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# Maine State Retirement System Annual Report for the Fiscal Year Ended June 30, 1999

Maine State Retirement System

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# Maine State Retirement System



## 1999 Annual Report

*For the Fiscal Year Ending June 30, 1999*

JUN 29 2000



This report has been produced as required by 5 MRSA §17102 (10), which states that the Maine State Retirement System must publish an annual report showing "the fiscal transactions of the retirement system for the fiscal year and the assets and liabilities of the retirement system at the end of the fiscal year; and [t]he actuary's report on the actuarial valuation of the financial condition of the retirement system for the fiscal year."

**Maine State Retirement System (MSRS)**

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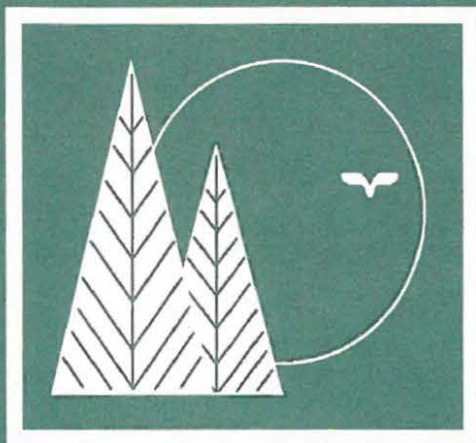
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# Maine State Retirement System



Executive Director's Report  
and  
1999 Legislative Summary





## Executive Director's Report



One wall of the Retirement System's second floor conference room is entirely covered with custom designed handmade wallpaper. The staff of the System created the design, which is impressive and exciting in both its overall conception and its details. System staff members were the artisans who turned the design into paper and assembled it on the wall itself. Those who have seen The Wall admire it not for its beauty, but for its succinct, informative, non-static representation of the System's Five Year Plan, our plan for the System's near- and long-term future, and, by definition, for the futures of its members, retirees and employers as participants in the Retirement System.

The Five Year Plan could be admired for its beauty: there is a kind of beauty in a plan that lays claim to sound and meaningful goals and has the allegiance of the people who will, goal by goal, convert them into achievements. At the System, that allegiance is here and growing. It is a shared commitment to our common endeavor to build the Retirement System into an enterprise that does its job very, very well. Our Five Year Plan is the building blocks, the solid, real, carefully shaped elements, from which we are constructing the Retirement System that we intend.

To date, the Five Year Plan has had a predominantly internal focus, on the work we do, the skills, knowledge and approaches needed to do it well, and on the creation of a work community thoroughly engaged by the intent to do it well. Some important internal results are evident: an energized, forthcoming, committed staff; huge and basic progress toward automating ourselves; a thoughtful program of repair, maintenance catch-up and energy efficiency improvements to our densely populated office. Other important results are already evident outside our walls: greatly improved financial recordkeeping and accounting; greatly improved investment recordkeeping and reporting; earlier initial payments of service and disability benefits; significant progress in reducing turnaround times on information requests and disability applications; increasing capacity to be in the field. Over time, we will make the Five Year Plan itself more visible, its vision as well as its concrete tasks and jobs, its imaginative

concepts as well as its thorough analyses, its intense focus on change.

The Five Year Plan drives toward excellent service that originates in a clear understanding of why the Retirement System exists, of why and how its work matters to our members, retirees, employers, and to the public. The System's members and employers do the work of the public side of the lives of Maine's people. They work on the roads and in the schools. They manage state and local financial matters. They register cars and license drivers. They carry out responsibilities in education, public safety, health, environmental protection, economic development and fire protection. They work in libraries, state hospitals, water and sewer facilities, jails and prisons. Maine taxpayers are, ultimately, the employers of our members and the creators and overseers of our participating employers; our members are themselves taxpayers. We know the Retirement System has a broad public responsibility to run itself cost-effectively and we believe that doing excellent work on behalf of our members, retirees and participating employers is integral to that responsibility.

### 1999 Highlights in Brief

Investment Returns. At June 30, 1999, the System's total assets were \$6.9 billion, an increase of \$751 million over the June 30, 1998 total. Its investment return for the 12 months ending June 30, 1999 was 11.2%; its three-and-five-year returns were 15.8% and 16.3% respectively. These strong returns result from the unprecedented markets of the last several years and from the Board's investment policy that bespeaks attention to both return and risk. The Board remains sharply aware that markets can, and will, decline.

Funding Status. The System's unfunded liability continues to decrease as contributions flow in regularly and systematically, new liabilities are funded at the outset, and strong investment returns continue to contribute to the growth of assets. As of the June 30, 1999 actuarial valuation, the actuarial funded status of the state employee and teacher plan stood at 69%;





## Executive Director's Report

last year it was 62.9%; ten years ago it was 31.6%. The legislative and public intent to pay down the unfunded actuarial liability and thereafter maintain responsible funding is embodied in the Constitutional amendment adopted at referendum in 1995. The legislature has underscored that intent by requiring itself to contribute additional funds from unallocated General Fund surplus and by shortening the Constitutionally-required period for pay down of the liability. Continued funding progress will require maintenance of the discipline demonstrated since 1995.

System Automation and Retirement System Services. Because our continuing major push on automation coincided, of necessity, with Year 2000 work, some of the service/turnaround time improvements of which we have been so proud suffered relapses. None of the slippages even approached the prior worst times but, to a person, Retirement System staff regretted the slides. Both our regular work and the fundamental changes we are making require — and receive — the focus, energy and dedicated effort of our experienced staff. This was a period, and there will be others, in which we would have liked to have been able to clone them.

Finance and Accounting. The installation three years ago of new accounting and financial systems and our subsequent conversion to accrual accounting continues to enable the kind of financial recordkeeping and reporting that is appropriate to the System's fiduciary role and its nature as a financial institution. We continue to receive "clean" annual audits, conducted by an independent outside audit firm.

Plan Design. In terms of retirement plan design, the Constitutional prohibition against creation of unfunded liabilities has operated to preserve the 1993 legislative changes to the State employee and teacher, legislative and judicial retirement plans that instituted several very significant differences in retirement plan provisions between members having at least 10 years of creditable service on July 1, 1993 and those having less. The cost of undoing these changes is required by the Constitu-

tion to be paid at the time such a change would become effective and has been seen as prohibitive. By the "protections" legislation enacted in 1999, the Legislature stated that it would not further alter basic plan provisions to the detriment of members once a member had earned the minimum amount of creditable service required for benefit eligibility. In the same legislation, the required minimum amount of creditable service for benefit eligibility was reduced from ten to five years.

Consolidated Plan for Participating Local Districts. The Consolidated Plan for Participating Local Districts consisted of 224 participating local districts at June 30, 1999, with a total active membership of 8,689. Because of the Plan's structure, under which an individual district retains responsibility for payment of liabilities existing at the time the district enters the Plan, and because of strong investment returns, the Consolidated Plan has no unfunded liability and its employer rates have decreased since inception. Participation of districts and employees in the related deferred compensation and defined contribution plans, administered by State Street Bank and Trust, continues to grow modestly.

Board of Trustees. With one important exception, the membership of the System's eight-person Board of Trustees was unchanged for the past year: David Wakelin, Chair; John Kimball, Vice Chair; Charles Jackson, Eunice Mercier, George Burgoyne, Peter Leslie and Dale McCormick. The exception was the departure, after 12 dedicated years as a Trustee, of Grover MacLaughlin. Catherine Sullivan was appointed to be Trustee in his place. As an average, the non-ex-officio members of the Board have given eight years of service to the Retirement System and its members, retirees and employers. The benefit of their continuity and their accumulating experience is very great, as is the benefit of their strong and unanimous support for the change efforts now underway.

Kay R. H. Evans  
Executive Director



# 1999 Legislative Summary



## **An Act to Amend the Laws Relative to Vesting in the Maine State Retirement System and to Protect Retirement Benefits Once the Right to Those Benefits Has Attached** **PL 1999, Chapter 489**

This law changes from ten years to five years the requirement of creditable service needed in order for eligible State employee and teacher members to receive a service retirement benefit. This bill also sets forth protections for those members.

## **An Act to Allow Former Employees of Head Start Credit in the Maine State Retirement System** **PL1999, Chapter 250**

This bill allows State employee and teacher members of the Maine State Retirement System, who formerly were employed by a Head Start program, to purchase up to two (2) years of service credit by paying the full actuarial cost.

## **An Act to Expand the Uniform 1998 Special Retirement Plan to Include Baxter State Park Authority Rangers, Fire Marshals and Certain Additional Correctional Employees** **PL 1999, Chapter 493**

This bill extends coverage of the 1998 Special Plan to three additional groups of State employees: Baxter State Park Authority Rangers; State Fire Marshal, Fire Marshal Inspectors and Fire Marshal Investigators; and certain additional employees of the Department of Corrections.

## **An Act to Amend the Calculation of Service Credits Under the Maine State Retirement System Pertaining to the Comprehensive Employment and Training Act of 1973 Employees** **PL 1999, Chapter 241**

This bill allows eligible former Comprehensive Employment and Training Act of 1973 (CETA) employees hired before July 1, 1979 to purchase service credits by paying the full actuarial cost.

## **An Act to Provide Equity for Veterans of the Vietnam War and the Persian Gulf Conflict** **PL 1999, Chapter 462**

This bill expands the period of time under which members who served in the armed forces during the Vietnam war or the Persian Gulf conflict may be eligible to purchase military time toward their service credit.





# Maine State Retirement System



## Overview of the Maine State Retirement System





# Overview of the Maine State Retirement System



## INTRODUCTION

By the authority granted to it by the Maine State Legislature, the Maine State Retirement System (MSRS) administers retirement plans that cover State employees, the state's public school teachers, the state's judges and the state's legislators, and plans covering the employees of the approximately 225 municipalities and other public entities, called "participating local districts" (PLDs), that have chosen to provide retirement plans through the MSRS. The MSRS is also responsible for the payment of benefits from the Governor's Retirement Fund to former governors and their surviving spouses.

In addition, the MSRS is also responsible for administering the Group Life Insurance Program. This program provides life insurance benefits for both active and retired State employees, public school teachers, many PLD employees, and members and retirees of the Legislative and Judicial Retirement Systems.

## RETIREMENT PROGRAM

Membership in the MSRS as of June 30, 1999 and 1998 is outlined below. The membership includes both active and inactive members. Active members are those who are currently working for an MSRS participating employer and who are, therefore, contributing to the MSRS. Inactive members are those who have contributed in the past and whose contributions remain with the System but who are not contributing presently because they are not working for an MSRS participating employer.

	<u>1999</u>			<u>1998</u>		
Members	Active	Inactive	Total	Active	Inactive	Total
State*	14,377	13,988	28,365	13,811	13,587	27,398
Teachers	26,510	32,982	59,492	25,882	33,049	58,931
PLD*	8,755	7,967	16,722	8,941	7,575	16,516
Legislative	168	110	278	165	77	242
Judicial	52	3	55	52	2	54
Total	49,862	55,050	104,912	48,851	54,290	103,141

\*This includes both regular and special plan members.

Recipients of MSRS benefits fall into five categories:

- *Service Retirees* - those who are receiving a service (or "regular") retirement benefit.
- *Retiree Beneficiaries* - those who are the beneficiaries of deceased service retirees and those who share in the benefit of a living service retiree.
- *Disability Retirees* - those who are receiving a disability retirement benefit.
- *Ordinary Death Beneficiaries* - those who are the beneficiary of an active or inactive member or disability retiree who died before being qualified to receive or, if qualified, before receiving, a service retirement benefit.
- *Accidental Death Beneficiaries* - those who are the beneficiary either of a deceased active member or of a disability retiree who died as a result of an injury arising out of and in the course of employment.





## Overview of the Maine State Retirement System

Below are the total benefit recipients and total benefit dollars at June 30, 1999 and June 30, 1998:

### BENEFITS PAYROLL

	1999 Benefit Recipients	1999 Benefit Dollars	1998 Benefit Recipients	1998 Benefit Dollars
Service Retirees	19,681	\$ 21,725,604	22,051	\$ 20,743,864
Retiree Beneficiaries	5,906	2,138,369	2,948	1,942,138
Disability Retirees	1,672	2,320,875	1,759	2,239,252
Ord./Accidental Death Benes.	1,113	398,587	1,043	392,582
Total	28,372	\$ 26,583,435	27,801	\$ 25,317,836

### GROUP LIFE INSURANCE PROGRAM

The Group Life Insurance Program is available to all State employees, public school teachers, and the employees of those PLDs that elect to provide the coverage for their employees, as well as members of the Legislative and Judicial Retirement Systems. In addition to basic coverage for the employee (which is equal to one times the participant's annual base compensation rounded up to the next highest \$1,000), supplemental coverage for the employee and coverage for dependents is also available to the Program's participants.

### BOARD OF TRUSTEES

The responsibility for the operation of the Maine State Retirement System, including all the various retirement programs and the Group Life Insurance Program, is held by the MSRS Board of Trustees, which is composed of eight members. State law specifies the Board's composition. The law requires that each individual elected or appointed to service as a trustee is subject to the legislative confirmation process. All elected or appointed trustees are required to have "a working knowledge of retirement policy and legal issues and a general knowledge of understanding of banking, finance and investment practices." Three trustees are to be Retirement System members, one of whom is elected by the Maine Education Association, one of whom is elected by the Maine State Employees Association and one of whom is a PLD member to be appointed by the governing body of the Maine Municipal Association. Four trustees are appointed by the Governor. Of these, one must be selected by the Governor from a list of nominees submitted by the Maine Retired Teachers Association and one must be an MSRS retiree selected from nominees submitted by State and/or PLD retirees. The remaining two gubernatorial appointees are direct appointments, both of whom must be qualified through training or experience in the field of investments, accounting, banking or insurance or as actuaries. The eighth trustee is the State Treasurer, who serves ex-officio. All trustees, save the State Treasurer, serve a three-year term. The Board elects its chair from its members.

The Board members as of June 30, 1999 were:

David S. Wakelin, Chair  
John H. Kimball, Vice Chair  
Peter M. Leslie  
George A. Burgoyne  
Charles M. Jackson  
Dale McCormick, State Treasurer  
Eunice Mercier  
Catherine Sullivan

Governor's Appointment (specified qualification)  
Maine Education Association  
Governor's Appointment (specified qualification)  
Maine State Employees' Association  
Maine Municipal Association  
Ex-officio Member  
Governor's Appointment (State Retiree)  
Governor's Appointment (Maine Retired Teachers Assoc.)

The Board contracts for the services of an actuary, which is currently the firm of Milliman and Robertson. The actuary prepares annual valuations of the assets and liabilities of each of the retirement programs administered by the Board. The actuary also provides information and recommendations as to sound and appropriate actuarial assumptions, which are utilized, together with valuation information, to determine the plans' funding requirements.

# Overview of the Maine State Retirement System



The Board's management of MSRS investments is governed by its detailed investment policy, which states the Board's underlying investment philosophy and goals and establishes guidelines and criteria for choice of investment types, asset allocation among investment types, investment manager selection and evaluation, and allotment of investment funds to investment managers. The Board currently contracts with the firm of Ennis and Knupp and Associates to assist in the development of the investment policy and the investment program.

The Board is the final administrative decision-maker in matters involving the rights, credits, and benefits of members. It has established an administrative appeals process for making of such decisions, through which the relevant factual information and legal requirements are identified and analyzed. In decisions on disability retirement appeals, statutorily established medical boards and individual medical advisors provide recommendations as to the medical aspects of disability. The Board's final administrative decisions are appealable to Superior Court.

## ADMINISTRATION

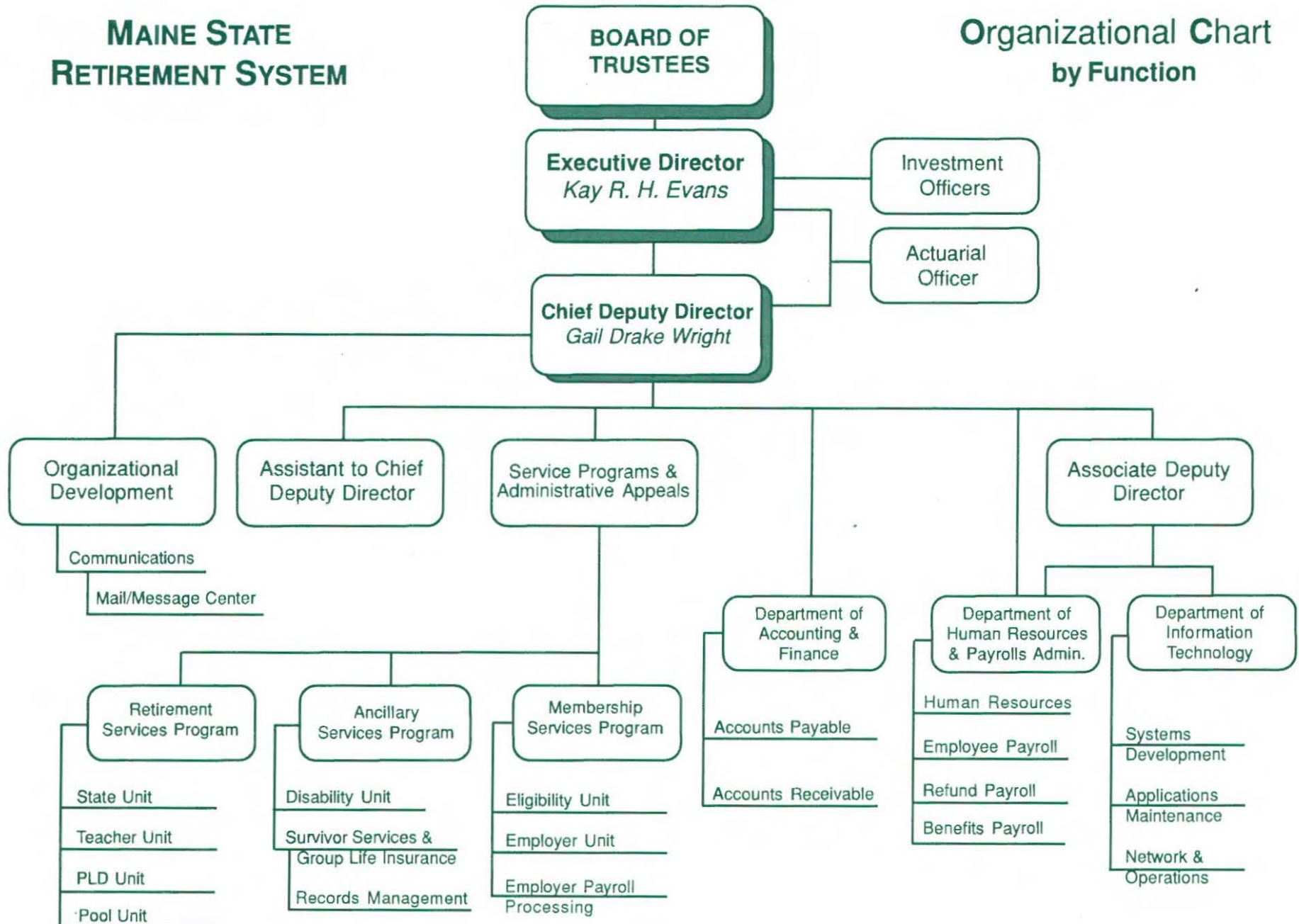
The Maine State Retirement System is a service organization with significant financial and investment management and recordkeeping responsibilities. The Board of Trustees appoints the Executive Director of the MSRS. The work of the System is managed through the Office of the Executive Director and four departments:

- Office of the Executive Director  
Investments and actuarial work are managed through the Executive Director. In addition, the day-to-day administration, legislative matters, appeals, federal, state and local relations, planning, organizational development, special projects and similar work is managed through the office of the Executive Director.
- Service Programs  
This department is responsible for service retirement and disability retirement programs as well as death benefit and group life insurance benefit programs. The department is the System's primary liaison with members, employers and retirees.
- Accounting & Finance  
This department has primary responsibility for the MSRS's accounting and financial management systems.
- Information Technology  
This department is responsible for the MSRS data systems and data processing.
- Human Resources/Payroll Administration  
This department is responsible for the System's internal personnel and payroll and labor relations matters. In addition, the System's benefits payroll programs and refunds are administered through the HR/PA department.



# MAINE STATE RETIREMENT SYSTEM

## Organizational Chart by Function



# Overview of the Maine State Retirement System



## STATISTICAL DATA SUMMARY FOR FISCAL YEARS 1995 TO 1999

### EMPLOYEE AND EMPLOYER CONTRIBUTIONS

<u>Fiscal Year ending June 30</u>	<u>Employee*</u>	<u>Employer*</u>
1999	\$ 105,706,888	\$ 292,104,205
1998	103,314,565	273,317,235
1997	100,683,010	266,453,877
1996	97,141,014	252,229,179
1995	101,863,132	242,627,047

### NUMBERS OF BENEFITS RECIPIENTS

<u>Fiscal Year ending June 30</u>	<u>Total</u>
1999	28,372
1998	27,801
1997	27,309
1996	26,921
1995	26,310

### BENEFITS PAYMENTS

<u>Fiscal Year ending June 30</u>	<u>Benefits Payments*</u>
1999	\$ 317,749,428
1998	301,341,756
1997	284,139,339
1996	277,030,590
1995	265,421,392

\* Does not include the Group Life Insurance Program. See the next page for the Group Life Insurance Program information.





## Overview of the Maine State Retirement System

### GROUP LIFE INSURANCE PROGRAM STATEMENT OF OPERATIONS FOR THE FISCAL YEARS ENDING JUNE 30, 1999 AND JUNE 30, 1998

<u>RECEIPTS</u>	<u>1999</u>	<u>1998</u>
Total Premiums Collected	\$ 6,980,097	\$ 6,683,297
Earnings on Investments	1,206,160	1,774,078
<u>TOTAL RECEIPTS</u>	<u>\$ 8,186,257</u>	<u>\$ 8,457,374</u>
<u>EXPENSES</u>		
Claims Paid		
Basic	\$ 2,510,925	\$ 3,056,002
Supplemental	1,506,040	667,019
Dependent	329,487	212,878
Retired Employees	3,340,554	2,368,465
Total Claims Paid	\$ 7,687,006	\$ 6,304,364
Retention	\$ 426,432	\$ 326,410
<u>TOTAL EXPENSES</u>	<u>\$ 8,113,438</u>	<u>\$ 6,630,774</u>
<u>BALANCE OF RESERVES</u>	<u>\$ 30,678,041</u>	<u>\$ 30,605,222</u>

# Maine State Retirement System



MSRS  
Financial Statements





**REPORT OF INDEPENDENT ACCOUNTANTS**

Board of Trustees of  
The Maine State Retirement System:

In our opinion, the accompanying statements of plan net assets and the related statements of changes in plan net assets present fairly, in all material respects, the net assets of the Maine State Retirement System as of June 30, 1999 and 1998, and the changes in plan net assets for the years then ended, in conformity with generally accepted accounting principles. These financial statements are the responsibility of the System's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with generally accepted auditing standards and *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

Our audits were made for the purpose of forming an opinion on the financial statements taken as a whole. The supplemental information included is required under GASB Statement No. 25. Such information, included in the "Required Supplementary Information" and "Notes to Required Supplementary Information", has been subjected to the auditing procedures applied in the audits of the financial statements and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

In accordance with *Government Auditing Standards*, we have also issued our report dated October 8, 1999, on compliance and on internal control over financial reporting based on an audit of financial statements performed in accordance with *Government Auditing Standards*.

PricewaterhouseCoopers LLP

October 8, 1999



# MSRS Financial Statements

## MAINE STATE RETIREMENT SYSTEM STATEMENTS OF PLAN NET ASSETS June 30, 1999 and 1998

### ASSETS

	<u>1999</u>	<u>1998</u>
Cash and cash equivalents (Note 3)	\$ 100,835,445	\$ 347,558,062
Investments at fair value (Note 3)		
Debt securities:		
U. S. government and government agencies	359,030,167	217,580,084
Corporate	328,310,183	158,602,685
Foreign	36,039,834	6,043,873
Common equity securities	1,443,279,109	1,413,416,786
Preferred equity securities	70,312,319	32,478,561
Common/collective trusts	4,559,866,146	4,010,479,040
Other	4,264,433	7,506,685
	<u>6,801,102,191</u>	<u>5,846,107,714</u>
Receivables:		
State and local agency contributions	9,373,345	9,664,076
Due from brokers for securities sold	42,781,964	20,305,457
Accrued interest and dividends	12,824,935	7,708,225
Other (Note 6)	21,786,026	8,564,226
	<u>86,766,270</u>	<u>46,241,984</u>
Fixed assets, net of accumulated depreciation	<u>916,537</u>	<u>1,142,477</u>
Total assets	<u>6,989,620,443</u>	<u>6,241,050,237</u>

### LIABILITIES

Accounts Payable	6,593,528	5,917,558
Due to brokers for securities purchased	41,371,607	46,388,232
Other liabilities	8,564,962	6,788,184
Total liabilities	<u>56,530,097</u>	<u>59,093,974</u>

Net assets held in trust for pension, disability, death and group life insurance benefits (a schedule of funding progress is shown in the "Required Supplementary Information" section)

\$ 6,933,090,346	\$ 6,181,956,263
------------------	------------------

The accompanying notes are an integral part of the financial statements.

# MSRS Financial Statements



## MAINE STATE RETIREMENT SYSTEM STATEMENTS OF CHANGES IN PLAN NET ASSETS for the years ended June 30, 1999 and 1998

	1999	1998
Additions:		
Investment income:		
Interest	\$ 87,654,301	\$ 59,660,295
Dividends	21,189,978	22,282,670
Net appreciation in the fair value of plan investments	595,393,651	850,981,801
Less: investment expenses	(12,121,739)	(10,550,305)
Net investment income	<u>692,116,191</u>	<u>922,374,461</u>
Contributions (Note 6):		
Members	112,686,985	108,527,537
State and local agencies	299,694,267	274,787,560
Total contributions	<u>412,381,252</u>	<u>383,315,097</u>
Total additions	<u>1,104,497,443</u>	<u>1,305,689,558</u>
Deductions:		
Benefits paid, net	325,989,225	307,972,530
Refunds and withdrawals	19,156,890	17,736,774
Administrative expenses	7,615,420	7,517,205
Depreciation adjustment (Note 2)	-	1,503,829
Other (Note 2)	<u>601,825</u>	<u>546,905</u>
Total deductions	<u>353,363,360</u>	<u>335,277,243</u>
Net increase	751,134,083	970,412,315
Net assets held in trust for pension, disability, death and group life insurance benefits (Note 6):		
Beginning of year	6,181,956,263	5,214,196,836
Reclassification (Note 2)	<u>-</u>	<u>(2,652,888)</u>
End of year	<u>\$ 6,933,090,346</u>	<u>\$ 6,181,956,263</u>

The accompanying notes are an integral part of the financial statements.





# MSRS Financial Statements

## MAINE STATE RETIREMENT SYSTEM NOTES TO FINANCIAL STATEMENTS

### 1. Plan Description:

#### General

The Maine State Retirement System (the System), which is a component unit of the State of Maine, is the administrator of an agent multiple-employer public employee retirement system established and administered under the Maine State Retirement System Laws of the State of Maine. The System provides pension, death and disability benefits to its members, which include employees of the State, public school employees who are defined by Maine law as teachers for whom the State is the employer for retirement contribution purposes, and employees of approximately 250 local municipalities and other public entities in Maine, each of which contracts for participation in the System under provisions of the relevant statutes. At June 30, 1999 and 1998, the membership consisted of:

	1999	1998
Active vested and nonvested members	49,765	48,551
Terminated vested participants	1,859	1,444
Retirees and benefit recipients	28,509	27,873
Total	80,133	78,168

The System's retirement programs provide defined retirement benefits based on members' average final compensation and creditable service. Vesting occurs upon the earning of ten years of service credit (effective October 1, 1999, the ten-year requirement was reduced to five years by legislative action) or the earning of one year of service credit immediately preceding retirement at or after normal retirement age. Normal retirement age is age 60 or 62, determined by whether a member had at least 10 years of creditable service on June 30, 1993, and the monthly benefit of members eligible to retire before normal retirement age by virtue of having at least 25 years of service is reduced by a statutorily prescribed factor for each year of age that a member is below her/his normal retirement age at retirement. The System also provides death and disability benefits, which are established by statute for State and public school employees, and by contract with other participating employers under applicable statutory provisions.

Upon termination of membership, members' accumulated employee contributions are refundable with interest, credited in accordance with statute. Withdrawal of accumulated contributions results in forfeiture of all benefits. The annual rate of interest credited to members' accounts is set by the System's Board of Trustees and is currently 6.0%.

In the event that a participating entity withdraws from the System, its individual employee-members can terminate membership or remain contributing members. The participating entity remains liable for contributions sufficient to fund benefits for its already retired former employee-members, for its terminated vested members, and for those active employees, whether or not vested, who remain contributing System members.

Retirement benefits are funded by contributions from members and employers and earnings from investments. Disability and death benefits are funded by employer contributions and investment earnings. Member and employer contributions are a percentage of applicable member compensation. Member contribution rates are defined by law and depend on the terms of the plan under which a member is covered. Employer contribution rates are determined by annual actuarial valuations.

The total funds managed by the System are constitutionally restricted as held in trust for the payment of pension and related benefits to its members. The System's Board of Trustees, in its fiduciary capacity, establishes the System's investment policies and their overall implementation. The System maintains separate reserves and accounts for each participating entity



# MSRS Financial Statements



## MAINE STATE RETIREMENT SYSTEM NOTES TO FINANCIAL STATEMENTS

### 1. Plan Description (continued):

and performs separate actuarial valuations for each participating entity's respective plan. Management's interpretation of the State of Maine Statutes is that all assets accumulated for the payment of benefits may legally be used to pay benefits, including refunds of member contributions, to any of the plan members or beneficiaries, and that the System is therefore regarded as administering a single plan for financial reporting purposes. During fiscal 1999 the System became aware that the State Auditor has a different view with respect to this, believing that the System should report as the administrator of multiple plans. All parties have agreed that clarification should be sought, and the System plans to take appropriate steps to resolve any issue of asset accumulation and utilization. Regardless of this question, each of its participating entities is responsible for the funding of benefits related to that entity.

The System also provides group life insurance under a plan that is administered by a third party insurance company. Premiums paid by or on behalf of those covered are set and collected by the System. Benefit payments are made by the insurance company. The System remits to the insurance company payments in the amount of benefits paid out and additional payments representing administrative fees.

### 2. Summary of Significant Accounting Policies:

#### Basis of Accounting

The System's financial statements are prepared using the accrual basis of accounting. Plan member contributions are recognized in the period in which the contributions are due. Benefits and refunds are recognized when due and payable in accordance with the terms of each plan. Investment purchases and sales are recorded as of their trade date.

#### New Accounting Pronouncements

During the year ended June 30, 1999, the System implemented Governmental Accounting Standards Board (GASB) Technical Bulletin (TB) 98-1, *Disclosures About Year 2000 Issues*, as amended by GASB TB 99-1, *Disclosures About Year 2000 Issues*, which requires the System to provide disclosures related to its commitment to make Year 2000 compliance changes or updates to computer systems and equipment. The System elected to make the required disclosures as unaudited supplemental information. The adoption of GASB TB 98-1 and GASB TB 99-1 had no impact on net assets held in trust for pension benefits at June 30, 1999.

#### Investments

Investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Securities that are not frequently traded on a national or international exchange are manually valued at the end of each month by Northern Trust through a variety of external sources. The fair value of the pro-rata share of units in commingled equity and fixed income mutual and index funds, common/collective trusts, is determined by the respective fund trustee based on quoted sales prices of the underlying securities. Investments that do not have an established market are reported at estimated fair value.

Net investment income includes net appreciation (depreciation) in the fair value of investments, interest income, dividend income, foreign currency transaction gains and losses, securities lending income and investment expenses, which includes investment management and custodial fees and all other significant investment related costs.

#### Cash and Cash Equivalents

The System considers all highly liquid debt instruments with maturities of three months or less, when purchased, to be cash equivalents.





# MSRS Financial Statements

## MAINE STATE RETIREMENT SYSTEM NOTES TO FINANCIAL STATEMENTS

### 2. Summary of Significant Accounting Policies (continued):

#### Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make significant estimates and assumptions that affect the reported amounts of net assets held in trust for pension benefits at the date of the financial statements and the actuarial information included in the required supplementary information as of the benefit information date, the changes in net assets during the reporting period and, when applicable, the disclosure of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.

#### Risks and Uncertainties

The System makes investments in the combination of stocks, bonds, fixed income securities, mutual funds, commingled mutual and index funds, derivative financial instruments and other investment securities established by the Trustee's investment policy. The System prohibits its investment managers from using leverage in its derivative financial instruments or from investing in speculative positions. Investment securities and investment securities underlying certain investment securities are exposed to various risks, such as interest rate, market and credit. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in the values of investment securities may occur in the near term and that such changes could materially affect the amounts reported in the statement of plan net assets and the statement of changes in plan net assets.

Employer contributions to the System are established on the basis of actuarial assumptions related to interest rates, inflation rates, and member and retiree compensation and demographics. By law, the assumptions are adopted by the Board of Trustees based on recommendation of the System's actuary. The System is required by Maine law to perform an actuarial experience study every three years and it is this study that triggers review of all assumptions, including economic assumptions. There is no statutory prohibition against changing assumptions more frequently, but such instances are extremely rare. There is no statutory requirement that assumptions must be changed with each three-year review. Thus, while near-term (i.e., shorter than three years) changes are very unlikely, such changes could occur and if they did could be material to the financial statements.

#### Depreciation and Other Deductions

Other deductions include immaterial adjustments related to corrections to accumulated depreciation on fixed assets and accounts receivable.

#### Reclassification

In 1998, due to legislative restrictions, certain prior year designated net asset balances were reclassified to other liabilities since the Legislature requires that certain revenues be deferred for specific expenditures.

### 3. Cash and Investments:

The System is authorized to invest in stocks, bonds, mortgages, real estate and other investments. The System maintains certain deposits, cash equivalents and other investments with financial institutions.



# MSRS Financial Statements



## MAINE STATE RETIREMENT SYSTEM NOTES TO FINANCIAL STATEMENTS

### 3. Cash and Investments (continued):

At June 30, 1999 and 1998, cash and cash equivalents were composed of the following:

	1999	1998
Cash on deposit with local banks	\$ (71,321)	\$ 4,595,314
Short-term investment funds	93,496,471	316,879,973
Foreign currency deposits	7,410,295	26,082,775
Total	\$ 100,835,445	\$ 347,558,062

The System's investments would generally be categorized into one of three separate categories. Category 1 includes investments, including units in common/collective trusts, that are insured or registered and for which the securities or units are held by the System or its agent in the System's name. Category 2 includes uninsured and unregistered investments for which the securities are held by the broker or agent in the System's name. Category 3 includes uninsured and unregistered investments for which the securities are held by the broker or agent, but not in the System's name. At June 30, 1999 and 1998, all of the System's investments are considered Category 1.

At June 30, 1999 and 1998, the System had certain investments representing 5% or more of plan net assets, as follows:

	1999	1998
Common/collective trusts:		
State Street-Wilshire 5000 Index Fund	\$ 1,652,977,680	\$ 1,481,325,911
State Street Standard & Poor's Growth Fund	542,746,187	423,000,609
State Street Bond Market Index Fund	1,004,015,332	1,300,404,658

### 4. Derivative Securities:

Derivative financial instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates or financial indexes. They include futures, forwards, options or swap contracts. In addition, some traditional securities can have derivative-like characteristics such as asset-backed securities like collateralized mortgage obligations (CMOs) which are sensitive to changes in interest rates and prepayments.

The System is a party, both directly and indirectly, to various derivative financial investments that are used in the normal course of business to enhance returns on investments and manage risk exposure to changes in value due to fluctuations in market conditions. The System's investments in derivatives are not leveraged, nor do they represent speculative investment activity. These investments may involve, to varying degrees, elements of credit and market risk. Credit risk is the possibility that loss may occur from the failure of a counterparty to perform according to the terms of the contract. Market risk arises due to adverse changes in market price, interest rate and foreign exchange rate fluctuations that may result in a decrease in the market value of a financial investment and/or increase its funding cost. The market risk is regulated by imposing strict limits as to the types, amounts and degree of risk that investment managers may undertake. These limits are approved by the Board of Trustees and senior management, and the risk positions of the investment managers are reviewed on a periodic basis to monitor compliance with the limits.





## MSRS Financial Statements

### MAINE STATE RETIREMENT SYSTEM NOTES TO FINANCIAL STATEMENTS

#### 4. Derivative Securities (continued):

Foreign currency forward contracts are used to hedge against the currency risk in the System's foreign stock and fixed income security portfolios. A foreign currency forward contract is an agreement to buy or sell a specific amount of a foreign currency at a specified delivery or maturity date for an agreed-upon price. The contracts are valued at forward exchange rates, and the changes in value of open contracts are recognized in the statement of changes in plan net assets. The realized gain or loss on forward currency contracts represents the difference between the value of the original contracts and the closing value of such contracts and is included in the statement of changes in plan net assets. As of June 30, 1999, the fair value of forward currency contracts held by the System was \$4,862,669.

The System's fixed income managers invest in CMOs to improve the yield or adjust the duration of the fixed income portfolio. As of June 30, 1999 the carrying value of the System's CMO holdings totaled \$36,829,407.

In addition to the derivative financial instruments directly held, the System may have indirect exposure to risk through its ownership interests in commingled investment funds which use, hold or write derivative financial instruments. There also may be indirect exposure in the State Street securities lending program, in which collateral pools may include derivatives (see Note 5).

#### 5. Securities Lending Agreement:

The System has entered into agreements with The Northern Trust Company ("Northern"), the System's master custodian, to lend any type of security held in the System's portfolio to broker-dealers and other entities. The agreements require that all loans be collateralized by cash, irrevocable letters of credit, or other securities in an amount at least equal to 102% (105% for international securities) of the market value of the securities loaned. The contract with Northern requires it to indemnify the System if the borrowers fail to return the securities and if Northern has failed to comply with its contractual obligations regarding the securities lent. The System is not permitted to pledge or sell collateral securities received unless the borrower defaults. Either the System or the borrower can terminate all securities loans on demand. The average term of the loans is 10 days, and the cash collateral received is invested in one of Northern's short-term investment pools, of which the average duration is 5 to 15 days. The market value of securities out on loan under this program at June 30, 1999 and 1998 is \$435,244,768 and \$355,886,253, respectively.

