

***Maine State
Retirement System
Actuarial Valuation
as of June 30, 2001***

A MILLIMAN GLOBAL FIRM



Milliman USA
Consultants and Actuaries

December 2001

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December 8, 2001

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

Dear Members of the Board:

At your request, we have conducted our annual actuarial valuation of the Maine State Retirement System. The results of the valuation are contained in the following report.

The actuarial assumptions used in performing this valuation have been recommended by the actuary and adopted by the Board of Trustees based on Milliman's most recent review of the System's experience completed during Fiscal Year 1999. We believe the assumptions used, in the aggregate, reflect our best estimate of anticipated future experience of the plan. The results of this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from these assumptions, the true cost of the plan could vary from our results.

The assumptions and methods used in performing this valuation meet the parameters set by Government Accounting Standards Board (GASB) Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contributions Plans*.

In preparing our report we relied, without audit, on information (some oral and some written) supplied by the Retirement System. This information includes, but is not limited to, plan provisions, employee data, and financial information. Census data provided to us has been reviewed for reasonableness, and for consistency with prior year's data.

I, Gene Kalwarski, am a consulting actuary for Milliman USA. I am also a member of the American Academy of Actuaries and meet their Qualification Standards to render the actuarial opinion contained herein.

Board of Trustees
Maine State Retirement System
December 8, 2001
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I hereby certify that, to the best of my knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the applicable Guides to Professional Conduct, Amplifying Opinions, and Supporting Recommendations and Interpretations of the American Academy of Actuaries.

Sincerely,

MILLIMAN USA



Gene M. Kalwarski, F.S.A.
Principal

EMK/AUG/10

SECTION I

BOARD SUMMARY

BOARD SUMMARY

This report presents the results of the June 30, 2001 actuarial valuation of the Maine State Retirement System (MSRS). The primary purposes of performing the annual actuarial valuation are to:

- 1) **determine the contributions** to be paid by the State in Fiscal Year 2003;
- 2) **measure and disclose**, as of the valuation date, the financial condition of the fund;
- 3) **indicate trends** in the financial progress of the fund;
- 4) **provide specific information** and documentation required by the Government Accounting Standards Board (GASB).

In this section of the report, we will present a summary of the above information in the form of:

- the actuary's comments;
- the prior year's experience of the System's assets, liabilities, contributions, and membership;
- a series of graphs highlighting key trends experienced by the System; and
- a tabular summary, intended for quick reference purposes, of all the principal results from this year's valuation, compared to the prior year's.

Actuary's Comments

As a result of Systems assets earning a negative return, **(7.83%)**, considerably below the 8% assumption, the System has a total unfunded actuarial liability of **\$2,157** million as of June 30, 2001 compared to an unfunded actuarial liability of **\$1,996** million measured at the June 30, 2000 valuation. This experience in turn also produced an increase in the State contribution of 1.00% of payroll, from **16.30%** in 2000, to **17.30%** this year.

However, thanks to the System's asset smoothing method, which discounted much of the prior decade's asset run-up, the resulting impact from this year's investment performance was minimized. The actuarial, or smoothed, rate of return measured from this past year was a positive **5.2%**, or only 2.8% less than our assumption. This explains why the overall System funding ratio of assets to liabilities decreased only slightly from **73.6%** in 2000, to **72.9%** this year.

The State contribution increase was mainly attributable to the investment loss, on a smoothed basis, of **\$156 million**. Combined with a liability loss of **\$15** million, due largely to pay increases above assumed levels, this resulted in a System plan experience net loss of **\$171** million.

Finally, while the results are not on the favorable side this year, we emphasize again, as we have so often in the past, that financing of any retirement system is a long term proposition, and that annual fluctuations are to be expected, and should not by themselves be cause for concern. We continue to maintain that the overall System's financial condition is healthy, and that there are procedures, assumptions and methods

BOARD SUMMARY

in place, which in our opinion adequately and appropriately finance the emerging long-term liabilities of the System.

The balance of this section summarizes System trends, and provides the principal details on this year's experience.

Prior Year Experience

ASSETS

Plan assets for this Fund are measured on both a market value and an actuarial or smoothed value basis. The actuarial smoothing method, described in detail in Appendix B, essentially reflects only 33% of a current year's actual market performance. In periods of high returns, this method significantly discounts the amount of asset gains above the assumed return of 8%. Conversely, in periods of returns below assumed, the losses are discounted. The primary advantage of this smoothing technique is contribution stability.

As stated earlier, for the plan year ending June 30, 2001, while the Fund earned a negative **7.83%** on a market value basis, on a smoothed basis, the return was a positive **5.18%**. While on a market basis, the total Fund (including PLD's) experienced an investment loss of **\$1,200** million, the actuarial or smoothed basis produced a loss of **\$198** million. The specific changes between the prior year amounts and this year's are presented below.

Item (In Millions)	Market Value	Actuarial Value
June 30, 2000 value	\$7,589	\$7,027
Employer Contributions	262	262
Member Contributions	116	116
Benefit Payments	(380)	(380)
Expected Investment Earnings (8%)	607	563
Expected Value June 30, 2001	\$8,194	\$7,588
INVESTMENT GAIN (LOSS)	(1,200)	(198)
June 30, 2001 value	\$6,994	\$7,390

Note: The actuarial value of assets is calculated on the total fund. This report primarily covers only the State Regular, State Special and Teachers plans. The market value attributable to plans contained in this report is **\$5,491** million and the corresponding actuarial value of assets is **\$5,802** million. Their share of the \$198 million loss on actuarial assets amounts to **\$156** million. The remainder is allocated amongst the PLD, Legislative and Judicial Plans.

LIABILITIES

Three different measures of liabilities are calculated for this fund: a total value of future obligations (PVB), an actuarial liability (EAN), and an accounting liability (PVAB). Section III of this report describes the development of each. Only the actuarial liability is analyzed in terms of a gain or loss experience, which then is used to determine the System's funding and accounting (GASB) disclosures. During the plan year ending in 2001, the actuarial liabilities experienced an overall loss of **\$15 million**, which is **0.2%** of the total actuarial liability being measured. The primary cause for liability experience being worse than anticipated this past year, were pay increases. We will continue to monitor gains and losses to ensure there is no significant pattern.

LIABILITIES (In Millions)	Total Value (PVB)	Actuarial (EAN)	Accounting (PVAB)
June 30, 2000	\$8,794	\$7,454	\$5,913
June 30, 2001	\$9,340	\$7,959	\$6,393

UNFUNDED LIABILITIES AND FUNDING RATIOS

The difference between assets and liabilities is the unfunded liability. This is measured in two ways: unfunded *actuarial* liabilities, which compare the actuarial liabilities to the actuarial asset value, and unfunded *accrued* benefits, which compare the present value of benefits accrued as of the valuation date to the market value of assets. These amounts are shown for June 30, 2000 and June 30, 2001, as well as the corresponding funding ratios for each (assets divided by liabilities).

(In Millions)	Actuarial	PVAB
6/30/2000 Net Surplus (Unfunded)	\$1,966	(\$13)
Funding Ratio	73.6%	100.2%
6/30/2001 Net Surplus (Unfunded)	\$2,157	\$902
Funding Ratio	72.9%	85.9%

Note to discuss: Should we elaborate on the PVAB funding ratio reduction being larger than the GASB funding ratio?

CONTRIBUTIONS

In Section IV, we show the various contribution rates by system. In this summary, we present overall the State contribution rate, and compare it to the rate developed in the June 30, 2000 actuarial valuation. In summary, due to both investment losses and liability losses, the overall System contribution rate has increased by **1.00%** of payroll. It is important to note that the results of this interim-year valuation will not be applied to the State's budget. The June 30, 2002 valuation will set rates for the next biennium.

Rate as Percent of Covered Payroll	
June 30, 2000 State Rate	16.30%
Increase due to Investment Loss	0.80%
Increase due to Liability Loss	0.20%
June 30, 2001 State Rate	17.30%

MEMBERSHIP

There are three types of plan participants, current active workers, previous terminations who retain a right to a deferred vested benefit, and participants in pay status. In Appendix A, we present extensive details on membership statistics. Below, we compare totals in each group between June 30, 2000 and 2001.

As shown below, there was an overall increase in participation during the year of **2%**.

	6/30/2001	6/30/2000	Change
Active Participants	42,575	42,023	1.3%
Terminated Vested Participants	1,894	1,606	17.9%
Participants In Pay Status	22,819	22,306	2.3%
TOTAL PARTICIPANTS	67,288	65,935	2.1%

Trends

One of the best ways to measure or evaluate the financial condition of a pension plan, is to examine the historical trends that are evolving. Below, we present three charts which present trend information from 1993 through the end of 2001, on the System's assets and liabilities, annual cash flows in an out of the fund, and the State contribution rate. Our comments on each follow.

