Maine Public Employees Retirement System State Employee and Teacher Retirement Program

Actuarial Valuation Report as of June 30, 2014

Produced by Cheiron

October 2014

Classic Values, Innovative Advice

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October 31, 2014

Board of Trustees
Maine Public Employees Retirement System
PO Box 349
Augusta, Maine 04332-0349

Dear Members of the Board:

We are pleased to submit the June 30, 2014 Actuarial Valuation Report for the plans in the State Employee and Teacher Retirement Program of the Maine Public Employees Retirement System (System). This report is for the use of the Public Employees Retirement Board and its auditors in preparing financial reports in accordance with applicable law and accounting requirements. This report contains information on assets, liabilities, and contributions of the Program, as well as the required accounting statement disclosures under the Governmental Accounting Standards Board Statement No. 67.

In preparing our report, we relied on information, some oral and some written, supplied by the System's staff. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

The results of this report rely on future plan experience conforming to the underlying assumptions and methods outlined in this report. To the extent that the actual plan experience deviates from the underlying assumptions and methods, or there are any changes in plan provisions or applicable laws, the results would vary accordingly.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This valuation was prepared for the Maine Public Employees Retirement System for the purposes described herein. This valuation report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

Sincerely,
Cheiron

Gene Kalwarski, FSA, EA	Fiona E. Liston, FSA, EA
Principal Consulting Actuary	Principal Consulting Actuary

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FOREWORD

Cheiron has performed the Actuarial Valuation of the plans in the Maine Public Employees Retirement System State Employee and Teacher Program as of June 30, 2014. The purpose of this report is to:

1) **Measure and disclose**, as of the valuation date, the financial condition of the plans in the Program;

2) **Indicate trends**, both historical and prospective, in the financial condition of the plans in the Program;

3) **Report on the contribution rate** developed in this valuation for informational purposes (the actual contributions to be paid by the State for Fiscal Years 2016 and 2017 were developed in July 2014, based on a roll forward of the June 30, 2013 valuation); and,

4) **Provide specific information** and documentation required by the Governmental Accounting Standards Board (GASB).

An actuarial valuation establishes and analyzes assets and liabilities on a consistent basis, and traces the progress of both from one year to the next. It includes measurement of investment performance as well as an analysis of actuarial liability gains and losses.

Section I presents a summary containing our key findings and discloses important trends experienced by the plans in the Program in recent years.

Section II contains details on various asset measures, together with pertinent performance measurements.

Section III shows similar information on liabilities, measured for actuarial, accounting, and government reporting purposes.

Section IV develops the State contribution rates that would be applied absent the State's biennial budgeting process.

Section V includes the required disclosures under GASB Statement No. 67.

Finally, at the end of this report we present appendices that contain a summary of the:

- Program membership by plan at the valuation date (Appendix A);
- The actuarial methods and assumptions used in the valuation (Appendix B);
- Major benefit provisions of the Program and the various plans included in the Program (Appendix C); and,
- A glossary of terminology used in the GASB disclosures (Appendix D).

SECTION I
BOARD SUMMARY

General Comments

The State of Maine's annual contributions to the plans in this Program are determined on a biennial basis. The contribution rates used in the State's budgeting process to produce the applicable State budget contributions in FY 2016 and FY 2017 were based on the liabilities of the 2013 valuation adjusted for anticipated growth in benefits and reductions due to payouts to reflect our best estimate of the June 30, 2014 liability based on the valuation of the Program as of June 30, 2013. The budgeting process then combined this expected liability with the actual plan assets as of June 30, 2014 to develop the budgeted rates. The results of this June 30, 2014 valuation will be used primarily for accounting disclosures. Next year's June 30, 2015 valuation will be used as the basis for the applicable FY 2018 and FY 2019 State budget contributions.

The State of Maine composite rate produced by the June 30, 2013 valuation for all plans in the State Employees and Teacher Retirement Program was 18.06% of payroll. The State composite rate produced in this valuation is 16.06% of payroll. The change in contribution rate was attributable to several elements, including a change in the assumed rate of investment return used to value liabilities (from 7.25% to 7.125%), a gain in investment returns, action taken to recognize an additional amount of past deferred assets gain in order to offset the change in investment return assumption, and a gain in liabilities.

Experience from July 1, 2013 through June 30, 2014 (FY 2014)

As of June 30, 2014, the Program had an Unfunded Actuarial Liability (UAL) of $2.303 billion. This represents a decrease of $0.350 billion from the $2.653 billion UAL measured as of June 30, 2013. The specific factors contributing to this change are presented in Table I-1 below.

Table I-1
Components of UAL Change

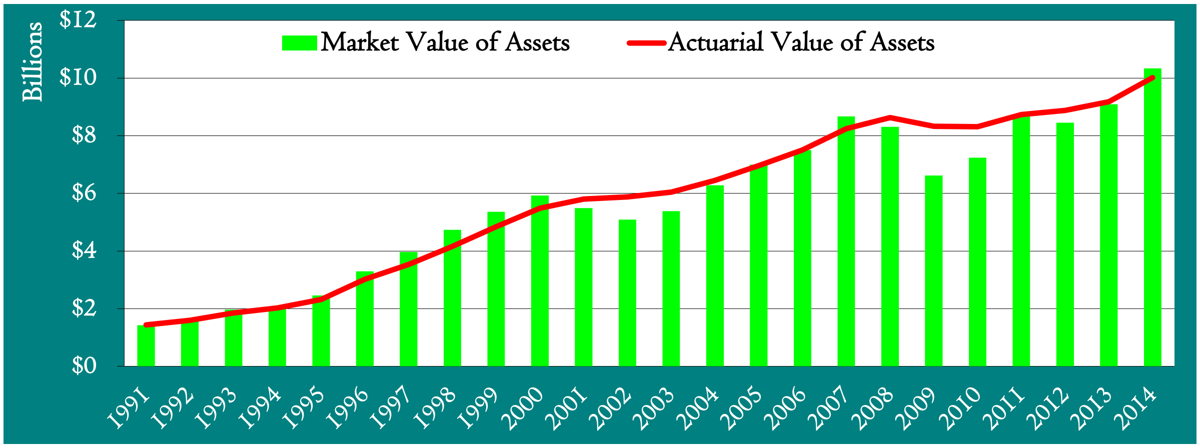
		$ in billions
1.	Unfunded Actuarial Liability as of June 30, 2013	$ 2.653
2.	Decrease expected as of June 30, 2014	(0.053)
3.	Increase due to change in return assumption	0.168
4.	Decrease due to recognized investment gains	(0.447)
5.	Decrease due to liability gains during the year	(0.018)
6.	Actuarial Liability as of June 30, 2014	$ 2.303

SECTION I
BOARD SUMMARY

Historical Trends

We present a series of graphs which display key historical trends in the Program's financial condition. Following the historical review, we present projections of the probable condition of the Program into the future under various market return scenarios.

Growth in Assets



The graph above illustrates how well the actuarial smoothing method has insulated the Program from market volatility. Also, it demonstrates how there has generally been an upward trend for both the market value (green bars) and actuarial value of assets (red line) of assets since 1991. The few exceptions are the years immediately following the severe market declines in the 2000s.

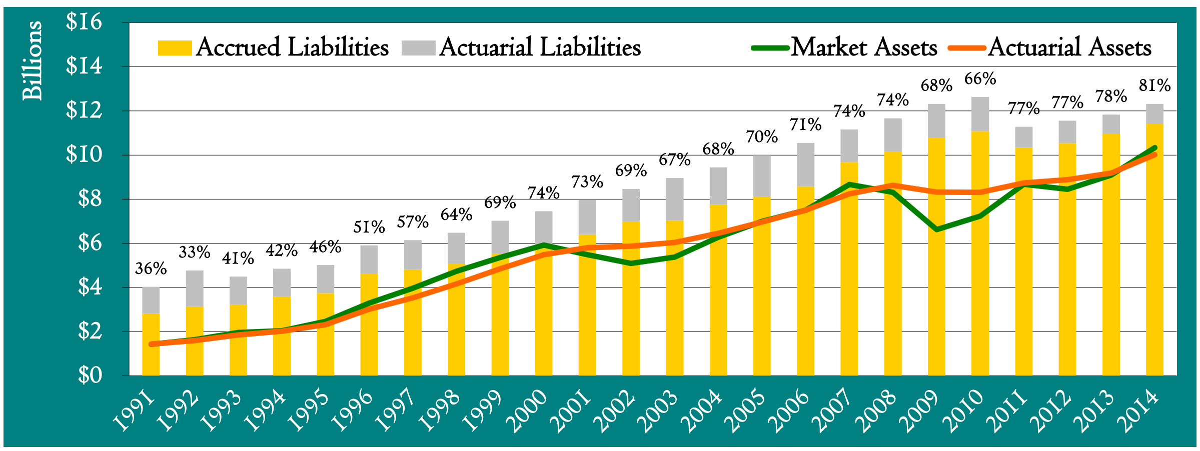
SECTION I
BOARD SUMMARY

Assets and Liabilities

This next graph shown below illustrates the progress of assets against liabilities. The yellow bars represent the Present Value of Accrued Benefits (PVAB) as of the valuation date.

The actuarial liability (AL), the liability measured used for funding purposes, is represented by the top of the grey bars. We compare the actuarial value of assets to this measure of liability in developing the funding ratios. These are the percentages shown in the graph labels.

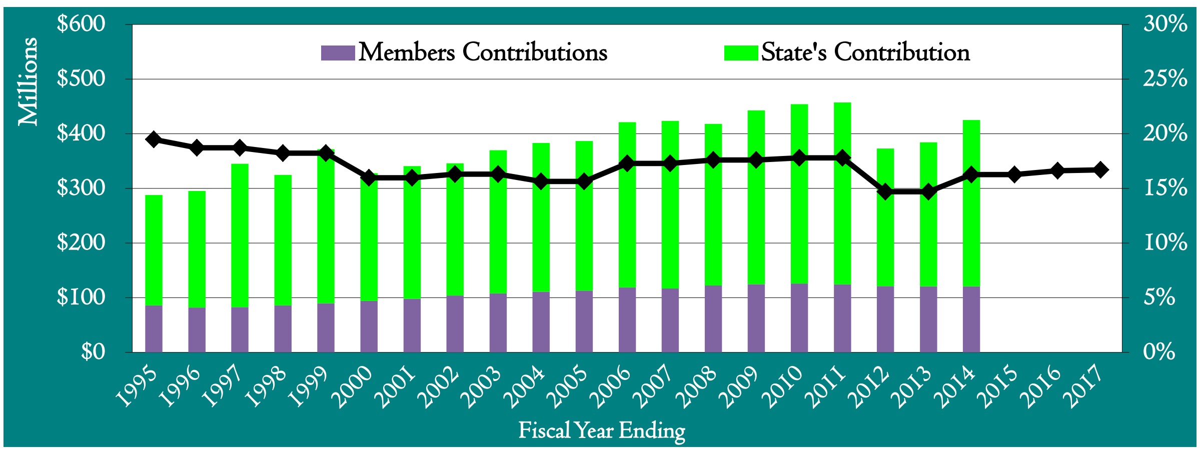
Plan changes were legislated during 2010 and first reflected in the 2011 valuation, resulting in a reduction in liability for that year. As of June 30, 2014, the Program is funded 81% on this measure, which represents the highest funding ratio for the Program since 1991, and most likely since the inception of the Program.



SECTION I
BOARD SUMMARY

Contributions

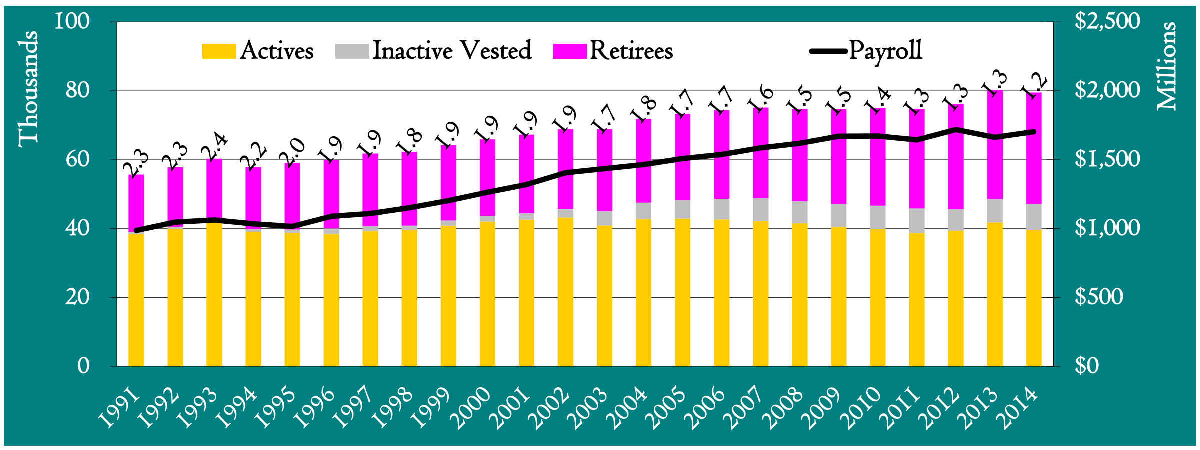
This graph shows the history of contributions to the Program both as dollar amounts and as a percentage of payroll. The stacked bars in this graph show the contributions made by both the State and the members in dollar terms. These bars should be read in relation to the axis on the left-hand side. The solid black line shows the State's Fiscal Year Appropriation contribution rate as a percent of payroll and should reference the right-hand axis. The member contribution rate is set by the statutes, based on the plan in which the member participates. The employer contribution rate paid by the State is set by the actuarial process, on a biennial basis. The contribution rate for FY 2014 was based on a roll forward of the June 30, 2011 valuation to June 30, 2012.



