Maine Public Employees Retirement System State Employee and Teacher Retirement Program

Actuarial Valuation Report as of June 30, 2013

Produced by Cheiron

October 2013

Classic Values, Innovative Advice

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October 31, 2013

Board of Trustees
Maine Public Employees Retirement System
#46 State House Station
Augusta, Maine 04333-0046

Dear Members of the Board:

We are pleased to submit the June 30, 2013 Actuarial Valuation Report for the plans in the State Employee and Teacher Retirement Program of the Maine Public Employees Retirement System. The purpose of this report is to present the annual actuarial valuation of Maine Public Employees Retirement 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 System's Retirement Programs, as well as the required accounting statement disclosures under the Government Accounting Standards Board Statement No. 25.

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.

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 which 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 and for the use by the plan auditor in completing an audit related to the matters 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
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, 2013. 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 (actual contributions to be paid by the State for Fiscal Years 2014 and 2015 were developed in July 2012, based on a roll forward of the June 30, 2011 valuation); and

4) **Provide specific information** and documentation required by the Government Accounting Standards Board (GASB). This report does not reflect any changes in pension accounting requirements from newly issued GASB Statements Nos. 67 and 68. Statement No. 67 will be effective for the plan year ending June 30, 2014. Statement No. 68 will be effective for the employer's fiscal year ending June 30, 2015. All references and calculations with respect to GASB reflect current Statements Nos. 25 and 27.

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. 25.

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); and

- Major benefit provisions of the Program and the various plans included in the Program (Appendix C).

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 2014 and FY 2015 were based on the liabilities of the 2011 valuation adjusted for anticipated growth in benefits and reductions due to payouts to reflect our best estimate of the June 30, 2012 liability. The budgeting process then combined this expected liability with the actual plan assets as of June 30, 2012 to develop the budgeted rates. The results of this June 30, 2013 valuation will ultimately be used in a similar fashion as the June 30, 2011 valuation, but for the FY 2016 and FY 2017 State budget.

The State of Maine composite rate produced by the June 30, 2012 valuation for all plans in the State Employees and Teacher Retirement Program was 16.77% of payroll. The State composite rate produced in this valuation is 18.06% of payroll. The FY 2014 and FY 2015 budgeted rate from rolling forward the June 30, 2011 valuation results were 16.72% and 16.81%. The 1.29% increase in the contribution rate from 16.77% to 18.06% was attributable to several elements, including a loss in investment returns, partially offset by a liability gain, and by a gain due to changes in the way that data was conveyed to Cheiron this year. A new participant data system was utilized for this June 30, 2013 valuation. The new system, among other things, allowed us to identify for the first time part-time members, and in addition the new system provided W-2 earnings as well as annualized equivalent salary. These changes resulted in a lower overall payroll figure which increased the contribution rate.

Experience from July 1, 2012 through June 30, 2013 (FY 2013)

As of June 30, 2013, the Program had an Unfunded Actuarial Liability (UAL) of $2.653 billion. This represents a decrease of $0.020 billion from the $2.673 billion UAL measured as of June 30, 2012. 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, 2012	$ 2.673
2.	Decrease expected as of June 30, 2013	(0.001)
3.	Decrease due to data changes	(0.050)
4.	Increase due to recognized investment losses	0.052
5.	Decrease due to liability gains during the year	(0.021)
6.	Actuarial Liability as of June 30, 2013	$ 2.653

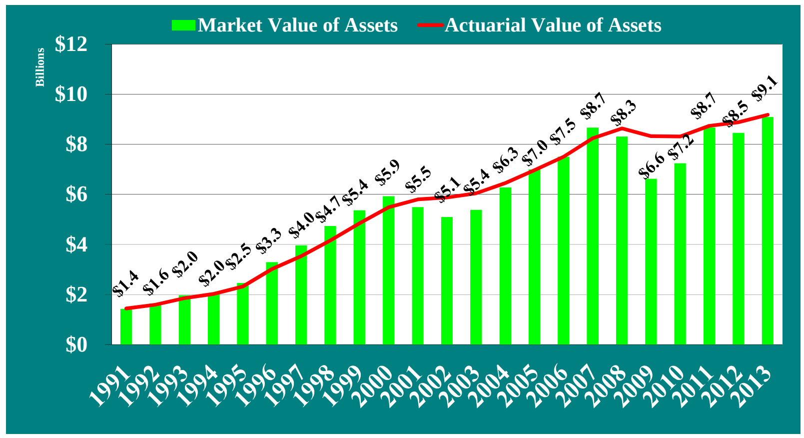
SECTION I
BOARD SUMMARY

Historical Trends

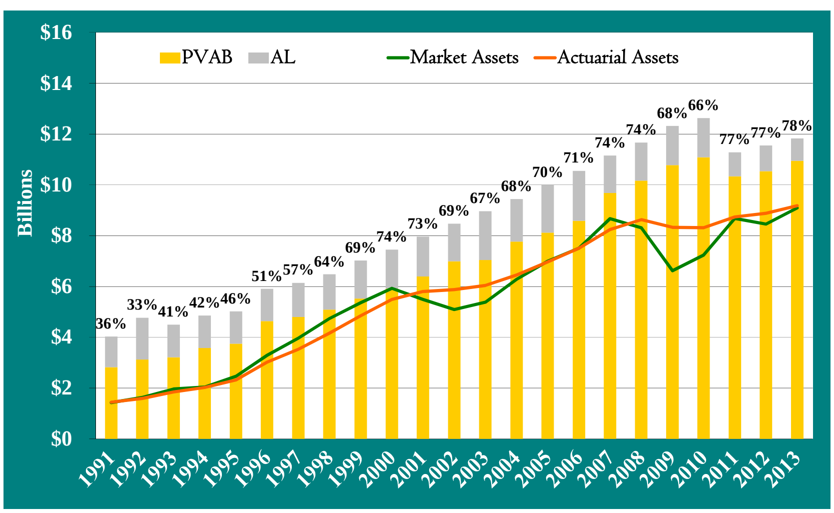
We present a series of charts which display key historical trends in the Program's financial condition. Following the historical review, we present projections of the probable condition of the Program into the future under various market return scenarios.

Growth in Assets

The graph to the right illustrates how well the actuarial smoothing method has insulated the Program from market volatility. Also, 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 last decade.



Assets and Liabilities

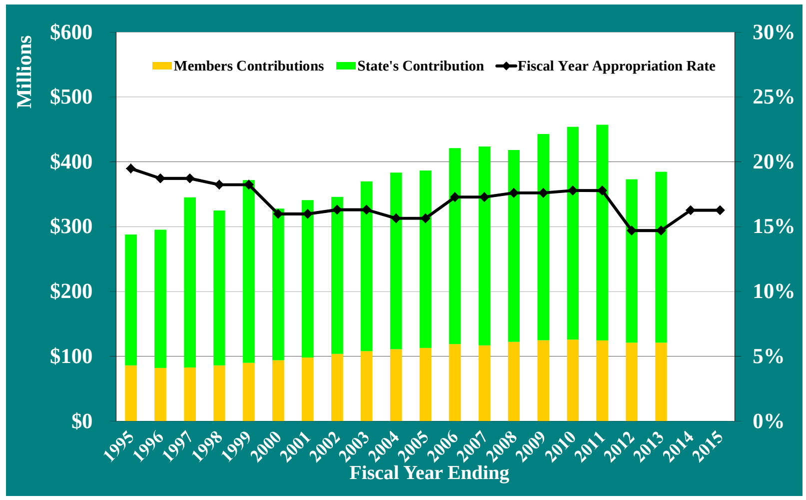


This next graph illustrates the progress of assets against liabilities. The colored bars represent different measures of liability mentioned in Section III of this report. The yellow bars represent the Present Value of Accrued Benefits (PVAB) as of the valuation date. The actuarial liability (AL), used for funding purposes, is represented by the top of the grey bar. 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 which is why the liability showed a reduction that year. As of June 30, 2013 the Program is funded 78% on this measure.