A similar agreement exists with State Street Bank, custodian for the System's holdings in common/collective trusts. Although securities lent under this program are not direct investments of the System, the cash collateral pool investment guidelines are approved by the System and the same requirements for collateral amounts exist.

#### 6. Contribution and Reserves:

The Maine Constitution, Maine Statutes and the System's funding policy provide for periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate adequate assets to pay benefits when due. Level percentage of payroll employer contribution rates are determined using the entry age normal actuarial funding method, except for the coverage of legislators, where the aggregate method is used. The System also uses the level percentage of payroll method to amortize the unfunded liability of the State and teacher plan over a closed 25 year period from June 30, 1998. For participating local districts, either the level percentage of payroll method or the level dollar method is used, depending on plan structure, status of the participating local district, nature of the unfunded liability (i.e., separate or pooled) and amount of the unfunded liability. Amortization periods range from 2 years to 28 years.

The State of Maine is required to remit 25% of its budgetary surplus at the end of its fiscal year to the System, in order to reduce any unfunded pension liability for state employees and teachers. Accordingly, for the years ended June 30, 1999 and



# MSRS Financial Statements



## MAINE STATE RETIREMENT SYSTEM NOTES TO FINANCIAL STATEMENTS

### 6. Contribution and Reserves (continued):

1998, the System recorded \$18,827,353 and \$8,487,572 in additional contributions from the State of Maine, which were recorded as other receivables due from the State at June 30, 1999 and 1998. Effective for fiscal year 1999, the State of Maine is also required to remit to the System all funds remaining at the end of the fiscal year in the statewide unfunded liability – retirement account. The funds are used to reduce any unfunded pension liability for state employees. As a result, the System has recorded \$2,018,645 in additional contributions from the State of Maine, of which \$2,018,645 was recorded as other receivables at June 30, 1999.

Significant actuarial assumptions used to compute contribution requirements are the same as those used to compute the standardized measure of the pension obligation discussed in the required supplementary information.

The contribution rates as actuarially determined in effect in 1999 and 1998 for participating entities are as follows:

	1999	1998
State:		
Employees <sup>(1)</sup>	7.65 - 8.65%	7.65 - 8.65%
Employer	16.68%	16.39%
Teachers:		
Employees	7.65%	7.65%
Employers	19.30%	19.30%
Participating Local Entities:		
Employees	6.5%	6.5%
Employers <sup>(1)</sup>	4.7 - 19%	4.7 - 19%

<sup>(1)</sup>Contribution rates vary depending on specific terms of plan benefits for certain classes of employees or benefit plan options selected by a particular participating local entity. Withdrawn entities' contributions are set in dollar amounts, not as rates.

### 7. Statutory and Constitutional Requirements:

In 1998, the State Legislature enacted a law that requires the State to fund unfunded actuarial liabilities existing as of June 30, 1998, of the State and teacher plans over a period not to exceed 25 years, commencing June 30, 1998. This statute shortens the constitutionally required amortization period of not more than 31 years from June 30, 1997, put in place by Constitutional amendment approved at referendum in November 1995. This Constitutional amendment also prohibits the creation of new unfunded liabilities in the State and teacher plans, except those arising from experience losses, which must be funded over a period of not more than ten years. In addition, the amendment requires use of actuarially sound current-cost accounting, reinforcing the existing statutory requirements.

### 8. System Employees – Retirement and Retiree Health Benefits:

The System, as the employer of its staff, is a participating employer in a consolidated plan of the Maine State Retirement System. System employees are required by statute to contribute 6.5% of their annual covered salaries. The System is required to contribute at an actuarially determined rate; the rate was 5.9% and 8% of annual covered payroll for 1999 and 1998, respectively. The actuarial assumptions are described in the actuarial assumptions and methods footnote to the required supplementary information. The contribution requirements of plan members are set by statute; the employer contribution





## MSRS Financial Statements

### MAINE STATE RETIREMENT SYSTEM NOTES TO FINANCIAL STATEMENTS

**8. System Employees – Retirement and Retiree Health Benefits (continued):**

is established by actuarial valuation. The System's annual pension cost for its employees was \$713,170 and \$655,977 for 1999 and 1998, respectively.

The System also offers post-retirement medical benefits for all of its employees who retire from the System with an immediate pension. The System pays the cost of these benefits for those first employed before July 1, 1991 and pays all or a portion of the cost for those employed after that date, depending on their years of participation in the health plan on a pay-as-you-go basis. Employees terminating employment with at least 25 years of service credit but not immediately retiring may defer eligibility for provision of health benefits at retirement. Included in administrative expenses in 1999 and 1998 is a charge of \$125,000 to cover all current expenses and to establish a liability for future benefits. As of June 30, 1999, there is \$858,076 in other liabilities for the payment of future benefits. The charge is equal to the actuarially determined expense as calculated by amortizing, as a level percent of payroll, the present value of future benefits less assets over a 25 year period, of which 19 years remain. The present value of the future benefits for fiscal year 1999 is \$2,686,000.

# MSRS Financial Statements



## MAINE STATE RETIREMENT SYSTEM REQUIRED SUPPLEMENTARY INFORMATION

### Schedule of Funding Progress

	(a)	(b)	(b - a)	(a/b)	(c)	((b - a)/c)
Actuarial valuation date	Actuarial value of assets	Actuarial accrued liability (AAL) - entry age	Unfunded AAL (UAAL)	Funded ratio	Annual Covered Payroll	UAAL (as a per- centage of covered payroll)
6/30/99	\$ 6,236,229,331	\$ 8,332,753,666	\$ 2,096,524,335	74.8%	\$ 1,443,312,536	145.3%
6/30/98	5,392,675,044	7,854,273,082	2,461,598,038	68.7%	1,389,139,818	177.2%
6/30/97	4,602,973,536	7,291,821,034	2,688,847,498	63.1%	1,341,612,931	200.4%
6/30/96	3,959,367,717	6,985,476,378	3,026,108,661	56.7%	1,316,462,200	229.9%

### Schedule of Employer Contributions

Year ended	Annual required contribution	Actual contribution	Percentage contributed
1999	\$ 277,848,369	\$ 299,694,267	107.9%
1998	253,379,103	274,787,560	108.4%
1997	249,327,155	267,853,658	107.4%
1996	247,646,796	253,646,796	102.4%



# MSRS Financial Statements

## MAINE STATE RETIREMENT SYSTEM NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

### Basis of Presentation:

For financial statement reporting purposes, the information provided on the required supplementary information schedules includes combined amounts for all participating entities: state employees, teachers, judicial and legislative employees, as well as employees of participating local districts.

### Actuarial Assumptions and Methods:

The information in the required supplemental schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation date, June 30, 1999, is as follows:

#### Funding Method

Costs are developed using the entry age normal cost method (based on a level percentage of covered payroll), except for the coverage of legislators, where the aggregate method is used. Under the entry age normal method, the accrued liability and the present value of future normal costs are determined by summing the individual entry age results for each participant. The normal cost is then determined in aggregate by spreading the present value of future normal costs as a level percentage of expected future covered payroll. Entry age is defined as the first day service is credited under the plan.

Experience gains and losses, i.e., decreases or increases in liabilities when actual experience differs from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

#### Asset Valuation Method

For actuarial purposes, assets are valued by determining the total yield on the investments of the System using the full investment return (including capital gains), which is measured by the difference in the actuarial value of the assets at the beginning of the fiscal year and the market value of the assets at the end of the fiscal year. Prior year's unrecognized gains and losses are added to this amount to develop expected actuarial value. One third of the excess of the yield (using the full investment return) over the actuarially determined yield is added to the expected actuarial value to determine the actuarial valuation of assets.

#### Amortization

The unfunded actuarial accrued liability is amortized on a level percentage of payroll over a legislatively-enacted 25 year closed period from June 30, 1998.

Significant actuarial assumptions employed by the actuary for funding purposes as of June 30, 1999 are as follows:

Investment Return - 8% per annum, compounded annually

Salary Increases - 5.5% to 9.5% per year (includes inflation of 5.5%)

Mortality Rates - Active State employee members and active participating local entity members - UP 1994 Tables; Active teacher members - 85% of UP 1994 Tables; Non-disabled State employee retirees and non-disabled participating local entity retirees - GAM 1971 Tables; Non-disabled teacher retirees - GAM 1971 Tables set back two years; All current recipients of disability benefits - 1964 Commissioners Disability Table; All disability benefit recipients who begin to receive benefits in 1999 and thereafter - RPA 1994 Table for pre-1995 Disabilities.

Cost of Living Benefit Increases - 4% per annum



# MSRS Financial Statements



## MAINE STATE RETIREMENT SYSTEM NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

### Group Life Plan:

The Group Life Insurance Program administered by the System provides for a life insurance benefit for certain active members equal to a member's annual base compensation as defined by statute. Upon retirement, life insurance coverage in the amount of the member's average final compensation is provided with a reduction of 15% per year until the greater of 40% of the average final compensation or \$2,500 is reached. To be covered in retirement, retirees must have participated in the Group Life Program for a minimum of ten years. Premiums are remitted to the System by the employer. The State pays a premium rate of \$0.30 per \$1,000 of coverage per month for state employees. Teachers and employees of participating local districts pay a premium rate of \$0.22 and \$0.46 per \$1,000 of coverage per month, respectively, some or all of which may be deducted from employees' compensation as per individual agreements with employees. Assumptions used to determine the actuarial liability are the same as for the pension plan. At June 30, 1999 and 1998, the net assets held in trust for group life insurance benefits is \$30,678,041 and \$30,605,221, respectively. At June 30, 1999 and 1998, the plan had the following actuarially determined liabilities:

	(In millions)	
	1999	1998
Actuarial liabilities:		
Active members	\$ 47.4	\$ 42.6
Retired members	33.5	36.4
Total	<u>\$ 80.9</u>	<u>\$ 79.0</u>

**INDEPENDENT ACCOUNTANT'S REPORT ON COMPLIANCE AND ON  
INTERNAL CONTROL OVER FINANCIAL REPORTING BASED ON AN AUDIT OF FINANCIAL  
STATEMENTS PERFORMED IN ACCORDANCE WITH  
GOVERNMENT AUDITING STANDARDS**

Board of Trustees  
Maine State Retirement System:

We have audited the financial statements of the Maine State Retirement System (the "System"), which is a component unit of the State of Maine, as of and for the year ended June 30, 1999 and have issued our report thereon dated October 8, 1999. We conducted our audit in accordance with generally accepted auditing standards and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States.

Compliance

As part of obtaining reasonable assurance about whether the System's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations and contracts, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance that are required to be reported under *Government Auditing Standards*.

Internal Control Over Financial Reporting

In planning and performing our audit, we considered the System's internal control over financial reporting in order to determine our auditing procedures for the purpose of expressing an opinion on the financial statements and not to provide assurance on the internal control over financial reporting. Our consideration of the internal control over financial reporting would not necessarily disclose all matters in the internal control over financial reporting that might be material weaknesses. A material weakness is a condition in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements in amounts that would be material in relation to the financial statements being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. We noted no matters involving the internal control over financial reporting and its operation that we consider to be material weaknesses.

We noted other matters involving the internal control structure and its operations that we have reported to the management of the System in a separate letter dated November 3, 1999.

This report is intended for the information of the Board of Trustees and management. However, this report is a matter of public record and its distribution is not limited.

*PricewaterhouseCoopers LLP*

October 8, 1999

PricewaterhouseCoopers LLP  
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## Report of Independent Accountants on Required Supplementary Information

Our report on the audit of the financial statements of the Maine State Retirement System as of June 30, 1999 and for the year then ended is presented in the first section of this document. Our audit was conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The year 2000 supplementary information on the following page is not a required part of the basic financial statements but is supplementary information required by the Governmental Accounting Standards Board, and we did not audit and do not express an opinion on such information. Further, we were unable to apply to the information certain procedures prescribed by professional standards because the disclosure criteria specified by GASB Technical Bulletin No. 98-1, "Disclosures About Year 2000 Issues," as amended, are not sufficiently specific and, therefore, preclude the prescribed procedures from providing meaningful results. In addition, we do not provide assurance that the Maine State Retirement System is or will become year 2000 compliant, that the Maine State Retirement System's year 2000 remediation efforts will be successful in whole or in part, or that parties with which the Maine State Retirement System does business are or will become year 2000 compliant.

*PricewaterhouseCoopers LLP*

October 8, 1999





# MSRS Financial Statements

## MAINE STATE RETIREMENT SYSTEM NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

### Year 2000 Readiness

The Year 2000 issue as it relates to the business of the Maine State Retirement System requires the Retirement System to address (1) its internal computer hardware components and systems; (2) its software, both system software and application software; (3) its technology based sources and flows of investment information; (4) the readiness of its banking entities; (5) the readiness of its investment managers, custodians and consultants; (6) the readiness of its actuarial consultant; and (7) the status of its embedded chip equipment. In order to comprehensively address these issues, MSRS established a Year 2000 Readiness Program to identify, investigate and correct any Year 2000 problems which may exist in the aforementioned areas, focusing first on the System's critical business systems.

As a result of the MSRS Readiness Program, a number of important steps were taken to prepare for the Year 2000. Among the more significant efforts, MSRS: 1) established a Year 2000 Team responsible for organizing and monitoring the System's Year 2000 compliance effort; 2) identified all of the potential computerized systems and components that may be affected by the Year 2000 problem; 3) completed the testing and validation of all computer hardware and the installation of the most current patches as provided by the vendor or replacement equipment as necessary; 4) continued the development of a new Membership System which will replace all non-compliant systems presently residing on the mainframe computer of the State Government with new Year 2000 compliant systems residing at the MSRS; 5) completed exhaustive validation and testing of the benefits payroll system using the back-up computer center in the Portland office including the testing of the direct deposit process through MSRS' banking institution and the Federal Reserve System; 6) developed a comprehensive contingency plan for the benefits payroll process; 7) upgraded the financial and accounting systems with a system certified as Year 2000 compliant by the Information and Technical Association of America; 8) completed the testing of the majority of application software programs; and 9) contacted all of the financial institutions with which the System conducts business to be assured that they are meeting their compliance responsibilities.

Although the completion of these procedures is not a guarantee that systems and equipment will be Year 2000 compliant, MSRS has a high level of confidence in its Year 2000 Readiness effort and does not anticipate any disruption to its internal system and processes. The Year 2000 problem also affects many inter-related areas which service providers, such as MSRS, rely upon such as independent delivery and transmission systems. Accordingly, MSRS has advised its members that there are other computer based systems that could be impaired, such as electrical and telephone services, the United States Postal Service, and the US banking system, which could affect the functionality of MSRS business and over which MSRS does not have control.



# Maine State Retirement System



Trust Fund Balances  
for the year ended  
June 30, 1999





# Trust Fund Balances for the year ended June 30, 1999



Ref Nbr	Plan or District Name	Members' Contribution	Retirement Allowance	Total Trust Fund Reserves
7	TEACHERS	\$ 706,445,190	\$ 2,464,829,979	\$ 3,171,275,169
1	STATE	467,784,515	1,723,436,767	2,191,221,282
350	JUDICIAL	4,062,395	30,563,705	34,626,100
351	LEGISLATIVE	813,691	4,905,502	5,719,192
370	CONS - AC	89,825,272	624,077,967	713,903,239
371	CONS - AN	16,107,857	93,233,854	109,341,711
372	CONS - BC	9,986	43,768	53,754
373	CONS - 1C	8,305,043	220,326,462	228,631,504
374	CONS - 1N	1,799,628	20,640,345	22,439,973
375	CONS - 2C	18,439,567	152,927,800	171,367,367
376	CONS - 2N	1,146,212	6,363,126	7,509,338
377	CONS - 3C	3,726,544	46,628,270	50,354,814
378	CONS - 3N	2,161,262	17,645,567	19,806,829
379	CONS - 4C	1,809,153	8,653,646	10,462,799
380	CONS - 4N	136,134	258,331	394,466
106	AROOSTOOK COUNTY		704,966	704,966
43	AUBURN PUBLIC LIBRARY		338,010	338,010
69	BAILEYVILLE		614,016	614,016
59	BANGOR WATER DISTRICT		467,714	467,714
73	BATH		8,848,820	8,848,820
35	BELFAST		227,268	227,268
108	BERWICK		169,170	169,170
207	BERWICK SEWER DISTRICT		10,436	10,436
246	BETHEL		263,731	263,731
158	BIDDEFORD		674,757	674,757
157	BINGHAM WATER DISTRICT		46,361	46,361
146	BOOTHBAY HARBOR		326,810	326,810
21	BOOTHBAY HARBOR WATER		401,781	401,781
176	BRIDGTON	2,994	399,318	402,312
253	BRIDGTON WATER DISTRICT		61,897	61,897
177	BROWNVILLE		342,794	342,794
42	BRUNSWICK		615,653	615,653
292	BRUNSWICK FIRE & POLICE		652,659	652,659
72	BRUNSWICK SEWER		213,802	213,802
130	BUCKSPORT		597,218	597,218
36	CALAIS		409,319	409,319
85	CAPE ELIZABETH	662,985	7,507,395	8,170,380
135	CAPITOL COASTAL COUNC OF GOV'T	10,388	252,384	262,772
208	CARIBOU FIRE AND POLICE		1,689,854	1,689,854
265	CASTLE HILL		115,307	115,307
235	CHINA		57,221	57,221
217	CORINNA		186,147	186,147
251	CORINNA SEWER DISTRICT		144,090	144,090
252	CSD #12 - TOPSFIELD		76,658	76,658





## Trust Fund Balances for the year ended June 30, 1999

Ref Nbr	Plan or District Name	Members' Contribution	Retirement Allowance	Total Trust Fund Reserves
266	CSD #18 -WELLS/OGUNQUIT	\$	\$ 258,696	\$ 258,696
204	CSD #3 - BOOTHBAY	58,880	522,095	580,975
216	CUMBERLAND		352,298	352,298
5	CUMBERLAND COUNTY		846,362	846,362
191	DAMARISCOTTA		312,703	312,703
97	DEXTER		128,292	128,292
197	DIXFIELD	685	371,749	372,435
167	DOVER-FOXCROFT		308,088	308,088
137	DOVER-FOXCROFT WATER		31,212	31,212
234	DURHAM		116,599	116,599
180	ELIOT		357,897	357,897
13	ELLSWORTH		130,729	130,729
249	ERSKINE ACADEMY		101,289	101,289
156	EXETER	6,840	13,859	20,699
260	FAIRFIELD		345,913	345,913
58	FALMOUTH MEMORIAL LIBRARY		106,370	106,370
100	FARMINGTON		205,764	205,764
17	FORT FAIRFIELD	37,675	1,339,141	1,376,816
275	FORT FAIRFIELD HOUSING AUTH		5,981	5,981
131	FORT FAIRFIELD UTILITIES		18,575	18,575
91	FORT KENT	192,620	1,259,729	1,452,350
102	FRANKLIN COUNTY	182,429	1,203,663	1,386,092
142	FREEPORT	3,709	1,043,521	1,047,230
98	FRENCHVILLE		61,916	61,916
149	FRYEBURG		85,044	85,044
24	GARDINER		881,097	881,097
221	GARDINER WATER DISTRICT		101,822	101,822
261	GEORGETOWN		65,483	65,483
133	GORHAM		632,406	632,406
205	GOULD ACADEMY		257,037	257,037
112	GREENVILLE		279,164	279,164
94	GRTR PORTLAND COUNC OF GOV'T	55,617	1,748,557	1,804,174
160	HALLOWELL		123,926	123,926
151	HAMPDEN		14,180	14,180
183	HAMPDEN WATER DISTRICT		108,436	108,436
150	HERMON		489,778	489,778
215	HODGDON		12,096	12,096
285	HOMESTEAD PROJECT	10,673	107,488	118,161
10	HOULTON		1,445,902	1,445,902
232	HOWLAND		79,605	79,605
244	INDIAN TOWNSHIP TRIBAL GOV'T		1,804,424	1,804,424
226	JACKMAN WATER DISTRICT		669	669
47	KENNEBEC COUNTY		18,319	18,319
220	KENNEBEC SANITARY DIST		237,964	237,964

# Trust Fund Balances for the year ended June 30, 1999



Ref Nbr	Plan or District Name	Members' Contribution	Retirement Allowance	Total Trust Fund Reserves
31	KENNEBEC WATER	\$	\$ 911,799	\$ 911,799
84	KENNEBUNK		570,235	570,235
255	KENNBUNK, KENNEPORT, WELLS WATER		326,724	326,724
201	KENNEBUNK SEWER DIST		342,957	342,957
188	KENNEBUNKPORT		816,634	816,634
14	KITTERY		274,689	274,689
12	KITTERY WATER		288,316	288,316
33	KNOX COUNTY	27,144	681,529	708,673
181	LEBANON		233,475	233,475
163	LEW/AUB WAT POLL CNTRL AUTH		65,516	65,516
245	LIMESTONE	52,666	455,481	508,147
29	LIMESTONE WATER AND SEWER	64,858	403,759	468,617
76	LINCOLN		1,369,266	1,369,266
134	LINCOLN ACADEMY		145,392	145,392
95	LINCOLN COUNTY	58,411	2,172,974	2,231,385
214	LINNEUS		5,001	5,001
103	LISBON		556,660	556,660
243	LISBON WATER		49,048	49,048
32	LIVERMORE FALLS WATER		11,911	11,911
109	LIVERMORE FALLS		208,439	208,439
276	LOVELL		45,590	45,590
228	LUBEC		182,258	182,258
88	LUBEC WATER & ELECTRIC		999	999
225	MAINE CTY COMM ASSOC		27,878	27,878
169	MAINE HOUSING AUTHORITY	147,178	1,856,504	2,003,682
38	MAINE MARITIME ACADEMY		4,932,594	4,932,594
55	MAINE MUNICIPAL ASSOC	107,097	1,319,113	1,426,211
227	MARS HILL		335,203	335,203
120	MDI REGIONAL SCHOOL DIST		143,893	143,893
105	ME STATE PRINCIPALS ASSOC		57,753	57,753
114	MECHANIC FALLS		247,870	247,870
194	MEDWAY		72,449	72,449
74	MEXICO		297,773	297,773
186	MILFORD		120,102	120,102
3	MILLINOCKET		818,074	818,074
104	MILO	2,275	346,886	349,161
238	MILO WATER DISTRICT		126,924	126,924
184	MONSON		17,636	17,636
16	MT. DESERT		112,746	112,746
172	NEW CANADA PLANTATION		27,110	27,110
210	NEW GLOUCESTER		221,162	221,162
254	NORTH BERWICK		172,127	172,127
125	NORWAY		204,122	204,122
284	NORWAY PARIS SOLID WASTE CORP	2,291	100,946	103,238





## Trust Fund Balances for the year ended June 30, 1999

Ref Nbr	Plan or District Name	Members' Contribution	Retirement Allowance	Total Trust Fund Reserves
140	OLD ORCHARD BEACH	\$ 591,236	\$ 7,788,108	\$ 8,379,344
111	OLD TOWN		931,697	931,697
262	OLD TOWN HOUSING		43,004	43,004
79	OLD TOWN WATER		87,598	87,598
166	ORLAND		295,675	295,675
61	ORONO		1,066,837	1,066,837
209	ORRINGTON		250,554	250,554
200	OXFORD		5,858	5,858
57	OXFORD COUNTY		93,326	93,326
127	PARIS		291,469	291,469
159	PARIS UTILITY DISTRICT		45,491	45,491
11	PENOBSCOT COUNTY		647,582	647,582
202	PHIPPSBURG		247,911	247,911
121	PISCATAQUIS COUNTY		79,869	79,869
110	PITTSFIELD		855,987	855,987
41	PORTLAND PUBLIC LIBRARY		5,478	5,478
4	PRESQUE ISLE	2,251,447	21,880,159	24,131,606
258	PRINCETON		199,504	199,504
268	PROJECT LODESTONE	2,539	47,725	50,264
269	REGION 4 - SO PENOBSCOT		71,912	71,912
224	REGION 7 - WALDO		192,510	192,510
213	RICHMOND	34,417	631,714	666,131
242	RICHMOND UTILITIES		21,088	21,088
161	ROCKPORT		47,813	47,813
247	RUMFORD MEXICO SEWAGE DISTRICT		52,946	52,946
175	SABATTUS		347,619	347,619
192	SACO		998,417	998,417
190	SAD # 16 - HALLOWELL		246,837	246,837
223	SAD #13 - BINGHAM		223,394	223,394
211	SAD #21 - DIXFIELD		114,482	114,482
78	SAD #28		64,115	64,115
168	SAD #29		243,179	243,179
50	SAD #31 - HOWLAND		117,974	117,974
77	SAD #34 - BELFAST	259,789	3,309,948	3,569,737
143	SAD #41 - MILO		515,628	515,628
189	SAD #49 - FAIRFIELD		364,631	364,631
198	SAD #51 - CUMBERLAND		565,669	565,669
129	SAD #53		106,633	106,633
115	SAD #54		202,147	202,147
218	SAD #56 - SEARSPORT	79,401	507,715	587,117
187	SAD #60 - NORTH BERWICK		796,468	796,468
113	SAD #66 - ELLSWORTH		552,219	552,219
126	SAD #67		308,214	308,214
128	SAD #71		807,417	807,417

# Trust Fund Balances for the year ended June 30, 1999

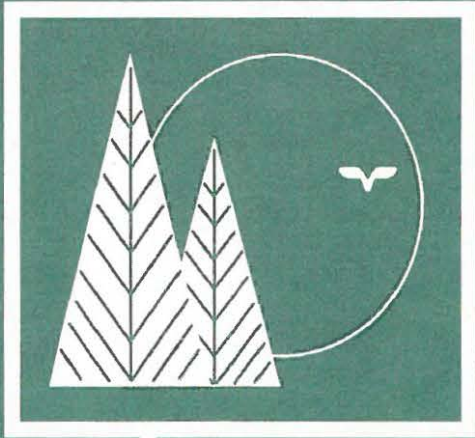


Ref Nbr	Plan or District Name	Members' Contribution	Retirement Allowance	Total Trust Fund Reserves
119	SAD#9 - FARMINGTON	\$	\$ 239,692	\$ 239,692
96	SAGADAHOC COUNTY	26,128	1,714,919	1,741,048
30	SAINT AGATHA		225,092	225,092
83	SANFORD		3,607,773	3,607,773
89	SANFORD SEWERAGE		174,985	174,985
170	SANFORD WATER DISTRICT		379,064	379,064
117	SEARSPORT		438,455	438,455
124	SEARSPORT WATER		143,888	143,888
80	SKOWHEGAN		615,194	615,194
141	SOUTH BERWICK		257,123	257,123
171	SOUTH BERWICK WATER DISTRICT		9,751	9,751
206	SOUTH PORTLAND HOUSING		653,949	653,949
164	THOMASTON	42,176	728,429	770,605
81	TOPSHAM		402,963	402,963
28	TOWN OF YORK		202,910	202,910
267	TRI-COMMUNITY LANDFILL		9,364	9,364
182	VAN BUREN		246,747	246,747
229	VAN BUREN HOUSING AUTH		139,398	139,398
153	VASSALBORO		208,109	208,109
162	WALLAGRASS PLANTATION		21,314	21,314
40	WASHINGTON COUNTY		7,412	7,412
66	WATERVILLE FIRE AND POLICE		912,643	912,643
107	WELLS		239,770	239,770
122	WESTBROOK	608,413	8,614,948	9,223,361
70	WESTBROOK FIRE AND POLICE	849,533	21,010,565	21,860,098
241	WESTERN ME COMM ACTION COUNC	100,661	1,270,189	1,370,850
86	WILTON	116,826	1,201,469	1,318,296
144	WINSLOW		779,589	779,589
250	WINTER HARBOR UTILITIES		16,307	16,307
179	WINTHROP		595,975	595,975
116	YARMOUTH		483,406	483,406
37	YORK COUNTY		657,157	657,157
39	YORK WATER DISTRICT		142,808	142,808
TOTAL TRUST FUNDS		\$ 1,329,222,431	\$ 5,573,189,875	\$ 6,902,412,306





# Maine State Retirement System



Investments  
at June 30, 1999





# Investments at June 30, 1999



## ASSETS BY MANAGER June 30, 1999

### MAINE STATE RETIREMENT SYSTEM

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
ALLIANCE CAPITAL - EQUITY	\$ 221,019,714	\$ 421,297,960	\$ 200,278,246
ALLIANCE CAPITAL - FIXED INCOME	260,295,707	253,388,171	(6,907,535)
CASH ACCOUNT	3,468,933	3,509,574	40,642
CRAMER, ROSENTHAL, MCGLYNN	130,514,177	152,181,792	21,667,616
FAME	3,039,680	3,079,937	40,256
GAM INTERNATIONAL	150,891,447	146,843,387	(4,048,060)
JP MORGAN - MORTGAGES	265,515,603	316,038,080	50,522,477
JP MORGAN - MULTI MARKET I	14,866,035	19,487,678	4,621,643
JP MORGAN - MULTI MARKET II	33,908,620	44,924,604	11,015,984
JP MORGAN - PRIVATE PLACEMENTS	105,365,535	105,965,313	599,778
LOOMIS SAYLES	210,667,395	208,305,096	(2,362,299)
MARTIN CURRIE	209,924,883	240,627,888	30,703,005
PEREGRINE ASSET MANAGEMENT	218,006,284	258,041,570	40,035,286
ROWE PRICE FLEMING	115,836,069	149,502,013	33,665,944
STANDISH AYER & WOOD	210,933,466	206,264,954	(4,668,511)
STATE STREET EQUITY CORE	921,488,822	1,652,994,966	731,506,144
STATE STREET FIXED CORE	861,780,122	1,004,015,332	142,235,210
STATE STREET GROWTH INDEX	278,115,626	542,746,187	264,630,561
STATE STREET INTERNATIONAL EAFE	283,765,931	302,896,086	19,130,155
STATE STREET RUSS 1000 VALUE	191,485,037	245,915,657	54,430,620
STATE STREET VALUE INDEX	153,264,087	240,292,611	87,028,524
TCW	207,189,816	207,592,490	402,674
WELLINGTON INTERNATIONAL	154,306,069	159,101,149	4,795,079
<b>TOTAL ASSETS</b>	<b>\$ 5,205,649,058</b>	<b>\$ 6,885,012,498</b>	<b>\$ 1,679,363,440</b>

### GROUP LIFE INSURANCE

JP MORGAN - GROUP LIFE	\$ 33,053,549	\$ 32,903,865	(\$ 149,685)
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## Investments at June 30, 1999

### ASSET ALLOCATION June 30, 1999

	<u>PERCENT OF TOTAL</u>	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
<b>TOTAL ASSETS</b>	<b>100%</b>	<b>\$ 5,205,649,058</b>	<b>\$ 6,885,012,498</b>	<b>\$ 1,679,363,440</b>
<b>TOTAL CASH</b>	<b>0.1%</b>	<b>\$ 3,468,933</b>	<b>\$ 3,509,574</b>	<b>\$ 40,642</b>
<b>TOTAL DOMESTIC EQUITY</b>	<b>52.0%</b>	<b>\$ 2,162,668,402</b>	<b>\$ 3,577,883,026</b>	<b>\$ 1,415,214,625</b>
ALLIANCE CAPITAL - EQUITY	6.1%	221,019,714	421,297,960	200,278,246
CRAMER, ROSENTHAL, MCGLYNN	2.2%	130,514,177	152,181,792	21,667,616
JP MORGAN - MULTI MARKET I	0.3%	14,866,035	19,487,678	4,621,643
JP MORGAN - MULTI MARKET II	0.7%	33,908,620	44,924,604	11,015,984
PEREGRINE ASSET MANAGEMENT	3.7%	218,006,284	258,041,570	40,035,286
STATE STREET EQUITY CORE	24.0%	921,488,822	1,652,994,966	731,506,144
STATE STREET GROWTH INDEX	7.9%	278,115,626	542,746,187	264,630,561
STATE STREET RUSS 1000 VALUE	3.6%	191,485,037	245,915,657	54,430,620
STATE STREET VALUE INDEX	3.5%	153,264,087	240,292,611	87,028,524
<b>TOTAL DOMESTIC FIXED INCOME</b>	<b>33.5%</b>	<b>\$ 2,124,787,325</b>	<b>\$ 2,304,649,375</b>	<b>\$ 179,862,050</b>
ALLIANCE CAPITAL - FIXED INCOME	3.7%	260,295,707	253,388,171	(6,907,535)
FAME	0.0%	3,039,680	3,079,937	40,256
JP MORGAN - MORTGAGES	4.6%	265,515,603	316,038,080	50,522,477
JP MORGAN - PRIVATE PLACEMENTS	1.5%	105,365,535	105,965,313	599,778
LOOMIS SAYLES	3.0%	210,667,395	208,305,096	(2,362,299)
STANDISH AYER & WOOD	3.0%	210,933,466	206,264,954	(4,668,511)
STATE STREET FIXED CORE	14.6%	861,780,122	1,004,015,332	142,235,210
TCW	3.0%	207,189,816	207,592,490	402,674
<b>TOTAL INTERNATIONAL EQUITY</b>	<b>14.5%</b>	<b>\$ 914,724,399</b>	<b>\$ 998,970,523</b>	<b>(\$ 84,246,124)</b>
STATE STREET INTERNATIONAL EAFE	4.4%	283,765,931	302,896,086	19,130,155
MARTIN CURRIE	3.5%	209,924,883	240,627,888	30,703,005
ROWE PRICE FLEMING	2.2%	115,836,069	149,502,013	33,665,944
GAM INTERNATIONAL	2.1%	150,891,447	146,843,387	(4,048,060)
WELLINGTON INTERNATIONAL	2.3%	154,306,069	159,101,149	4,795,079

# Investments at June 30, 1999



## INVESTMENT PERFORMANCE June 30, 1999

	ONE YEAR	THREE YEARS	FIVE YEARS	SINCE INCEPTION	INCEPTION DATE
TOTAL ASSETS	11.2	15.8	16.3	12.7	1/31/77
DOMESTIC EQUITY CONSOLIDATION	18.2	24.1	24.3	15.9	1/31/77
ALLIANCE EQUITY	27.1	34.8	30.6	18.4	7/31/78
CRAMER ROSENTHAL	5.2	15.2	18.3	18.1	4/30/94
MORGAN MULTI-MKT I	(12.9)	9.7	-	11.5	4/30/92
MORGAN MULTI-MKT II	9.2	14.6	-	16.0	4/30/94
PEREGRINE	(2.4)	9.1	16.6	17.6	4/30/91
STATE STREET RUSSELL 1000 VALUE	-	-	-	31.8	9/30/98
STATE STREET LARGE VALUE	16.5	-	-	23.7	12/31/96
STATE STREET LARGE GROWTH	28.3	-	-	35.8	12/31/96
STATE STREET WILSHIRE 5000	19.4	-	-	26.6	12/31/96
FIXED INCOME CONSOLIDATION	3.3	7.4	8.0	9.7	6/30/78
ALLIANCE FIXED	(0.3)	6.3	7.5	9.2	8/31/78
JP MORGAN FIXED INCOME	3.0	7.7	8.4	10.4	11/30/77
LOOMIS SAYLES	1.3	-	-	1.3	6/30/98
STANDISH AYER & WOOD	3.1	-	-	3.1	6/30/98
STATE STREET BOND INDEX	3.2	-	-	6.8	12/31/96
TCW	-	-	-	3.8	10/31/98
INTL EQUITY CONSOLIDATION	4.6	8.3	8.8	6.2	11/30/88
GAM INTERNATIONAL	-	-	-	(2.1)	11/30/98
MARTIN CURRIE	7.9	10.8	-	12.3	4/30/95
ROWE PRICE	5.9	9.1	-	10.0	7/31/95
STATE STREET EAFE INDEX	-	-	-	6.9	7/31/98
WELLINGTON	-	-	-	5.9	1/31/99





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
<b>CASH</b>			
CASH ACCOUNT	\$ 3,468,933	\$ 3,509,574	\$ 40,642
<b>DOMESTIC EQUITY</b>			
<b>ALLIANCE CAPITAL</b>			
ALLIED SIGNAL INC COM	\$ 1,463,888	\$ 3,024,000	\$ 1,560,112
ALTERA CORP COM	3,642,472	6,037,250	2,394,778
AMER INTL GROUP INC COM	3,513,393	9,438,625	5,925,232
AMER ON-LINE COM	2,624,459	3,740,000	1,115,541
ASSOC 1ST CAP CORP CL A COM	6,179,420	7,015,875	836,455
AT&T CORP COM LIBERTY MEDIA	4,021,294	16,787,400	12,766,106
AVON PROD INC COM	6,648,201	8,325,000	1,676,800
BK AMER CORP COM	11,886,421	13,636,125	1,749,704
BRISTOL MYERS SQUIBB CO COM	13,618,540	19,104,436	5,485,896
CHASE MANHATTAN CORP	4,061,031	7,868,040	3,807,009
CISCO SYS INC COM	3,531,978	21,457,688	17,925,710
CITIGROUP INC COM	4,952,605	15,617,905	10,665,300
COLGATE-PALMOLIVE CO COM	4,354,480	9,377,200	5,022,720
COLTV STIF	8,711,524	8,739,411	27,888
DELL COMPUTER CORP COM	4,738,461	14,985,000	10,246,539
GAP INC COM	4,084,530	4,654,650	570,121
GEN ELEC CO COM	4,650,634	16,159,000	11,508,366
GILLETTE CO COM	2,782,658	3,936,000	1,153,342
HARLEY DAVIDSON INC COM	3,960,230	7,503,750	3,543,520
HOME DEPOT INC COM	6,012,842	15,503,663	9,490,821
INTEL CORP CAP	8,548,128	13,256,600	4,708,472
INTL BUSINESS MACH CORP CAP	8,632,100	10,986,250	2,354,150
KOHL'S CORP COM	5,509,444	12,084,750	6,575,306
KROGER CO COM	6,494,844	7,822,360	1,327,516
LUCENT TECHNOLOGIES INC COM	4,241,174	10,992,313	6,751,139
MBNA CORP COM	4,021,637	12,027,068	8,005,431
MCI WORLDCOM INC COM	6,128,883	15,792,469	9,663,585
MCKESSON HBOC INC COM	1,608,033	725,485	(882,548)
MEDTRONIC INC COM	6,368,244	10,508,334	4,140,090
MERCK & CO INC CO	-	11,394	11,394
MICROSOFT CORP COM	7,155,739	15,602,438	8,446,698
MORGAN STANLEY DEAN WITTER	3,594,620	11,216,913	7,622,293