SECTION I
BOARD SUMMARY

Participant Trends

As with many funds in this country, there has been a steady growth in the number of retired members as the Program has matured. The bars in the graph below show the number of active, terminated vested, and retired members annually over the last 25 years. The labels above each bar show the ratio of active members per inactive member in payment status, which has been generally declining since 1991. We anticipate that this ratio will continue to decline as the baby boom generation enters retirement. While a declining ratio would be a concern in a plan with no prefunding, in MainePERS's case, it merely indicates that on a cash flow basis, there is more money being paid for benefits than made in contributions. The more negative a plan's cash flows, the more sensitive, in terms of contribution volatility, the plan is to volatile investment returns.

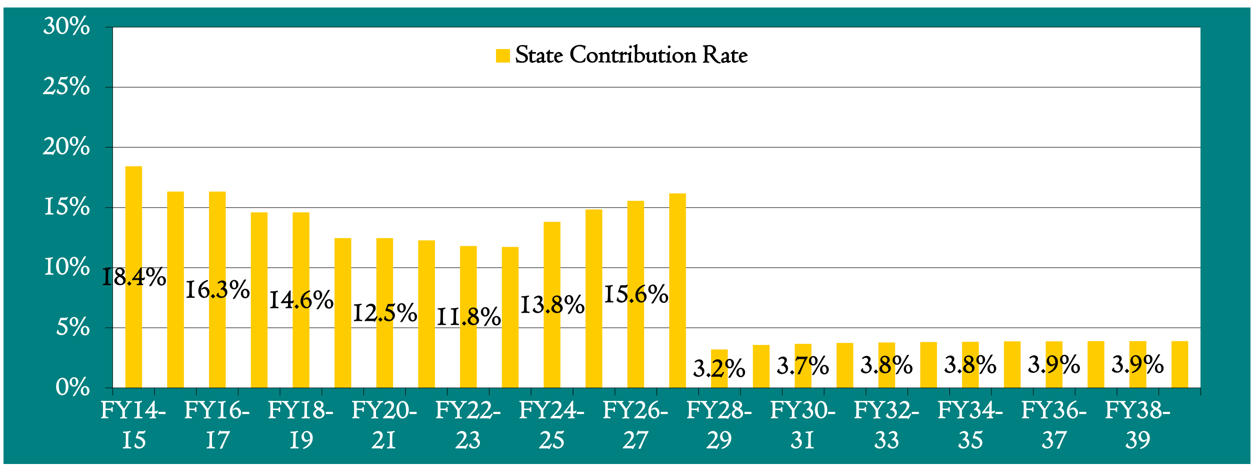


Projections

Our analysis of the projected financial trends for MainePERS is an important part of this valuation. In this section, we present a sensitivity analysis of future valuation results in terms of benefit security (assets divided by liabilities) and the State's expected cost progression. We first present a baseline projection of these future results if all assumptions, including the assumed 7.125% investment return were achieved each year. We then present the same projections based on achieving all assumptions each year except for earnings which are in these scenarios assumed to be 1% above and 1% below the assumed 7.125% return each year. The primary purpose of presenting these projections is to demonstrate how sensitive future valuation results could be to volatile investment returns.

Baseline Projections

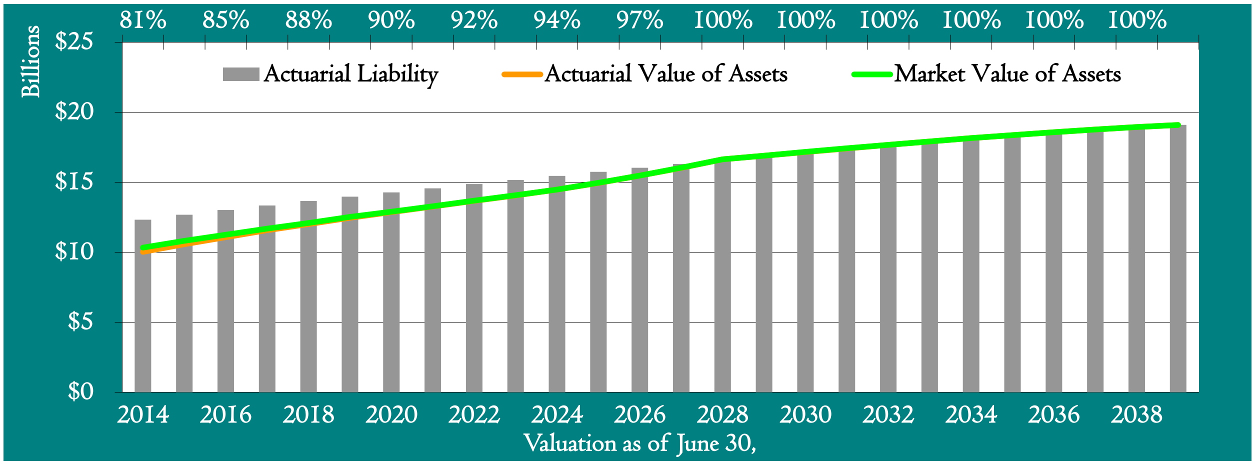
The graphs that follow show the expected progress of the Program's funded ratio over the next 25 years, measured in terms of the employer contribution rate and the funded ratio for the fiscal year beginning in that year, assuming the Program's assets earn 7.125% on their *market value*.



The chart above shows that the State's overall composite contribution rate is projected to decline for the next ten years, then increase for four years until the UAL has been paid off in FY 2028. At that point, only the normal cost of just under 4% will be payable. The reason the rate is dropping initially, and then increasing until 2028 is a function of when prior gains and losses are fully amortized and thus dropped from the contribution rate. In addition, this projection is based on the assumption that all actuarial assumptions are exactly met each and every year, including the 7.125% investment assumption. The reality is that there will be gains and losses each and every year, resulting in amortization payments (negative or positive) occurring every year. Also, due to the short amortization period (currently 10 years), there will always be this type of up and down volatility in the rate as is shown above for the period 2015 through 2028.

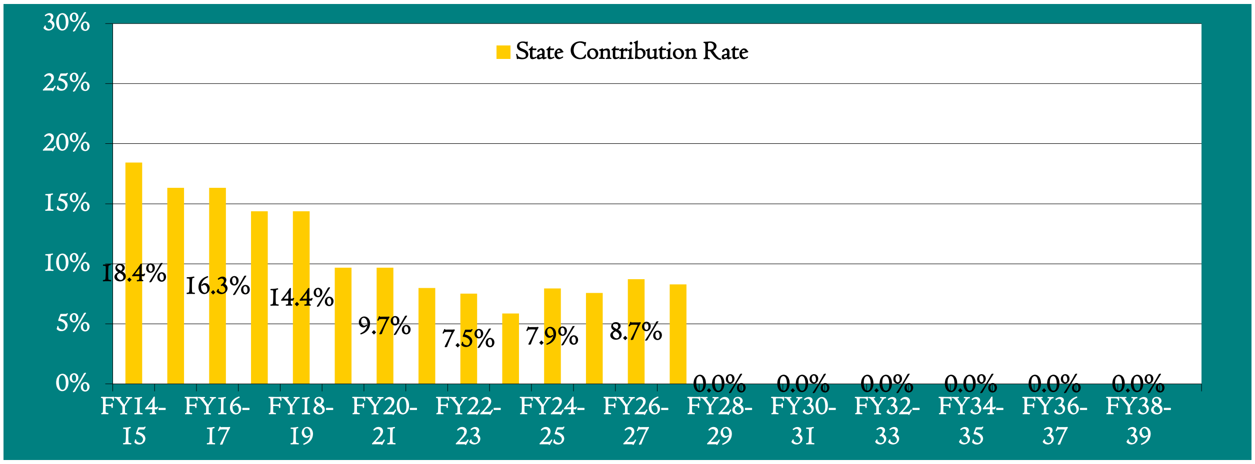
SECTION I
BOARD SUMMARY

The next graph projects assets and liabilities and shows that if all actuarial assumptions are exactly met, the Program's funded ratio is projected to improve from the starting level of 81% as of FY 2014 to 100% funding in FY 2028, the year that the Maine Constitution mandates that the Program's UAL is to be paid off. However as just mentioned earlier, annual gains and losses will always occur, meaning that by 2028, there will be either an unfunded actuarial liability (if more losses occur) or a surplus of plan assets (if more gains occur).



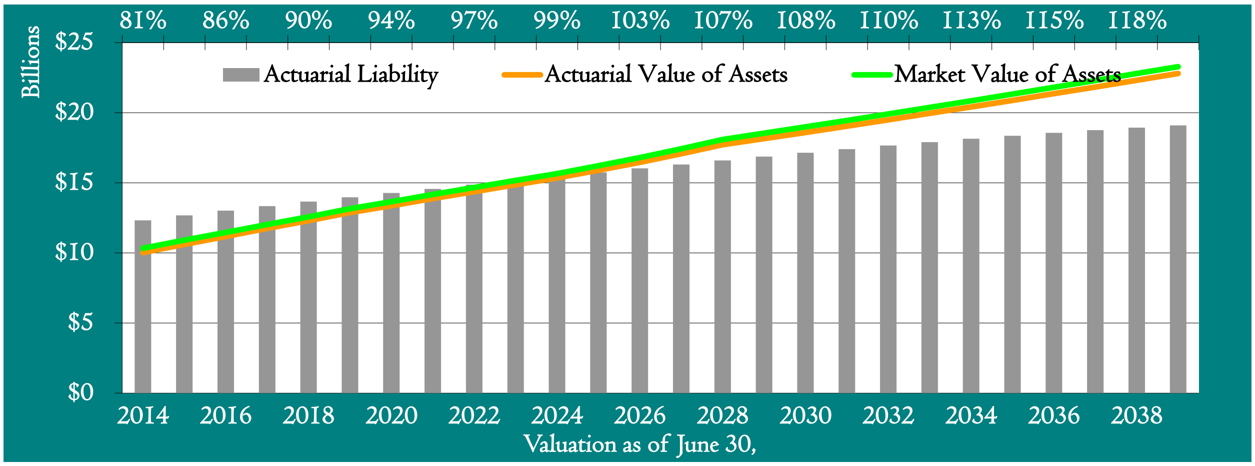
Projections with Asset Returns of 8.125%

The future funding of this Program will be largely driven by the investment earnings. Relatively minor changes in the market returns can have significant effects on the Program's status. The graph below shows that if the Program were to earn 8.125% annual returns each year while exactly meeting all other assumptions, the composite contribution rate would decline throughout most of the UAL payoff period, and both the Normal cost and the UAL rates would go to zero. This is due to the excess earnings each year which results in a surplus of assets such that the amortization of the surpluses would be more than enough to offset the entirety of the employer normal cost for the remainder of the projection period.



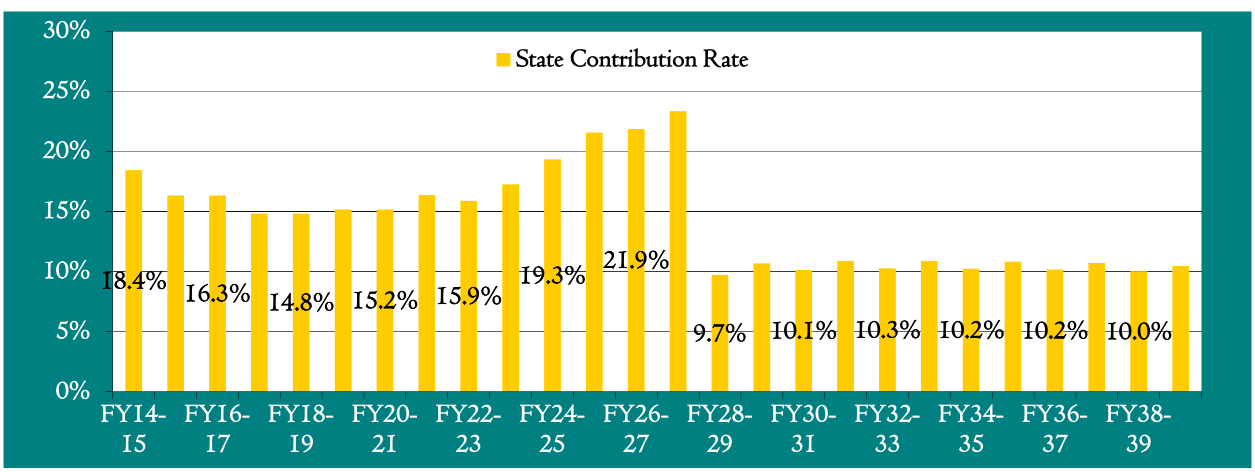
SECTION I
BOARD SUMMARY

Assuming the same 8.125% return on investments, this next graph shows that the Program's funded ratio would increase to reach 100% by 2025, and then continue to improve. The reason the plan reaches 100% funding in the year 2025 and the UAL payments in the graph above continued until 2028 has to do with the timing of when the valuation is performed and State's the biennial budget is set.



