Worcester Retirement System
Worcester, Massachusetts
(A Component Unit of the City of Worcester, Massachusetts)

Comprehensive Annual Financial Report
Year Ended December 31, 2003

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For the Year Ended December 31, 2003

Prepared by the Staff of the
Worcester Retirement System

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Introductory Section

Chairman's Letter

June 11, 2004

Dear Members of the Worcester Retirement System:

On behalf of the Worcester Retirement Board, I am pleased to present the Comprehensive Annual Financial Report (CAFR) for the year ended December 31, 2003. The report is designed to provide a detailed look at the financial, investment and actuarial aspects of the retirement system.

Although the Worcester Retirement System (the System) has issued basic financial statements for many years this is the first time it has issued a comprehensive annual financial report. The retirement board wanted to provide comprehensive information to System members and to demonstrate its stewardship over the System's finances and accounting controls.

This report will be submitted to the Government Finance Officers Association of the United States and Canada (GFOA) for its review in order that it can be considered for the coveted Certificate of Achievement for Excellence in Financial Reporting award. The Certificate of Achievement is a prestigious national award, recognizing conformance with the highest standards for preparation of a public retirement system's financial report.

In order to be awarded a Certificate, a retirement system must publish an easily readable and efficiently organized CAFR, whose contents conform to program standards. Such CAFR must satisfy both accounting principles generally accepted in the United States of America and applicable legal requirements.

The Board meets on a regular basis to discuss benefit and financial issues. During 2003 the Board was rewarded for maintaining its investment discipline by keeping in line with the System's designed asset allocation after experiencing disappointing investment results during the previous three years. A strong investment performance during the year greatly improved the funded status of the System based on market value.

During 2004 the Board felt it necessary to further diversify its asset allocation in order have long-term investment results that exceed its actuarial benchmark and to reduce volatility and risk. In that regard it has increased its allocation to timberland assets from one to three percent of the total portfolio. Additionally, the Board also recognized the positive impact that absolute return products (hedge funds) can have on a portfolio if they are well diversified and properly managed. On that basis the Board has set aside two percent of its total portfolio for absolute strategies to be funded by the fall of this year. The allocation to domestic equities will be reduced to fund these strategies.

I would like to thank other members of the Board for their diligence on retirement matters, the Board's investment consultant and actuary for assistance with the preparation of this report and advice on other matters. I would also like to thank the Board's legal representatives for their excellent consul and the Public Employee Retirement Administration Commission for their oversight of our actions.

(continued)

Finally, I would like to commend the staff of the System for their diligent work in preparing this report and their commitment to continually improve the administrative operation of the System. I encourage members to carefully review this report, as it contains a wealth of information about your retirement system.

Sincerely,

James DelSignore, CPA
Chairman, Worcester Retirement Board

Worcester Retirement System

Room 103 City Hall Worcester Massachusetts 01608 Phone (508) 799 1062

June 11, 2004

Worcester Retirement Board
City Hall Room 103
455 Main Street
Worcester, MA 01608

Dear Mr. Chairman and Members of the Board:

We are pleased to submit the Comprehensive Annual Financial Report (CAFR) of the Worcester Retirement System (WRS or the System) for the year ended December 31, 2003. WRS management maintains responsibility for both the accuracy of the financial information and for the complete and fair presentation of the data. We believe this report fairly and accurately presents the financial position and results of operations of the WRS, and that all disclosures necessary to enable the reader to gain the maximum understanding of WRS financial affairs have been made.

Report Structure

This CAFR is presented in five sections as follows:

Introductory Section, which contains this letter of transmittal, information on the administrative organization, and a letter from the Chairman of the Board,

Financial Section, which contains the report of the Independent Auditors, the Management's Discussion & Analysis (MD&A), the basic financial statements of WRS, related notes and disclosures, required supplemental information, and certain supporting schedules,

Investment Section, which contains an investment report prepared by the investment consultant, investment policies, investment results, and schedules,

Actuarial Section, which contains the independent actuary's certification, results of the annual actuarial valuation, and an outline of actuarial assumptions,

Statistical Section, which contains significant data pertaining to WRS.

(continued)

History of WRS

The Commonwealth of Massachusetts Commissioner of Insurance, Charles J. Harrington, issued a certificate declaring the establishment of a contributory retirement system on June 12, 1944 after the City Council approved acceptance of Chapter 32 section 31 I of the General Laws and the Mayor approved acceptance of sections 26 to 31 H inclusive with amendments.

The System became operative as of January 1, 1945. WRS is a contributory defined benefit plan that covers eligible employees of the City of Worcester (except Worcester Public School teachers) and the Worcester Housing Authority (WHA). The System is administered by a five member Board consisting of the City Auditor, two representatives elected from the membership, a City Manager representative and a fifth member chosen by the other four that can not be an employee, retiree or official of the City. One of these five board members is elected by the other four to serve as Chairman.

Major Initiatives

Benefits

A cost of living adjustment (COLA) was provided for retirees and survivors effective July 1, 2003. The 3% COLA was paid on a base of $12,000 (maximum $360) the most allowed by law.

Administration

The WRS strives to provide quality service and information to active and retired members and their beneficiaries. To assist in this effort, we have launched our internet site through the City web page at www.ci.worcester.ma.us/ret.

As part of the City 's plan to address the municipal budget shortfall, the City Council adopted the Commonwealth's Early Retirement Incentive (ERI) in accordance with section 116 of Chapter 46 of the Acts 2003. This incentive was offered only to Group 1 members (nonpublic safety employees) with a limit of 40 participants in the program. WRS staff aided the City in the administration of the ERI. While striving to maintain confidentiality, effort was taken by the staff to ensure that eligible members were provided with the necessary information in order to make an informed decision on participation in the retirement incentive program.

