008, $14.3 billion of the $19.2 billion total liability in SERS is attributable to current retirees (a large majority of which are Tier I) and Tier I actives, with the balance associated with active members of Tiers II and IIA. While this is the total liability, the proportion of the unfunded liability for each tier probably bares a similar relationship to the proportion of the total liability. One implication of tiered liabilities is; choices are now limited to reduce the liability for Tier I plan members. Another consideration is that the projections produced by Cavanaugh Macdonald Consulting LLC ("Cavanaugh Macdonald") for the period ending June 30, 2010 and beyond, reflect a significant increase in the unfunded liability for SERS, which will impact all three tiers.

Schedule 2-SERS Liabilities by Groups/Tiers (as of 6/30/08)

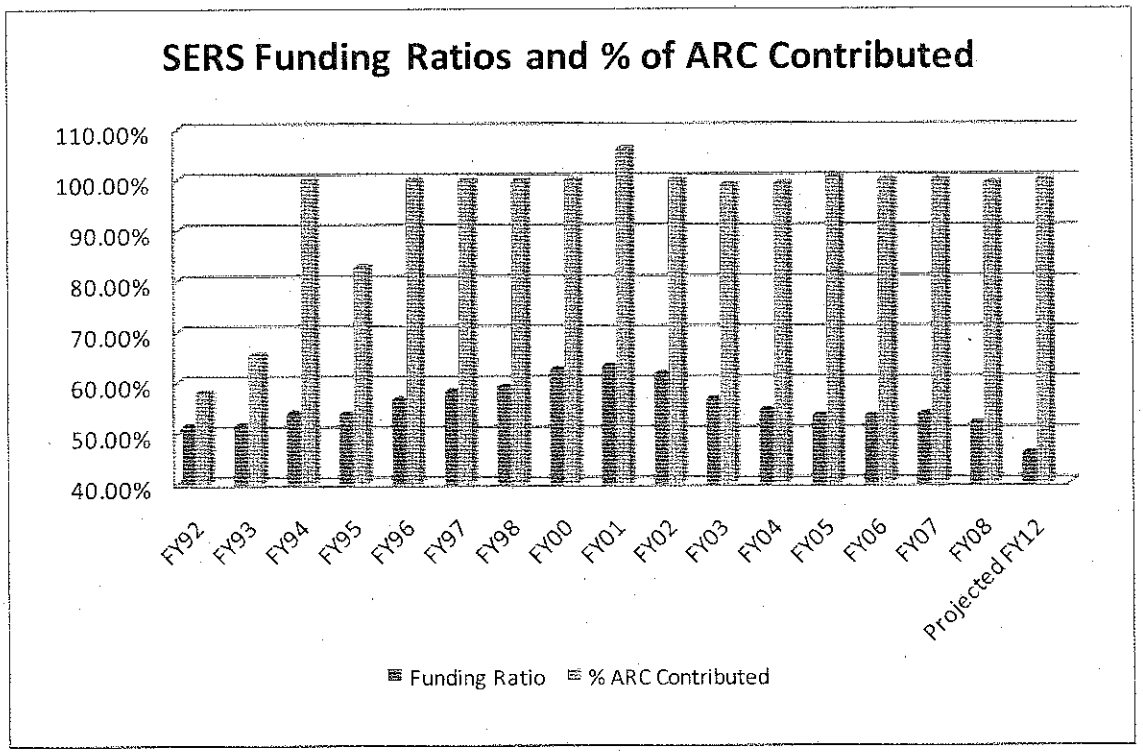
Group	Actuarial Accrued Liability	Normal Costs % of Payroll
Inactives	$11.4 billion	
Tier I Actives	$2.9 billion	Hazardous Duty: 13.08 %; B: 13.90 %; C: 10.90 %
Tier II Actives	$4.0 billion	Hazardous Duty: 14.80 %; all others: 9.75 %
Tier IIA Actives	$.9 billion	Hazardous Duty: 6.95 %; all others: 4.70 %
Total	**$19.2 billion**	**9.44%**

A recent projection done for the Commission by the actuarial firm Cavanaugh Macdonald indicates, based on the loss in value of plan assets, along with lower contributions and the RIP, that the funding ratio will drop to 45.8 percent for the period ending June 30, 2010. A significant ongoing budgetary challenge is the steady increase in the ARC for the years beginning 2011-12 and beyond. The $1.029 billion ARC projected by Cavanaugh Macdonald for fiscal year 2011-2012 is $185 million higher than the $844 million contribution being made by the state in the current year, fiscal year 2010-11, and will continue to increase each year thereafter, until the unfunded accrued liability is fully amortized.

Causes of Growth in SERS Unfunded Liability and Lack of Funding Progress

The SERS plan has historically been underfunded based in part because until the 1980's, it was funded on a pay-as-you-go basis. As can be seen in Chart 1, the funding ratio for this plan is just slightly above the level that existed back in 1992, despite a decision to begin funding the ARC. The lack of funding progress is due to the several contributing factors as described below.

Chart 1



Sources: June 30, 2008 SERS Actuarial Valuation; Projected FY 12 by Cavanaugh Macdonald, new actuaries for SERS **Note**: The Annual Required Contributions above reflect the deductions made based on the interpretation of the requirements related to SEBAC IV and V. The ARC before these adjustments was generally 10% to 15% higher than the ARC shown above.

The factors contributing to the magnitude of the SERS actuarial accrued liability include:

(1) Methods of Calculating the ARC. The Level Percent-of-Payroll method used to calculate the amortization component of a plan's ARC is similar to a home mortgage where mostly interest is paid in the early years. The dollar amount of the ARC rises over time by including an automatic cost escalator (typically 2% to 5% per year). This makes it more difficult to make progress improving the plan's funding ratio until half way through the amortization period.

Under the Level Dollar method, the ARC payment starts higher but does not increase as precipitously over the years as under the percent-of-payroll method. Higher funding in the earlier years provides consistent progress in improving the plan's funding ratio. Charts 2 and 3 below demonstrate the differences in these two methods with projections done in August 2010 by Cavanaugh Macdonald. While both methods of calculating the ARC are acceptable approaches, the actuary's application of the level percent-of-payroll approach helps to explain, in part, why the plan's funding ratio will not show improvement in the near term.

Chart 2

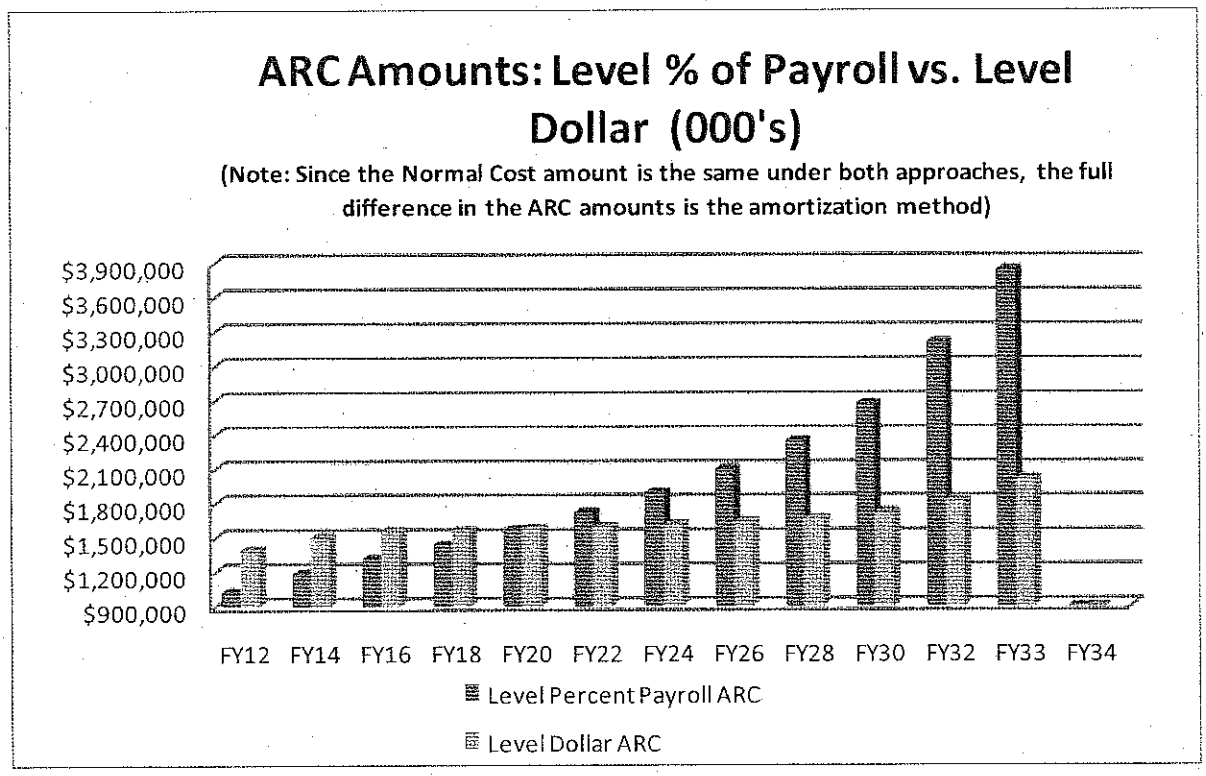
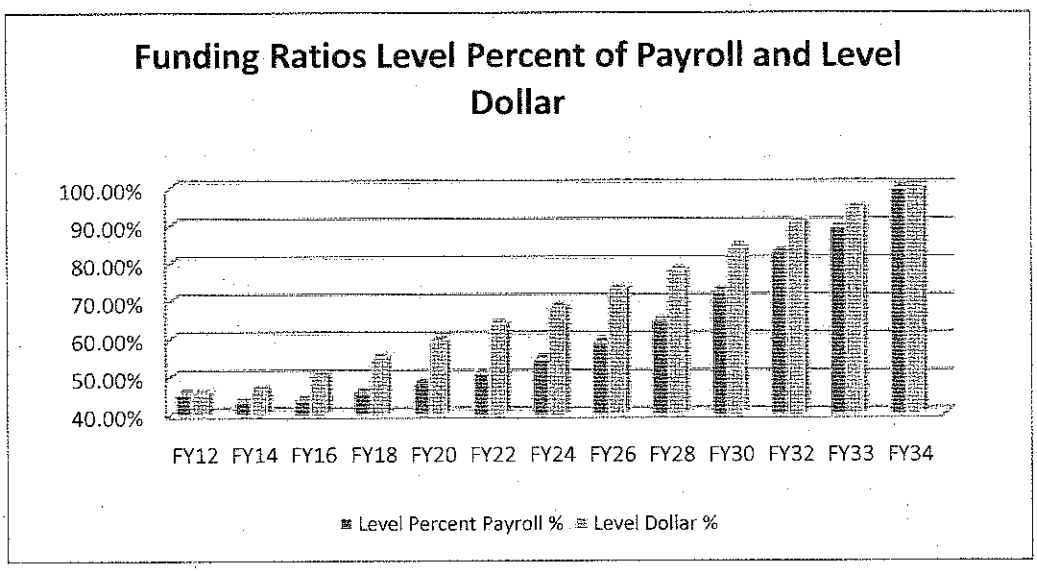


Chart 3



NOTE: As seen in Charts 2 and 3, contribution amounts are much larger in the early years under a level-dollar amortization; however, the funding ratio improves more quickly. A similar funding ratio improvement can be achieved using a level percent-of-payroll amortization with a shorter amortization period.

(2) Adjustments to Amortization Schedule; Contributing less than the Full ARC. Another critical issue for the SERS plan is the effect that the SEBAC agreements IV and V, negotiated by the State and the coalition in 1995 and 1997, respectively, have had on the ARC calculation. Each year the ARC is calculated in accordance with actuarial standards, and then reduced under interpretations of SEBAC IV and V. These reductions were $43.7 million and $61.8 million, respectively, for a total reduction in the ARC of $105.5 million in the ARC calculation for fiscal year 2011.

The calculations for fiscal years 2002-2011 are provided below in Schedule 3, which reflects adjustments made related to SEBAC IV and V in the 2009 agreement. It is unclear if the provisions of SEBAC IV and SEBAC V have been interpreted correctly in terms of applying these reductions to the ARC. The total reductions for these 10 years is $820 million, with the full amount through the agreement period likely being $1.0 billion or more. According to Cavanaugh Macdonald, the impact of the SEBAC IV and V interpretations has been to exacerbate the back-loading of the amortization schedule already inherent in the level percent-of-payroll method, which leads to further growth each year in the ARC and delays improving the plan's funding ratio.