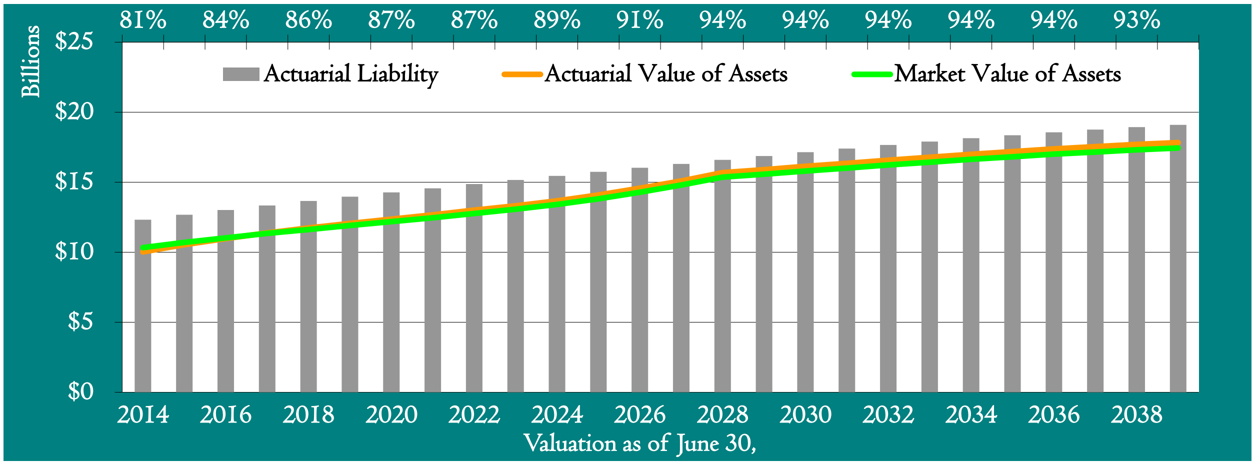
Projections with Asset Returns of 6.125%

Just as returns in excess of the earnings assumption will lead to declining State contributions and an improved funded status, the opposite will occur if actual investment earnings are below the assumed rate. The graph below shows the projections under a 6.125% annual return scenario. The period of decline in the State's contribution rate will be shorter than in the baseline scenario, and the State's contribution rate would rise to around 23% of payroll in order to meet the Constitutional requirement of full funding in 2028. Beyond 2028, there will be continued unfunded actuarial contributions in order to amortize the annual investment losses of 1% each year compared to the assumed rate of return.



SECTION I
BOARD SUMMARY

The next graph shows that the Program's funded ratio would increase to 97% over the next 25 years with actual returns at 6.125%, one percentage point lower than the assumed rate. In addition, under this scenario, the Program would still have an Unfunded Actuarial Liability in 2028, the end of the current amortization period. The Constitutional Amendment would be satisfied, in that the UAL existing on July 1, 1997 would be paid off by 2028, but new losses that create additional UAL would continue to be funded over up to ten years each based on the Constitutional Amendment.



The balance of this Board Summary section of the actuarial valuation presents a summary of the principal results of the valuation, comparing key results between this year's valuation and last year's for participant counts, assets and liabilities, and contribution rates. These summary results are shown for the total State Employee and Teacher programs, and then for each of the subgroups.

SECTION I
BOARD SUMMARY

Table I-2
Summary of Principal Results
Total State Employee and Teacher Program

Valuation as of:	June 30, 2013	June 30, 2014	% Change
Participant Counts			
Active Members	41,809	39,669	(5.1%)
Retired Members	23,314	24,039	3.1%
Beneficiaries of Retirees	5,983	6,015	0.5%
Survivors of Deceased Members	643	638	(0.8%)
Disabled Members	1,684	1,699	0.9%
Deferred "Vested" Members	6,794	7,447	9.6%
Inactives Due Refunds	35,124	36,611	4.2%
Total Membership	115,351	116,118	0.7%
Annual Salaries of Active Members	$ 1,662,390,557	$ 1,702,310,338	2.4%
Annual Payments to Benefit Recipients	$ 637,482,081	$ 658,595,271	3.3%
Assets and Liabilities			
Total Actuarial Liability	$ 11,830,649,882	$ 12,320,158,783	4.2%
Assets/Actuarial (Smoothed)	9,177,749,627	10,017,512,006	9.1%
Unfunded Actuarial Liability	$ 2,652,900,255	$ 2,302,646,777	(13.2%)
Funding Ratio	77.58%	81.31%	
Present Value of Accrued Benefits	$ 10,949,403,257	$ 11,407,151,568	4.3%
Assets/Market Value	9,091,347,964	10,337,615,927	13.7%
Unfunded PVAB	$ 1,858,055,293	$ 1,069,535,641	(42.4%)
Accrued Benefit Funding Ratio	83.03%	90.62%	
Contributions as a Percentage of Payroll	**Fiscal Year 15**	**Fiscal Year 16**	
Normal Cost Contribution	3.90%	3.96%	
Unfunded Actuarial Liability Contribution	14.16%	12.10%	
Total Contribution	18.06%	16.06%	

SECTION I
BOARD SUMMARY

Table I-3
Summary of Principal Results
Teachers

Valuation as of:	**June 30, 2013**	**June 30, 2014**	**% Change**
Participant Counts			
Active Members	28,581	26,763	(6.4%)
Retired Members	13,790	14,313	3.8%
Beneficiaries of Retirees	2,716	2,748	1.2%
Survivors of Deceased Members	279	280	0.4%
Disabled Members	695	704	1.3%
Deferred "Vested" Members	4,186	4,662	11.4%
Inactives Due Refunds	29,534	30,682	3.9%
Total Membership	79,781	80,152	0.5%
Annual Salaries of Active Members	$ 1,112,676,366	$ 1,125,915,449	1.2%
Annual Payments to Benefit Recipients	$ 383,225,117	$ 399,267,433	4.2%
Assets and Liabilities			
Total Actuarial Liability	$ 7,630,451,039	$ 7,980,307,969	4.6%
Assets/Actuarial (Smoothed)	6,098,009,434	6,686,320,439	9.6%
Unfunded Actuarial Liability	$ 1,532,441,605	$ 1,293,987,530	(15.6%)
Funding Ratio	79.92%	83.79%	
Present Value of Accrued Benefits	$ 6,991,748,149	$ 7,318,652,948	4.7%
Assets/Market Value	6,040,601,227	6,899,978,021	14.2%
Unfunded PVAB	$ 951,146,922	$ 418,674,927	(56.0%)
Accrued Benefit Funding Ratio	86.40%	94.28%	
Contributions as a Percentage of Payroll	**Fiscal Year 15**	**Fiscal Year 16**	
Normal Cost Contribution	3.14%	3.22%	
Unfunded Actuarial Liability Contribution	11.77%	9.67%	
Total Contribution	14.91%	12.89%	

SECTION I
BOARD SUMMARY

Table I-4
Summary of Principal Results
State Employees (Regular and Special Plans)

Valuation as of:	June 30, 2013	June 30, 2014	% Change
Participant Counts			
Active Members	13,228	12,906	(2.4%)
Retired Members	9,524	9,726	2.1%
Beneficiaries of Retirees	3,267	3,267	0.0%
Survivors of Deceased Members	364	358	(1.6%)
Disabled Members	989	995	0.6%
Deferred "Vested" Members	2,608	2,785	6.8%
Inactives Due Refunds	5,590	5,929	6.1%
Total Membership	35,570	35,966	1.1%
Annual Salaries of Active Members	$ 549,714,191	$ 576,394,889	4.9%
Annual Payments to Benefit Recipients	$ 254,256,964	$ 259,327,838	2.0%
Assets and Liabilities			
Total Actuarial Liability	$ 4,200,198,843	$ 4,339,850,814	3.3%
Assets/Actuarial (Smoothed)	3,079,740,193	3,331,191,567	8.2%
Unfunded Actuarial Liability	$ 1,120,458,650	$ 1,008,659,247	(10.0%)
Funding Ratio	73.32%	76.76%	
Present Value of Accrued Benefits	$ 3,957,655,108	$ 4,088,498,620	3.3%
Assets/Market Value	3,050,746,737	3,437,637,906	12.7%
Unfunded PVAB	$ 906,908,371	$ 650,860,714	(28.2%)
Accrued Benefit Funding Ratio	77.08%	84.08%	
Contributions as a Percentage of Payroll	**Fiscal Year 15**	**Fiscal Year 16**	
Normal Cost Contribution	5.44%	5.39%	
Unfunded Actuarial Liability Contribution	18.99%	16.84%	
Total Contribution	24.43%	22.23%	

SECTION I
BOARD SUMMARY

Table I-5
Summary of Principal Results
State Employees (Regular Plan)

Valuation as of:	**June 30, 2013**	**June 30, 2014**	**% Change**
Participant Counts			
Active Members	11,505	11,134	(3.2%)
Retired Members	8,536	8,864	3.8%
Beneficiaries of Retirees	2,877	2,901	0.8%
Survivors of Deceased Members	353	349	(1.1%)
Disabled Members	905	915	1.1%
Deferred "Vested" Members	2,397	2,549	6.3%
Inactives Due Refunds	4,948	5,242	5.9%
Total Membership	31,521	31,954	1.4%
Annual Salaries of Active Members	$ 464,032,526	$ 488,119,422	5.2%
Annual Payments to Benefit Recipients	$ 217,913,910	$ 226,682,819	4.0%
Assets and Liabilities			
Total Actuarial Liability	$ 3,536,583,616	$ 3,712,477,722	5.0%
Assets/Actuarial (Smoothed)	2,613,729,800	2,881,426,309	10.2%
Unfunded Actuarial Liability	$ 922,853,816	$ 831,051,413	(9.9%)
Funding Ratio	73,91%	77.61%	
Present Value of Accrued Benefits	$ 3,328,321,314	$ 3,494,405,003	5.0%
Assets/Market Value	2,589,123,483	2,973,500,653	14.8%
Unfunded PVAB	$ 739,197,831	$ 520,904,350	(29.5%)
Accrued Benefit Funding Ratio	77.79%	85.09%	
Contributions as a Percentage of Payroll	**Fiscal Year 15**	**Fiscal Year 16**	
Normal Cost Contribution	5.27%	5.19%	
Unfunded Actuarial Liability Contribution	18.52%	16.39%	
Total Contribution	23.79%	21.58%	

SECTION I
BOARD SUMMARY

Table I-6
Summary of Principal Results
State Employees (Special Plans - Composite)

Valuation as of:	June 30, 2013	June 30, 2014	% Change
Participant Counts			
Active Members	1,723	1,772	2.8%
Retired Members	988	862	(12.8%)
Beneficiaries of Retirees	390	366	(6.2%)
Survivors of Deceased Members	11	9	(18.2%)
Disabled Members	84	80	(4.8%)
Deferred "Vested" Members	211	236	11.8%
Inactives Due Refunds	642	687	7.0%
Total Membership	4,049	4,012	(0.9%)
Annual Salaries of Active Members	$ 85,681,665	$ 88,275,467	3.0%
Annual Payments to Benefit Recipients	$ 36,343,054	$ 32,645,019	(10.2%)
Assets and Liabilities			
Total Actuarial Liability	$ 663,615,227	$ 627,373,092	(5.5%)
Assets/Actuarial (Smoothed)	466,010,393	449,765,258	(3.5%)
Unfunded Actuarial Liability	$ 197,604,834	$ 177,607,834	(10.1%)
Funding Ratio	70.22%	71.69%	
Present Value of Accrued Benefits	$ 629,333,794	$ 594,093,617	(5.6%)
Assets/Market Value	461,623,254	464,137,253	0.5%
Unfunded PVAB	$ 167,710,540	$ 129,956,364	(22.5%)
Accrued Benefit Funding Ratio	73.35%	78.13%	
Contributions as a Percentage of Payroll	**Fiscal Year 15**	**Fiscal Year 16**	
Normal Cost Contribution	6.35%	6.52%	
Unfunded Actuarial Liability Contribution	21.49%	19.36%	
Total Contribution	27.84%	25.88%	

SECTION II
ASSETS

Pension assets play a key role in the financial operation of the Program and in the decisions the Trustees make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact benefit levels, State contributions, and the ultimate security of participants' benefits.

The assets of the Program include amounts contributed for all programs for which the System is the Plan Sponsor, namely, the State Employee and Teacher Retirement Program, the Judicial Retirement Program, the Legislative Retirement Program, the Participating Local District Retirement Program, which includes the Consolidated Plan for Participating Local Districts (PLDs), along with several plans of PLDs who withdrew from the System, as the assets of all these programs are co-mingled for investment purposes. In performing the annual valuation, the actuarial value of assets that is developed reflects all defined benefit plan assets and subsequently it is allocated across all of the defined benefit plans included in the programs administered by MainePERS.

In this section, we present detailed information on program assets including:

- **Disclosure** of assets at June 30, 2013 and June 30, 2014;
- Statement of the **changes** in market values during the year;
- Development of the **actuarial value of assets**;
- **Allocation** of actuarial value to sub-plans;
- Assessment of **investment performance**; and,
- Projection of expected **cash flows** for the next ten years.

Disclosure

The market value of assets represents a "snap-shot" or "cash-out" value, which provides the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. Because these fluctuations would result in volatility in contributions if the unadjusted market value was used in developing the contributions in the valuation process, an actuarial value of assets is developed.

The actuarial values are market values that have been smoothed and are used for evaluating the Program's ongoing ability to meet its obligations.

Current actuarial methods employed in this Program set the actuarial value of assets equal to the expected value of the actuarial value of assets plus one-third of the difference between the actual market value of assets and the expected actuarial value of assets. The expected value of the actuarial value of assets takes the prior year's actuarial value of assets and adjusts it for contributions, benefit payments, and expected interest earnings at the investment return assumption that was in effect for the previous year, 7.25% for this valuation.