SECTION I
BOARD SUMMARY

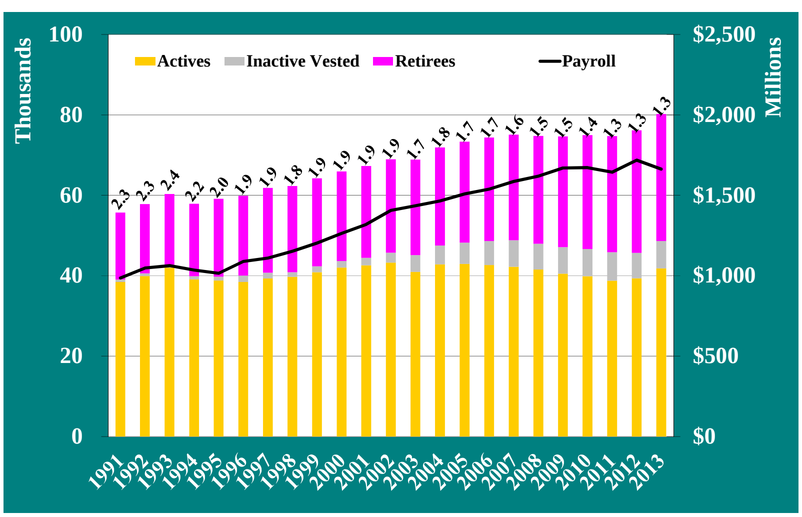
Contributions

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, depending 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 paid during FY 2013 was based on the June 30, 2010 valuation.

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 to the left show the number of active members, terminated vesteds and retirees over the last 23 years. The labels above each bar show the ratio of active members per inactive member, which has been 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 that a plan's cash flows are, the more sensitive (in terms of contribution volatility) the plan is to volatile investment markets.

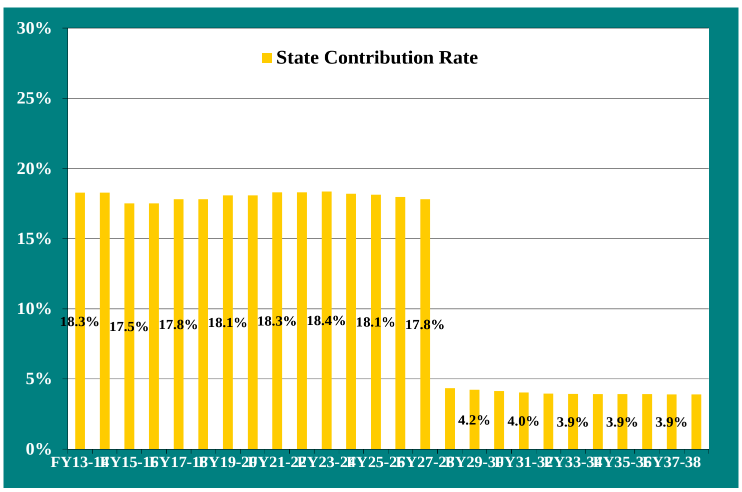
SECTION I
BOARD SUMMARY

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 over liabilities) and the State's expected cost progression. We first present a baseline projection of these future results if the assumed 7.25% investment return were achieved each year. We then present the same projections based on earnings 1% above and 1% below the assumed 7.25% return. The primary purpose of presenting these projections is to demonstrate how sensitive future valuation results could be to positive and negative investment markets.

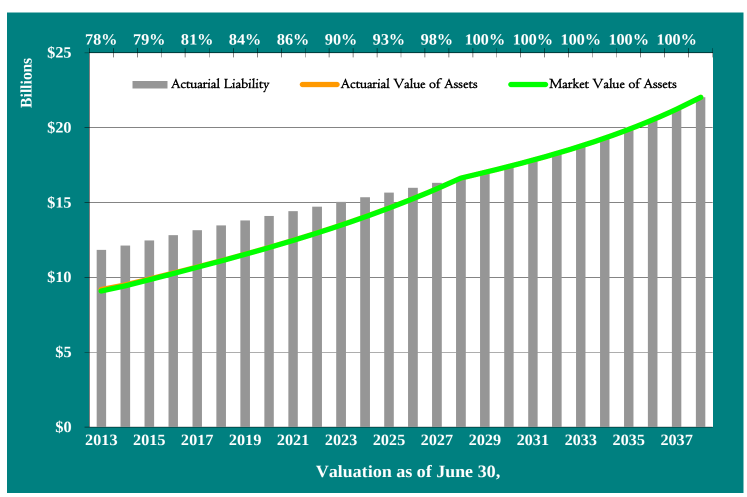
Base Line Projections

The charts on this page show the expected progress of the Program's funding status over the next 25 years measured in terms of the employer contribution rate and the funding ratio for the fiscal year beginning in that year.



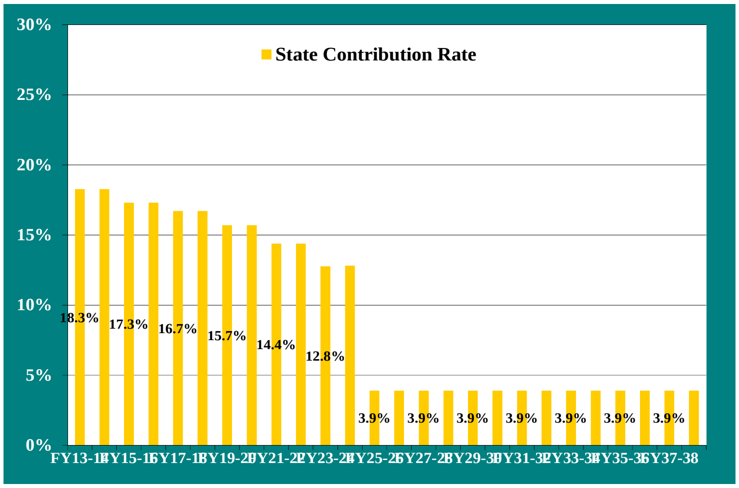
The chart on the left shows that the State's overall composite contribution rate is projected to remain fairly level until the UAL has been paid off in FY 2028, if all actuarial assumptions are met, including the 7.25% investment assumption. While the chart shows that by 2028 the UAL will be paid off, and the State's contribution rate would drop to the Normal Cost, the reality is that there will be gains and losses each and every year resulting in amortization payments (negative or positive) occurring every year.

The chart on the right 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 current level of 78% to 100% funding in 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).