Schedule 3-ARC Calculation for Fiscal Years 2002-2011 (from Actuarial Valuations)

ARC Calculation (Amortization Period)	Amortization Payment-Unfunded Liability	Normal Cost	Total ARC before Adjustments	SEBAC IV Asset Adjustment	SEBAC V Asset Adjustment	Reported ARC	Additional Adjustment per SEBAC 2009	Actual Contribution	Actual Contribution as a Percent of ARC before Adjustments
FY2002(31yrs)	$224,822,810	$254,856,678	$479,679,488	($26,606,725)	($37,580,164)	$415,492,599	N/A	$415,492,599	87%
FY 2003 (30)	227,445,258	265,853,449	493,298,707	(27,937,061)	(39,459,172)	425,902,474	N/A	421,451,731	85%
FY 2004 (29)	290,512,660	271,856,543	562,369,203	(29,333,914)	(41,432,130)	491,603,159	N/A	470,332,944	84%
FY 2005 (28)	316,448,241	280,857,803	597,306,044	(30,800,610)	(43,503,737)	523,001,697	N/A	518,768,821	87%
FY 2006 (27)	421,328,884	279,753,428	701,082,312	(32,340,640)	(45,678,924)	623,062,748	N/A	623,062,732	89%
FY 2007 (26)	453,571,533	292,275,360	745,846,893	(33,957,672)	(47,962,870)	663,926,351	N/A	663,930,735	89%
FY 2008 (25)	490,600,066	312,360,768	802,960,834	(35,655,556)	(50,361,014)	716,944,264	N/A	711,555,274	89%
FY 2009 (24)	523,100,250	320,915,187	844,015,437	(37,438,334)	(52,879,064)	753,698,039	($50,000,000)	$703,698,039	83%
FY 2010 (23)	663,525,189	335,323,144	998,848,333	(42,040,683)	(59,379,565)	897,428,085	($164,500,000)	$732,928,085	73%
FY2011 (22)	708,627,332	340,926,657	1,049,553,989	(43,722,310)	(61,754,747)	944,076,932	($100,000,000)*	$844,076,932	80%
10 Year Total			**$7,274,961,240**	**($339,833,505)**	**($479,991,387)**	**$6,455,136,348**	**($314,500,000)**	**$6,105,297,892**	**84%**

*The FY2011 state budget presumes that the lower state revenue amounts will trigger a provision that allows for a $100 million reduction in the contribution.

(3) Investment Return Experience. When the actual rates of return are less than the actuarial assumption, the result will likely be a decrease in the funding ratio and a costlier ARC. For SERS, the late 1990's reflected strong investment returns while the results from 2001 on, have generally been below the assumed level.

Like all but a handful of states, Connecticut smoothes its investment gains and losses over a set number of years, recording only a portion of the impact each year. This means that under current smoothing techniques the funding levels will likely continue to drop for the next four or five years, as the major losses experienced in 2008 are gradually incorporated. In a year when the pension fund loses value, its position is doubly compromised. It loses both a portion of the funds' assets and the assumed earnings. The Pew Center report notes that the "critical question for states is whether the investment returns of the past two years are anomalous or whether they signal a fundamental change in how the markets will be operating."

In February 2010 the Pew Center on the States Report reported that seventeen states use an investment return assumption of less than 8 percent, while twenty-two others use an 8.0 percent assumption. According to the report, Connecticut is one of eleven states utilizing an investment return assumption greater than 8.0 percent. However, it is important to assess the reasonableness of the return assumption not by itself but in its relationship to the assumed rate of inflation. When returns are lower than expected (an actuarial loss), this is often partially offset by inflation being lower than expected (an actuarial gain).

Schedule 4- SERS-Historical Rates of Return

Fiscal Year	Assumed Rate of Return	Actual Market Value	Actual Actuarial Value
1993	8.50%	11.70%	8.80%
1994	8.50%	4.50%	7.40%
1995	8.50%	13.10%	8.40%
1996	8.50%	14.40%	10.70%
1997	8.50%	19.00%	12.90%
1998	8.50%	17.20%	14.30%
1999	8.50%	10.30%	14.60%
2000	8.50%	13.10%	15.00%
2001	8.50%	-3.71%	9.02%
2002	8.50%	-6.61%	5.84%
2003	8.50%	1.91%	5.08%
2004	8.50%	15.20%	6.74%
2005	8.50%	10.45%	7.37%
2006	8.50%	11.01%	8.03%
2007	8.50%	17.11%	9.80%
2008	8.50%	-4.80%	6.76%
2009	8.25%	*-18.58%*	*2.63%*
Compound Return 1993-2009		***6.86%***	**8.97%**

(4) Retirement Incentive Programs (RIP). Actuaries make pension liability computations based upon assumptions and projections including when employees will retire. There are two kinds of retirement incentive programs; those that incent employees to retire earlier than they might otherwise have; and those that incent employees to delay retirement. Historically, Connecticut RIPs have incentivized employees to retire early by offering additional benefits. These incentive plans add to the state's liability. Conversely, if Connecticut incentivized employees to delay retirement with an actuarially sound plan, the liability would decrease.

(5) Actuarial Gains and Losses. There are numerous actuarial assumptions that are made when calculating liabilities and ARCs, including turnover, salary increases and a number of others. To the extent that some of these assumptions are not realized, the actuarial amounts will be different than projected. An overview of the major actuarial methods and assumptions used for State-administered pension plans are included in Schedule 5.

Schedule 5- Actuarial Methods and Assumptions from Comptroller's June 30, 2009 Comprehensive Annual Financial Report

The following is information as of the most recent actuarial valuation:

	SERF	TRF	JRS
Valuation Date	6/30/2008	6/30/2008	6/30/08
Actuarial Cost Method	Projected unit credit cost method	Entry age actuarial cost method using level percent of payroll funding	Projected unit credit cost method
Amortization Method	Level percent of payroll	Level percent of payroll	Level percent of payroll
Remaining Amortization Period	24 Years	29.2 years	23 Years
Asset Valuation Method	20% of declining balance method*	4-year smoothed market	5-year smoothed market
Actuarial Assumptions:			
Investment Rate of Return	8.25%	8.5%	8.25%
Projected Salary Increases	4.0%-20.0%	4.0%-7.5%	5.25%
Includes inflation at	4.0%	4.0%	5.25%
Cost-of-Living Adjustments	2.7%-3.6%	2.0%-3.0%	2.75%-5.25%

* This method has since been changed to a 5-year smoothed market value.

Pensions: Comparisons to Other States, Municipalities and Private Sector

Connecticut's Pension Funding Ratios

In the Pew Center on the States report on state retirement systems issued in February 2010, the State of Connecticut's combined 2008 funding ratio in regard to its three pension plans of 61.6 percent was the fifth lowest among the fifty states. Similarly, the National Association of Retirement Systems Administrators 2008 survey found Connecticut ranked 49th out of 51 states and the District of Columbia in terms of the combined ratio of the SERS and TRS funding ratio (58.5 percent). Individually, the SERS (53.3 percent as of June 30, 2005) and TRS (63.0 percent as of June 30, 2006) plans were 115th and 121st, respectively, out of 125 statewide plans listed in the survey. The total average funding ratio for all the plans surveyed was 85.3 percent.

Connecticut's Pension Plan Provisions

Comparing pension benefit levels between states is complicated by the differences in the actuarial assumptions utilized (e.g., discount rates) and the timing of valuations. Data for state-administered pension plans from the February 2010 Pew Report indicated that Connecticut's total liability per capita for its three pension plans is 10th highest in the country. The data included the liabilities associated with Tier I, which has not had new participants since July 1, 1984.

The Federal Reserve Bank of Boston recently completed a report regarding state pension plans in the six New England States. The report did not include Tier I in Connecticut in its comparisons, since it has not been available to new employees since 1984. In comparing Connecticut's Tier II/IIA plan provisions to plans in other states, the pension salaries at retirement are lower in Connecticut than the other states, with comparisons to Massachusetts and Maine being somewhat more difficult because their employees are not eligible for social security. The other New England states paying into the social security fund for employees have significantly higher employee contribution amounts than Connecticut. The other New England states range from 5.1 percent in Vermont to 8.75 percent in Rhode Island. Connecticut's comparable employee contributions for non-hazardous duty employees in Tiers II and IIA are zero and 2 percent, respectively. The other New England states also generally have a steeper reduction in benefit amounts for early retirements.

Connecticut inflation based cost-of-living adjustments (COLAs) for Tiers II and IIA range from 2.5 percent to 6.0 percent, calculated as a percentage of CPI, with the actuarial assumption used being 2.7 percent. COLA provisions vary across the country and between municipalities in Connecticut. Among New England states, Massachusetts indexes only the first $12,000 per year, up to a maximum of 3 percent. The maximums in Maine and Rhode Island are 4 percent and 3 percent respectively, while Vermont's range is 1 to 5 percent. New Hampshire has no automatic COLA, but the legislature makes regular ad-hoc adjustments.

In terms of the percentage of final average salary earned per year of service, Tiers II and IIA, representing most members' current benefit accruals in SERS, are lower than other New England states. Another important benefit component is the calculation of final average salaries. Most state plans determine final average salaries over a 3 to 5 year period, with most of those, like Connecticut, being at 3 years. A shorter period results in a final salary that is closer to a person's earnings near retirement, which benefits those with rapidly growing salaries.

A related issue addressed in Connecticut's plans and in others involves "spiking" of final average salaries through increased use of overtime and by other means. Massachusetts's special commission on its retirement systems indicated that 45 of the 108 largest state-administered plans currently have anti-spiking provisions in place. Some states simply have language that prohibits unusual payments just prior to retirement, but twenty-seven plans have percentage limits on the annual increases used in calculating final average salary. These anti-spiking provisions vary, with limits on annual salary growth of 5 to 20 percent, with a median of 10 percent. Connecticut's SERS and TRS limits were annualized at 14 percent in the Massachusetts report. The level of base salaries and the types of additional compensation included in final average salaries (e.g., overtime, longevity) are other critical areas in which plans may differ.

Another issue discussed by the Commission was the ability for members to buy additional years of service in a plan, whether such service was in local government, the military or in other areas. Plans have differing provisions in this regard, however the amount charged for buying additional years should reflect the actuarial value of the added benefit.

There has been some attention given to those who have retired under the SERS plan with pensions of at least $100,000. These pensions are often related to high salaried positions in our state university systems. Many of these individuals are likely in Tier I. The concerns about these high pensions include what impact they will have on the plan's liabilities and costs and perhaps a sense that high-salaried employees should assume more responsibility for their retirement needs. There is a maximum annual benefit (currently $195,000, indexed for inflation and adjusted for age at retirement) based on the Internal Revenue Code. Cavanaugh Macdonald projected very minor changes in the ARC associated with placing caps of $150,000 and $125,000 on pensions in Tiers II and IIA, respectively. While the annual pension payments for retired members range from very low amounts to these higher amounts, the average pension payment was approximately $27,500 per year in the June 30, 2008 valuation.

Connecticut Municipal Pension Plans

170 Connecticut municipalities, including both the Town and City of Groton, submitted audit information to the Office of Policy and Management (OPM). Some of the summary data from the June 30, 2008 audit reports related to pension plans is as follows:

- Only 7 municipalities reported not offering a pension plan to any of their employees, while 163 municipalities offer a pension plan to some or all of their employees.

- There were 208 defined-benefit plans, 61 defined-contribution plans, and 45 municipalities participating in the State's Municipal Employee Retirement Fund (MERF) (20 municipalities offered only MERF).
- There were 24 municipalities with a defined-contribution plan only, while 113 had at least one self-administered defined-benefit Plan.
- For the 178 defined-benefit plans for which data was available, the aggregate total actuarial accrued liability was $8.2 billion with $6.8 billion in assets, for a funding ratio of 83.3 percent.

Private Sector Pension Plans

According to the Employee Benefit Research Institute, a nonprofit research institute in Washington, D.C, in 2008, 79 percent of public sector employees had a defined-benefit plan. In comparison, 33 percent of private-sector employees were enrolled in a defined-benefit pension plan in the same period. Eighteen percent of state workers had a defined-contribution plan in 2008, compared with 55 percent of private sector workers enrolled in a defined-contribution plan.

State Other Post Employment Benefit (OPEB) Plans

Overview of State Administered OPEB Plans

The State sponsors two defined-benefit OPEB plans: the State Employee OPEB Plan and the Retired Teacher Health Care Plan (RTHP). The State OPEB plan is administered by the State Comptroller's Office, while the RTHP is administered by the Teachers' Retirement Board. While OPEB plans involve life insurance and other non-pension post-employment benefits, almost all of the liability in this area relates to retiree health insurance plans.

State Employee OPEB Plan

The State Employee OPEB Plan is a single-employer defined-benefit OPEB plan that covers retired employees of the State who are receiving benefits from SERS or other state-sponsored retirement systems, except TRS and the Municipal Employee Retirement System. As of the 2006 OPEB valuation, there were 59,347 active members, 42,395 retired members and 27,266 spouses of retirees, for a total of 129,008 members. Of the 129,008 members, 11,887 were Non-SERS members. These numbers have, of course, changed since the last full valuation in 2006.

A Summary of Plan Provisions is outlined in Schedule 6. OPEB benefits (i.e., Life Insurance, Dental, and Medical) are available for those who retire with a normal, early or disability retirement under the applicable retirement system. Participants who are deemed terminated vested in the retirement system have been, to date, eligible for OPEB benefits when they begin collecting retirement benefits. The "Rule of 75" in the 2009 SEBAC agreement, described later in this report, makes changes in this category. The ability to leave state service after ten years for another job and at later date begin receiving full retiree health benefits is reportedly not found in many other state plans.