SECTION II
ASSETS

Table II-1
Changes in Market Value of Total Defined Benefit Plan Assets (All Programs)

Value of Assets – June 30, 2013			**$ 11,344,181,577**
<u>Additions</u>			
Contributions:			
Employer Contributions	$ 338,638,472		
Employee Contributions	155,005,491		
Transfer	(5,355)		
Total Contributions		$ 493,638,608	
Investment Income:			
Net Appreciation (Depreciation) in Fair Value of Investments	$ 1,935,254,799		
Interest on Bank Balances	85,641		
Total Investment Income	$ 1,935,340,440		
Investment Activity Expenses:			
Management Fees	$ (38,448,389)		
Investment Related Expense	(2,680,426)		
Banking Fees	(33,803)		
Total Investment Activity Expenses	$ (41,162,618)		
Net Income from Investing Activities		$ 1,894,177,822	
Total Additions			$ 2,387,816,430
<u>Deductions</u>			
Retirement Benefits	$ (738,576,135)		
Disability Benefits	(36,097,331)		
Survivor Benefits	(20,485,341)		
Refunds	(29,192,968)		
Administrative Expenses	(9,324,293)		$ (833,676,068)
Total Deductions			
<u>Total</u>			
Net Increase (Decrease)			$ 1,554,140,362
Value of Assets – June 30, 2014			**$ 12,898,321,939**

SECTION II
ASSETS

Table II-2
Development of Actuarial Value of Assets (All Programs)
as of June 30, 2014

1.	Actuarial Value of Assets at June 30, 2013	$ 11,451,993,550
2.	Amount in (1) with Interest to June 30, 2014	12,282,263,082
3.	Employer and Member Contributions for the Plan Year Ended June 30, 2014	493,638,608
4.	Interest on Contributions Assuming Received Uniformly Throughout the Year to June 30, 2014	17,581,314
5.	Disbursements from Trust Except Investment Expenses, July 1, 2013 through June 30, 2014	(824,351,775)
6.	Interest on Disbursements Assuming Payments Made Uniformly throughout the Year to June 30, 2014	(29,359,914)
7.	Expected Value of Assets at June 30, 2014 = (2) + (3) + (4) + (5) + (6)	$ 11,939,771,315
8.	Actual Market Value of Assets at June 30, 2014	12,898,321,939
9.	Excess of (8) Over (7)	958,550,624
10.	Recognition of Past Deferred Asset Gains	239,637,656
11.	Actuarial Value of Assets at June 30, 2014 = (7) + 37.5% of (9) + (10)	$ 12,498,925,846

Actuarial Value of Assets

The actuarial value of assets represents a "smoothed" value developed by the actuary to reduce, or eliminate, volatility in contribution rates that could develop from short-term fluctuations in the market value of assets. For this Program, the actuarial value has been calculated by adding one-third of the difference between actual market value and expected value of the actuarial value of assets, to the expected value of the actuarial value of assets. The actuarial value of assets in this June 30, 2014 valuation also recognizes an additional amount of past deferred asset gains (37.5%) in order to offset the increase in liability and normal cost from reducing the investment return assumption from 7.25% to 7.125% for the non-PLD Programs. The previous table illustrates the calculation of actuarial value of assets for the June 30, 2014 valuation.

SECTION II
ASSETS

Allocation of Actuarial Value of Assets

The assets for all of the defined benefit plans in the programs administered by MainePERS are commingled for investment purposes. The actuarial smoothing methodology is applied on the market value of total assets. This produces an asset ratio which is then applied to the market value of assets attributable to each of the programs. The asset value derived in this valuation is 0.969035 ($12,498,925,846 ÷ $12,898,321,939). The allocation of actuarial value of assets to each of the System's retirement programs is shown in the following chart.

Table II-3
Allocation of Actuarial Value of Assets
as of June 30, 2014

	Market Value	Actuarial Value
Teachers	$ 6,899,978,021	$ 6,686,320,439
State (Regular & Special)	3,437,637,906	3,331,191,567
Judges	57,189,900	55,419,017
Legislators	11,120,032	10,775,701
Participating Local Districts (Consolidated & Non-Consolidated)	2,492,396,080	2,415,219,122
Total Fund	$ 12,898,321,939	$ 12,498,925,846

Investment Performance

The market value of assets returned a positive 16.85% during FY 2014. This is higher than the assumed return of 7.25%. The returns in FY 2013 and FY 2012 were positive 11.20% and positive 0.50%, respectively.

On an actuarial value of assets basis, the return for FY 2014 was a positive 12.20%. This return is lower than the return on a market value basis but higher than the 7.25% assumption; therefore, this return gives rise to an investment gain this year.

SECTION II
ASSETS

Table II-4
Projection of State and Teacher Program Benefit Payments and Contributions

FY Ending June 30	Expected Benefit Payments	Expected State Contributions	Expected Member Contributions	Total Expected Contributions
2015	$ 703,689,000	$ 319,266,000	$ 126,776,000	$ 446,042,000
2016	746,972,000	292,554,000	131,214,000	423,768,000
2017	787,088,000	302,793,000	135,806,000	438,599,000
2018	825,833,000	280,342,000	140,559,000	420,901,000
2019	862,447,000	290,154,000	145,479,000	435,633,000
2020	898,216,000	256,274,000	150,571,000	406,845,000
2021	932,924,000	265,243,000	155,841,000	421,084,000
2022	965,688,000	270,407,000	161,295,000	431,702,000
2023	997,396,000	269,188,000	166,940,000	436,128,000
2024	1,026,562,000	276,881,000	172,783,000	449,664,000

We provide this projection of cash flows in and out of the Program for informational purposes. The Board may share these projections with its investment advisor for consideration of the growing gap between cash coming in from State and member contributions and cash being paid out to provide benefits. The chart shows this gap is expected to widen over the next ten years.

The expected benefit payments were developed using the data currently included in this valuation and on the assumption that the actuarial assumptions disclosed in Appendix C will be exactly met. Actual benefit payments will vary if members retire sooner or later than assumed and if salary increases and projected future post-retirement COLAs differ from those assumed. The projections exclude any assumption about new hires, whose experience will eventually lead to increased benefit payments. However, we do not feel this exclusion will materially impact the projections for the time period shown.

Expected contributions assume the market value of assets will earn 7.125% per year and uses the budget UAL contributions for FY 15 through FY 17. Future contributions are also projected to follow the biennial budgeting process and are shown graphically on page 5.

The projection of member contributions is similarly based on a 3.50% per year increase in covered payroll multiplied by the average aggregate member contribution rate of 7.32%.

SECTION III
LIABILITIES

In this section, we present detailed information on liabilities including:

- **Disclosure** of liabilities at June 30, 2013 and June 30, 2014;
- Statement of **changes** in these liabilities during the year; and,
- An **allocation** of liabilities to the Teachers, State Regular and State Special Plans.

Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the purpose for which the figures are ultimately used.

- **Present Value of Future Benefits (PVB):** Used for analyzing the overall financial obligations of the Program, this represents the amount of money needed today to fully pay off all future benefits, assuming participants continue to earn salary increases and accrue benefits under the current program and plan provisions.

- **Actuarial Liability:** Used for funding calculations and GASB disclosures, this liability is calculated taking the PVB above and subtracting the value of accruals that are assigned to future years on a person-by-person basis. This offset is equal to the present value of future Member Contributions and future Employer Normal Costs under an acceptable actuarial funding method. For MainePERS, this method is referred to as the **Entry Age Normal** funding method.

- **Present Value of Accrued Benefits:** Used for communicating the liabilities for benefits accrued as of the valuation date. These liabilities are also required for accounting purposes (FASB ASC Topic 960) and used to assess whether the Program can meet its current benefit commitments.

The following table discloses each of these liabilities for the current and prior years' valuations. With respect to the actuarial liability and the present value of accrued benefits, a subtraction of the appropriate value of assets yields, for each respective type, a **net surplus** or an **unfunded liability**.

The present value of future benefits is compared to the current market value of assets, the expected future value of member contributions, and the expected future value of State contributions made on behalf of current members assuming the valuation rate remains constant. The difference between the present value of future benefits (PVB) and these anticipated resources indicates a shortfall representing additional funding required on the payroll of new hires to pay for benefits of existing members. This surplus or a shortfall indicates the size of the State and Teacher Program's allocation of the stored gains or losses that remain outside of the valuation process. These gains or losses may enter the rate-making processes depending on the future investment performance.

SECTION III
LIABILITIES

Table III-1
Disclosure of Liabilities

	June 30, 2013	June 30, 2014
Present Value of Future Benefits (PVB)		
Active Participant Benefits	$ 5,850,701,234	$ 5,984,525,148
Retiree Benefits	6,745,069,235	7,092,689,887
Terminated Vested and Inactive Members	436,189,842	479,348,398
Total PVB	**$ 13,031,960,311**	**$ 13,556,563,433**
Market Value of Assets (MVA)	$ 9,091,347,964	$ 10,337,615,927
Future Employee Contributions	826,562,963	844,326,336
Future State Contributions Assuming No Further Gains or Losses or New Hires	3,093,848,172	2,761,137,318
Projected (Surplus)/Shortfall	20,201,212	(386,516,148)
Total Resources	**$ 13,031,960,311**	**$ 13,556,563,433**
Actuarial Liability		
Present Value of Future Benefits (PVB)	$ 13,031,960,311	$ 13,556,563,433
Present Value of Future Normal Costs (PVFNC)		
Employer Portion	374,747,466	392,078,314
Employee Portion	826,562,963	844,326,336
Actuarial Liability (AL = PVB – PVFNC)	**$ 11,830,649,882**	**$ 12,320,158,783**
Actuarial Value of Assets (AVA)	9,177,749,627	10,017,512,006
Net (Surplus)/Unfunded (AL – AVA)	**$ 2,652,900,255**	**$ 2,302,646,777**
Present Value of Accrued Benefits		
Present Value of Future Benefits (PVB)	$ 13,031,960,311	$ 13,556,563,433
Present Value of Future Benefit Accruals (PVFBA)	2,082,557,054	2,149,411,865
Accrued Liability (PVAB = PVB – PVFBA)	**$ 10,949,403,257**	**$ 11,407,151,568**
Market Value of Assets (MVA)	9,091,347,964	10,337,615,927
Net (Surplus)/Unfunded (PVAB – MVA)	**$ 1,858,055,293**	**$ 1,069,535,641**

SECTION III
LIABILITIES

Changes in Liabilities

Each of the liabilities disclosed in the prior table is expected to change at each subsequent valuation. The components of these changes, depending upon which liability is analyzed, can include:

- New hires since the last valuation
- Benefits accrued since the last valuation
- Program and Plan amendments changing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial assumptions
- A change in the actuarial funding method

Unfunded liabilities will change because of all of the above, and also due to changes in assets resulting from:

- State contributions being different than expected
- Investment earnings being different than expected
- A change in the method used to measure Plan assets

In each valuation, we report on those elements of change which are of particular significance, potentially affecting the long-term financial outlook of the Program. Below, we present key changes in liabilities since the last valuation.

Table III-2

	Present Value of Future Benefits	Actuarial Liability	Present Value of Accrued Benefits
Liabilities 6/30/2013	$ 13,031,960,311	$ 11,830,649,882	$ 10,949,403,257
Liabilities 6/30/2014	13,556,563,433	12,320,158,783	11,407,151,568
Liability Increase (Decrease)	$ 524,603,122	$ 489,508,901	$ 457,748,311
Change Due to:			
Program/Plan Amendment	$ 0	$ 0	$ 0
Change in Assumptions	220,511,761	167,650,573	161,610,697
Actuarial (Gain)/Loss	N/C	(17,694,276)	N/C
Benefits Accumulated and Other Sources	$ 304,091,361	$ 339,552,604	$ 296,137,614

N/C = Not calculated

SECTION III
LIABILITIES

Table III-3
Allocation of Actuarial Liability as of June 30, 2014

	Total Program	Teachers	State Regular	Special Plans
1. Actuarial Liabilities for:				
a. Active Members	$ 4,748,120,498	$3,287,434,494	$ 1,207,719,830	$ 252,966,174
b. Retired, Disabled and Beneficiary Members	7,092,689,887	4,377,447,460	2,349,879,823	365,362,604
c. Vested Deferred and Inactive Status Members	479,348,398	315,426,015	154,878,069	9,044,314
2. Total Actuarial Liability (1(a) + 1(b) + 1(c))	$12,320,158,783	$7,980,307,969	$ 3,712,477,722	$ 627,373,092
3. Actuarial Value of Assets	10,017,512,006	6,686,320,439	2,881,426,309	449,765,258
4. Unfunded Actuarial Liability (2 – 3)	$ 2,302,646,777	$1,293,987,530	$ 831,051,413	$ 177,607,834

SECTION IV
CONTRIBUTIONS

In the process of evaluating the financial condition of any pension program, the actuary analyzes the assets and liabilities to determine the level of contributions needed to achieve and maintain an appropriate funded status. Typically, the primary goal in setting contributions is to maintain, over time, a pattern of contributions that is both stable and predictable.

For the plans in this Program, the funding methodology employed is the **Entry Age Normal** funding method. Under this method, there are two components to the total contribution: the **normal cost rate**, and the **unfunded actuarial liability rate** (UAL rate). The normal cost rate is determined by the following steps. First, an individual normal cost rate is determined by taking the value, as of entry age into a plan, of each active member's projected future benefits. Second, this value is then divided by the value, also at entry age, of the member's expected future salary to produce a total normal cost rate. Finally, the total normal cost rate is reduced by the member contribution rate to produce the employer normal cost rate.

The UAL rate is that percentage of member payroll which, when applied to each year's payroll, is sufficient to amortize the original unfunded actuarial liability (UAL) over 14 years from June 30, 2014. Net losses that arise are amortized over a fixed 10-year period from the date they are first measured.

The table below presents and compares the composite State contribution rate for all plans in the Program for this valuation and the prior one.

Table IV-1
Composite State Rate

	June 30, 2013	June 30, 2014
Normal Cost Rate	3.90%	3.96%
UAL Rate	14.16%	12.10%
Total State Rate	18.06%	16.06%

The charts on the pages that follow show the contribution rate component for each plan within the State and Teacher Program and the development of the UAL amortization rate for each plan.

SECTION IV
CONTRIBUTIONS

Table IV-2
State Employer Contribution Rates

Valuation Date June 30, 2014	Normal Cost Contributions*	Unfunded Actuarial Liability Contributions*	Total Contributions*
Total State and Teachers	3.96%	12.10%	16.06%
Teacher	3.22	9.67	12.89
State Regular and Specials	5.39	16.84	22.23
State Regular	5.19	16.39	21.58
State Police (Closed)	11.64	26.13	37.77
Inland Fish & Wildlife (Closed)	12.86	27.61	40.47
Prison Employees (Closed)	5.01	16.96	21.97
Forest Rangers (Closed)	4.11	16.17	20.28
25 & Out Plan	5.00	17.41	22.41
1998 Special Plan	7.22	20.27	27.49

*As a Percent of Payroll

The rates developed above are for valuation purposes only. Actual budgeted rates are set based on the process described in the Board Summary section.