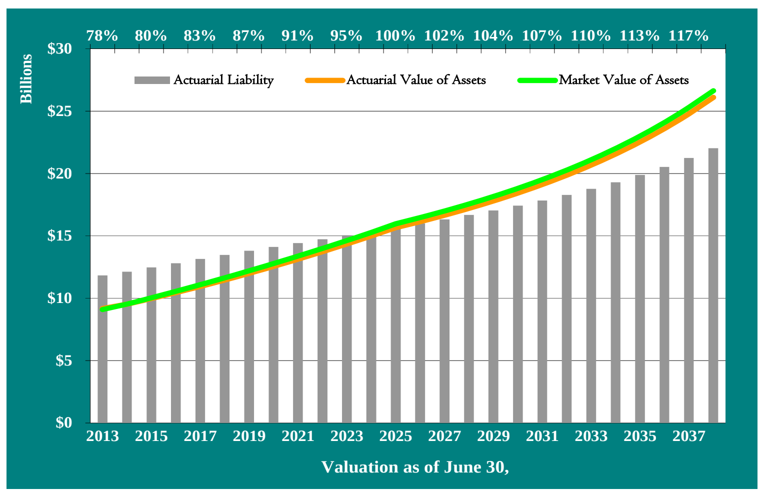
SECTION I
BOARD SUMMARY

<u>Projections with Asset Returns of 8.25%</u>



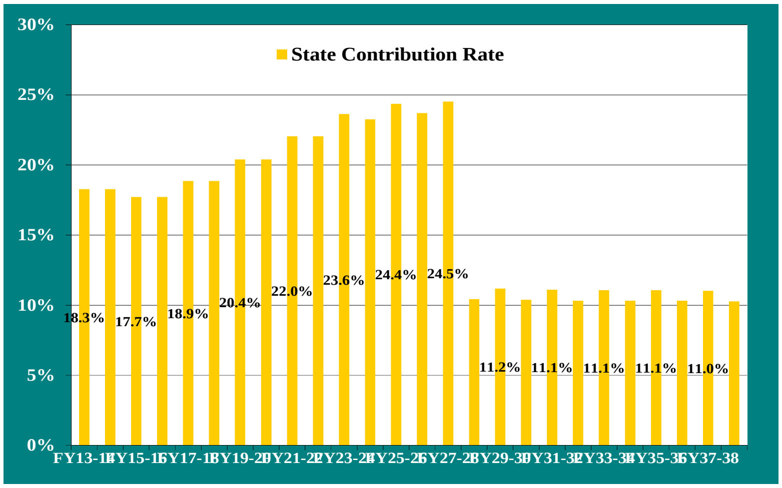
The future funding of this Program will be largely driven by the investment earnings. Relatively minor changes in the market returns can have significant effects on the Program's status. The chart to the left shows that if the Program were to earn 8.25% annual returns each year, the contribution rate would decline throughout the UAL pay off period and the UAL would be projected to have been paid in full by 2025.

Assuming the same 8.25% return on investments, this next chart shows that the Program's funded level would increase to reach 100% by 2025 and then continue to improve.



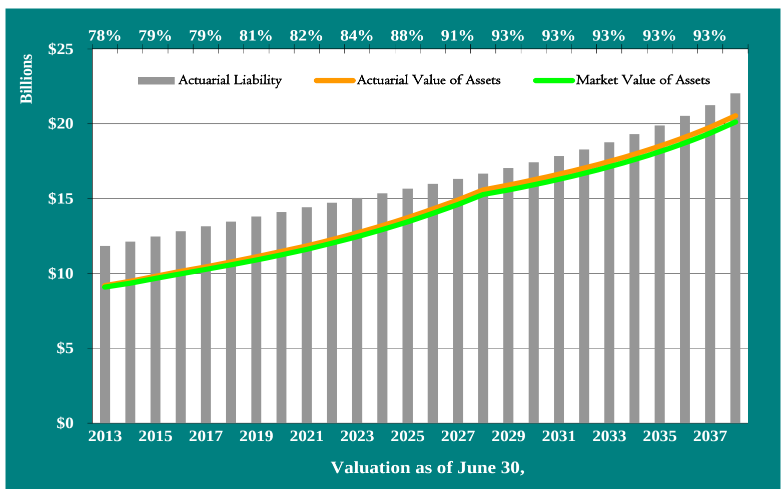
SECTION I
BOARD SUMMARY

Projections with Asset Returns of 6.25%



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 investment earnings are below the assumption. The graphs on this page show the projections under a 6.25% annual return scenario. The State's contribution rate would rise to around 24% of payroll in order to meet the requirement of full funding in 2028.

The Program's funded ratio would increase to 94% over the next 24 years. In this scenario, the Program would still have an Unfunded Actuarial Liability at 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 have to be funded over ten years.



SECTION I
BOARD SUMMARY

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

Valuation as of:	June 30, 2012	June 30, 2013	% Change
Participant Counts			
Actives	39,360	41,809	6.2%
Retired Members	22,145	23,314	5.3%
Beneficiaries of Retirees	5,948	5,983	0.6%
Survivors of Deceased Members	638	643	0.8%
Disabled Members	1,754	1,684	(4.0%)
Deferred "Vested" Members	6,291	6,794	8.0%
Total*	76,136	80,227	5.4%
Annual Salaries of Active Members	$ 1,718,449,172	$ 1,662,390,557	(3.3%)
Annual Payments to Benefit Recipients	$ 614,303,923	$ 637,482,081	3.8%
Assets and Liabilities			
Total Actuarial Liability	$ 11,553,306,281	$ 11,830,649,882	2.4%
Assets/Actuarial (Smoothed)	8,880,730,120	9,177,749,627	3.3%
Unfunded Actuarial Liability	$ 2,672,576,161	$ 2,652,900,255	(0.7%)
Funding Ratio	76.87%	77.58%	
Present Value of Accrued Benefits	$ 10,539,025,275	$ 10,949,403,257	3.9%
Assets/Market Value	8,453,862,754	9,091,347,964	7.5%
Unfunded PVAB	$ 2,085,162,521	$ 1,858,055,293	(10.9%)
Accrued Benefit Funding Ratio	80.21%	83.03%	
Contributions as a Percentage of Payroll	**Fiscal Year 14**	**Fiscal Year 15**	
Normal Cost Contribution	3.67%	3.90%	
Unfunded Actuarial Liability Contribution	13.10%	14.16%	
Total Contribution	16.77%	18.06%	

*Total members as of June 30, 2013 exclude 35,124 Inactive Non-Vested Members.

SECTION I
BOARD SUMMARY

Table I-3
Summary of Principal Results
Teachers

Valuation as of:	June 30, 2012	June 30, 2013	% Change
Participant Counts			
Actives	26,417	28,581	8.2%
Retired Members	12,961	13,790	6.4%
Beneficiaries of Retirees	2,667	2,716	1.8%
Survivors of Deceased Members	264	279	5.7%
Disabled Members	727	695	(4.4%)
Deferred "Vested" Members	4,556	4,186	(8.1%)
Total*	47,592	50,247	5.6%
Annual Salaries of Active Members	$ 1,132,474,064	$ 1,112,676,366	(1.7%)
Annual Payments to Benefit Recipients	$ 364,117,774	$ 383,225,117	5.2%
Assets and Liabilities			
Total Actuarial Liability	$ 7,555,171,743	$ 7,630,451,039	1.0%
Assets/Actuarial (Smoothed)	5,865,478,176	6,098,009,434	4.0%
Unfunded Actuarial Liability	$ 1,689,693,567	$ 1,532,441,605	(9.3%)
Funding Ratio	77.64%	79.92%	
Present Value of Accrued Benefits	$ 6,833,578,111	$ 6,991,748,149	2.3%
Assets/Market Value	5,583,544,012	6,040,601,227	8.2%
Unfunded PVAB	$ 1,250,034,099	$ 951,146,922	(23.9%)
Accrued Benefit Funding Ratio	81.71%	86.40%	
Contributions as a Percentage of Payroll	**Fiscal Year 14**	**Fiscal Year 15**	
Normal Cost Contribution	2.97%	3.14%	
Unfunded Actuarial Liability Contribution	12.55%	11.77%	
Total State Contribution	15.52%	14.91%	

*Total members as of June 30, 2013 exclude 29,534 Inactive Non-Vested Members.

SECTION I
BOARD SUMMARY

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

Valuation as of:	June 30, 2012	June 30, 2013	% Change
Participant Counts			
Actives	12,943	13,228	2.2%
Retired Members	9,184	9,524	3.7%
Beneficiaries of Retirees	3,281	3,267	(0.4%)
Survivors of Deceased Members	374	364	(2.7%)
Disabled Members	1,027	989	(3.7%)
Deferred "Vested" Members	1,735	2,608	50.3%
Total*	28,544	29,980	5.0%
Annual Salaries of Active Members	$ 585,975,108	$ 549,714,191	(6.2%)
Annual Payments to Benefit Recipients	$ 250,186,149	$ 254,256,964	1.6%
Assets and Liabilities			
Total Actuarial Liability	$ 3,998,134,538	$ 4,200,198,843	5.1%
Assets/Actuarial (Smoothed)	3,015,251,944	3,079,740,193	2.1%
Unfunded Actuarial Liability	$ 982,882,594	$ 1,120,458,650	14.0%
Funding Ratio	75.42%	73.32%	
Present Value of Accrued Benefits	$ 3,705,447,164	$ 3,957,655,108	6.8%
Assets/Market Value	2,870,318,742	3,050,746,737	6.3%
Unfunded PVAB	$ 835,128,422	$ 906,908,371	8.6%
Accrued Benefit Funding Ratio	77.46%	77.08%	
Contributions as a Percentage of Payroll	**Fiscal Year 14**	**Fiscal Year 15**	
Normal Cost Contribution	5.02%	5.44%	
Unfunded Actuarial Liability Contribution	14.17%	18.99%	
Total State Contribution	19.19%	24.43%	

*Total members as of June 30, 2013 exclude 5,590 Inactive Non-Vested Members.