# Investments at June 30, 1999



## SYSTEM HOLDINGS

June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
PFIZER INC COM	\$ 12,111,760	\$ 12,317,000	\$ 205,240
PHILIP MORRIS COS INC COM	-	16,984	16,984
PROCTER & GAMBLE CO COM	4,196,459	3,748,500	(447,959)
SCHERING-PLOUGH CORP COM	6,427,175	14,836,500	8,409,325
SOLECTRON CORP COM	4,390,490	20,179,638	15,789,148
TIME WARNER INC COM	4,498,202	4,851,350	353,148
UNITED STATES DOLLARS	(3,163,768)	(3,163,768)	-
UNITED STATES DOLLARS	4,437,266	4,437,266	-
UNUMPROVIDENT CORP COM	4,223,413	3,985,800	(237,613)
UTD TECHNOLOGIES CORP COM	3,252,627	5,904,000	2,651,373
WAL-MART STORES INC COM	6,640,203	11,400,050	4,759,847
WASTE MGMT INC DEL COM STK	6,263,983	8,847,250	2,583,267
<b>TOTAL ALLIANCE CAPITAL</b>	<b>\$ 221,019,714</b>	<b>\$ 421,297,960</b>	<b>\$ 200,278,246</b>
<b>PEREGRINE CAPITAL</b>			
3DFX INTERACTIVE INC COM	\$ 1,515,354	\$ 1,218,750	\$ (296,604)
ACNIELSEN CORP COM STK	4,877,745	5,308,875	431,130
ACXIOM CORP COM	1,419,432	2,062,830	643,398
ADAPTEC INC COM	1,211,300	3,033,344	1,822,044
ADR TEVA PHARMACEUTICAL	4,664,532	5,600,700	936,168
ADTRAN INC COM	578,619	851,175	272,556
ADVANCED FIBRE COM	1,305,364	1,612,500	307,136
ALREF COM STK	2,276,588	2,095,663	(180,926)
AMERN ITALIAN PASTA CO CL A	1,649,077	2,001,713	352,635
AMERN PWR CONVERSION CORP	646,854	1,304,100	657,246
ARTESYN TECHNOLOGIES INC	1,939,315	2,351,875	412,560
ASK JEEVES INC OC-COM	144,200	144,200	-
ATMEL CORP COM	1,237,875	1,971,919	734,044
AVANT CORP COM	1,444,784	1,224,625	(220,159)
AVIATION SALES CO COM	1,680,288	1,809,100	128,813
AWARE INC MASS COM	2,100,160	2,186,325	86,165
AZURIX CORP COM STK	2,388,300	2,514,000	125,700
BARR LABS INC COM	1,680,532	1,929,950	249,418
BEA SYS INC COM	1,223,151	2,245,013	1,021,861
BIOMATRIX INC COM	(78,915)	(66,844)	12,072
BNK UNITED CORP CL A COM	3,975,401	3,970,525	(4,876)
BROWN SHOE INC NEW COM	1,047,259	1,458,135	410,876
BUCKLE INC COM	1,271,679	1,308,125	36,446
CAP AUTOMOTIVE REIT COM STK	2,536,500	2,240,575	(295,925)





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
CAP SR LIVING CORP COM	\$ 1,197,859	\$ 1,190,000	\$ (7,859)
CENTOCOR INC COM EXCH J&J STK	4,088,821	4,224,225	135,404
CEPHALON INC CON	565,488	750,600	185,112
CHEESECAKE FACTORY INC COM	1,219,870	1,631,750	411,880
CIBER INC COM	3,310,862	3,513,263	202,401
CITRIX SYS INC COM	2,449,384	4,339,200	1,889,816
CMNTY SVGS BANKSHARES INC	1,145,687	1,342,038	196,351
COLTV STIF	9,123,158	9,160,221	37,063
COULTER PHARMACEUTICAL INC	2,228,730	2,498,097	269,368
CSK AUTO CORP COM	1,975,406	2,019,600	44,194
CYBEX COMPUTER PRODS CORP	601,039	632,763	31,723
CYMER INC COM	1,768,250	2,120,000	351,750
CYTYC CORP COM	893,422	1,132,950	239,528
DAL-TILE INTL INC COM	1,384,636	1,686,913	302,276
DEL MONTE FOODS CO COM	1,075,121	1,179,200	104,079
DIAMOND TECH PARTNERS INC CL A	988,860	1,181,400	192,540
DURA AUTOMOTIVE SYS INC COM	1,033,380	1,323,350	289,970
EVEREST REINS HLDGS INC	1,559,328	2,329,425	770,097
GASONICS INTL CORP COM	1,227,327	1,407,000	179,673
GENZYME CORP COM	2,488,335	4,021,966	1,533,631
GLOBALSTAR TELECOMM	1,156,615	1,657,906	501,291
GOLDEN ST BANCORP INC	748,953	927,000	178,047
HANDLEMAN CO DEL COM	1,624,197	1,524,994	(99,203)
HELLER FINL INC CL A COM STK	2,804,970	2,695,031	(109,939)
HOUGHTON MIFFLIN CO COM	2,105,336	2,075,456	(29,879)
ICN PHARMACEUTICALS INC	3,574,252	4,606,031	1,031,779
IMCLONE SYS INC COM	698,542	1,205,313	506,771
IMRGLOBAL CORP COM STK	881,643	1,087,625	205,982
INFORMIX CORP COM	2,762,039	2,916,749	154,710
INHALE THERAPEUTIC SYS INC COM	1,436,875	1,281,113	(155,762)
INSIGHT ENTERPRISES INC COM	1,622,257	1,462,725	(159,532)
INTEGRATED ELEC SVCS INC COM	1,573,299	1,667,325	94,026
INTRAWEST CORP COM NEW	3,278,690	2,899,822	(378,869)
ITC DELTACOM INC COM	2,475,482	3,164,000	688,518
IVAX CORP COM	2,401,019	2,606,063	205,044
JONES APPAREL GROUP INC COM	3,475,001	4,000,838	525,836
KEY ENERGY SVCS INC	1,032,210	1,219,800	187,590
LIGAND PHARMACEUTICALS INC CL B	1,258,120	1,501,875	243,755
LOUISIANA-PACIFIC CORP COM	2,361,786	2,525,975	164,189
MICREL INC COM	1,060,920	2,072,000	1,011,080

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
MILLENNIUM PHARMACEUTICALS	\$ 931,512	\$ 1,641,600	\$ 710,088
MLP AMERIGAS PARTNERS L P UNIT	1,577,944	1,296,038	(281,907)
MUSICLAND STORES CORP COM	1,070,095	1,034,550	(35,545)
N.W. AIRLS CORP CL A	3,621,400	3,802,500	181,100
NATL COMPUTER SYS INC COM	1,148,498	1,420,875	272,377
NCO GROUP INC COM	624,626	760,000	135,374
OFFICEMAX INC COM	2,475,578	2,606,400	130,822
PANTRY INC COM	1,407,673	1,733,438	325,765
PAPA JOHNS INTL INC COM	1,520,654	1,863,469	342,814
PENTAIR INC COM	4,573,601	5,476,275	902,674
PETSMART INC COM	2,830,444	3,338,425	507,981
PROTEIN DESIGN LABS INC	997,588	1,346,781	349,194
RADIAN GROUP INC COM	2,325,722	3,304,606	978,884
REGIS CORP MINN COM	2,923,028	2,271,800	(651,228)
RENAL CARE GROUP INC COM	569,276	944,438	375,161
RENT-WAY INC COM	2,296,675	2,094,465	(202,210)
REPUBLIC SVCS INC	1,771,875	2,598,750	826,875
RES AMER INC CL A	1,361,666	1,326,750	(34,916)
RIGGS NATL CORP COM	1,971,616	1,566,863	(404,753)
ROSLYN BANCORP INC COM	3,355,238	3,317,188	(38,051)
SABRATEK CORP COM	1,335,962	1,498,438	162,475
SCH SPECIALTY INC COM	1,244,758	950,900	(293,858)
SCP POOL CORP COM	1,236,702	2,566,800	1,330,098
SEA CONTAINERS LTD CL A	2,244,460	2,164,781	(79,678)
SKYWEST INC COM	1,982,884	2,476,776	493,892
SLI INC COM	3,437,100	3,437,100	-
SOFTWARES INC COM	1,506,750	1,578,500	71,750
SONIC AUTOMOTIVE INC CL A	1,324,233	1,215,500	(108,733)
SONOSITE INC COM	754,000	986,000	232,000
STEIN MART INC COM	1,341,346	1,298,438	(42,908)
STEWART ENTERPRISES INC CL A COM	3,530,843	3,037,738	(493,106)
SUNRISE ASSISTED LIVING INC COM	2,285,001	2,531,925	246,924
SWIFT TRANSN INC COM	1,364,121	2,470,600	1,106,479
SYKES ENTERPRISES INC COM	1,921,933	2,459,738	537,804
SYNOPSIS INC COM	2,521,041	3,956,944	1,435,903
TENFOLD CORP COM	612,000	1,143,000	531,000
T-HQ INC COM NEW	1,212,888	1,489,250	276,362
TIDEWATER INC COM	3,564,625	3,782,000	217,375
TOMMY HILFIGER ORD SH	3,323,838	4,490,225	1,166,387
TORO-CO COM	1,172,295	1,793,073	620,778





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	COST	MARKET VALUE	UNREALIZED GAIN/LOSS
TOWER AUTOMOTIVE INC COM	\$ 2,839,993	\$ 4,576,206	\$ 1,736,214
TRIUMPH GROUP INC NEW COM	1,332,224	1,137,300	(194,924)
UNIONBANCAL CORP COM	2,629,713	3,089,245	459,532
UNITED STATES DOLLARS	(11,723,744)	(11,723,744)	-
UNITED STATES DOLLARS	12,857,899	12,857,899	-
UNITEDGLOBAL COM	1,644,937	4,172,463	2,527,525
USFREIGHTWAYS CORP COM	1,656,486	2,895,724	1,239,238
VALASSIS COMMUNICATIONS INC COM	2,052,934	3,922,538	1,869,604
VENATOR GROUP INC COM STK	1,984,496	2,085,413	100,917
VISIO CORP COM	1,209,036	1,674,750	465,714
WATSCO INC CL A	1,807,015	1,612,938	(194,078)
XIRCOM COM	1,051,250	1,509,138	457,888
<b>TOTAL PEREGRINE CAPITAL</b>	<b>\$ 218,006,284</b>	<b>\$ 258,041,570</b>	<b>\$ 40,035,286</b>
<b>CRAMER ROSENTHAL</b>			
1ST AMER CORP COM	\$ 208,243	\$ 199,500	\$ (8,743)
ALLMERICA FINL CORP COM	3,082,788	3,362,931	280,144
AMERADA HESS CORP COM	2,134,895	2,207,450	72,555
ANTEC CORP COM	1,581,439	1,920,544	339,105
APPLIED PWR INC CL A	4,434,860	4,217,050	(217,810)
BERGEN BRUNSWIG CORP CL A COM	4,849,972	3,688,050	(1,161,922)
BORG WARNER AUTOMOTIVE INC COM	1,519,491	1,683,000	163,509
CIN BELL INC COM	1,581,250	3,344,119	1,762,869
CIT GROUP INC CL A COM STK	3,710,016	3,866,363	156,347
COASTAL CORP COM	1,952,518	3,261,281	1,308,763
COLTV STIF	5,296,159	5,317,572	21,412
COLUMBIA ENERGY GROUP COM	2,653,858	3,121,838	467,980
COMMSCOPE INC COM	1,579,347	3,245,140	1,665,793
COMSAT CORP SER 1 COM	2,867,837	4,293,250	1,425,413
CONVERGYS CORP COM	3,089,678	3,873,063	783,385
FOOD LION INC CL A	1,998,714	2,422,500	423,786
FORTUNE BRANDS INC COM STK	2,682,863	3,624,450	941,587
GOLDEN ST BANCORP INC COM STK	1,197,680	1,892,250	694,570
GOODRICH B F CO COM	1,151,531	1,304,638	153,107
GOODRICH BF CO COM .056	3,052,461	3,496,025	443,564
HCR MANOR CARE	3,375,031	2,619,506	(755,524)
HEALTHSOUTH CORP COM STK	5,972,104	6,591,113	619,008
HUMANA INC COM	2,803,894	1,949,681	(854,213)
INGERSOLL-RAND CO COM	2,501,140	3,438,050	936,910

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
JOHNS MANVILLE CORP COM STK	\$ 1,437,365	\$ 2,028,936	\$ 591,571
K MART CORP COM	4,473,214	5,733,750	1,260,536
KEYSPAN CORP COM	1,428,894	1,466,767	37,872
MASCOTECH INC	2,526,063	2,952,206	426,143
MFC HANCOCK JOHN BK & THRIFT OPP	2,186,044	3,520,700	1,334,656
MODIS PROFESSIONAL SVCS INC COM	1,611,297	1,942,150	330,853
MONTANA PWR CO COM	1,853,378	3,510,900	1,657,522
NV PWR CO COM EX SIERRA POWER	2,113,141	2,045,000	(68,141)
OCEAN ENERGY INC TEX COM	1,062,466	1,360,167	297,700
PALL CORP COM	2,079,658	2,343,000	263,342
QUANTUM CORP COM	3,015,491	3,428,163	412,672
REPUBLIC SVCS INC	1,917,000	2,811,600	894,600
RYDER SYS INC COM	3,369,694	3,424,750	55,056
SAFETY-KLEEN CORP NEW COM NEW	3,081,157	3,633,609	552,453
SANTA FE INTL CORP COM STK	1,429,992	1,665,250	235,258
SHOPKO STORES INC COM	1,790,185	2,339,650	549,465
SNAP-ON INC COM	2,623,921	2,192,963	(430,958)
SNYDER COMM REDESIGNATED AS SNC	2,751,020	3,553,375	802,355
SOVEREIGN BANCORP INC COM	2,757,047	2,293,323	(463,725)
STARWOOD HOTELS & RESORTS	2,784,238	3,329,235	544,997
STERLING COMM INC COM	1,982,255	2,399,775	417,520
TEKTRONIX INC COM	2,680,960	3,248,175	567,215
TENNECO INC NEW COM	3,840,189	3,657,650	(182,539)
THOMAS & BETTS CORP COM	1,698,775	1,804,943	106,168
UNIONBANCAL CORP COM	2,334,199	2,637,878	303,679
UNITED STATES DOLLARS	(1,484,314)	(1,484,314)	-
UNITED STATES DOLLARS	414,539	414,539	-
VULCAN MATERIALS CO COM	1,265,499	1,326,875	61,376
WELLPOINT HLTH NETWORKS INC	1,866,722	3,292,301	1,425,579
WHITMAN CORP NEW COM	2,068,899	2,281,867	212,968
WORLD COLOR PRESS INC	2,277,422	2,087,250	(190,172)
<b>TOTAL CRAMER ROSENTHAL</b>	<b>\$ 130,514,177</b>	<b>\$ 152,181,792</b>	<b>\$ 21,667,616</b>





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
<b>JP MORGAN MULTI MARKET I</b>			
CF JP MORGAN MULTI MKT I	\$ 14,858,682	\$ 19,480,298	\$ 4,621,616
COLTV STIF	7,353	7,381	27
<b>TOTAL JP MORGAN MULTI MARKET I</b>	<b>\$ 14,866,035</b>	<b>\$ 19,487,678</b>	<b>\$ 4,621,643</b>
<b>JP MORGAN MULTI MARKET II</b>			
CF JP MORGAN MULTI MKT II	\$ 33,908,620	\$ 44,924,604	\$ 11,015,984
<b>TOTAL JP MORGAN MULTI MARKET II</b>	<b>\$ 33,908,620</b>	<b>\$ 44,924,604</b>	<b>\$ 11,015,984</b>
<b>STATE STREET WILSHIRE 5000</b>			
CF ST STR U S TOTAL MKT	\$ 921,488,822	\$ 1,652,977,680	\$ 731,488,859
COLTV STIF	-	17,286	17,286
<b>TOTAL STATE STREET WILSHIRE 5000</b>	<b>\$ 921,488,822</b>	<b>\$ 1,652,994,966</b>	<b>\$ 731,506,144</b>
<b>STATE STREET S&amp;P VALUE</b>			
CF ST ST S & P VALUE FD	\$ 153,264,087	\$ 240,292,611	\$ 87,028,524
<b>TOTAL STATE STREET S&amp;P VALUE</b>	<b>\$ 153,264,087</b>	<b>\$ 240,292,611</b>	<b>\$ 87,028,524</b>
<b>STATE STREET LARGE GROWTH</b>			
CF ST ST S & P GROWTH FD	\$ 278,115,626	\$ 542,746,187	\$ 264,630,561
<b>TOTAL STATE STREET LARGE GROWTH</b>	<b>\$ 278,115,626</b>	<b>\$ 542,746,187</b>	<b>\$ 264,630,561</b>
<b>STATE STREET RUSS 1000 VALUE</b>			
CF STATE STREET RUSSELL 1000 VALUE	\$ 191,485,037	\$ 245,915,657	\$ 54,430,620
<b>TOTAL STATE STREET RUSS 1000 VALUE</b>	<b>\$ 191,485,037</b>	<b>\$ 245,915,657</b>	<b>\$ 54,430,620</b>
<b>TOTAL DOMESTIC EQUITY</b>	<b>\$ 2,162,668,402</b>	<b>\$ 3,577,883,026</b>	<b>\$ 1,415,214,625</b>
<b>FIXED INCOME</b>			
<b>ALLIANCE CAPITAL</b>			
BRITISH POUND STERLING	\$ (8,044,487)	\$ (7,832,968)	\$ 211,519
CANADIAN DOLLAR	(6,931,948)	(6,878,349)	53,600
CARCO AUTO LN MASTER	3,999,436	3,978,794	(20,642)
CLEARNET COMMUNICATIONS INC	1,992,401	1,849,537	(142,864)
CLEARNET COMMUNICATIONS INC	5,009,689	4,884,805	(124,883)
CMO LB COML CONDUIT MTG TR 99-C1	2,776,458	2,731,795	(44,663)
CONSORCIO ECUATORIANO DE TELE	5,300,000	1,664,722	(3,635,278)
CSC HLDGS INC 7.625 SR NTS	4,995,050	4,815,549	(179,501)

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
EURO	\$ 229	\$ 229	\$ -
EURO	6,103,863	5,994,168	(109,695)
EURO	(2,220,345)	(2,140,512)	79,833
EURO	(5,926,626)	(5,855,676)	70,950
FHLMC GROUP #E00485 7.0	4,087,330	4,169,029	81,699
FHLMC GROUP #G10564 7.0	3,222,921	3,317,004	94,084
FNMA POOL #0323545 8	4,114,500	4,110,536	(3,964)
FNMA POOL #303890 7	905,634	926,599	20,965
FNMA POOL #313947 7	2,364,327	2,330,569	(33,758)
FNMA POOL #323037 6.5 GTD MTG	1,295,150	1,245,859	(49,291)
FNMA POOL #323600 8	2,542,506	2,538,140	(4,366)
FNMA POOL #323640 7.5	5,763,675	5,702,737	(60,938)
FNMA POOL #323705 7.5	4,835,884	4,793,085	(42,800)
FNMA POOL #390178 7	937,524	963,077	25,553
FNMA POOL #443058 6.5	1,924,968	1,851,575	(73,394)
FNMA POOL #447954 6.5	1,963,615	1,888,748	(74,867)
FNMA POOL #490109 6	6,100,679	5,948,550	(152,129)
FNMA POOL #495507 6	4,918,702	4,775,318	(143,383)
GNMA POOL #167424	12,243,642	11,953,941	(289,701)
GNMA POOL #434144	8,399,418	8,142,052	(257,367)
GNMA POOL #460758 7	2,626,776	2,580,417	(46,359)
GNMA POOL #462554 7	2,634,475	2,587,981	(46,494)
GNMA POOL #462642	3,248,277	3,133,848	(114,429)
GNMA POOL #498380	11,904,783	11,540,858	(363,926)
GNMA POOL #780734	3,955,321	3,822,016	(133,305)
GNMA, POOL #462543	2,852,002	2,801,668	(50,333)
GNMA, POOL #780601	2,417,398	2,363,920	(53,478)
GNMA, POOL #780802	362,511	347,930	(14,581)
MC-CUERNAVACA TRST 9.25%	1,945,174	1,479,716	(465,458)
NIAGARA MOHAWK PWR	9,735,000	10,452,820	717,820
NTL INCORPORATED 9.75%	7,927,755	7,629,015	(298,740)
PVTPL CENTAUR FDG CORP	8,503,480	8,580,000	76,520
PVTPL EMPRESA NACIONAL DE ELEC	10,051,300	9,948,333	(102,967)
PVTPL FUJI JGB L L C SER A	4,909,375	4,376,371	(533,004)
PVTPL TPSA FIN BV GTD SR NT	7,013,016	7,020,150	7,134
RAYTHEON CO 7.2	7,804,320	7,980,480	176,160
RSL COMMUNICATIONS PLC GTD	2,600,000	2,502,292	(97,708)
RSL COMMUNICATIONS STEP-UP	2,219,481	1,969,807	(249,673)





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
U.S. TREAS BDS 5.25	\$ 8,569,547	\$ 8,172,004	\$ (397,543)
UNITED STATES DOLLAR	17,910,008	17,973,722	63,714
UNITED STATES DOLLAR	6,931,948	6,931,948	-
UNITED STATES DOLLAR	8,044,487	8,044,487	-
UNITED STATES DOLLAR	2,220,345	2,220,345	-
UNITED STATES DOLLAR	5,926,626	5,926,626	-
UNITED STATES DOLLAR	(6,103,863)	(6,103,863)	-
UNITED STATES DOLLAR	(3,264,540)	(3,264,540)	-
UNITED STATES DOLLAR	2,594,009	2,594,009	-
US TREAS 6.375 BD DUE 8-15-2027	4,368,712	4,519,640	150,928
US TREAS 6.75 NT DUE 4-30-2000	21,327,438	21,075,701	(251,736)
US TREAS BDS BD 5.25	2,380,205	2,341,318	(38,888)
US TREAS NTS 4.75	9,041,503	8,799,779	(241,724)
US TREAS NTS 6.5	10,609,356	10,772,649	163,293
USA TREASURY NTS 5.5%	1,117,969	1,106,881	(11,087)
USA TREASURY NTS 6.875%	3,237,320	3,290,931	53,610
<b>TOTAL ALLIANCE CAPITAL</b>	<b>\$ 260,295,707</b>	<b>\$ 253,388,171</b>	<b>(\$ 6,907,535)</b>
<b>LOOMIS SAYLES</b>			
1ST INDL L P 7.6 BD	\$ 6,020,409	\$ 5,432,564	(\$ 587,845)
APP FINANCE (VII) 3 1/2% CNV NTS	1,726,648	1,764,687	38,039
ARGENTINA REP DEB	2,456,220	2,552,366	96,146
ATLAS AIR INC PASSTHRU CTF	2,750,000	2,849,582	99,582
BAKER HUGHES INC 6.875%	1,169,875	1,115,687	(54,188)
BAKER HUGHES INC ZERO CPN	2,626,346	3,000,000	373,654
BANGKOK BANK 4.589% CNV	434,375	672,691	238,316
BATTLE MOUNTAIN GD 6% CNV	280,500	291,800	11,300
BAUSCH & LOMB INC	4,694,758	4,356,356	(338,402)
BRAZIL C EUROCLEAR	3,641,719	3,223,483	(418,236)
BRIT COLUMBIA	1,607,770	1,473,117	(134,653)
BSTN CHICKEN INC 4.5	72,337	11,896	(60,441)
CANADA GENERIC RES ZERO CPN	1,390,189	1,574,218	184,029
CAP 1 BK 6.7 SR MTN	2,461,935	2,433,289	(28,645)
CHES ENERGY CORP 8.5	459,375	427,514	(31,861)
CHES ENERGY CORP PFD CONV 7	895,000	520,000	(375,000)
CHESAPEAKE ENERGY SR SER B 7.875	236,250	215,797	(20,453)
CIRRUS LOGIC INC 6	1,151,750	1,098,267	(53,483)
COLONIAL RLTY LT PARTNERSHIP 7.0	994,150	961,742	(32,408)
COLUMBIA / HCA HEALTHCARE CORP	918,755	830,809	(87,946)

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
CONAGRA INC	\$ 2,953,936	\$ 2,786,151	(\$ 167,785)
CYPRESS SEMICONDUCTOR CORP	530,156	589,500	59,344
DANA CORP NT 7	4,936,286	4,685,972	(250,314)
DELL COMPUTER CORP 7.1	5,325,300	4,999,359	(325,941)
DIAMOND OFFSHORE DRILLING INC	1,514,448	1,766,042	251,594
DOLE FOOD INC NT DTD 10/06/1998	3,988,800	3,840,790	(148,010)
DURA PHARMACEUTICALS INC 3.5	986,938	970,174	(16,764)
EMP NAC ELECTRICID 7.875%	2,027,630	2,103,433	75,803
ENRON CORP 6.95 DUE 07-15-2028 REG	933,110	941,137	8,027
ENSCO INTL INC 7.2 DUE 11-15-2027 REG	1,987,120	1,821,200	(165,920)
EOP OPER LTD PARTNERSHIP	3,014,435	2,942,557	(71,878)
EVI INC CONV PFD STK	1,770,375	2,086,875	316,500
FORD MOTOR COMPANY 6.625%	2,472,050	2,274,781	(197,269)
FOX FAMILY WORLD FOX KID	988,750	952,500	(36,250)
GCV REGS PILTEL INTNTL D07/17/96	535,694	445,706	(89,989)
GCVREGS ADVANCE AGRO	92,500	84,761	(7,739)
GLOBAL MARINE INC 7.0 NT	1,173,838	1,149,919	(23,919)
HIGHWOODS REALITY 7%	477,735	471,432	(6,303)
HIGHWOODS REALITY 7.125%	979,630	952,228	(27,403)
HIGHWOODS/FORSYTH LTD	1,020,630	889,993	(130,637)
HMT TECH CORP 5.75 DUE	991,125	528,544	(462,581)
HVIDE CAP TR SECS CONV	984,113	131,450	(852,663)
INGRAM MICRO INC SR DEB ZERO	150,000	163,750	13,750
INTEGRATED DEVICE 5.5% CNV	684,750	665,729	(19,021)
INTEVAC INC 6.5 SUB NT CONV	590,313	450,042	(140,271)
INTL BK FOR RECON & DEV	7,038,626	7,633,853	595,227
JAPANESE YEN	-	395	395
JAPANESE YEN	6,320	6,320	-
JAPANESE YEN	(1,324,269)	(1,249,952)	74,318
JAPANESE YEN	(6,312)	(6,320)	(8)
KENT ELECTRS CORP 4.5 SUB	1,491,063	1,496,250	5,188
KEY ENERGY GROUP INC 5.0	1,537,755	1,247,458	(290,297)
KOREA ELEC PWR CO 7.0 DEB	280,643	358,878	78,235
LA QUINTA INNS INC	1,434,645	1,249,669	(184,976)
LAM RESH CORP 5.0 CONV	3,140,375	3,540,333	399,958
LEHMAN BROS HLDGS INC 6.625	1,245,175	1,250,710	5,535
LEHMAN BROS INC 6.625	481,415	487,774	6,359
LEHMAN INC 6.5 BD	5,197,958	4,908,864	(289,094)





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
LENNAR CORP SR NT 7.625	\$ 2,964,750	\$ 2,955,898	\$ (8,852)
LIBERTY PPTY LTD PARTNERSHIP 7.25	726,750	723,554	(3,196)
LIBERTY PPTY LTD PARTNERSHIP	906,650	897,386	(9,264)
LOEWS CORP 3.125	3,789,029	3,991,314	202,286
MAXTOR CORP 5.75	378,750	384,583	5,833
NATL PWR CORP GTD BD 9.625	5,932,700	5,734,941	(197,759)
NEXTEL COMMNS INC 0%/STP	1,001,250	1,046,250	45,000
NEXTEL COMMUNICATIONS INC	1,036,125	1,359,300	323,175
NEXTLINK COMMUNICATIONS INC	1,415,000	1,350,000	(65,000)
OCEAN ENERGY INC SR NT	1,484,100	1,501,875	17,775
ONT PROV CTF DEP CDS	4,116,319	4,450,544	334,225
OWENS CORNING 7.5	2,410,615	2,324,250	(86,365)
PENNZOIL-QUAKER ST CO	7,173,852	6,877,173	(296,679)
PETROLEOS MEXICANOS 9.5 GLOBAL	2,632,188	2,829,035	196,847
PETROLEOS MEXICANOS GLOBAL	3,432,063	3,173,276	(258,787)
PHYCOR INC 4.5 SUB DEB	371,875	391,000	19,125
PINDO DELI FIN MAURITIUS LTD 10.75	1,393,000	1,731,844	338,844
PINDO DELI FIN MAURITIUS LTD 11.75	858,125	864,844	6,719
PIONEER NAT RES CO 7.2	2,452,495	1,885,600	(566,895)
PROVIDENT COS INC 7.25	1,154,781	1,137,979	(16,802)
PVTPL BANGKOK BK PUB LTD	2,462,625	3,105,308	642,683
PVTPL CHIRON CORP SUB NT	465,000	491,161	26,161
PVTPL ESPIRITO SANTO CENTRAIS ELEC	700,188	921,278	221,090
PVTPL NATL SEMICONDUCTOR	972,867	1,014,563	41,696
PVTPL PEREZ COMPANC S A 8.125	1,874,000	1,774,931	(99,069)
PVTPL SAPPI BVI FIN LTD GTD 7.5	497,750	531,236	33,486
PVTPL SIAM COML BK PUB LTD 7.5	1,436,250	1,664,167	227,917
PVTPL TELEKOM MALAYSIA BERHAD 7.875	2,347,345	2,611,538	264,193
PVTPL TENAGA NASIONAL BERHAD 7.5	1,992,530	1,974,700	(17,830)
PVTPL THAI FMRS BK PUB LTD 8.25	2,366,163	3,077,208	711,046
PVTPL THERMO ELECTRON CORP	3,280,799	3,389,063	108,263
PVTPL THERMO INSTR SYS INC 4.5	955,000	985,325	30,325
PVTPL TOTAL ACCESS COMMUNICATION	472,500	556,508	84,008
PVTPL WESTN DIGITAL CORP ZERO CPN	895,050	590,625	(304,425)
R & B FALCON CORP SR NT SER B 7.375	4,647,663	3,408,057	(1,239,605)
RCN CORP 0 DUE 02-15-2008	154,063	156,250	2,188
RCN CORP 0 DUE 07-01-2008	2,147,658	2,296,458	148,801
READ-RITE CORP 6.5	1,031,750	728,750	(303,000)
REP S. AFRICA 8.5 YANKEE NT	1,194,688	1,431,101	236,414

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
ROGERS COMMS INC 2/5.75% CV	\$ 635,000	\$ 721,944	\$ 86,944
S3 INC 5.75 DUE 10-01-2003/10-08-1999	752,750	855,625	102,875
SAMSUNG ELECTRONIC 0% CNV	1,884,500	2,517,120	632,620
SEAGATE TECH 7.45 DEB	1,368,195	1,430,480	62,285
SEAGATE TECH INC 7.125 SR NT	1,299,675	1,264,484	(35,191)
SEAGATE TECH INC 7.37 SR NT	1,482,810	1,419,325	(63,485)
SEC CAP GROUP INC NT 7.7	2,239,910	1,932,125	(307,785)
SILICON GRAPHICS INC 5.25	577,125	585,563	8,438
SSANGYONG OIL REF 3% CNV	140,250	217,525	77,275
SSANGYONG OIL REF 3.75% CNV	203,500	285,339	81,839
SUSA PARTNERSHIP L P 7.45 BD	1,843,860	1,856,340	12,480
SUSA PARTNERSHIP L P DEB 7.5	887,580	873,240	(14,340)
TIME WARNER INC 6.95 GTD DEB	4,445,438	4,285,203	(160,235)
TJIWI KIMIA FIN MAURITIUS LTD 10.0	332,500	380,833	48,333
TN GAS PIPELN CO DEB 7	1,479,615	1,418,412	(61,203)
TRANSGAS DE OCCIDENTE S A SR	869,362	849,765	(19,597)
TRICO MARINE SVCS INC SR NT SER	491,875	472,708	(19,167)
TRINET CORP RLTY TR INC 7.7 SR	1,453,801	1,419,658	(34,144)
U S W. CAP FDG INC 6.875 CO GUARNT	446,170	465,031	18,861
UN PAC RES GROUP INC 7.15	3,120,870	3,024,389	(96,481)
UN PAC RES GROUP INC 7.5	953,730	945,223	(8,507)
UNITED STATES DOLLAR	923,793	928,442	4,648
UNITED STATES DOLLAR	1,324,269	1,324,269	-
UNITED STATES DOLLAR	6,312	6,312	-
UNITED STATES DOLLAR	(462,021)	(462,021)	-
USA NETWORKS INC / USANI LLC	3,234,400	3,146,829	(87,571)
USA WASTE SVCS INC 7.0 SR NTS	1,200,276	1,156,065	(44,211)
VENEZUELA (REP OF) 9.25% GLB BDS	4,386,135	4,241,877	(144,258)
<b>TOTAL LOOMIS SAYLES</b>	<b>\$ 210,667,395</b>	<b>\$ 208,305,096</b>	<b>(\$ 2,362,299)</b>
<b>STANDISH AYER &amp; WOOD</b>			
1ST SECURITY CORP 5.875%	\$ 697,823	\$ 681,010	\$ (16,813)
1ST UN LEHMAN SER 1997-C1 CL D 7.5	664,523	647,530	(16,993)
ABITIBI CONS INC 7.5 DEB	1,322,594	1,205,633	(116,961)
ADELPHIA COMMUNICATIONS CORP	719,250	724,938	5,688
ALLIED WASTE N AMER INC SR NT 7.375	574,155	566,958	(7,197)
ALLIED WASTE NTH A 7.625%	1,337,188	1,281,698	(55,489)
AMERN FINL GROUP INC OH 7.125	918,294	879,989	(38,305)
AMERUS LIFE HLDGS INC 6.95 SR NT	527,174	506,094	(21,079)





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
AMRESKO INC SER 1998-A 9.875 SR	\$ 663,000	\$ 519,400	\$ (143,600)
AMVESCAP PLC SR NT 6.6	1,003,750	993,213	(10,537)
ARAMARK SVCS INC 7.0 BD	974,737	982,242	7,505
ARAMARK SVCS INC ARAMARK CORP 6.75	1,493,460	1,504,673	11,213
B.STEARNS MTG SECS INC	923,361	910,931	(12,430)
BEAR STEARNS COS INC	924,797	915,962	(8,835)
BLDG MATLS CORP AMER 8	603,714	580,133	(23,581)
BLDG MATLS CORP AMER SR NT 7.75	1,269,569	1,237,689	(31,880)
BLOUNT INC 7.0 SR NT	2,081,081	1,902,854	(178,227)
BRIT SKY BROADCASTING GROUP PLC	460,224	440,639	(19,585)
CALIFORNIA FED BK 9.125%	1,237,500	1,175,625	(61,875)
CARRAMERICA RLTY CORP 7.2 NT	507,740	495,930	(11,810)
CARRAMERICA RLTY CORP SR NT	1,373,818	1,382,607	8,790
CHATTEM INC SR SUB NT 8.875	750,000	744,141	(5,859)
COLONIAL RLTY LT PARTNERSHIP 7.0 NT	994,150	961,742	(32,408)
COLT TELECOM GROUP PLC	903,375	946,406	43,031
CONESCO FIN 8.796 BD DUE 04-01-2027	1,719,285	1,428,102	(291,184)
CONMED CORP 9.0 SR SUB NT	750,938	766,125	15,188
CONSECO FING TR II 8.7 DUE 11-15-2026	450,840	364,935	(85,905)
CRESCENT REAL ESTATE EQUITIES	841,680	881,903	40,223
DELTA FDG HOME EQTY LN TR	1,499,252	1,435,288	(63,964)
EDPERBRASCAN CORP NT 7.125	949,012	928,263	(20,749)
EMPRESS ENTMT INC SR SUB NT 8.125	576,875	604,109	27,234
EOP OPER LTD PRTRNSHP MANDATORY	444,726	452,502	7,776
EOP OPER LTD PARTNERSHIP NT 6.375	490,605	497,552	6,947
EQCC HOME EQTY LN TR 1998-2	1,080,656	1,076,119	(4,537)
EXTENDICARE HEALTH 9.35% BDS 15/12/07	776,938	580,596	(196,342)
FHLB BD 5.375 03-02-2001	1,829,679	1,847,406	17,727
FLAG LTD SR NT 8.25	328,656	314,309	(14,347)
FNMA DISC NT 07-08-1999	5,409,842	5,419,629	9,788
FNMA NTS 5.125 02-13-2004	814,085	807,648	(6,437)
FNMA POOL #0323788 6.5 DUE 05-01-2014	5,494,143	5,397,194	(96,950)
FNMA POOL #0323812 6 DUE 06-01-2029	9,285,855	9,334,480	48,625
FNMA POOL #251613 6.5 DUE 04-01-2028	24	24	-
FNMA POOL #323465 9 DUE 08-01-2025	2,451,846	2,462,469	10,622
FNMA POOL #323606 6.5 DUE 03-01-2029	2,707,280	2,619,415	(87,865)
FRESENIUS MEDICAL 7.875% CO	1,221,875	1,218,766	(3,109)
GLOBAL CROSS HLDGS 10.5	2,588,500	2,756,000	167,500