SECTION IV
CONTRIBUTIONS

Table IV-3
Derivation of Unfunded Actuarial Liability Rates

Valuation Date June 30, 2014	Teachers	State and Specials	Total Program
1. Actuarial Accrued Liability	$ 7,980,307,969	$ 4,339,850,814	$12,320,158,783
2. Actuarial Value of Assets	6,686,320,439	3,331,191,567	10,017,512,006
3. Unfunded Actuarial Liability	$ 1,293,987,530	$ 1,008,659,247	$ 2,302,646,777
4. Remaining Balances of Prior Amortization Bases			
a. Original UAL Amount	$ 1,605,547,807	$ 924,517,654	$ 2,530,065,461
b. 2012 Loss Base	27,882,326	27,882,326	55,764,652
c. 2013 (Gain)/Loss Base	(125,599,019)	141,190,476	15,591,457
d. 2014 Gain Base	(213,843,584)	(84,931,209)	(298,774,793)
e. Sum of the Bases	$ 1,293,987,530	$ 1,008,659,247	$ 2,302,646,777
5. UAL Amortizations			
a. Original UAL Amount 14 Years	$ 147,043,291	$ 84,671,486	$ 231,714,777
b. 2012 Loss Base 8 Years	4,056,589	4,056,589	8,113,178
c. 2013 (Gain)/Loss Base 9 Years	(16,511,135)	18,560,774	2,049,639
d. 2014 Gain Base 10 Years	(25,715,676)	(10,213,369)	(35,929,045)
e. Sum of Amortization Payments	$ 108,873,069	$ 97,075,480	$ 205,948,549
6. Covered Payroll	$ 1,125,915,449	$ 576,394,889	$ 1,702,310,338
7. UAL Amortization Rate			
a. Original UAL Amount 14 Years	13.06%	14.69%	13.61%
b. 2012 Loss Base 8 Years	0.36%	0.70%	0.48%
c. 2013 (Gain)/Loss Base 9 Years	(1.47%)	3.22%	0.12%
d. 2014 Gain Base 10 Years	(2.28%)	(1.77%)	(2.11%)
e. Sum of Amortization Rates	9.67%	16.84%	12.10%

SECTION IV
CONTRIBUTIONS

Table IV-4
Allocation of Unfunded Actuarial Liability Rates within State & Special Plans

Valuation Date June 30, 2014	State and Specials	State Regular	State Police (Closed)	Inland F&W (Closed)	Prison Employees (Closed)	Forest Rangers (Closed)	25 & Out Plan	1998 Special Plan
1. Employer Normal Cost Rate	5.39%	5.19%	11.64%	12.86%	5.01%	4.11%	5.00%	7.22%
2. Member Contribution Rate	7.42%	7.28%	8.24%	8.14%	7.89%	8.19%	8.24%	8.20%
3. Total Normal Cost Rate	12.81%	12.47%	19.88%	21.00%	12.90%	12.30%	13.24%	15.42%
4. UAL Amortization Rates – Allocated by Line 3.								
a. Original UAL Amount	14.69%	14.30%	22.80%	24.08%	14.79%	14.11%	15.18%	17.68%
b. 2012 Loss Base	0.70%	0.68%	1.09%	1.15%	0.70%	0.67%	0.72%	0.84%
c. 2013 Loss Base	3.22%	3.13%	5.00%	5.28%	3.24%	3.09%	3.33%	3.88%
d. 2014 Gain Base	(1.77%)	(1.72%)	(2.75%)	(2.90%)	(1.70%)	(1.70%)	(1.83%)	(2.13%)
e. Sum of Amortization Rates	16.84%	16.39%	26.13%	27.61%	16.96%	16.17%	17.41%	20.27%

SECTION V
ACCOUNTING STATEMENT INFORMATION

ASC Topic 960 of the Financial Accounting Standards Board (FASB) requires the disclosure of certain information regarding the funded status of a retirement program. The Governmental Accounting Standards Board (GASB) establishes standards for disclosure of pension information by public employee retirement systems (PERS) and governmental employers in notes to financial statements and supplementary information.

The FASB ASC Topic 960 disclosures provide a quasi “snap shot” view of how assets compare to liabilities if contributions were to stop and accrued benefit claims had to be satisfied. However, due to potential legal requirements and the possibility that alternative interest rates would have to be used to determine the liabilities, these values may not be a good indication of the amount of money it would take to buy the benefits for all members if all plans in the Program were to terminate. FASB ASC Topic 960 specifies that a comparison of the present value of accrued (accumulate) benefits with the market value of the assets as of the valuation date must be provided. The relevant amounts as of June 30, 2013 and June 30, 2014 are exhibited in Table V-1, along with a reconciliation between the two dates.

Prior to the current plan year, GASB Statement No. 25 established standards for disclosure of pension information by PERS and governmental employers in notes to financial statements and supplementary information.

GASB No. 25 was replaced by GASB No. 67 effective June 30, 2014 for Plan disclosures. We have prepared the following exhibits:

- Table V-1: Accrued Benefits Information
- Table V-2: Schedule of Changes in Net Pension Liability and Related Ratios
- Table V-3: Sensitivity of Net Pension Liability to Changes in Discount Rate
- Table V-4: Schedule of Employer Contributions
- Table V-5: Solvency Test

While GASB No. 25 is no longer applicable for the Plan disclosures, the requirements of GASB Statement No. 27 currently remain in effect for employers. For employers with June 30 fiscal years, GASB No. 68 will replace GASB No. 27 effective for the fiscal year ending June 30, 2015.

Tables V-4 and V-5 are exhibits required for the System’s Comprehensive Annual Financial Report. Table V-4 is a history of gains and losses in Accrued Liability, and Table V-5 is the Solvency Test, which shows the portion of Accrued Liability covered by Assets.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-1
Accrued Benefits Information

	June 30, 2013	June 30, 2014
FASB ASC Topic 960 Basis		
1. Present Value of Benefits Accrued to Date		
a. Members Currently Receiving Payments	$ 6,745,069,235	$ 7,092,689,887
b. Vested Terminated	436,189,842	479,348,398
c. Active Members	3,768,144,180	3,835,113,283
d. Total PVAB	$ 10,949,403,257	$ 11,407,151,568
2. Assets at Market Value	9,091,347,964	10,337,615,927
3. Unfunded Present Value of Accrued Benefits, But Not Less Than Zero	$ 1,858,055,293	$ 1,069,535,641
4. Ratio of Assets to Value of Benefits (2)/(1)(d)	83.03%	90.62%
Change in Present Value of Benefits Accrued to Date		
Increase (Decrease) During Years Attributable to:		
Passage of Time	$ 767,534,560	
Benefits Paid – FY 2014	(689,053,212)	
Assumption Change	161,610,697	
Plan Changes	0	
Benefits Accrued, Other Gains/Losses	217,656,266	
Net Increase (Decrease)	$ 457,748,311	

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-2 below shows the changes in the Total Pension Liability, the Plan Fiduciary Net Position, (i.e., fair value of Plan assets), and the Net Pension Liability during the Measurement Year.

There were no changes in benefits during the year, but the schedule does show the impact of reducing the investment return assumption.

Total contributions and investment income exceeded the service cost, interest cost, and administrative expenses, resulting in a decrease in the Net Pension Liability (NPL) of approximately $757 million. The NPL remaining as of June 30, 2014, is approximately $1,982 million.

Table V-2
Schedule of Changes in Net Pension Liability and Related Ratios

	Teachers	State	Total State and Teacher
Total Pension Liability			
Service Cost	$ 115,607,074	$ 70,769,680	$ 186,376,754
Interest (includes interest on service cost)	543,587,418	298,641,644	842,229,062
Changes of Benefit Terms	0	0	0
Differences Between Actual and Expected Experience	(5,118,990)	(12,575,286)	(17,694,276)
Changes of Assumptions	111,601,780	56,048,793	167,650,573
Benefit Payments, Including Refunds of Member Contributions	(415,820,352)	(273,232,860)	(689,053,212)
Net Change in Total Pension Liability	**349,856,930**	**139,651,971**	**489,508,901**
Beginning Total Pension Liability	**7,630,451,039**	**4,200,198,843**	**11,830,649,882**
Ending Total Pension Liability	**$ 7,980,307,969**	**$ 4,339,850,814**	**$ 12,320,158,783**
Plan Fiduciary Net Position			
Employer Contributions	$ 183,293,028	$ 121,035,358	$ 304,328,386
Member Contributions	86,542,050	34,491,102	121,033,152
Net Investment Income	1,010,313,982	507,113,006	1,517,426,988
Benefit Payments, Including Refunds of Member Contributions	(415,820,352)	(273,232,860)	(689,053,212)
Administrative Expense	(4,951,914)	(2,515,437)	(7,467,351)
Net Change in Plan Fiduciary Net Position	$ 859,376,794	$ 386,891,169	$ 1,246,267,963
Beginning Plan Fiduciary Net Position	**6,040,601,227**	**3,050,746,737**	**9,091,347,964**
Ending Plan Fiduciary Net Position	**$ 6,899,978,021**	**$ 3,437,637,906**	**$ 10,337,615,927**
Ending Net Pension Liability	**$ 1,080,329,948**	**$ 902,212,908**	**$ 1,982,542,856**
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	86.46%	79.21%	83.91%
Covered Employee Payroll	$ 1,115,637,695	$ 561,219,599	$ 1,676,857,294
Net Pension Liability as a Percentage of Covered Payroll	96.84%	160.76%	118.23%

SECTION V
ACCOUNTING STATEMENT INFORMATION

Changes in the discount rate affect the measurement of the Total Pension Liability (TPL). Lower discount rates produce a higher TPL, and higher discount rates produce a lower TPL. Because the discount rate does not affect the measurement of assets, the percentage change in the NPL can be very significant for relatively small change in the discount rate. Table V-3 below shows the sensitivity of the NPL to the discount rate.

Table V-3
Sensitivity of Net Pension Liability to Changes in Discount Rate

	1% Decrease 6.125%	Discount Rate 7.125%	1% Increase 8.125%
Teachers			
Total Pension Liability	$ 8,969,256,327	$ 7,980,307,969	$ 7,152,784,141
Plan Fiduciary Net Position	6,899,978,021	6,899,978,021	6,899,978,021
Net Pension Liability	$ 2,069,278,306	$ 1,080,329,948	$ 252,806,120
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	76.9%	86.5%	96.5%
State Employees			
Total Pension Liability	$ 4,831,636,729	$ 4,339,850,814	$ 3,923,547,145
Plan Fiduciary Net Position	3,437,637,906	3,437,637,906	3,437,637,906
Net Pension Liability	$ 1,393,998,823	$ 902,212,908	$ 485,909,239
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	71.1%	79.2%	87.6%
Total State and Teacher Plan			
Total Pension Liability	$ 13,800,893,056	$ 12,320,158,783	$ 11,076,331,286
Plan Fiduciary Net Position	10,337,615,927	10,337,615,927	10,337,615,927
Net Pension Liability	$ 3,463,277,129	$ 1,982,542,856	$ 738,715,359
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	74.9%	83.9%	93.3%

A one percent decrease in the discount rate increases the TPL by approximately 12% and increases the NPL by approximately 75%. A one percent increase in the discount rate decreases the TPL by approximately 10% and decreases the NPL by approximately 63%.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-4
Schedule of Employer Contributions
Last 10 Fiscal Years
Exhibit Will Build to Reach 10 Years Starting with 2014

	Teachers	State	Total State and Teacher
Actuarially Determined Contribution	$ 183,293,028	$ 121,035,358	$ 304,328,386
Contributions in Relation to the Actuarially Determined Contribution	183,293,028	121,035,358	304,328,386
Contribution Deficiency/(Excess)	$ 0	$ 0	$ 0
Covered-Employee Payroll	$ 1,115,637,695	$ 561,219,599	$ 1,676,857,294
Contributions as a Percentage of Covered-Employee Payroll	16.43%	21.57%	18.15%

Notes to Schedule

Valuation Date: 6/30/2014

Timing: Actuarially determined contribution rates are calculated based on a 2012 actuarial valuation developed as a roll-forward of the 2011 actuarial valuation, adjusted for expected experience and any assumption or methodology changes during FYE 2012 using actual assets as of June 30, 2012.

Key Methods and Assumptions Used to Determine Contribution Rates

Actuarial Cost Method: Entry Age Normal

Asset Valuation Method: 3-year smoothed market

Amortization Method: Level percent of payroll, closed 16-year amortization of the 2012 UAL

Discount Rate: 7.25%

Amortization Growth Rate: 3.50%

Price Inflation 3.50%

Salary Increases: 3.50% plus merit component based on employee's years of service

Mortality: Sex distinct RP-2000 Combined Mortality projected to 2015 using Scale AA for State Employees; Teachers use the same table with a 2-year set back.