SECTION I
BOARD SUMMARY

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

Valuation as of:	June 30, 2012	June 30, 2013	% Change
Participant Counts			
Actives	11,228	11,505	2.5%
Retired Members	8,228	8,536	3.7%
Beneficiaries of Retirees	2,893	2,877	(0.6%)
Survivors of Deceased Members	364	353	(3.0%)
Disabled Members	939	905	(3.6%)
Deferred "Vested" Members	1,735	2,397	38.2%
Total*	25,387	26,573	4.7%
Annual Salaries of Active Members	$ 496,671,281	$ 464,032,526	(6.6%)
Annual Payments to Benefit Recipients	$ 214,740,645	$ 217,913,910	1.5%
Assets and Liabilities			
Total Actuarial Liability	$ 3,380,058,853	$ 3,536,583,616	4.6%
Assets/Actuarial (Smoothed)	2,569,122,137	2,613,729,800	1.8%
Unfunded Actuarial Liability	$ 810,936,716	$ 922,853,816	13.5%
Funding Ratio	76.01%	73,91%	
Present Value of Accrued Benefits	$ 3,128,508,516	$ 3,328,321,314	6.4%
Assets/Market Value	2,445,632,920	2,589,123,483	6.0%
Unfunded PVAB	$ 682,875,596	$ 739,197,831	7.9%
Accrued Benefit Funding Ratio	78.17%	77.79%	
Contributions as a Percentage of Payroll	**Fiscal Year 14**	**Fiscal Year 15**	
Normal Cost Contribution	4.86%	5.27%	
Unfunded Actuarial Liability Contribution	13.83%	18.52%	
Total State Contribution	18.69%	23.79%	

*Total members as of June 30, 2013 exclude 4,948 Inactive Non-Vested Members.

SECTION I
BOARD SUMMARY

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

Valuation as of:	June 30, 2012	June 30, 2013	% Change
Participant Counts			
Actives	1,715	1,723	0.5%
Retired Members	956	988	3.3%
Beneficiaries of Retirees	388	390	0.5%
Survivors of Deceased Members	10	11	10.0%
Disabled Members	88	84	(4.5%)
Deferred "Vested" Members	0	211	
Total*	3,157	3,407	7.9%
Annual Salaries of Active Members	$ 89,303,827	$ 85,681,665	(4.1%)
Annual Payments to Benefit Recipients	$ 35,445,504	$ 36,343,054	2.5%
Assets and Liabilities			
Total Actuarial Liability	$ 618,075,685	$ 663,615,227	7.4%
Assets/Actuarial (Smoothed)	446,129,807	466,010,393	3.9%
Unfunded Actuarial Liability	$ 171,945,878	$ 197,604,834	16.4%
Funding Ratio	72.18%	70.22%	
Present Value of Accrued Benefits	$ 576,398,648	$ 629,333,794	9.1%
Assets/Market Value	424,685,822	461,623,254	8.2%
Unfunded PVAB	$ 152,252,826	$ 167,710,540	11.7%
Accrued Benefit Funding Ratio	73.61%	73.35%	
Contributions as a Percentage of Payroll	**Fiscal Year 14**	**Fiscal Year 15**	
Normal Cost Contribution	5.88%	6.35%	
Unfunded Actuarial Liability Contribution	16.06%	21.49%	
Total State Contribution	21.94%	27.84%	

*Total members as of June 30, 2013 exclude 642 Inactive Non-Vested Members.

SECTION II
ASSETS

Pension program 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, 2012 and June 30, 2013;
- 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 the resulting contributions if the market value were used, unadjusted, in the valuation process, an actuarial value is developed.

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

Current actuarial methods employed in this Program set the actuarial value equal to the expected value plus one-third of the difference between the actual market value of assets and the expected value of assets. The expected 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 assumed 7.25% rate.

SECTION II
ASSETS

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

Value of Assets – June 30, 2012			**$ 10,544,032,959**
Additions			
Contributions:			
Employer Contributions	$ 291,502,625		
Employee Contributions	153,536,500		
Transfer	(5,354)		
Total Contributions		$ 445,033,771	
Investment Income:			
Net Appreciation (Depreciation) in Fair Value of Investments	$ 1,192,036,185		
Interest on Bank Balances	91,382		
Total Investment Income	$ 1,192,127,567		
Investment Activity Expenses:			
Management Fees	$ (29,220,787)		
Investment Related Expense	(1,991,759)		
Banking Fees	(30,951)		
Total Investment Activity Expenses	$ (31,243,497)		
Net Income from Investing Activities		$ 1,160,884,070	
Total Additions			$ 1,605,917,841
Deductions			
Retirement Benefits	$ (714,662,842)		
Disability Benefits	(37,020,970)		
Survivor Benefits	(20,515,684)		
Refunds and Other Expenses	(33,569,727)		
Total Deductions			$ (805,769,223)
Total			
Net Increase (Decrease)			$ 800,148,618
Value of Assets – June 30, 2013			**$ 11,344,181,577**

SECTION II
ASSETS

Table II-2
Development of Actuarial Value of Assets (All Programs)
as of June 30, 2013

1.	Actuarial Value of Assets at June 30, 2012	$ 11,076,440,890
2.	Amount in (1) with Interest to June 30, 2013	11,879,482,855
3.	Employer and Member Contributions for the Plan Year Ended June 30, 2013	445,033,771
4.	Interest on Contributions Assuming Received Uniformly Throughout the Year to June 30, 2013	15,850,215
5.	Disbursements from Trust Except Investment Expenses, July 1, 2012 through June 30, 2013	(805,769,222)
6.	Interest on Disbursements Assuming Payments Made Uniformly throughout the Year to June 30, 2013	(28,698,082)
7.	Expected Value of Assets at June 30, 2013 = (2) + (3) + (4) + (5) + (6)	$ 11,505,899,537
8.	Actual Market Value of Assets at June 30, 2013	11,344,181,577
9.	Excess of (8) Over (7)	(161,717,960)
10.	Actuarial Value of Assets at June 30, 2013 = (7) + 33⅓% of (9)	$ 11,451,993,550

Actuarial Value of Assets

The actuarial value of assets represents a "smoothed" value developed by the actuary to reduce, or eliminate, volatile contribution rates which 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, to the expected value. The previous table illustrates the calculation of actuarial value of assets for the June 30, 2013 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 1.009504 ($11,451,993,550 ÷ $11,344,181,577). 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, 2013

	Market Value	Actuarial Value
Teachers	$ 6,040,601,227	$ 6,098,009,434
State (Regular & Special)	3,050,746,737	3,079,740,193
Judges	50,574,604	51,055,251
Legislators	9,679,959	9,771,955
Participating Local Districts (Consolidated & Non-Consolidated)	2,192,579,050	2,213,416,717
Total Fund	$ 11,344,181,577	$ 11,451,993,550

Investment Performance

The market value of assets returned a positive 11.20% during FY 2013. This is higher than the assumed return of 7.25%. The returns in FY 2012 and FY 2011 were positive 0.50% and positive 22.11%, respectively.