Chart A: ASSET / LIABILITIES

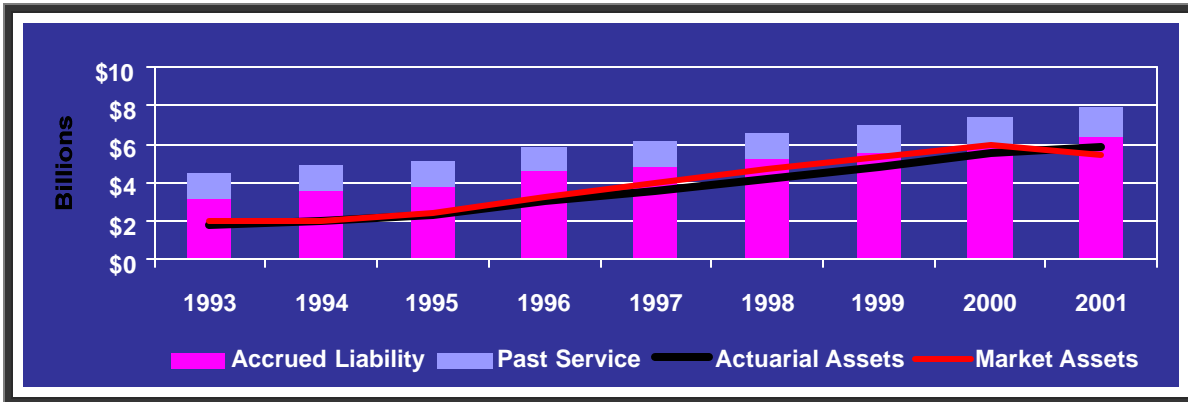


Chart B: CASH FLOWS

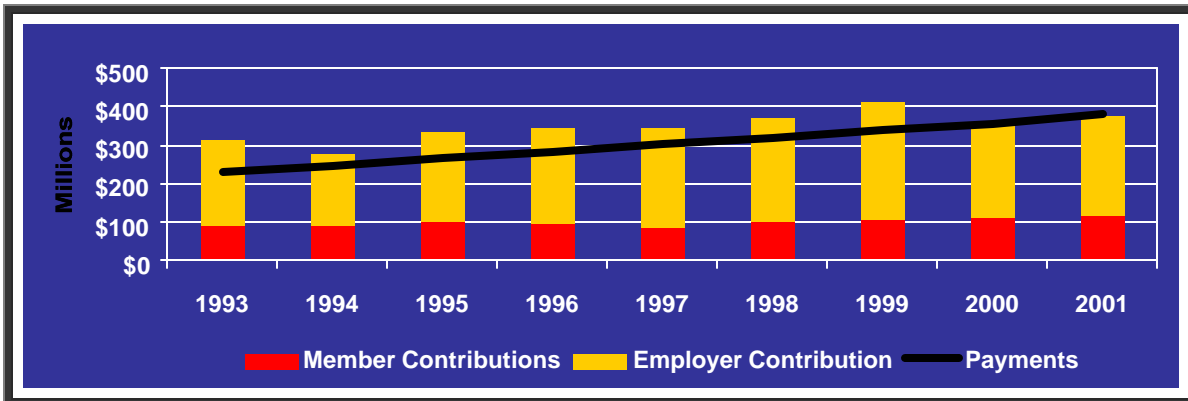
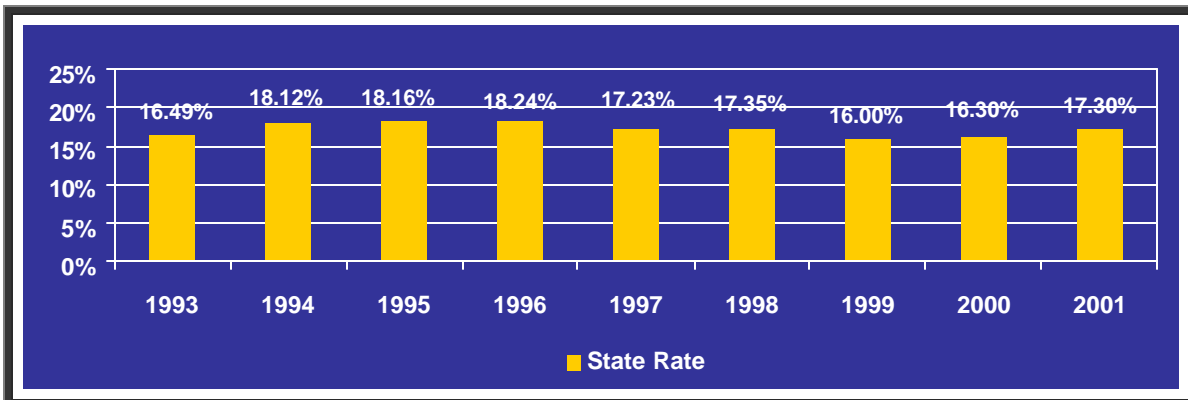


Chart C: STATE CONTRIBUTION RATE



Comments

Chart A places depicts the aforementioned investment and liability performance losses of this past year. Despite those losses, the ratio of assets to liabilities, which have continuously grown, not just over the period in the chart but since early 1980's, are as of this year, the second best ever for the State.

Chart B presents an emerging trend that will have investment implications. It is a trend being faced by many state-wide retirement systems, with the aging of our baby boomer generations. Payments to retirees are on the increase. While cash into the fund, from employer and employee contributions are stable or declining. This is not unanticipated, and essentially explains the past need for total fund buildup.

Finally, Chart C, looks only at the State contribution rate which is used each year to determine the upcoming fiscal year State appropriation. It shows the impact of the past decade's sustained investment gains. Even after the market downturn, this year's rate is still within the normal range contribution rates over the past decade.

BOARD SUMMARY

TOTAL MSRS (EXCLUDES PLDs)			
SUMMARY OF PRINCIPAL PLAN RESULTS			
Valuation As Of -->	6/30/2001	6/30/2000	% change
PARTICIPANT COUNTS			
ACTIVES	42,575	42,023	1.3%
RETIRED MEMBERS	15,563	15,295	1.8%
BENEFICIARIES OF RETIREES	4,605	4,469	3.0%
SURVIVORS OF DECEASED MEMBERS	908	920	(1.3%)
DISABLED MEMBERS	1,743	1,622	7.5%
VESTED DEFERRED MEMBERS	<u>1,894</u>	<u>1,606</u>	17.9%
TOTAL	67,288	65,935	2.1%
Annual Salaries of Active Members	\$1,318,999,535	\$1,263,818,345	4.4%
Annual Retirement Allowances for Members in Pay Status	\$ 308,844,558	\$286,252,637	7.9%
ASSETS & LIABILITIES			
Total Actuarial Liability	\$7,958,809,863	\$ 7,453,914,536	6.8%
Assets for Valuation Purposes	<u>5,801,422,994</u>	<u>5,487,720,169</u>	5.7%
Unfunded Actuarial Liability	\$2,157,386,869	\$ 1,966,194,367	9.7%
Funding Ratio	72.89%	73.62%	N/A
Present Value of Accrued Benefits	\$ 6,393,493,572	\$ 5,913,174,325	8.1%
Market Value of Assets	<u>5,490,520,609</u>	<u>5,926,693,594</u>	(7.4%)
Unfunded FASB Accrued Liability	\$ 902,972,963	(\$ 13,519,269)	678%
Accrued Benefit Funding Ratio	112.0%	100.23%	N/A
CONTRIBUTIONS AS % OF PAYROLL			
	Fiscal Year 2003	Fiscal Year 2002	
Normal Cost Contribution	6.16%	6.16%	0.0%
Unfunded Actuarial Liability Contribution	<u>11.14</u>	<u>10.14</u>	9.9%
Total State Contribution	17.30%	16.30%	6.1%

BOARD SUMMARY

TEACHERS			
SUMMARY OF PRINCIPAL PLAN RESULTS			
Valuation As Of -->	6/30/2001	6/30/2000	% change
PARTICIPANT COUNTS			
ACTIVES	27,905	27,503	1.5%
RETIRED MEMBERS	8,541	8,344	2.4%
BENEFICIARIES OF RETIREES		1,729	
SURVIVORS OF DECEASED MEMBERS		311	
DISABLED MEMBERS	674	626	7.7%
VESTED DEFERRED MEMBERS	<u>1,092</u>	<u>914</u>	19.5%
TOTAL	40,340	39,427	2.3%
Annual Salaries of Active Members	\$ 843,950,689	\$ 817,116,771	3.3%
Annual Retirement Allowances for Retired Members and Beneficiaries	\$ 170,243,549	\$ 156,066,088	9.1%
ASSETS & LIABILITIES			
Total Actuarial Liability	\$5,102,063,770	\$ 4,792,441,102	6.5%
Assets for Valuation Purposes	<u>3,509,918,347</u>	<u>3,283,102,199</u>	6.9%
Unfunded Actuarial Liability	\$ 1,592,145,423	\$ 1,509,338,903	5.5%
Funding Ratio	68.79%	68.51%	N/A
Present Value of Accrued Benefits	\$3,970,997,626	\$3,671,756,408	8.1%
Market Value of Assets	<u>3,321,819,326</u>	<u>3,545,723,938</u>	(6.3%)
Unfunded FASB Accrued Liability	\$ 649,178,300	\$ 126,032,470	515%
Accrued Benefit Funding Ratio	83.65%	96.57%	N/A
CONTRIBUTIONS AS % OF PAYROLL			
	Fiscal Year 2003	Fiscal Year 2002	
Normal Cost Contribution	6.04%	6.04%	0.0%
Unfunded Actuarial Liability Contribution	<u>12.84</u>	<u>12.05</u>	6.6%
Total State Contribution	18.88%	18.09%	4.4%