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2014 can be found in the June 30, 2012 actuarial valuation report.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-5
ANALYSIS OF FINANCIAL EXPERIENCE
Gain and Loss in Accrued Liability During Years Ended June 30
Resulting from Differences Between Assumed Experience and Actual Experience

	Gain (or Loss) for Year Ended June 30, 2009	Gain (or Loss) for Year Ended June 30, 2010	Gain (or Loss) for Year Ended June 30, 2011	Gain (or Loss) for Year Ended June 30, 2012	Gain (or Loss) for Year Ended June 30, 2013	Gain (or Loss) for Year Ended June 30, 2014
Type of Activity						
Investment Income	$(843,411,410)	$(534,019,417)	$ (29,110,015)	$ (220,050,211)	$ (52,030,633)	$ 639,521,136
Combined Liability Experience	(91,293,558)	248,398,931	(91,222,335)	57,603,161	21,191,240	17,694,276
Gain (or Loss) During Year from Financial Experience	$(934,704,968)	$(285,620,486)	$(120,332,350)	$ (162,447,050)	$ (30,839,393)	$ 657,215,412
Non-Recurring Items	0	0	1,822,058,877	15,629,192	50,659,935	(167,650,573)
Composite Gain (or Loss) During Year	**$ (934,704,968)**	**$ (285,620,486)**	**$(1,701,726,527)**	**$ (146,817,858)**	**$ 19,820,542**	**$ 489,564,839**

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-6
SOLVENCY TEST
Aggregate Actuarial Accrued Liabilities For

Valuation Date June 30,	(1) Active Member Contributions	(2) Retirees, Vested Terms, Beneficiaries	(3) Active Members (Employer Financed Portion)	Reported Assets	Portion of Actuarial Liabilities Covered by Reported Assets (1)	(2)	(3)
2014	$2,315,075,905	$ 7,572,038,285	$ 2,443,044,593	$10,017,512,006	100%	100%	5%
2013	2,290,505,939	6,656,860,191	2,625,281,496	8,880,730,120	100%	99%	0%
2012	2,271,164,594	6,656,860,191	2,625,281,496	8,880,730,120	100%	99%	0%
2011	2,229,984,968	6,453,384,730	2,598,295,489	8,736,885,121	100%	100%	2%
2010	2,117,903,830	6,856,828,427	3,642,411,748	8,313,459,810	100%	90%	0%
2009	2,002,784,768	6,622,143,609	3,696,290,955	8,325,951,236	100%	95%	0%
2008	1,898,148,565	6,209,005,616	3,560,878,330	8,631,557,629	100%	100%	15%
2007	1,789,362,929	5,850,882,771	3,517,524,438	8,245,520,019	100%	100%	17%
2006	1,645,241,719	5,367,785,679	3,534,271,796	7,504,219,546	100%	100%	14%

APPENDIX A
MEMBERSHIP INFORMATION

Active Member Data as of June 30, 2014	
Teachers	
Count	26,763
Average Current Age	46.7
Average Service	13.5
Average Valuation Pay	$ 42,070
State Employee Regular Plan	
Count	11,134
Average Current Age	48.5
Average Service	12.6
Average Valuation Pay	$ 43,840
Forest Rangers Special Plan (Closed Plan)	
Count	5
Average Current Age	55.9
Average Service	35.0
Average Valuation Pay	$ 60,420
Inland Fisheries & Wildlife Officers Special Plan (Closed Plan)	
Count	3
Average Current Age	58.4
Average Service	33.1
Average Valuation Pay	$ 57,611
Prison Employees Special Plan (Closed Plan)	
Count	1
Average Current Age	50.9
Average Service	30.5
Average Valuation Pay	$ 61,116

APPENDIX A
MEMBERSHIP INFORMATION

Active Member Data as of June 30, 2014	
State Police Special Plan (Closed Plan)	
Count	6
Average Current Age	57.5
Average Service	32.4
Average Valuation Pay	$ 84,401
State Employee Special 25 & Out Plan	
Count	461
Average Current Age	40.5
Average Service	13.7
Average Valuation Pay	$ 62,822
State Employee 1998 Special Plan	
Count	1,296
Average Current Age	44.5
Average Service	11.6
Average Valuation Pay	$ 44,963
State Employee Totals (Excludes Teachers)	
Count	12,906
Average Current Age	47.8
Average Service	12.6
Average Valuation Pay	$ 44,661

APPENDIX A
MEMBERSHIP INFORMATION

Non-Active Member Data as of June 30, 2014
Teachers

	Count	Total Annual Benefit	Average Annual Benefit
Retired	14,313	$ 350,595,655	$ 24,459
Retired – Concurrent Beneficiaries	1,457	8,120,645	5,574
Disabilities/1122	0	0	0
Disabilities/3 and 3A	704	18,372,806	26,098
Beneficiaries	1,291	20,618,376	15,971
Pre-Retirement Death Benefits	280	1,559,952	5,571
Terminated Vested	4,662	31,433,631	6,743
Inactive Due Refund	30,682		

Non-Active Member Data as of June 30, 2014
State Regular

	Count	Total Annual Benefit	Average Annual Benefit
Retired	8,864	$ 176,009,822	$ 19,857
Retired – Concurrent Beneficiaries	1,083	5,419,530	5,004
Disabilities/1122	4	67,849	16,962
Disabilities/3 and 3A	911	20,084,949	22,047
Beneficiaries	1,818	23,151,004	12,734
Pre-Retirement Death Benefits	349	1,949,665	5,586
Terminated Vested	2,549	17,018,034	6,676
Inactive Due Refund	5,242		

APPENDIX A
MEMBERSHIP INFORMATION

Non-Active Member Data as of June 30, 2014
Special Plans

	Count	Total Annual Benefit	Average Annual Benefit
Retired	862	$ 26,253,061	$ 30,456
Retired – Concurrent Beneficiaries	151	889,596	5,891
Disabilities/1122	1	18,293	18,293
Disabilities/3 and 3A	79	2,108,388	26,688
Beneficiaries	215	3,330,644	15,491
Pre-Retirement Death Benefits	9	45,037	5,004
Terminated Vested	236	1,591,605	6,744
Inactive Due Refund	687		

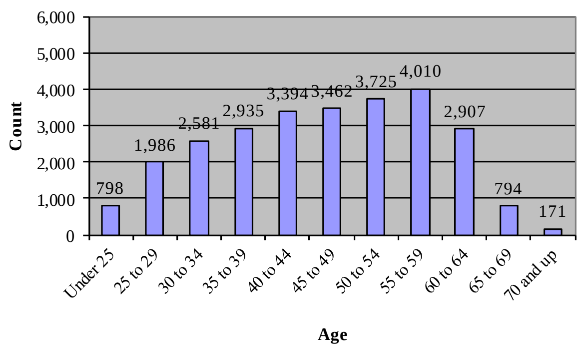
APPENDIX A
MEMBERSHIP INFORMATION

Distribution of Active Members
As of June 30, 2014

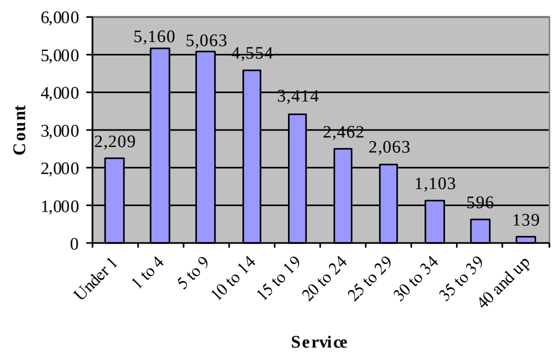
Teachers

	Years of Service										
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	Totals
Under 25	423	374	1	0	0	0	0	0	0	0	798
25 to 29	346	1,220	420		0	0	0	0	0	0	1,986
30 to 34	233	724	1,220	404		0	0	0	0	0	2,581
35 to 39	253	645	743	987	307		0	0	0	0	2,935
40 to 44	263	660	696	706	838	229	2	0	0	0	3,394
45 to 49	208	529	679	643	530	657	215		1	0	3,462
50 to 54	188	420	508	674	561	456	700	217	1	0	3,725
55 to 59	118	291	439	649	611	551	549	570	231	1	4,010
60 to 64	87	192	246	391	439	452	456	242	320	82	2,907
65 to 69	60	74	87	90	113	99	127	62	37	45	794
70 and up	30	31	24	10	15	18	14	12	6	11	171
Total	2,209	5,160	5,063	4,554	3,414	2,462	2,063	1,103	596	139	26,763

Age Distribution



Service Distribution



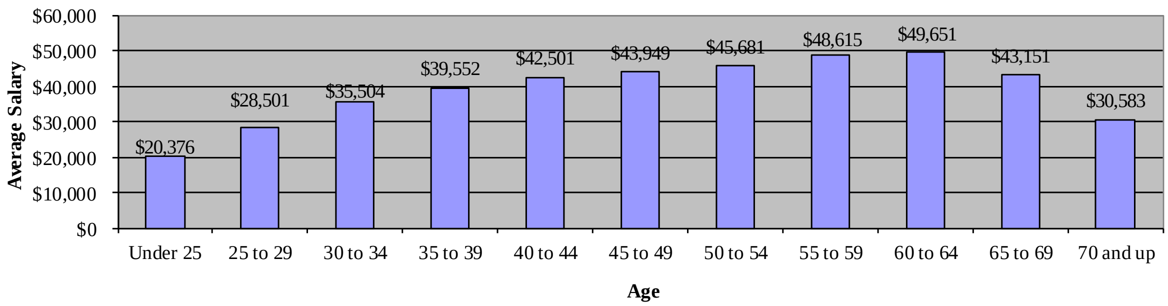
APPENDIX A
MEMBERSHIP INFORMATION

Distribution of Active Members
As of June 30, 2014

Teachers

	Average Salary Years of Service										
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	Average
Under 25	$ 16,143	$ 25,114	$ 38,749	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 20,376
25 to 29	18,312	28,886	35,775	-	0	0	0	0	0	0	28,501
30 to 34	21,074	30,110	38,421	44,681	0	0	0	0	0	0	35,504
35 to 39	20,431	28,818	39,539	47,444	52,524	2	0	0	0	0	39,552
40 to 44	20,823	27,335	38,074	47,969	55,235	60,957	60,362	0	0	0	42,501
45 to 49	17,886	24,341	35,903	44,615	54,770	61,482	60,167	0	130,000	0	43,949
50 to 54	18,603	25,084	31,688	41,359	50,020	57,918	62,122	65,277	32,563	0	45,681
55 to 59	23,404	25,441	32,433	39,833	47,505	54,755	60,698	64,760	65,813	57,372	48,615
60 to 64	17,060	24,023	32,685	40,480	45,314	54,774	59,479	65,339	66,292	67,941	49,651
65 to 69	19,953	11,313	31,821	41,650	42,734	49,639	52,494	60,644	67,171	67,891	43,151
70 and up	13,911	9,508	17,888	28,572	39,231	45,950	51,055	53,374	45,948	68,738	30,583
Average	$ 18,922	$ 27,058	$ 36,296	$ 44,142	$ 50,919	$ 57,446	$ 60,285	$ 64,633	$ 66,006	$ 67,912	$ 42,070

Average Salary Distribution

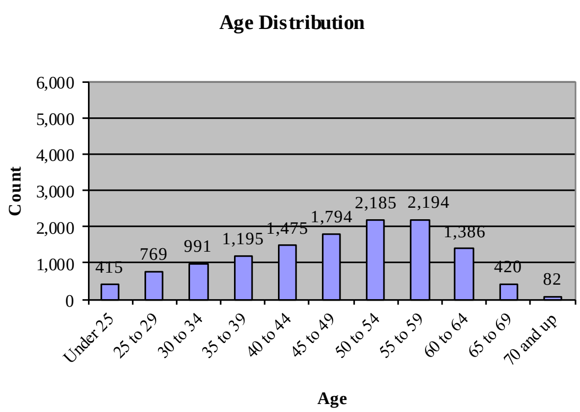


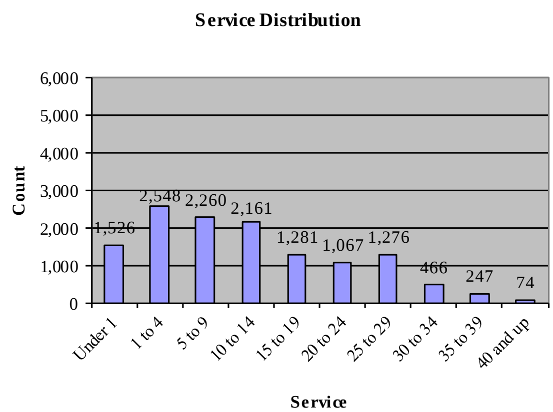
APPENDIX A
MEMBERSHIP INFORMATION

Distribution of Active Members
As of June 30, 2014

State

	Years of Service										
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	Totals
Under 25	313	100	2	0	0	0	0	0	0	0	415
25 to 29	242	417	107	3	0	0	0	0	0	0	769
30 to 34	179	364	328	119	1	0	0	0	0	0	991
35 to 39	138	283	344	325	105		0	0	0	0	1,195
40 to 44	153	306	286	331	272	108	19	0	0	0	1,475
45 to 49	152	285	314	334	239	242	225	3	0	0	1,794
50 to 54	133	304	295	373	230	271	424	141	14	0	2,185
55 to 59	126	250	318	350	240	241	347	182	132	8	2,194
60 to 64	66	179	185	238	148	153	201	101	75	40	1,386
65 to 69	21	49	71	78	38	47	46	29	21	20	420
70 and up	3	11	10	10	8	5	14	10	5	6	82
Total	1,526	2,548	2,260	2,161	1,281	1,067	1,276	466	247	74	12,906