On an actuarial value of assets basis, the return for FY 2013 was a positive 6.76%. This return is lower than the return on a market value basis and does not meet the 7.25% assumption; therefore, this return gives rise to an investment loss 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 Contribution
2014	$ 677,279,000	$ 309,000,000	$ 123,629,000	$ 421,749,000
2015	708,572,000	319,815,000	127,956,000	436,510,000
2016	748,967,000	317,298,000	132,435,000	451,787,000
2017	787,766,000	328,403,000	137,070,000	467,600,000
2018	825,840,000	345,407,000	141,867,000	483,966,000
2019	862,422,000	357,496,000	146,833,000	500,905,000
2020	898,051,000	375,943,000	151,972,000	518,437,000
2021	932,161,000	389,101,000	157,291,000	536,582,000
2022	964,481,000	407,596,000	162,796,000	555,363,000
2023	995,721,000	421,862,000	168,494,000	574,800,000

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 time.

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 7.25% per year and uses the budget UAL contributions for FY 14 and 15. 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 7.31%.

SECTION III
LIABILITIES

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

- **Disclosure** of liabilities at June 30, 2012 and June 30, 2013;
- 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:** Used for analyzing the overall financial obligations, 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 Present Value of Future Benefits above and subtracting the value of accruals that are assigned to future years. 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, 2012	June 30, 2013
Present Value of Future Benefits (PVB)		
Active Participant Benefits	$ 6,142,608,139	$ 5,850,701,234
Retiree Benefits	6,208,801,279	6,745,069,235
Terminated Vested and Inactive Members	448,058,912	436,189,842
Total PVB	**$ 12,799,468,330**	**$ 13,031,960,311**
Market Value of Assets (MVA)	$ 8,453,862,754	$ 9,091,347,964
Future Employee Contributions	890,728,877	826,562,963
Future State Contributions Assuming No Further Gains or Losses or New Hires	3,097,214,407	3,093,848,172
Projected (Surplus)/Shortfall	357,662,292	20,201,212
Total Resources	**$ 12,799,468,330**	**$ 13,031,960,311**
Actuarial Liability		
Present Value of Future Benefits (PVB)	$ 12,799,468,330	$ 13,031,960,311
Present Value of Future Normal Costs (PVFNC)		
Employer Portion	355,443,172	374,747,466
Employee Portion	890,728,877	826,562,963
Actuarial Liability (AL = PVB – PVFNC)	**$ 11,553,306,281**	**$ 11,830,649,882**
Actuarial Value of Assets (AVA)	8,880,730,120	9,177,749,627
Net (Surplus)/Unfunded (AL – AVA)	**$ 2,672,576,161**	**$ 2,652,900,255**
Present Value of Accrued Benefits		
Present Value of Future Benefits (PVB)	$ 12,799,468,330	$ 13,031,960,311
Present Value of Future Benefit Accruals (PVFBA)	2,260,443,055	2,082,557,054
Accrued Liability (PVAB = PVB – PVFBA)	**$ 10,539,025,275**	**$ 10,949,403,257**
Market Value of Assets (MVA)	8,453,862,754	9,091,347,964
Net (Surplus)/Unfunded (PVAB – MVA)	**$ 2,085,162,521**	**$ 1,858,055,293**

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 6/30/2012	$ 12,799,468,330	$ 11,553,306,281	$ 10,539,025,275
Liabilities 6/30/2013	13,031,960,311	11,830,649,882	10,949,403,257
Liability Increase (Decrease)	$ 232,491,981	$ 277,343,601	$ 410,377,982
Change Due to:			
Program/Plan Amendment	$ 0	$ 0	$ 0
Data Change	(105,112,154)	(50,659,935)	82,341,832
Actuarial (Gain)/Loss	N/C	(21,191,240)	N/C
Benefits Accumulated and Other Sources	$ 337,604,135	$ 349,194,776	$ 328,036,150

N/C = Not calculated

SECTION III
LIABILITIES

Table III-3
Allocation of Actuarial Liability as of June 30, 2013

	Total Program	Teachers	State Regular	Special Plans
1. Actuarial Liabilities for:				
a. Active Members	$ 4,649,390,805	$3,231,258,142	$ 1,172,215,991	$ 245,916,672
b. Retired, Disabled and Beneficiary Members	6,745,069,235	4,121,302,433	2,218,220,665	405,546,137
c. Vested Deferred and Inactive Status Members	436,189,842	277,890,464	146,146,960	12,152,418
2. Total Actuarial Liability (1(a) + 1(b) + 1(c))	$ 11,830,649,882	$7,630,451,039	$ 3,536,583,616	$ 663,615,227
3. Actuarial Value of Assets	9,177,749,627	6,098,009,434	2,613,729,800	466,010,393
4. Unfunded Actuarial Liability (2 – 3)	$ 2,652,900,255	$1,532,441,605	$ 922,853,816	$ 197,604,834

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 Actuarial Cost 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 15 years from June 30, 2013. 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, 2012	June 30, 2013
Normal Cost Rate	3.67%	3.90%
UAL Rate	13.10%	14.16%
Total State Rate	16.77%	18.06%

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, 2013	Normal Cost Contributions*	Unfunded Actuarial Liability Contributions*	Total Contributions*
Total State	3.90%	14.16%	18.06%
Teacher	3.14	11.77	14.91
State Regular	5.27	18.52	23.79
State Police (Closed)	11.17	28.72	39.89
Marine Resources (Closed)	11.95	28.82	40.77
Inland Fish & Wildlife (Closed)	12.46	30.42	42.88
Prison Employees (Closed)	4.14	17.72	21.86
Forest Rangers (Closed)	4.02	17.81	21.83
25 & Out Plan	4.59	18.95	23.54
1998 Special Plan	7.24	22.78	30.02

*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, 2013	Teachers	State Regular	State Police (Closed)	Marine Resources (Closed)	Inland F&W (Closed)	Prison Employees (Closed)	Forest Rangers (Closed)	25 & Out Plan	1998 Special Plan
1. Actuarial Liability	$7,630,451,039	$3,536,583,616	$ 148,229,847	$ 16,459,567	$ 52,744,228	$ 51,990,610	$ 24,281,773	$ 115,787,522	$ 254,121,680
2. Actuarial Value of Assets	6,098,009,434	2,613,729,800	146,906,285	16,277,261	52,196,191	51,870,136	23,584,828	55,989,860	119,185,832
3. Unfunded Actuarial Liability (1) – (2)	$ 1,532,441,605	$ 922,853,816	$ 1,323,562	$ 182,306	$ 548,037	$ 120,474	$ 696,945	$ 59,797,662	$ 134,935,848
4. UAL to amortize over 15 years	$ 1,635,232,242	$ 775,547,923	$ 1,112,023	$ 153,206	$ 460,559	$ 101,244	$ 585,698	$ 50,252,744	$ 113,397,353
5. Remaining 2012 (G)/L over 9 years	$ 29,799,006	$ 24,543,444	$ 35,390	$4,848	$ 14,575	$ 3,204	$ 18,536	$ 1,590,341	$ 3,588,668
6 New (Gain)/Loss over 10 years	($ 132,589,643)	$ 122,762,448	$ 176,150	$ 24,251	$ 72,903	$ 16,026	$ 92,711	$ 7,954,578	$ 17,949,827
7. 15 year Amortization Factor	11.4239	11.4239	11.4239	11.4239	11.4239	11.4239	11.4239	11.4239	11.4239
8. 9 year Amortization Factor	7.5692	7.5692	7.5692	7.5692	7.5692	7.5692	7.5692	7.5692	7.5692
9. 10 year Amortization Factor	8.2701	8.2701	8.2701	8.2701	8.2701	8.2701	8.2701	8.2701	8.2701
10. Estimated Payroll	$1,112,676,366	$ 464,032,526	$ 429,361	$ 58,928	$ 167,872	$ 63,337	$ 364,585	$ 29,406,844	$ 55,190,738
11. Unfunded Actuarial Liability Rate [(4)/(7) +(5)/(8) +(6)/(9)]/10	11.77%	18.52%	28.72%	28.82%	30.42%	17.72%	17.81%	18.95%	22.78%

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. Statement No. 25 of 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.