BOARD SUMMARY

TOTAL STATE (Regular and Special Plans)			
SUMMARY OF PRINCIPAL PLAN RESULTS			
Valuation As Of -->	6/30/2001	6/30/2000	% change
PARTICIPANT COUNTS			
ACTIVES	14,670	14,520	1.0%
RETIRED MEMBERS	7,022	6,951	1.0%
BENEFICIARIES OF RETIREES	2,785	2,740	1.6%
SURVIVORS OF DECEASED MEMBERS	600	609	1.5%
DISABLED MEMBERS	1,069	996	7.3%
VESTED DEFERRED MEMBERS	<u>802</u>	<u>692</u>	15.9%
TOTAL	26,946	26,508	1.7%
Annual Salaries of Active Members	\$ 475,048,847	\$ 446,701,574	6.3%
Annual Retirement Allowances for Retired Members and Beneficiaries	\$ 139,601,009	\$ 130,186,549	7.2%
ASSETS & LIABILITIES			
Total Actuarial Liability	\$2,856,746,093	\$ 2,661,473,434	7.3%
Assets for Valuation Purposes	<u>2,291,594,647</u>	<u>2,204,617,970</u>	3.9%
Unfunded Actuarial Liability	\$ 565,261,186	\$ 456,855,464	23.7%
Funding Ratio	80.21%	82.83%	N/A
Present Value of Accrued Benefits	\$2,422,495,946	\$ 2,241,417,917	8.6%
Market Value of Assets	<u>2,168,701,283</u>	<u>2,380,969,656</u>	8.1%
Unfunded FASB Accrued Liability	\$ 253,794,633	(\$ 139,551,739)	282%
Accrued Benefit Funding Ratio	89.52%	106.23%	N/A
CONTRIBUTIONS AS % OF PAYROLL			
	Fiscal Year 2003	Fiscal Year 2002	
Normal Cost Contribution	6.38%	6.39%	(0.2%)
Unfunded Actuarial Liability Contribution	<u>8.10</u>	<u>6.67</u>	21.4%
Total State Contribution	14.48%	13.06%	10.9%

BOARD SUMMARY

STATE REGULAR			
SUMMARY OF PRINCIPAL PLAN RESULTS			
Valuation As Of -->	6/30/2001	6/30/2000	% change
PARTICIPANT COUNTS			
ACTIVES	12,831	12,703	1.0%
RETIRED MEMBERS	6,375	6,321	0.9%
BENEFICIARIES OF RETIREES	2,530	2,497	1.3%
SURVIVORS OF DECEASED MEMBERS	596	609	(2.1%)
DISABLED MEMBERS	1,050	984	6.7%
VESTED DEFERRED MEMBERS	<u>802</u>	<u>692</u>	15.9%
TOTAL	24,184	23,806	1.6%
Annual Salaries of Active Members	\$ 405,661,653	\$ 383,842,691	5.7%
Annual Retirement Allowances for Retired Members and Beneficiaries	\$ 121,997,834	\$ 113,953,054	7.1%
ASSETS & LIABILITIES			
Total Actuarial Liability	\$ 2,433,381,539	\$ 2,207,256,873	10.2%
Assets for Valuation Purposes	<u>1,976,450,779</u>	<u>1,899,143,726</u>	4.1%
Unfunded Actuarial Liability	\$ 456,930,760	\$ 371,113,147	23.1%
Funding Ratio	81.22%	83.65	N/A
Present Value of Accrued Benefits	\$ 2,039,057,299	\$ 1,888,565,666	8.0%
Market Value of Assets	<u>1,870,531,375</u>	<u>2,051,059,932</u>	(8.8%)
Unfunded FASB Accrued Liability	\$ 168,525,924	(\$ 162,494,266)	204%
Accrued Benefit Funding Ratio	91.74%	108.60%	N/A
CONTRIBUTIONS AS % OF PAYROLL			
	Fiscal Year 2003	Fiscal Year 2002	
Normal Cost Contribution	6.04%	6.04%	0.0%
Unfunded Actuarial Liability Contribution	<u>7.67</u>	<u>6.30</u>	21.8%
Total State Contribution	13.71%	12.34%	11.1%

BOARD SUMMARY

COMPOSITE SPECIALS			
SUMMARY OF PRINCIPAL PLAN RESULTS			
Valuation As Of -->	6/30/2001	6/30/2000	% change
PARTICIPANT COUNTS			
ACTIVES	1,839	1,817	1.2%
RETIRED MEMBERS	647	630	2.7%
BENEFICIARIES OF RETIREES	259	243	6.6%
SURVIVORS OF DECEASED MEMBERS	4	0	N/A
DISABLED MEMBERS	19	12	58.3%
VESTED DEFERRED MEMBERS	<u>0</u>	<u>0</u>	0.0%
TOTAL	2,764	2,702	2.3%
Annual Salaries of Active Members	\$ 69,387,194	\$ 62,858,883	10.4%
Annual Retirement Allowances for Retired Members and Beneficiaries	\$ 17,603,175	\$ 16,233,495	8.4%
ASSETS & LIABILITIES			
Total Actuarial Liability	\$ 423,364,554	\$ 391,216,561	8.2%
Assets for Valuation Purposes	<u>315,053,868</u>	<u>305,474,244</u>	3.1%
Unfunded Actuarial Liability	\$ 108,310,686	\$ 85,742,317	26.3%
Funding Ratio	74.42%	78.08%	N/A
Present Value of Accrued Benefits	\$ 383,438,647	\$ 352,852,251	8.7%
Market Value of Assets	<u>298,169,908</u>	<u>329,909,724</u>	(9.6%)
Unfunded FASB Accrued Liability	\$ 85,268,739	\$ 22,942,527	372%
Accrued Benefit Funding Ratio	77.76%	93.50	N/A
CONTRIBUTIONS AS % OF PAYROLL			
	Fiscal Year 2003	Fiscal Year 2002	
Normal Cost Contribution	8.37%	8.52%	(1.8%)
Unfunded Actuarial Liability Contribution	<u>10.63</u>	<u>8.89</u>	19.6%
Total State Contribution	19.00%	17.41%	9.1%

SECTION II

ASSETS

Pension plan assets play a key role in the financial operation of the plan and in the decisions the Trustees may 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 upon benefit levels, negotiated contributions, and the ultimate security of participants' benefits.

In this section we present detailed information on plan assets including:

- **Disclosure** of plan assets at June 30, 2001 and June 30, 2000;
- Statement of the **changes** in market values during the year;
- Development of the Actuarial Value of Assets; and
- An assessment of **investment performance**.

Disclosure:

Market values represent "snap-shot" or "cash-out" values which provide the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the market place. As a result, market values are usually not suitable for long range planning.

Actuarial values, or "carrying values," are market values which have been smoothed and are the actuary's best estimate of long term asset values. They are used for evaluating the Fund's ongoing ability to meet its obligations.

Current methods employed by this Fund set the actuarial values equal to the expected adjusted market value plus 33% of the difference between a smoothed value of assets and the actual market value.

Disclosure of Plan Market Value Of Assets

STATEMENT OF ASSETS AT MARKET VALUE (In Millions)			
		June 30,	
		2001	2000
INVESTMENTS			
Equities	\$	4,370	\$ 4,978
Fixed Income		2,622	2,607
Real Estate		<u>2</u>	<u>4</u>
Total Investments	\$	6,994	\$ 7,589
OTHER ASSETS			
Other Assets	\$	0	\$ 0
Net Assets Available for Benefits	\$	6,994	\$ <u>7,589</u>

Changes in Market Value:

The components of asset change are:

- Contributions
- Benefit payments
- Expenses
- Investment Income (realized and unrealized)

The specific changes during 2001 are presented below:

CHANGES IN MARKET VALUES	
Value of Assets – JUNE 30, 2000	\$7,589,357,682
RECEIPTS	
Member Contributions	\$ 116,032,261
Employer Contributions	<u>261,845,196</u>
Total Receipts	\$ 377,877,457
DISBURSEMENTS	
Benefit Payments	\$ 379,522,223
Investment Returns	<u>594,165,770</u>
Total	\$ 973,687,993
Disbursements	
TOTAL	
Value of Assets – June 30, 2001	\$6,993,547,146

Actuarial Value of Assets:

The Actuarial Value of Assets represents a "smoothed" value developed by the actuary to reduce, or eliminate, erratic results which could develop from short term ups and downs in the Market Value of Assets. For this Fund, the Actuarial Value has been calculated by adding 33% of any deviation from Market Value and Expected Adjusted Market Value to the Expected Adjusted Market Value. The following table illustrates the calculation of the Actuarial Value of Assets for the June 30, 2001 valuation.

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS AS OF JUNE 30, 2001	
1. Actuarial Value of Assets at June 30, 2000	\$ 7,027,235,433
2. Amount in (1) with interest to June 30, 2001	7,589,414,268
3. Employer & member contributions for the Plan Year ended June 30, 2001	377,877,457
4. Interest on Employer contributions assuming payments made uniformly throughout the year to June 30, 2001	15,115,098
5. Disbursements from Trust except investment expenses, June 30, 2000 through June 30, 2001	379,522,223
6. Interest on disbursements to June 30, 2001 at 8.00% per year	15,180,889
7. Expected adjusted Market Value of Assets at June 30, 2001 = (2) + (3) + (4) - (5) - (6)	7,587,703,711
8. Actual Market Value of Assets at June 30, 2001	6,993,547,146
9. Excess of (8) over (7)	(594,156,565)
10. Actuarial Value of Assets at June 30, 2001 = (7) + 33% of (9)	\$7,389,558,863

Investment Performance:

The Market Value of Assets (MVA) returned (7.83%) during 2001. This is lower than the assumed 8% and is due to the poor asset performance in 2001.

A return of 5.18% on the Actuarial Value of Assets (AVA) is primarily the result of the Asset Valuation method being utilized for the calculation of the Actuarial Value of Assets. Since only 33% of the "gain" from the performance of the Fund is recognized in a given year, in periods of very good performance, the AVA can lag significantly behind the MVA. However, due to the period of poor performance, we see the benefit of using an actuarial smoothing method, in that the AVA investment return remains stable compared to the final assumption and last year's return.

SECTION III

LIABILITIES

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

- **Disclosure** of plan liabilities at June 30, 2001 and June 30, 2000;
- Statement of **changes** in these liabilities during the year; and
- A **projection** of future liabilities.

Disclosure:

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures, and the purpose for which they are using them.