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
GNMA POOL #379655 7	\$ 21,000	\$ 20,630	\$ (370)
GNMA POOL #386471 SER 2027 7	76,044	74,634	(1,409)
GNMA POOL #426644 SER 2026 8	131,782	131,880	97
GNMA POOL #433788 SER 2028 7	710,399	697,969	(12,430)
GNMA POOL #441710 SER 2028 7	745,447	732,403	(13,043)
GNMA POOL #450296 SER 2027 7	952,214	935,140	(17,074)
GNMA POOL #454386 7	991,173	973,381	(17,792)
GNMA POOL #456734 SER 2028 7	4,625,393	4,540,616	(84,777)
GNMA POOL #462490 SER 2028 7	796,606	777,638	(18,968)
GNMA POOL #463475 SER 2028 7	1,013,812	995,001	(18,811)
GNMA POOL #463840 7	997,137	978,635	(18,502)
GNMA POOL #464696 SER 2028 7	2,718,326	2,662,972	(55,354)
GNMA POOL #466950 SER 2028 7	908,097	891,247	(16,850)
GNMA POOL #466951 SER 2028 7	970,934	952,918	(18,016)
GNMA POOL #471857 SER 2028 7	1,587,721	1,558,021	(29,700)
GNMA POOL #472684 SER 2028 7	279,811	274,915	(4,896)
GNMA POOL #473523 SER 2028 7	723,563	710,903	(12,660)
GNMA POOL #478152 SER 2028 7	267,298	262,621	(4,677)
GNMA POOL #480352 SER 2028 7	22,936	22,463	(473)
GNMA POOL #481298 SER 2028 7	263,241	258,635	(4,606)
GNMA POOL #483445 SER 2028 7	1,950,495	1,914,009	(36,486)
GNMA POOL #495946 SER 2029 7	779,004	764,990	(14,014)
GNMA POOL #498647 SER 2029 7	350,343	341,987	(8,356)
GNMA POOL #499245 SER 2029 7	658,083	646,542	(11,541)
GNMA POOL #502193 SER 2029 6.5	977,238	981,343	4,105
GNMA POOL #503842 SER 2029 6.5	903,945	907,741	3,797
GNMA POOL #506443 SER 2029 7	370,267	361,436	(8,831)
GNMA POOL #507705 SER 2029 7	297,925	290,819	(7,105)
GNMA POOL #509932 SER 2029 6.5	3,368,550	3,384,080	15,530
GNMA POOL #780047 9	2,619,884	2,605,653	(14,231)
GNMA POOL #780054 SER 2017 9	1,148,442	1,141,116	(7,326)
GNMA TBA POOL #9999999 SER 2029 8	10,308,520	10,303,820	(4,699)
GNMA POOL # 385932	253,406	253,623	217
GNMA POOL # 414737	300,614	300,871	257
GNMA POOL # 417342	207,159	203,510	(3,649)
GNMA POOL # 465908	3,009,484	2,948,201	(61,283)
GREEN TREE FINL CORP 98-6	1,399,563	1,302,882	(96,681)
GREEN TREE FINL CORP SER 98-2	1,397,075	1,314,628	(82,447)
GRV WORLDWIDE LLC / GRV CAP INC	2,003,750	1,831,347	(172,403)
GS ESCR CORP SR NT 7	1,022,468	1,029,271	6,803





## Investments at June 30, 1999

### SYSTEM HOLDINGS

June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
GS ESCR CORP SR NT 7.125	\$ 1,634,676	\$ 1,634,717	\$ 41
HORSESHOE GAMING LLC 9.375	587,125	560,542	(26,583)
IMC GLOBAL INC NT DTD 08/11/1998 6.5	1,793,052	1,803,372	10,320
LILLY INDS INC 7.75 DUE 12-01-2007	465,300	439,168	(26,132)
MCLEODUSA INC 8.375 SR NT	1,334,629	1,274,862	(59,767)
MCLEODUSA INC SR DISC NT STEP UP	244,563	249,438	4,875
MCLEODUSA INC SR NT 9.5	856,375	838,063	(18,313)
MEYER FRED INC DEL NEW 7.375	372,274	363,410	(8,864)
MFO STANDISH AYER & WOOD INVT	16,987,346	16,559,387	(427,959)
MIDLAND RLTY ACCEP CORP	1,951,100	1,873,749	(77,350)
MORGAN ST CAP I INC SER 1998-HF1	913,922	914,063	141
NATL WESTMINSTER BK	482,675	454,246	(28,428)
NEWS AMER INC GTD SR DEB 7.625	929,070	905,032	(24,038)
NEWS AMERICA HLDGS 9.5% DEB	498,736	480,018	(18,718)
NIAGARA MOHAWK PWR CORP SR NT	1,465,719	1,500,658	34,940
NVR INC 8.0 SR NTS DUE 06-01-2005/03	1,936,266	1,928,917	(7,349)
PRIME SUCCESSION INC 10.75	1,364,063	1,000,764	(363,299)
PVTPL 1ST USA SECD NT TR 1998-1	985,419	951,085	(34,333)
PVTPL ARG FDG CORP 1999-1 RENT	1,849,458	1,821,139	(28,319)
PVTPL EXIDE CORP SR SUB NT CONV	301,875	304,394	2,519
PVTPL FL WINDSTORM ASSN SER	919,922	922,105	2,183
PVTPL FMAC LN RECEIVABLES TR	1,923,750	1,885,202	(38,548)
PVTPL FUJI JGB L L C SER A	879,941	919,038	39,097
PVTPL HORSESHOE GAMING LLC	348,723	342,818	(5,905)
PVTPL LEAR CORP SR NT 144A 7.96	1,850,000	1,821,863	(28,137)
PVTPL MERITA BK LTD 7.15	403,784	397,495	(6,289)
PVTPL SKANDINAVISKA ENSKILDA BANKEN	927,770	908,155	(19,615)
PVTPL SKANDINAVISKA ENSKILDA BANKEN	969,696	901,734	(67,962)
PVTPL SOCIETE GENERALE FRANCE 7.85	1,006,026	943,644	(62,382)
PVTPL UPM KYMMENE CORP 7.45 NT	663,530	664,904	1,374
PX ESCR CORP SR SUB DISC NT	878,750	762,500	(116,250)
QWEST COMM INTL IN 0% CPN	745,875	762,089	16,214
QWEST COMMUNICATIONS INTL INC	1,192,250	1,204,640	12,390
QWEST COMMUNICATIONS INTL INC	500,000	496,042	(3,958)
RELIANCE GROUP HLDGS INC SR NT 9.0 BD	462,938	463,613	675
REVLON WORLDWIDE 0% SR NTS	2,312,375	2,069,250	(243,125)
SALOMON SMITH BARNEY HLDGS INC 6.25	1,201,584	1,165,629	(35,955)
SIMON DEBARTOLO GROUP L P NT 6.75	1,993,880	1,913,600	(80,280)

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
SPIEKER PPTYS L P 6.75 NT	\$ 723,848	\$ 716,126	\$ (7,721)
SPIEKER PPTYS L P INC 6.8	998,950	987,044	(11,906)
TENET HEALTHCARE 6% CNV SUB NTS	2,098,219	1,873,313	(224,906)
TENET HEALTHCARE 8.625% SNR NTS	1,317,900	1,258,984	(58,916)
TOLL CORP 7.75 DUE 09-15-2007	1,736,875	1,708,174	(28,701)
TRICON GLOBAL RESTAURANTS INC 7.45	1,231,235	1,234,273	3,037
TRICON GLOBAL RESTAURANTS INC 7.65	249,083	249,166	84
TYCO INTL GROUP S A 6.375 BD	431,902	416,820	(15,082)
U S BANCORP MEDIUM TERM NTS	949,088	933,128	(15,960)
UNITED STATES DOLLAR	12,402,452	12,439,375	36,923
UNITED STATES DOLLAR	(10,308,520)	(10,308,520)	-
US TREAS INFL INDX 3.625	956,569	986,552	29,982
US TREAS NTS 4.75 DUE 11-15-2008 REG	4,673,865	4,621,733	(52,132)
US TREAS NTS 5.75 DUE 11-30-2002 REG	1,694,422	1,705,624	11,202
USA TREASURY BDS 11.25% 15/2/2015	3,731,130	3,779,317	48,187
USA TREASURY BDS 8.125% 15/5/21	11,863,306	11,499,628	(363,677)
USA TREASURY BDS STRIP PRIN PMT	839,958	734,119	(105,839)
USA WASTE SVCS INC 6.125 NIS	648,668	664,750	16,083
VANDERBILT MTG & FIN INC 1998-C	1,445,226	1,366,009	(79,217)
VIACOM INC 7.75 BD DUE 06-01-2005	347,844	336,634	(11,210)
<b>TOTAL STANDISH AYER &amp; WOOD</b>	<b>\$ 210,933,466</b>	<b>\$ 206,264,954</b>	<b>(\$ 4,668,511)</b>
<b>TCW</b>			
A T & T CAP CORP NT DTD 02/02/1999 6.75	\$ 1,017,700	\$ 1,013,788	\$ (3,913)
ABBAY NATL PLC MEDIUM TERM SUB NTS	1,036,280	1,000,572	(35,708)
AIRTOUCH COMMUNICATIONS INC 6.65	1,051,800	985,023	(66,777)
AMERN GEN FIN CORP SR NT 5.75	697,753	681,935	(15,818)
AT&T CORP 5.625 DUE 03-15-2004	497,660	490,427	(7,233)
ATLC RICHFIELD CO NT 5.55	499,355	492,007	(7,348)
AUSTRALIAN DOLLAR	630	630	-
AUSTRALIAN DOLLAR	32,433	32,531	98
BANKAMERICA CORP 6.625	1,097,789	1,104,482	6,693
BELGIUM (KINGDOM) 8.75%	1,005,756	991,623	(14,133)
BRIT COLUMBIA (PROV) 5.25%	737,346	739,974	2,628
BRITISH POUND STERLING	2,722	2,722	-
CANADA (GOVT OF) 8.75% BDS 1/12/2005	742,984	750,129	7,145
CANADIAN DOLLAR	(2,119)	(2,119)	-
CANADIAN DOLLAR	103,371	103,697	326
CAROLINA PWR & LT CO 5.875	1,024,030	1,005,710	(18,320)





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
CASE EQUIP RECEIVABLES TR	\$ 499,925	\$ 498,444	\$ (1,481)
CMO BA MTG SECS INC 6.75	2,012,500	1,974,990	(37,510)
CMO FNMA FNW 99-W5 A3	500,000	491,684	(8,316)
CMO GE CAP MTG SVCS INC REMIC	2,031,250	2,015,203	(16,047)
CMO GE CAP MTG SVCS REMIC	1,980,235	1,951,718	(28,517)
CMO NORWEST AST SECS CORP	2,497,656	2,442,708	(54,948)
COCA COLA ENTERPRISES INC 6.95 DEB	517,055	480,355	(36,700)
COLTV STIF	1,742,622	1,750,754	8,132
COMCAST CABLE COMMUNICATIONS INC	648,278	611,352	(36,925)
CONTINENTAL AIRLS PASS THRU TRS	500,000	500,897	897
CWMBS INC SER 94-D 6.5 MTG	983,750	935,097	(48,653)
DANISH KRONE	20	20	-
DANISH KRONE	139	139	-
DENMARK (KINGDOM) 7% BDS 15/12/04	954,510	870,095	(84,415)
DUTCH GOVT 7% BDS 15/2/03 EUR	1,367,171	1,232,943	(134,229)
EQCC HOME EQTY LN TR 1999-1	998,594	991,984	(6,610)
EURO	75,833	75,833	-
EURO	893,060	894,697	1,637
FHLB BD 5.45 10-19-2005	3,513,125	3,373,545	(139,580)
FHLMC 5 02-15-2001	4,738,078	4,790,639	52,562
FHLMC DEB 5.7 02-12-2004/02-12-2001	599,982	597,473	(2,509)
FHLMC MULTICLASS 2097 PZ 6 11-15-2028	3,030,103	2,789,499	(240,604)
FHLMC MULTICLASS SER 1969 CL PE 7.5	2,584,375	2,550,000	(34,375)
FHLMC MULTICLASS SER 2059 CL Z 5.95	2,046,870	1,828,980	(217,890)
FHLMC MULTICLASS SER 2061 CL CD 7.5	2,158,864	2,168,565	9,700
FHLMC MULTICLASS SER G029 CL ZC 8.0	3,066,391	3,046,266	(20,125)
FINOVA CAP CORP MEDIUM TERM NTS	996,610	1,002,031	5,421
FIRST USA CR CARD MASTER TR 1998-9	986,055	955,917	(30,138)
FLEET FINL GROUP INC NEW 6.5 NTS	517,585	489,349	(28,236)
FNMA 5.25 BD DUE 01-15-2003 BEO	3,419,052	3,395,982	(23,070)
FNMA NTS 5.125 02-13-2004	1,969,680	1,957,935	(11,745)
FNMA POOL #392168 ADJ RT	1,240,225	1,258,727	18,502
FNMA REMIC SER 1994-88 CL-PH 7.5	3,131,250	3,069,360	(61,890)
FNMA REMIC TR 1997-58 CL-DZ 7.5	1,802,713	1,723,050	(79,663)
FNMA-GNMA REMIC TR SER 1994-9	3,156,040	3,084,182	(71,858)
FRANCE (GOVT OF) 5.25% BDS 25/4/08	4,410,138	3,846,379	(563,759)
GERMANY(FED REP) 5.125%	912,299	829,965	(82,334)
GERMANY(FED REP) 5.625%	1,212,328	1,058,559	(153,769)
GNMA POOL #506453 SER 2029 6.5	1,958,319	1,943,446	(14,873)

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	COST	MARKET VALUE	UNREALIZED GAIN/LOSS
GNMA REMIC TR 1997-7 CL PB 7	\$ 2,532,813	\$ 2,532,533	(\$ 279)
GOLDMAN SACHS GROUP INC NT 6.65	598,794	584,459	(14,335)
IMC GLOBAL INC NT DTD 08/11/1998 6.5	1,005,030	1,001,873	(3,157)
INTL BANK RECON&DV 7.125% EMTN	1,159,618	1,192,412	32,794
INTL PAPER CO NT DTD 04/12/1999 6.875	991,740	930,334	(61,406)
ITALY (REP OF) 6.25% TSY CERTS 1/3/02	1,417,763	1,271,549	(146,214)
JAPANESE YEN	715	715	-
JAPANESE YEN	3,065,102	3,065,188	86
LEHMAN BROS HLDGS INC NT	-	8,741	8,741
LILLY ELI & CO 7.125 DEB	1,102,510	1,004,038	(98,473)
LUCENT TECHNOLOGIES INC 5.5	995,620	925,758	(69,862)
MAN PROV CDA DEB SER EF	1,001,290	935,820	(65,470)
MELLON FINL CO 5.75	499,075	486,119	(12,956)
MERRILL LYNCH & CO INC 6	-	13,833	13,833
MFO TCW GALILEO FDS INC CONV	8,332,520	9,663,187	1,330,667
MFO TCW GALILEO FDS INC EMERGING	20,389,558	22,909,289	2,519,731
MFO TCW GALILEO FDS INC HI YIELD	37,368,571	37,658,090	289,518
MILLENNIUM AMER INC 7.625	-	4,872	4,872
NEW STH WALES TSY 7%	440,242	444,291	4,049
NORWEST AST SECS CORP	2,187,091	2,158,459	(28,632)
OCCIDENTAL PETE CORP SR NT 7.65	-	14,981	14,981
PHILLIPS PETE CO SR NT	999,340	972,395	(26,945)
PNC FDG CORP MEDIUM TERM	517,950	484,807	(33,143)
QUE PROV CDA 7 DUE 01-30-2007 REG	1,058,680	1,037,481	(21,199)
QUEENSLAND TSY CP 8% NTS 14/5/2003	403,929	417,196	13,267
RESDNTL FDG MTG SECS I INC	2,035,000	2,033,120	(1,880)
SAXON AST SECS TR MTG LN	750,000	743,544	(6,456)
SWEDEN (KINGDOM OF) 5.5% 12/4/02 1039	482,275	455,036	(27,239)
SWEDISH KRONA	8	8	-
SWEDISH KRONA	23,994	24,042	48
TOYOTA AUTO LEASE TR SER 98-B	1,264,774	1,272,012	7,238
TRANSCANADA PIPELINES LTD MEDIUM	599,232	609,037	9,805
TREASURY 7 1/4% STK 2007 GBP	823,413	804,111	(19,301)
TREUHANDANSTALT 6.625% BDS 9/7/03	4,525,143	4,192,558	(332,584)
U.S TREAS INFLATION INDEX 3.375 NT	2,226,041	2,247,999	21,958
U.S. TREAS NTS 4.500 DUE 09-30-2000	4,071,422	4,119,512	48,090
UN PAC CORP 7.25 NT DUE 11-01-2008	535,115	505,992	(29,123)
UNITED STATES DOLLARS	266,612	267,668	1,055
UNITED STATES DOLLARS	(2,677,708)	(2,677,708)	-





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
UNITED STATES DOLLARS	\$ 17,554,494	\$ 17,554,494	\$ -
US TREAS 6.125 BD DUE 11-15-2027	323,447	299,875	(23,573)
US TREAS 7.5 BD DUE 11-15-2024 REG	2,540,173	2,402,477	(137,695)
US TREAS BDS 12	916,875	869,570	(47,305)
US TREAS BDS 7.5	2,758,320	2,669,550	(88,770)
US TREAS BDS 8.5	4,451,467	4,167,306	(284,161)
US TREAS BDS 5.25	283,200	287,149	3,949
US TREAS NTS 5.5	366,970	371,511	4,541
US TREAS NTS DTD 00850 5.75	560,656	562,363	1,707
US TREAS NTS DTD 05/17/1999 5.25	828,750	835,389	6,639
UTD TECHNOLOGIES CORP NT	414,024	385,566	(28,458)
<b>TOTAL TCW</b>	<b>\$ 207,189,816</b>	<b>\$ 207,592,490</b>	<b>\$ 402,674</b>
<b>FAME</b>			
ACORN CO MORTGAGE NOTE	\$ 653,387	\$ 653,387	\$ -
HARDWOOD MANAGEMENT INC	971,213	971,213	-
PINETTE FILLION MORTON 5.60%	1,309,958	1,350,000	40,042
COLTV STIF	105,122	105,337	214
<b>TOTAL FAME</b>	<b>\$ 3,039,680</b>	<b>\$ 3,079,937</b>	<b>\$ 40,256</b>
<b>JP MORGAN MORTGAGES</b>			
CF MGT MORTGAGE PRIVATE PLCMT	\$ 265,515,603	\$ 316,038,080	\$ 50,522,477
<b>TOTAL JP MORGAN MORTGAGES</b>	<b>\$ 265,515,603</b>	<b>\$ 316,038,080</b>	<b>\$ 50,522,477</b>
<b>JP MORGAN PRIVATE PLACEMENTS</b>			
CF MGT CORP PVT PLMT FD	\$ 63,963,551	\$ 67,028,347	\$ 3,064,796
CF MGT EMERGING MKT OPPORTUNITY	38,282,984	35,817,966	(2,465,018)
UNITED STATES DOLLARS	3,119,000	3,119,000	-
<b>TOTAL JP MORGAN PRIVATE PLACEMENTS</b>	<b>\$ 105,365,535</b>	<b>\$ 105,965,313</b>	<b>\$ 599,778</b>
<b>STATE STREET BOND INDEX</b>			
CF ST ST BD MKT INDEX FD	\$ 861,780,122	\$ 1,004,015,332	\$ 142,235,210
<b>TOTAL STATE STREET BOND INDEX</b>	<b>\$ 861,780,122</b>	<b>\$ 1,004,015,332</b>	<b>\$ 142,235,210</b>
<b>TOTAL FIXED INCOME</b>	<b>\$ 2,124,787,325</b>	<b>\$ 2,304,649,375</b>	<b>\$ 179,862,050</b>

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
<b>INTERNATIONAL EQUITY</b>			
<b>GAM INTERNATIONAL</b>			
ABN-AMRO HLDGS NV NLG1.25	\$ 2,446,099	\$ 2,545,554	\$ 99,455
ADECCO SA CHF10 (REGD)	1,663,417	1,606,952	(56,466)
ALLIANZ AG DEM5 (REGD) (VINKULIERT)	3,994,996	3,093,902	(901,094)
ASTRAZENECA ORD GBP0.25	1,951,302	1,698,483	(252,820)
AXA EUR9.15	4,858,940	4,272,317	(586,623)
BANK OF SCOTLAND STK 25P	5,390,727	5,880,649	489,921
BARCLAYS PLC ORD GBP1	4,240,468	5,505,876	1,265,408
BRITISH POUND STERLING	(28,000,000)	(27,852,842)	147,158
CARREFOUR EUR2.5	2,687,098	3,202,392	515,295
COMPUTACENTER ORD GBP0.05	801,922	659,510	(142,411)
CREDIT LYONNAIS CERT D'INVEST NPV	4,700,795	4,545,241	(155,554)
DAIRY CREST GROUP ORD GBP0.25	1,289,749	992,316	(297,433)
DANONE FRF10	2,684,069	2,450,242	(233,826)
DEN DANSKE BANK AS DKK100	2,965,886	2,451,201	(514,685)
EIDOS ORD GBP0.10	412,168	415,048	2,880
EMAP ORD GBP0.25	2,348,736	2,308,838	(39,898)
EURO	63	63	-
EURO	(25,330,570)	(23,060,806)	2,269,764
EURO	(29)	(29)	-
EURO	(20,000,000)	(18,986,815)	1,013,185
FORTIS NL EUR0.24	6,715,762	5,193,114	(1,522,647)
GLAXO WELLCOME ORD GBP0.25	2,302,942	1,832,973	(469,969)
HYDER ORD GBP1.20	1,719,282	1,669,918	(49,364)
ING GROEP NV CVA NLG1	1,905,838	1,739,208	(166,630)
JAPANESE YEN	18,838	18,838	-
JAPANESE YEN	(5,000,000)	(4,871,919)	128,081
JAPANESE YEN	(1,893)	(1,931)	(38)
L'OREAL EUR2	2,868,743	2,806,678	(62,065)
NATIONAL POWER ORD GBP0.50	2,748,236	2,369,578	(378,658)
NATL EXPRESS GRP ORD GBP0.05	2,625,548	2,287,613	(337,935)
NESTLE SA CHF10 (REGD)	6,037,051	5,131,383	(905,668)
NEWSQUEST ORD GBP0.01	778,163	1,399,266	621,103
NOKIA (AB) OY EUR0.24	4,873,441	7,158,338	2,284,896
NORWICH UNION ORD GBP0.10	2,355,720	2,078,800	(276,920)
NOVARTIS AG CHF20 (REGD)	3,673,750	2,676,515	(997,235)
NTT MOBILE COMMUNI NEW NPV (13/9/99)	-	2,944,481	2,944,481
NTT MOBILE COMMUNI NPV	2,310,273	745,208	(1,565,065)





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
NUMICO (KON) NV CVA (PART-EXCH)	\$ 2,416,739	\$ 1,866,951	\$ (549,788)
OM GRUPPEN AB SEK2	1,949,646	1,755,992	(193,655)
RAILTRACK GROUP ORD25P	2,382,133	1,992,398	(389,735)
ROCHE HLDG AG GENUSSSCHEINE	5,076,513	4,204,181	(872,332)
SAP AG NON-VTG PRF NPV	3,021,076	2,669,382	(351,694)
SCOT POWER ORD GBP0.50	3,056,604	2,521,413	(535,191)
SEVERN TRENT ORD GBX65.263157	3,287,117	2,808,392	(478,725)
SMITHKLINE BEECHAM ORD GBP0.0625	1,822,163	1,760,887	(61,276)
STAGECOACH HLDGS ORD GBP0.005	2,907,048	2,479,207	(427,841)
SWISS FRANC	-	64,295	64,295
SWISS FRANC	(10,200,000)	(9,301,921)	898,079
SWISS FRANC	(3,000,000)	(2,915,896)	84,104
SYNTHELABO FRF10	3,158,324	3,056,143	(102,181)
TAKEDA CHEMICAL IN Y50	2,583,723	3,290,730	707,008
THAMES WATER ORD GBP0.23	3,330,194	2,752,015	(578,179)
UNILEVER NV CUM PRF SHS NLG0.10	478,669	374,151	(104,518)
UNILEVER NV CVA NLG1.12	5,785,924	4,198,251	(1,587,674)
UNION ASSUR FEDERA FRF10	1,449,637	1,357,776	(91,862)
UNITED STATES DOLLAR	11,072,658	11,112,435	39,777
UNITED STATES DOLLAR	5,000,000	5,000,000	-
UNITED STATES DOLLAR	10,200,000	10,200,000	-
UNITED STATES DOLLAR	1,893	1,893	-
UNITED STATES DOLLAR	28,000,000	28,000,000	-
UNITED STATES DOLLAR	29	29	-
UNITED STATES DOLLAR	20,000,000	20,000,000	-
UNITED STATES DOLLAR	3,000,000	3,000,000	-
UNITED STATES DOLLAR	25,330,570	25,330,570	-
VNU NV NLG0.50	2,940,545	3,210,092	269,547
WOLTERS KLUWER CVA EUR0.12	2,981,509	2,227,392	(754,117)
YAMANOUCHI PHARM JPY50	2,175,394	2,601,124	425,730
ZURICH ALLIED AG CHF10 (REGD)	5,645,806	4,319,352	(1,326,455)
<b>TOTAL GAM INTERNATIONAL</b>	<b>\$ 150,891,447</b>	<b>\$ 146,843,387</b>	<b>(\$ 4,048,060)</b>

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
<b>MARTIN CURRIE</b>			
ACCOR EUR15	\$ 2,583,411	\$ 2,764,203	\$ 180,792
ADR DESC S A DE C V SPONSORED	437,383	402,725	(34,658)
ADR GRUPO TELEVISIA SA DE CV	960,042	1,344,360	384,318
ADR TELE DE MEX SA CV L RPSTG	858,710	1,055,631	196,921
ADR TELE NORTE LESTE PARTICIPACOES	-	15,101	15,101
AHOLD (KON) NV NLG0.50	2,244,281	2,663,837	419,555
AHOLD (KON) NV NLG0.50	-	16	16
ALBERTA ENERGY CO COM STK	1,115,098	1,142,921	27,822
ALLIANZ AG DEM5 (REGD) (VINKULIERT)	964,268	930,972	(33,296)
ALLIED ZURICH ORD GBP0.25	1,242,890	1,294,765	51,875
ARGENTARIA CORP BC EUR0.75 (REGD)	3,058,361	2,854,774	(203,587)
ASSICUR GENERALI ITL2000	2,962,051	2,147,254	(814,797)
ASTRAZENECA COMM STK	1,920,374	1,778,220	(142,154)
ASTRAZENECA ORD GBP0.25	1,865,469	1,701,964	(163,505)
AXA EUR9.15	2,025,719	3,635,984	1,610,264
BASF AG NPV	2,160,624	2,246,123	85,499
BAYER HYPO-VEREINS ORD NPV	2,437,432	1,969,392	(468,040)
BCE INC COM NPV	2,607,561	3,270,906	663,345
BCO SANT CENT HISP EUR0.50 (REGD)	2,618,152	2,944,384	326,232
BK OF IRELAND ORD IEP1	1,763,950	1,428,792	(335,158)
BOMBARDIER INC CLASS'B'SUB VTG	1,479,330	1,456,275	(23,055)
BP AMOCO ORD USD0.50	1,795,581	2,132,704	337,123
BRIDGESTONE CORP Y50	1,471,336	1,605,216	133,880
BRIT AMER TOBACCO ORD GBP0.25	-	43,820	43,820
BRITISH POUND STERLING	-	9,363	9,363
BRITISH POUND STERLING	5,414	5,414	-
BRITISH POUND STERLING	-	2,580	2,580
BRITISH SKY BROADCAST ORD GBP0.50	1,406,398	1,558,400	152,002
BRITISH TELECOM ORD 25P	1,248,146	1,273,415	25,269
CABLE & WIRELESS ORD GBP0.25	1,688,945	2,217,443	528,497
CANON INC JPY50	1,482,915	2,131,978	649,063
CAP GEMINI EUR8	2,405,895	2,625,863	219,968
CIE DE ST-GOBAIN EUR16	2,369,978	2,265,958	(104,021)
CIFRA SA DE CV SER'V'NPV	2,472,534	2,387,807	(84,727)
EURO	-	16,443	16,443
EURO	(46)	(46)	-
EURO	1,052,903	1,058,001	5,098





## Investments at June 30, 1999

### SYSTEM HOLDINGS

June 30, 1999

	COST	MARKET VALUE	UNREALIZED GAIN/LOSS
EURO	\$ (35,595)	\$ (36,165)	(\$ 570)
EURO	(1,952,983)	(1,941,417)	11,566
FORENINGSSPARBK SEK20 SER'A'	2,080,906	1,841,920	(238,987)
FUJI PHOTO FILM CO Y50	1,327,536	1,324,356	(3,180)
FUJITSU Y50	1,043,505	1,709,972	666,467
GEN ELECTRIC CO ORD GBP0.05	891,244	1,376,769	485,525
GKN ORD GBP0.50	1,011,754	2,287,475	1,275,721
GLAXO WELLCOME ORD GBP0.25	2,228,683	2,917,862	689,179
GPO FIN BANCOMER COM SER'O'NPV	1,185,426	1,299,323	113,897
HILTON GRP ORD 10P	1,901,116	1,958,340	57,224
HITACHI JPY50	1,707,322	2,062,954	355,632
HOECHST AG ORD NPV	2,751,400	2,760,263	8,862
HONDA MOTOR CO Y50	1,355,992	1,695,307	339,315
INDIAN OPP FUND ORD USD0.01	1,798,020	1,945,742	147,722
ING GROEP NV CVA NLG1	3,025,878	2,753,584	(272,295)
ITO-YOKADO CO Y50	1,189,948	1,472,241	282,293
JAPAN TOBACCO INC JPY50000	790,486	885,658	95,171
JAPANESE YEN	76,555	76,555	-
JAPANESE YEN	6,238	6,239	2
JAPANESE YEN	8,623,436	8,660,452	37,016
JAPANESE YEN	(2,030)	(2,072)	(41)
JAPANESE YEN	(8,868,000)	(8,660,452)	207,548
KAO CORP JPY50	1,266,845	2,331,461	1,064,615
KUBOTA CORP Y50	693,677	828,437	134,760
LAND SECURITIES ORD GBP1	2,486,049	1,985,272	(500,778)
LASMO ORD 25P	1,501,739	915,780	(585,959)
LEGAL & GENERAL GP ORD GBP0.025	983,514	865,515	(118,000)
LLOYDS TSB GROUP ORD GBP0.25	1,336,368	2,196,022	859,654
MANNESMANN AG ORD NPV	1,849,679	5,325,861	3,476,182
MARKS & SPENCER ORD 25P	1,175,589	815,625	(359,964)
MARTIN CURRIE ASIA PACIFIC EX JAPAN	23,031,564	27,428,360	4,396,795
MARTIN CURRIE EURO MID-EAST AFRICA	8,763,846	8,148,115	(615,731)
MARTIN CURRIE JAPAN SMALL COMP	5,416,431	7,351,124	1,934,693
MARUI CO JPY50	1,357,596	1,371,447	13,852
MCKECHNIE ORD GBP0.25	870,096	892,745	22,649
METRO AG ORD NPV	2,769,104	2,212,693	(556,411)
MITSUMI MARINE FIRE JPY50	976,181	933,989	(42,192)
NAT WEST ORD GBP1	1,241,019	1,674,837	433,817
NOKIA (AB) OY EUR0.24	1,589,763	5,175,472	3,585,709

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
NOVARTIS AG CHF20 (REGD)	\$ 4,018,418	\$ 3,996,520	(\$ 21,898)
NTT MOBILE COMMUNI NEW NPV (13/9/99)	-	3,265,697	3,265,697
NTT MOBILE COMMUNI NPV	2,124,256	826,504	(1,297,752)
PETROL BRASILEIROS SPON ADR EA	1,014,108	1,264,375	250,267
PEUGEOT SA EUR6	2,038,893	2,262,260	223,367
PREUSSAG AG NPV	640,357	1,215,058	574,701
RECKITT & COLMAN ORD GBP0.105263	-	38,640	38,640
ROCHE HLDG AG GENUSSSCHEINE	3,361,795	2,672,585	(689,210)
ROHM CO JPY50	1,988,355	3,757,436	1,769,081
ROYAL BANK CAN MONTREAL QUE	1,599,339	1,427,883	(171,456)
ROYAL BK SCOTLAND ORD GBP0.25	743,237	1,267,940	524,703
SAN PAOLO-IMI SPA ITL5430	2,891,597	2,725,228	(166,369)
SANWA INTERNL FINA UTS RP1000	1,156,606	1,180,023	23,417
SCOT & NEWCASTLE ORD GBP0.20	1,928,053	1,644,951	(283,101)
SCOT POWER ORD GBP0.50	1,537,443	1,730,478	193,035
SECOM Y50	1,738,229	2,602,445	864,217
SHELL TRNSPT & TRDG ORD GBP0.25	1,399,902	1,792,255	392,353
SHIN-ETSU CHEM CO Y50	1,335,415	2,241,821	906,406
SIEMENS AG DEM5	2,957,031	2,924,813	(32,217)
SMITHKLINE BEECHAM ORD GBP0.0625	2,092,767	2,138,556	45,790
SMITHS INDUSTRIES ORD GBP0.25	1,594,654	1,628,289	33,635
SOC GENERALE EUR5	3,623,642	3,420,467	(203,175)
SONY CORP Y50	2,315,828	3,385,410	1,069,582
SWISS FRANC	-	86,061	86,061
SWISSCOM AG CHF25 (REGD)	2,521,398	2,445,967	(75,432)
TB FINANCE (CAYMAN) 2.75% MAND	410,241	355,668	(54,574)
TECNOST INTNL NV GTD FRN 23/06/2004	804,125	1,085,994	281,869
TECNOST SPA ITL500	2,329,642	527,511	(1,802,131)
TELECOM ITALIA SPA ITL1000	2,232,480	2,275,562	43,082
TELEFONICA SA EUR3.00506	3,349,333	3,621,289	271,956
TOPPAN PRINTING CO Y50	2,270,510	1,919,795	(350,714)
TOTAL FINA EUR10	2,580,083	2,679,645	99,562
UNILEVER ORD GBP0.014	1,514,070	1,747,795	233,725
UNITED STATES DOLLAR	5,048,976	5,070,249	21,273
UNITED STATES DOLLAR	2,030	2,030	-
UNITED STATES DOLLAR	35,595	35,595	-
UNITED STATES DOLLAR	8,868,000	8,868,000	-
UNITED STATES DOLLAR	(8,623,436)	(8,623,436)	-
VALEO EUR3	1,477,422	1,473,693	(3,729)





## Investments at June 30, 1999

### SYSTEM HOLDINGS

June 30, 1999

	COST	MARKET VALUE	UNREALIZED GAIN/LOSS
VIVENDI EUR5.5	\$ 3,443,768	\$ 5,551,882	\$ 2,108,114
VNU NV NLG0.50	1,862,626	1,853,382	(9,243)
VODAFONE AIRTOUCH ORD USD0.10	1,461,416	2,232,214	770,798
WASSALL ORD GBP0.0636364	636,446	409,929	(226,517)
WOLTERS KLUWER CVA EUR0.12	1,335,398	1,308,666	(26,732)
YAMANOUCHI PHARM JPY50	2,113,829	3,060,145	946,316
<b>TOTAL MARTIN CURRIE</b>	<b>\$ 209,924,883</b>	<b>\$ 240,627,888</b>	<b>(\$ 30,703,005)</b>
<b>ROWE PRICE FLEMING</b>			
ABB LTD CHF10 (RG)	\$ 516,054	\$ 725,597	\$ 209,543
ABB LTD COMM STK	195,452	308,066	112,613
ABBNEY NATIONAL ORD GBP0.10	496,077	882,333	386,256
ABN-AMRO HLDGS NV NLG1.25	466,887	695,423	228,536
ADECCO SA CHF10 (REGD)	805,056	1,051,297	246,240
ADR BANCO DE GALICIA S.A	143,732	150,255	6,523
ADR BANCO FRANCES DEL RIO	132,509	97,622	(34,887)
ADR CBT GROUP PUB LTD	350,686	183,959	(166,728)
ADR CHILECTRA S A SPONSORED 144A	111,046	114,247	3,201
ADR GRUPO TELEVISIA SA DE CV REP	253,755	337,658	83,903
ADR GUCCI GROUP N V SHS-N Y	474,917	459,830	(15,087)
ADR HUANENG PWR INTL INC	257,770	241,655	(16,116)
ADR KOREA TELECOM	307,181	360,000	52,819
ADR TELE DE MEX SA CV L RPSTG	482,004	1,066,025	584,021
ADR TELECOMMUNICACOES BRASILEIRAS	1,500	1,221	(279)
ADR TELECOMMUNICACOES BRASILEIRAS	1,362,069	1,788,056	425,987
ADR TELEFONICA DE ARGENTINA 10 CL B	257,651	293,984	36,333
ADR TV AZTECA S A DE C V ISIN	152,867	42,015	(110,852)
AHOLD (KON) NV NLG0.50	693,598	849,794	156,196
AKZO NOBEL NV NLG5 (NL EXCH)	162,753	205,830	43,077
ALCAN ALUMIN COM STK (CAN QUOTE)	270,601	270,058	(543)
ALCATEL EUR10	576,663	634,992	58,328
ALLIANZ AG DEM5 (REGD) (VINKULIERT)	390,367	582,551	192,184
ARGENTARIA CORP BC EUR0.75 (REGD)	174,685	370,771	196,087
ASDA GROUP ORD 25P	199,752	424,624	224,872
ASM LITHOGRAPHY HL NLG0.13	712,033	1,038,460	326,427
ASSICUR GENERALI ITL2000	336,274	539,152	202,879
ASTRAZENECA COMM STK	997,475	1,330,463	332,988
ATLAS COPCO AB SER'B' SEK5	293,725	434,439	140,714
AUST GAS LIGHT CO NPV	96,659	142,400	45,741