The GASB-25 actuarial accrued liability is the same as the actuarial liability amount calculated for funding purposes.

Both the present value of accrued benefits (FASB ASC Topic 960) and the actuarial accrued liability (GASB-25) are determined assuming that the plans in the Program are ongoing and participants will continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities are discounted at the assumed valuation interest rate of 7.25% per annum.

FASB ASC Topic 960 specifies that a comparison of the present value of accrued (accumulated) benefits with the market value of the assets as of the valuation date must be provided. GASB Statement No. 25 requires the actuarial accrued liability be compared with the actuarial value of assets for funding purposes. The relevant amounts as of June 30, 2012 and June 30, 2013 are exhibited in Table V-1. Table V-2 reconciles the FASB ASC Topic 960 liabilities determined as of the prior valuation, June 30, 2012 to the liabilities as of June 30, 2013.

Tables V-3 through V-5 are exhibits required for the System's Comprehensive Annual Financial Report. The GFOA recommends showing 6-10 years of experience in each of these exhibits. Table V-3 shows the Notes to Required Supplementary Information. 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
Accounting Statement Information

	June 30, 2012	June 30, 2013
A. FASB ASC Topic 960 Basis		
1. Present Value of Benefits Accrued to Date		
a. Members Currently Receiving Payments	$ 6,208,801,279	$ 6,745,069,235
b. Vested Terminated	448,058,912	436,189,842
c. Active Members	3,882,165,084	3,768,144,180
d. Total PVAB	$ 10,539,025,275	$ 10,949,403,257
2. Assets at Market Value	8,453,862,754	9,091,347,964
3. Unfunded Present Value of Accrued Benefits, But Not Less Than Zero	$ 2,085,162,521	$ 1,858,055,293
4. Ratio of Assets to Value of Benefits (2) / (1)(d)	80.21%	83.03%
B. GASB No. 25 Basis		
1. Actuarial Liabilities		
a. Members Currently Receiving Payments	$ 6,208,801,279	$ 6,745,069,235
b. Vested Deferred and Inactive Status Members	448,058,912	436,189,842
c. Active Members	4,896,446,090	4,649,390,805
d. Total	$ 11,553,306,281	$ 11,830,649,882
2. Actuarial Value of Assets	8,880,730,120	9,177,749,627
3. Unfunded Actuarial Liability	$ 2,672,576,161	$ 2,652,900,255
4. Ratio of Actuarial Value of Assets to Actuarial Liability (2) / (1)(d)	76.87%	77.58%

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-2
Statement of Changes in Total Actuarial Present Value of All Accrued Benefits

	Accumulated Benefit Obligation (FASB ASC Topic 960)
Actuarial Present Value of Accrued Benefits as of June 30, 2012	$ 10,539,025,275
Increase (Decrease) During Years Attributable to:	
Passage of Time	739,818,781
Benefits Paid – FY 2013	(669,256,581)
Data Change	82,341,832
Plan Changes	0
Benefits Accrued, Other Gains/Losses	257,473,950
Net Increase (Decrease)	$ 410,377,982
Actuarial Present Value of Accrued Benefits as of June 30, 2013	$ 10,949,403,257

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-3
NOTE TO REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.

Valuation date	June 30, 2013
Actuarial cost method	Entry age
Amortization method	Level percent closed
Remaining amortization period	Layers at 9-15 years Equivalent Single Amortization Period 14.7
Asset valuation method	3-Year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.25%
Projected salary increases*	3.50%
*Includes inflation at	3.50%
Cost-of-living adjustments	2.55%

The actuarial assumptions used have been recommended by the actuary and adopted by the System's Board of Trustees based on the most recent review of the experience of the plans in the Program, completed in 2011.

The rate of employer contributions to the plans in the Program is composed of the normal cost and an amortization of the unfunded actuarial accrued liability. The normal cost is a level percent of payroll cost which, along with the member contributions, will pay for projected benefits at retirement for the each individual participant. The actuarial accrued liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial accrued liability.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-4
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, 2008	*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*
Type of Activity						
Investment Income	$ (160,831,089)	$ (843,411,410)	$(534,019,417)	$ (29,110,015)	$ (220,050,211)	$ (52,030,633)
Combined Liability Experience	68,570,730	(91,293,558)	248,398,931	(91,222,335)	57,603,161	21,191,240
Gain (or Loss) During Year from Financial Experience	$ (92,260,359)	$ (934,704,968)	$(285,620,486)	$(285,620,486)	$ (162,447,050)	$ (30,839,393)
Non-Recurring Items	0	0	0	1,822,058,877	15,629,192	50,659,935
Composite Gain (or Loss) During Year	**$ (92,260,359)**	**$ (934,704,968)**	**$ (285,620,486)**	**$ (285,620,486)**	**$ (146,817,858)**	**$ 19,820,542**

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-5
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 Accrued Liabilities Covered by Reported Assets (1)	(2)	(3)
2013	$2,290,505,939	$ 7,181,259,077	$ 2,358,884,866	$ 9,177,749,627	100%	96%	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, 2013	
Teachers	
Count	28,581
Average Current Age	46.4
Average Service	13.0
Average Valuation Pay	$ 38,931
State Employee Regular Plan	
Count	11,505
Average Current Age	48.4
Average Service	12.6
Average Valuation Pay	$ 40,333
Forest Rangers Special Plan (Closed Plan)	
Count	6
Average Current Age	55.4
Average Service	33.8
Average Valuation Pay	$ 60,764
Inland Fisheries & Wildlife Officers Special Plan (Closed Plan)	
Count	3
Average Current Age	57.4
Average Service	32.2
Average Valuation Pay	$ 55,957
Prison Employees Special Plan (Closed Plan)	
Count	1
Average Current Age	49.9
Average Service	29.4
Average Valuation Pay	$ 63,337

APPENDIX A
MEMBERSHIP INFORMATION

Active Member Data as of June 30, 2013	
State Police Special Plan (Closed Plan)	
Count	5
Average Current Age	56.7
Average Service	31.9
Average Valuation Pay	$ 85,872
Marine Resource Officers Special Plan (Closed Plan)	
Count	1
Average Current Age	56.7
Average Service	34.2
Average Valuation Pay	$ 58,928
State Employee Special 25 & Out Plan	
Count	456
Average Current Age	40.4
Average Service	13.5
Average Valuation Pay	$ 64,489
State Employee 1998 Special Plan	
Count	1,251
Average Current Age	45.0
Average Service	12.2
Average Valuation Pay	$ 44,117
State Employee Totals (Excludes Teachers)	
Count	13,228
Average Current Age	47.8
Average Service	12.6
Average Valuation Pay	$ 41,557

APPENDIX A
MEMBERSHIP INFORMATION

Non-Active Member Data as of June 30, 2013
Teachers

	Count	Total Annual Benefit	Average Annual Benefit
Retired	13,790	$ 335,039,859	$ 24,296
Retired – Concurrent Beneficiaries	1,462	8,116,856	5,552
Disabilities / 1122	1	23,985	23,985
Disabilities / 3 and 3A	694	18,711,407	26,962
Beneficiaries	1,254	19,786,740	15,779
Pre-Retirement Death Benefits	279	1,546,270	5,542
Terminated Vested	4,186	26,286,166	6,280
Inactive Due Refund	29,534		

Non-Active Member Data as of June 30, 2013
State Regular

	Count	Total Annual Benefit	Average Annual Benefit
Retired	8,536	$ 168,132,053	$ 19,697
Retired – Concurrent Beneficiaries	1,095	5,448,494	4,976
Disabilities / 1122	3	47,708	15,903
Disabilities / 3 and 3A	902	19,843,186	21,999
Beneficiaries	1,782	22,465,868	12,607
Pre-Retirement Death Benefits	353	1,976,601	5,599
Terminated Vested	2,397	16,226,888	6,770
Inactive Due Refund	4,948		