Schedule 6: Summary of OPEB Plan Provisions (not including life insurance)

- Pre-65 retirees have the choice of the State's POE and POS medical plans (PPO plan was closed for future retirees as part of the 2009 SEBAC agreement).
- For those eligible for Medicare, Medicare is primary plan and the State plan is administered as a supplement to Medicare.
- For those who retired before July 1, 1997 or under the 1997 Early Retirement Incentive Program (ERIP), the premium share is zero percent, with participants only responsible for co-pays.
- For those who retired July 1, 1997 to June 30, 1999, the retiree pays 0 percent except those in the PPO plan who pay up to a maximum of approximately 3 percent.
- For those retired July 1, 1999 or later, 'POE/out of area PPO', the premium share is 0 percent, while Pre-65 'POS/PPO' premium shares are a variable amount up to a maximum of about 3 percent for retiree and dependant coverage. Premium shares for Post-65 POS/PPO coverage is 0 percent for retiree coverage and a variable amount for dependant coverage up to a maximum of approximately 3 percent.
- Retirees pay 80% of dental premiums.

Retired Teachers Health Plan (RTHP)

The RTHP is a is a single-employer defined-benefit OPEB plan that covers retired teachers and administrators of public schools in Connecticut who are receiving benefits from the Teachers' Retirement System. The plan provides healthcare insurance benefits to eligible retirees and their spouses. The cost of providing plan benefits is designed to be financed on a pay-as-you-go basis as follows: active teachers pay for one-third of plan costs though a contribution of 1.25 percent of their annual salary, retired teachers pay for one-third of plan costs through monthly premiums, and the State pays for one-third of plan costs through an annual appropriation in the General Fund. As of June 30, 2008, the plan had 30,619 retirees and beneficiaries receiving benefits. In fiscal year 2009, the General Fund contribution was $22.433 million, although no contributions were made in fiscal years 2010 and likely in 2011 in response to the State's budget situation. The RTHP was recently able to lower its costs associated with its prescription drug plan by purchasing prescription drugs through the state employee health plan.

State OPEB Actuarial Accrued Liability and ARC Amounts

Statements 43 and 45 from the Governmental Accounting Standards Board (GASB) required governments to begin reflecting their OPEB liabilities in their financial statements similar to their pension liabilities. As will be discussed, the OPEB plan's actuary uses a 4.50 percent discount rate related to the pay-as-you-go approach, even though no assets are accumulating. The State of Connecticut's first valuation for its OPEB plan was completed for the period ending April 1, 2006. An update to the 2006 valuation was provided for the period ending April 30, 2008. Milliman, the actuary for the State OPEB plan, recently produced an interim report again using the 2008 data. The AAL, ARC and actual state payments from the valuation and updates are in Schedule 7.

Schedule 7: OPEB Valuation Summaries

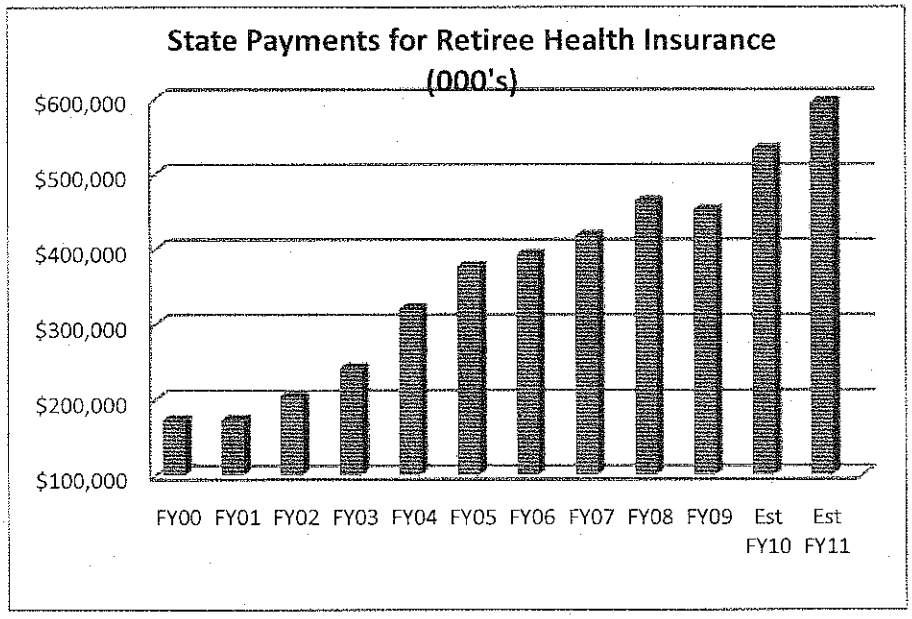
Valuation Date/Discount Rate	Actuarial Accrued Liability (AAL)*	ARC	State Actual Payment
Period Ending April 1, 2006			
• 4.50 % Discount Rate (Pay-as-you-go)	$21.7 billion	$1.6 billion	$.418 billion
• 8.50 % Discount Rate (Pay Full ARC)	$11.4 billion	$.96 billion	$.418 billion
Period Ending April 1, 2008 (update)			
• 4.50 % Discount Rate (Pay-as-you-go)	$24.6 billion	$1.66 billion	$.464 billion
• 8.50 % Discount Rate (Pay Full ARC)	$13.2 billion	$1.01 billion	$.464 billion
Period Ending April 1, 2008(interim July 2010)**			
• 4.50 % Discount Rate (Pay-as-you-go)	$26.6 billion	$1.9 billion	$.464 billion
• 8.25 % Discount Rate (Pay Full ARC)	$14.0 billion	$1.2 billion	$.464 billion

*The Unfunded Accrued Liability is equal to the AAL because there are no plan assets.

** Does not reflect the 2009 SEBAC agreement, including the RIP, the Rule of 75 and the 3 percent contribution for newer employees for up through 10 years of service.

Connecticut's OPEB funding challenge is finding the additional dollars necessary to fund the ARC. On the other hand, continuing pay-as-you-go will subject the state to a significant and continuing escalation in these costs from a combination of health care inflation and a growing number of retirees. From fiscal year 1999-00 to 2008-09, these costs increased at an annual rate of 11.2 percent.

Chart 4



Breakdown of OPEB Actuarial Accrued Liability

Schedules 8a and 8b, which were provided by the actuarial firm, Milliman, provide breakdowns of the actuarial liability and the related ARC for the state OPEB plan reflecting their recent interim update of the liabilities using the April 1, 2008 data. As indicated, these projections do not reflect the 2009 SEBAC agreement. The schedules break out the estimated actuarial accrued liabilities (AAL) and related ARCs for OPEB benefits to be provided to:

- Active employees in Tiers I, II, and IIA and in non-SERS plans;
- Terminated vested employees; and
- Current retirees (In-pay status).

The AAL and related ARCs are further broken down for active and terminated vested employees

- Member (i.e. employee) Pre-65 and Member post-65 and
- Dependant Pre-65 and Dependant Post-65.

The information is provided for a 4.50 percent discount rate (Schedule 8a) and an 8.25 percent discount rate (pay full ARC, Schedule 8b). As can be seen in the schedules, $14.6 billion of the AAL with a 4.50 percent discount rate is related to active employees and $11.9 billion related to current retirees and terminated vested employees, for a total AAL of $26.5 billion. The projected AAL declines to $14.0 billion when a discount rate of 8.25 percent is utilized as an acknowledgement of fully funding the ARC.

Schedule 8a: OPEB Liability and ARC Breakdown 4/1/08 Valuation Preliminary Results

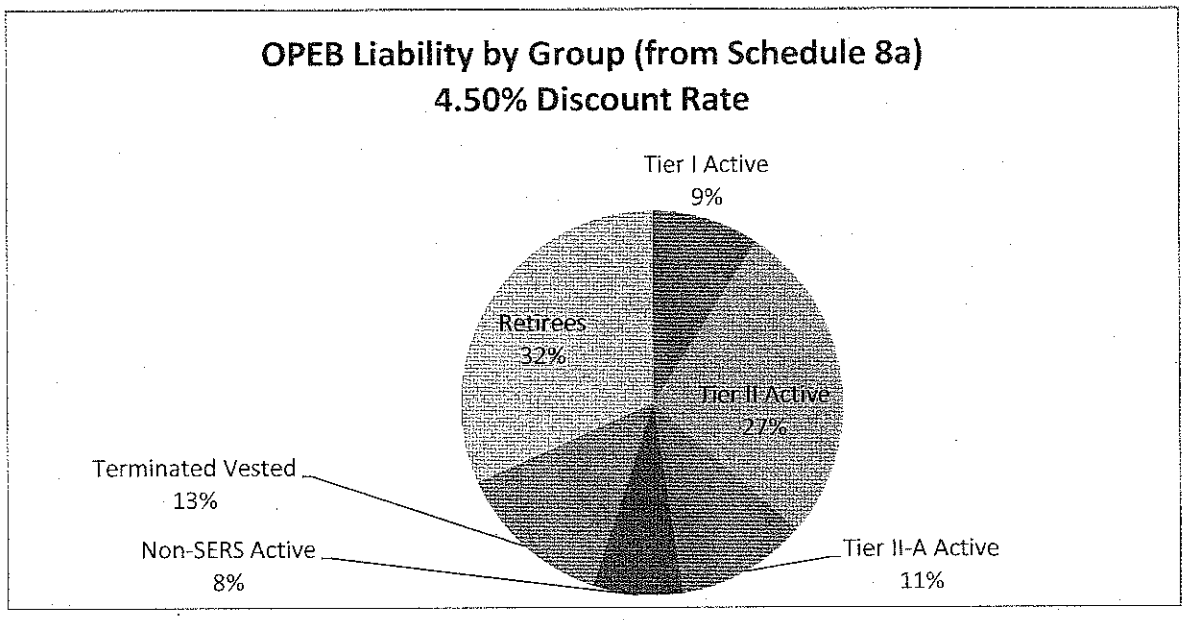
Details of Accrued Liability and ARC ($000s) Discount Rate= 4.50% Pay-as-you-go

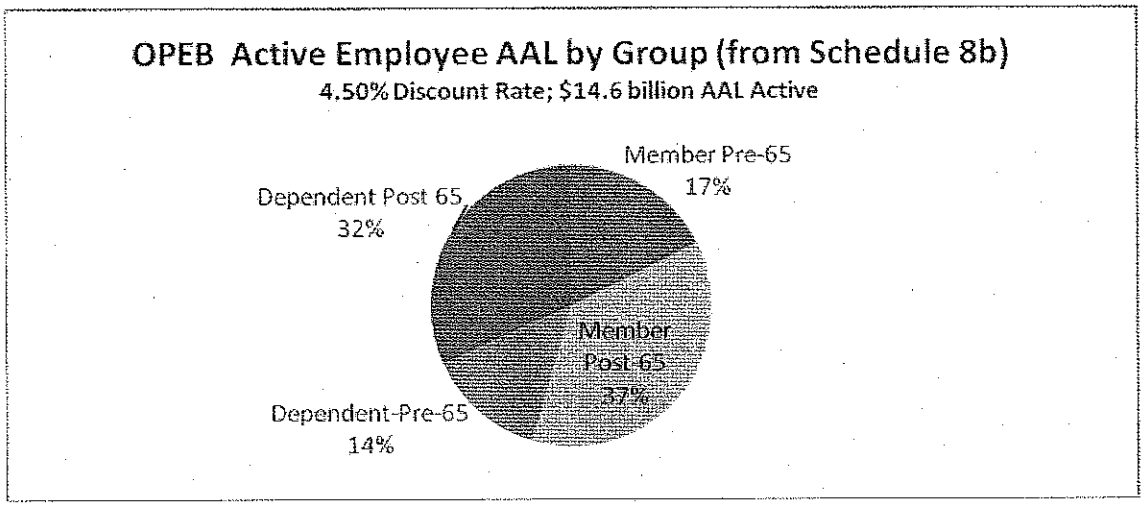
Accrued Liability	Tier I Actives	Tier II Actives	Tier IIA Actives	Non-SERS Active	Total Active	Terminated Vested	In- Pay Status	Total In-pay/Term	Total
Member pre-65	$390,370	$1,375,732	$554,684	$260,729	$2,581,515	$737,155	$0	$737,155	$3,318,670
Member post-65	956,216	2,622,284	1,062,259	766,942	5,407,701	1,223,080	0	1,223,080	6,630,781
Dependant pre-65	280,517	1,058,930	440,585	233,160	2,013,192	587,689	0	587,689	2,600,881
Dependant post-65	792,280	2,199,352	891,622	762,931	4,646,185	946,979	0	946,979	5,593,434
Retirees	0	0	0	0	0	0	8,423,446	8,423,446	8,423,446
Totals	**$2,419,383**	**$7,256,298**	**$2,949,150**	**$2,023,762**	**$14,648,593**	**$3,494,903**	**$8,423,446**	**$11,918,349**	**$26,566,942**
ARC	Tier I Actives	Tier II Actives	Tier IIA Actives	Non-SERS Active	Total Active	Terminated Vested	In-Pay Status	Total In-pay/Term	Total
Member pre-65	$23,073	$113,600	$101,634	$35,099	$273,406	$27,469	$0	$27,469	$300,875
Member post-65	53,474	200,168	187,581	95,486	536,709	45,575	0	45,575	582,284
Dependant pre-65	16,921	88,557	82,163	32,805	220,446	21,899	0	21,899	242,345
Dependant post-65	44,137	169,088	159,619	94,844	467,688	35,287	0	35,287	502,975
Retirees	0	0	0	0	0	0	313,879	313,879	313,879
Totals	**$137,605**	**$571,413**	**$530,997**	**$258,234**	**$1,498,249**	**$130,230**	**$313,879**	**$444,109**	**1,942,358**