# Investments at June 30, 1999



## SYSTEM HOLDINGS

June 30, 1999

	COST	MARKET VALUE	UNREALIZED GAIN/LOSS
AUSTRALIAN DOLLAR	\$ 51	\$ 51	\$ -
AUSTRALIAN DOLLAR	-	37	37
AXA EUR 9.15	628,508	994,515	366,007
BAYER AG ORD NPV	370,818	474,993	104,175
BAYER HYPO-VEREINS ORD NPV	912,302	1,111,287	198,985
BCA DI ROMA ITL500	77,897	125,157	47,260
BCO BILBAO VIZCAYA EUR0.52	140,006	279,131	139,125
BCO BRADESCO SA PRF CR\$1 (REGD) PN	146,981	102,867	(44,113)
BCO ITAU SA PREF (REGD) (PN)	80,550	104,790	24,240
BCO POPULAR ESP EUR1	179,465	184,859	5,394
BCO SANT CENT HISP EUR0.50 (REGD)	299,447	734,778	435,332
BERGESEN DY ASA 'A'NOK2.50	62,646	38,900	(23,746)
BG ORD GBP0.01133	160,248	241,801	81,554
BIPOP-CARIRE ITL5000	645,036	771,269	126,233
BP AMOCO ORD USD0.50	429,406	698,953	269,547
BQE NATL PARIS EUR4	376,375	358,296	(18,079)
BRAMBLES INDS LTD A \$0.50	206,646	263,437	56,791
BRITISH POUND STERLING	-	4,892	4,892
BRITISH POUND STERLING	1,138	1,138	-
BRITISH POUND STERLING	4,729	4,912	183
BRITISH POUND STERLING	214,898	214,170	(728)
BROKEN HILL PTY NPV	227,851	305,891	78,040
CABLE & WIRELESS ORD GBP0.25	1,029,610	1,325,368	295,758
CABLE&WIRELESS HKT HKD0.50	177,343	240,201	62,858
CADBURY SCHWEPES ORD GBP0.125	775,129	1,031,619	256,490
CANADIAN DOLLAR	643	643	-
CANADIAN DOLLAR	676	678	2
CANON INC JPY50	1,139,255	1,555,768	416,513
CARADON ORD GBP0.27 7/9	293,990	178,150	(115,840)
CARREFOUR EUR2.5	727,297	1,080,984	353,687
CEMEX S A COM STK ISIN	77,317	122,629	45,313
CEMEX SA 'B'NPV	103,185	119,221	16,037
CEMEX SA SPONSORED EXCH ADR	302,100	356,063	53,963
CEMIG COMPANHIA ENERGETICA DE	144,279	120,288	(23,991)
CENTRICA ORD GBP0.055555	42,068	61,299	19,231
CHEUNG KONG (HLDGS) HKD0.50	294,493	364,616	70,123
CHINA TELECOM (HK) HKD0.10	306,005	455,506	149,501
CIE DE ST-GOBAIN EUR16	486,930	594,292	107,362
CIM PORT ITAU CIA PREF SHARES	114,617	35,780	(78,837)





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
CITIZEN WATCH CO Y50	\$ 157,416	\$ 199,521	\$ 42,105
CLP HOLDINGS HKD5	360,216	359,564	(653)
CMNWLTH BK OF AUST NPV	286,825	434,963	148,139
COLONIAL LTD NPV	325,662	353,140	27,478
COMPANHIA ENERGETICA DE MINAS	296,833	243,000	(53,833)
COMPASS GROUP ORD GBP0.025	921,481	1,070,773	149,292
CREDIT COMMERCIAL EUR5	289,110	443,538	154,428
CREDIT SUISSE GRP CHF20 (REGD)	475,863	612,543	136,680
CSM NV CVA (NON EXCH) NLG1	490,242	514,728	24,486
DAIICHI PHARM CO JPY50	247,614	248,249	635
DAIWA HOUSE IND CO 50	510,919	378,619	(132,300)
DANISH KRONE	7	7	-
DANONE FRF10	363,740	494,998	131,258
DAO HENG BNK GROUP LTD COM ISIN	78,473	80,734	2,260
DDI CORP JPY5000	560,524	516,350	(44,174)
DEN DANSKE BANK AS DKK100	134,133	207,784	73,651
DENSO CORP JPY50	996,310	1,036,517	40,207
DEUTSCHE BANK AG ORD NPV	641,540	739,543	98,003
DEUTSCHE TELEKOM ORD NPV	424,827	685,021	260,194
DEXIA (CRE CO HLDG) NPV	102,012	154,422	52,410
DEXIA FRANCE NPV	78,571	110,699	32,128
DEXIA FRANCE NPV (PRIME DE FIDEL)	124,020	198,107	74,087
DIAGEO ORD GBX28.935185	1,857,950	2,242,905	384,955
DRESDNER BANK AG ORD NPV	778,439	601,428	(177,010)
EAST JAPAN RAILWAY JPY50000	352,813	392,019	39,206
ELECTROCOMPONENTS ORD GBP0.10	117,409	134,776	17,367
ELECTROLUX AB SER'B' SEK5	430,174	774,432	344,258
ELF AQUITAINE EUR8	318,897	570,844	251,947
ELSEVIER NV EUR0.06	736,109	630,775	(105,335)
ENDESA SA EUR1.2	238,722	363,825	125,102
ENI ITL1000 (REGD)	654,513	780,429	125,916
EQUANT NV NLG0.02	196,340	242,469	46,129
ESSELTE 'B' FREE SWKR12.5	26,995	33,018	6,023
EURO	-	3,999	3,999
EURO	(39,039)	(39,039)	-
EURO	1,642,776	1,644,156	1,380
EURO DISCOVERY TST RPF	30,155	40,897	10,742
FANUC JPY 50	274,805	354,428	79,624

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
FIELMANN AG NON VTG PRF DEM5	\$ 56,881	\$ 51,830	\$ (5,051)
FOMENTO ECON MEXIC UNIT	260,450	306,540	46,090
FORTIS B NPV	298,500	585,575	287,074
FORTIS NL EUR0.24	433,714	795,928	362,214
FRESENIUS AG NON VTG PRF NPV	146,214	122,033	(24,181)
FUJITSU Y50	406,145	523,050	116,905
GAS NATURAL SDG ESP500	158,189	249,444	91,255
GDR MAHANAGAR TEL NIGAM LTD ISIN	119,625	111,650	(7,975)
GDR UNIAO DE BANCOS BRASILEIROS	214,845	144,180	(70,665)
GEHE AG NPV	880,641	790,630	(90,011)
GKN ORD GBP0.50	102,926	273,131	170,206
GLAXO WELLCOME ORD GBP0.25	1,450,248	2,223,133	772,885
GRANGES AB SEK25	30,157	49,457	19,300
GRUPO MODELO S A COM STK	185,570	315,580	130,010
HAYS ORD 1P	138,272	136,983	(1,289)
HENDERSON LAND DEV HKD2	316,842	373,638	56,796
HENNES & MAURITZ SEK0.25'B'	280,597	1,394,072	1,113,475
HILTON GRP ORD 10P	173,234	221,998	48,764
HITACHI JPY50	571,813	534,493	(37,320)
HOECHST AG ORD NPV	208,707	300,152	91,445
HONDA MOTOR CO Y50	111,565	211,913	100,348
HONG KONG DOLLAR	85	85	-
HONG KONG DOLLAR	902	907	5
HSBC HLDGS HK\$10 (HK REG)	452,604	569,002	116,398
HUTCHISON WHAMPOA HKD0.25	776,868	1,059,339	282,471
IBERDROLA SA EUR3	326,008	511,017	185,009
INA (IST NAZ ASS) ITL1000	695,641	663,607	(32,034)
ING GROEP NV CVA NLG1	1,505,261	2,263,883	758,623
ITALGAS (SOC ITAL) ITL1000	136,761	188,873	52,112
ITO-YOKADO CO Y50	487,936	602,280	114,344
JAPANESE YEN	74,039	74,039	-
JAPANESE YEN	203,239	203,242	3
JAPANESE YEN	130,554	130,295	(259)
JAPANESE YEN	(336,848)	(337,391)	(543)
JERONIMO MARTINS EUR5	584,456	793,103	208,648
KAO CORP JPY50	320,146	786,517	466,371
KBC BANKVERZEKERIN NPV	499,261	1,043,622	544,361
KIMBERLY CLARK MEX 'A'NPV	196,857	227,593	30,736
KINGFISHER ORD GBP0.125	515,609	1,200,195	684,586





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
KOKUYO CO Y50	\$ 269,116	\$ 257,766	\$ (11,350)
KOMORI CORP JPY50	331,606	270,159	(61,447)
KON KPN NV NLG1	142,782	235,219	92,437
KURARAY CO JPY50	364,719	433,047	68,328
KYOCERA CORP COM	1,099,770	938,533	(161,238)
LAFARGE FR25 (BR)	161,971	207,995	46,024
LAING (JOHN) ORD'A'NON V GBP0.25	83,616	122,001	38,386
LEGRAND EUR2	372,358	344,030	(28,328)
LEND LEASE CORP ORD A \$0.50	137,132	231,677	94,545
L'OREAL EUR2	157,409	325,823	168,414
MAKITA CORP Y50	236,782	282,758	45,976
MALAYASIAN RINGGIT	1	1	-
MANNESMANN AG ORD NPV	643,237	1,453,417	810,179
MARUI CO JPY50	665,959	693,985	28,026
MATSUSHITA ELC IND Y50	1,002,000	1,184,319	182,319
MEDIOLANUM ITL200 (POST SUBD)	332,055	353,408	21,354
METO AG COM STK	14,549	15,796	1,247
MEXICAN NUEVO PESO	-	145	145
MFC KOREA FD INC CLOSED END FD	521,060	396,285	(124,775)
MITSUBISHI CORP Y50	377,451	257,436	(120,016)
MITSUBISHI HEAVY IND LTD	1,232,939	786,963	(445,976)
MITSUMI FUDOSAN JPY50	965,200	712,492	(252,708)
MURATA MFG CO JPY50	694,688	1,183,741	489,053
NAT WEST ORD GBP1	2,043,317	3,582,879	1,539,562
NEC CORP Y50	1,029,758	1,081,750	51,991
NESTLE SA CHF10 (REGD)	1,999,066	2,459,388	460,323
NEW WORLD DEVEL CO HK\$1	216,711	239,726	23,015
NEW ZEALAND DOLLAR	-	3	3
NEWS CORPORATION NPV (AUST LISTING)	195,289	315,083	119,794
NEWS CORPORATION PRF AUD0.50	141,525	235,891	94,366
NIPPON TEL&TEL CP JPY50000	1,017,863	1,409,534	391,671
NOKIA (AB) OY EUR0.24	376,909	1,730,329	1,353,420
NOMURA SECURITIES Y50	816,362	714,119	(102,243)
NORDBANKEN HOLDING SEK7	610,549	681,893	71,344
NORSK HYDRO AS NOK20	599,982	494,969	(105,013)
NORWEGIAN KRONE	-	15	15
NOVARTIS AG CHF20 (REGD)	1,528,617	1,854,432	325,815
NTT MOBILE COMMUNI NEW NPV (13/9/99)	-	749,504	749,504
NTT MOBILE COMMUNI NPV	514,047	189,689	(324,357)

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
NUMICO (KON) NV CVA (PART-EXCH)	\$ 296,009	\$ 313,851	\$ 17,841
ORKLA ASA NOK 6.25'A'	502,113	581,963	79,850
PACIFIC DISC TRST RPF	5,905	4,912	(993)
PAO DE ACUCAR CIA ADR-REPR 1000	162,081	168,369	6,288
PETROL BRASILEIROS PREF SHARES	439,586	347,029	(92,556)
PHILIPS ELEC (KON) EUR1	871,867	1,077,135	205,268
PIN-PRINTEMPS-REDO FRF20	480,642	1,261,256	780,615
PUBLISHING & BROAD NPV	288,528	389,350	100,822
RANK GROUP ORD GBP0.10	233,988	135,186	(98,802)
RAO GAZPROM ADR N/C GAZPROM OAO	55,110	68,130	13,020
REED INTERNATIONAL ORD GBP0.125	1,598,305	1,267,575	(330,730)
REPSOL SA (RG) EUR1 (REGD)	202,271	353,202	150,932
RHON-KLINIKUM AG ORD NPV	253,028	239,832	(13,196)
RIO TINTO PLC ORD 10P (REGD)	560,805	687,297	126,492
ROCHE HLDG AG GENUSSSCHEINE	1,048,209	1,356,851	308,642
ROLLS-ROYCE ORD 20P	144,082	189,061	44,979
ROYAL BANK CAN MONTREAL QUE COM	160,209	219,141	58,932
ROYAL DUTCH PETROL NLG1.25	667,238	1,118,193	450,956
SAFEWAY PLC ORD GBP0.25	394,744	283,235	(111,509)
SAN PAOLO-IMI SPA ITL5430	577,511	591,747	14,236
SANDVIK AB 'B'SEK6	241,370	254,735	13,365
SANKYO CO JPY50	1,123,666	1,083,526	(40,140)
SANOFI-SYNTHELABO EUR2	525,361	986,208	460,848
SAP AG NON-VTG PRF NPV	318,508	374,832	56,324
SAP AG ORD NPV	263,140	534,433	271,294
SCHNEIDER ELECTRIC FF 50 (BR)	710,449	725,644	15,196
SECURITAS SER'B'SEK1	158,984	160,341	1,357
SEKISUI CHEM Y50	649,778	376,983	(272,796)
SEKISUI HOUSE Y50	449,756	442,383	(7,373)
SEVEN ELEVEN NPV	299,375	391,937	92,562
SHELL TRNSPT & TRDG ORD GBP0.25	1,772,998	2,504,658	731,660
SHIN-ETSU CHEM CO Y50	424,698	669,200	244,502
SHISEIDO CO Y50	330,298	404,643	74,345
SIEMENS AG DEM5	351,630	434,746	83,115
SINGAPORE PRESS HD SGD1	209,770	246,377	36,606
SMITH (DAVID S.) HLD ORD GBP0.10	213,872	102,992	(110,881)
SMITHKLINE BEECHAM ORD GBP0.0625	1,688,717	2,894,587	1,205,870
SOC EUROPEENNE FIDUCIARY DR REP	111,970	101,604	(10,367)





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
SOC GENERALE EUR5	\$ 468,002	\$ 569,608	\$ 101,606
SODEXHO ALLIANCE EUR16	793,917	997,832	203,915
SONY CORP Y50	984,781	1,714,268	729,487
STAR CITY HLDGS NPV	146,073	124,932	(21,140)
STMICROELECTRONICS EUR 3.12	347,846	635,541	287,695
STMICROELECTRONICS NLG13.75	-	570	570
SUMITOMO CORP JPY50	718,675	606,866	(111,810)
SUMITOMO ELECT IND Y50	969,072	852,611	(116,461)
SUN HUNG KAI PROP HKD0.50	246,923	319,152	72,228
SWEDISH KRONA	26	26	-
SWISS FRANC	-	89,201	89,201
SWISS FRANC	169	169	-
SWISS FRANC	5,789	5,792	2
SWISS FRANC	(5,962)	(5,958)	3
SWISSCOM AG CHF25 (REGD)	152,557	227,663	75,106
T.I.M.SPA EUR0.05	564,549	1,181,555	617,006
TABCORP HLDGS LTD NPV	227,031	202,145	(24,887)
TDK CORP JPY50	818,221	1,188,946	370,725
TECNOST SPA ITL500	490,995	204,075	(286,920)
TELE DANMARK A/S DKK5	141,567	195,901	54,334
TELECOM CORP NEW ZEALAND LTD	356,288	339,083	(17,205)
TELECOM ITALIA SPA ITL1000	460,927	978,426	517,499
TELEFONICA SA EUR3.00506	947,512	1,512,186	564,675
TELESP CELULAR SA PRF'B'NPV	87,765	64,325	(23,441)
TELESP RECEIPTS	1,708	1,459	(249)
TELESP TEL S PAULO COM STK NPV (ON)	3,190	2,310	(881)
TELESP-TEL SAO PAU PREF CRS (REGD)	215,751	156,716	(59,036)
TELSTRA CORP NPV	265,967	527,133	261,166
TESCO ORD 5P	449,661	536,783	87,123
TF1 - TV FRANCAISE FRF10	365,439	675,879	310,440
TNT POST GROEP NV NLG1	48,785	82,196	33,411
TOKIO MARINE & FIRE JPY50	259,404	249,876	(9,528)
TOKYO ELECTRON Y50	199,794	339,144	139,350
TOMKINS ORD GBP0.05	817,339	833,765	16,426
TOPPAN PRINTING CO Y50	416,524	346,010	(70,514)
TOSHIBA CORP Y50	156,978	156,857	(121)
TOTAL FINA EUR10	1,071,383	1,662,926	591,543
UBS AG CHF20 (REGD)	1,044,534	1,305,802	261,269
UCB NPV NEW SHARES	221,943	222,543	601

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
UNIBANCO UNIAO BCO UNITS	\$ -	\$ 11	\$ 11
UNICREDITO ITALIAN ITL500	245,878	659,090	413,212
UNIDANMARK 'A' DNKR100	117,583	155,668	38,086
UNILEVER NV CVA NLG1.12	412,067	637,798	225,731
UNILEVER ORD GBP0.014	816,449	659,396	(157,053)
UNITED NEWS & MEDI ORD 25P	763,323	769,207	5,884
UNITED STATES DOLLAR	2,817,696	2,827,468	9,772
UNITED STATES DOLLAR	5,962	5,962	-
UNITED STATES DOLLAR	(130,554)	(130,554)	-
UNY CO JPY50 (8270)	374,774	330,800	(43,975)
UTD O/S BANK SGD1 (ALIEN MKT)	442,200	461,322	19,121
VEBA AG NPV	471,654	595,452	123,798
VIVENDI EUR5.5	1,221,823	2,187,120	965,297
VNU NV NLG0.50	444,415	445,563	1,148
VOLKSWAGEN AG ORD NPV	204,585	261,285	56,700
WESTPAC BKG CORP NPV	391,581	455,187	63,606
WOLTERS KLUWER CVA EUR0.12	1,642,908	2,475,782	832,874
<b>TOTAL ROWE PRICE FLEMING</b>	<b>\$ 115,836,069</b>	<b>\$ 149,502,013</b>	<b>\$ 33,665,944</b>
<b>WELLINGTON INTERNATIONAL</b>			
ABITIBI-CONS INC COM NPV	\$ 669,672	\$ 842,212	\$ 172,540
ADR ALCATEL ALSTHOM	1,485,261	1,957,099	471,838
ADR ASIA PULP & PAPER LTD	289,572	292,600	3,028
ADR COFLEXIP SPONSORED	532,400	765,600	233,200
ADR COMPANHIA VALE DO RIO DOCE	720,431	1,007,663	287,231
ADR GUCCI GROUP N V SHS-N Y	805,535	819,000	13,465
ADR KONINKLIJKE PHILIPS ELECTRS	1,395,152	1,818,978	423,826
ADR NEWS CORP LTD SPONSORED	1,642,285	1,619,131	(23,154)
ADR NOKIA CORP SPONSORED FINLAND	2,765,616	3,717,417	951,801
ADR PRIMACOM AG SPONSORED	356,768	347,363	(9,406)
ADR REED INTL PLC NEW	1,031,052	790,225	(240,827)
ADR REPSOL SA SPONSORED	3,733,450	4,193,048	459,598
ADR RYANAIR HLDGS PLC	1,423,439	2,109,400	685,961
ADR SHELL TRANS & TRADING PLC NY	2,242,726	2,411,500	168,774
ADR SOCIEDAD QUIMICA MINERA	363,840	374,975	11,135
ADR TAIWAN SEMICONDUCTOR MFG	721,043	1,295,400	574,358
ADR TELEFONICA DE ESPANA	3,050,885	3,269,706	218,821
ADR TOTAL FINA S A SPONSORED	2,960,332	3,428,048	467,716
ADR UTD PAN-EUROPE COMM	900,775	806,650	(94,125)





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
AEGON NV NLG0.50	\$ 5,211,574	\$ 3,506,981	\$ (1,704,593)
AKZO NOBEL NV NLG5 (NL EXCH)	603,849	589,048	(14,801)
ALCATEL EUR10	302,146	394,143	91,996
ALLIED IRISH BANKS ORD EUR0.32	2,918,954	2,071,788	(847,166)
ANGLO AMERICAN USD0.50	156,201	214,964	58,763
ASTRAZENECA SPON ADR REP 1	1,281,435	1,187,366	(94,069)
AUST & NZ BANK GRP NPV	1,624,807	1,784,103	159,296
AUST GAS LIGHT CO NPV	822,041	733,825	(88,215)
AUSTRALIAN DOLLAR	51,793	52,061	268
AUSTRALIAN DOLLAR	143,466	144,317	851
AUSTRALIAN DOLLAR	(195,542)	(196,378)	(836)
AXA EUR9.15	5,185,466	4,648,066	(537,400)
BANYU PHARM JPY50	2,761,311	2,577,660	(183,651)
BAYER AG ORD NPV	1,431,338	1,583,170	151,832
BILLITON ORD USD0.50	1,367,550	2,463,177	1,095,627
BOC GROUP ORD 25P	700,623	947,952	247,330
BQE NATL PARIS EUR4	2,568,234	2,474,745	(93,489)
BRIT AMER TOBACCO ORD GBP0.25	4,552,573	4,516,711	(35,861)
BRITISH AIRWAYS ORD 25P	361,096	341,550	(19,546)
BRITISH POUND STERLING	6,813	6,762	(51)
BRITISH POUND STERLING	821,290	816,989	(4,301)
BRITISH POUND STERLING	498,353	498,285	(68)
BRITISH POUND STERLING	(1,330,172)	(1,322,023)	8,150
BRITISH TELECOM ORD 25P	3,173,391	3,347,741	174,351
BRL HARDY LTD NPV	289,204	312,795	23,591
CANADIAN DOLLAR	(18)	(18)	-
CDN NATL RAILWAYS COM NPV	1,645,840	2,050,200	404,360
CHRISTIANIA BANK NOK7	2,080,526	1,757,314	(323,212)
CIBA SPEZIALITATEN CHF10 (REGD)	591,649	501,885	(89,764)
COGNOS INC COM NPV	1,397,500	1,131,000	(266,500)
COLT TELECOM GROUP ORD GBP0.02	1,979,702	1,959,513	(20,190)
CREDIT SUISSE GRP CHF20 (REGD)	1,821,546	1,841,091	19,545
DAIMLER CHRYSLER AG STK ISIN	2,036,110	1,884,150	(151,960)
DANISH KRONE	126,294	126,075	(220)
DANISH KRONE	(127,683)	(126,075)	1,608
DONOHUE INC CL A SUB VTG COM	66,796	73,872	7,076
EISAI CO JPY50	2,596,380	2,798,001	201,621
ENDESA SA EUR1.2	2,006,312	1,561,077	(445,235)

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
EURO	\$ -	\$ 5,361	\$ 5,361
EURO	99,248	99,248	-
EURO	139,832	139,196	(637)
EURO	77,566	77,219	(347)
EURO	(116,650)	(116,128)	522
EURO	(167,687)	(167,194)	493
EURO	(396,385)	(392,303)	4,082
EURO	368,351	366,015	(2,337)
FLEXTECH ORD GBP0.10	490,669	532,358	41,689
FUJISAWA PHARMA CO Y50	2,677,131	3,059,815	382,684
FUJITSU Y50	833,056	865,045	31,989
GILAT SATELLITE NETWORKS LTD ORD	1,938,414	1,779,750	(158,664)
GKN ORD GBP0.50	1,001,723	1,247,869	246,146
HALIFAX GROUP ORD GBP0.20	4,234,709	3,788,186	(446,523)
HENNES & MAURITZ SEK0.25'B'	3,468,653	4,056,740	588,087
HINO MOTORS Y50	631,184	833,526	202,343
HITACHI JPY50	927,319	984,592	57,273
HONDA MOTOR CO Y50	1,562,337	1,737,690	175,353
HSBC HLDGS HK\$10 (HK REG)	2,264,215	3,195,164	930,949
ING GROEP NV CVA NLG1	3,148,581	2,853,852	(294,730)
INVENSYS ORD GBP0.25	1,004,996	1,154,298	149,303
JAPANESE YEN	53,416	53,416	-
JAPANESE YEN	(99,991)	(99,925)	66
JAPANESE YEN	(146,281)	(146,184)	97
JAPANESE YEN	246,101	245,969	(132)
KAO CORP JPY50	764,825	955,056	190,231
KIMBERLY CLARK MEX 'A'NPV	548,507	761,380	212,873
KOMATSU Y50	897,839	887,698	(10,141)
LAPORTE ORD GBP0.50	279,521	276,505	(3,016)
L'OREAL EUR2	1,049,778	1,013,973	(35,804)
MATSUSHITA ELC IND Y50	976,113	931,923	(44,189)
MEDEVA ORD GBP0.10	732,487	681,957	(50,530)
MERITA OYJ ORD NPV	224,773	217,627	(7,146)
MICHELIN CGDE EUR2 (REGD)	1,173,551	1,239,560	66,008
NISSAN MOTOR CO Y50	757,336	945,506	188,170
NORDBANKEN HOLDING SEK7	1,465,684	1,242,032	(223,651)





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
NORWEGIAN KRONE	\$ 109,203	\$ 108,886	\$ (317)
NORWEGIAN KRONE	(109,877)	(108,886)	991
OLYMPUS OPTICAL CO JPY50	1,582,302	2,157,915	575,613
ORICA LIMITED NPV	223,112	209,617	(13,494)
PETRO-CANADA EURO COM	325,888	320,214	(5,674)
PEUGEOT SA EUR6	1,486,866	1,625,142	138,276
PROMISE CO JPY50	1,611,913	2,026,148	414,236
PVTPL NEW HOLLAND N V COM	742,625	755,213	12,588
RECKITT & COLMAN ORD GBP0.105263	610,988	443,050	(167,938)
REUTERS GROUP ORD GBP0.25	283,146	253,867	(29,278)
SANDVIK AB 'A' SEK6	776,713	758,189	(18,524)
SCOT POWER ORD GBP0.50	1,915,086	1,786,808	(128,278)
SEMA GRP ORD GBP0.10	1,889,685	1,618,492	(271,193)
SHISEIDO CO Y50	719,990	794,299	74,309
SIMEON WINES NPV	474,291	475,434	1,144
SMITHKLINE BEECHAM ADR	2,170,003	2,208,702	38,699
SMURFIT (JEFFERSON) ORD EUR0.30	266,322	356,691	90,369
SOUTHCORP LTD NPV	1,391,191	1,476,682	85,491
STMICROELECTRONICS N V SHS	967,213	1,290,375	323,162
SUEZ LYONN EAUX EUR10	2,139,191	2,056,162	(83,029)
SUNCOR ENERGY COM NPV	1,320,590	1,348,900	28,310
SWISS FRANC	-	22,577	22,577
SWISS FRANC	81,875	81,586	(289)
SWISS FRANC	(82,269)	(81,586)	683
SWISSCOM AG CHF25 (REGD)	1,553,952	1,294,481	(259,471)
TAKEFUJI CORP JPY50	1,219,813	1,508,972	289,159
TECHNIP FRF20	363,829	493,678	129,850
TELECEL COMUNI PES EUR5	1,800,520	1,160,153	(640,367)
TELECOM ITALIA SPA ITL1000	2,802,727	3,083,147	280,420
TOKYO ELEC POWER JPY500	964,144	930,895	(33,249)
UNIDANMARK 'A' DNKR100	1,954,980	1,652,888	(302,092)
UNILEVER NV CVA NLG1.12	1,338,590	1,200,049	(138,541)
UNITED STATES DOLLAR	-	13,043	13,043
UNITED STATES DOLLAR	4,030,503	4,041,107	10,604
UNITED STATES DOLLAR	116,650	116,650	-
UNITED STATES DOLLAR	99,991	99,991	-
UNITED STATES DOLLAR	146,281	146,281	-
UNITED STATES DOLLAR	167,687	167,687	-
UNITED STATES DOLLAR	(6,813)	(6,813)	-

# Investments at June 30, 1999



## SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
UNITED STATES DOLLAR	\$ (821,290)	\$ (821,290)	\$ -
UNITED STATES DOLLAR	(126,294)	(126,294)	-
UNITED STATES DOLLAR	(139,832)	(139,832)	-
UNITED STATES DOLLAR	(77,566)	(77,566)	-
UNITED STATES DOLLAR	(109,203)	(109,203)	-
UNITED STATES DOLLAR	(51,793)	(51,793)	-
UNITED STATES DOLLAR	(498,353)	(498,353)	-
UNITED STATES DOLLAR	(81,875)	(81,875)	-
UNITED STATES DOLLAR	(143,466)	(143,466)	-
UNITED STATES DOLLAR	(644,060)	(644,060)	-
UNITED STATES DOLLAR	978,603	978,603	-
VEBA AG NPV	1,629,367	1,675,260	45,893
VODAFONE AIRTOUCH ORD USD0.10	2,843,589	2,948,874	105,285
WESTPAC BKG CORP NPV	1,978,358	1,878,769	(99,588)
<b>TOTAL WELLINGTON INTERNATIONAL</b>	<b>\$ 153,914,986</b>	<b>\$ 159,101,149</b>	<b>\$ 5,186,163</b>
<b>STATE STREET EAFE INDEX</b>			
CF ST ST EAFE INTL INDEX	\$ 283,391,865	\$ 301,954,086	\$ 18,562,221
CF ST STR MALAYSIA MSCI INDEX FD	356,192	959,876	603,684
UNITED STATES DOLLARS	(17,875)	(17,875)	-
<b>TOTAL STATE STREET EAFE INDEX</b>	<b>\$ 283,730,181</b>	<b>\$ 302,896,086</b>	<b>\$ 19,165,905</b>
<b>TOTAL INTERNATIONAL EQUITY</b>	<b>\$ 914,297,565</b>	<b>\$ 998,970,523</b>	<b>\$ 84,672,958</b>
<b>TOTAL PENSION ASSETS</b>	<b>\$ 5,205,222,224</b>	<b>\$ 6,885,012,498</b>	<b>\$ 1,679,790,274</b>





## Investments at June 30, 1999

### SYSTEM HOLDINGS June 30, 1999

	<u>COST</u>	<u>MARKET VALUE</u>	<u>UNREALIZED GAIN/LOSS</u>
<b>GROUP LIFE RESERVES</b>			
<b>JP MORGAN GROUP LIFE</b>			
COLTV STIF	\$ 111,036	\$ 111,082	\$ 46
FFCB DTD 02/01/1999 4.8 02-01-2000	2,497,450	2,540,225	42,775
FFCB PREASSIGN 721 5 01-14-2002	999,450	1,005,694	6,244
FHLB 4.9 01-14-2000	2,500,300	2,549,001	48,701
FHLB 5.25 DUE 04-25-2002 REG	4,996,550	4,957,133	(39,417)
FHLB BD 4.89 12-22-2000	4,999,050	4,924,863	(74,188)
FNMA MTN 4.45 10-16-2000 BEO	2,490,145	2,477,702	(12,443)
SLMA 5.582 08-11-1999	2,004,480	2,043,736	39,256
STUD LN MARKETING ASSN MEDIUM	2,494,550	2,470,358	(24,192)
STUDENT LN MARKETING ASSN DISC NT	3,265,583	3,266,000	417
US TREAS 5.375 NT DUE 06-30-2000	4,044,648	4,003,064	(41,584)
US TREAS NTS 5.75 DUE 08-15-2003	2,650,307	2,555,006	(95,301)
<b>TOTAL JP MORGAN GROUP LIFE</b>	<b>\$ 33,053,549</b>	<b>\$ 32,903,865</b>	<b>(\$ 149,685)</b>



# Maine State Retirement System



1999 Actuarial Valuation:  
State/Teacher





# Actuarial Valuation: State/Teacher - 1999



## SECTION I BOARD SUMMARY

### Overview

This report presents the results of our June 30, 1999, actuarial valuation of the retirement plans for state employees and teachers administered by the Maine State Retirement System (MSRS). These results provide a "snapshot" view of the System's financial condition on June 30, 1999 including the effect of the recent changes in benefits and additional contributions as outlined below.

### Benefit Changes

- Effective October 1, 1999, the minimum creditable service required for eligibility for benefits when qualified was reduced from 10 to 5 years.
- Membership in the 1998 Special Plan was expanded to include employees in the following capacities: Baxter State Park Authority Rangers, State Fire Marshals, and employees of the Department of Corrections.
- Members of the State Police 38th training troop were granted membership in the pre-84 State Police Special Plan.

### Additional Contributions

- General Fund Surplus funds of \$18.8 million, as required by 5 MRSA Section 1517.
- \$15.5 million which had been reserved out of earlier General Fund Surplus contributions pending judgement in Parker v Wakelin was transferred into the System's assets.
- An additional \$1 million of General Fund Surplus resulting from reprojected revenues was contributed under 5 MRSA Section 1517.
- \$2 million from a State General Fund retirement account was transferred to the System.

One of the principal purposes of the annual actuarial valuation is to determine the amount that the State, as the employer, must contribute to the plan, given its funded status and its actuarial assumptions. For the MSRS State employee and teacher plans, the State's employer contribution is expressed as a percent of payroll (contribution rate), an approach largely dictated by the way in which the State establishes and manages its budget.

This year's valuation produces a combined employer contribution rate for the State employee and teacher plans of 16.00%, which is lower than the 17.35% produced in last year's valuation. The benefit changes resulted in an increased employer contribution rate which was offset by investment returns at greater than the actuarially assumed rate of 8% by liabilities not increasing as much as expected, and by additional contributions, resulting in the 1.35% decrease in the rate.

On June 30, 1999, the total actuarial liability for the System's State employee and teacher plans stood at \$7.0 billion, up from \$6.6 billion at the end of the previous year. Similarly, the total actuarial value of assets increased from \$4.2 billion on June 30, 1998 to \$4.8 billion on June 30, 1999. Finally, the unfunded actuarial liability decreased from \$2.4 billion on June 30, 1998 to \$2.2 billion on June 30, 1999.

This is the third year in which we measure experience gains/losses for purposes of the 1995 Constitutional amendment. In 1999, the plans experienced a net gain of \$298 million. Therefore, the Constitutional requirement regarding the amortization of experience losses and the Board of Trustees' policy regarding the treatment of experience gains were not called into play in this year's valuation.

The balance of this section summarizes recent trends in the System's finances, analyzes the actuarial experience in the System during the past year, and concludes with summary tables useful for reference purposes.

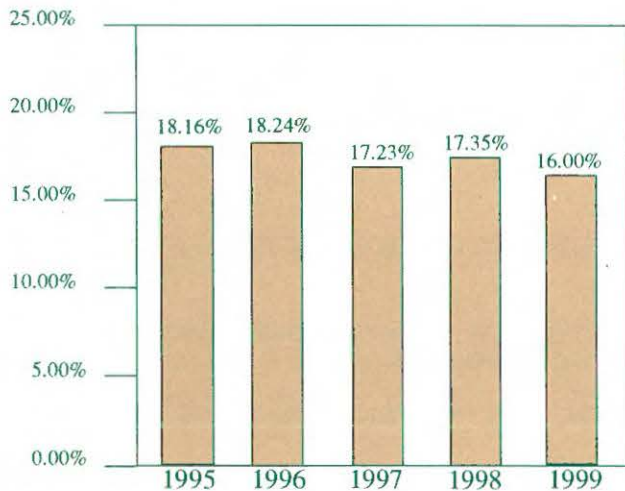




# Actuarial Valuation: State/Teacher - 1999

## System Trends

### Retirement System Contribution Rates\*

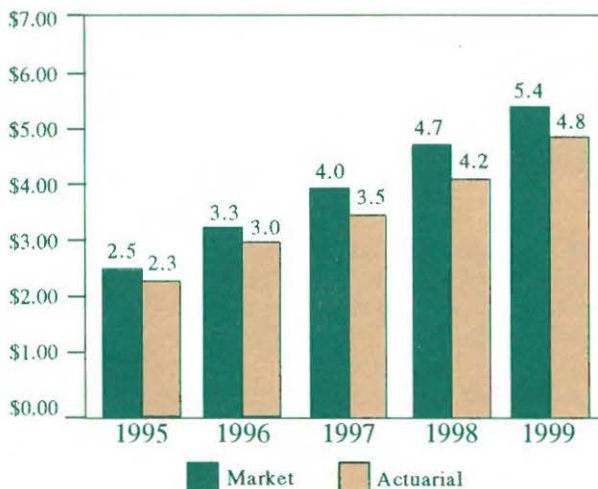


The State contribution rate dropped by 135 basis points this year, primarily due to greater than expected investment returns, coupled with additional State contributions.

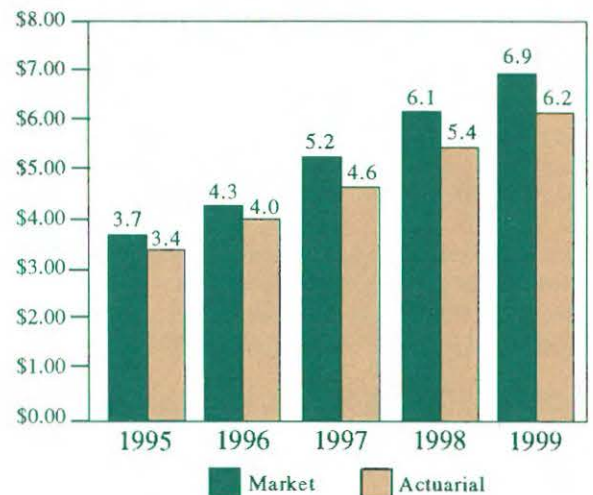
\*Rates do not include retiree health insurance (separately established by the State) or costs of System operations. Rates shown are composite rates for the State Regular employees, Teachers, and the State special plan groups.