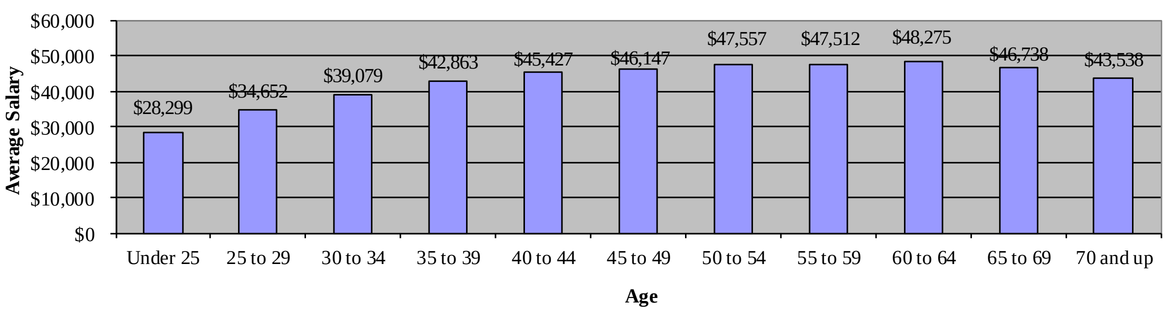
APPENDIX A
MEMBERSHIP INFORMATION

Distribution of Active Members
As of June 30, 2014

State

	Average Salary Years of Service										
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	Average
Under 25	$ 27,710	$ 30,024	$ 34,413	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 28,299
25 to 29	31,721	35,765	36,851	38,024	0	0	0	0	0	0	34,652
30 to 34	33,987	37,237	41,612	45,402	37,631	0	0	0	0	0	39,079
35 to 39	34,330	38,059	42,106	48,057	53,424	-	0	0	0	0	42,863
40 to 44	34,953	38,509	41,691	48,240	55,311	54,803	53,605	0	0	0	45,427
45 to 49	34,960	36,914	41,560	47,926	52,514	55,642	52,180	46,503	0	0	46,147
50 to 54	34,990	38,868	41,641	48,500	50,914	53,459	53,612	52,336	54,263	0	47,557
55 to 59	35,087	36,774	43,911	44,556	49,975	52,722	52,829	57,284	54,452	52,967	47,512
60 to 64	38,697	38,429	42,959	46,664	51,032	51,404	52,770	58,960	57,574	53,151	48,275
65 to 69	30,298	33,209	38,486	46,231	51,917	52,341	54,603	59,741	57,026	57,655	46,738
70 and up	26,187	25,346	28,330	39,416	38,822	57,997	52,246	50,986	65,208	61,231	43,538
Average	$ 32,881	$ 37,025	$ 41,739	$ 47,155	$ 52,133	$ 53,601	$ 53,034	$ 56,098	$ 55,826	$ 55,004	$ 44,661

Average Salary Distribution

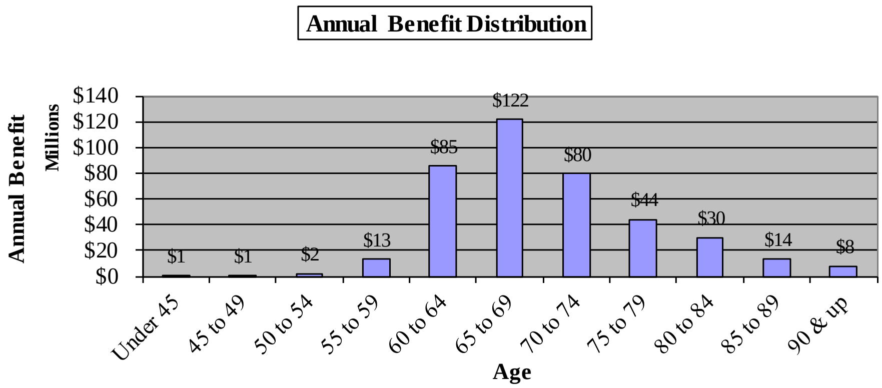


APPENDIX A
MEMBERSHIP INFORMATION

Distribution of Retirees, Disabled Members, Beneficiaries, and Survivors
As of June 30, 2014

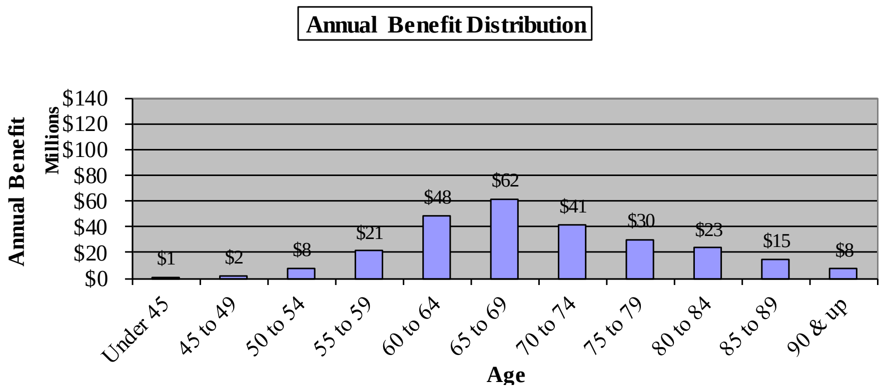
Teachers

Age	Count	Annual Benefit
Under 45	143	$ 808,360
45 to 49	62	631,713
50 to 54	121	2,295,702
55 to 59	543	12,976,190
60 to 64	3,294	85,434,010
65 to 69	5,106	121,676,115
70 to 74	3,613	79,532,518
75 to 79	2,185	44,320,894
80 to 84	1,589	29,966,404
85 to 89	850	13,624,510
90 & up	539	8,001,017
Total	18,045	$ 399,267,433



State

Age	Count	Annual Benefit
Under 45	151	$ 1,136,934
45 to 49	146	1,916,086
50 to 54	399	7,672,987
55 to 59	1,048	21,001,955
60 to 64	2,344	48,393,757
65 to 69	3,128	61,647,904
70 to 74	2,269	41,430,192
75 to 79	1,775	30,289,269
80 to 84	1,508	23,381,615
85 to 89	997	14,917,205
90 & up	581	7,539,935
Total	14,346	$ 259,327,838



APPENDIX B
SUMMARY OF PROGRAM AND PLAN PROVISIONS

1. Membership:

Membership is a condition of employment for state employees and teachers, and optional for elected and appointed officials.

Membership ceases on the earlier of withdrawal of contributions, retirement, or death.

2. Member Contributions:

Except as otherwise described below, members are required to contribute 7.65% of earnable compensation.

<u>Contribution Requirements for Special State Employee Groups</u>

State police and inland fisheries and wildlife officers employed before 9/1/84 – 8.65% of earnable compensation for 20 years; 7.65% thereafter.

Forest rangers and state prison employees employed before 9/1/84 – 8.65% of earnable compensation until eligible for retirement; 7.65% thereafter.

1998 Special Plan employees which include state prison employees, airplane pilots, forest rangers, defense, veterans and emergency management firefighters employed at Bangor International Airport, corrections employees, Baxter State Park Authority rangers, fire marshals, investigators and inspectors, oil and hazardous materials emergency response workers and capitol security officers – 8.65% of earnable compensation for 25 years; 7.65% thereafter.

State police employed on or after 9/16/84 and special agent investigators hired before 6/21/82 – 8.65% of earnable compensation for 25 years; 7.65% thereafter.

Inland fisheries and wildlife officers and marine resources officers employed on or after 9/1/84 – 8.65% of earnable compensation for 25 years; 7.65% thereafter.

3. Average Final Compensation:

For purposes of determining benefits payable, average final compensation is the average annual rate of earnable compensation for the three years of creditable service (not necessarily consecutive) which produce the highest such average.

For compensation paid on or after July 1, 1993, increases in earnable compensation of greater than 5% per year or 10% over the highest three years are not included in calculating average final compensation unless the employer pays the cost of including such compensation. Earnable compensation does not include sick and vacation pay for those members who had less than ten years of service at July 1, 1993. For members for whom sick and vacation pay is includible in earnable compensation, these payments are included in applying the caps described above.

4. Creditable Service:

Creditable service includes service while a member, certain service prior to the establishment of the Program, purchased military service credit, other purchased service credit, and service while receiving disability benefits under the Program.

5. Service Retirement Benefits:

A. Regular Plan (State Employees and Teachers)

i. Provisions for Members with at Least Ten Years of Creditable Service on July 1, 1993

Normal Retirement Age: 60

Eligibility for Members in Active Service and Inactive Members: 25 years of creditable service.

Eligibility Alternative for Members in Active Service: At least one year of creditable service immediately before retirement and at least normal retirement age.

Eligibility for Members not in Active Service at Retirement, and not in Active Service on or After October 1, 1999: At least ten years of creditable service and at least normal retirement age.

Eligibility for Members not in Active Service at Retirement, but in Active Service on or After October 1, 1999: At least five years of creditable service and at least normal retirement age.

Benefit: 1/50 of average final compensation multiplied by years of membership service and up to 25 years of prior service, reduced by approximately 2¼% for each year retirement age is less than age 60.

Form of Payment: Life annuity.

ii. Provisions for Members with Less Than Ten Years of Creditable Service on July 1, 1993

Normal Retirement Age: 62

APPENDIX B
SUMMARY OF PROGRAM AND PLAN PROVISIONS

Eligibility for Members in Active Service and Inactive Members: 25 years of creditable service.

Eligibility Alternative for Members in Active Service: At least one year of creditable service immediately before retirement age and at least normal retirement age.

Eligibility for Members not in Active Service at Retirement, and not in Active Service on or After October 1, 1999: At least ten years of creditable service and at least normal retirement age.

Eligibility for Members not in Active Service at Retirement, but in Active Service on or After October 1, 1999: At least five years of creditable service and at least normal retirement age.

Benefit: 1/50 of average final compensation multiplied by years of membership service and up to 25 years of prior service, reduced by 6% for each year retirement age is less than age 62.

Form of Payment: Life annuity.

iii. Provisions for Members with Less Than Five Years of Creditable Service on July 1, 2011

Normal Retirement Age: 65

Eligibility for Members in Active Service and Inactive Members: 25 years of creditable service.

Eligibility Alternative for Members in Active Service: At least one year of creditable service immediately before retirement age and at least normal retirement age.

Eligibility for Members not in Active Service at Retirement, and not in Active Service on or After October 1, 1999: At least ten years of creditable service and at least normal retirement age.

Eligibility for Members not in Active Service at Retirement, but in Active Service on or After October 1, 1999: At least five years of creditable service and at least normal retirement age.

Benefit: 1/50 of average final compensation multiplied by years of membership service and up to 25 years of prior service, reduced by 6% for each year retirement age is less than age 65.

Form of Payment: Life annuity.

APPENDIX B
SUMMARY OF PROGRAM AND PLAN PROVISIONS

B. *Special Plans (State Employees)*

i. State Police Employed Before 9/16/84 and Inland Fisheries and Wildlife Officers Employed Before 9/1/84

Eligibility: 20 years of creditable service in named positions.

Benefit: one-half of average final compensation plus 2% for each year of service in excess of 20. If greater, the pro-rated portion of the benefit for service before July 1, 1976 is based on annual pay instead of average final pay.

Form of Payment: 50% joint and survivor annuity, or life annuity.

ii. Forest Rangers Employed Before 9/1/84

Eligibility: Age 50 with 25 years of creditable service as a forest ranger.

Benefit: one-half of average final compensation plus 2% for each year of service earned after qualification for retirement. If greater, the pro-rated portion of the benefit for service before July 1, 1976 is based on annual pay instead of average final pay.

Form of Payment: Life annuity.

iii. Liquor Inspectors Employed Before 9/1/84

Eligibility: Age 55 and 25 years of creditable service as a liquor inspector.

Benefit: one-half of average final compensation plus 2% for each year of service earned after qualification for retirement. If greater, the pro-rated portion of the benefit for service before July 1, 1976 is based on annual pay instead of average final pay.

Form of Payment: Life annuity.

iv. State Prison Employees Employed Before 9/1/84

Eligibility: Age 50 and 20 years of creditable service as a prison employee.

Benefit: one-half of average final compensation plus 2% for each year of service earned after qualification for retirement.

Form of Payment: Life annuity.

APPENDIX B
SUMMARY OF PROGRAM AND PLAN PROVISIONS

v. 1998 Special Plan

1998 Entrants: State prison employees, airline pilots, forest rangers and liquor inspectors, employed after 8/31/84; defense, veterans and emergency management firefighters employed on and after 7/1/98.

2000 Entrants: Baxter State Park Authority rangers, correctional employees and state fire marshals employed on or after 1/1/2000.

2002 Entrants: Capitol security officers and oil and hazardous materials emergency response workers.

Eligibility: Ten years of creditable service under the 1998 Special Plan in one or a combination of the covered capacities and the attainment of age 55 – OR – 25 years of creditable service in one or a combination of the covered capacities.

Benefit: For service prior to coverage in the 1998 Special Plan, 1/50 of average final compensation multiplied by years of service reduced for retirement before age 60 or 62, except oil and hazardous materials emergency response workers and certain prison employee benefits are reduced for retirement before age 55.

-AND-

For service under the 1998 Special Plan, 1/50 of average final compensation multiplied by years of service reduced for retirement before age 55.

Form of Payment: Life annuity.

vi. 25 & Out Plan

1998 Entrants: State police employed on or after 9/16/84 and special agent investigators hired before 6/21/82.

2002 Entrants: Inland fisheries and wildlife officers and marine resources officers employed on and after 8/31/84.

Eligibility: 25 years of creditable service in named positions.

Benefit: 1/50 of average final compensation multiplied by years of service.

Form of Payment: Life annuity.

Members in Special Plans who fail to qualify for special plan benefits can receive regular plan benefits when and as eligible and qualified.

APPENDIX B
SUMMARY OF PROGRAM AND PLAN PROVISIONS

6. Disability Retirement Benefits Other Than No Age Benefits (See Item 7):

Eligibility: Disabled as defined in the MainePERS statutes prior to normal retirement age; employed prior to October 16, 1992 and did not elect No Age Disability Benefits.

Benefit: 66⅔% of average final compensation, reduced by employment earnings over the specified statutory limit, and to the extent that the benefit, in combination with Worker's Compensation and Social Security, exceeds 80% of average final compensation.

Form of Payment: Payment begins on termination of service and ceases on cessation of disability or after five or two years, depending on disability plan, unless the member is unable to engage in any substantially gainful activity, in which case payments cease on the earlier of ten years following normal retirement age or on the date the service retirement benefit equals or exceeds the disability benefit.