- **Total Future Obligations:** Used for analyzing the financial outlook of the System, this represents the amount of money needed today to fully pay off all future benefits and expenses of the System, assuming participants continue to accrue benefits.
- **Actuarial Liabilities:** Used for funding calculations and GASB disclosures, this liability is calculated by taking the Total Obligations above and subtracting the present value of future Member Contributions and future Employer Normal Costs under an acceptable actuarial funding method. This method is referred to as the **Entry Age Normal** funding method.
- **Accrued Liabilities:** Used for communicating the current level of liabilities, this liability represents the total amount of money needed today to fully pay off the current accrued obligations of the fund, assuming no future accruals of benefits. These liabilities are also required for accounting purposes (FAS 35) and used to assess whether the plan can meet its current benefit commitments.

LIABILITIES

The table below discloses each of these liabilities for the current, and prior, valuation. With respect to each disclosure, a subtraction of the appropriate value of System assets yields, for each respective type, a **net surplus** or an **unfunded liability**.

LIABILITIES/NET SURPLUS (UNFUNDED)	6/30/2001	6/30/2000
Total Obligations		
Active Participant Benefits	\$ 5,840,233,305	\$5,621,982,134
Retiree and Inactive Benefits	3,499,338,199	3,172,453,849
Total Obligations	\$ 9,339,571,504	\$8,794,435,983
Market Value of Assets	5,490,520,609	5,926,693,594
Future Member Contributions	770,137,523	747,624,361
Future State Contributions	3,078,913,372	2,120,118,028
Total Resources	\$ 9,339,571,504	\$8,794,435,983
Actuarial Liability		
Total Liabilities	\$ 9,339,571,504	\$8,794,435,983
Present Value of Future Normal Costs Under Entry Age Method	610,624,118	592,897,086
Present Value Of Future Member Contributions	770,137,523	747,624,361
Actuarial Liability	\$ 7,958,809,863	\$7,453,914,536
Actuarial Value of Assets	5,801,422,994	5,487,720,169
Net (Surplus) Unfunded	\$ 2,157,386,869	\$ 1,966,194,367
Accrued Liability		
Total Liabilities	\$ 9,339,571,504	\$8,794,435,983
Less Present Value of Future Benefit Accruals	(2,946,077,932)	(2,881,261,658)
Accrued Liability	\$ 6,393,493,572	\$5,913,174,325
Market Value of Assets	5,490,520,609	5,926,693,594
Net (Surplus) Unfunded	\$ 902,972,963	(\$ 13,519,269)

Changes in Liabilities:

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

- new hires since the last valuation
- benefits accrued since the last valuation
- plan amendments increasing 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 or investment assumptions
- a change in the actuarial funding method

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

- employer contributions different than expected
- investment earnings 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 fund. Below we present the key changes in liabilities since the last valuation.

	\$ in Millions		
	TOTAL OBLIGATION	ACTUARIAL LIABILITY	ACCRUED LIABILITY
Liabilities 6/30/2000	\$ 8,794	\$ 7,454	\$ 5,913
Liabilities 6/30/2001	\$ 9,340	\$ 7,959	\$ 6,393
Liability Increase (Decrease)	\$ 546	\$ 505	\$ 480
Change due to:			
Plan Amendment	\$ 0	\$ 0	\$ 0
Assumption Change	\$ 0	\$ 0	\$ 0
Actuarial (Gain)/Loss	N/A	\$ 15	N/A
Benefits Accumulated and Other Sources	\$ 546	\$ 490	\$ 480

LIABILITIES

ACTUARIAL LIABILITY BY EMPLOYER AS OF JUNE 30, 2001

	Total Systems	Teachers	State Regular	Special Plans
1. Actuarial Liabilities for:				
a. Active Members	\$4,459,471,664	\$3,108,182,524	\$1,147,029,622	\$204,259,518
b. Retired, Disabled and Beneficiary Members	3,374,950,025	1,911,731,068	1,244,113,921	219,105,036
c. Vested Deferred and Inactive Status Members	<u>124,388,174</u>	<u>82,150,178</u>	<u>42,237,996</u>	<u>0</u>
1. Total Actuarial Liability (1(a) + 1(b) + 1(c))	\$7,958,809,863	\$5,102,063,770	\$2,433,381,539	\$423,364,554
3. Actuarial Value of Assets	<u>5,801,422,994</u>	<u>3,509,918,347</u>	<u>1,976,450,779</u>	<u>315,053,868</u>
4. Unfunded Actuarial Liability (2 – 3)	<u>\$ 2,157,386,869</u>	<u>\$ 1,592,145,423</u>	<u>(\$ 456,930,760)</u>	<u>(\$108,310,686)</u>

SECTION IV

CONTRIBUTIONS

CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to properly maintain the funding status of the Plan. Typically, the actuarial process will utilize a funding scheme that will result in a pattern of contributions that are both stable and predictable.

For this System, the funding scheme employed is the **Entry Age Actuarial Cost Method**. Under this method there are two components to the total contribution, a **normal cost**, and an **amortization payment**. A normal cost is determined for each individual participant which, when added up for all participants, represents the System's total normal cost. Each year's normal cost represents the cost to fund that portion of the total future obligations which has been allocated to the current year, based upon the actuarial cost method in use.

The amortization payment, on the other hand, is not calculated for individual participants but calculated for the System as a whole, and represents an annual installment to fund the **unfunded actuarial liability (UAL)** for the System. The UAL represents the amount of additional funds that would have been accumulated by the valuation date, had all prior normal costs been made, and all actuarial assumptions been realized.

In Appendix B we describe more fully this technical topic.

The table below presents and compares the actuarially determined contributions for the System for this valuation and the prior one, and includes a calculation of the average annual normal cost per participant for each year.

ACTUARIALLY DETERMINED CONTRIBUTION	7/1/2001	7/1/2000
Entry Age Normal Cost	6.16%	6.16%
Amortization Payment	<u>11.14%</u>	<u>(10.14%)</u>
Actuarially Determined Contribution	17.30%	16.30%

On the following pages we display the contribution rates developed for each System.

**TABLE IV-1
STATE CONTRIBUTION RATES
FISCAL YEAR 2003 – ENTRY AGE NORMAL**

	Total State	Teachers	State Regular	State Police Marine Resources Inland Fish & Wildlife (Closed Plans)	Prison Employees	Liquor Inspectors	Forest Rangers	State Police (25 & Out)	1998 Special Plan
New Entrant Normal Contributions as Percent of Payroll	6.16	6.04%	6.04%	17.84%	9.04%	8.24%	7.34%	9.15%	6.89%
Unfunded Actuarial Liability Contribution as Percent of Payroll	<u>11.14</u>	<u>12.84</u>	<u>7.67</u>	<u>22.65</u>	<u>11.48</u>	<u>10.46</u>	<u>9.32</u>	<u>11.62</u>	<u>8.75</u>
Total Contributions as Percent of Payroll	<u>17.30%</u>	<u>18.88%</u>	<u>13.71%</u>	<u>40.49%</u>	<u>20.52%</u>	<u>18.70%</u>	<u>16.66%</u>	<u>20.77%</u>	<u>15.64%</u>

CONTRIBUTIONS

**TABLE IV-2
DERIVATION OF UNFUNDED ACTUARIAL LIABILITY RATES**

Valuation Date June 30	Teachers	State Regular	State Police, Marine Resource & Inland Fish	Prison Employees	Liquor Inspectors	Forest Rangers	Police 20 & Out	1998 Special Plan
1. Present Value of Future Benefits	6,020,457,080	2,839,481,368	236,580,515	43,543,031	4,550,390	23,089,037	30,526,723	141,353,360
2. Normal Cost Rate	6.04%	6.04%	17.84%	9.04%	8.24%	7.34%	9.15%	6.89%
3. Present Value of Future Payroll	6,708,497,522	2,966,397,577	4,336,656	5,311,868	833,657	4,194,131	76,648,416	255,685,490
4. Present Value of Future Normal Cost (2) x (3)	405,193,250	179,170,414	773,659	480,193	68,693	307,859	7,013,330	17,616,730
5. Present Value of Future Member Contributions	513,200,060	226,929,415	375,121	459,477	63,775	362,792	6,630,088	22,116,795
6. Actuarial Liability: (1) – (4) – (5)	5,102,063,770	2,433,381,539	235,431,735	42,603,361	4,417,922	22,408,396	16,883,305	101,619,835
7. Actuarial Value of Assets	3,509,918,347	1,976,450,779	213,360,451	37,543,548	3,973,022	20,291,484	(173,467)	40,058,829
8. Unfunded Actuarial Liability: (6) – (7)	1,592,145,423	456,930,760	22,071,284	5,059,813	444,900	2,116,912	17,056,772	61,561,006
9. Estimated Payroll	843,950,689	405,661,653	6,634,930	3,001,716	289,560	1,546,715	9,997,222	47,917,051
10. Amortization Factor	14.6870	14.6870	14.6870	14.6870	14.6870	14.6870	14.6870	14.6870
11. – Unfunded Actuarial Liability Rate: (8)/(9)/(10)	12.84%	7.67%	22.65%	11.48%	10.46%	9.32%	11.62%	8.75%

SECTION V

**ACCOUNTING STATEMENT
INFORMATION**

ACCOUNTING STATEMENT INFORMATION

Statement No. 35 of the Financial Accounting Standards Board requires the System to disclose certain information regarding its funded status. Statement No. 25 of the Governmental 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-35 disclosures provide a quasi “snap shot” view of how the plan’s assets compare to its liabilities if contributions stopped 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 the plan 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-35) and the actuarial accrued liability (GASB-25) are determined assuming that the plan is on going and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities are discounted at the assumed valuation interest rate of 8% per annum.

FASB Statements No. 35 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 #25 requires the actuarial accrued liability be compared with the actuarial value of assets for funding purposes. The relevant amounts as of June 30, 2001 are exhibited in Table V-1, Table V-2, and Table V-3. As directed by FASB-35, the liabilities shown in Section A of Table V-1 and Table V-2 do not include any projection for future service and salary. Finally, Table V-4 reconciles the FASB-35 liabilities determined as of the prior valuation, June 30, 2000, to the liabilities as of June 30, 2001.