### Retirement System Assets

#### State Employee and Teacher Assets (in billions)



#### System Total Assets\*\* (in billions)



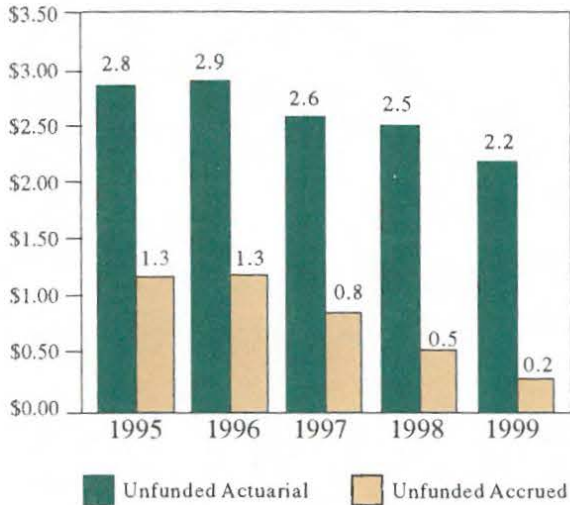
The System's assets earned about 11.2% from 1998 to 1999 when measured on Market Values. For funding purposes we use a smoothed value of assets known as the Actuarial Value. On this basis, the assets returned 14.1% over the year.

\*\* System total assets include those attributable to the state employee, teacher, judicial, legislative and participating local district (Consolidated and non-consolidated/withdrawn) plans.

# Actuarial Valuation: State/Teacher - 1999

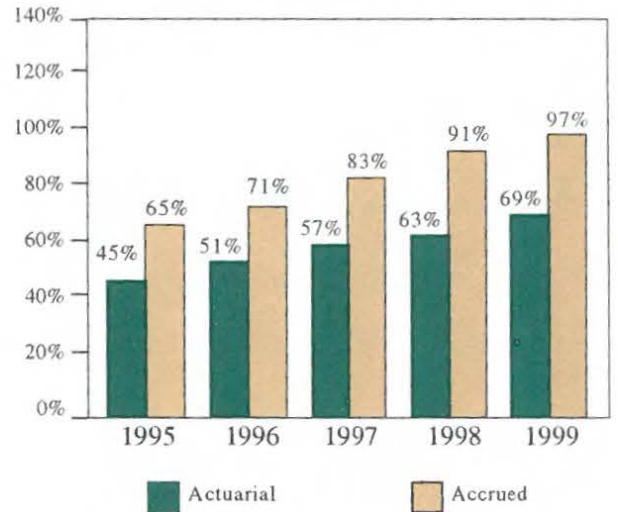


**State Employee and Teacher Plans  
Unfunded Liabilities  
(in billions)**



Unfunded actuarial liabilities have generally decreased over the past few years.

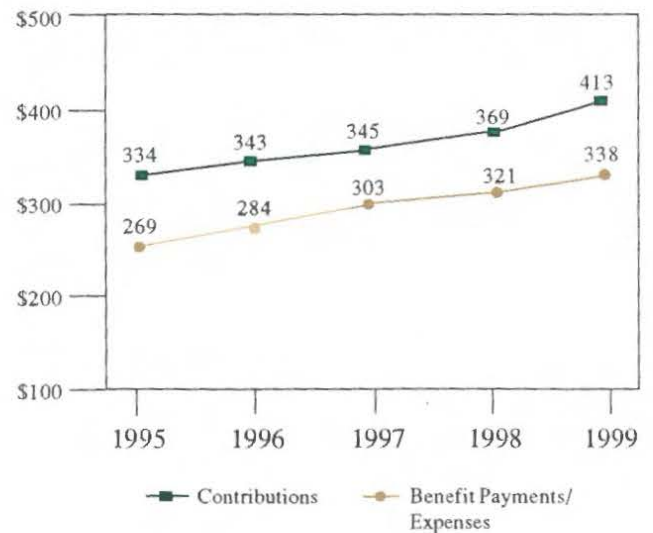
**Funding Ratios**



Both the actuarial and the accrued funding ratios have increased steadily over the past few years.

The net cash flow of the System, excluding investments, has maintained a positive balance over the past few years.

**Cash Flows  
(in millions)**







## Actuarial Valuation: State/Teacher - 1999

### SYSTEM EXPERIENCE July 1, 1998 – June 30, 1999

The key indicator of overall experience of the System is the stability of the composite (i.e., State employer regular and special plans and teacher plan) State contribution rate. The rate is set so that it will be stable from year to year if experience is exactly as expected. An increase in the rate indicates unfavorable experience and a decrease, favorable experience, during the year covered by the valuation. The net experience of the System during the year ending June 30, 1999, was better than expected and even coupled with the benefit improvements resulted in a significant decrease in the contribution rate of 1.35%.

The balance of this part examines the System's experience in more detail.

### ASSETS

As of June 30, 1999, the market value of System assets was \$6.90 billion, an increase of \$0.76 billion from the 1998 figure of \$6.14 billion.

When measured on a method that smooths market fluctuations, the actuarial value of System assets increased by \$0.85 billion, to \$6.24 billion in 1999 from \$5.39 billion in 1998. The components of this change, in millions, are:

Actuarial			Market		
+	\$ 413	employer and member contributions	+	\$ 413	
-	337	payment of benefits and expenses,	-	337	
+	434	investment return per 8.0% assumption,	+	494	
+	<u>333</u>	actuarial investment gain (actuarial rate of return @ 14.1%)			
		market investment gain (market rate of return @ 11.2%)	+	<u>197</u>	
=	\$ 843	total increase in assets	=	\$ 767	

The investment gain for the State employee and teacher plans only, excluding participating local districts, was \$259.0 million on an actuarial value basis.

Section II of this report presents more detailed information on System assets.

# Actuarial Valuation: State/Teacher - 1999



## LIABILITIES

Throughout this report we discuss two types of liabilities:

- Actuarial Liabilities
- Accrued Benefit Liabilities

## ACTUARIAL LIABILITY

In general, actuarial liabilities are calculated for purposes of determining future contributions, and are directly dependent upon the particular funding method used by the actuary. Use of different funding methods would provide entirely different results, when nothing else has changed (e.g., inflation, salaries, etc.). The calculation of unfunded actuarial liabilities includes assumed future increases in pay and service credits.

As of June 30, 1999, the State's unfunded actuarial liability was \$2.18 billion. This compares to June 30, 1998, unfunded actuarial liability of \$2.45 billion, a decrease of \$270 million. This compares with an expected increase of \$58 million. The components of this decrease, in millions, are as follows:

Unfunded Actuarial Liability, June 30, 1998	\$ 2,454
• increase expected	58
• decrease due to asset gain (investment return)	(256)
• decrease due to extra contributions	(39)
• other (gains)/losses (see below)	(42)
Unfunded Actuarial Liability, June 30, 1999	\$ 2,175

The unexpected decrease in unfunded actuarial liabilities from "other (gains)/losses" of \$42 million is attributable to the differences between assumed and actual rates of pay increases and of members retiring, terminating employment, or dying.

## ACCRUED BENEFIT LIABILITY

The second type of liability is the accrued benefit liability. This represents the liabilities for all future benefits, based on members' earnings and service credits as of the valuation date June 30, 1999. The difference between this figure and the market value of System assets represents the unfunded accrued benefit liability. As of June 30, 1999, the unfunded accrued benefit liability was \$0.16 billion, down from \$0.46 billion on June 30, 1998.

## CONTRIBUTIONS

In Section IV of this report, we present detailed information on the development of State employer contribution rates, calculated as of June 30, 1999. In addition, Section IV discusses the application of the State contribution rate for State budget purposes.





## Actuarial Valuation: State/Teacher - 1999

### CONTRIBUTIONS (continued)

Contributions to the System consist of:

- A 'normal contribution' for the portion of projected liabilities attributable to service of members during the year following the valuation date, and
- An 'unfunded actuarial liability contribution' for the excess of actuarial liabilities over assets on hand.

The composite contribution rate for all State employees and teachers decreased from 17.35% of payroll as of June 30, 1998, to 16.00% of payroll as of June 30, 1999. The primary components of this change are shown below.

Contribution Rate as of June 30, 1998	17.35%
Investment Gain (Due to Higher than Expected Investment Returns)	(1.12)
Extra Contributions	(0.17)
Net effect of Other Losses and Gains	(0.14)
Effect of Aggregate Payroll Growth at less than the 5.5% Assumption	<u>0.08</u>
Contribution Rate as of June 30, 1999	16.00%

The effect of aggregate payroll growth at less than the actuarial assumption was discussed in detail in the 1995 valuation report. Simply put, the dollar amount of the unfunded actuarial liability payment increased according to the amortization schedule for its ultimate paydown, while the aggregate payroll (which is divided into this contribution in order to create a rate) did not grow as much as anticipated. As a result, this factor acts to increase the contribution rate (but not necessarily resulting in an increase in the amount of the contribution). As shown above, the combination of this factor with other factors that acted to increase or decrease the rate resulted in total in a decrease in the contribution rate of 1.35%.

# Actuarial Valuation: State/Teacher - 1999



## SUMMARY OF PRINCIPAL RESULTS TOTAL (State and Teacher)\*

	<u>June 30, 1999</u>	<u>June 30, 1998</u>
<b>1. Participant Data</b>		
Number of:		
Active Members	40,833	39,681
Retired Members and Beneficiaries	19,426	19,055
Survivors and Disabled Members	2,451	2,398
Vested Deferred Members	<u>1,489</u>	<u>1,186</u>
Total Membership	64,199	62,320
Annual Salaries of Active Members	\$ 1,202,943,859	\$ 1,152,172,667
Annual Retirement Allowances for Retired Members and Beneficiaries (includes survivors and disabled employees)	\$ 270,410,313	\$ 256,882,183
<b>2. Assets and Liabilities</b>		
Actuarial Liability	\$ 7,020,347,666	\$ 6,612,948,281
Actuarial Value of Assets	<u>4,844,937,706</u>	<u>4,158,926,645</u>
Unfunded Actuarial Liability	\$ 2,175,409,960	\$ 2,454,021,636
Actuarial Liability Funding Ratio	69.01%	62.89%
Accrued Liability	\$ 5,523,871,144	\$ 5,189,989,996
Market Value of Assets	<u>5,362,496,450</u>	<u>4,732,073,875</u>
Unfunded Accrued Liability	\$ 161,374,694	\$ 457,916,121
Accrued Benefit Funding Ratio	97.08%	91.18%
<b>3. Contribution Results as a Percent of Payroll (composite rate for all State Employees and Teachers)**</b>		
Normal Cost	6.15%	6.10%
Unfunded Actuarial Liability	<u>9.85</u>	<u>11.25</u>
Total	16.00%	17.35%

\* Excludes participating local districts

\*\* Does not include the cost of retiree health insurance, which is separately established by the State, or the cost of System operations.





# Actuarial Valuation: State/Teacher - 1999

## SUMMARY OF PRINCIPAL RESULTS TEACHERS\*

### 1. Participant Data

	<u>June 30, 1999</u>	<u>June 30, 1998</u>
Number of:		
Active Members	26,507	25,876
Retired Members and Beneficiaries	9,790	9,585
Survivors and Disabled Members	891	864
Vested Deferred Members	870	685
Total Membership	<u>38,058</u>	<u>37,010</u>
Annual Salaries of Active Members	\$ 769,074,585	\$ 739,432,766
Annual Retirement Allowances for Retired Members and Beneficiaries (includes survivors and disabled employees)	\$ 145,527,510	\$ 137,618,253

### 2. Assets and Liabilities

Actuarial Liability	\$ 4,481,506,659	\$ 4,208,845,895
Actuarial Value of Assets	<u>2,865,201,085</u>	<u>2,429,005,004</u>
Unfunded Actuarial Liability	\$ 1,616,305,574	\$ 1,779,840,891
Actuarial Liability Funding Ratio	63.93%	57.71%
Accrued Liability	\$ 3,398,477,619	\$ 3,171,165,276
Market Value of Assets	<u>3,171,275,170</u>	<u>2,763,749,424</u>
Unfunded Accrued Liability	\$ 227,202,449	\$ 407,415,852
Accrued Benefit Funding Ratio	93.31%	87.15%

### 3. Contribution Results as a Percent of Payroll\*\*

Normal Cost	6.04%	6.00%
Unfunded Actuarial Liability	<u>11.45</u>	<u>12.72</u>
Total	17.49%	18.72%

\* Includes both MRTA and Old System teachers.

\*\* Does not include the cost of retiree health insurance, which is separately established by the State, or the cost of System operations.

# Actuarial Valuation: State/Teacher - 1999



## SUMMARY OF PRINCIPAL RESULTS TOTAL STATE

<b>1. Participant Data</b>	<b>June 30, 1999</b>	<b>June 30, 1998</b>
Number of:		
Active Members	14,326	13,805
Retired Members and Beneficiaries	9,636	9,470
Survivors and Disabled Members	1,560	1,534
Vested Deferred Members	619	501
Total Membership	<u>26,141</u>	<u>25,310</u>
Annual Salaries of Active Members	\$ 433,869,274	\$ 412,739,901
Annual Retirement Allowances for Retired Members and Beneficiaries (includes survivors and disabled employees)	\$ 124,882,803	\$ 119,263,930
<b>2. Assets and Liabilities</b>		
Actuarial Liability	\$ 2,538,841,007	\$ 2,404,102,386
Actuarial Value of Assets	<u>1,979,736,621</u>	<u>1,729,921,641</u>
Unfunded Actuarial Liability	\$ 559,104,386	\$ 674,180,745
Actuarial Liability Funding Ratio	77.98%	71.96%
Accrued Liability	\$ 2,125,393,525	\$ 2,018,824,720
Market Value of Assets	<u>2,191,221,280</u>	<u>1,968,324,451</u>
Unfunded Accrued Liability	(\$ 65,827,755)	\$ 50,500,269
Accrued Benefit Funding Ratio	103.10%	97.50%
<b>3. Contribution Results as a Percent of Payroll*</b>		
Normal Cost	6.35%	6.27%
Unfunded Actuarial Liability	<u>7.02</u>	<u>8.63</u>
Total	13.37%	14.90%

\* Does not include the cost of retiree health insurance, which is separately established by the State, or the cost of System operations.





# Actuarial Valuation: State/Teacher - 1999

## SUMMARY OF PRINCIPAL RESULTS STATE REGULAR

<b>1. Participant Data</b>	<b><u>June 30, 1999</u></b>	<b><u>June 30, 1998</u></b>
Number of:		
Active Members*	12,546	12,857
Retired Members and Beneficiaries	8,780	8,646
Survivors and Disabled Members	1,552	1,526
Vested Deferred Members	<u>619</u>	<u>501</u>
Total Membership	23,497	23,530
Annual Salaries of Active Members	\$ 373,681,749	\$ 379,492,795
Annual Retirement Allowances for Retired Members and Beneficiaries (includes survivors and disabled employees)	\$ 109,408,298	\$ 104,476,166
<b>2. Assets and Liabilities</b>		
Actuarial Liability	\$ 2,172,470,681	\$ 2,108,012,840
Actuarial Value of Assets	<u>1,714,643,391</u>	<u>1,514,558,021</u>
Unfunded Actuarial Liability	\$ 457,827,290	\$ 593,454,819
Actuarial Liability Funding Ratio	78.93%	71.85%
Accrued Liability	\$ 1,802,697,740	\$ 1,746,968,824
Market Value of Assets	<u>1,897,809,560</u>	<u>1,723,281,283</u>
Unfunded Accrued Liability	(\$ 95,111,820)	\$ 23,687,541
Accrued Benefit Funding Ratio	105.28%	98.64%
<b>3. Contribution Results as a Percent of Payroll (State Portion only)**</b>		
Normal Cost	6.04%	6.00%
Unfunded Actuarial Liability	<u>6.67</u>	<u>8.26</u>
Total	12.71%	14.26%

\* The 1998 number reflects re-pooling of 179 members who were transferred by law to the 1998 Special Plan and had previously been included in the State Regular Plan. The 1999 numbers reflect the transfer of additional members to the 1998 Special Plan, effective January 1, 2000.

\*\* Does not include the cost of retiree health insurance, which is separately established by the State, or the cost of System operations.

# Actuarial Valuation: State/Teacher - 1999



## SUMMARY OF PRINCIPAL RESULTS COMPOSITE SPECIALS

1. Participant Data	<u>June 30, 1999</u>	<u>June 30, 1998</u>
Number of:		
Active Members*	1,780	948
Retired Members and Beneficiaries	856	824
Survivors and Disabled Members	8	8
Vested Deferred Members	<u>0</u>	<u>0</u>
Total Membership	2,644	1,780
Annual Salaries of Active Members	\$ 60,187,525	\$ 33,247,106
Annual Retirement Allowances for Retired Members and Beneficiaries (includes survivors and disabled employees)	\$ 15,474,505	\$ 14,787,764
2. Assets and Liabilities		
Actuarial Liability	\$ 366,370,326	\$ 296,089,546
Actuarial Value of Assets	<u>265,093,230</u>	<u>215,363,620</u>
Unfunded Actuarial Liability	\$ 101,277,096	\$ 80,725,926
Actuarial Liability Funding Ratio	72.36%	72.74%
Accrued Liability	\$ 322,695,785	\$ 271,855,896
Market Value of Assets	<u>293,411,720</u>	<u>245,043,168</u>
Unfunded Accrued Liability	\$ 29,284,065	\$ 26,812,728
Accrued Benefit Funding Ratio	90.93%	90.14%
3. Contribution Results as a Percent of Payroll**		
Normal Cost	8.29%	9.32%
Unfunded Actuarial Liability	<u>9.17</u>	<u>12.83</u>
Total	17.46%	22.15%

\* The 1998 number reflects re-pooling of 179 members who were transferred by law to the 1998 Special Plan and had previously been included in the State Regular Plan. The 1999 numbers reflect the transfer of additional members to the 1998 Special Plan, effective January 1, 2000.

\*\* Does not include the cost of retiree health insurance, which is separately established by the State, or the cost of System operations.





## Actuarial Valuation: State/Teacher - 1999

### SECTION II ASSETS

In this section we present the value assigned to assets held by the System. These assets are valued on two different bases: the market value and the actuarial value.

#### Market Value of Assets

For accounting statement purposes, System assets are valued at current market values. Briefly stated, these values represent the "snapshot" or "cash-out" value of System assets as of the valuation date. Table II-1 shows the market value of System assets as of June 30, 1999, by investment category.

#### Actuarial Value of Assets

The market value of assets, representing a "liquidation" value of the funds, is not a good measure of the System's ongoing ability to meet its obligations. Ongoing funding requirements established using market values are subject to significant variability because of the volatility of market values.

As a consequence, actuarial valuations employ a technique for determining the actuarial value of assets which dampens the swings in market value. The specific technique adopted recognizes one-third of the investment return in excess of the 8.00% actuarial assumption each year. The following is a step-by-step description:

**Step 1:** Determine the total yield on the investments of the System using the full investment return (including capital gains) measured by the difference in the actuarial value of the assets at the beginning of the fiscal year just ended (adjusted for cash flow) and the market value of assets at the end of the fiscal year. The calculation of this return is:

- (a) Increase in assets = Market value of assets at the end of the year minus actuarial value of assets at the end of the prior year adjusted for net cash flow for the current year (contributions minus benefit payments) [= \$1,434,057,766].
- (b) Adjusted actuarial value of assets = Actuarial value of assets at the end of the prior year plus one-half of net cash flow for the current year [= \$5,430,514,792].
- (c) Return = (a) Increase in assets divided by (b) Adjusted actuarial value of assets [= 26.41%].

**Step 2:** Calculate the excess of the actual return determined in Step 1 over the expected return for the same year according to the actuarial assumption (8.00%). [26.41% - 8.00% = 18.41%]

**Step 3:** Calculate an adjusted rate equal to the rate expected by the actuarial assumption (8.00%) plus one-third of the rate determined in step 2. [8.00% + (1/3 \* 18.41%) = 14.41%]

**Step 4:** The actuarial value of assets equals the amount that would have existed if the actual return on last year's actuarial value of assets had been the theoretical rate determined in Step 3 applied to last year's actuarial value of assets.

#### Allocation by Group

Since retirement benefit costs are calculated separately for State Employees, Teachers and other Special Groups, total assets (market and actuarial values) must be allocated to each of these groups. We have made this allocation as of June 30, 1999, in proportion to System reserves (provided at market value). The total for each group has been further allocated between the Member Contribution Fund and the Retirement Allowance Fund. The resulting allocations are shown in Tables II-2 and II-3.

# Actuarial Valuation: State/Teacher - 1999



**TABLE II-1**  
**INVESTMENT CATEGORIES AT MARKET VALUE**

<u>Asset Category</u>	<u>June 30, 1999</u> <u>(In Millions)</u>
Bonds & Cash Equivalents	\$ 2,306
Stocks	\$ 4,583
Land & Buildings	\$ 13
<b>TOTAL</b>	<b>\$ 6,902</b>

**TABLE II-2**  
**ALLOCATION OF MARKET VALUE OF ASSETS**

	<u>Allocation to:</u> <u>Member</u> <u>Contribution Fund</u>	<u>Retirement</u> <u>Allowance Fund</u>	<u>Total</u>
State Employees	\$ 467,784,515	\$ 1,723,436,765	\$ 2,191,221,280
MRTA Teachers	706,445,190	2,464,829,980	3,171,275,170
Judges	4,062,395	30,563,705	34,626,100
Legislators	813,691	4,905,501	5,719,192
Subtotal State	\$ 1,179,105,791	\$ 4,223,735,951	\$ 5,402,841,742
Participating Districts	150,116,641	1,349,453,922	1,499,570,563
<b>TOTAL</b>	<b>\$ 1,329,222,432</b>	<b>\$ 5,573,189,873</b>	<b>\$ 6,902,412,305</b>

**TABLE II-3**  
**ALLOCATION OF ACTUARIAL VALUE OF ASSETS**

	<u>Allocation to:</u> <u>Member</u> <u>Contribution Fund</u>	<u>Retirement</u> <u>Allowance Fund</u>	<u>Total</u>
State Employees	\$ 467,784,515	\$ 1,511,952,106	\$ 1,979,736,621
MRTA Teachers	706,445,190	2,158,755,895	2,865,201,085
Judges	4,062,395	27,221,784	31,284,179
Legislators	813,691	4,353,516	5,167,207
Subtotal State	\$ 1,179,105,791	\$ 3,702,283,301	\$ 4,881,389,092
Participating Districts	150,116,641	1,204,723,597	1,354,840,238
<b>TOTAL</b>	<b>\$ 1,329,222,432</b>	<b>\$ 4,907,006,898</b>	<b>\$ 6,236,229,330</b>





## Actuarial Valuation: State/Teacher - 1999

### SECTION III LIABILITIES

#### Actuarial Liabilities

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. There are several methods currently used in making such a determination.

The method used for this valuation is referred to as the "Entry Age Normal actuarial cost method." Under this method, a level-percent-of-pay employer cost is determined which, along with member contributions, will pay for projected benefits at retirement for a new entrant into the plan. It is assumed applicable to all active plan members. The level percent developed is called the normal cost rate and the product of that rate and payroll is the normal cost. The Entry Age Normal method is described in greater detail in Section IV.

The actuarial 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 funds accumulated as of the same date is referred to as the unfunded actuarial liability. If the employer's contributions exceed the employer's normal cost for the year, after allowing for interest earned on the previous balance of the unfunded actuarial liability, this liability will be reduced. Benefit improvements, actuarial gains and losses, and changes in actuarial procedures will also have an effect on the total actuarial liability and on the portion of it that is unfunded. The methodology for developing the unfunded actuarial liability rate is described in greater detail in Section IV.

After the amount of the unfunded actuarial liability has been determined, a schedule of contributions is established to amortize that amount over a given period. Effective with the 1987 valuation, a 30 year amortization period was adopted by the Trustees. This period was legislatively extended to 35 years effective with the June 30, 1993 valuation. By a Constitutional amendment adopted at referendum in 1995, the amortization period cannot exceed 31 years from July 1, 1997. In 1998, the Legislature established a 25-year amortization period commencing June 30, 1998, shortening the Constitutionally-permitted period by five years. Payments to fund the actuarial liability are calculated as a level percentage of payroll.

In Table III-1 we have summarized the actuarial liabilities as of June 30, 1999, and the amounts that were unfunded.

#### Accounting Statement Information

Statement No. 35 of the Financial Accounting Standards Board requires the System to disclose certain information regarding its funded status.

As directed by the above referenced accounting statements, the liabilities shown in Table III-2, Accrued Benefit Liabilities, do not include any projections for future creditable service and pay increases.

The GASB released a new pronouncement which replaced the disclosures formerly required by Statement #5. The figures shown in Table III-1 are suitable for the new Statement #25 disclosures.

Both present values of accrued benefits are determined assuming that the plan is ongoing and participants continue to terminate employment, retire, etc. in accordance with the actuarial assumptions.

# Actuarial Valuation: State/Teacher - 1999



**TABLE III-1  
ACTUARIAL LIABILITIES**

	State Employees	Teachers*	All State Employees
1. Active employees			
(a) Current accrued benefits	\$ 789,825,292	\$ 1,746,152,724	\$ 2,535,978,016
(b) Future benefit accruals	852,868,391	1,942,345,036	2,795,213,427
(c) Total active projected benefits	\$ 1,642,693,683	\$ 3,688,497,760	\$ 5,331,191,443
2. Inactive Employees	\$ 1,335,568,233	\$ 1,652,324,895	\$ 2,987,893,128
3. Total Present Value of Projected Benefits (1 + 2)	\$ 2,978,261,916	\$ 5,340,822,655	\$ 8,319,084,571
4. Future Contributions	\$ 439,420,909	\$ 859,315,996	\$ 1,298,736,905
5. Actuarial Liability (3 - 4)	\$ 2,538,841,007	\$ 4,481,506,659	\$ 7,020,347,666
6. Invested Assets (Actuarial Value)	\$ 1,979,736,621	\$ 2,865,201,085	\$ 4,844,937,706
7. Unfunded Actuarial Liability (5 - 6)	\$ 559,104,386	\$ 1,616,305,574	\$ 2,175,409,960
8. Actuarial Benefit Funding Ratio (6 / 5)	78.0%	63.9%	69.0%

**TABLE III-2  
ACCRUED BENEFIT LIABILITIES**

	State Employees	Teachers*	All State Employees
1. Present Value of Accrued Benefits			
(a) Employees terminated with vested rights	\$ 28,537,636	\$ 60,785,782	\$ 89,323,418
(b) Retired employees	1,307,030,597	1,591,539,113	2,898,569,710
(c) Active employees	789,825,292	1,746,152,724	2,535,978,016
(d) Total	\$ 2,125,393,525	\$ 3,398,477,619	\$ 5,523,871,144
2. Invested Assets (Market Value)	\$ 2,191,221,280	\$ 3,171,275,170	\$ 5,362,496,450
3. Unfunded Present Value of Accrued Benefits (1-2)	(\$ 65,827,755)	\$ 227,202,449	\$ 161,374,694
4. Accrued Benefit Funding Ratio (2/1)	103.1%	93.3%	97.1%

\* Includes both MRTA and Old System Teachers





# Actuarial Valuation: State/Teacher - 1999

## SECTION IV CONTRIBUTIONS

### General Comments

Under established procedures, in a year in which the State is preparing and, eventually, adopting its budget for an upcoming biennium, employer contribution rates based on the annual actuarial valuation for the fiscal year that precedes the fiscal year in which a biennium begins are used to establish the required employer contributions and hence the appropriations for those contributions to be made in the biennial budget. Contributions, contribution rates and appropriations are thus established for both years of the biennium.

The actuarial valuation for a fiscal year that precedes the second year of a biennium does not affect the contributions, contribution rates or appropriations as previously set in the budget, but is important for assessing the funding requirements and funding progress of the State employee and teacher plan(s).

Member contribution rates are set by statute.

### Employer Contribution Rate

As used in this valuation, and because of the way in which the State establishes and manages its budget, "employer contribution rate" means the percentage that is applied to a particular active member payroll to result in the required contribution amount in dollars for the group represented by the payroll.

### Description of Rate Components

The Entry Age Normal method was used to develop the employer contribution rates. Under this funding method, as with most other actuarial funding methods, a total contribution rate is determined which consists of two elements: the normal cost rate and the unfunded actuarial liability rate. These elements are described in more detail below.

#### Normal Cost Rate

For State Employees, Teachers (MRTA) and each Special Plan Group, an individual entry age normal cost rate was determined for a typical new entrant of each respective group. This rate was 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. The normal cost rate, so determined separately for each group, was assumed applicable to all active members of the group.

#### Unfunded Actuarial Liability Rate

The unfunded actuarial liability under the Entry Age Normal method equals the present value, at time of valuation, of future benefits less the present value of future normal costs, future member contributions and current assets. The unfunded actuarial liability rate (or amortization rate) is the level percent of active member payroll that, when applied to each year's payroll, is sufficient to amortize the unfunded actuarial liability over 24 years from June 30, 1999.

### Total Contribution Rate Summary

In Table IV-1 we present total contribution rates, determined as of June 30, 1999. These were developed using actuarial assumptions and methods described in Appendix C. The State's budget cycle and process are such that this FY 1999 actuarial valuation provides information only, since the State's contributions for the biennium were developed last year. The derivations of the unfunded actuarial liability rates for each group are shown in Table IV-2.

# Actuarial Valuation: State/Teacher - 1999



**TABLE IV-1**  
**RECOMMENDED STATE CONTRIBUTION RATES\*,\*\***  
**FOR FISCAL YEAR 2000/2001**

	<u>NORMAL COST</u>	<u>UNF ACTRL LIAB</u>	<u>TOTAL CONTRIBUTION RATE</u>
STATE EMPLOYEES	6.04%	6.67%	12.71%
SPECIAL GROUPS			
State Police (Closed Plan)	17.84%	19.72%	37.56%
Marine Resources Officers (Closed Plan)	17.84%	19.72%	37.56%
Inland Fisheries & Wildlife Officers (Closed Plan)	17.84%	19.72%	37.56%
Prison Employees (Closed Plan)	9.04%	9.99%	19.03%
Liquor Inspectors (Closed Plan)	8.24%	9.11%	17.35%
Forest Rangers (Closed Plan)	7.34%	8.11%	15.45%
1998 Special Plan	6.89%	7.62%	14.51%
MRTA TEACHERS	6.04%	11.45%	17.49%

\* Does not include the cost of retiree health insurance, which is separately established by the State, or the cost of System operations.

\*\* These exact rates are not necessarily those that are in fact used in the State's budget/budget process, principally because the State develops its own salary projections for member groups which may be different than those used in the valuation.





# Actuarial Valuation: State/Teacher - 1999

**TABLE IV-2**  
**June 30, 1999, Valuation**  
**DERIVATION OF UNFUNDED ACTUARIAL LIABILITY RATES**

	STATE REGULAR	SP, MRO IF&WO <sup>1</sup>	PRISON EMPLOYEES	LIQUOR INSPECTORS	FOREST RANGERS	1998 SPECIAL PLAN	ALLSTATE EMPLOYEES	MRTA TEACHERS
1. Present Value of Future Benefits	2,557,121,310	224,064,254	39,067,293	3,984,513	20,500,036	133,524,510	2,978,261,916	5,340,822,655
2. Normal Cost Rate	6.04%	17.84%	9.04%	8.24%	7.34%	6.89%	6.35% <sup>2</sup>	6.04%
3. Present Value of Future Payroll	2,809,719,711	7,903,483	8,298,898	1,074,645	5,830,733	322,429,076	3,155,256,546	6,276,961,260
4. Present Value of Future Normal Costs: (2) x (3)	169,707,071	1,409,981	750,220	88,551	427,976	22,215,363	194,599,162	379,128,460
5. Present Value of Future Member Contributions	214,943,558	683,651	717,855	82,210	504,358	27,890,115	244,821,747	480,187,536
6. Actuarial Liability: (1) - (4) - (5)	2,172,470,681	221,970,622	37,599,218	3,813,752	19,567,702	83,419,032	2,538,841,007	4,481,506,659
7. Actuarial Value of Assets	-	-	-	-	-	-	1,979,736,621	2,865,201,085
8. Unfunded Actuarial Liability (UAL): (6) - (7)	-	-	-	-	-	-	559,104,386	1,616,305,574
9. Estimated Payroll	-	-	-	-	-	-	433,869,274	769,074,585
10. Amortization Factor	-	-	-	-	-	-	18.3590	18.3590
11. Unfunded Actuarial Liability Rate: (8)/(9)/(10)	-	-	-	-	-	-	7.02% <sup>3</sup>	11.45%
12. Allocation of UAL Rate to Plans	6.67%	19.71%	9.99%	9.11%	8.11%	7.62%	N/A	N/A

<sup>1</sup> SP=State Police; MRO = Marine Resources Officers; IF&WO = Inland Fisheries & Wildlife Officers

<sup>2</sup> The average normal cost rate is based on valuation payrolls.

<sup>3</sup> The Pooled UAL rate is allocated among State Regular and Special Groups on the basis of the ratio of the 6.35% aggregate normal cost rate as compared to the individual normal cost rates.



## APPENDIX A SUMMARY OF MEMBERSHIP DATA ACTIVE MEMBER DATA

	<u>Count</u>	<u>Average Current Age</u>	<u>Average Service</u>	<u>Average Valuation Pay</u>
Teachers	26,507	44.3	13.6	\$ 29,014
State Regular	12,546	44.7	14.6	\$ 29,785
Forest Rangers (Closed Plan)	42	46.8	21.8	\$ 38,800
Inland Fisheries & Wildlife Officers (Closed Plan)	30	48.6	24.4	\$ 42,021
Liquor Inspectors (Closed Plan)	9	51.7	26.1	\$ 38,945
Prison Employees (Closed Plan)	87	49.3	21.7	\$ 39,540
State Police (Closed Plan)	107	44.5	19.8	\$ 46,756
Marine Resources Officers (Closed Plan)	15	46.5	22.8	\$ 43,342
1998 Special Plan	1,490	40.2	9.2	\$ 32,117
State Totals (Excludes Teachers)	14,326	44.3	12.6	\$ 30,285

## NON-ACTIVE MEMBER DATA TEACHERS

	<u>Count</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
<u>Retired</u> (Options 0-4)	8,252	\$ 125,034,392	\$ 15,152
<u>Retired</u> (Option 4 Concurrent Beneficiary)	1,047	\$ 3,894,227	\$ 3,719
<u>Disabilities/1122</u>	10	\$ 166,791	\$ 16,679
<u>Disabilities/3 and 3-A</u>	320	\$ 6,644,354	\$ 20,764
<u>Beneficiaries</u>	706	\$ 7,558,360	\$ 10,706
<u>Pre-Retirement Death Benefits</u>	309	\$ 1,368,951	\$ 4,430
<u>Terminated Vested</u>	870	\$ 4,526,160	\$ 5,202





## Actuarial Valuation: State/Teacher - 1999

### NON-ACTIVE MEMBER DATA STATE REGULAR

	Count	Total Annual Benefit	Average Annual Benefit
<u>Retired</u> (Options 0-4)	6,448	\$ 80,096,168	\$ 12,422
<u>Retired</u> (Option 4 Concurrent Beneficiary)	1,126	\$ 3,887,222	\$ 3,452
<u>Disabilities/1122</u>	18	\$ 243,759	\$ 13,542
<u>Disabilities/3 and 3-A</u>	594	\$ 9,037,498	\$ 15,215
<u>Beneficiaries</u>	1,489	\$ 12,328,674	\$ 8,280
<u>Pre-Retirement Death Benefits</u>	608	\$ 2,845,917	\$ 4,681
<u>Terminated Vested</u>	619	\$ 3,849,811	\$ 6,219

### NON-ACTIVE MEMBER DATA SPECIAL GROUPS

	Count	Total Annual Benefit	Average Annual Benefit
<u>Retired</u> (Options 0-4)	628	\$ 13,714,658	\$ 21,839
<u>Retired</u> (Option 4 Concurrent Beneficiary)	126	\$ 486,250	\$ 3,859
<u>Disabilities/1122</u>	3	\$ 40,380	\$ 13,460
<u>Disabilities/3 and 3-A</u>	5	\$ 78,171	\$ 15,634
<u>Beneficiaries</u>	103	\$ 1,155,046	\$ 11,214
<u>Terminated Vested</u>	0	\$ 0	\$ N/A



## APPENDIX B 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 September 1, 1984 - 8.65% of earnable compensation for 20 years; 7.65% thereafter.
- Forest rangers and state prison employees employed before September 1, 1984 - 8.65% of earnable compensation until eligible for retirement; 7.65% thereafter.
- 1998 Special Plan employees employed after August 31, 1984 which include state police, 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.

### 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.

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 member, 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)

At least 10 years of creditable service on July 1, 1993

Normal Retirement Age: 60





## Actuarial Valuation: State/Teacher - 1999

### SUMMARY OF PLAN PROVISIONS FOR STATE EMPLOYEES AND TEACHERS (continued)

Eligibility for members in active service: 25 years of creditable service or 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 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 prior service, reduced by approximately  $2\frac{1}{4}\%$  for each year retirement age is less than 60.

Form of payment - life annuity.

Less than 10 years of creditable service on July 1, 1993

Normal Retirement Age: 62

Eligibility for members in active service: 25 years of creditable service or 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 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 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 September 16, 1984; inland fisheries and wildlife officers and marine resource officers employed before September 1, 1984:

Eligibility - 20 years of creditable service in named positions.

Benefit -  $1/2$  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.



## SUMMARY OF PLAN PROVISIONS FOR STATE EMPLOYEES AND TEACHERS (continued)

### Forest rangers employed before September 1, 1984:

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

Benefit -  $\frac{1}{2}$  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.

### Airplane pilots employed before September 1, 1984:

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

Benefit - greater of (1)  $\frac{1}{2}$  of average final compensation plus 2% for each year of service earned after qualifications for retirement, and (2) if retiring after age 60, the benefit under the general formula.