Schedule 8b: OPEB Liability and ARC Breakdown 4/1/08 Valuation Preliminary Results

Details of Accrued Liability and ARC ($000s) Discount Rate= 8.25% Pay full ARC

Accrued Liability	Tier I Actives	Tier II Actives	Tier IIA Actives	Non-SERS Active	Total Active	Terminated Vested	In- Pay Status	Total In-pay/Term	Total
Member pre-65	$273,980	$833,293	$286,742	$152,805	$1,546,820	$491,446	$0	$491,446	$2,038,266
Member post-65	432,869	1,026,984	371,414	322,374	2,153,641	458,634	0	458,634	2,612,275
Dependant pre-65	206,123	654,218	229,915	141,374	1,231,630	391,880	0	391,880	1,623,510
Dependant post-65	358,994	855,324	309,705	321,718	1,845,741	358,331	0	358,331	2,204,072
Retirees	0	0	0	0	0	0	5,546,622	5,546,622	5,546,622
Totals	**$1,271,966**	**$3,369,819**	**$1,197,776**	**$938,271**	**$6,777,832**	**$1,700,291**	**$5,546,622**	**$7,246,913**	**$14,024,745**
ARC	Tier I Actives	Tier II Actives	Tier IIA Actives	Non-SERS Active	Total Active	Terminated Vested	In-Pay Status	Total In-pay/Term	Total
Member pre-65	$21,723	$84,348	$55,832	$22,097	$184,000	$28,665	$0	$28,665	$212,665
Member post-65	32,401	94,934	69,327	42,629	239,291	26,752	0	26,752	266,043
Dependant pre-65	16,524	66,763	45,394	21,073	149,754	22,858	0	22,858	172,612
Dependant post-65	26,825	79,513	58,340	42,503	207,181	20,900	0	20,900	228,081
Retirees	0	0	0	0	0	0	323,522	323,522	323,522
Totals	**$97,473**	**$325,558**	**$228,893**	**$128,302**	**$780,226**	$99,175	$323,522	$422,697	$1,202,923





Impact of State and Employee Contributions on Discount Rate and Total Liabilities

The OPEB plan's actuary uses a 4.50 percent discount rate to the pay-as-you-go approach, even though no assets are accumulating. This rate represents a long-term expected rate of return on short-term fixed income securities, which are typically found in the assets of the employer. A number of Commission members expressed concern as to whether this 4.50 percent discount rate underestimates the AAL; however, the members deferred to the actuary's application of standard practices in making these assumptions.

Milliman also produced AAL and ARC projections using a blended discount rate reflecting the 4.50 percent discount rate referenced previously and varying levels of accumulating assets beyond the pay-as-you-go amount. These discount rates are weighted proportionally to the respective reliance

expected to be placed on plan assets to pay OPEB benefits when due or on annual budgets to pay OPEB benefits when due. One scenario involved a 6.08% discount rate related to a partial pre-funding arrangement based upon a State contribution of $100 million and future State contributions of $50 million per year increasing by 5 percent per year after the first year. The resulting AAL and ARC amounts are included in Schedule 9.

Another projection was provided by Milliman related to an alternate pre-funding strategy in which an initial State contribution of $10 million and employee contributions of $17 million per year growing by 4 percent each year related to the 3 percent of payroll contribution up through 10 years of state employment for those with fewer than 5 years of service as of July 1, 2010 included in the 2009 SEBAC agreement. Recent estimates are that these contributions will be $23 million in the current year, up from the $17 million original estimate. Milliman noted that if these employee contributions were used to cover current year cost of benefits, as SEBAC 2009 allows up to 2013, there would be no change in the AAL since there would be no accumulation of assets. On the other hand, if there were to be a policy to place the contributions in the trust for a significant time period (20-30 years or more), there would be an impact on both the AAL and ARC.

Milliman calculated a discount rate of 5.02 percent related to allowing the employee contributions to remain in the trust, with related decreases in the AAL and ARC of $2.547 billion and $155 million, respectively, compared to the pay-as-you-go amounts (see Schedule 9). From a budgetary standpoint, the State would be paying for many years to come the full pay-as-you-go amount, which would continue to grow each year. The policy question is at what point plan assets would be used to pay for current expenses since the use of higher discount rates assumes that contributions above the pay-as-you-go amount would remain in the trust for a significant amount of time.

Schedule 9: OPEB AAL and ARC by Discount Rate (as of April 1, 2008)

Discount Rate	AAL	ARC
4.50% (Pay-as-you-go)	$26.567 billion	$1.942 billion
5.02%	$24.020 billion	$1.787 billion
6.08%	$19.814 billion	$1.536 billion
8.25% (Pay full ARC)	$14.025 billion	$1.203 billion

Health Care Costs and Trends

Milliman also did some projections related to the impact on the AAL and ARC associated with changes in the health care inflation trends. The health care inflation trends utilized by Milliman in making their projections were 7.65 percent in the first five years, 5.9 percent for the next five years, and then gradually trending down to 4.70 percent by year 52. Some members questioned if this trend is too high based on the State's experience, however, the Commission understands that there is a great deal of uncertainty with these assumptions.

Milliman's projections demonstrated that changes in the health care inflation assumption have a significant impact on the OPEB plan's liabilities. Milliman projected that a 1 percent ongoing increase above the amount assumed would increase the total OPEB liability by $3.75 billion, while a 2 percent increase would increase the total by $8.55 billion (both using a 6.08 percent discount rate). On the other hand, a 1 percent decrease below the baseline trend would lead to a $2.96 billion projected reduction in liability, with the projected impact of 2 percent reduction below the trend being a decrease of $5.33 billion in the liability.

If health care cost trends can be brought down through improvements in the delivery of health care, such as the use of medical homes, plan changes and other measures, the impact on lowering the State's annual costs and liabilities associated with its OPEB plan could be significant.

The State is now pursuing a medical home pilot with respect to the state employee plan to determine the impact of this change in service delivery method. The State is also seeking to take part in a multi-payer medical home demonstration project as part of the federal health care reform. The goal of these pilot programs is to determine if the savings from strengthening primary care will be equal to the additional payment levels for primary care. The savings anticipated under the medical home model include those associated with fewer emergency room visits, reducing major illnesses through working with patients to follow testing and other medical protocols and in other areas. One of the serious challenges raised with this model is whether it can work without major reforms to the current fee-for-service payment method.

OPEB: Comparisons to Other States, Municipalities and Private Sector

State OPEB Plans and Provisions

A November 2009 report done by the Center for State and Local Government Excellence found that Connecticut's unfunded OPEB liability per capita was the third highest in the nation, behind only New Jersey and Hawaii. Connecticut is fourth highest in terms of its total liability per capita. Most states, including Connecticut, have zero or a very low level of assets in dedicated OPEB funds, with only 7 or 8 states reporting any meaningful level of funding.

The Center for State and Local Government Excellence report states that the "substantial variation in the unfunded liabilities is a function of the size of the workforce, the generosity of the retiree health plan, the portion of the total cost of the health care program paid by the state, and the type of employees in included in the plan." The inclusion or treatment of spouses and dependants is also a factor, as well as the provisions related to retirees who are eligible for Medicare. The extent to which states have certain services provided by county governments could impact these per capita comparisons as well. Unlike a number of other states, Connecticut does not have county governments.

As an example of these differences, in a 2007 report, the Federal Reserve Bank of Boston indicated that among the New England states, benefit payments per eligible retiree in 2006, recorded on

a pay-as-you-go basis, ranged from approximately $3,300 for Maine to $11,000 for Connecticut, according to the states' Comprehensive Annual Financial Reports. There are also a number of states across the country whose liabilities are limited to or include only the "implicit subsidy" involved with allowing retirees (who generally have higher medical costs than younger active workers) to participate in the state's plan with the retiree paying the full premium. Premium sharing by Connecticut retirees is currently minimal, ranging from zero to 3 percent.

Commonly state employees go directly into retirement in order to receive state employee retiree health insurance, rather than leaving State employment with the idea of collecting benefits years later.

A number of states prorate the amount of premium share paid by retirees based on the number of years of service. The report of the Massachusetts special commission on its retirement systems issued in 2009 listed thirteen states whose retiree health plans include a percent reduction for each year of service below a certain number (e.g., 20 years) in the amount of premium to be paid by the state, while 9 states have a dollar amount reduction for each year of service below a certain number. These reductions make retiree health plans analogous to pension plans in that the amount of the benefit received is correlated to the number of years of service provided. Other states have rules similar to Connecticut's Rule of 75 related to retiree health care eligibility.

Municipalities and the Private Sector

Fiscal year 2008 was the first year for many municipalities to include OPEB status information, based on an actuarial valuation, in their financial reports. Aggregating the data for the 25 Connecticut municipalities having valuations, the total actuarial accrued liability was $5.0 billion, with assets of $3,200,000, for a funding ratio of less than 0.1 percent.

While not reporting funding ratios related to the private sector regarding OPEB-type benefits, the Kaiser Family Foundation's Employer Health Benefits Survey for 2009 did contain information about the percentage of firms that offer active health benefits that also offer retiree health benefits. Of all large firms of 200 or more workers that offered active employee health insurance, 29 percent of these employers offer retiree health benefits. State/local government was the highest at 81 percent. Of the large firms that do provide retiree health insurance, 92 percent provide retiree health benefits to early retirees, with 68 percent offering retiree health for Medicare-Age Retirees. The percentages for State/local government surveyed in this regard were 100 and 73, respectively.

Impact of Pension and OPEB Liabilities on State's Budgetary and Financial Outlook and Credit Ratings

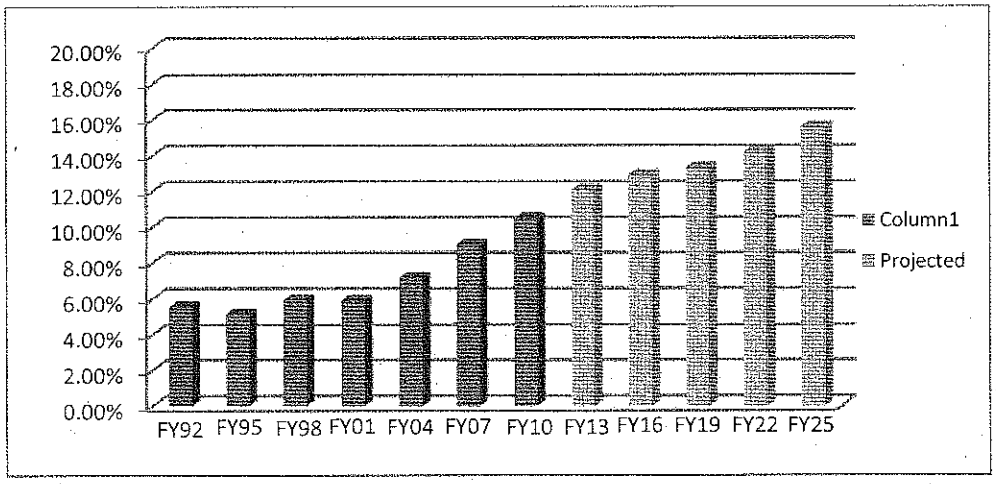
State Pension and OPEB Costs as an Increasing Portion of State Expenditures

In order to provide a baseline for the potential budgetary and funding implications of continuing current approaches and practices, Schedule 10 provides actual and projected expenditures for a 40 year period related to the State budget and contributions to SERS, TRS and OPEB. Schedule 10 also provides available actual and projected funding ratios, where available. The projections for future years in the schedule involved making certain assumptions, which are outlined in the notes to the schedule. These assumptions include:

- State expenditures will grow at 4.75 percent per year, the average from 1992 through the 2014 projection amount;
- SERS contributions will reflect the Cavanaugh Macdonald projections using the current funding method;
- TRS contributions and POB debt service based on a 2007 contribution schedule done for the State by the Public Resources Advisory Group (PRAG) and the debt service schedule from the Treasurer's Office; and
- OPEB state costs to increase by 10 percent per year. This last assumption is based on the average increase for 2000 to 2009 of 11.2 percent per year.

As indicated in Schedule 10, the costs for SERS, TRS and OPEB grew from 5.57 percent of budgeted expenditures in 1992 to 11.24 percent of expenditures in the current year, fiscal year 2010-11. These costs grew by an average of 8.8 percent per year during from 1992 to 2011. Using the assumptions described above, annual costs for SERS, TRS, and OPEB are projected to reach 18.97 percent of the budget in fiscal year 2032. The growth for fiscal year 2012 alone is almost $270 million higher than that expended in these areas in the current fiscal year. The challenge for the State will be to balance the need to increase the funding ratio of its pension and OPEB plans with the need to manage its overall budgetary needs. These increasing costs could crowd out additional investments in education, infrastructure, health care, and other critical areas.