Internal and Budgetary Controls

WRS management is responsible for maintaining a system of internal controls designed to provide reasonable assurance that the financial statements are fairly stated in accordance with generally accepted accounting standards while adequately safeguarding the assets. We believe the current internal controls accomplish this goal.

(continued)

Accounting

This report has been prepared in accordance with accounting principals generally accepted in the United States of America. The basic financial statements are presented in accordance with the principals of Government Accounting Standards Board (GASB), including guidelines established by GASB Statement No. 25, Financial reporting for defined benefit plans; Statement GASB No. 34 Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments; No. 37, Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments: Omnibus; and No. 38, Certain Financial Statement Note Disclosures.

KPMG LLP a firm of licensed certified public accountants has audited WRS basic financial statements. The goal of the independent audit is to give reasonable assurance that the financial statements for the year ended December 31, 2003 are free of material misstatements. The report of the independent auditors is included in the Financial Section of this report. KPMG LLP has issued an unqualified opinion on WRS basic financial statements for the year ended December 31, 2003.

GASB Statement No. 34 requires that management provide a narrative introduction, overview and analysis to accompany the basic financial statements in the form of Management's Discussion and Analysis (MD&A). This letter of transmittal is designed to compliment the MD&A and should be read in conjunction with it. The WRS MD&A can be found immediately following the report of the independent auditor.

Asset Allocation

An integral part of the overall investment policy is the asset allocation policy. This is designed to provide as optimal mix of asset classes to both preserve principal and provide adequate funds to pay pension benefits. Both traditional assets (cash, bonds, domestic stocks, domestic fixed income and mortgages) and nontraditional assets (real estate, international stock and fixed income, venture capital, mezzanine financing, timber and leveraged buyouts) are part of the mix. For the year ended December 31, 2003 the System had an investment return of 25.5%.

Please refer to the Investment Report in the Investment Section for additional performance information.

Actuarial Funding

WRS has retained the services of The Segal Company, an independent actuarial firm, to conduct an annual actuarial valuation of the System. The funded ratio is one measure of the financial condition of the WRS. The funded ratio is calculated by dividing the net assets of the System by the projected pension liability. The projected pension liability is a measure of the present value of total pension benefits estimated to be payable in the future to both current and future retirees and/or beneficiaries. A higher funding ratio gives the members a greater degree of assurance that their pension benefits are secure. As of January 1, 2004 the funded ratio of the system was calculated at 77.62%.

(continued)

Acknowledgements

The publication of this report represents the combined efforts of the WRS Board, staff, KPMG LLP and consultants. We are proud to present this report for the first time to our members. We feel it is important to provide an annual comprehensive financial report for our members and other interested parties to follow the progress of the System.

Respectfully submitted,

Elizabeth A. Early
Executive Secretary

Retirement Board Members

		Terms
James DelSignore	Ex-Officio Member	01/01/2004 -01/01/2007
Stephen F. Wentzell	City Manager Appointee	At the pleasure of the City Manager
Elizabeth A. Early	Elected Member	11/01/2001 -10/31/2004
Raymond F. McGrath	Elected Member	01/01/2003 -12/31/2005
Thomas Wade	Appointed Member	01/10/2003 -01/09/2006

Administrative Staff

Elizabeth A. Early	Executive Secretary
Judith McMillen	Executive Assistant
Donald McLaren	Principal Accountant
Kim Laino	Retirement Analyst
Barbara Zecco	Head Clerk
Eileen Powers	Principal Clerk

Organizational Chart

Worcester Retirement Board

Executive Secretary

Executive Assistant

Principal Accountant | Retirement Analyst | Head Clerk | Principal Clerk

CONSULTANTS AND PROFESSIONAL SERVICES

DOMESTIC EQUITY MANAGERS

Columbia Management Advisors, Inc.
Hartford, CT
Hutchens Investment Management, Inc.
New London, NH
Enhanced Investment Technologies LLC
Palm Beach Gardens, FL
Loomis Sayles & Company, L.P.
Boston, MA
State Street Global Advisors
Boston, MA

DOMESTIC FIXED MANAGERS

OPUS Investment Management, Inc.
Worcester, MA
Loomis Sayles & Company, L.P.
Boston, MA
Merrill Lynch, Pierce, Fenner & Smith
Worcester, MA
The Northern Trust Company
Chicago, IL

INTERNATIONAL EQUITY AND FIXED INCOME MANAGERS

The Boston Company Asset Management LLC
Boston, MA
Bank of Ireland Asset Management
Greenwich, CT

ALTERNATIVE CAPITAL INVESTMENT MANAGERS

Ascent Venture Management
Boston, MA
Boston Capital Ventures
Boston, MA
Boston Millennia Partners
Boston, MA
Charlesbank Capital Partners
Boston, MA
Concord Partners L.P.
New York, NY
Duke Street Capital
London, England
Standard Life Investments Limited
Edinburgh EH2 2LL
Invesco Private Capital, Inc.
New York, NY
New England Partners Capital L.P.
Boston, MA
Northstar Capital LLC
Minneapolis, MN

(cont. Alternative Investment Mng.)
Rice Mezzanine Lenders, L.P.
Houston, TX
The Riverside Company
Dallas, TX

REAL ESTATE MANAGERS

Bailard, Biehl & Kaiser
Foster City, CA
Evergreen Timberland Investment Mgt.
Salem, NC
Henderson Global Investors
Hartford, CT
L&B Realty Advisors Inc
Dallas, TX
Lend Lease Real Estate Investment, Inc.
New York, NY
SSR Realty Advisors, Inc.
White Plains, NY