Form of payment - life annuity.

### Liquor inspectors employed before September 1, 1984:

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

Benefit -  $\frac{1}{2}$  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 September 1, 1984:

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

Benefit -  $\frac{1}{2}$  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 police employed on or after September 16, 1984; state prison employees, airplane pilots, forest rangers, inland fisheries and wildlife officers, marine resources officers and liquor inspectors, employed before September 1, 1984; defense, veterans and emergency management firefighters employed on and after July 1, 1998.

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





## Actuarial Valuation: State/Teacher - 1999

### SUMMARY OF PLAN PROVISIONS FOR STATE EMPLOYEES AND TEACHERS (continued)

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.

Member 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 Workers' 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 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 Workers' 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.



## SUMMARY OF PLAN PROVISIONS FOR STATE EMPLOYEES AND TEACHERS (continued)

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 the 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(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.

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.





## Actuarial Valuation: State/Teacher - 1999

### **SUMMARY OF PLAN PROVISIONS FOR STATE EMPLOYEES AND TEACHERS** (continued)

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.

Members on service retirement who did not have 10 years of service on July 1, 1993 will not receive a cost-of-living adjustment 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 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: Any other method of benefit payment which provides a benefit that is actuarially equivalent to the full benefit and is approved by the Board.



## APPENDIX C ACTUARIAL ASSUMPTIONS AND METHODS

### Actuarial Assumptions

	<u>State Employees</u>	<u>Teachers</u>
1. Rate of Investment Return	8.0%	8.0%
2. Cost-of-living Increases in Benefits	4.0%	4.0%
3. Rates of Salary Increase (% at Selected Ages)	<u>Age</u>	<u>State Employees &amp; Teachers</u>
	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.

		<u>State Employees</u>			<u>Teachers</u>		
4. Rates of Termination at Select and Ultimate Service (% at Selected ages)*	<u>Age</u>	<u>Service</u>			<u>Service</u>		
		0-1	1-2	2+	0-1	1-2	2+
	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

\* Members with 10 or more years of service and whose age plus service totals 60 or more are assumed to elect deferred vested benefits; other terminations are assumed to elect refunds.





# Actuarial Valuation: State/Teacher - 1999

## ACTUARIAL ASSUMPTIONS AND METHODS (continued)

	<u>Age</u>	<u>State Employees</u>		<u>Teachers</u>	
		<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
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 assumed to be accidental.

	<u>Age</u>	<u>State Employees</u>		<u>Teachers</u>	
		<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
6. Rates of Inactive Healthy 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

	<u>Age</u>	<u>State Employees</u>		<u>Teachers</u>	
		<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
7. Rates of Mortality for Future Anticipated Disabled Employees at Selected Ages (number of deaths per 10,000 members)	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



## ACTUARIAL ASSUMPTIONS AND METHODS (continued)

	<u>Age</u>	<u>State Employees</u>		<u>Teachers</u>	
		<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
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

	<u>Age</u>	<u>State Employees*</u>	<u>Teachers</u>
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.

	<u>Age</u>	<u>State Employees</u>	<u>Teachers</u>
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 66-213% of pay; also, rates for State Special groups are higher by 7 per 10,000 at all ages.





## Actuarial Valuation: State/Teacher - 1999

### ACTUARIAL ASSUMPTIONS AND METHODS (continued)

- |                                    |   |
|------------------------------------|---|
| 11. 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. |
| 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 average final 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.   |

### 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 (UAL) rate.

For Teachers (MRTA) and State Employees, including each of the State Special Groups, a normal cost rate is determined for a 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 24 year period from July 1, 1999. 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, 1999 actuarial valuation, assets are valued at an "actuarial value" as described in Part II.



# Maine State Retirement System



1999 Actuarial Valuation:  
Legislative  
Retirement System





# 1999 Actuarial Valuation: Legislative Retirement System



## INTRODUCTION

This report presents the results, as of June 30, 1999, of the actuarial valuation of the Maine Legislative Retirement System.

Schedule A, following this introduction, contains the cost results, assets, liabilities, and accounting disclosure information. Schedule B presents a summary of plan provisions and Schedule C presents a description of actuarial assumptions and methods used in determining your costs, including a description of the funding method.





# 1999 Actuarial Valuation: Legislative Retirement System

## SCHEDULE A PARTICIPANT DATA

Number of:	June 30, 1999
Active Employees	168
Retired Members and Beneficiaries	70
Survivors and Disabled Members	2
Vested Deferred Members	2
Inactive Non-Vested Members	105
Active Payroll	\$ 1,781,449
Annual Retiree Allowances for Retired Members and Beneficiaries (Includes survivors and disableds)	\$ 84,147

## COST RESULTS

Employer Normal Cost <sup>1</sup>	0.00%
Unfunded Actuarial Liability	<u>N/A</u>
Total Cost	0.00%

<sup>1</sup>Employer Normal Cost includes Retirement Benefits, Disability, and Survivor Benefit costs.

## ACCOUNTING INFORMATION

### 1. GASB Disclosure

#### A. Actuarial Accrued Liability\*

1. Retirees and beneficiaries currently receiving benefits and terminated vested employees not yet receiving benefits	\$ 1,266,572
2. Current employees	
- Accumulated employee contributions including allocated investment earnings	\$ 813,691
- Employer-financed vested	\$ 0
- Employer-financed non-vested	\$ 3,086,944
Total Actuarial Accrued Liability (AAL)*	\$ 5,167,207
B. Actuarial Value of Assets (AVA)	\$ 5,167,207
C. Unfunded Actuarial Accrued Liability	\$ 0

### 2. Other Accounting Information

A. Market Value of Assets	\$ 5,719,192
B. Unfunded Accrued Liability (not less than \$0)	\$ 0
C. Amortization Period	N/A

\*The aggregate actuarial funding method does not, technically, define an AAL. For purposes of GASB#25 disclosure, in which all plans are combined, we have shown an Accrued Actuarial Liability exactly equal to the Actuarial Value of Assets.



## **SCHEDULE B**

### **SUMMARY OF PLAN PROVISIONS**

#### **1. Membership.**

Except as provided by statute, membership is mandatory for legislators entering on or after December 3, 1986, and optional for those who were members of the Maine State Retirement System on December 2, 1986. Membership ceases on the earlier of withdrawal of contributions, retirement, or death.

#### **2. Member Contributions.**

Members are required to contribute 7.65% of earnable compensation.

#### **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) as a legislator which produce the highest such average.

#### **4. Creditable Service.**

Creditable service includes the following:

- A. All legislative service as a member after December 2, 1986;
- B. All legislative service before December 3, 1986, for which contributions are made at the rate applicable to the Maine State Retirement System, including appropriate interest;
- C. Service credited while receiving disability benefits under the System; and
- D. All service creditable under the Maine State Retirement System as a State Employee, provided the member elects to have the member's own and the employer's contributions on behalf of such service transferred to the legislative system.

#### **5. Service Retirement Benefits.**

Eligibility for members in service at retirement having at least 10 years of creditable service on July 1, 1993: 25 years of creditable service, or attainment of age 60.

Eligibility for members in service at retirement having less than 10 years of creditable service on July 1, 1993: 25 years of creditable service, or attainment of age 62.

Eligibility for members not in service at retirement having less than 10 years of credited service on July 1, 1993: attainment of age 60.

Eligibility for members not in service at retirement having less than 10 years of credited service on July 1, 1993: attainment of age 62 with 10 years of creditable service (or five full terms as a legislator).

For eligibility, creditable service includes service under the Maine State Retirement System after termination of legislative service.

Benefit: 1/50 of average final compensation multiplied by years of creditable service, reduced for retirement before age 60 at the rate of approximately 2 1/4% for each year retirement age is less than age 60, for members with at least 10 years creditable service on July 1, 1993; reduced for retirement before age 62 at a rate of 6% for each year retirement age is less than age 62, for members with less than 10 years creditable service on July 1, 1993; minimum benefit \$100 per month if at least 10 years of creditable service.

Form of payment: life annuity.





# 1999 Actuarial Valuation: Legislative Retirement System

## SUMMARY OF PLAN PROVISIONS (continued)

### 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 Option.

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 Workers' 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 years, 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 Workers' 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 years, unless the member is unable to engage in any substantially gainful activity; in which case payments cease on the date the service retirement benefit equals or exceeds the disability benefit.

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

### 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), parents, 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 parent or estate.

### 9. Pre-Retirement Accidental Death Benefits.

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



## SUMMARY OF PLAN PROVISIONS (continued)

Benefit: if the member leaves no dependent children, two-thirds 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 two-thirds 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 two-thirds of member's average final compensation until death.
- if the member leaves no spouse, the dependent child(ren) shall be paid an annual amount 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 (COLA).

All service and disability retirement and survivor benefits are adjusted each year there is a percentage change in the Consumer Price Index (CPI), 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 increase or decrease is 4%. Average final compensation used in determining disability benefits for disabled members is similarly adjusted for purposes of determining the recipients service retirement benefit if and when the recipient moves to service retirement.

Members on service retirement who did not have at least 10 years creditable service on July 1, 1993 are not eligible to receive a cost-of-living adjustment 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 is 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.





# 1999 Actuarial Valuation: Legislative Retirement System

## SCHEDULE C SUMMARY OF ACTUARIAL ASSUMPTIONS

This schedule summarizes the actuarial assumptions and methods used in the valuation.

### A. ACTUARIAL ASSUMPTIONS

1. Annual Rate of Investment Return: 8.0%
2. Annual Rate of Salary Increase: 5.5%
3. Annual Cost-of-living Increase: 4.0%
4. Normal Retirement Age: Age 60 for members with at least 10 years creditable service on July 1, 1993.  
Age 62 for members with less than 10 years creditable service on July 1, 1993.
5. Probabilities of employment termination:

Age	due to:	Disability	Termination	Death	
				Male	Female
25		.0006	.07	.0007	.0003
30		.0006	.06	.0009	.0004
35		.0007	.05	.0009	.0005
40		.0011	.04	.0012	.0008
45		.0022	.03	.0017	.0010
50		.0042	.02	.0028	.0015
55		.0072	.01	.0048	.0025

### 6. Rates of Healthy Life Mortality at Selected Ages:

Age	Currently Active Employees		Currently Retired Employees	
	Male	Female	Male	Female
25	.0007	.0003	.0006	.0003
30	.0009	.0004	.0008	.0005
35	.0009	.0005	.0011	.0007
40	.0012	.0008	.0016	.0009
45	.0017	.0010	.0029	.0014
50	.0028	.0015	.0053	.0022
55	.0048	.0025	.0085	.0033



## SUMMARY OF ACTUARIAL ASSUMPTIONS (continued)

### 7. Rates of Disabled Life Mortality at Selected Ages:

<u>Age</u>	<u>Currently Active Employees</u>		<u>Currently Retired Employees</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	.0092	.0072	.0391	.0528
30	.0112	.0089	.0315	.0467
35	.0134	.0109	.0321	.0326
40	.0160	.0126	.0332	.0215
45	.0193	.0144	.0349	.0191
50	.0236	.0165	.0376	.0207
55	.0295	.0191	.0420	.0240

## B. ACTUARIAL METHODS

### FUNDING METHOD

The Aggregate actuarial funding method is used to determine costs. Under this funding method, the total employer contribution rate consists of only one element, the normal cost rate. The normal cost rate is developed by taking the difference between the present value of future benefits, less future member contributions, and less the actuarial value of plan assets and dividing this difference by the present value of future payroll.

Under the Aggregate actuarial method there is no unfunded actuarial liability since the Actuarial Accrued Liability is set exactly equal to the actuarial value of assets.

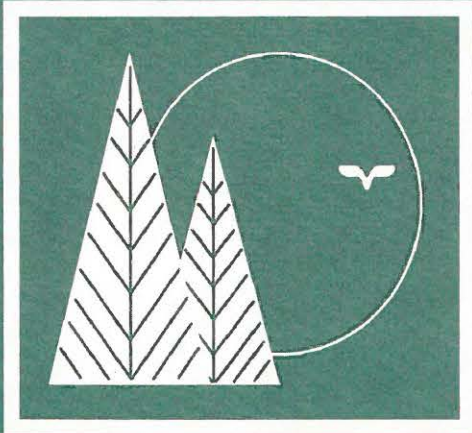
### ASSET VALUATION METHOD

The actuarial valuation employs a technique for determining the actuarial value of assets which dampens the swings in market value. The specific technique adopted in this valuation recognizes in a given year one-third of the investment return that is in excess of 8.00% actuarial assumption for investment return.





# Maine State Retirement System



1999 Actuarial Valuation:  
Judicial  
Retirement System





# 1999 Actuarial Valuation: Judicial Retirement System



## INTRODUCTION

This report presents the results, as of June 30, 1999, of the actuarial valuation of the Maine Judicial Retirement System.

Schedule A, following this introduction, contains the cost results, assets, liabilities, and accounting disclosure information. Schedule B presents a summary of plan provisions and Schedule C presents a description of actuarial assumptions and methods used in determining costs, including a description of the funding method.





# 1999 Actuarial Valuation: Judicial Retirement System

## SCHEDULE A PARTICIPANT DATA

Number of:

Members	52
Retired Members and Beneficiaries	32
Vested and Deferred Members	2
Annual Salaries of Active Members	\$ 4,898,053
Annual Retirement Allowance for Retired Members and Beneficiaries (includes Survivors and Disableds)	\$ 1,553,589

## COST RESULTS

Employer Normal Cost <sup>1</sup>	20.04%
Unfunded Actuarial Liability	- 3.64%
Total Cost	16.40%

<sup>1</sup>Employer Normal Cost includes Retirement Benefits, Disability, and Survivor Benefit costs.

## ACCOUNTING INFORMATION

### 1. GASB Disclosure

#### A. Actuarial Accrued Liability

1. Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$ 16,099,119
2. Current employees	
- Accumulated employee contributions including allocated investment earnings	\$ 4,062,395
- Employer-financed vested	\$ 5,540,700
- Employer-financed non-vested	\$ 2,892,657

Total Actuarial Accrued Liability \$ 28,594,871

B. Actuarial Value of Assets	\$ 31,284,179
C. Unfunded Actuarial Accrued Liability	\$ (2,689,308)

### 2. Other Accounting Information

A. Market Value of Assets	\$ 34,626,100
B. Unfunded Accrued Liability (not less than \$0)	\$ 0
C. Amortization Period	18

# 1999 Actuarial Valuation: Judicial Retirement System



## **SCHEDULE B** **SUMMARY OF PLAN PROVISIONS** **Retirement On or After December 1, 1984**

### **1. Membership.**

Membership is a condition of employment for all judges serving on or after December 1, 1984. Membership ceases on the earlier of withdrawal of contributions, retirement, or death.

### **2. Member Contributions.**

Members are required to contribute 7.65% of earnable compensation.

### **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.

### **4. Creditable Service.**

Creditable service includes the following:

- A. All judicial service as a member after November 30, 1984;
- B. All judicial service before December 1, 1984;
- C. Service credited while receiving disability benefits under the System; and
- D. All service creditable under the Maine State Retirement System provided the member elects to have the member's and the employer's contributions on behalf of the service transferred to the judicial system.

### **5. Service Retirement Benefits.**

Eligibility: 25 years of creditable service, or attainment of age 60 (62 if less than 10 years creditable service on July 1, 1993) with 10 years of creditable service, or attainment of age 70 and one year of service immediately before retirement.

Benefit: sum of (1) For service after November 30, 1984 and before July 1, 1998 and creditable service allowed under Section 1302(3), 2% of average final compensation multiplied by years of service; for service on or after July 1, 1998, 3% of average final compensation multiplied by years of service, and (2) for judicial service prior to December 1, 1984, 75% of November 30, 1984 salary for the position held at retirement, pro-rated for prior service less than 10 years. The benefit is reduced for retirement before age 60 by the ratio of the amount of a life annuity due at age 60 to the amount of a life annuity due at the retirement age if at least 10 years creditable service on July 1, 1993; reduced for retirement before age 62 by 6% for each year the member's age is less than age 62, if less than 10 years creditable service on July 1, 1993.

Maximum benefit: for service before July 1, 1998, 60% of average final compensation; for service on or after July 1, 1998, 70% of average final compensation. Total benefit cannot exceed 70% of average final compensation except as provided under the minimum benefit provision.

Minimum benefit: for a judge in service and age 50 or older on December 1, 1984, 75% of salary on June 30, 1984 for the position held at retirement, increased by 6% per year from June 30, 1984 to June 30, 1989 or retirement date if earlier, and increased beyond June 30, 1989 by the cost-of-living increase granted the previous September.

Form of payment: life annuity; except, for a judge in service and age 50 before December 1, 1984, 50% joint and survivor annuity to surviving spouse.





# 1999 Actuarial Valuation: Judicial Retirement System

## SUMMARY OF PLAN PROVISIONS Retirement On or After December 1, 1984 (continued)

### 6. Disability Retirement Benefits Other Than No Age Benefits.

Conditions: disabled as defined in the Judicial Retirement System statutes, prior to normal retirement age; employed as a judge prior to October 16, 1992 and did not elect No Age Disability.

Benefit:  $66\frac{2}{3}\%$  of average final compensation, reduced by the amount by which employment earnings plus the disability allowance exceeds the current salary of the position held at disability, and to the extent that the benefit, in combination with Workers' Compensation, exceeds 80% of average final compensation. A member in service on November 30, 1984, may elect benefits applicable for retirement before December 1, 1984.

Form of Payment: payment begins on termination of service and ceases on cessation of disability or after two years, unless the member is unable to engage in any substantially gainful activity; in which case payments cease on the earlier of attainment of age 70 and date the service retirement benefit 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  $66\frac{2}{3}\%$  of average final compensation, or at age 70, if earlier, the disability benefit converts to a service retirement benefit based on service and pay at that point.

### 7. No Age Disability Retirement Benefits.

Conditions: disabled as defined in the Judicial retirement statutes; employed as a judge on or after October 16, 1992 or employed as a judge prior to October 16, 1992 and elected the provisions of No Age Disability.

Benefit: 59% of average final compensation, reduced by the amount by which employment earnings plus the disability allowance exceeds the current salary of the position held at disability, and to the extent that the benefit, in combination with Workers' Compensation exceeds 80% of average final compensation. A member in service on November 30, 1984 may elect benefits applicable for retirement before December 1, 1984.

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

Conversion to service retirement: during the period of disability, average final compensation is increased with cost-of-living adjustments and service is credited. On the date when service benefits reach a level of 59% of average final compensation the disability benefit converts to a service retirement benefit based on service and pay 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), parents, 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 parent or estate.

Minimum Benefit: for a judge in service prior to December 1, 1984, one-half of the judge's retirement benefit determined on date of death, payable to the spouse and/or dependent children.





## SUMMARY OF PLAN PROVISIONS Retirement On or After December 1, 1984 (continued)

### 9. Pre-Retirement Accidental Death Benefits.

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

Benefit: if the member leaves no dependent children, two-thirds 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 two-thirds 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 two-thirds of member's average final compensation until death.
- if the member leaves no spouse, the dependent child(ren) shall be paid an annual amount 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 (COLA).

Except as described below, all service and disability retirement and survivor benefits are adjusted each year there is a percentage change in the Consumer Price Index (CPI), 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 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.

Members on service retirement who did not have at least 10 years creditable service on July 1, 1993 are not eligible to receive a cost-of-living adjustment until 12 months after the member reaches normal retirement age.

Minimum benefits are increased 6% per year from July, 1985, through July, 1989, and as described above thereafter.

### 12. Methods of Payment of Service Retirement Benefits

At retirement, a member must choose from the following methods of payment:

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

Option 1: Cash refund equal to the remaining employee contribution balance 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.)





# 1999 Actuarial Valuation: Judicial Retirement System

## **SUMMARY OF PLAN PROVISIONS** **Retirement On or After December 1, 1984** **(continued)**

- Option 2: 100% joint and survivor annuity.
- Option 3: 50% joint and survivor annuity.
- Option 4: Any other method of benefit payment which provides a benefit that is actuarially equivalent to the full benefit and is approved by the Board.

## **SUMMARY OF PLAN PROVISIONS** **Retirement Prior to December 1, 1984**

### **1. Currently Effective Annual Salary.**

For determination of benefit payments, currently effective annual salary is the salary on June 30, 1984 for the position last held, increased by 6% per year each July 1, beginning July 1, 1984.

### **2. Regular Retirement Benefits.**

Eligibility: attainment of age 70 with 7 years of service, or attainment of age 65 with 12 years of service, or attainment of age 60 with 20 years of service.

Benefit: three-quarters of currently effective annual salary.

### **3. Disability Benefits.**

Three-quarters of currently effective annual salary.

### **4. Survivor Benefits.**

Three-eighths of currently effective annual salary, payable to the surviving spouse or dependent children.

# 1999 Actuarial Valuation: Judicial Retirement System



## SCHEDULE C SUMMARY OF ACTUARIAL ASSUMPTIONS

This schedule summarizes the actuarial assumptions and methods used in the valuation.

### A. ACTUARIAL ASSUMPTIONS

1. Annual Rate of Investment Return: 8.0%
2. Annual Rate of Salary Increase: 5.5%
3. Annual Cost-of-living Increase: 4.0%
4. Normal Retirement Age:
  - Age 60 for members with at least 10 years creditable service on July 1, 1993.
  - Age 62 for members with less than 10 years creditable service on July 1, 1993.
5. Probabilities of employment termination:

<u>Age</u>	due to:	<u>Disability</u>	<u>Termination</u>	<u>Death</u>	
				<u>Male</u>	<u>Female</u>
25		.0006	.07	.0007	.0003
30		.0006	.06	.0009	.0004
35		.0007	.05	.0009	.0005
40		.0011	.04	.0012	.0008
45		.0022	.03	.0017	.0010
50		.0042	.02	.0028	.0015
55		.0072	.01	.0048	.0025

6. Rates of Healthy Life Mortality at Selected Ages:

<u>Age</u>	<u>Currently Active Employees</u>		<u>Currently Retired Employees</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	.0007	.0003	.0006	.0003
30	.0009	.0004	.0008	.0005
35	.0009	.0005	.0011	.0007
40	.0012	.0008	.0016	.0009
45	.0017	.0010	.0029	.0014
50	.0028	.0015	.0053	.0022
55	.0048	.0025	.0085	.0033





## 1999 Actuarial Valuation: Judicial Retirement System

### SUMMARY OF ACTUARIAL ASSUMPTIONS (continued)

#### 7. Rates of Disabled Life Mortality at Selected Ages:

<u>Age</u>	<u>Currently Active Employees</u>		<u>Currently Retired Employees</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	.0092	.0072	.0391	.0528
30	.0112	.0089	.0315	.0467
35	.0134	.0109	.0321	.0326
40	.0160	.0126	.0332	.0215
45	.0193	.0144	.0349	.0191
50	.0236	.0165	.0376	.0207
55	.0295	.0191	.0420	.0240

### B. ACTUARIAL METHODS

#### FUNDING METHOD

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

The normal cost rate is developed for a typical new entrant. This rate is determined by taking the value, as of entry age to 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 plan's normal cost, contributions will be 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 actuarial liability less the actuarial value of plan assets.

The unfunded liability is amortized by annual payments over an 18 year period from June 30, 1999. The payments are determined so that they will be a level percentage of pay, assuming total pay increases 5.5% per year.

#### ASSET VALUATION METHOD

The actuarial valuation employs a technique for determining the actuarial value of assets which dampens the swings in market value. The specific technique adopted in this valuation recognizes in a given year one-third of the investment return that is in excess of the 8.00% actuarial assumption for investment return.



# Maine State Retirement System



1999 Actuarial Valuation:  
Participating Local Districts







## SECTION I EXECUTIVE SUMMARY

### Overview

As of June 30, 1999, there were 224 participating local districts in the Consolidated Plan for Participating Local Districts (PLDs) of the Maine State Retirement System. This report presents the results of our June 30, 1999, actuarial valuation for this Plan. Comments on the findings of our valuation are presented below. Following our comments are detailed tables of the June 30, 1999, results for the Regular Plans and Special Plans that comprise the Consolidated Plan.

For the third year in a row, the Pooled Unfunded Actuarial Liability (PUAL) is negative as of this valuation date, due to investment returns greater than the assumed 8.0% and employee salary increases and post-retirement COLAs at less than the actuarially assumed rates. The negative PUAL is translated into a reduction in the normal cost rates otherwise payable. The reduction varies by the plan elected, however, mathematically, it produces a net contribution rate of 0.1% of payroll in all Regular Plans and a less-than-zero rate in all Special Plans.

We strongly recommended that the Board of Trustees not establish near-zero and zero employer contribution rates for the plans in the Consolidated Plan, notwithstanding the valuation results. Our reasons are as follows:

Rate volatility. Rate stability is a goal of the Board and employers, as explicitly stated and as reflected in the actuarial methodology established for performing annual valuations. As the rate approaches and reaches zero, volatility is magnified. We understand, anecdotally, that some PLD employers have expressed concern about volatility even at the rates currently in effect.

Budget concerns. The disappearance from an employer's operating budget of a retirement contribution line item can produce an illusion of no cost, and a more painful adjustment if and when the line item reappears.

Duration of zero rate circumstances. This reason is linked to the volatility reason discussed above. The June 30, 1999 valuation is the first Consolidated Plan valuation in which the asset/liability calculation has yielded near zero and zero rates. At this time, there is no basis for any expectation that these rates reflect circumstances that will prevail over a long enough time that establishing these rates would be reasonable. While the question of duration is not the only or controlling consideration in determining if and when such rates would be appropriate, it is an important consideration.

Investment gains. The growth in assets has largely been fueled by investment gains in the years since the Consolidated Plan went into operation. Arguably, the longer the market that has produced the strong returns persists, the less reason there is to expect that it will continue.

The Board accepted our recommendation that the Consolidated Plan rates not be those arising from the valuation, and set the employer contribution rates at levels that represent a reasonable, small decrease from current rates, thus acknowledging the Plan's present funded status. The amount of the decrease is consistent across all of the plans within the Consolidated Plan. The resulting rates are shown in the chart in Section IV of this report.

The Board also directed that a study be undertaken to identify and address actuarial and policy issues that arise in the context of a well - or fully - funded retirement plan and with respect to the Consolidated Plan, which has several unique features, in particular.

In the following sections of the report we present detailed results on Plan Assets (Section II), Plan Liabilities (Section III), and Plan Contributions (Section IV). This report also contains four Appendices. Appendix A displays a list of the 224 PLDs that have entered the Plan and each PLD's benefit plan elections. Appendix B presents membership data and profiles and Appendix C provides a summary of benefit provisions of the plans within the Plan. Finally, an outline of all actuarial assumptions and procedures used in our valuation is contained in Appendix D.





# Actuarial Valuation: Participating Local Districts - 1999

## EXECUTIVE SUMMARY

(continued)

### Valuation Comments

#### Assets

As of June 30, 1999, the Plan had assets, when measured on a market value basis, of \$1,334 million as compared to \$1,214 million as of June 30, 1998.

On an actuarial basis, using a method which smooths market fluctuations, the assets were valued at \$1,205 million on June 30, 1999, as compared to \$1,067 million as of June 30, 1998. The components of this change in millions are:

Actuarial			Market	
+	39	employer and member contributions	+	39
-	58	payment of benefits and expenses	-	58
+	85	investment return per 8.0% assumption	+	96
+	<u>72</u>	actuarial investment gain (actuarial rate of return @ 14.1%)		
		market investment gain (market rate of return @ 11.2%)	+	<u>43</u>
=	138	total increase in assets	=	120

Section II of this report presents more detailed information on System assets.

#### Liabilities

Throughout this report we discuss two types of liabilities: (1) Unfunded Actuarial Liabilities and (2) Unfunded Accrued Benefit Liabilities. In Section III, we discuss in detail the different uses and definitions of these terms.

In general, Actuarial Liabilities are calculated for purposes of determining future contributions. Since actuarial funding methods are used to determine costs for future retirement benefits, unfunded actuarial liabilities will include future increases in pay and service credits. The calculated amount of a plan's actuarial liabilities is directly dependent on the particular funding method used by the actuary; use of different funding methods would provide entirely different results, even when none of the factors (e.g., inflation, salary growth, etc.) is different. In this valuation, the "Entry Age Normal" method of funding was used.

As of June 30, 1999, the total actuarial liability for the Plan was \$1,218 million, as compared to \$1,148 million as of June 30, 1998. Comparing this to the actuarial value of assets of \$1,205 million produces an unfunded actuarial liability of \$13 million. \$192 million has been allocated to PLDs as their Initial Unfunded Unpooled Actuarial Liabilities (IUUAL) (described in detail in Section III) which yields a pooled surplus of \$179 million. As of June 30, 1998 the pool surplus was \$108 million. The components of the increase in the surplus, in millions, are as follows:

# Actuarial Valuation: Participating Local Districts - 1999



## EXECUTIVE SUMMARY (continued)

Pooled Unfunded Actuarial Liability, June 30, 1998	\$ (108)
◆ increase expected	(2)
◆ decrease due to asset gain (investment return)	(65)
◆ increase due to assumption change	0
◆ other (gains)/losses	<u>(4)</u>
Pooled Unfunded Actuarial Liability, June 30, 1999	\$ (179)

The second type of liability presented in this report is the Accrued Benefit Liability. This represents the liabilities for all benefits to be paid in the future, based on members' earnings and service credits as of the valuation date. The difference between this figure and plan assets represents the Unfunded Accrued Benefit Liability. As of June 30, 1999, there is no Unfunded Accrued Benefit Liability.

More detailed information on plan liabilities is presented in Section III.

### Contributions

In Section IV of this report, we present detailed information on the development of Plan employer contribution rates, calculated as of June 30, 1999.

Employer contributions to the Plan consist of:

- ◆ a "normal cost contribution", for the portion of projected liabilities attributable to service of members during the year following the valuation date,
- ◆ a "pooled unfunded actuarial liability contribution", for the excess of projected liabilities allocated to service to date over assets on hand and receivables from PLDs entering the Plan with IUUALs.

The normal cost varies by plan and is shown in detail in Table IV-1.

The Pooled UAL rate for all employees changed from -5.7% of payroll as of June 30, 1998, to -9.3% of payroll as of June 30, 1999. The primary components of this change are shown below.

Pooled UAL Rate as of June 30, 1998	-5.7%
• investment gain (due to higher than expected investment returns)	-3.3%
• other (gains)/losses	<u>-0.3%</u>
Pooled UAL Rate as of June 30, 1999	-9.3%





## Actuarial Valuation: Participating Local Districts - 1999

### EXECUTIVE SUMMARY

(continued)

The PUAL rate as calculated above would normally be reflected in the FY 2001 contribution rates. The PUAL rate is allocated to the individual plans and is used to offset the individual plans' normal costs to develop the ultimate rate for each plan. Because the PUAL rate would nearly or completely offset the Normal Cost rate for the respective individual plans, resulting in rates of near-zero or zero, and because of our recommendation against that result and the Board's adoption of it, the rates summarized in Table IV-1 are based on the PUAL rate as developed in the 1998 valuation, with the ultimate contribution rates reduced to acknowledge the favorable plan experience since that valuation date.

Employees also contribute to the plans; rates are set out at Appendix C-1.

#### **Members and Benefit Recipients**

The total active membership of the Consolidated Plan decreased from 8,689 as of June 30, 1998 to 8,500 as of June 30, 1999. With respect to members who are no longer active, the number of benefit recipients increased from 5,933 as of June 30, 1998 to 6,071 on June 30, 1999. The number of vested inactive members increased from 219 on June 30, 1998 to 239 on June 30, 1999.

The total annual payroll of active members in all plans increased from \$224 million as of June 30, 1998 to \$227 million as of June 30, 1999. Appendix B of this report presents more detail regarding members and benefit recipients.

# Actuarial Valuation: Participating Local Districts - 1999



## SUMMARY OF PRINCIPAL RESULTS TOTAL

	<u>June 30, 1999</u>	<u>June 30, 1998</u>
<b>1. Participant Data</b>		
Number of:		
Active Members	8,500	8,689
Retired Members, Beneficiaries, Disabled Members and Survivors	6,071	5,933
Vested Inactive Members	<u>239</u>	<u>219</u>
Total Members and Benefit Recipients	14,810	14,841
Annual Salaries of Active Members	\$ 226,798,019	\$ 223,525,533
Annual Benefits to Recipients	\$ 51,752,017	\$ 48,558,212
<b>2. Assets and Liabilities</b>		
<b>Funding Liability</b>		
Actuarial Liability	\$ 1,218,062,143	\$ 1,147,660,148
Actuarial Value of Assets	<u>1,205,489,778</u>	<u>1,066,810,947</u>
Unfunded Actuarial Liability	\$ 12,572,365	\$ 80,849,201
Unpooled Portion (IUUAL)	<u>191,937,217</u>	<u>189,197,598</u>
Pooled Portion (PUAL)	(\$ 179,364,852)	(\$ 108,348,397)
Actuarial Liability Funding Ratio	99%	93%
<b>FASB Accounting Liability</b>		
Accrued Benefit Liability	\$ 1,002,151,078	\$ 949,422,499
Market Value of Assets	<u>1,334,265,793</u>	<u>1,213,829,587</u>
Unfunded Accrued Benefit Liability	\$ 0	\$ 0
Accrued Benefit Funding Ratio	133%	128%





# Actuarial Valuation: Participating Local Districts - 1999

## SUMMARY OF PRINCIPAL RESULTS REGULAR PLANS AC, AN, & BC

	<u>June 30, 1999</u>	<u>June 30, 1998</u>
<b>1. Participant Data</b>		
Number of:		
Active Members	6,968	7,163
Retired Members, Beneficiaries, Disabled Members and Survivors	4,488	4,423
Vested Inactive Members	<u>232</u>	<u>211</u>
Total Members and Benefit Recipients	11,688	11,797
Annual Salaries of Active Members	\$ 170,167,242	\$ 168,835,178
Annual Benefits to Recipients	\$ 30,194,635	\$ 28,539,254
<b>2. Assets and Liabilities</b>		
<b>Funding Liability</b>		
Actuarial Liability	\$ 718,132,755	\$ 670,251,928
Actuarial Value of Assets	<u>\$ 743,838,429</u>	<u>\$ 657,739,451</u>
Unfunded Actuarial Liability	(\$ 25,705,674)	\$ 12,512,477
Unpooled Portion (IUUAL)	<u>89,835,191</u>	<u>89,152,234</u>
Pooled Portion (PUAL)	(\$ 115,540,865)	(\$ 76,639,757)
Actuarial Liability Funding Ratio	104%	98%
<b>FASB Accounting Liability</b>		
Accrued Benefit Liability	\$ 557,367,921	\$ 522,787,262
Market Value of Assets	<u>823,298,704</u>	<u>748,383,402</u>
Unfunded Accrued Benefit Liability	\$ 0	\$ 0
Accrued Benefit Funding Ratio	148%	143%

# Actuarial Valuation: Participating Local Districts - 1999



## SUMMARY OF PRINCIPAL RESULTS SPECIAL PLANS 1C-4C & 1N-4N

	<u>June 30, 1999</u>	<u>June 30, 1998</u>
<b>1. Participant Data</b>		
Number of:		
Active Members	1,532	1,526
Retired Members, Beneficiaries, Disabled Members and Survivors	1,583	1,510
Vested Inactive Members	<u>7</u>	<u>8</u>
Total Members and Benefit Recipients	3,122	3,044
Annual Salaries of Active Members	\$ 56,630,777	\$ 54,690,355
Annual Benefits to Recipients	\$ 21,557,382	\$ 20,018,958
<b>2. Assets and Liabilities</b>		
<b>Funding Liability</b>		
Actuarial Liability	\$ 499,929,388	\$ 477,408,220
Actuarial Value of Assets	461,651,349	409,071,496
Unfunded Actuarial Liability	<u>\$ 38,278,039</u>	<u>\$ 68,336,724</u>
Unpooled Portion (IUUAL)	102,102,026	100,045,364
Pooled Portion (PUAL)	<u>(\$ 63,823,987)</u>	<u>(\$ 31,708,640)</u>
Actuarial Liability Funding Ratio	92%	86%
<b>FASB Accounting Liability</b>		
Accrued Benefit Liability	\$ 444,783,157	\$ 426,635,237
Market Value of Assets	510,967,090	465,446,185
Unfunded Accrued Benefit Liability	<u>\$ 0</u>	<u>\$ 0</u>
Accrued Benefit Funding Ratio	115%	109%





# Actuarial Valuation: Participating Local Districts - 1999

## SECTION II ASSETS

In this section we present the value assigned to assets held by the Plan. These assets are valued on two different bases: the market value and the actuarial value.

### Market Value of Assets

For accounting statement purposes, Plan assets are valued at current market values. Briefly stated, these values represent the "snapshot" or "cash-out" value of Plan assets as of the valuation date.

### Actuarial Value of Assets

The market value of assets, representing a "liquidation" value of the funds, is not a good measure of the System's ongoing ability to meet its obligations. Ongoing funding requirements established using market values are subject to significant variability because of the volatility of market values.

As a consequence, actuarial valuations employ a technique for determining the actuarial value of assets which dampens the swings in market value. The specific technique adopted in this valuation recognizes in a given year one-third of the investment return that is in excess of the 8.00% actuarial assumption for investment return. The following is a step-by-step description:

**Step 1:** Determine the total yield on the investments of the Plan using the full investment return (including capital gains) measured by the difference in the actuarial value of the assets at the beginning of the fiscal year just ended (adjusted for cash flow) and the market value of assets at the end of the fiscal year. The calculation of this return is:

- (a) Increase in assets = Market value of assets at the end of the year minus actuarial value of assets at the end of the prior year adjusted for net cash flow for the current year (contributions minus benefit payments) [= \$1,434,057,766].
- (b) Adjusted actuarial value of assets = Actuarial value of assets at the end of the prior year plus one-half of net cash flow for the current year [= \$5,430,514,792].
- (c) Return = (a) (Increase in assets) divided by (b) (Adjusted actuarial value of assets) [= 26.41%].