Chart 5
Pension and OPEB Actual and Projected Costs as a Percentage of State Expenditures (from Schedule 10)



Schedule 10

Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10	Col 11	Col 12	Col 13
40-year Baseline Information: PEB Commission												
Fiscal Year Ending 30-Jun	All Appropriated Funds- Actual/ *Projectd* Expenditures	SERS: State's Actual/*Projected* Contribution	TRS: State's Actual/*Projected* Contribution	TERS POB Debt Service	Actual/*Projected* Costs OPEB	Total SERS, TERS, POB & OPEB	% of Expenditures SERS, TERS, POB & OPEB	% Growth Expenditures	% Growth SERS, TERS, POB, & OPEB	Funding Ratio SERS	Funding Ratio TERS	Funding Ratio OPEB
1992	$ 7,962,141,000	$ 250,324,285	$ 133,000,000		$ 60,000,000	$ 443,324,285	5.57%				66.60%	
1993	$ 8,693,528,000	$ 290,827,685	$ 111,600,000		$ 81,500,000	$ 483,927,685	5.57%	9.19%	9.16%			
1994	$ 9,268,194,000	$ 310,206,351	$ 124,300,000		$ 81,000,000	$ 515,506,351	5.56%	6.61%	6.53%	51.37%	68.10%	
1995	$ 9,789,510,000	$ 290,801,000	$ 132,500,000		$ 82,000,000	$ 505,301,000	5.16%	5.62%	-1.98%	51.41%		
1996	$ 10,022,764,000	$ 335,111,971	$ 140,000,000		$ 85,900,000	$ 561,011,971	5.60%	2.38%	11.03%	53.82%	69.10%	
1997	$ 10,399,284,000	$ 348,920,134	$ 147,884,700		$ 101,800,000	$ 598,604,834	5.76%	3.76%	6.70%	53.70%		
1998	$ 10,839,367,000	$ 334,513,820	$ 179,365,000		$ 129,500,000	$ 643,378,820	5.94%	4.23%	7.48%	56.57%	70.40%	
1999	$ 11,414,117,000	$ 315,561,785	$ 188,334,000		$ 130,600,000	$ 634,495,785	5.56%	5.30%	-1.38%	58.09%		
2000	$ 12,404,547,000	$ 342,760,330	$ 204,445,443		$ 173,900,000	$ 721,105,773	5.81%	8.68%	13.65%	59.11%	81.42%	
2001	$ 12,932,612,000	$ 375,623,183	$ 214,665,698		$ 174,000,000	$ 764,288,881	5.91%	4.26%	5.99%			
2002	$ 13,265,527,000	$ 415,492,599	$ 204,511,460		$ 205,000,000	$ 825,004,059	6.22%	2.57%	7.94%	62.51%	75.92%	
2003	$ 13,283,978,000	$ 421,451,731	$ 179,823,603		$ 242,200,000	$ 843,475,334	6.35%	0.14%	2.24%	63.10%		
2004	$ 13,595,294,000	$ 470,332,944	$ 185,348,144		$ 320,800,000	$ 976,481,088	7.18%	2.34%	15.77%	61.64%	65.34%	
2005	$ 14,428,128,000	$ 518,768,821	$ 185,348,143		$ 377,300,000	$ 1,081,416,964	7.50%	6.13%	10.75%	56.66%		
2006	$ 15,665,824,000	$ 623,062,732	$ 396,248,844		$ 393,400,000	$ 1,412,711,576	9.02%	8.58%	30.61%	54.46%	62.99%	0.00%
2007	$ 16,505,640,000	$ 663,930,735	$ 412,101,958		$ 418,400,000	$ 1,494,432,693	9.05%	5.36%	5.78%	53.28%		0.00%
2008	$ 17,906,920,000	$ 711,555,274	$ 518,560,263		$ 463,697,000	$ 1,693,812,537	9.46%	8.49%	13.34%	53.19%	70.05%	
2009	$ 18,547,639,000	$ 699,770,000	$ 539,302,674	$ 105,749,942	$ 452,029,000	$ 1,796,851,616	9.69%	3.58%	6.08%	53.58%		
2010	$ 18,574,400,000	$ 732,928,085	$ 565,980,000	$ 120,857,076	$ 532,856,000	$ 1,952,621,161	10.51%	0.14%	8.67%	51.92%		
2011	$ 19,124,600,000	$ 844,076,932	$ 588,619,000	$ 120,857,076	$ 595,252,100	$ 2,148,805,108	11.24%	2.96%	10.05%	42.70%		
2012	$ 20,591,800,000	$ 1,029,991,000	$ 612,163,000	$ 120,857,076	$ 654,777,310	$ 2,417,788,386	11.74%	7.67%	12.52%	45.80%		
2013	$ 21,225,200,000	$ 1,087,642,000	$ 632,540,000	$ 120,857,076	$ 720,255,041	$ 2,561,294,117	12.07%	3.08%	5.94%	45.80%		
2014	$ 22,013,800,000	$ 1,185,986,000	$ 657,841,000	$ 144,547,076	$ 792,280,545	$ 2,780,654,621	12.69%	3.72%	8.56%	43.80%		
2015	$ 23,059,455,500	$ 1,272,116,000	$ 684,155,000	$ 133,339,776	$ 871,508,600	$ 2,961,119,376	12.84%	4.75%	6.49%	42.80%		
2016	$ 24,154,779,636	$ 1,319,091,000	$ 711,520,000	$ 132,361,996	$ 958,659,460	$ 3,121,632,456	12.92%	4.75%	5.42%	44.20%		
2017	$ 25,302,131,669	$ 1,376,254,000	$ 739,982,000	$ 119,227,321	$ 1,054,525,406	$ 3,289,988,727	13.00%	4.75%	5.39%	45.20%		
2018	$ 26,503,982,923	$ 1,438,420,000	$ 769,224,000	$ 139,848,871	$ 1,159,977,946	$ 3,507,470,317	13.23%	4.75%	6.61%	46.20%		
2019	$ 27,762,922,112	$ 1,504,012,000	$ 799,992,000	$ 118,029,871	$ 1,275,975,741	$ 3,698,009,612	13.32%	4.75%	5.43%	47.30%		
2020	$ 29,081,660,912	$ 1,573,551,000	$ 831,992,000	$ 118,029,871	$ 1,403,573,315	$ 3,927,146,186	13.50%	4.75%	6.20%	48.60%		
2021	$ 30,463,039,806	$ 1,645,126,000	$ 865,273,000	$ 118,029,871	$ 1,543,930,646	$ 4,172,359,517	13.70%	4.75%	6.24%	49.90%		
2022	$ 31,910,034,197	$ 1,721,604,000	$ 899,883,000	$ 202,709,871	$ 1,698,323,711	$ 4,522,520,582	14.17%	4.75%	8.39%	51.40%		
2023	$ 33,425,760,821	$ 1,804,529,000	$ 1,147,532,000	$ 306,309,871	$ 1,868,156,082	$ 5,126,526,953	15.34%	4.75%	13.36%	53.10%		
2024	$ 35,013,484,460	$ 1,895,189,000	$ 1,193,733,000	$ 315,301,271	$ 2,054,971,690	$ 5,459,194,961	15.59%	4.75%	6.49%	55.00%		
2025	$ 36,676,624,972	$ 1,993,641,000	$ 1,241,171,000	$ 329,820,271	$ 2,260,468,859	$ 5,825,101,130	15.88%	4.75%	6.70%	57.10%		
2026	$ 38,418,764,658	$ 2,100,975,000	$ 1,290,818,000	$ 267,881,121	$ 2,486,515,745	$ 6,146,189,866	16.00%	4.75%	5.51%	59.40%		
2027	$ 40,243,655,979	$ 2,217,889,000	$ 1,342,450,000	$ 283,993,809	$ 2,735,167,320	$ 6,579,500,128	16.35%	4.75%	7.05%	62.10%		
2028	$ 42,155,229,638	$ 2,347,414,000	$ 1,395,091,000	$ 290,484,518	$ 3,008,684,052	$ 7,041,673,570	16.70%	4.75%	7.02%	65.20%		
2029	$ 44,157,603,046	$ 2,495,122,000	$ 1,450,895,000	$ 319,810,228	$ 3,309,552,457	$ 7,575,379,684	17.16%	4.75%	7.58%	68.80%		
2030	$ 46,255,089,191	$ 2,670,732,000	$ 1,508,930,000	$ 339,001,068	$ 3,640,507,702	$ 8,159,170,770	17.64%	4.75%	7.71%	72.90%		
2031	$ 48,452,205,927	$ 2,892,758,000	$ 1,569,288,000	$ 359,337,240	$ 4,004,558,473	$ 8,825,941,713	18.22%	4.75%	8.17%	77.60%		
2032	$ 50,753,685,709	$ 3,207,658,000	$ 1,632,060,000	$ 380,901,225	$ 4,405,014,320	$ 9,625,643,545	18.97%	4.75%	9.06%	83.20%		

Data Sources and Projection Assumptions

Column	Category	Data Sources and Projection Assumptions
Col. 1	Fiscal Year	Fiscal year ending June 30 of year noted in column
Col. 2	All Appropriated Funds	General Fund, Transportation funds, other appropriated funds, surplus (primarily one-time items), and appropriations carried forward into subsequent fiscal year (Other appropriated funds include: Mashantucket Pequot/Mohegan; Soldiers Sailor Marine, Regional Marketing & Banking, Market, and Banking). Actual expenditures from 1992-2009 from Office of Fiscal Analysis budget books. 2010 to 2014 figures are May 4, 2010 OFA projection. 2015 to 2032 reflects average annual increase of 4.75% based on average growth from 1992 through projection for 2014.
Col. 3	State's SERS Contributions	1992 to 20009 reflects actual contributions from actuarial valuations or Comptroller's annual financial report. 2010 to 2032 are projections done by SERS actuary, Cavanaugh Macdonald. SERS contribution is projected to drop to $311,307,000 (Normal Cost) in FY2034.
Col. 4	State's TRS Contributions	1992 to 2009 reflects actual contributions from actuarial valuations or Comptroller's annual financial reports. 2010 to 2032 reflects projections from October 2007 schedule done by PRAG. 2008 TRS contribution does not reflect $2 billion POB as contribution; is reflected in funding ratio.
Col. 5	TRS POB Debt Service	Pension Obligation Bond debt service schedule from Treasurer's Office. Note: Final bond payment made in 2032; $0 in 2033
Col. 6	OPEB Costs	1992-1995 OFA budget books for retiree health costs, plus estimated amount re life incusrance. 1996-2009 from Comptroller's Financial Reports, 2010 &2011 are OPM projections. 2012 to 2032 10% average increases. (Actual increase from 2000 to 2009 was 11.2%; 1992 through 2011 projection is average annual increase of 12.8%) Extra $10m into trust fund in 08.
Col. 7	Total SERS, TERS, POB & OPEB	Sum of Columns 3, 4, 5 and 6
Col. 8	% of Expenditures: SERS, TERS, POB & OPEB	Column 7 divided by Column 2: Total of SERS, TRS, POB and OPEB as a percentage of expenditures
Col. 9	% Growth Expenditures	Growth in State expenditures (Column 2) compared to prior year
Col. 10	% Growth SERS, TRS, POB & OPEB	Growth in total of SERS contributions, TRS contributions, POB debt service and OPEB costs (Column 7) compared to prior year.
Col. 11	Funding Ratio SERS	1992 to 2008 is from actuarial valuations; 2009 to 2032 are projections done by Cavanaugh Macdonald
Col. 12	Funding Ratio TRS	Ratios are from actuarial valuations
Col. 13	Funding Ratio OPEB	Ratios are from actuarial valuations

Impact on Financial Outlook and Credit Ratings

Demographic factors must be considered when analyzing and seeking solutions to the State's pension and OPEB liabilities. Nationwide and in Connecticut, the ratio of active workers to retirees will continue to decline as the baby boom generation ages, leaving fewer workers to pay for amortization of past liabilities.

Connecticut's state spending growth has outpaced its population growth, increases in gross state product, and income growth over the past several decades. Although job growth in the State has lagged that of the nation, Connecticut residents' income growth has outperformed national growth over the long-term. In fact, Connecticut continues to have the highest per capita income in the nation. Commission members have noted, however, that there is a growing income disparity, in which those at the higher end of the income scale have seen their incomes rise rapidly through the years in contrast to those in the lower and middle income levels.

Connecticut was 5th highest in terms of state taxes per capita in 2009, while it was 19th highest in terms of state taxes as a percentage of income. For total state and local taxes, Connecticut was 5th highest on a per capita basis and 11th highest in terms of per capita taxes as a percentage of income.

The bond rating agencies give a third-party view of Connecticut's financial to potential creditors. These bond ratings have an impact on how much the State will pay in interest on the bonds it issues to pay for capital projects. The rating criteria used by the agencies include the following factors: the State's economy; debt structure; financial condition; demographic factors; and management practices of the governing body and administration. The three major rating agencies have Connecticut rated in the middle tier of the high quality category (Moody's: Aa2; Fitch AA; and Standard and Poor's: AA). The best quality category is marked by those with AAA ratings. Fitch had temporarily raised Connecticut's bond rating to AA+ but reduced it in 2010 to AA based on the state's budgetary problems.

In a recent article about pension funding, Standard and Poor's noted that the decline in public pension fund assets, which has occurred across the country, is contributing to the type of budget distress that States are experiencing. A separate report also asserted Standard and Poor's position that pension liabilities and the costs associated with them on an annual basis are an important credit factor. Rating agencies are interested in the steps states are taking and the overall plans they have in place to address these liabilities, which they understand must be funded over time.

In addition to appropriate planning, ratios and other measures are used by the rating agencies to determine the level of flexibility states have to address their fiscal challenges. In this regard, Standard and Poor's July 8, 2010 report indicated that Connecticut has the second highest combined debt and pension unfunded liability per capita as a percent of income in the country. High liability levels reduce the State's flexibility to address other critical services and investments to maintain Connecticut's competitive advantage.