LEGAL ADVISORS

Kirkpatrick & Lockhart LLP
Boston, MA

INDEPENDENT AUDITORS

KPMG LLP
Boston, MA

INVESTMENT ADVISORS

Meketa Investment Group
Braintree, MA

ACTUARIAL CONSULTANT

The Segal Company
Boston, MA

CUSTODIAN

Investors Bank & Trust Company
Boston, MA

COMMISSION RECAPTURE BROKERS

Donaldson & Company
Atlanta, GA
Lynch, Jones & Ryan, Inc.
New York, NY

SECURITIES LENDING

UBS Investment Bank
Boston, MA

Financial Section

KPMG

KPMG LLP
99 High Street
Boston, MA 02110-2371

Telephone 617 988 1000
Fax 617 988 0800
Internet www.*us*.kpmg.com

Independent Auditors' Report

The Retirement Board
Worcester Retirement System:

We have audited the accompanying basic financial statements of the Worcester Retirement System (WRS), a component unit of the City of Worcester, Massachusetts, as of and for the year ended December 31, 2003, as listed in the table of contents. These financial statements are the responsibility of WRS's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *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. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the plan net assets of WRS as of December 31, 2003, and the changes in plan net assets for the year then ended in conformity with accounting principles generally accepted in the United States of America.

The management's discussion and analysis on pages 16 through 20 and historical pension information on pages 29 through 30 are not a required part of the basic financial statements but are supplementary information required by accounting principles generally accepted in the United States of America. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the required supplementary information. However, we did not audit the information and express no opinion on it.

Our audit was conducted for the purpose of forming an opinion on the basic financial statements. The supporting schedules, introductory, investment, actuarial and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements. The supporting schedules have been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, are fairly stated in all material respects in relation to the basic financial statements taken as a whole. The introductory, investment, actuarial and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we express no opinion on them.

In accordance with *Government Auditing Standards*, we have also issued a report dated June 11, 2004 on our consideration of WRS's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, and contracts. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be read in conjunction with this report in considering the results of our audit.

KPMG LLP

June 11, 2004

Management's Discussion & Analysis

Our discussion and analysis of the City of Worcester Retirement System's (WRS or the System) financial performance provides an overview of WRS's financial activities for the calendar year ended December 31, 2003. Please read it in conjunction with the transmittal letter at the front of this report and the basic financial statements that follow this discussion.

Financial Highlights

WRS's funding objective is to meet long-term benefit obligations through contributions and investment income. As of December 31, 2003, the funded ratio was 77.62% based on the actuarial value of assets at that date.

Net assets increased during the year by $96.9 million or 21% because of strong investment returns.

Total investment gains were $115.6 million, an all-time high for the System. The investment rate of return was 25.5% also an all-time high for the System compared with a negative 12.1% return in the previous year. (Refer to the table in the Investment Section)

Overview of the Financial Statements

This discussion and analysis is intended as an introduction to the System's basic financial statements. The basic financial statements are comprised of a Statement of Plan Net Assets, Statement of Changes in Plan Net Assets and Notes to the Financial Statements.

The ***Statement of Plan Net Assets*** presents information on the System's assets and liabilities and the resulting net assets held in trust for pension benefits. This statement reflects the System's investments at fair value, as well as cash, receivables and other assets and liabilities.

The ***Statement of Changes in Plan Net Assets*** presents information showing how the System's net assets held in trust for pension benefits changed during the year ended December 31, 2003. It reflects contributions by members and participating employers along with deductions for retirement benefits, refunds, and withdrawals, and administrative expenses. Investment income during the period is also presented showing income from investing and securities lending activities.

The ***Notes to the Financial Statements*** provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

The ***Required Supplementary Information*** includes this management's discussion and analysis and schedules of funding progress and employers' contributions.

(continued)

Management's Discussion & Analysis

Financial Analysis

The System's total assets as of December 31, 2003 were $568 million and were mostly comprised of cash and investments. Total assets increased $98.7 million or 21% from the prior year primarily due to investment gains. Total liabilities as of December 31, 2003 were $9 million and were mostly comprised of collateral held under securities lending arrangements. Total liabilities increased by $1.84 million, or 25.6% over the prior year.

(continued)

Management's Discussion & Analysis
Net Assets

(in thousands of dollars)

Assets		2003	2002
Cash	$	7,941	10,949
Receivables		2,807	2,004
Investments		551,525	451,373
Securities lending short-term collateral			
Investment pool		5,254	4,500
Total assets		567,527	468,826
Liabilities			
Payables		3,757	2,672
Cash collateral held – securities lending		5,253	4,500
Total liabilities		9,010	7,172
Total net assets held in trust for pension benefits	$	558,517	461,654

Changes in Net Assets

(in thousands of dollars)

Additions		2003	2002
Total contributions	$	33,403	28,965
Net investment gain		115,615	(67,805)
Total additions		149,018	(38,840)
Deductions			
Benefit payments		47,849	43,541
Other		4,306	4,363
Total deductions		52,155	47,904
Net increase(decrease) in plan net assets		96,863	(86,744)
Net assets held in trust for pension benefits:			
Beginning of year		461,654	548,398
End of year	$	558,517	461,654

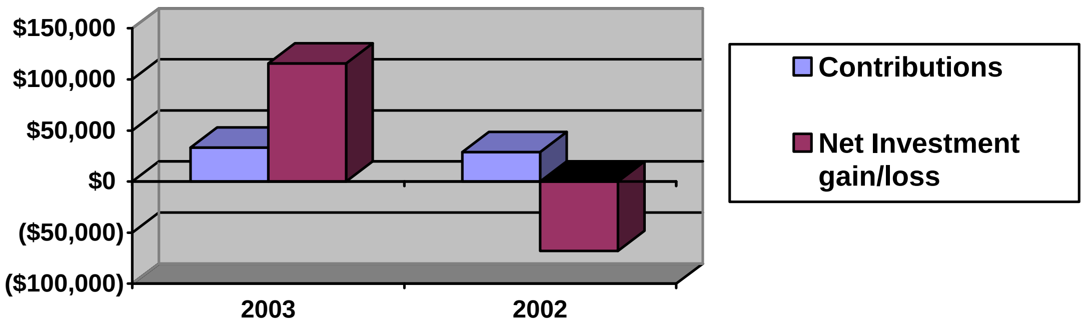
(continued)