APPENDIX A
MEMBERSHIP INFORMATION

Non-Active Member Data as of June 30, 2013
Special Plans

	Count	Total Annual Benefit	Average Annual Benefit
Retired	988	$ 29,641,011	$ 30,001
Retired – Concurrent Beneficiaries	165	951,029	5,764
Disabilities / 1122	2	38,434	19,217
Disabilities / 3 and 3A	82	2,214,242	27,003
Beneficiaries	225	3,442,872	15,302
Pre-Retirement Death Benefits	11	55,467	5,042
Terminated Vested	211	1,419,619	6,728
Inactive Due Refund	642		

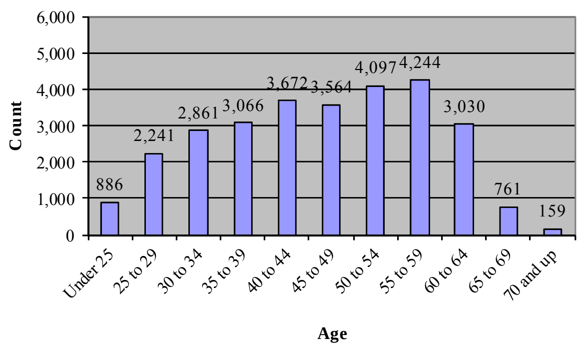
APPENDIX A
MEMBERSHIP INFORMATION

Distribution of Active Members
As of June 30, 2013

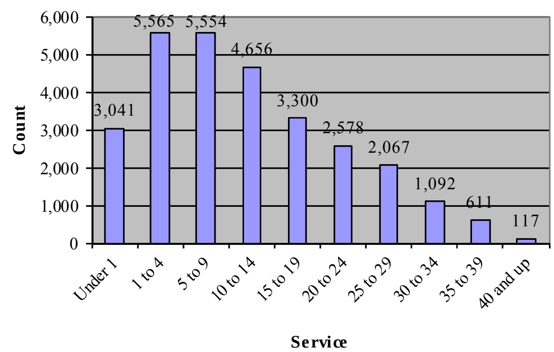
Teachers

	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	538	348		0	0	0	0	0	0	0	886
25 to 29	494	1,288	459		0	0	0	0	0	0	2,241
30 to 34	303	831	1,338	389		0	0	0	0	0	2,861
35 to 39	338	679	789	993	267		0	0	0	0	3,066
40 to 44	376	721	782	725	838	230		0	0	0	3,672
45 to 49	282	582	707	639	499	636	218	1	0	0	3,564
50 to 54	272	457	616	765	548	520	717	201	1	0	4,097
55 to 59	164	351	475	646	617	586	543	602	257	3	4,244
60 to 64	145	189	287	405	433	501	464	228	311	67	3,030
65 to 69	83	86	79	84	85	95	117	54	38	40	761
70 and up	46	33	22	10	13	10	8	6	4	7	159
Total	3,041	5,565	5,554	4,656	3,300	2,578	2,067	1,092	611	117	28,581

Age Distribution



Service Distribution



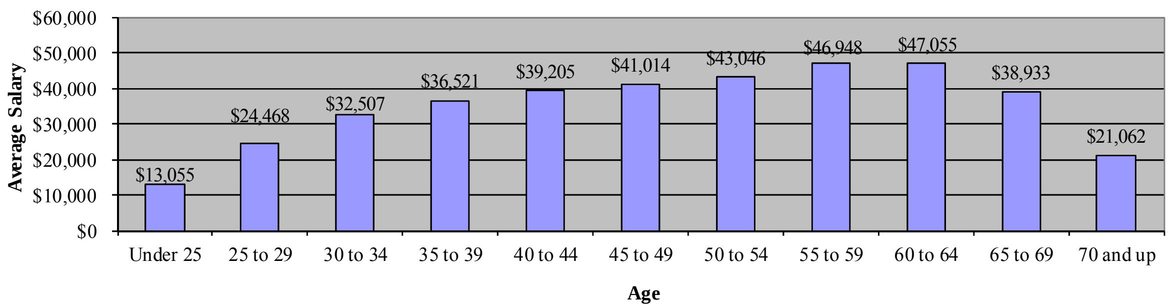
APPENDIX A
MEMBERSHIP INFORMATION

Distribution of Active Members
As of June 30, 2013

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	$ 5,422	$ 24,856	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 13,055
25 to 29	7,105	27,239	35,382	-	0	0	0	0	0	0	24,468
30 to 34	7,311	26,955	38,119	44,687	0	0	0	0	0	0	32,507
35 to 39	9,182	27,057	37,550	47,045	53,021	2	0	0	0	0	36,521
40 to 44	6,793	24,238	37,353	47,972	55,124	59,782	-	0	0	0	39,205
45 to 49	6,354	22,318	34,523	43,932	54,619	60,165	60,864	124,404	0	0	41,014
50 to 54	5,594	21,821	31,714	41,302	50,077	56,517	61,382	64,006	27,836	0	43,046
55 to 59	5,986	22,844	32,283	40,295	47,271	54,431	59,926	63,503	65,658	59,496	46,948
60 to 64	5,519	21,549	32,080	39,795	44,993	53,377	57,600	64,367	65,486	65,496	47,055
65 to 69	2,459	10,999	32,000	41,690	43,793	47,291	50,433	59,494	62,501	68,625	38,933
70 and up	1,504	6,790	19,641	39,670	29,904	38,690	67,363	47,518	43,238	64,876	21,062
Average	$ 6,468	$ 24,834	$ 35,565	$ 43,942	$ 50,850	$ 56,215	$ 59,499	$ 63,546	$ 65,165	$ 66,375	$ 38,931

Average Salary Distribution



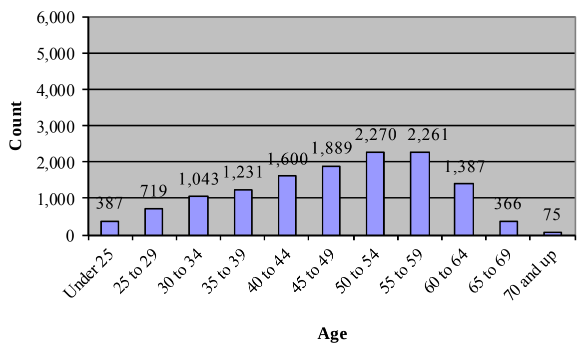
APPENDIX A
MEMBERSHIP INFORMATION

Distribution of Active Members
As of June 30, 2013

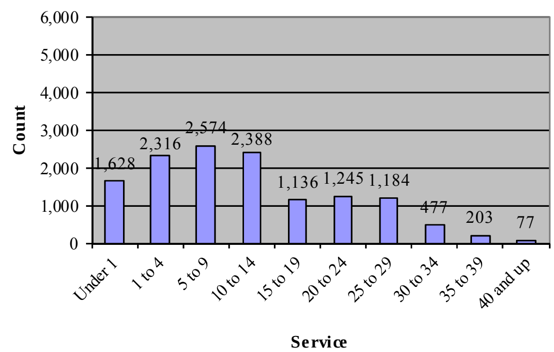
State

	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	291	94	2	0	0	0	0	0	0	0	387
25 to 29	234	335	146	4	0	0	0	0	0	0	719
30 to 34	197	336	385	125		0	0	0	0	0	1,043
35 to 39	152	270	348	382	78	1	0	0	0	0	1,231
40 to 44	176	281	361	383	250	133	16	0	0	0	1,600
45 to 49	175	273	343	374	222	292	203	7	0	0	1,889
50 to 54	149	274	363	415	198	317	399	138	17	0	2,270
55 to 59	138	253	338	399	223	274	320	202	101	13	2,261
60 to 64	86	150	225	227	118	175	194	96	70	46	1,387
65 to 69	25	44	54	64	38	47	40	27	11	16	366
70 and up	5	6	9	15	9	6	12	7	4	2	75
Total	1,628	2,316	2,574	2,388	1,136	1,245	1,184	477	203	77	13,228