Actions Taken in Other States Regarding Pension and OPEB Liabilities

The Pew Report noted that fifteen states passed legislation in 2009 to reform some aspect of their state run retirement systems, compared with twelve states in 2008 and eleven in 2007. Legal restrictions regarding reducing benefits for current employees shifted many of the changes to benefits for new employees.

Ten states increased the contributions made by current and new employees to their benefit systems, while ten states lowered benefits for new employees or set higher retirement ages or longer service requirements. A 2009 report from the Center for State and Local Government Excellence indicates that a number of states have amended their retiree health plans to address the related costs and liabilities. Changes have included higher premium shares, higher deductibles, higher co-payments and more years of service to qualify for retiree health coverage. Pew places the changes into five general categories:

- Keeping up with funding requirements;
- Reducing benefits or increasing retirement age;
- Sharing the risk with employees;
- Increasing employee contributions; and
- Improving governance and investment oversight.

The range of actions taken by other states to address pension and OPEB liability issues was gathered by the National Conference of State Legislators, which actions are summarized in Appendix 3.

Potential Strategies to Address Pension and OPEB Liabilities and Costs

Pension Plans

Overall Strategy

The size of State's unfunded pension liabilities are a result of many factors. The early approach to the SERS Plan was pay-as-you-go, there was no prefunding of future benefit payments. Even after a decision was made to prevent the growth of the unfunded liability and to amortize the past liabilities over time through payment of the ARC, little progress has been made in improving the Plan's funding ratio for the reasons described in this report. This has recently been exacerbated by losses in asset values, which affected plans throughout the country. Using the current funding strategy, the funded ratio is projected to drop from its June 30, 2008 level of 52 percent down to 46 percent as of June 30, 2010 based on preliminary projections done by Cavanaugh Macdonald.

Cavanaugh Macdonald also projected that the ARC for fiscal year 2012 will be $185 million higher than the contribution being made in the current year, and will grow each year thereafter until the unfunded accrued liability is fully amortized. Even with these growing ARC amounts, the funding ratio is projected to decrease further over the next few years and not rise above 46 percent until 2016, based on the current calculation methods.

Given the State's serious budgetary challenges over the next several years, and the pressure that the growing costs of the State's retirement systems place on other budgetary needs, a number of approaches need to be considered to reduce the unfunded pension liabilities of the State. Consideration should be given to new funding strategies, financing alternatives, plan design and benefit modifications. It is critical in the Commission's view, to reinvest any benefit related State ARC savings into reducing the plan's unfunded liabilities.

Finally, the Commission discussed the potential benefits and drawbacks of creating a defined-contribution plan in lieu of a defined-benefit plan for new employees, or a hybrid plan that would include both a defined-benefit and defined-contribution component for these employees.

It is important to note that there are Commission members who did not agree with some of the strategies presented below in regard to the State pension and OPEB plans. Also, the Commission did not seek to prioritize these strategies. The main goal of this report has been to provide information and potential approaches to addressing these liabilities to policy-makers and stakeholders.

Funding Strategies

Paying the Annual Required Contribution (ARC)

Paying the ARC calculated under accepted actuarial standards and a carefully structured funding policy, each and every year, would put the state on a surer path towards reducing and eventually eliminating its unfunded pension liabilities and limiting further growth in these liabilities. When the ARC is not fully contributed, the State falls behind in improving its funding, which in turn increases future ARC costs. The State also loses the investment income assumed to be achieved on the timely payment of the calculated ARC.

1) ***The State should, each year, make the full ARC payment determined by its plan actuaries in accordance with accepted actuarial principles and the State's funding plan.***

Calculating the ARC

In addition to paying the ARC each year, it is critical for the State to review how the ARC is calculated. Some of the issues, which have been described in this report, include:

- *Approaches to Calculating the ARC: Level Percent-of-Payroll vs. Level Dollar.* The State, like many other public plans, uses the level percent-of-payroll approach to calculate the amortization component of the ARC for its three major plans. This approach back-loads the amortization of the unfunded liabilities, resulting in steady increases each year in the ARC and slower progress in improving a plan's funding ratio. In contrast, the level dollar amortization approach, as demonstrated by the Cavanaugh Macdonald projections (see Schedule 11 below), increases the funding ratio more rapidly and achieves budget stability through smaller annual increases in the ARC. The ARC is significantly higher in the earlier years with the level dollar approach.

  Another issue of great concern involves the reductions made to the ARC based the interpretation that has been given to certain provisions of SEBAC IV and SEBAC V. For the past ten years, the reductions to the ARC related to these agreements total nearly $820 million, and likely total $1.0 billion or more for all of the years of the agreement period. The impact of these reductions is a further back-loading of the payment schedule and an accompanying lack of progress in improving the funding ratio of the Plan. Exacerbating this concern is that the SEBAC 2009 agreement allowed for additional reductions in pension contributions of $314 million over the period of fiscal years 2009 to 2011.

  While difficult to achieve from a budget standpoint, the Cavanaugh Macdonald projections found in Schedule 11 demonstrate that payments beyond the current ARC levels would have a significant impact of improving the State's funding position and lowering its annual budget costs in the long-term.

Schedule 11: Comparison of ARCs, Funding Ratios, Level Percent of Payroll vs. Level Dollar Methods
(000's) (taken from Appendix 4 of this report)

Fiscal Year Ending	Level Percent of Payroll ARC Appendix B Attachment 2	Level Percent of Payroll Funding Ratio Appendix B Attachment 1	Level Dollar ARC Appendix B Attachment 2	Level Dollar Payroll Funding Ratio Append. B Attachment 1	Difference in ARC: Level $ minus Level %	Difference in Funding Ratio Level $ minus Level %
6/30/12	1,029,991	45.8%	1,393,288	45.8%	363,297	N/A
6/30/15	1,272,116	42.8%	1,558,482	47.7%	286,366	4.9%
6/30/18	1,438,420	46.2%	1,570,442	55.3%	132,022	9.1%
6/30/21	1,645,126	49.9%	1,593,733	62.1%	(51,393)	12.2%
6/30/24	1,895,189	55.0%	1,618,180	68.8%	(277,009)	13.8%
6/30/27	2,217,889	62.1%	1,657,110	76.0%	(560,779)	13.9%
6/30/30	2,670,732	72.9%	1,720,765	84.4%	(949,967)	11.5%
6/30/33	3,839,879	89.8%	2,013,616	94.9%	(1,826,263)	5.1%
6/30/36	326,738	100.0%	326,738	100.0%	0	0%

Note: The actuaries' application of SEBAC IV and V reductions are reflected in all of the above projections.

- *Actuarial Assumptions, including Investment Return/Discount Rate Assumption.* If the actual investment returns are lower than those assumed in the actuarial valuation, the result will be a growth in the unfunded liabilities and the ARC going forward. In comparing Connecticut to other states, our assumed rate of return of 8.25 percent is higher than the 8.0 percent or below that is assumed by thirty-nine other states. The real rate of return (total return less inflation) assumed by Connecticut is near the median of statewide assumptions.

  A lower investment return rate would reduce the impact of a loss in plan asset values, but would increase the amount of the ARC. The actuarial rate of investment returns for SERS for the past decade have generally been below the actuarial assumed rate, and will remain below this level for a number of years as 2008 investment losses are incorporated into the calculations of the actuarial rate of return. While the investment return assumption is important, this assumption must be viewed in the context of all of the assumptions used in calculating actuarial liabilities.

2) ***The State should eliminate the reductions in ARC payments as has been interpreted in SEBAC IV and V.***

3) ***The State should consider decreasing its assumed rates of return and inflation to reflect more realistic and conservative expectations about the economy and capital markets.***

4) ***The State and SEBAC should adopt a more rigorous funding strategy targeted at achieving specified minimum funding ratios over time. This enhanced funding could be financed through additional state and employee contributions and plan modifications.***

An example of such targeted funding ratios follows:

	Targeted Funding Ratio	Projected Ratio: Current Method
• Fiscal Year Ending 6/30/15:	47.5 percent	42.8 percent
• Fiscal Year Ending 6/30/18:	55.0 percent	46.2 percent
• Fiscal Year Ending 6/30/21:	62.5 percent	49.9 percent
• Fiscal Year Ending 6/30/24:	70.0 percent	55.0 percent
• Fiscal Year Ending 6/30/27:	75.0 percent	62.1 percent

5) ***The State should consider adopting a funding policy which addresses both Tier I legacy liabilities and ongoing accruals for Tiers II and IIA. One possible strategy is to install a contribution minimum. The minimum amount contributed to the SERS fund in a given year by the State shall not be less than the sum of expected benefit payments to Tier I retirees and the employer normal cost for Tiers II and IIA.***

6) ***The State should require that each pension and OPEB valuation contain a projection for each year of the remaining amortization schedule, thereby highlighting the long- term impact of its funding practices.***

Employee Contributions to the Fund

As described earlier in this report, hazardous duty employees in Tiers II and IIA contribute 4 percent and 5 percent, respectively, towards the SERS Plan, while other Tier II employees contribute nothing and Tier IIA employees contribute 2 percent. Other New England states have employee contribution rates of between 5.1 percent and 8.75 percent for non-hazardous duty employees. Increasing employee contributions is among the strategies employed in a number of states to address these liabilities.

Based on an active employee payroll of almost $3.2 billion preliminarily projected by Cavanaugh Macdonald for the period ending June 30, 2010, each 1 percent increase in average employee contributions would add $32.0 million in contributions. These contributions likely could be made on a pre-tax basis, thereby mitigating the impact on employees.

While the State is currently experiencing serious and continuing budgetary challenges, there have been provisions proposed and/or enacted in the past to dedicate a portion of operating budget surpluses to addressing pension, OPEB or other long- term liabilities. The longer-term positive impact on pension, OPEB and other liabilities of consistent and significant funding above the current ARC has been demonstrated by actuarial work done for the Commission. Another approach, reportedly considered in Massachusetts, is to dedicate a portion of cyclical revenues (e.g., capital gains tax) to a pension and/or OPEB trust when these revenue sources go above a certain levels.

7) ***The State and SEBAC should consider increasing employee contribution rates to levels found in other states, taking into account differing benefit levels and plan funding ratios. A study may be needed to determine appropriate levels of cost sharing between employer and employee. Such additional contributions should go towards moving the State fully or closer each year to achieving the recommended minimum funding ratio targets.***

8) ***In addition to the State meeting its obligation to pay the ARC each year, a mechanism for dedicating a specified proportion of future operating budget surpluses or large increases in cyclical revenue sources towards the pension and OPEB liabilities should be enacted.***

Pension Obligation Bonds

Pension Obligation Bonds (POBs) are generally defined as a type of general obligation bond issued to reduce the unfunded liabilities of a defined-benefit pension plan. POBs can help a government to lower its costs of carrying an unfunded liability, particularly when: (1) the cost of issuing POBs is lower than the cost of carrying the unfunded pension liabilities at the plan's assumed rate of return; and (2) the rate of return on the amount borrowed and ultimately invested is greater than the interest on the bonds (which, according to federal tax law, are taxable). An important element of this approach is that the government issuing the POBs should continue to pay the actuarially recommended contribution (ARC) associated with whatever unfunded liability remains after the bond issuance. Some issuers have used POBs to fund their current contribution, and this can add to budget instability.

POBs have been issued by a number of governmental entities across the nation, including several municipalities here in Connecticut. In 2008, the State of Connecticut issued POBs in order to reduce the unfunded liability of the Teachers' Retirement System (TRS) and to ensure future funding through a bond covenant.

Current market conditions suggest that POBs for SERS could be issued at a taxable rate of approximately 5.75%. Consequently, an issuance of POBs would be feasible only if a number of conditions were satisfied, chief among them: the average rate of return over the life of the bonds must exceed the cost of borrowing by an acceptable margin. As a frame of historical reference, the SERS' annualized net return for the period ended June 30, 2010 was 12.93% for the 2010 fiscal year; 2.89% for ten years; 6.71% for fifteen years; 7.08% for twenty years and 8.02% for twenty-five years. These figures reflect the extraordinary global economic crisis in 2008 and 2009, which resulted in a -18.3% return for fiscal year 2009.

The economic conditions and experiences that justified Connecticut's issuance of POBs in the Spring of 2008, may not now exist for SERS. Prospects for long-term investment returns have moderated following the financial meltdown of the fall of 2008, and leading indicators suggest very slow economic growth following the ensuing recession. Consequently, a number of factors suggest that the issuance of POBs to reduce the unfunded liability of SERS may be unwarranted at this time. Among them:

- Impact on State Debt Levels: The issuance of POBs for SERS would increase the State's debt levels. Given that Connecticut already has relatively high debt levels, the Governor and legislature must consider any POB in the context of other competing priorities for bonding during a period of budget stress.

- Financial Flexibility: The issuance of POBs converts the State's commitment to fund annual pension contributions for a portion of the unfunded liability to a fixed debt liability. When the State issued POBs for the TRS, one of the primary objectives was to bind the State to fully funding the ARC going forward, allowing the fund to gain the benefit of compounding of investment earnings over time and to end the practice of chronic underfunding. However, in the case of SERS, under its labor agreements in effect through 2017, the State has already committed to fully fund the ARC annually -- although the State has recently negotiated reductions in such payments.