Management's Discussion & Analysis
Plan Net Assets

Additions to Plan Net Assets

The amount needed to finance benefits is accumulated through the collection of employers' and employees' contributions, reimbursement from the Commonwealth of Massachusetts for pre-1998 COLA and through earnings on investments. Contributions and net investment gain for calendar year 2003 resulted in a net gain of $149 million. Employers' contributions increased by $5.9 million in 2003 as a result of declining investment returns in 2002 and the added cost of the benefit enhancement Early Retirement Program offered to members. The System had a net investment gain of $115.6 million in 2003 versus a loss of $67.8 million in 2002.

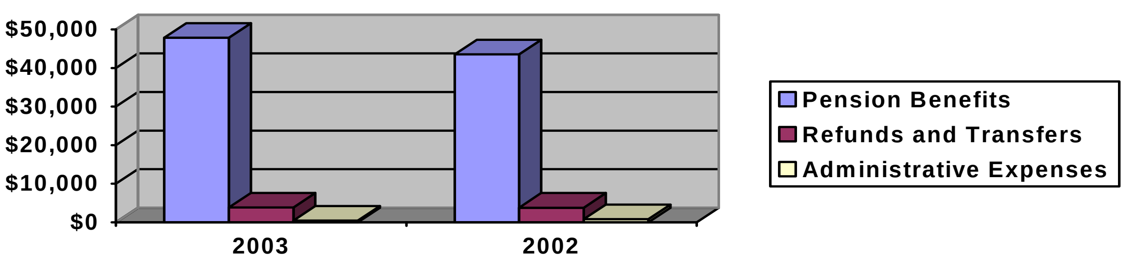
Additions to Plan Net Assets
(in thousands of dollars)



Deductions from Plan Net Assets

The primary deductions of WRS include the payment of pension benefits to participants and beneficiaries, refunds of contributions, and the costs of administering the system. Total deductions for 2003 were $52.2 million, which represents an increase of 9% over deductions of $47.9 million in 2002. The payment of pension benefits increased by $4.3 million or 9.9% over the previous year. The increase in these expenses resulted from an increase in benefit payments to newer retirees with higher average compensation offset by a slight decrease in the number of pensioners and beneficiaries (3,001 in 2002 versus 2,996 in 2003).

Deductions from Plan Net Assets
(in thousands of dollars)



(continued)

Management's Discussion & Analysis

Contacting WRS's Financial Management

This financial report is designed to provide the Retirement Board, our membership, taxpayers, investors, and creditors with a general overview of WRS's financial results and to demonstrate WRS's accountability for the funding it receives. If you have any questions about this report or need additional financial information, contact the Worcester Retirement System, City Hall Room 103, 455 Main Street, Worcester, Massachusetts 01608.

Statement of Plan Net Assets

December 31, 2003

Assets:		
Cash	$	7,940,906
Investments at fair value:		
Equities		235,118,731
Fixed Income		89,545,526
Pooled Equities		111,321,805
Pooled Fixed Income		49,756,849
Alternative Investments		65,782,249
		551,525,160
Securities lending short-term collateral investment pool		5,253,730
Receivables:		
Accrued interest and dividends		1,146,148
Due from Commonwealth of Massachusetts and other systems		325,384
Receivable for securities sold		1,335,594
Total receivables		2,807,126
Total plan assets		567,526,922
Liabilities:		
Accounts payable and accrued expenses		519,456
Due to Commonwealth of Massachusetts and other systems		1,559,321
Payable for securities purchased		1,677,937
Collateral held on securities lending transactions		5,253,730
Total plan liabilities		9,010,444
Net assets held in trust for pension benefits	$	558,516,478
(see schedule of funding progress on page 29)		

See accompanying notes to financial statements.

Statement of Changes in Plan Net Assets

Year ended December 31, 2003

Additions:	
Contributions:	
Employers	$ 18,928,252
Employees	11,691,887
Reimbursements from Commonwealth of Massachusetts	2,457,884
Reimbursements from other systems	325,384
Total contributions	33,403,407
Investment income:	
Interest and dividends	10,786,402
Securities lending income	70,065
Net realized and unrealized gains	107,885,292
Less management fees	(3,068,593)
Less borrow rebates and fees under securities lending program	(58,222)
Net investment income	115,614,944
Total additions	149,018,351
Deductions:	
Benefit payments to plan members and beneficiaries	47,848,502
Reimbursements to other systems	1,559,321
Refunds and transfers of plan member accounts to other systems	2,307,517
Administrative expenses	440,294
Total deductions	52,155,634
Net increase in plan net assets	96,862,717
Net assets held in trust for pension benefits:	
Beginning of year	461,653,761
End of year	$558,516,478

See accompanying notes to financial statements.

Notes to Financial Statements
December 31, 2003

1. Plan Description

(a) General

The Worcester Retirement System (WRS or the System) is a cost-sharing, multiple-employer public employee retirement system established by the City of Worcester, Massachusetts (the City) on June 12, 1944 under Chapter 32 of the Massachusetts General Laws and is regulated by the Massachusetts Public Employee Retirement Administration Commission (PERAC). WRS is a defined benefit pension plan that covers certain eligible employees of the City and the Worcester Housing Authority.