Conversion to Service Retirement: During the period of disability, average final compensation is increased with cost-of-living adjustments and service is credited. On the date when service benefits reach a level of 66⅔% of average final compensation or ten years after the normal retirement date, if earlier, the disability benefit converts to a service retirement benefit based on service and average final compensation at that point.

7. No Age Disability Retirement Benefits

Eligibility: Disabled as defined in the MainePERS statutes; employed on or after October 16, 1992 or employed prior to October 16, 1992 and elected the provisions of No Age Disability.

Benefit: 59% of average final compensation, reduced by employment earnings over the specified statutory limit, and to the extent that the benefit, in combination with Worker's Compensation and Social Security, exceeds 80% of average final compensation.

Form of Payment: Payment begins on termination of service and ceases on cessation of disability or after five or two years, depending on disability plan, unless the member is unable to engage in any substantially gainful activity; in which case payments cease on the date the service retirement benefit equals or exceeds the disability benefit.

Conversion to Service Retirement: During the period of disability, average final compensation is increased with cost-of-living adjustments and service is credited. On the date when service benefits reach a level of 59% of average final compensation, the disability benefit converts to a service retirement benefit based on service and average final compensation at that point.

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SUMMARY OF PROGRAM AND PLAN PROVISIONS

8. Pre-Retirement Ordinary Death Benefits:

Eligibility: Death while active, inactive eligible to retire, or disabled.

Benefit: Designated beneficiary, spouse, child(ren), or parents entitled to benefit calculated as if deceased member had retired under Option 2 (see item 12); however, beneficiary may elect survivor benefits payable to a surviving spouse, dependent child(ren), parent, or other designated beneficiaries in monthly amounts varying by status of beneficiary and number of eligible survivors. Otherwise accumulated contributions with interest are payable to designated beneficiary, spouse, child(ren), older parents, or estate.

9. Pre-Retirement Accidental Death Benefits:

Eligibility: Death while active or disabled resulting from an injury received in the line of duty.

- If the member is survived by a spouse who has the care of dependent child(ren) of the member, the surviving spouse shall receive an annual sum equal to the member's average final compensation. When there is no longer any dependent child, the surviving spouse shall receive 2/3 of member's average final compensation until death.

- If the member is survived by a spouse who does not have the care of the member's dependent child(ren), the surviving spouse and dependent child(ren) shall share equally an annual sum equal to the member's average final compensation. When there is no longer any dependent child, the surviving spouse shall receive 2/3 of member's average final compensation until death.

- If the member leaves no spouse, the dependent child(ren) shall be paid an annual sum equal to the member's average final compensation. Benefits will cease when the last dependent child no longer meets the definition of "dependent child".

10. Refund of Contributions:

Eligibility: Termination of service without retirement or death.
Benefit: Member's accumulated contributions with interest.

11. Cost-of-Living Adjustments:

All service and disability retirement and survivor benefits are adjusted each year that there is a percentage change in the Consumer Price Index, based on the Index. If the percentage change is negative then no adjustment is made in that year. In subsequent years, the adjustment that would have been made will be adjusted downward to the extent necessary to recoup the full actuarial value of not having made the previous year's negative adjustment. This process of adjustment may occur over a multi-year period if needed to recoup the full value of the non-zero COLA.

APPENDIX B
SUMMARY OF PROGRAM AND PLAN PROVISIONS

Cost-of-living adjustments are effective September 1 and are applied to that portion of the benefit which is not in-excess of $20,000 (indexed) for all benefits which have been in payment for twelve months. The maximum annual increase is 3%. Average final compensation used in determining disability benefits for disabled members is similarly adjusted for purposes of determining the recipient's service retirement benefit if and when the recipient moves to service retirement.

Members on service retirement who did not have ten years of service on July 1, 1993 will not receive a cost-of-living adjustment until 12 months after their normal retirement age.

No cost-of-living adjustments will be made until September 2014.

12. Methods of Payment of Service Retirement Benefits:

At retirement, a member who retires with a benefit must choose from the following methods of payment:

Full Benefit: Unadjusted benefit paid for the life of the member only.

Option 1: Cash refund equal to the remaining employee contribution balance, if any, at the date of death (where the employee contribution balance has been reduced each month by the portion of the monthly benefit deemed to be provided by employee contributions).

Option 2: 100% joint and survivor annuity.

Option 3: 0% joint and survivor annuity.

Option 4: Joint and survivor annuity at any percentage other than those available under Option 2 and Option 3.

Option 5: Designated percentage of the benefit (not less than 51%) payable to the member, with the remaining percentage (the two to equal 100%) payable to a beneficiary (may only be a sole beneficiary) while both are alive. At the death of either, the higher of the two percentages is paid to the survivor for the survivor's life, and the lower-percentage benefit ceases to be paid.

Option 6:100% joint and survivor annuity (Option 2) with pop-up*.

Option 7: 50% joint and survivor annuity (Option 3) with pop-up.*

Option 8: Option 4 with pop-up*.

* The "pop-up" feature attached to a given Option means that in the case of a beneficiary predeceasing the member, the member's benefit will be revised prospectively to the amount that the benefit would have been had the member selected Full Benefit payment upon retirement.

APPENDIX B
SUMMARY OF PROGRAM AND PLAN PROVISIONS

13. Changes since Prior Valuation:

None

APPENDIX C
ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

1. Rate of Investment Return:

State Employees	7.125%
Teachers	7.125%

Rate is net of both administrative and investment expense.

2. Cost-of-Living Increases in Benefits:

State Employees	2.55%
Teachers	2.55%

3. Rates of Salary Increase (% at Selected Years of Service):

Service	State Employees	Teachers
0	10.50%	13.50%
5	6.00	6.25
10	4.50	5.00
15	3.95	4.50
20	3.70	3.70
25 and over	3.50	3.50

The above rates include a 3.50% across-the-board increase at each year of service.

4. Rates of Termination (% at Selected Service):

Service	State Employees	Teachers
0	30.00%	37.00%
5	7.50	12.00
10	4.40	6.90
15	4.00	5.50
20	4.00	5.50
25	4.00	5.50

Non-vested members are assumed to take a refund of contributions with interest. Once vested, the member is assumed to elect the greater of the deferred vested benefit or a refund.

APPENDIX C
ACTUARIAL ASSUMPTIONS AND METHODS

5. Rate of Mortality for Active Healthy Lives and Retired Healthy Lives at Selected Ages (number of deaths per 10,000 members)*:

	State Employees		Teachers	
Age	Male	Female	Male	Female
50	16	13	14	11
55	27	24	22	20
60	53	47	41	36
65	103	90	81	71
70	177	155	142	125
75	306	249	246	204
80	554	413	448	338
85	997	708	807	571
90	1,727	1,259	1,418	1,026
95	2,596	1,888	2,267	1,654

* For State Regular and Teachers 5% of deaths assumed to arise out of and in the course of employment; for State Special 20% of deaths are assumed to arise out of and in the course of employment.

Rates for State Employees are based on the RP 2000 Mortality Table for Males and Females projected forward for 2015 using Scale AA. Rates for Teachers are based on the same projected table but with a two-year set back.

6. Rates of Mortality for Disabled Lives and Retired Disabled Lives at Selected Ages (number of deaths per 10,000 members):

	State Employees		Teachers	
Age	Male	Female	Male	Female
25	92	72	92	72
30	112	89	112	89
35	134	109	134	109
40	160	126	160	126
45	193	144	193	144
50	236	165	236	165
55	295	191	295	191
60	362	226	362	226
65	446	272	446	272
70	576	331	576	331

Rates are based on the Revenue Ruling 96-7 Disabled Mortality Table for Males and Females.

APPENDIX C
ACTUARIAL ASSUMPTIONS AND METHODS

7. Rates of Retirement at Selected Ages (number retiring per 1,000 members):

	State Employees			Teachers		
Age	**Tier 1**	**Tier 2**	**Tier 3**	**Tier 1**	**Tier 2**	**Tier 3**
45	3	NA	NA	13	NA	NA
50	19	NA	NA	29	NA	NA
55	19	NA	NA	79	NA	NA
59	58	75	75	150	225	225
60	300	100	100	225	225	225
61	300	100	100	230	225	225
62	270	250	125	250	300	225
63	270	250	125	260	300	225
64	250	250	125	270	300	225
65	250	250	250	300	300	300
70	1,000	1,000	1,000	1,000	1,000	1,000

* Members of Special Groups are assumed to retire at a rate of 50% per year, once they reach eligibility for unreduced benefits at every age.

In the case of State Regular and Teacher employees, Tier 1 refers to those who had accrued at least ten years of service by July 1, 1993. Tier 2 are those who had not or were hired after that date but had five years of service by July 1, 2011. Tier 3 are those who did not have five years of service by July 1, 2011.

8. Rates of Disability at Selected Ages (members becoming disabled per 10,000 members)*:

Age	**State Employees**	**Teachers**
25	6.8	3.5
30	7.6	3.8
35	10.2	3.8
40	19.0	5.1
45	27.9	11.6
50	42.7	18.2
55	53.0	24.8
60	63.0	31.3

* 10% assumed to receive Workers Compensation benefits offsetting disability benefit; also, rates for State Special groups are higher by 7 per 10,000 at all ages.

APPENDIX C
ACTUARIAL ASSUMPTIONS AND METHODS

9. Family Composition Assumptions:

80% of active members are married and have two children born when the member is 24 and 28; children are dependent until age 18; female spouse is three years younger than male spouse; member has no dependent parents; unmarried members have beneficiaries entitled to benefits worth 80% as much as those of married members' beneficiaries.

10. Vacation/Sick Leave Credits:

For members who had ten years of service on July 1, 1993, credits for unused vacation and sick leave may be used to increase final average compensation and/or creditable service. In order to reflect this, projected retirement benefits are increased by 0.48% for state (regular) employees and 0.75% for teachers.

11. Date of Adoption of Assumptions

The assumptions were adopted by the Trustees as a result of the latest experience study review performed in 2011 and covering the period July 1, 2005 through June 30, 2010.

12. Changes since Last Valuation

The rate of investment return assumption was changed from 7.25% to 7.125%.

APPENDIX C
ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

1. Funding Method:

The Individual Entry Age Normal method is used to determine costs. Under this funding method, a total contribution rate is determined which consists of two elements: the normal cost rate and the unfunded actuarial liability (UAL) rate.

For Teachers and State Employees, including each of the State Special Plans, a normal cost rate is determined for each active member. This rate is determined by taking the value, as of age at entry into a plan in the Program, of the member's projected future benefits, reducing it by the value of future member contributions, and dividing it by the value, also as of the member's entry age, of the member's expected future salary.

In addition to contributions required to meet a plan's normal cost, contributions are required to fund the plan's unfunded actuarial liability. The actuarial liability is defined as the present value of future benefits less the present value of future normal costs and future member contributions. The unfunded actuarial liability is the total of the actuarial liability for all members less the actuarial value of assets. The actuarial liability includes projections of future member pay increases and future service credits and should not be confused with the Accrued Benefit Liability.

The unfunded actuarial liability is amortized by annual payments. The payments are determined so that they will be a level percentage of pay, assuming payroll increases 3.50% per year. The UAL measured as of June 30, 2011 is amortized over the remaining 14-years of the statutory period. Net gains or losses to the System are amortized over a 10-year period from the date when they are first measured.

2. Asset Valuation Method:

For purposes of determining the State contribution to the plans in the Program, we use an actuarial value of assets. The asset adjustment method dampens the volatility in asset values that could occur because of fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process.

In determining the actuarial value of assets, we calculate an expected actuarial value based on cash flow for the year and imputed returns at the actuarial assumption. This expected value is compared to the market value and one-third of the difference is added to the preliminary actuarial value to arrive at the final actuarial value.

In the 2014 valuation there was an additional recognition of 37.5% of the remaining balance of past investment gains.

3. Changes since Last Valuation:

There was an additional recognition of 37.5% of the past investment gains in the asset smoothing method.

APPENDIX D
GLOSSARY OF GASB TERMS

1. Actuarially Determined Contribution

A target or recommended contribution for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

2. Actuarial Valuation Date

The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

3. Deferred Inflow of Resources

An acquisition of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience gains on the Total Pension Liability, assumption changes reducing the Total Pension Liability, or investment gains that are recognized in future reporting periods.

4. Deferred Outflow of Resources

A consumption of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience losses on the Total Pension Liability, assumption changes increasing the Total Pension Liability, or investment losses that are recognized in future reporting periods.

5. Entry Age Actuarial Cost Method

The actuarial cost method required for GASB 67 and 68 calculations. Under this method, the actuarial present value of the projected benefits of each individual, included in an actuarial valuation, is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this actuarial present value allocated to a valuation year is called the Service Cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future service costs is called the Total Pension Liability.

6. Measurement Date

The date as of which the Total Pension Liability and Plan Fiduciary Net Position are measured. The Total Pension Liability may be projected from the Actuarial Valuation Date to the Measurement Date. The Measurement Date must be the same as the Reporting Date for the plan.

7. Net Pension Liability

The liability of employers and non-employer contributing entities for employees for benefits provided through a defined benefit pension plan. It is calculated as the Total Pension Liability less the Plan Fiduciary Net Position.

APPENDIX D
GLOSSARY OF GASB TERMS

8. Plan Fiduciary Net Position

The fair or market value of assets.

9. Reporting Date

The last day of the Plan or employer's fiscal year.

10. Service Cost

The portion of the actuarial present value of projected benefit payments that is attributed to the current period of employee service in conformity with the requirements of GASB 67 and 68. The Service Cost is the normal cost calculated under the entry age actuarial cost method.

11. Total Pension Liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of GASB 67 and 68. The Total Pension Liability is the actuarial liability calculated under the entry age actuarial cost method.