- Rating Agency Views: The State needs to consider how a POB for SERS could be viewed by rating agencies given the State's existing debt levels. Since the rating agencies already include unfunded pension liabilities in the State's total long-term obligations, these liabilities are already accounted for, but POBs will be considered a hard liability. If the State issues bonds to fund current pension contributions, it would be considered a deficit financing by the credit rating agencies. The State did not use the POBs issued in 2008 to fund current contributions for TRS.

- Prospect for Long-Term Investments Returns: The potential benefit of a POB is the spread between the POB debt cost and the long-term return on assets. The State needs to consider the risk of earning certain levels of future investment returns in the near and long-term and incorporate that into any decision to issue POBs. If the State does not earn at least the debt cost over the long-term through the investment of proceeds from the issuance of POBs, then the transaction will result in dissavings.

9) ***Pension Obligation Bonds, if properly structured and timed, could help a government to lower its costs of carrying an unfunded pension liability, but there are a number of issues and risks that must be carefully considered before issuing bonds for this purpose. A number of factors, however, suggest that the issuance of POB's may be unwarranted at this time.***

Plan Design and Benefit Modification Strategies

Tiers II and IIA, the SERS plan benefits offered to employees hired after 1984 are, in a number of respects, reasonable in terms of a defined-benefit plan when compared to other states in New England. In reviewing the options outlined below, the Commission considered areas where modifications may be appropriate in light of similar provisions in other governmental plans. The need to consider modifications, however, is based on the need to make these plans sustainable for the State, its employees and taxpayers. As noted previously, the State's funding progress is among about the worst in the country.

The Commission considered the degree to which employees have made future plans based on the plan provisions as they now exist. This becomes a greater issue, the closer an employee is to retirement. The impact of the disruptions and serious declines in the financial markets, however, will likely cause many individuals to delay their retirement age throughout our state and country. The economic downturn has also challenged the ability of governments to pay for commitments made to both its employees and its citizens.

Conducting Actuarial Valuations of Proposed Plan Changes, Early Retirement Programs and Other Major Actions

A major goal for the Governor in creating the Commission was to increase the level of transparency and understanding of pension and OPEB liabilities and costs. During a budgetary crisis or legislative session, the ability to undertake a full vetting of the impact of changes affecting pension or OPEB liabilities, can be limited. This type of information, however, is necessary for elected officials and the public, in terms of assessing the short and long-term impacts of actions contemplated in these areas.

10) A mechanism should be established to require and obtain independent actuarial information regarding the impact of plan changes and other major actions affecting pension and OPEB plan liabilities for each of the years remaining in the plan's current amortization schedule prior to the enactment of any such changes or actions. Any change that increases a plan's unfunded liability should be accompanied by a funding strategy to fully address such increased liability.

11) The State should seek to avoid future retirement incentive programs, unless: 1) a multi-year actuarial analysis is first undertaken and 2) a method of funding any actuarial losses is identified and implemented.

Increasing Retirement Age or Providing Incentives to Retire Later; Other Pension Benefit Modifications

The Federal Reserve Bank of Boston recently reported that traditional pension plans for most state employees in New England discourage continued work at older ages. This places stress on plans as people live longer and involves the macroeconomic question of how a proportionately smaller working-age population can support the unfunded liabilities of a proportionately larger retirement population. While Connecticut's percentage of final average salaries paid under Tier II and Tier IIA are lower than

other states, these other states generally have a steeper reduction, greater than Connecticut's 3 percent per year, for early retirements. Connecticut's 3 percent reduction does not reflect the full actuarial impact of those retiring earlier. A related incentive to retire early is that Connecticut offers early retirees health insurance at a lower cost than if they kept working.

The potential impact on total liabilities and ARC costs from delaying the age for early and normal retirements and increasing the reductions associated with early retirements was projected by Cavanaugh Macdonald. In addition to pension plan impacts, delaying the age of retirement would have an impact on the State's OPEB liability because the State only pays for a supplemental plan once a retiree reaches Medicare eligibility. Actuarial estimates were requested for all of Tier II and all of Tier IIA actives under four scenarios:

Scenario 1-Tier II, Non-Hazardous:

- Proposed Early Retirement Eligibility: Age 62 with 10 years of service (Current: Age 55, 10 years);
- Proposed Normal Retirement: Age 65 and 10 years or 70 and 5 (Current: 62 and 10, 60 and 25 or 70 and 5); and
- Early Retirement Reduction change from 3% to 6%.

Scenario 2-Tier IIA, Non-Hazardous:

- Proposed Early Retirement Eligibility: Age 62 with 20 years of service (Current: Age 55, 10 years);
- Proposed Normal Retirement: Age 65 and 10 years or 70 and 5 (Current: 62 and 10, 60 and 25 or 70 and 5); and
- Early Retirement Reduction change from 3% to 6%.

Scenario 3-Tier II, Hazardous:

- Eligibility of Retirement: 25 years of service (Current: 20 years of service)

Scenario 4-Tier IIA, Hazardous:

- Eligibility of Retirement: 25 years of service and age 55 (Current: 20 years of service)

The full schedules for these changes done by Cavanaugh Macdonald, and the baseline related to current plan are in Appendix 4. Schedule 12 below compares the ARC with each of these scenarios to the baseline related to the current plan, as well as a total for the four scenarios.

Schedule 12-Comparison of ARCs for Scenarios 1 to 4 with Baseline

Based on Level Percent of Payroll (000's)

Fiscal Year Ending	Baseline ARC	Scenario 1 ARC	Scen. 1 ARC Savings	Scenario 2 ARC	Scen. 2 ARC Savings	Scenario 3 ARC	Scen. 3 ARC Savings	Scen. 4 ARC	Scen. 4 ARC Savings	Scen 1-4 Total Savings
6/30/12	1,029,991	974,615	(55,376)	1,008,257	(21,734)	993,993	(35,998)	1,008,094	(21,897)	(135,005)
6/30/15	1,272,116	1,199,751	(72,365)	1,238,826	(33,290)	1,229,189	(42,927)	1,233,628	(38,488)	(187,070)
6/30/18	1,438,420	1,367,317	(71,103)	1,403,752	(34,668)	1,403,933	(34,487)	1,387,500	(50,920)	(191,178)
6/30/21	1,645,126	1,574,830	(70,296)	1,610,540	(34,586)	1,611,453	(33,673)	1,584,579	(60,547)	(199,102)
6/30/24	1,895,189	1,826,693	(68,496)	1,856,527	(38,662)	1,851,637	(43,552)	1,838,965	(56,224)	(206,934)
6/30/27	2,217,889	2,143,540	(74,349)	2,172,387	(45,502)	2,163,483	(54,406)	2,164,932	(52,957)	(227,214)
6/30/30	2,670,732	2,575,063	(95,669)	2,618,229	(52,503)	2,605,127	(65,605)	2,625,400	(45,332)	(259,109)
6/30/33	3,839,879	3,709,911	(129,968)	3,783,185	(56,694)	3,762,792	(77,087)	3,782,279	(57,600)	(321,349)
6/30/36	326,738	329,305	2,567	298,188	(28,550)	324,923	(1,815)	288,752	(37,986)	(65,784)

While the changes described above would likely have some overall positive impact on the plan's funding ratio, "reinvesting" the ARC savings into the plan would help Connecticut reach the minimum funding ratio targets.

12) The State and SEBAC should consider raising the retirement age for those in Tiers II and IIA and increase the reductions related to early retirements in order to achieve ARC savings, which should be applied towards achieving the recommended minimum funding ratio targets.

In order to test the impact of certain proposals on the ARC, Cavanaugh Macdonald provided actuarial projections, using the 2008 valuation data (which does not reflect the 2009 Retirement Incentive Program and other changes since 2008), with respect the potential changes described below. Actuarial estimates were only requested for Tiers II and IIA since, at this point, it was considered to be too late to consider changes in Tier I.

Schedule 13: Impact of Various Benefit Changes

Potential Change for Currently Active Employees	% Change in Normal Cost	% Change in ARC	$ Savings in ARC-1st Year (Savings would grow as ARC grows)
Tier II-Final Average Salary based on last 5 years (not current three)	(0.17%)	(0.48%)	$17.4 million
Tier IIA-Final Average Salary based on last 5 years (not current three)	(0.09%)	(0.13%)	$4.7 million
Tier II-COLA capped at 2.0%	(0.35%)	(0.84%)	$30.4 million
Tier IIA-COLA capped at 1.5%	(0.29%)	(0.44%)	$15.9 million
Tier II-Maximum Pension-$150,000		(0.01%)	$.5 million
Tier IIA-Maximum Pension-$125,000	Liability decrease too small for impact on ARC		$0

Based on the time and costs related to obtaining actuarial estimates, projections were not obtained for all potential changes, including those related to spiking, rates charged for additional years of service for military, local government or other service, and others being implemented in other states (see Appendix 3).

13) The State and SEBAC should consider plan modifications in order to achieve ARC savings, which should be applied towards achieving the recommended minimum funding ratio targets.

Defined Contribution and Hybrid Plans for New Employees

Another issue considered by the Commission is how to prevent the problems that have been described above with defined-benefit plans from being perpetuated going forward. While less significant at this point in time than Tier I, the unfunded liabilities related to Tiers II and IIA have been growing and will continue to grow unless properly funded.

The Commission had significant discussions regarding the pros and cons of defined-contribution plans. The main advantage for the State of a defined-contribution plan is that its liability would be limited to a known and fixed percentage of payroll. Under a defined-contribution plan, the risks associated with not realizing the assumed investment returns and not adequately saving for future costs moves from the State to the employee, significantly impacting an employee's ability to retire during difficult economic times. An advantage of defined-contribution plans is that they are portable for those who change jobs or leave State service with relatively few years of service.

Defined-benefits plans typically have the advantage of professional investment management and have been shown to provide benefits at a significantly lower administrative cost. Defined-benefit plans also provide lifetime incomes without the financial risk, for individual employees, of large market losses or of large individual withdrawals that can be associated with defined-contribution plans. Under a defined-benefit plan these risks are pooled and become the responsibility of the State and its taxpayers.

Defined-contribution plans are the most prevalent plans for those employed in the private sector, primarily due to the profit-making nature of business, mobility of their workforces, and questions about the ongoing existence of some businesses. Eliminating the risk of large cost fluctuations and unfunded liabilities is an important concern for such businesses.

Defined-benefit plans remain the most prevalent plans for state and local governments, although there has been movement among some Connecticut municipalities towards providing defined-contribution plans. Some states, such as Michigan, have moved to a defined-contribution plan for new employees, while Georgia has created a hybrid or combination defined-contribution/defined-benefit plan for new employees. States such as Maine and Massachusetts have looked at this approach and have decided to remain with a defined-benefit plan, with some changes.

Hybrid plans often include a defined-benefit plan with a lower annual benefit amount supplemented by a defined-contribution plan. Hybrid plans have been viewed by some states and entities as a means of addressing, in part, the advantages and disadvantages to defined-benefit and defined-contribution plans that have been described above.

Connecticut's Alternate Retirement Plan has an 8 percent of salary state contribution, with an employee contribution of 5 percent. The employer contribution percentage in a defined-contribution

plan represents the employer's cost for the benefits and is considered comparable to the normal costs as a percentage of payroll for a defined-benefit plan. The normal cost as a percent of payroll for SERS' Tier IIA (from the June 30, 2008 valuation and the related actuarial assumptions) non-hazardous duty employees was 4.70 percent. The Tier IIA-non- hazardous duty percentage is projected to grow to 7 percent or so over time. The normal cost projections for Tier II-A indicate that the current level of benefits being accrued by new members of SERS are not as significant a problem as addressing financing the Tier I liabilities. The normal cost of a plan, however, does not reflect the need to amortize unfunded liabilities that have arisen from past funding shortfalls and continue to grow in many defined-benefit plans, including SERS.

A concern was raised that problems that could arise with the investment of plan assets by having a separate plan for new employees and a "closed" plan for current employees and retirees. Such a closed plan would need, over time, to shift more of its investments away from equities towards more fixed income to support a population of mostly retirees. The result would be that the State may have to increase contributions to the fund to make up for lower expected investment returns.

The Commission was in agreement that a move towards a different plan for new employees would have little or no impact on the State's current liabilities, because past benefits would not be affected. Some of the members of the Commission, however, feel that Connecticut's history regarding its non ARC-compliant contributions to the plan, offering retirement incentives and other actions requires that a defined-contribution or hybrid plan be considered, while other members feel that the Commission should not make recommendations based on an expectation of irresponsible State funding decisions.

Those on the Commission who opposed a defined-contribution plan for new employees believe that such a plan would be more costly to the state and would not address the current unfunded liability problem, while providing lower and less secure retirement benefits to its employees. Those on the Commission who believed that a defined-contribution plan should be considered expressed significant concern that the problems and issues associated with the defined-benefit plan could be perpetuated going forward at a growing cost to the State, especially if the recommendations in this report are ignored.

State OPEB Plan

Overall Strategy

A significant challenge for the State going forward will be managing the cost of its retiree health care benefits. According to the most recent actuarial projection, for the period ending April 1, 2008, the total unfunded OPEB liability was $26.56 billion using a 4.50 percent discount rate, with an associated ARC of $1.94 billion. This ARC is more than three times the $595 million that the State is paying on a pay-as-you-go amount in the current year. As indicated previously, Connecticut's 2008 actuarial accrued liability (AAL) related to its OPEB plan per capita is the fourth highest in the nation.