Membership in WRS is mandatory immediately upon the commencement of employment for all permanent full-time employees working at least 20 hours weekly, except for the City school teachers, who participate in the Massachusetts Teachers' Retirement System.

Membership in WRS was as follows at December 31, 2003:

Active employees	3,409
Pensioners and beneficiaries	2,996
Inactive employees with vested rights	1,102
Total members	7,507
Number of participating employers	2

WRS is administered by a five-person Retirement Board (the Board) consisting of the City Auditor, who serves *ex-officio*; two members who are elected by the participants in or retired from the service of WRS; a fourth member appointed by the City Manager; and a fifth member appointed by the other members.

(b) Significant Plan Provisions and Requirements

Benefit provisions and state law establishes contribution requirements of WRS.
Members of WRS become vested after 10 years of creditable service. Normal retirement occurs at age 65 except for employees of the City's Police and Fire departments, whose normal retirement age is 55. Retired employees receive an allowance based upon the average of their three highest average salary years of service multiplied by (1) the number of years and full months of creditable service at the time of retirement and (2) a percentage based on age at retirement in accordance with a schedule provided by state law.

(continued)

Assuming normal retirement at age 65, this percentage is 2.5%, which is reduced for individuals who retire prior to age 65 to reflect the longer pay out period.

Employees may elect early retirement after 20 years of service or at any time after attaining age 55 with 10 years of eligible service. Plan members who become permanently and totally disabled may be eligible to receive a disability retirement allowance. The amount of benefits to be received depends on several factors, including the member's age, compensation, veteran status, years of service and whether or not the disability is work-related. In addition, certain death benefits exist for beneficiaries of employees who die in active service.

2. Summary of Significant Accounting Policies

(a) Financial Reporting Entity

Because of the significance of its operational and financial relationship with the City, WRS is included as a blended component unit in the City's financial statements.

(b) Basis of Accounting

The accompanying financial statements are presented on the accrual basis of accounting.

(c) Revenue Recognition

Contributions are recognized as additions in the period when they become due pursuant to formal commitments or statutory or contractual requirements. Investment income is recognized when earned.

(d) Benefits and Refunds

Benefits and refunds to System members and beneficiaries are recognized as deductions when due and payable in accordance with the terms of the WRS.

(e) Valuation of Investments

Investments are reported at fair value. Fair value of investments are based on quotations from a national securities exchange except for pooled funds, venture capital and real estate, for which fair values are estimated as detailed below.

Pooled Funds

The fair value of shares in managed investment pools is based on unit values reported by the funds.

(continued)

Venture Capital

Venture capital investments are recorded at fair value as determined in good faith by the general partners of the venture capital firms after consideration of pertinent information, including current financial position and operating results, price-earnings multiples and available market prices of similar companies' securities, the nature of securities, marketability, restrictions on disposition and other appropriation and do not necessarily represent amounts which might ultimately be realized, since such amounts depend on future circumstances and cannot reasonably be determined until individual securities are liquidated.

Real Estate

The fair value of real estate funds is based on independent third-party appraisals. The investment managers of the funds are responsible for the reported value of those investments. However, because of the inherent uncertainty of valuation, those estimated values may differ significantly from the values that would have been used had a ready market for the real estate existed, and the differences could be material.

(f) Basis of Investment Transactions

Purchases and sales of investments are recorded on the trade date. Transactions remaining unsettled as of year-end are recorded as payable for securities purchased and as receivable for securities sold.

(g) Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting period. Fair values of real estate funds and venture capital funds have been estimated in the absence of readily available market values, and these estimates may be materially different than values that would have been used had a ready market existed.

3. Deposits, Investments and Securities Lending

WRS has the ability to invest in equity securities, corporate bonds, annuities and other specified investments in accordance with the state laws and regulations.

(a) Deposits

The following summary presents the amount of deposits as of December 31, 2003. Deposits that are fully insured or collateralized with securities held by WRS or its agent in WRS's name are shown in Category 1. Deposits collateralized with securities held by the pledging institutions or trust departments or agent in WRS's name are shown in Category 2. Deposits that are not insured or collateralized are shown in Category 3.

(continued)

Bank Balance Category 1	2	3	Total Bank Balance	Total Carrying Amount
$0	$0	$8,747,735	$8,747,735	$7,940,906

(b) Investments

WRS's investments have been categorized to indicate the level of risk assumed by WRS at year-end. Category 1 includes investments that are insured, registered of held by WRS or its agents in WRS's name. Category 2 includes investments which are uninsured and unregistered with securities held by the counter party's trust department or agent in WRS's name. Category 3 includes investments which are uninsured and unregistered, with securities held by the counterpart's trust department or its agent but not in WRS's name. "N/A" is not categorized because they are managed investment pools. The carrying and fair values of the WRS's investments at December 31, 2003 are categorized as follows:

	Category	**Carrying and Fair Values**
Investments:		
Common and preferred stocks	1	$141,626,905
International equity funds	N/A	89,517,495
U.S. government obligations	1	45,452,671
Debt securities	1	43,040,982
Pooled domestic equity funds	N/A	111,321,805
Real estate funds	N/A	41,718,951
Pooled global fixed income funds	N/A	49,756,849
Venture capital funds	N/A	24,063,298
		546,498,956
Investments held by custodian under securities loans:		
Common and preferred stocks	N/A	3,974,331
Debt securities	N/A	1,051,873
		5,026,204
Total investments		$551,525,160
Securities lending short-term collateral investment pool	N/A	$5,253,730

(continued)

(c) Securities Lending

PERAC has issued supplemental regulations that permit WRS to engage in securities lending transactions. These transactions are conducted by WRS's custodian, who lends certain securities owned by WRS to other broker-dealers and banks pursuant to a form of loan agreement. WRS and the borrowers maintain the right to terminate all securities lending transaction on demand.