Age Distribution



Service Distribution



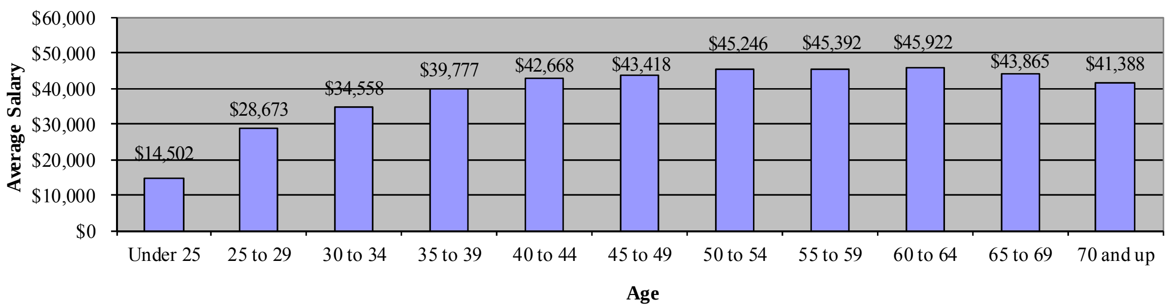
APPENDIX A
MEMBERSHIP INFORMATION

Distribution of Active Members
As of June 30, 2013

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	$ 9,847	$ 28,658	$ 26,506	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 14,502
25 to 29	15,265	34,464	36,480	43,053	0	0	0	0	0	0	28,673
30 to 34	15,219	35,070	41,067	43,609	0	0	0	0	0	0	34,558
35 to 39	15,001	36,337	40,985	48,432	52,036	51,917	0	0	0	0	39,777
40 to 44	16,410	36,253	41,344	48,283	56,595	50,556	56,496	0	0	0	42,668
45 to 49	13,686	36,025	41,567	46,999	52,020	53,364	51,589	49,669	0	0	43,418
50 to 54	14,105	35,491	41,785	46,715	51,100	52,125	53,698	52,842	56,936	0	45,246
55 to 59	13,317	35,863	42,314	44,275	51,371	51,519	51,648	57,156	54,170	49,017	45,392
60 to 64	13,446	37,776	42,122	47,036	50,793	50,483	52,427	57,515	54,925	51,103	45,922
65 to 69	8,316	30,418	37,561	43,671	48,679	53,494	49,769	62,987	55,483	63,696	43,865
70 and up	8,439	26,357	32,563	40,429	44,428	64,325	41,990	48,790	68,822	48,899	41,388
Average	$ 13,725	$ 35,327	$ 41,144	$ 46,619	$ 52,441	$ 51,994	$ 52,360	$ 56,078	$ 55,022	$ 53,310	$ 41,557

Average Salary Distribution

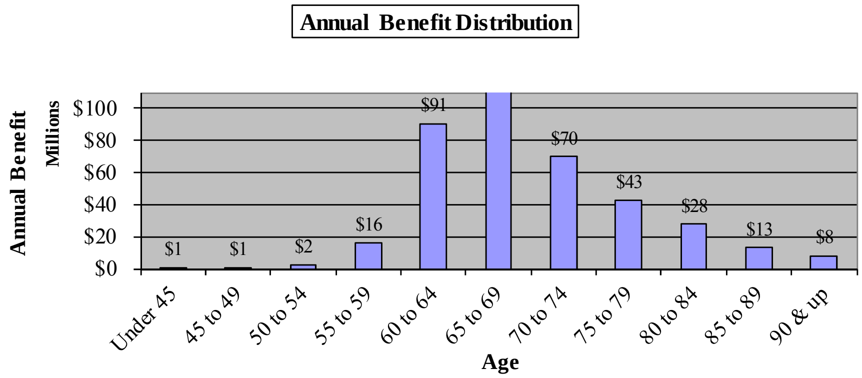


APPENDIX A
MEMBERSHIP INFORMATION

Distribution of Retirees, Disabled Members, Beneficiaries, and Survivors
As of June 30, 2013

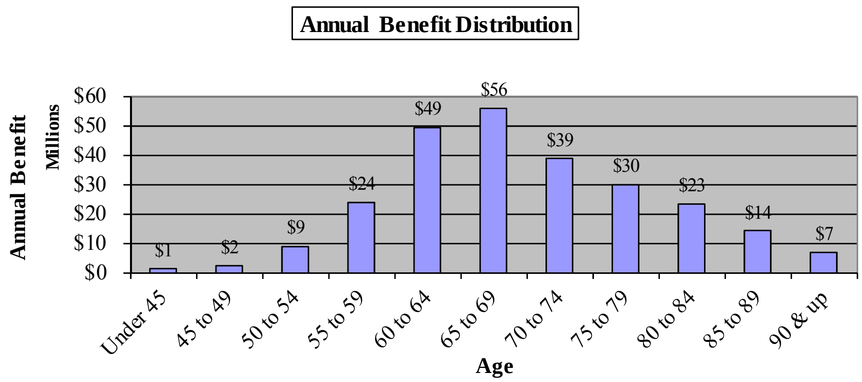
Teachers

Age	Count	Annual Benefit
Under 45	150	$ 881,294
45 to 49	62	667,331
50 to 54	128	2,337,850
55 to 59	666	16,064,794
60 to 64	3,510	90,539,120
65 to 69	4,747	111,606,105
70 to 74	3,219	69,808,132
75 to 79	2,122	42,607,154
80 to 84	1,517	27,596,110
85 to 89	806	12,941,159
90 & up	553	8,176,068
Total	17,480	$ 383,225,117



State

Age	Count	Annual Benefit
Under 45	155	$ 1,210,077
45 to 49	158	2,237,461
50 to 54	465	8,970,859
55 to 59	1,162	23,868,360
60 to 64	2,378	49,380,093
65 to 69	2,881	55,789,207
70 to 74	2,146	38,731,494
75 to 79	1,801	29,986,777
80 to 84	1,486	23,261,369
85 to 89	981	14,064,116
90 & up	531	6,757,150
Total	14,144	$ 254,256,964



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.

Contribution Requirements for Special State Employee Groups

State police, inland fisheries and wildlife officers, and marine resources 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; Inland Fisheries and Wildlife Officers and Marine Resource 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. *Airplane Pilots Employed Before 9/1/84*

Eligibility: Age 55 and 25 years of creditable service as an airplane pilot.

Benefit: Greater of (1) one-half of average final compensation plus 2% for each year of service earned after qualification for retirement, and (2) if retiring after age 60, the benefit under the general formula.

Form of Payment: Life annuity.

iv. *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.

APPENDIX B
SUMMARY OF PROGRAM AND PLAN PROVISIONS

v. 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.

vi. 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.

vii. 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.

APPENDIX B
SUMMARY OF PROGRAM AND PLAN PROVISIONS

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.

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.

APPENDIX B
SUMMARY OF PROGRAM AND PLAN PROVISIONS

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.

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

APPENDIX B
SUMMARY OF PROGRAM AND PLAN PROVISIONS

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.

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: 50% 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*.

APPENDIX B
SUMMARY OF PROGRAM AND PLAN PROVISIONS

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.

13. Changes since Prior Valuation:

None

APPENDIX C
ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

1. Rate of Investment Return:

State Employees	7.25%
Teachers	7.25%

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.

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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.

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

Cheiron received data from MainePERS using a new system this year. Using actual credited service and full time salary instead of using service based on membership date and W-2 salary resulted in some changes to the liability allocation by plan. This was largely due to the change in how participants were valued as to their membership in the age 60, age 62 or age 65 plans.

This year is the first in which a liability for inactive members who are due a refund of member contributions with interest was included in the System liability.

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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 15-year period, remaining as of this valuation date. 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.

3. Changes since Last Valuation:

None.