ACCOUNTING STATEMENT INFORMATION

**TABLE V-1
ACCOUNTING STATEMENT INFORMATION
THE TOTAL SYSTEMS OF THE STATE OF MARYLAND**

	2001	2000
A. FASB #35 Basis		
1. Present Value of Benefits Accrued to Date:		
a. Members Currently Receiving Payments	\$3,374,950,025	\$3,086,703,816
b. Former Vested Members	124,388,174	85,750,033
c. Active Members	<u>2,894,155,373</u>	<u>2,740,720,476</u>
2. Total Present Value of Accrued Benefits (1(a) + 1(b) + 1(c))	<u>\$6,393,493,572</u>	<u>\$5,913,174,3256</u>
3. Assets at Market Value	<u>5,490,520,609</u>	<u>\$5,926,693,594</u>
4. Unfunded Value to Value of Benefits (3 / 2)	\$ 902,972,963	(\$13,519,269)
5. Ratio of Assets to Value of Benefits (3 / 2)	85.88%	100.23%
B. GASB #25 Basis		
1. Actuarial accrued liabilities for retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$3,499,338,199	\$3,172,453,849
2. Actuarial accrued liabilities for current Employees	<u>4,459,471,664</u>	<u>4,281,460,687</u>
3. Total actuarial accrued liability (1 + 2)	\$7,958,809,863	\$7,453,914,536
4. Net actuarial assets available for benefits	<u>5,801,422,994</u>	<u>5,487,720,169</u>
5. Unfunded actuarial accrued liability (3 – 4)	<u>\$2,157,386,869</u>	<u>\$1,966,194,367</u>

**TABLE V-2
ACCOUNTING STATEMENT INFORMATION – FASB 35
AS OF JUNE 30, 2001**

	Total System	Teachers	State Regular	State Special
1. Present Value of Benefits Accrued to Date:				
a. Members Currently Receiving Payments	\$3,374,950,025	\$1,911,731,068	\$1,244,113,921	\$219,105,036
b. Former Vested Members	124,388,174	82,150,178	42,237,996	0
c. Active Members	<u>2,894,155,373</u>	<u>1,977,116,380</u>	<u>752,705,382</u>	<u>164,333,611</u>
2. Total Present Value of Accrued Benefits (1(a) + 1(b) + 1(c))	\$6,393,493,572	\$3,970,997,626	\$2,039,057,299	\$383,438,647
3. Assets at Market Value	<u>5,490,520,609</u>	<u>3,321,819,326</u>	<u>1,870,531,375</u>	<u>298,169,908</u>
4. Unfunded Value of Accrued Benefits (2 – 3)	<u>\$902,972,963</u>	<u>\$649,178,300</u>	<u>\$168,525,924</u>	<u>\$85,268,739</u>
5. Ratio of Assets to Value of Accrued Benefits (3 / 2)	85.9%	83.7%	91.7%	77.8%

ACCOUNTING STATEMENT INFORMATION

**TABLE V-3
ACCOUNTING STATEMENT INFORMATION – GASB #25
AS OF JUNE 30, 2001**

	Total System	Teachers	State Regular	State Special
1. Actuarial Accrued Liability:				
a. Members Currently Receiving Benefits	\$3,374,950,025	\$1,911,731,068	\$1,244,113,921	\$219,105,036
b. Former Vested Members	124,388,174	82,150,178	42,237,996	0
c. Active Members	<u>4,459,471,664</u>	<u>3,108,182,524</u>	<u>1,147,029,622</u>	<u>204,259,518</u>
2. Total Actuarial Accrued Liability (1(a) + 1(b) + 1(c))	\$7,958,809,863	\$5,102,063,770	\$2,433,381,539	\$423,364,554
3. Actuarial Value of Assets	5,801,422,994	3,509,918,347	1,976,450,779	315,053,868
4. Unfunded Actuarial Accrued Liability (2 – 3)	<u>\$2,157,386,869</u>	<u>\$1,592,145,423</u>	<u>\$456,930,760</u>	<u>\$108,310,686</u>
5. Funded Ratio	72.89%	68.79%	81.22%	74.42%
6. Annual Payroll	\$1,318,999,536	\$843,950,689	\$405,661,653	\$69,387,194
7. UAAL as % of Payroll	163.56%	188.65%	112.64%	156.10%

ACCOUNTING STATEMENT INFORMATION

TABLE V-4
Statement of Changes in Total Actuarial
Present Value of All Accrued Benefits

(In millions)	Accumulated Benefit Obligation (FASB 35)
Actuarial Present Value of Accrued Benefits at June 30, 2000	\$5,913
Increase (Decrease) During years Attributable to:	
Passage of Time	461
Benefits Paid – FY 2001	(313)
Benefits Accrued, Other Gains/Losses	332
Plan Amendment	<u>0</u>
Net Increase (Decrease)	480
Actuarial Present Value of Accrued Benefits at June 30, 2001	<u>\$6,393</u>

APPENDIX A

MEMBERSHIP INFORMATION

APPENDIX A – MEMBERSHIP INFORMATION

MAINE STATE RETIREMENT SYSTEM ACTIVE MEMBER DATA AS OF JUNE 30, 2001	
TEACHERS	
Count	27,905
Average Current Age	44.7
Average Service	13.5
Average Valuation Pay	\$30,244
STATE REGULAR	
Count	12,831
Average Current Age	45.2
Average Service	12.7
Average Valuation Pay	\$31,616
FOREST RANGERS (CLOSED PLAN)	
Count	35
Average Current Age	48.1
Average Service	23.5
Average Valuation Pay	\$44,192
INLAND FISHERIES & WILDLIFE OFFIERS (CLOSED PLAN)	
Count	29
Average Current Age	50.6
Average Service	26.2
Average Valuation Pay	\$45,744
LIQUOR INSPECTORS (CLOSED PLAN)	
Count	7
Average Current Age	51.3
Average Service	25.7
Average Valuation Pay	\$41,366

APPENDIX A – MEMBERSHIP INFORMATION

MAINE STATE RETIREMENT SYSTEM ACTIVE MEMBER DATA AS OF JUNE 30, 2001	
PRISON EMPLOYEES (CLOSED PLAN)	
Count	68
Average Current Age	51.0
Average Service	23.0
Average Valuation Pay	\$44,143
STATE POLICE (CLOSED PLAN)	
Count	90
Average Current Age	46.3
Average Service	21.2
Average Valuation Pay	\$52,819
MARINE RESOURCES OFFICERS (CLOSED PLAN)	
Count	12
Average Current Age	47.5
Average Service	24.2
Average Valuation Pay	\$46,218
STATE POLICE NEW	
Count	236
Average Current Age	34.1
Average Service	8.4
Average Valuation Pay	\$42,361
1998 SPECIAL PLAN	
Count	1,362
Average Current Age	41.8
Average Service	9.7
Average Valuation Pay	\$35,181

APPENDIX A – MEMBERSHIP INFORMATION

MAINE STATE RETIREMENT SYSTEM ACTIVE MEMBER DATA AS OF JUNE 30, 2001	
STATE TOTALS (EXCLUDES TEACHERS)	
Count	14,670
Average Current Age	44.8
Average Service	12.5
Average Valuation Pay	\$32,382

APPENDIX A – MEMBERSHIP INFORMATION

MAINE STATE RETIREMENT SYSETEM NON-ACTIVE MEMBER DATA AS OF JUNE 30, 2001 TEACHERS			
	Count	Total Annual Benefit	Average Annual Benefit
Retired			
(Option 0-4)	8,541	\$143,056,081	\$16,749
(Option 4 Concurrent Beneficiary)	1,142	\$4,602,075	\$4,030
Disabilities/1122	8	\$136,473	\$17,059
Disabilities/3 and 3-A	666	\$13,130,648	\$19,716
Beneficiaries	678	\$7,844,733	\$11,570
Pre-Retirement Death Benefits	308	\$1,473,539	\$4,784
Terminated Vested	1,092	\$10,344,469	\$9,473

MAINE STATE RETIREMENT SYSETEM NON-ACTIVE MEMBER DATA AS OF JUNE 30, 2001 STATE REGULAR			
	Count	Total Annual Benefit	Average Annual Benefit
Retired			
(Option 0-4)	6,375	\$86,732,013	\$13,605
(Option 4 Concurrent Beneficiary)	1,141	\$4,180,469	\$3,664
Disabilities/1122	15	\$216,488	\$14,433
Disabilities/3 and 3-A	1,035	\$15,390,408	\$14,870
Beneficiaries	11,389	\$12,620,829	\$9,086
Pre-Retirement Death Benefits	596	\$2,857,627	\$4,795
Terminated Vested	802	\$7,229,186	\$9,014

APPENDIX A – MEMBERSHIP INFORMATION

MAINE STATE RETIREMENT SYSETEM NON-ACTIVE MEMBER DATA AS OF JUNE 30, 2001 SPECIAL GROUPS			
	Count	Total Annual Benefit	Average Annual Benefit
Retired			
(Option 0-4)	647	\$15,291,220	\$23,634
(Option 4 Concurrent Beneficiary)	138	\$574,582	\$4,164
Disabilities/1122	3	\$42,752	\$14,251
Disabilities/3 and 3-A	16	\$278,235	\$17,390
Beneficiaries	117	\$1,348,522	\$11,526
Pre-Retirement Death Benefits	4	\$67,864	\$16,966
Terminated Vested	0	\$0	\$0