The custodian lends, at the direction of the lending agent, WRS's securities and cash received (including both U.S. and foreign currency), U.S. government securities, sovereign debt of foreign countries, and irrevocable bank letters of credit as collateral. The custodian does not have the ability to pledge or sell collateral unless the borrower defaults. Borrowers are required to deliver cash collateral in amounts equal to not less than 100% of the market value of the loaned securities.

WRS does not impose any restrictions on the amount of securities lent on its behalf by the custodian. There were no failures by any borrowers to return loaned securities or pay distributions thereon, nor were there any losses from default of the borrowers or the custodian for the year ended December 31, 2003. The cash collateral received on each loan was invested; together with the cash collateral of other qualified tax-exempt plan lenders, in a collective investment pool. The relationship between the average maturities of the investment pool and loans was affected by the maturities of the loans made by other plans that invested cash collateral in the collective investment pool, which WRS could not determine. At December 31, 2003, WRS had no credit risk exposure to borrowers because the amounts WRS owed the borrowers exceeded the amounts owed WRS. The cash collateral held and the fair value of the securities on loan for WRS at December 31, 2003 was $5,253,730 and $5,026,204 respectively. Borrower rebates and fees paid to the broker were $58,222 for the year ended December 31, 2003.

4. Funding Policy

Depending on their employment date, active System members must contribute 5%, 7%, 8% or 9% of their gross regular compensation. Members hired after December 31, 1978 must contribute an additional 2% of regular compensation in excess of $30,000. These deductions earn interest at a rate determined by PERAC that vests based upon years of service.

Member employers are required to contribute the remaining amounts necessary to finance benefits, except for a portion of benefits owing to cost-of-living adjustments (COLA) granted through June 30, 1998, which are reimbursed by the Commonwealth of Massachusetts (the Commonwealth). The Commonwealth does not reimburse COLA's granted after June 30, 1998.

(continued)

5. Legally Required Reserve Accounts

The balances in WRS' legally required reserves as of December 31, 2003 are as follows:

Description	Amount	Purpose
Annuity Savings Fund	$115,779,891	Active members' contribution balance
Annuity Reserve Fund	50,157,812	Retired members' contribution account
Military Service Fund	16,836	Members' contribution account while on military leave
Pension Reserve Fund	145,802,176	Amounts appropriated to fund future Retirement
Pension Fund	246,759,763	Remaining net assets
Total	$558,516,478	

All reserve accounts are funded at levels required by state law.

Required Supplementary Information

The following reflects the Schedule of Funding Progress under the Entry-Age-Normal Actuarial Cost Method, which is the required method for all retirement systems, governed by Chapter 32 of the Massachusetts General Laws. The System believes that this method of valuation more clearly reflects the actual funding status of the System.

Schedule of Funding Progress

Actuarial	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	UAAL as a Percent of Covered Payroll
	(a)	(b)	(b - a)	(a/b)	(c)	(b -a)/c
1/1/1999	$529,999,363	538,803,009	8,803,646	98.37%	115,742,392	7.61%
1/1/2000	614,894,920	598,179,134	(16,715,786)	102.79	130,376,689	(12.82)
1/1/2001	630,714,618	628,681,483	(2,033,135)	100.32	136,000,517	(1.49)
1/1/2002	620,814,307	671,876,943	51,062,636	92.40	148,764,543	34.32
1/1/2003	554,190,090	715,855,564	161,665,474	77.42	142,802,508	113.21
1/1/2004	577,123,067	743,570,440	166,447,373	77.62	138,796,895	119.92

Schedule of Employers Contributions

Year Ended December 31		Annual Required Contributions	Percentage Contributed
*1998	$	241,213,831	100%
1999		8,606,751	100
2000		8,280,410	100
2001		9,480,000	100
2002		12,956,778	100
2003		18,928,252	100

*Includes $217,399,984 Pension Obligation Bonds issued by the City.
See notes to required supplementary information

(continued)

Notes to Required Supplementary Information

The information presented in the required supplementary schedules was determined as part of the actuarial valuation as of January 1, 2004 as follows:

Actuarial cost method	Entry-age normal cost
Amortization method	Payments increase 1.5% per year on the 2002 ERI liability, 4.5% per year on remaining unfunded liability and level payments on the 2003 ERI liability
Remaining amortization period	14 years from July 1, 2004 for the 2002 ERI liability, 15 years from July 1, 2004 for the 2003 ERI liability and 21 years from July 1, 2004 for remaining unfunded liability
Asset valuation method	5-year smoothing of investment returns greater/(less) than expected
Actuarial assumptions:	
Cost-of-living adjustments	3% for first $12,000 of retirement income
Investment rate of return	8.5%
Projected salary increases	5.0%

(continued)

Schedule of Administrative Expenses

The composition of administrative expenses for the year ended December 31, is as follows:

Personal Services:	
Staff Salaries	$ 289,277
Board Member Compensation	15,000
Insurance	10,859
Total Personal Services	315,136
Professional Services:	
Legal Expenses	68,707
Actuarial Fees	21,500
Audit Fees	14,700
Computer Consultant Fees	4,571
Medical Fees	2,447
Total Professional Services	111,925
Miscellaneous:	
Travel	2,016
Printing	1,951
Administrative Expenses	9,266
Total Miscellaneous	13,233
Total Administrative Expenses	$ 440,294

See Independent Auditors' Report

(continued)