The challenge for the State is that until it can begin to significantly address this unfunded liability, it is destined to pay a higher amount each year for retiree health insurance for decades to come. From 2000 to 2009, the growth in the State's actual costs was 11.2 percent per year. The overall strategy is to close the gap between the ARC and the amount contributed by the State and its employees. Connecticut's goal should be to fully fund the ARC each year. In order to achieve this goal, Connecticut must find ways to reduce and move its AAL and ARC per capita for OPEB closer to the average levels found in other states.

The range in the AAL and ARC per capita for New England states are listed below in Schedule 14. There three main reasons for the differences below are: 1) benefit levels and cost of plans; 2) retiree population covered; and 3) funding policy.

Schedule 14: 2008 State OPEB AAL and ARC Per Capita: New England States (Pew Report, February 2010)

State	2008 OPEB AAL Per Capita (as % of Per Capita Income)	2008 OPEB ARC Per Capita	2008 Funding Ratio
Connecticut*	$7,428 (11.8%)	$491	0%
Maine	3,334 (8.7%)	124	1.2%
Massachusetts	2,339 (4.1%)	128	1.8%
New Hampshire	2,443 (5.1%)	203	5.4%
Rhode Island	748 (1.7%)	44	0%
Vermont	2,606 (6.1%)	173	0.2%

*The figures in the 2008 Pew Report figures for Connecticut reflected a 4.50 percent pay-as-you-go discount rate.

As with the Pension plan, the major strategies will fall into two categories, funding and plan design and methods of addressing the size of the liabilities.

Prefunding in a Trust Fund

The only portion of the ARC that has traditionally been funded by Connecticut is the pay-as-you-go amount for benefits received by existing retirees. The two basic components of prefunding are: (1) establishing a trust specific to OPEB and (2) making annual contributions to the trust that would exceed

current year costs. If these additional funds accumulate and remain in the trust for a significant amount of time, this would result in a lower actuarial accrued liabilities (AAL) and ARCs, as investment returns would become a significant source of benefit funding. The extent of the impact depends upon the amount contributed to the trust each year.

If it is assumed that the $17 million related to the 3 percent contribution for employees with less than 10 years of service (now estimated at $23 million) were to be placed in the trust, the ARC would decrease from $1.94 billion to $1.787 billion. If the State were to contribute another $50 million to the trust beyond the $17 million, the ARC is projected to further decrease to $1.606 billion.

1) ***The State should consider further increasing its contributions into the OPEB trust fund. This should include contributing to the OPEB Trust Fund a designated portion of future budget surpluses.***

2) ***The State and SEBAC should consider increasing the level of employee contributions into the OPEB trust fund. Any increase in employee contributions should go towards prefunding the trust fund and not towards current costs.***

Schedule 15: OPEB Liability and ARC Breakdown 4/1/08 Valuation Preliminary Results

Details of Accrued Liability and ARC ($000s) Discount Rate= 4.50% Pay-as-you-go*

Accrued Liability (AAL)	Tier I Actives	Tier II, IIA, and Non-SERS Actives	Total Active	Terminated Vested	In- Pay Status (Retirees)	Total
Member pre-65	*$390,370*	*$2,191,145*	***$2,581,515***	$737,155	$0	**$3,318,670**
Member post-65	*956,216*	*4,451,485*	***5,407,701***	1,223,080	0	**6,630,781**
Dependant pre-65	*280,517*	*1,732,675*	***2,013,192***	587,689	0	**2,600,881**
Dependant post-65	*792,280*	*3,853,905*	***4,646,185***	946,979	0	**5,593,164**
Retirees	*0*	*0*	***0***	0	8,423,446	**8,423,446**
Totals	***$2,419,383***	***$12,229,210***	***$14,648,593***	**$3,494,903**	**$8,423,446**	**$26,566,942**
ARC	Tier I Actives	Tier II, IIA, and Non-SERS Actives	**Total Active**	Terminated Vested	In-Pay Status	**Total**
Member pre-65	*$23,073*	*$250,333*	***$273,406***	$27,469	$0	**$300,875**
Member post-65	*53,474*	*483,235*	***536,709***	45,575	0	**582,284**
Dependant pre-65	*16,921*	*203,525*	***220,446***	21,899	0	**242,345**
Dependant post-65	*44,137*	*423,551*	***467,688***	35,287	0	**502,975**
Retirees	*0*	*0*	***0***	0	313,879	**313,879**
Totals	***$137,605***	***$1,360,644***	***$1,498,249***	**$130,230**	**$313,879**	**1,942,358**

*With the 5.02% discount rate related to the original estimate for the 3.0% employee contribution up through ten years of service, the AAL would be lowered to $24.020 billion and the total ARC to $1.787 billion.

Increasing the Age that Retirees Begin Receiving Retiree Health Insurance

The macroeconomic issue raised in the Federal Reserve Bank Report of people living longer and the number of years spent in retirement needs to be addressed with respect to OPEB plans as well. As shown in Schedule 15, $493 million ($273 million Member plus $220 million Dependant) of the $1.942 billion ARC using a 4.50% discount rate, is related to projected pre-65 retiree health benefits for active employees and their dependants. Increasing the early and normal retirement ages, along with the

reduction per year for early retirement, on the pension side should also result in OPEB savings. The age and years of service required for eligibility for pension and retiree health insurance could be further decoupled, as was done recently for some employees with the institution of the "Rule of 75".

3) ***The State and SEBAC should consider, beyond increasing the early and normal retirement age for retirement eligibility, whether other steps, such as moving to a "Rule of 80" for all active employees, are needed to reduce the AAL and the ARC associated with the projected pre-65 health benefits for active employees.***

Modifying Provisions Related to Terminated Vested Employees

As indicated in Schedule 15, almost $3.5 billion of the AAL and approximately $130 million of the ARC, using a 4.50 percent discount rate, is related to terminated vested employees. Terminated vested employees have left State service with at least 10 years of service, but have not yet started collecting retirement benefits. At the point that they do begin receiving pension payments, they will also begin receiving full health care benefits. The Rule of 75 will help to lower the liabilities cited above for terminated vested employees, but additional steps for consideration include:

- Require that only employees going directly into retirement from state employment be eligible for retiree health benefits;
- Move to a Rule of 80 for all employees, not just with those with less than 10 years of service as of July 1, 2009;
- Reduce the portion of premium paid for each year of service below 25 years.

There are legal questions regarding changes the State can implement for this group of former employees that may need further review.

4) ***The State and SEBAC should consider additional methods, such as requiring that only employees who go directly into retirement from state employment be eligible for retiree health benefits and moving to the Rule of 80, to reduce the AAL and the ARC associated with terminated vested employees.***

Increasing Premium Cost Sharing

As indicated in Schedule 15, $14.6 billion of the $26.6 billion in OPEB AAL relates to projected future benefits of current employees and their dependants. Approximately 45.5 percent of this liability relates to dependant coverage. One approach used in a number of other states to address this liability is to increase the level of premium sharing, currently minimal under Connecticut's plans. An advantage of adding a greater level for premium sharing for spouses and dependants is that it would increase the incentive for these individuals to consider joining other plans that are available to them, such as through their own employer.

The options for premium sharing changes include:

- Requiring retirees to pay the same premium share as active employees;

- Have dependants pay a higher premium share amount than employee members; and
- Reduce the portion of the premium paid by the state for each year of service below twenty-five years. The level of premium sharing could be different for pre and post 65 members and/or dependants.

For states that provide access to their plan with the retiree and/or their dependants paying some, or all, of the premium, there is still an "implicit subsidy" and liability associated with letting higher cost retirees participate in the plan. This may be less of an issue in Connecticut, which sets different rates for active employees and pre-65 retirees based on the separate experience of these two groups. A concern with increased premium sharing is that those with lower income will contribute a higher portion of their income than those with higher incomes.

5) ***The State and SEBAC should consider increasing premium sharing for retiree health benefits, which could vary based on whether the participant is a member or dependant and/or is pre or post-65, in order to reduce the AAL and the ARC. The premium share could also vary based on the number of years of service, similar to pension plans.***

<u>Health Care Cost Benefit Management</u>

As indicated previously, the level of the AAL and the ARC are sensitive to the actuarial assumptions used in doing the valuation for OPEB plans. A one percent reduction in annual health inflation below the assumed level is projected to lower the ARC from $1.942 billion to $1.561 billion. A one percent increase above the trend would also have a significant impact in the other direction. Connecticut historically has utilized plan design changes to reduce health care costs. Efforts are underway, including the state employee health plan, to demonstrate new methods of service delivery, such as the implementation of medical homes. The savings currently achieved by a provision in the 2009 SEBAC agreement leading to a higher percentage of employees purchasing generic drugs is an example of cost saving efforts underway. The biggest, and most important, challenge with health care reform is "bending the cost curve."

6) ***The State and SEBAC should continue to work on methods, including through plan design changes and improvements in service delivery approaches, to identify and implement actuarially verifiable methods of reducing health care costs.***

Conclusion

Connecticut's unfunded liabilities and funding ratios related to its post-employment benefit plans for its employees and retirees are among the worst in the nation. These unfunded liabilities have led to increasing annual costs which have been outpacing of the growth in total State expenditures. These escalating costs put pressure on or squeeze out other budgetary priorities, including investments in human and physical capital needed to maintain our infrastructure and quality of life and to attract new businesses and jobs to the state. Lower credit ratings and higher borrowing costs are a potential outcome if changes are not made.

Unfortunately, these liabilities and associated annual costs will only continue to get worse if additional actions are not taken soon. While this report outlines a number of the many causes of our current situation, it more importantly offers a series of balanced and responsible strategies for consideration to mitigate these growing unfunded liabilities.

The strategies, frankly, call for the State, its employees and all stakeholders to continue to participate in finding and implementing solutions—ones that will involve tough choices today in order to avoid tougher ones later on.

Appendices

Page

Appendix 1 – Governor M. Jodi Rell, Executive Order No. 38 Establishing the State Post-Employment Benefits Commission A-1

Appendix 2 – Summary of Plan Provisions, State Employee Retirement System (SERS) A-2

Appendix 3 – Summary of Changes Made to Pension Plans and Other Post Employment Benefit (OPEB) Plans by States in 2010 ..... A-8

Appendix 4 - Actuarial Projections Related to SERS by Cavanaugh-Macdonald Consulting LLC, August 2, 2010 ..... A-15

List of Major Information Sources

1) Actuarial Valuations of the State Employees Retirement System (SERS), Teachers Retirement System (TRS) and State Other Post-Employment Benefit (OPEB) Plans from 2000 to 2008
2) Actuarial estimates and projections related to SERS and OPEB done in the spring and summer of 2010 by the plans' actuaries (Cavanaugh Macdonald-SERS; Milliman-OPEB)
3) Collective Bargaining Agreements between the State of Connecticut and the State Employee Bargaining Agent Coalition (SEBAC)
4) State of Connecticut, Office of the State Comptroller, Comprehensive Annual Financial Reports, Fiscal Years 1996-2009
5) State of Connecticut, General Assembly's Office of Fiscal Analysis, Budget Books, Fiscal Years 1992 -2009; May 2010 projections for fiscal years 2010-2014
6) Fiscal Year 2011 Midterm Economic Report of the Governor, State of Connecticut, Office of Policy and Management, February 3, 2010
7) Connecticut Municipal Audits for Fiscal Year Ending June 30, 2008 submitted to the State Office of Policy and Management
8) "The Trillion Dollar Gap: Underfunded State Retirement Systems and the Roads to Reform", The Pew Center on the States, February 2010
9) Public Fund Survey-Summary of Findings for 2008, National Association of State Retirement Administrators, October 2009
10) "Population Aging and State Pensions in New England", New England Public Policy Center, Federal Reserve Bank of Boston, June 2010
11) Final Report of the Special Commission to Study the Massachusetts Contributory Retirement Systems, October 7, 2009
12) State Defined Contribution and Hybrid Pension Plans, National Conference of State Legislatures, June 2010
13) "Governmental Pension Contributions May Increase Due to New Guidance", Moody's Investors Service, July 6, 2010
14) "The Crisis in State and Local Government Retiree Health Benefit Plans: Myths and Realities", The Center for State and Local Government Excellence", November 2009
15) "Prefunding Other Post-Employment Benefits (OPEB) in State and Local Governments: Options and Early Evidence, The Center for State and Local Government Excellence, September 2009
16) "GASB 45 and other post-employment benefit promises: The fog is clearing", New England Public Policy Center, Federal Reserve Bank of Boston, September 2007
17) Employer Health Benefits – 2009 Annual Survey, The Kaiser Family Foundation
18) Federation of Tax Administrators, 2008 State and Local Tax Collections/Burdens
19) "Pension Funding and Policy Challenges Loom for U.S. States", Standard and Poor's, July 8, 2010
20) Pensions and Retirement Plan Enactments in 2010 State Legislatures, National Conference of State Legislatures, July 19, 2010

Note: Additional sources of information are included on the Commission's web-site, located at: http://www.ct.gov/opm/cwp/view.asp?a=2998&q=457846&opmNav_GID=1791