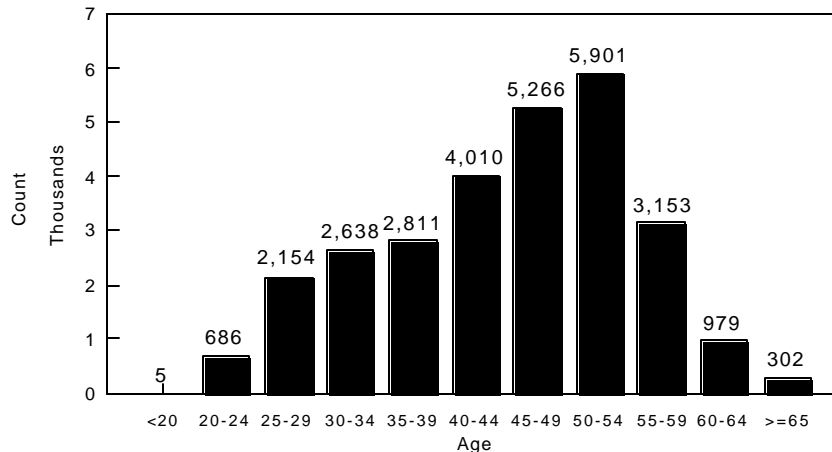
APPENDIX A – MEMBERSHIP INFORMATION

MAINE STATE RETIREMENT SYSTEM DISTRIBUTION OF ACTIVE MEMBERS as of June 30, 2001

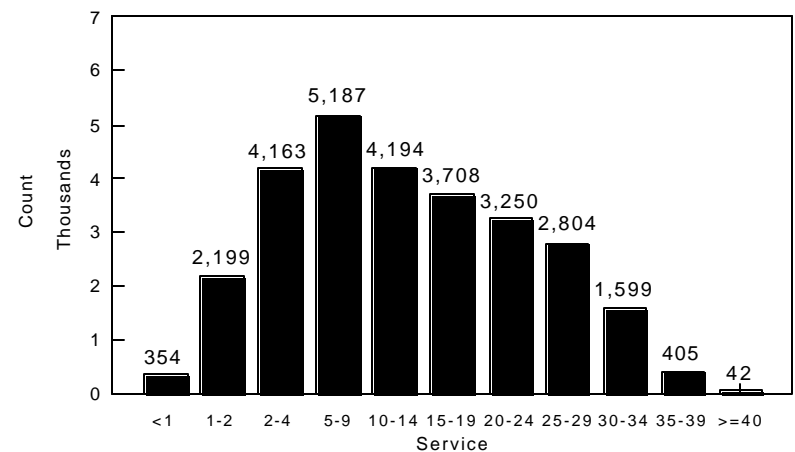
Teachers

Age	Years of Service											Total	
	Under 1	1 TO 2	2 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 & UP		
Under 20	2	3											5
20 TO 24	61	302	301	22									686
25 TO 29	65	401	860	822	6								2,154
30 TO 34	42	280	563	1,217	525	11							2,638
35 TO 39	43	293	544	559	795	570	7						2,811
40 TO 44	56	342	688	771	656	917	572	8					4,010
45 TO 49	33	269	523	862	822	734	1,229	787	7				5,266
50 TO 54	26	168	374	601	873	829	736	1,449	840	5			5,901
55 TO 59	15	83	191	208	378	460	509	396	657	256			3,153
60 TO 64	6	37	88	75	103	151	154	133	79	130	23		979
65 & UP	5	21	31	50	36	36	43	31	16	14	19		302
Total	354	2,199	4,163	5,187	4,194	3,708	3,250	2,804	1,599	405	42		27,905

Age Distribution



Service Distribution



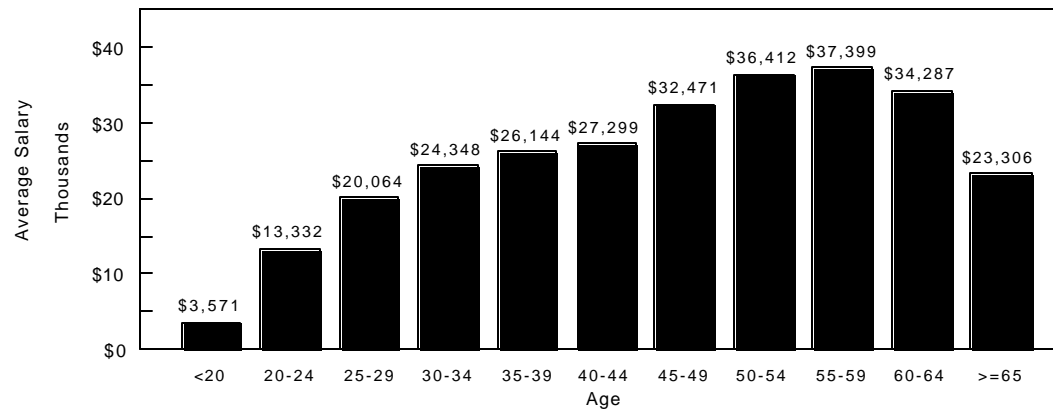
APPENDIX A – MEMBERSHIP INFORMATION

MAINE STATE RETIREMENT SYSTEM DISTRIBUTION OF ACTIVE MEMBERS as of June 30, 2001

Teachers

Age	Average Salary Years of Service											Total			
	Under 1	1 TO 2	2 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 & UP				
Under 20	2,590	4,224													\$3,571
20 TO 24	6,316	12,196	15,435	19,621											\$13,332
25 TO 29	8,088	15,860	19,990	23,063	30,569										\$20,064
30 TO 34	7,024	16,485	20,558	26,383	29,353	20,593									\$24,348
35 TO 39	8,724	14,302	18,039	24,765	32,025	34,414	27,315								\$26,144
40 TO 44	9,967	12,815	16,679	22,948	31,441	35,450	38,285	41,084							\$27,299
45 TO 49	12,781	14,860	18,144	23,369	32,269	36,586	40,332	42,846	38,598						\$32,471
50 TO 54	14,634	17,641	20,753	25,485	31,929	35,216	39,636	44,180	45,185	46,083					\$36,412
55 TO 59	7,429	16,889	19,912	27,549	31,688	34,235	38,279	43,661	46,273	46,759					\$37,399
60 TO 64	12,659	15,168	18,333	18,707	30,381	33,380	37,128	39,051	45,061	47,284	48,913				\$34,287
65 & UP	3,608	9,657	5,270	14,966	18,633	33,084	23,484	32,265	40,683	40,399	43,024				\$23,306
Total	\$8,904	\$14,721	\$18,624	\$24,364	\$31,439	\$35,161	\$39,090	\$43,349	\$45,552	\$46,700	\$46,249				\$30,244

Average Salary Distribution



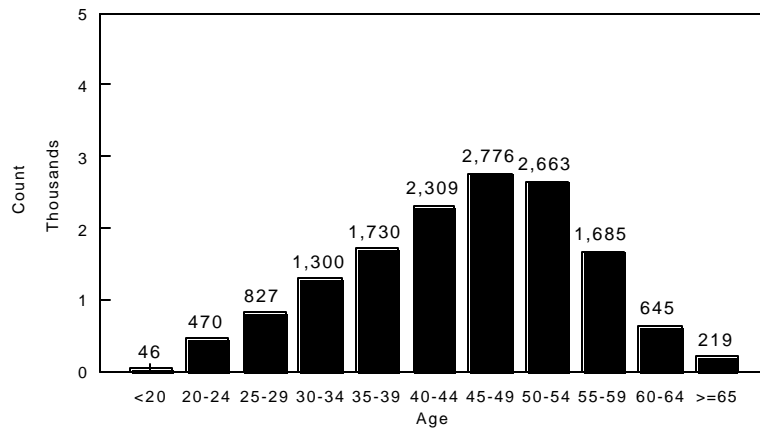
APPENDIX A – MEMBERSHIP INFORMATION

MAINE STATE RETIREMENT SYSTEM DISTRIBUTION OF ACTIVE MEMBERS as of June 30, 2001

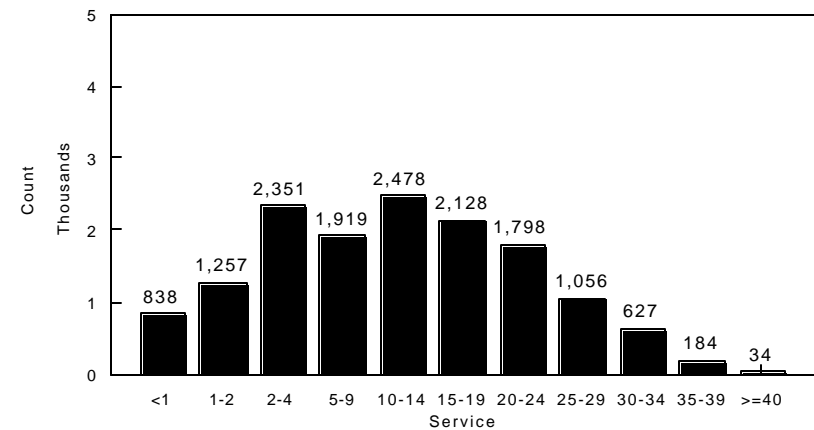
State

Age	Years of Service											Total	
	Under 1	1 TO 2	2 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 & UP		
Under 20	34	10	2										46
20 TO 24	191	144	129	6									470
25 TO 29	118	199	371	123	16								827
30 TO 34	108	198	395	332	249	18							1,300
35 TO 39	88	170	347	294	500	308	23						1,730
40 TO 44	107	177	317	297	474	512	382	43					2,309
45 TO 49	81	161	342	315	434	486	585	335	37				2,776
50 TO 54	55	105	231	284	387	417	413	415	326	30			2,663
55 TO 59	43	66	156	161	262	236	262	177	196	120	6		1,685
60 TO 64	7	20	46	80	127	113	104	57	49	28	14		645
65 & UP	6	7	15	27	29	38	29	29	19	6	14		219
Total	838	1,257	2,351	1,919	2,478	2,128	1,798	1,056	627	184	34		14,670