Schedule of Investment and Consultants Expenses

Investment Expenses		
Management Fees:		
Domestic & Equity Managers	$	845,236
Venture Capital Funds		730,635
Domestic Fixed Income Managers		241,359
International Investments Managers		488,741
Real Estate Investments Managers		448,629
Consultant Fees		108,000
Custodial Fees		205,993
		3,068,593
Securities Lending Fees:		
Borrowers Rebates		50,755
Fees		7,467
		58,222
Total Investment Expenses		$3,126,815
Consultant Expenses:		
Independent Audit Fees		$14,700
Actuarial Fees		21,500
Legal Fees		68,707
		$104,907

See Independent Auditors' Report

Investment Section

REPORT ON INVESTMENT ACTIVITY

The information contained in the Investment Section of the Comprehensive Annual Financial Report (CAFR) has been prepared by Meketa Investment Group acting as the investment consultant for the Worcester Retirement System (the System). All investment information herein has been reconciled between the Trustees of the System, the investment managers hired by the System, and Meketa Investment Group. The investment returns presented herein were calculated in a manner consistent with that specified in the Association for Investment Management and Research (AIMR) presentation standards.

OUTLINE OF INVESTMENT POLICIES

The purpose of this document is to set forth the goals and objectives of the Worcester Retirement System, and to establish guidelines for the implementation of investment strategy.

The Board of the System recognizes that a stable, well-articulated investment policy is crucial to the long-term success of the System. As such, the Board has developed this Investment Policy Statement with the following goals in mind:

- To clearly and explicitly establish the objectives and constraints that govern the investment of the System's assets,
- To establish a long-term target asset allocation with a high likelihood of meeting the System's objectives given the explicit constraints, and
- To protect the financial health of the System through the implementation of this stable long-term investment policy.

I. Worcester Retirement System Goals

The System was established to provide retirement income for City of Worcester employees and their families. The System's assets are structured to provide real growth from capital gains and income, while maintaining sufficient liquidity to meet the System's benefit payments.

I. Investment Objectives

The investment strategy of the System is designed to ensure the prudent investment of funds in such a manner as to provide real growth of assets over time while protecting the value of the assets from undue volatility or risk of loss.

Risk Objectives

- To accept a level of market risk consistent with moderate interim volatility without sacrificing the potential for long-term real growth of assets.
- To use extensive diversification to minimize or eliminate completely exposure to company and industry-specific risks in the aggregate investment portfolio.

(continued)

- To avoid extreme levels of volatility that could adversely affect the System's portfolio.

- To limit the likelihood of investment return patterns that could negatively impact the funded status of the System.

Return objective

Within the risk constraints outlined above, to achieve the highest real return possible.
To achieve, over long time periods, investment returns consistent with the actuarial rate of return on assets of 8.5%.

III. Investment Constraints

Legal and Regulatory

The System is a qualified defined benefit plan governed by the Massachusetts General Laws, Chapter 32. Investment procedures and restrictions stipulated under these regulations must be followed.

The Board intends to manage the assets of the System at all times in accordance with the provisions of the Public Employee Retirement Administration Commission (PERAC) and the Massachusetts General Laws Chapter 32. The Board will retain legal counsel when appropriate to review contracts and provide advice with respect to applicable statutes and regulations.

Time Horizon

The WRS will be managed on a going-concern basis. The assets of the System will be invested with long-term time horizon (twenty years or more), consistent with the participant demographics and the purpose of the System.

Liquidity

The System exhibits a moderate need for interim liquidity. Cash outflows for benefit payments are expected to grow from approximately $47.8 million to close to $60 million over the next ten years, while cash flows are expected to rise from approximately $19.2 million to $35 million (covering normal costs and expenses) over the same period. This pattern results in a net negative cash flow of up to 4% of System assets, based on the System's year-end asset value and the actuarial assumed rate of return of 8.5% per year.

Tax Considerations

WRS is a tax-exempt entity. Therefore, investments and strategies will be evaluated only on the basis of expected risks and potential returns.

(continued)

IV. Risk and Return Considerations

The System's Board recognizes that a persistent positive relationship exists between risk and return, whether risk is described as possibility of loss or as interim volatility. The Board also recognizes that investors are rarely compensated for risks that can be eliminated through diversification. Within the risk and return parameters discussed above, the Board accepts the risks associated with investing in the capital markets (market risks), but will minimize wherever possible those risks for which the System is unlikely to be compensated (non-market or diversifiable risks).

V. Diversification

The System's Board recognizes that a primary element of risk control is diversification. Therefore, investments will be allocated across multiple classes of assets, chosen in part for their low correlation of returns. Within each asset type, investments will be distributed across many individual holdings, thus further reducing volatility. In addition, investment manager guidelines will specify the largest permissible investment in any one asset, and the largest permissible investment in any group of related assets.

The System's aggregate equity portfolio will be diversified by individual issue, capitalization, and industry. (International equity portfolios will also be diversified by country.) The System's aggregate fixed income portfolio will, at a minimum, be diversified by individual issue, by issuer, by maturity, and by industry. Residual cash will be swept by the custody bank into a short-term fixed income investment pool that is broadly diversified across individual issue and issuer. The System's aggregate real estate portfolio will be invested across a spectrum of geographic regions and property types.

The specific degrees of diversification within the above asset classes will be addressed in each manager's investment guidelines.

VI. Asset Allocation

The Board recognizes that the allocation of monies to various asset classes will be the major determinant of the System return and risk experience over time. Therefore, the System will allocate investments across those asset classes that, based on historical and expected returns and risks, provide the highest likelihood of meeting the System's investment objectives.

A. Permissible Asset Classes

Because investment in any particular asset class may or may not be consistent with the objectives of the System, the Board has specifically indicated those asset classes that may be utilized when investing the System's assets.