**Step 2:** Calculate the excess of the actual return determined in Step 1 over the expected return for the same year according to the actuarial assumption (8.00%). [26.41% - 8.00% = 18.41%]

**Step 3:** Calculate an adjusted rate that is equal to the rate expected by the actuarial assumption (8.00%) plus one-third of the rate determined in Step 2. [8.00% + (1/3 X 18.41%) = 14.14%]

**Step 4:** The actuarial value of assets equals the amount that would have existed if the actual return on the prior year's actuarial value of assets had been the theoretical rate determined in Step 3 applied to the prior year's actuarial value of assets.

This four-step process and the amounts shown are applied in aggregate to the total assets of the System. The portion allocated to this PLD Consolidated Retirement Plan is based on the reported market value applicable to this plan.



**TABLE II-1**  
**ASSET ALLOCATION**

	<b>Regular Plans</b>	<b>Special Plans</b>	<b>Total</b>
<b>Market Value</b>	\$823,298,704	\$510,967,090	\$1,334,265,794
<b>Actuarial Value</b>	\$743,838,429	\$461,651,349	\$1,205,489,778





## Actuarial Valuation: Participating Local Districts - 1999

### SECTION III LIABILITIES

#### Actuarial Liabilities

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. There are several methods currently used by actuaries in making this allocation.

The method used for this valuation is referred to as the "entry age normal actuarial cost method". Under this method, a level-percent-of-pay employer cost is determined for each plan that, along with member contributions, will pay for projected benefits at retirement for a new entrant into the plan. It is assumed applicable to all active plan members. The level percent of pay is called the normal cost rate, and the product of that rate and payroll is the normal cost.

The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer normal cost contributions and member contributions. If this liability is greater than the actuarial value of plan assets as of the same date, the difference is referred to as the unfunded actuarial liability.

Upon entering the Consolidated Plan, each PLD had its individual actuarial liability calculated. Each PLD having an Initial Unpooled Unfunded Actuarial Liability (IUUAL) will pay this liability on a scheduled basis, in addition to making the Normal Cost Contribution required by the plan(s) in which it participates. Each year the valuation for the Consolidated Plan will calculate the Pooled Unfunded Actuarial Liability of the Regular and of the Special Plans under the Plan, and adjust the employer contribution rates accordingly. Benefit improvements, actuarial gains and losses, and changes in actuarial assumptions and methodologies, if any, will have an effect on the total actuarial liabilities of the Regular and of the Special Plans under the Plan and on the portion of these that are unfunded. In Table III-1 we have summarized the actuarial liabilities as of June 30, 1999.

#### Accounting Statement Information

Statement No. 35 of the Financial Accounting Standards Board requires that every pension plan disclose certain information regarding the status of the plan.

As directed by the above referenced accounting statements, the liabilities shown in Table III-2, Accrued Benefit Liabilities, do not include any projections for future creditable service and pay increases.

The GASB released a new pronouncement (Statement #25) which replaced the disclosures formerly required by Statement #5. The figures shown in Table III-1 are suitable for the new Statement #25 disclosures.

Both types of present values of benefits are determined assuming that the plan is ongoing and members continue to terminate employment, retire, etc., in accordance with the actuarial assumptions.

All PLDs that enter the Consolidated Plan cease to be individual sponsors of a "Single-Employer Defined Benefit Pension Plan" and instead become participants in a "Cost-Sharing Multiple-Employer Defined Benefit Pension Plan". As such, the disclosures made by individual PLDs should reflect the assets and liabilities of the Regular and/or Special Plan(s) under the Consolidated Plan in which a PLD participates and not those of the PLD itself.

# Actuarial Valuation: Participating Local Districts - 1999



**TABLE III-1  
ACTUARIAL LIABILITIES**

	<u>Regular Plans</u>	<u>Special Plans</u>	<u>Total</u>
1. Present Value of Benefits	\$ 936,667,117	\$ 571,866,408	\$ 1,508,533,525
2. Present Value of Future Contributions			
a. Employer Normal Cost	123,383,257	44,383,595	167,766,852
b. Employee Contributions	95,151,105	27,553,425	122,704,530
3. Actuarial Liability	\$ 718,132,755	\$ 499,929,388	\$ 1,218,062,143
(1) - (2)			
4. Actuarial Value of Assets			
a. Total Invested Assets	\$ 783,087,894	\$ 481,427,586	\$ 1,264,515,480
b. IUUAL Surpluses in Individual PLD Accts.	39,249,465	19,776,237	59,025,702
c. Valuation Assets (a) - (b)	\$ 743,838,429	\$ 461,651,349	\$ 1,205,489,778
5. Unfunded Actuarial Liability			
a. Total Unfunded Liability (3) - (4c)	(\$ 25,705,674)	\$ 38,278,039	\$ 12,572,365
b. Individual PLD Unpooled Liability (IUUAL)	89,835,191	102,102,026	191,937,217
c. Pooled Unfunded Actuarial Liability	(\$ 115,540,865)	(\$ 63,823,987)	(\$ 179,364,852)
(a) - (b)			
6. Amortization over 15 Years	(\$ 13,498,587)	(\$ 7,456,527)	(\$ 20,955,114)
7. Payroll	\$ 170,167,242	\$ 56,630,777	\$ 226,798,019
8. Pooled Unfunded Liability Contribution Rate	(7.9%)	(13.2%)	(9.3%)
(6) ÷ (7)			

**TABLE III-2  
ACCRUED BENEFIT LIABILITY**

	<u>Regular Plans</u>	<u>Special Plans</u>	<u>Total</u>
1. Present Value of Accrued Benefits			
a. Vested Inactive Members	\$ 9,167,082	\$ 114,724	\$ 9,281,806
b. Retired Members, Beneficiaries Disabled Members and Survivors	296,413,684	266,047,146	562,460,830
c. Active Members	251,787,155	178,621,287	430,408,442
d. Total	\$ 557,367,921	\$ 444,783,157	\$ 1,002,151,078
2. Market Value of Assets	\$ 832,298,704	\$ 510,967,090	\$ 1,334,265,793
3. Unfunded Accrued Benefit Liability	\$ 0	\$ 0	\$ 0
(1) - (2)			
4. Accrued Benefit Funding Ratio			
(2)/(1)	148%	115%	133%





## Actuarial Valuation: Participating Local Districts - 1999

### SECTION IV CONTRIBUTIONS

#### General Comments

Under established procedures, employer contribution rates based on this June 30, 1999, actuarial valuation, including our recommendation not to establish the near-zero and zero rates and the Board's adoption of the recommendation, are used to determine Fiscal Year 2001 contributions. In this context, the term "employer contribution rate" means the percentage that is applied by each PLD to its active member payroll to determine the PLD's actual employer contribution amount.

In addition to the applicable employer contribution rate, each individual PLD will make a dollar payment or receive a dollar credit based on its IUUAL to be added to (or subtracted from) the amount derived by applying the employer contribution rate to the participant payroll.

Employees are required to contribute to the plans; rates are set out at Appendix C-1.

#### Description of Rate Components

The Entry Age Normal funding method was used to develop the employer contribution rates in this section. Under this funding method, as with most other actuarial funding methods, a total contribution rate is determined which consists of two elements: the normal cost rate and the pooled unfunded actuarial liability rate.

##### Normal Cost Rate

For each of the Regular and Special Plans in the Consolidated Plan, an individual entry age normal cost rate was determined for a typical new entrant. This rate was determined by taking the value, as of age at entry into the plan, of the typical member's projected future benefits (including retirement, death and disability 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. The normal cost rate, so determined separately for each Regular and Special Plan, was assumed applicable to all active members of each of the plans.

##### Pooled Unfunded Actuarial Liability Rate

The unfunded actuarial liability under the Entry Age Normal method equals the present value, at time of valuation, of future benefits less the present value of future normal costs, future member contributions, future IUUAL payments and current assets. Under the Consolidated Plan, a Pooled Unfunded Actuarial Liability Rate is calculated for the Regular Plans as a group and for the Special Plans as a group. The rate for each group is then allocated to each plan within the Regular Plans and to those within the Special Plans, respectively, on the basis of total normal cost plus employee contributions for each such plan. That is, those plans which constitute a larger portion of the overall liability will pay a larger portion of the pooled UAL rate or receive a larger credit if the rate is negative.

##### IUUAL Payments/(Credits)

In addition to employer contributions required under the Consolidated Plan, each individual PLD in the Consolidated Plan that has an IUUAL continues to make payments on its IUUAL. Where IUUAL payments are due, each PLD makes payment of a specific dollar amount. Where a PLD had, at the time of entry into the Consolidated Plan, surplus assets, the PLD uses a portion of the surplus toward payment of its employer contributions to the Consolidated Plan. Credit transactions, also of specific dollar amounts, are accomplished by MSRS accounting entries.

#### Employer Contribution Rate Summary

In Table IV-1 we present employer contribution rates applicable for determining the Fiscal Year 2001 contributions to the Plan, using the cost methods described above. These were developed using actuarial assumptions and methods described in Appendix D.

# Actuarial Valuation: Participating Local Districts - 1999



**TABLE IV-1**  
**EMPLOYER CONTRIBUTION RATES\***  
**FISCAL YEAR 2001**

	<u>Pooled Unfunded Actuarial Liability</u>			
	<u>Normal Cost**</u>	<u>Regular Plans</u>	<u>Special Plans</u>	<u>Total Rates</u>
<u>Plans with COLA</u>				
Regular Employees Plan AC	9.0%	-6.2%		2.8%
Regular Employees Plan BC	5.5%	-3.8%		1.7%
Special Plan 1C	17.5%		-11.0%	6.5%
Special Plan 2C	10.8%		-6.8%	4.0%
Special Plan 3C	14.3%		-9.0%	5.3%
Special Plan 4C	9.3%		-5.8%	3.5%
<u>Plans with No COLA</u>				
Regular Employees Plan AN	4.8%	-3.3%		1.5%
Special Plan 1N	9.8%		-6.2%	3.6%
Special Plan 2N	5.8%		-3.7%	2.1%
Special Plan 3N	7.8%		-4.9%	2.9%
Special Plan 4N	5.0%		-3.1%	1.9%

\* IUUAL payments are made in addition to these costs and IUUAL credits are taken against these costs.

\*\* Includes costs of ancillary benefits.





# Actuarial Valuation: Participating Local Districts - 1999

## APPENDIX A PARTICIPATING LOCAL DISTRICTS PLAN ELECTIONS

<u>PLD Name</u>	<u>PLD #</u>	<u>Regular Plan</u>	<u>Special Plan</u>	<u>Special Plan</u>	<u>COLA</u>	<u>Entry Date</u>
Androscoggin County	67	A <sup>1</sup>	1	2	Yes	7/1/94
Androscoggin Valley COG	231	A			Yes	7/1/96
Aroostook County	106	A			Yes	7/1/94
Auburn Housing Authority	145	A			Yes	7/1/94
Auburn Lewiston Airport	256	A			Yes	7/1/96
Auburn Public Library	43	A			No	7/1/96
Auburn Water and Sewer District	52	A			Yes	7/1/94
Augusta Sanitary District	64	A			Yes	7/1/94
Augusta Water District	34	A			Yes	7/1/94
Bangor Housing Authority	288	A			Yes	7/1/94
Bangor Public Library	22	A			Yes	7/1/96
Bangor Water District	59	B <sup>2</sup>			Yes	7/1/96
Bath Water District	19	A			Yes	7/1/94
Belfast Water District	132	A			Yes	7/1/95
Berwick Sewer District	207	A			Yes	7/1/94
Boothbay Harbor Water District	21	A			Yes	7/1/96
Brewer Housing Authority	248	A			Yes	7/1/94
Brewer Water District	68	A			No	7/1/96
Bridgton Water District	253	A			No	7/1/96
Brunswick Fire and Police	292		1	2	FO	7/1/97
Brunswick Public Library	273	A			FO	7/1/95
Brunswick Sewer District	72	A			Yes	7/1/96
Caribou Police and Fire	208	A	1	2	No	7/1/96
Carrabassett Valley	277	A			FO	7/1/94
Cheverus High School	203		2		No	7/1/96
City of Auburn	27	A	2		Yes	7/1/94
City of Augusta	23	A	1	2	Yes	7/1/94
City of Bangor	20	A	1	2	Yes	7/1/96
City of Bath	73		2	3	Yes	7/1/96
City of Belfast	35	A	2		Yes	7/1/96
City of Biddeford	158	A			No	7/1/96
City of Brewer	63	A	2		Yes	7/1/96
City of Calais	36	A			FO	7/1/96
City of Ellsworth	13	A	4		Yes	7/1/95
City of Gardiner	24	A	3		No	7/1/96
City of Hallowell	160	A			Yes	7/1/96
City of Lewiston	48	A	1	2	Yes	7/1/96
City of Old Town	111	A	2		No	7/1/95
City of Portland	2	A	1	2	Yes	7/1/95
City of Rockland	18	A	3	2 <sup>3</sup>	Yes	7/1/95
City of Saco	192	A	2		No	7/1/95
City of South Portland	9	A	2		Yes	7/1/95
Community School District #12	252	A			Yes	7/1/96
Community School District # 915	233	A			Yes	7/1/95

# Actuarial Valuation: Participating Local Districts - 1999



## PARTICIPATING LOCAL DISTRICTS PLAN ELECTIONS

(continued)

<u>PLD Name</u>	<u>PLD #</u>	<u>Regular Plan</u>	<u>Special Plan</u>	<u>Special Plan</u>	<u>COLA</u>	<u>Entry Date</u>
Corinna Sewer District	251	A			No	7/1/96
Cumberland County	5	A			Yes	7/1/96
Dover-Foxcroft Water District	137	A			Yes	7/1/94
Eagle Lake Water & Sewer District	274	A			Yes	7/1/96
Erskine Academy	249	A			No	7/1/94
Falmouth Memorial Library	58	A			Yes	7/1/96
Farmington Village Corp.	118	A			No	7/1/94
Fort Fairfield Housing Authority	275	A			FO	7/1/94
Fort Fairfield Utilities District	131	A			Yes	7/1/96
Gardiner Water District	221	A			No	7/1/94
Gould Academy	205	A			No	7/1/96
Hampden Water District	183	A			No	7/1/96
Hancock County	56	A			Yes	7/1/94
Houlton Water District	26	A			Yes	7/1/95
Indian Township Tribal Gov't	244	A			No	7/1/96
Jackman Water District	226	A			Yes	7/1/96
Kennebec County	47	A			Yes	7/1/95
Kennebec Sanitary Treatment District	220	A			FO	7/1/95
Kennebec Water District	31	A			Yes	7/1/96
Kennebunk Light and Power Co.	62	A			Yes	7/1/94
Kennebunk Sewer District	201	A			No	7/1/94
Kennebunk, Kennebunkport & Wells Water District	255	A			FO	7/1/96
Kittery Water District	12	A			Yes	7/1/94
Lew/Aub. Water Pollution Control Authority	163	A			FO	7/1/96
Lewiston Housing Authority	154	A			Yes	7/1/94
Lewiston-Auburn 9-1-1	291	A			Yes	7/1/94
Lincoln Academy	134	A			Yes	7/1/94
Lincoln Sanitary District	219	A			Yes	7/1/94
Lincoln Water District	92	A			Yes	7/1/95
Lisbon Water Department	243	A			No	7/1/96
Livermore Falls Water District	32	A			Yes	7/1/94
Lubec Water And Electric District	88	A			Yes	7/1/96
Madawaska Water District	236	A			Yes	7/1/94
Maine County Commissioners Assoc.	225	A			No	7/1/96
Maine International Trade Center	293	A			Yes	7/1/98
Maine Maritime Academy	38	A	2		Yes	7/1/96
Maine Municipal Bond Bank	93	A			Yes	7/1/95
Maine School Management Association	239	A			Yes	7/1/94
Maine State Retirement System	290	A			Yes	7/1/94
Maine Turnpike Authority	49	A			Yes	7/1/94
Maine Veterans Home	271	A			Yes	7/1/94
Mars Hill Utility District	283	A			Yes	7/1/94
ME Secondary School Principals Assoc.	105	A			Yes	7/1/94





# Actuarial Valuation: Participating Local Districts - 1999

## PARTICIPATING LOCAL DISTRICTS PLAN ELECTIONS

(continued)

<u>PLD Name</u>	<u>PLD #</u>	<u>Regular Plan</u>	<u>Special Plan</u>	<u>Special Plan</u>	<u>COLA</u>	<u>Entry Date</u>
Mechanic Falls Sanitary District	282	A			No	7/1/94
Milo Water District	238	A			No	7/1/96
Mt. Desert Island Reg. School District	120	A			Yes	7/1/96
Norway Water District	136	A			No	7/1/95
Old Town Housing Authority	262	A			FO	7/1/94
Old Town Water District	79	A			No	7/1/94
Oxford County	57	A			Yes	7/1/94
Paris Utility District	159	A			Yes	7/1/95
Penobscot County	11	A			Yes	7/1/94
Penquis Cap Inc.	237	A			No	7/1/95
Piscataquis County	121	A			Yes	7/1/94
Pleasant Point Passamaquoddy	165	A			Yes	7/1/96
Portland Housing Authority	185	A			Yes	7/1/94
Portland Public Library	41	A			Yes	7/1/95
Richmond Utilities District	242	A			No	7/1/94
Rumford Fire and Police	60	A	3	4	Yes	7/1/95
Rumford/Mexico Sewerage District	247	A			Yes	7/1/96
Rumford Water District	65	A			Yes	7/1/95
Sanford Housing Authority	152	A			Yes	7/1/96
Sanford Sewerage District	89	A			No	7/1/94
Sanford Water District	170	A			No	7/1/96
School Administrative District No. 9	119	A			Yes	7/1/95
School Administrative District No. 13	223	A			Yes	7/1/96
School Administrative District No. 16	190	A			No	7/1/94
School Administrative District No. 21	211	A			No	7/1/96
School Administrative District No. 29	168	A			Yes	7/1/96
School Administrative District No. 31	50	A			FO	7/1/94
School Administrative District No. 41	143	A			Yes	7/1/96
School Administrative District No. 49	189	A			No	7/1/95
School Administrative District No. 51	198	A			No	7/1/96
School Administrative District No. 53	129	A			No	7/1/96
School Administrative District No. 54	115	A			Yes	7/1/96
School Administrative District No. 60	187	A			No	7/1/94
School Administrative District No. 67	126	A			Yes	7/1/96
School Administrative District No. 71	128	A			No	7/1/96
Searsport Water District	124	A			No	7/1/96
So. Penobscot Voc. School Reg. #4	269	A			No	7/1/96
So. Portland Housing Authority	206	A			No	7/1/96
Somerset County	101	A			Yes	7/1/94
South Berwick Water	171		2		Yes	7/1/96
Town of Baileyville	69	A	3		Yes	7/1/96
Town of Bar Harbor	15	A	4		Yes	7/1/95
Town of Berwick	108	A			No	7/1/96
Town of Bethel	246	A			Yes	7/1/96
Town of Boothbay Harbor	146	A			FO	7/1/96

# Actuarial Valuation: Participating Local Districts - 1999



## PARTICIPATING LOCAL DISTRICTS PLAN ELECTIONS (continued)

<u>PLD Name</u>	<u>PLD #</u>	<u>Regular Plan</u>	<u>Special Plan</u>	<u>Special Plan</u>	<u>COLA</u>	<u>Entry Date</u>
Town of Brunswick	42	A	1	2	No	7/1/95
Town of Bucksport	130	A			No	7/1/95
Town of Camden	8	A			FO	7/1/94
Town of China	235	A			No	7/1/96
Town of Corinna	217	A			No	7/1/96
Town of Cumberland	216	B <sup>4</sup>			Yes	7/1/95
Town of Dexter	97	A			Yes	7/1/96
Town of Dover-Foxcroft	167	A			No	7/1/95
Town of Durham	234	A			No	7/1/96
Town of East Millinocket	54	A	2		Yes	7/1/96
Town of Easton	240	A			Yes	7/1/94
Town of Eliot	180	A	4		Yes	7/1/94
Town of Fairfield	260	A	2		No	7/1/95
Town of Falmouth	87	A			Yes	7/1/96
Town of Farmington	100	A	1	4	Yes	7/1/95
Town of Frenchville	98	A			No	7/1/96
Town of Fryeburg	149	A			No	7/1/96
Town of Glenburn	174	A			Yes	7/1/94
Town of Gorham	133	A	2	4	Yes	7/1/96
Town of Greenville	112	A			Yes	7/1/96
Town of Hampden	151	A			No	7/1/96
Town of Harpswell	270	A			Yes	7/1/94
Town of Harrison	280	B <sup>5</sup>			Yes	7/1/94
Town of Hermon	150	A			No	7/1/96
Town of Hodgdon	215	A			No	7/1/96
Town of Houlton	10	A			No	7/1/96
Town of Jay	45	A			Yes	7/1/94
Town of Kennebunk	84	A	2		Yes	7/1/96
Town of Kennebunkport	188	A	1		No	7/1/96
Town of Kittery	14	A	1	2	Yes	7/1/95
Town of Lebanon	181	A			No	7/1/96
Town of Lincoln	76	A	3		No	7/1/96
Town of Linneus	214	A			No	7/1/96
Town of Lisbon	103	A			Yes	7/1/96
Town of Livermore Falls	109	A			No	7/1/96
Town of Lovell	276	A			Yes	7/1/96
Town of Lubec	228	A			No	7/1/96
Town of Madawaska	82	A			Yes	7/1/96
Town of Mapleton	265	A			Yes	7/1/96
Town of Mars Hill	227	A			Yes	7/1/96
Town of Mechanic Falls	114	A			FO	7/1/94
Town of Medway	194	A			Yes	7/1/96
Town of Mexico	74	A			Yes	7/1/96
Town of Milford	186	A			No	7/1/96
Town of Millinocket	3	A	3	4	Yes	7/1/96





# Actuarial Valuation: Participating Local Districts - 1999

## PARTICIPATING LOCAL DISTRICTS PLAN ELECTIONS (continued)

<u>PLD Name</u>	<u>PLD #</u>	<u>Regular Plan</u>	<u>Special Plan</u>	<u>Special Plan</u>	<u>COLA</u>	<u>Entry Date</u>
Town of Monson	184	A			No	7/1/96
Town of Mt. Desert	16	A			Yes	7/1/96
Town of New Gloucester	210	A			No	7/1/95
Town of North Berwick	254	A	1		No	7/1/96
Town of Norway	125	A			No	7/1/96
Town of Orland	166	A			No	7/1/96
Town of Orono	61	A	4		No	7/1/96
Town of Orrington	209	A			No	7/1/95
Town of Otisfield	193	A			FO	7/1/96
Town of Oxford	200	A			No	7/1/96
Town of Paris	127	A			No	7/1/96
Town of Phippsburg	202	A			Yes	7/1/96
Town of Pittsfield	110	A			No	7/1/96
Town of Princeton	258	A			No	7/1/96
Town of Rockport	161	A			No	7/1/96
Town of Rumford	90	A			Yes	7/1/95
Town of Sabattus	175	A			No	7/1/96
Town of Sanford	83	A	1	4	No	7/1/95
Town of Scarborough	147	A	2		Yes	7/1/96
Town of Searsport	117	A			No	7/1/96
Town of Skowhegan	80	A	3		Yes	7/1/96
Town of South Berwick	141	A			FO	7/1/96
Town of St. Agatha	30	A			No	7/1/96
Town of Topsham	81	A	2		Yes	7/1/96
Town of Van Buren	182	A			Yes	7/1/95
Town of Vassalboro	153	A			Yes	7/1/96
Town of Waldoboro	195	A	3		Yes	7/1/95
Town of Washburn	230	A			No	7/1/94
Town of Wells	107	A	3		Yes	7/1/95
Town of Winslow	144	A			No	7/1/96
Town of Winthrop	179	A			No	7/1/94
Town of Yarmouth	116	A	2		Yes	7/1/96
Town of York	28	A	4		Yes	7/1/94
Tri Community Sanitary Landfill	267	A			Yes	7/1/96
Van Buren Housing Authority	229	A			Yes	7/1/95
Waldo County	46	A			Yes	7/1/94
Waldo Reg. Voc. Ctr. Region #7	224	A			No	7/1/96
Washington County	40	A			Yes	7/1/96
Waterville Fire and Police	66	A	3		No	7/1/96
Waterville Sewerage District	222	A			Yes	7/1/94
Wells Ogunquit CSD	266	A			FO	7/1/95
Westbrook Housing Authority	259	A			Yes	7/1/96
Winter Harbor Utility District	250	A			Yes	7/1/95
Yarmouth Water District	278	A			Yes	7/1/94
York County	37	A	2		Yes	7/1/96

# Actuarial Valuation: Participating Local Districts - 1999



## PARTICIPATING LOCAL DISTRICTS PLAN ELECTIONS (continued)

<u>PLD Name</u>	<u>PLD #</u>	<u>Regular Plan</u>	<u>Special Plan</u>	<u>Special Plan</u>	<u>COLA</u>	<u>Entry Date</u>
York Sewer District	139	A			No	7/1/94
York Water District	39	A			Yes	7/1/96

### Notes:

FO = Future Service COLA only, that is, for benefits attributable to service rendered after the PLD's entry date.

- <sup>1</sup> Employees hired prior to July 1, 1997 and who are members of the System are covered under Special Plan #1. Corrections Officers and Law Enforcement Officers hired on or after July 1, 1997, will be covered under Special Plan #2. All other employees hired on or after July 1, 1997, will be covered under Regular Plan A.
- <sup>2</sup> Applicable to all new hires after July 1, 1996. All members in the PLD at July 1, 1996 elected to remain in the 1/50 Plan under Regular Plan A.
- <sup>3</sup> Applicable to all new hires after July 1, 1998.
- <sup>4</sup> Applicable to all new hires after July 1, 1995. All members in the PLD at July 1, 1995 elected to remain in the 1/50 Plan under Regular Plan A.
- <sup>5</sup> Applicable to all new hires after July 1, 1994. All members in the PLD at July 1, 1994 elected to remain in the 1/50 Plan under Regular Plan A.





## Actuarial Valuation: Participating Local Districts - 1999

### APPENDIX B MEMBER AND BENEFITS RECIPIENTS DATA AND PROFILES ACTIVE MEMBER DATA AS OF JUNE 30, 1999

#### Regular Plans Members

Count	6,968
Average Current Age	45.1
Average Service	8.7
Average Valuation Pay	\$ 24,421

#### Special Plans Members

Count	1,532
Average Current Age	39.4
Average Service	11.6
Average Valuation Pay	\$ 36,965

#### All Plans Members

Count	8,500
Average Current Age	44.1
Average Service	9.2
Average Valuation Pay	\$ 26,682

# Actuarial Valuation: Participating Local Districts - 1999



## BENEFIT RECIPIENT AND INACTIVE VESTED MEMBER DATA AS OF JUNE 30, 1999

### REGULAR PLANS

#### Retired Members, Beneficiaries, Disabled Members and Survivors

Count	4,488
Total Annual Benefit	\$ 30,194,635
Average Annual Benefit	\$ 6,728

#### Inactive Vested

Count	232
Total Annual Deferred Benefit (Payable at Normal Retirement Age)	\$ 1,356,329
Average Annual Deferred Benefit (Payable at Normal Retirement Age)	\$ 5,846

### SPECIAL PLANS

#### Retired Members, Beneficiaries, Disabled Members and Survivors

Count	1,583
Total Annual Benefit	\$ 21,557,382
Average Annual Benefit	\$ 13,618

#### Inactive Vested

Count	7
Total Annual Deferred Benefit (Payable at Normal Retirement Age)	\$ 21,991
Average Annual Deferred Benefit (Payable at Normal Retirement Age)	\$ 3,142

### ALL PLANS

#### Retired Members, Beneficiaries, Disabled Members and Survivors

Count	6,071
Total Annual Benefit	\$ 51,752,017
Average Annual Benefit	\$ 8,524

#### Inactive Vested

Count	239
Total Annual Deferred Benefit (Payable at Normal Retirement Age)	\$ 1,378,320
Avg. Annual Deferred Benefit (Payable at Normal Retirement Age)	\$ 5,767





# Actuarial Valuation: Participating Local Districts - 1999

## APPENDIX C SUMMARY OF PLAN PROVISIONS

### 1. Member Contributions

Members are required to contribute a percent of earnable compensation which varies by plan as follows:

Regular AC & AN	6.5%
Regular BC	3.0%
Special 1C & 1N	6.5%
Special 2C & 2N	6.5%
Special 3C & 3N	8.0% for first 25 years, 6.5% after
Special 4C & 4N	7.5% for first 25 years, 6.5% after

### 2. Average Final Compensation

For purposes of determining benefits payable under the plan, average final compensation is the average annual rate of earnable compensation for the 3 years of creditable service (not necessarily consecutive) which produce the highest such average.

### 3. Creditable Service

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

### 4. Service Retirement Benefits

#### Regular Plan AC

Eligibility: *if in active service* - 25 years of creditable service or at least one year of creditable service immediately before retirement and at least normal retirement age.

*if not in active service* - at least 10 years of creditable service and at least normal retirement age.

Benefit: 1/50 of average final compensation multiplied by years of membership service under Consolidated Plan A plus a variable percentage of average final compensation multiplied by years of service under any previous plans (the percentage depends on the previous plan(s)), the sum of which is reduced by approximately 2-1/4% for each year that a member is younger than age 60 at retirement.

Form of payment: life annuity ("full benefit"), unless an optional method of payment is selected.

Cost of Living Adjustment: See item 10.

#### Regular Plan AN

This benefit plan is the same as Regular Benefit Plan AC, except that there is no provision for cost of living adjustments.



## SUMMARY OF PLAN PROVISIONS (continued)

### Regular Plan BC

Eligibility: *if in active service* - 25 years of creditable service or at least one year of creditable service immediately before retirement and at least normal retirement age.

*if not in active service* - at least 10 years of creditable service and at least normal retirement age.

Benefit: 1/100 of average final compensation multiplied by years of membership service under Consolidated Plan B plus a variable percentage of average final compensation multiplied by years of service under any previous plans (the percentage depends on the previous plan(s)), the sum of which is reduced by approximately 2-1/4% for each year that a member is younger than age 60 at retirement.

Form of payment: life annuity ("full benefit"), unless an optional method of payment is selected.

Cost of Living Adjustment: See item 10.

### Special Plan 1C

Eligibility: 20 years of creditable service in named positions.

Benefit: 1/2 of average final compensation plus 2% for each year of service in excess of 20.

Form of payment: life annuity ("full benefit"), unless an optional method of payment is selected.

Cost of Living Adjustment: See item 10.

### Special Plan 1N

This benefit plan is identical to Special Benefit Plan 1C, except that there is no provision for cost of living adjustments.

### Special Plan 2C

Eligibility: 25 years of creditable service in named positions.

Benefit: 1/2 average final compensation plus 2% for each year of service in excess of 25.

Form of payment: life annuity ("full benefit"), unless an optional method of payment is selected.

Cost of Living Adjustment: See item 10.

### Special Plan 2N

This benefit plan is identical to Special Benefit Plan 2C, except that there is no provision for cost of living adjustments.





## Actuarial Valuation: Participating Local Districts - 1999

### SUMMARY OF PLAN PROVISIONS (continued)

#### Special Plan 3C

Eligibility: 25 years of creditable service in named positions.

Benefit:  $\frac{2}{3}$  of average final compensation plus 2% for each year of service in excess of 25.

Form of payment: life annuity ("full benefit"), unless an optional method of payment is selected.

Cost of Living Adjustment: See item 10.

#### Special Plan 3N

This benefit is identical to Special Benefit Plan 3C, except that there is no provision for cost of living adjustments.

#### Special Plan 4C

Eligibility: Age 55 with 25 years of creditable service in named positions.

Benefit: 2% of average final compensation for each year of service.

Form of payment: life annuity ("full benefit"), unless an optional method of payment is selected.

Cost of Living Adjustment: See item 10.

#### Special Plan 4N

This benefit plan is identical to Special Benefit Plan 4C, except that there is no provision for cost of living adjustments.

If Special Plan members fail to meet the Special Plan eligibility criteria, their service retirement benefits are those provided by the applicable underlying Regular Plan; Special Plan service credits are used toward Regular Plan eligibility requirements.

### **5. Pre-Retirement Accidental Death Benefits**

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

- Benefit:
- if the member leaves no dependent children,  $\frac{2}{3}$  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(ren), the surviving spouse shall receive  $\frac{2}{3}$  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 final average compensation. When there is no longer any dependent child(ren), the surviving spouse shall receive  $\frac{2}{3}$  of member's average final compensation until death.



## SUMMARY OF PLAN PROVISIONS (continued)

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

### 6. 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 11); however, beneficiary may elect survivor benefits payable to a surviving spouse, dependent child(ren), parents, 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 parent or estate.

### 7. Disability Benefits Other Than No Age Benefits

Eligibility: Disabled as defined in the MSRS statutes, prior to normal retirement age; unable to perform duties of own position; employed prior to October 16, 1992 and did not elect No-Age Disability Option.

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 Workers' 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 5 years, 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.

### 8. No-Age Disability 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 Workers' 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 5 years, unless the member is unable to engage in any substantially gainful activity; in which case payments cease on the date the service retirement benefit equals or exceeds the disability benefit.

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





## Actuarial Valuation: Participating Local Districts - 1999

### SUMMARY OF PLAN PROVISIONS (continued)

#### 9. Refund of Contributions

Eligibility: termination of service other than by retirement or death.

Benefit: member's accumulated contributions with interest.

#### 10. Cost of Living Adjustments

All retirement (and survivor) benefits payable to (or in relation to) benefit recipients who were employed by a PLD that elected a plan which provides for a COLA 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 six months. The maximum annual increase or decrease is 4%.

#### 11. Methods of Payment of Service Retirement Benefits

At retirement, a member must choose one of the following methods of payment:

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

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

Option 2: Reduced retirement benefit payable for life to member; after death, benefit of same amount as the retiree's benefit payable to beneficiary for beneficiary's life.

Option 3: Reduced retirement benefit payable for life to member; after death, benefit of one-half the amount of the retiree's benefit payable to beneficiary for beneficiary's life.

Option 4: Any other method of benefit payment that provides a benefit that is actuarially equivalent to the full benefit and is approved by the Board.



## APPENDIX D ACTUARIAL ASSUMPTIONS AND METHODS

### A. Actuarial Assumptions

1. Annual Rate of Investment Return 8.0%
2. Cost of Living Increases in Benefits 4.0% (Where applicable)
3. Annual Rate of Salary Increase 5.5%

4. Rates of Termination at Selected Ages*	Age	Regular & Special Plan Members % Leaving
	25	7.0%
	30	6.0
	35	5.0
	40	4.0
	45	3.0
	50	2.0
	55	1.0

5. Rates of Active Healthy Life Mortality at Selected Ages (number of deaths per 10,000 members)**	Age	Male	Female
	25	7	3
	30	9	4
	35	9	5
	40	12	8
	45	17	10
	50	28	15
	55	48	25

6. Rates of Inactive Healthy Life Mortality at Selected Ages (number of deaths per 10,000 members)	Age	Regular & Special Plan Members Male	Female
	25	6	3
	30	8	5
	35	11	7
	40	16	9
	45	29	14
	50	53	22
	55	85	33

\* Members with ten or more years of service are assumed to elect deferred vested benefits; other terminations are assumed to elect refunds.

\*\* For Regulars, 5% of deaths are assumed to be accidental; for Specials, 20% of deaths are assumed to be accidental.





# Actuarial Valuation: Participating Local Districts - 1999

## ACTUARIAL ASSUMPTIONS AND METHODS (continued)

7. Rates of Mortality for Future Anticipated Disableds at Selected Ages (number of deaths per 10,000 members)	Age	Male	Female
	25	92	72
	30	112	89
	35	134	109
	40	160	126
	45	193	144
	50	236	165
	55	295	191
	60	362	226
	65	446	272
	70	576	331

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

9. Rates of Retirement at Selected Ages (number retiring per 1,000 members)	Age	Regular Plan	Special Plan
	45	25	*
	50	38	
	55	50	
	59	60	
	60	1000	

\* Assumed to retire when eligible for retirement. - i.e., after 20 years of service in Special Plan 1, after 25 years of service in Special Plans 2 and 3, and at the later of age 55 or 25 years of service in Special Plan 4.

10. Rates of Disability at Selected Ages (number becoming disabled per 10,000 members)**	Age	Regular Plan	Special Plan
	25	6	13
	30	6	13
	35	7	14
	40	11	18
	45	22	29
	50	42	49
	55	72	79

\*\* Disabilities are assumed to be 75% non-service connected for Regular employees and 25% non-service connected for Police and Fire.



## ACTUARIAL ASSUMPTIONS AND METHODS (continued)

- |  |  |
|--|--|
| 11. Family<br>Composition<br>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; spouses are same age; member has no dependent parents; unmarried members have beneficiaries entitled to benefits worth 80% as much as those of married members' beneficiaries. |
|--|--|

### B. Actuarial Methods

#### 1. Funding Method

The Entry Age Normal method is used to determine costs. Under this funding method, the total employer contribution rate is determined which consists of two elements, the normal cost rate and the pooled unfunded actuarial liability (PUAL) rate. The actual contribution for a given PLD will include an IUUAL payment as well.

For each Regular and Special Plan, a normal cost rate is determined for the average 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 normal cost contributions calculated per plan, the employers in each plan are required to make contributions to fund that plan's pooled unfunded actuarial liability, if any. The actuarial liability is defined as the present value of future benefits less the present value of future normal costs, less future member contributions, and less expected IUUAL payments. The pooled unfunded actuarial liability is the total of the actuarial liability for all members less the actuarial value of the Plan's assets. The actuarial liability includes projections of future member pay increases and future service credits.

The Initial Unpooled Unfunded Actuarial Liability (IUUAL) was calculated at entry into the Consolidated Plan for each PLD. These amounts are amortized by annual payments over a fixed number of years. Additional unfunded liability amounts which arise after entry to the Consolidated Plan will be pooled and amortized over 15 years.

#### 2. Asset Valuation Method

The actuarial valuation employs a technique for determining the actuarial value of assets which dampens the swings in market value. The specific technique adopted in this valuation recognizes in a given year one-third of the investment return that is in excess of the 8.00% actuarial assumption for investment return.