Age Distribution



Service Distribution



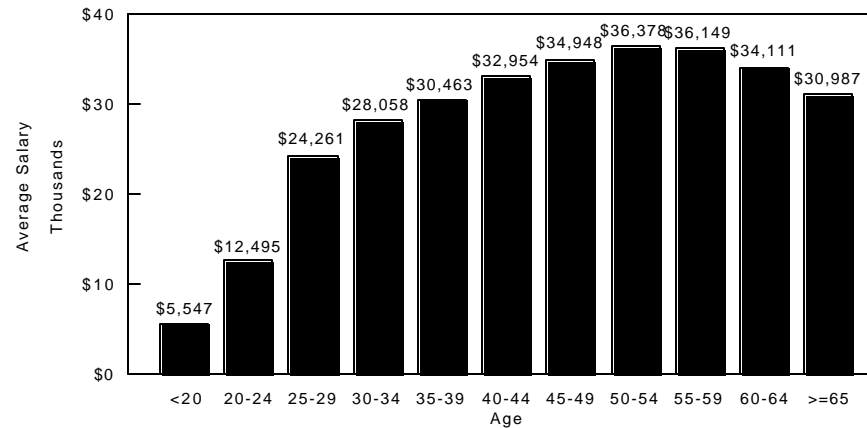
APPENDIX A – MEMBERSHIP INFORMATION

MAINE STATE RETIREMENT SYSTEM DISTRIBUTION OF ACTIVE MEMBERS as of June 30, 2001

State

Age	Average Salary Years of Service											Total	
	Under 1	1 TO 2	2 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 & UP		
Under 20	4,921	6,471	11,571										\$5,547
20 TO 24	7,162	16,946	14,996	21,732									\$12,495
25 TO 29	16,435	23,033	26,759	27,230	16,482								\$24,261
30 TO 34	17,084	23,514	26,862	32,817	31,726	31,619							\$28,058
35 TO 39	14,271	21,531	26,921	33,157	34,053	35,533	31,496						\$30,463
40 TO 44	17,198	23,846	27,713	32,351	35,367	37,942	36,709	33,105					\$32,954
45 TO 49	17,963	25,134	28,907	32,309	36,569	37,138	40,282	37,460	38,320				\$34,948
50 TO 54	18,522	25,619	28,644	33,470	34,508	37,083	38,977	41,482	41,800	42,885			\$36,378
55 TO 59	17,761	21,793	27,492	32,272	35,282	35,285	38,072	41,471	44,624	44,672	38,377		\$36,149
60 TO 64	14,242	19,701	26,902	30,562	32,918	33,955	34,726	39,710	39,916	43,224	54,764		\$34,111
65 & UP	6,072	10,257	15,864	24,911	32,755	27,384	32,552	36,451	45,204	32,043	51,769		\$30,987
Total	\$14,068	\$22,487	\$26,750	\$32,166	\$34,526	\$36,493	\$38,343	\$39,629	\$42,433	\$43,748	\$50,639		\$32,382

Average Salary Distribution



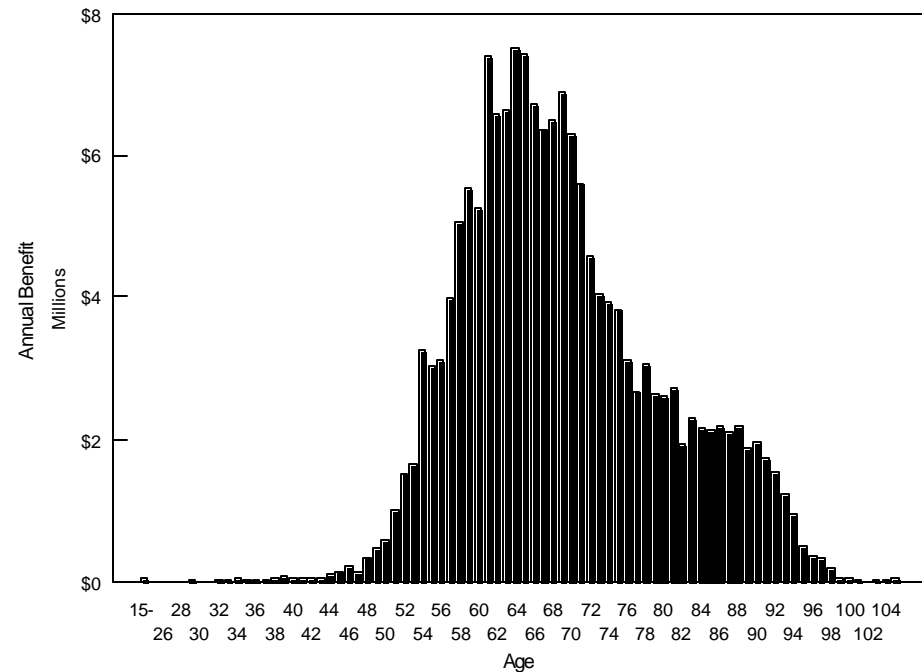
APPENDIX A – MEMBERSHIP INFORMATION

**MAINE STATE RETIREMENT SYSTEM
DISTRIBUTION OF RETIREES, DISABLED MEMBERS,
BENEFICIARIES AND SURVIVORS
as of June 30, 2001**

Teachers

Age	Count	Annual Benefit	Age	Count	Annual Benefit
Under 25	7	\$40,414	65	424	\$7,412,111
25	0	0	66	403	6,703,397
26	1	3,918	67	412	6,363,654
27	0	0	68	401	6,496,955
28	1	3,389	69	418	6,885,059
29	2	10,562	70	406	6,292,481
30	2	7,644	71	379	5,614,556
31	0	0	72	334	4,578,781
32	5	24,448	73	301	4,042,797
33	1	15,770	74	278	3,923,600
34	5	55,292	75	291	3,837,951
35	3	30,059	76	255	3,121,946
36	3	8,944	77	222	2,674,989
37	4	17,703	78	252	3,040,083
38	2	36,084	79	213	2,620,294
39	5	62,414	80	218	2,601,620
40	4	50,144	81	231	2,723,395
41	4	37,031	82	172	1,950,006
42	5	55,626	83	180	2,297,867
43	5	49,285	84	170	2,155,695
44	8	104,015	85	180	2,132,831
45	7	135,887	86	168	2,196,883
46	13	206,774	87	158	2,102,134
47	11	113,084	88	177	2,190,464
48	19	347,432	89	142	1,870,595
49	26	469,940	90	140	1,962,883
50	42	594,378	91	130	1,740,979
51	64	995,647	92	123	1,537,035
52	93	1,514,939	93	93	1,222,893
53	102	1,656,016	94	66	944,631
54	178	3,234,050	95	43	480,188
55	173	3,009,526	96	34	376,051

Annual Benefit Distribution



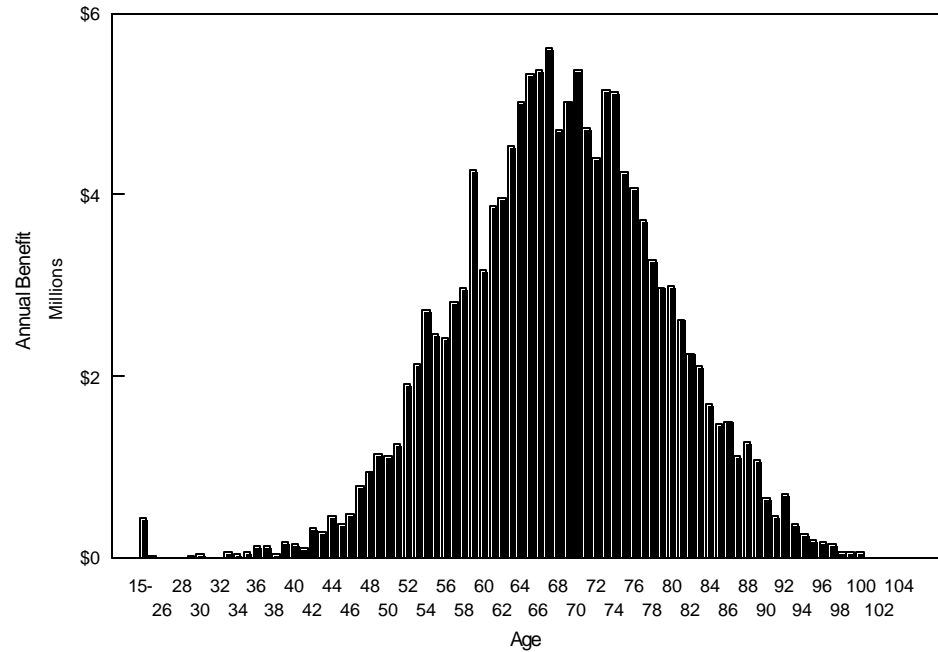
APPENDIX A – MEMBERSHIP INFORMATION

**MAINE STATE RETIREMENT SYSTEM
DISTRIBUTION OF RETIREES, DISABLED MEMBERS,
BENEFICIARIES AND SURVIVORS
as of June 30, 2001**

State

Age	Count	Annual Benefit	Age	Count	Annual Benefit
Under 25	123	\$429,999	65	381	\$5,320,521
25	4	14,046	66	391	5,360,463
26	3	13,160	67	434	5,612,560
27	2	4,786	68	370	4,707,356
28	0	0	69	417	5,025,079
29	5	28,638	70	405	5,360,887
30	6	37,345	71	385	4,740,282
31	1	4,133	72	379	4,393,539
32	6	11,778	73	427	5,141,225
33	4	55,316	74	424	5,127,585
34	6	44,476	75	373	4,241,731
35	10	60,235	76	370	4,065,206
36	13	115,218	77	352	3,716,910
37	12	116,725	78	310	3,283,003
38	11	48,697	79	299	2,976,155
39	22	164,365	80	298	2,996,697
40	17	142,370	81	269	2,626,795
41	13	112,001	82	238	2,246,772
42	23	312,362	83	220	2,110,234
43	27	280,719	84	189	1,699,277
44	48	450,598	85	169	1,459,377
45	33	350,981	86	180	1,509,026
46	41	479,513	87	127	1,101,923
47	60	791,369	88	127	1,272,708
48	68	956,195	89	124	1,066,724
49	84	1,144,725	90	91	655,674
50	90	1,102,118	91	67	452,374
51	95	1,253,913	92	73	698,454
52	136	1,913,705	93	44	364,166
53	144	2,137,588	94	32	262,160
54	188	2,734,896	95	29	172,617

Annual Benefit Distribution



APPENDIX B ACTUARIAL ASSUMPTIONS AND METHODS

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Assumptions

	State Employees	Teachers
1. Rate of Investment Return	8.0%	8.0%
2. Cost-of-Living Increases in Benefits	4.0%	4.0%
	Age	State Employees and Teachers
3. Rates of Salary Increase (% at Selected Ages)	20	9.5
	25	8.3
	30	7.2
	35	6.7
	40	6.2
	45	5.7
	50	5.5
	55	5.5
	60	5.5
	65	5.5

The above rates include a 5½% across-the-board increase at each age.

Calculations have been adjusted to account for the 5% per year/10% over three-years cap on final pay.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

	Age	State Employees Service			Teachers Service		
		0-1	1-2	2+	0-1	1-2	2+
4. Rates of Termination at Select and Ultimate Service (% at Selected Ages)	20	25.0	17.5	18.8	33.0	24.0	18.8
	25	25.0	17.5	12.5	27.5	24.0	12.5
	30	25.0	17.5	10.0	27.5	24.0	10.4
	35	25.0	17.5	7.5	27.5	24.0	8.3
	40	25.0	17.5	5.0	27.5	24.0	6.1
	45	25.0	17.5	5.0	27.5	24.0	4.0
	50	25.0	17.5	5.0	27.5	24.0	4.0
	55	20.0	17.5	5.0	27.5	24.0	4.0

	Age	Male		Female	
		Male	Female	Male	Female
5. Rates of Active Healthy Life Mortality at Selected Ages (Number of Deaths Per 10,000 Members)*	20	5	3	5	3
	25	7	3	6	3
	30	9	4	7	3
	35	9	5	8	4
	40	12	8	10	6
	45	17	10	14	9
	50	28	15	24	13
	55	48	25	40	21
	60	86	48	73	41
	65	156	93	133	79
	70	255	148	217	125

* For State Regular and Teachers 5% of deaths assumed to be accidental; for State Special 20% of deaths are assumed to be accidental.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

	Age	State Employees		Teachers	
		Male	Female	Male	Female
6. Rates of Inactive Health Life Mortality at Selected Ages (number of deaths per 10,000 members)	20	5	3	5	2
	25	6	3	6	3
	30	8	5	7	4
	35	11	7	10	6
	40	16	9	14	8
	45	29	14	23	12
	50	53	22	42	18
	55	85	33	71	27
	60	131	55	109	44
	65	213	96	174	77
	70	361	165	292	129
7. Rates of Mortality for Future Anticipated Disableds at Selected Ages (number of deaths per 10,000 members)	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

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

	Age	State Employees		Teachers	
		Male	Female	Male	Female
8. Rates of Inactive Disabled Life Mortality at Selected Ages (number of deaths per 10,000 members)	25	391	528	391	528
	30	315	467	315	467
	35	321	326	321	326
	40	332	215	332	215
	45	349	191	349	191
	50	376	207	376	207
	55	420	240	420	240
	60	488	288	488	288
	65	595	366	595	366
	70	763	487	763	487

	Age	State	Teachers
		Employees*	
9. Rates of Retirement at Selected Ages (number retiring per 1,000 members)	45	35	25
	50	57	25
	55	150	113
	59	180	183
	60	350	350
	61	350	350
	62	350	350
	63	350	350
	64	350	350
	65	350	350
	70	1000	1000

* Members of Special Groups are assumed to retire when first eligible for unreduced benefits.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

		Age	State Employees	Teachers
10.	Rates of Disability at Selected Ages (members becoming disabled per 10,000 members)**	25	6.8	4.6
		30	7.6	5.0
		35	10.2	5.0
		40	19.0	6.8
		45	27.9	15.5
		50	42.7	24.3
		55	81.0	33.0
		60	119.3	41.8

** 10% assumed to receive Workers Compensation benefits of 66 2/3% of pay; also, rates for State Special groups are higher by 7 per 10,000 at all ages. Note: Disability costs calculated using these rates were reduced 15% to reflect favorable experience.

11. Family Composition Assumptions 80% of active members are married and have two children born when the member was 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.

12. Vacation/Sick Leave Credits For members who had 10 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 benefits are increased by 1.0% for state employees and 1.3% for teachers.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Methods

1. Funding Method

The 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 rate (UAL).

For Teachers (MTRA) and State Employees, including each of the State Special Groups, a normal cost rate is determined for as typical new entrant. This rate is determined by taking the value, as of age at entry into the plan, 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 the System's normal cost, contributions will be required to fund the System'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 the System's 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 over a 19 year period from July 1, 2000. The payments are determined so that they will be a level percentage of pay, assuming total pay increases 5.5% per year.

The funding components are described in greater detail in Part IV.

2. Asset Valuation Method

For purposes of this June 30, 2001 actuarial valuation, assets are valued at an "actuarial value" as described in Part II.

APPENDIX C

**SUMMARY OF
PLAN PROVISIONS**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

State Employees and Teachers

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 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 employed after 8/31/84 which include state prison employees, airplane pilots, forest rangers, inland fisheries and wildlife officers, marine resources officers, liquor inspectors and defense, veterans and emergency management firefighters employed at Bangor International Airport – 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.

3. Average Final Compensation

For purposes of determining benefits payable under the System, 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.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Earnable compensation does not include sick and vacation pay for those members who had less than 10 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 in the preceding paragraph.

4. Creditable Service

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

5. Service Retirement Benefits

A. *Regular Plan (State Employees and Teachers)*

Eligibility for members with at least 10 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 for members not in active service at retirement, and not in active service on or after October 1, 1999: at least 10 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 5 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 membership service and up to 25 years of prior service, reduced by approximately 2-1/4% for each year retirement age is less than age 60.

Form of payment – life annuity.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Eligibility for members with less than 10 years of creditable service on July 1, 1993

Normal Retirement Age: 62

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 10 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 5 years of creditable service and at least normal retirement age.

Benefit – $\frac{1}{50}$ 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.

B. Special Plans (state employees)

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 – $\frac{1}{50}$ 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.

Forest rangers employed before 9/1/84:

Eligibility – age 50 with 25 years of creditable service as a forest ranger.

Benefit – $\frac{1}{50}$ of average final compensation plus 2% for each year of service earned after qualification for retirement. If greater, the pro-rated portion of the

APPENDIX C – SUMMARY OF PLAN PROVISIONS

benefit for service before July 1, 1976 is based on annual pay instead of average final pay.

Form of payment – life annuity.

Airplane pilots employed before 9/1/84:

Eligibility – age 55 and 25 years of creditable service as an airplane pilot.

Benefit – greater of (1) $\frac{1}{60}$ 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.

Liquor inspectors employed before 9/1/84:

Eligibility – age 55 and 25 years of creditable service as a liquor inspector.

Benefit – $\frac{1}{60}$ 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.

State prison employees employed before 9/1/84:

Eligibility – age 50 and 20 years of creditable service as a prison employee.

Benefit – $\frac{1}{60}$ of average final compensation plus 2% for each year of service earned after qualification for retirement.

Form of payment – life annuity.

1998 Special Plan

1998 entrants: State prison employees, airline pilots, forest rangers, inland fisheries and wildlife officers, marine resources officers 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.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Eligibility – 10 years of creditable service under the 1998 Special Plan in one or a combination of the covered capacities after June 30, 1998 (1998 entrants) or after December 31, 1999 (2000 entrants), 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 July 1, 1998 (1998 entrants) or prior to January 1, 2000 (2000 entrants), 1/50 of average final compensation multiplied by years of service reduced for retirement before age 60 or 62, except state police and certain prison employee benefits are reduced for retirement before age 55.

-AND-

for service starting on July 1, 1998 (1998 entrants) or on January 1, 2000 (2000 entrants), 1/50 of average final compensation multiplied by years of service reduced for retirement before age 55.

Form of payment – life annuity.

State Police New 25 & Out Plan

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

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

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

Benefit – 66-2/3% of average final compensation, reduced by employment earnings over \$10,000, 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,

APPENDIX C – SUMMARY OF PLAN PROVISIONS

unless the member is unable to engage in any substantially gainful activity; in which case payments cease on the earlier of 10 years following normal retirement age or 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 66 2/3% of average final compensation or 10 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 MSRS 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 \$10,000, 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 and average final compensation at that point.

8. Pre-Retirement Ordinary Death Benefits

Eligibility – death while active 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(re), older parents, or estate.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

9. Pre-retirement Accidental Death Benefits

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

Benefit – if the member leaves no dependent children, 2/3 of the member's average final compensation to the surviving spouse until death.

- 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.

Cost-of-living adjustments are effective September 1 and are applied to all benefits which have been in payment for twelve months. The maximum annual increase or decrease is 4%. 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.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Members on service retirement who did not have 10 years of service on July 1, 1993 will not receive a cost-of-living adjustments until 12 months after their normal retirement age.

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 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 with pop-up*.

Option 7: 50% joint and survivor annuity 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.