(continued)

Asset Type	Purpose	Asset Class
Equity	Large U.S. Common Stocks	Total Return Potential
Equity	Small U.S. Common Stocks	Total Return Potential
Equity	Non-U.S. Common Stocks	Total Return Potential Diversification
Equity	Private Markets	Total Return Potential Diversification
Fixed Income	High Grade Bonds	Return Stability Income
Fixed Income	High Yield Bonds	Total Return Potential Diversification Income
Real Estate	Real Estate	Total Return Potential Diversification Income
Cash	Cash Equivalents	Liquidity Return Stability

B. Expected Returns, Risks, and Correlations for Permissible Asset Classes

The risk and return behavior of the System will be driven primarily by the allocation of investments across asset classes. In determining the appropriate allocation, the expected return and risk behavior of each asset class and the likely interaction of various asset classes in a portfolio must be examined.

C. Long-Term Target Allocations

Based on the investment objectives and constraints of the System, and on the expected behavior of the permissible asset classes, the Board will specify a long-term target allocation for each class of permissible assets. These targets will be expressed as a percentage of the System's overall market value, surrounded by a band of permissible variation resulting from market forces.

The long-term target allocations are intended as strategic goals, not short-term imperatives. Thus, it is permissible for the overall System's asset allocation to deviate from the long-term target, as would likely occur during manager transitions, asset class restructurings, and other temporary changes in the System. Deviations from targets that occur due to capital market changes are discussed below.

(continued)

ASSET ALLOCATION TARGETS

	Target	Range
Equity	60%	55% - 65%
Domestic Equity: Large Cap	35%	30% - 40%
Domestic Equity: Small Cap	10%	8% - 12%
Non-U.S. Common Stocks	15%	13% - 17%
Fixed Income	25%	20% - 30%
Investment Grade (excl. TIPS)	15%	12% - 18%
TIPS	5%	3% - 7%
High Yield	5%	3% - 7%
Real Estate[1]	10%	8% - 12%
Private Equity[1]	5%	3% - 7%
Cash[2]	*0%*	*<5%*

Based upon the expected asset returns, risks, and correlations determined by Meketa Investment Group, this target allocation exhibits an expected annual return of 8.8% and an expected annual standard deviation of 12.8%.

(continued)

[1] The Retirement System is restricted by PERAC to target allocations of 10% for real estate, and 5% for private equity. The System will make reasonable attempts to maintain those allocations, recognizing that market fluctuations and the funding requirements of alternative investments may result in short-term deviations from the targets.

[2] The cash target of zero defines the System's objective of keeping cash balances as low as possible, at least below 5% at all times. The Retirement Board is aware, however, that a certain cash balance is needed for the efficient operation of the System and its various portfolios.

D. Rebalancing

The Board recognizes that, periodically, market forces may move the System's allocations outside the target ranges. The Board also recognizes that failing to rebalance the allocations would unintentionally change the System's structure and risk posture. However, the Board understands that constant rebalancing would result in a significant increase in explicit and implicit trading costs to the System. Consequently, the Board has established a process to rebalance the allocations periodically.

On at least an annual basis, if any strategic allocation is outside the specified target range, assets will be shifted to return the strategy to the target range. The specific plan for rebalancing will identify those assets that can be shifted at the lowest possible risk and cost, if the rebalancing cannot be accomplished solely by allocating contributions and withdrawals.

E. Changes to Asset Allocation

Once established, permanent changes in the System's target asset allocation will take place only in response to significant changes in the objectives and constraints of the System, or in response to material changes in the fundamental nature or appropriateness of the asset classes themselves.

VII. Review of Investment Policy, Asset Allocation, and Performance

The Investment Policy Statement will be reviewed at least annually, and specifically upon each actuarial valuation, to ensure that the objectives and constraints remain relevant. However, the Board recognizes the need for a stable long-term policy for the System, and major changes to this policy statement will be made only when significant developments in the circumstances of the System occur. The Board will notify PERAC of any changes to this document within ten days of the effective date of those changes.

The asset allocation of the System will be reviewed on an on-going basis, and at least annually. When necessary, such reviews may result in a rebalancing of asset allocations. In general, the Board intends that the System will adhere to its long-term target allocations, and that major changes to these targets will be made rarely and only in response to significant developments in the circumstances of the System.

The Board will specifically evaluate the performance of the System relative to its objectives and to the returns available from the capital markets during the period under review. In general, the Board will utilize relative, rather than absolute, benchmarks in evaluating performance.

VIII. Trading and Proxy Voting by Investment Managers

In accordance with the fiduciary and other obligations imposed on investment managers by either their agreements with the Board all trades executed by managers must be for the exclusive benefit of the System's participants and beneficiaries. Managers are expected to seek best execution on all trades.

(continued)

The Board recognizes that the right to vote proxies for securities held represents an asset of the System.

As such, the Board has specifically delegated the responsibility for voting all security proxies to the individual managers. The Board believes that the voting of proxies constitutes an investment decision by the managers, and that prudent voting of proxies is important to the overall performance of the System. Investment managers are expected to execute all proxy votes in a timely fashion and to provide a full written accounting of proxy votes on an annual basis.

X. Management Structure

To diversify the System's assets so as to minimize the risk associated with dependence on the success of one enterprise, the Board Members have decided to employ a multi-manager team approach to investing System assets.

A consultant will be employed whose responsibilities will be to: 1) provide risk and return assumptions for various asset classes, 2) to diversify the System so as to minimize risk, while enhancing the probability of achieving the System's return objectives, and 3) to evaluate the performance and compliance of investment managers.

Investment managers will be employed to utilize individual expertise within their assigned area of responsibility. Each manager will be governed by individual investment guidelines.

XI. Implementation

All monies invested for the System after the adoption of this investment policy statement shall conform to this statement.

(continued)

Investment Results

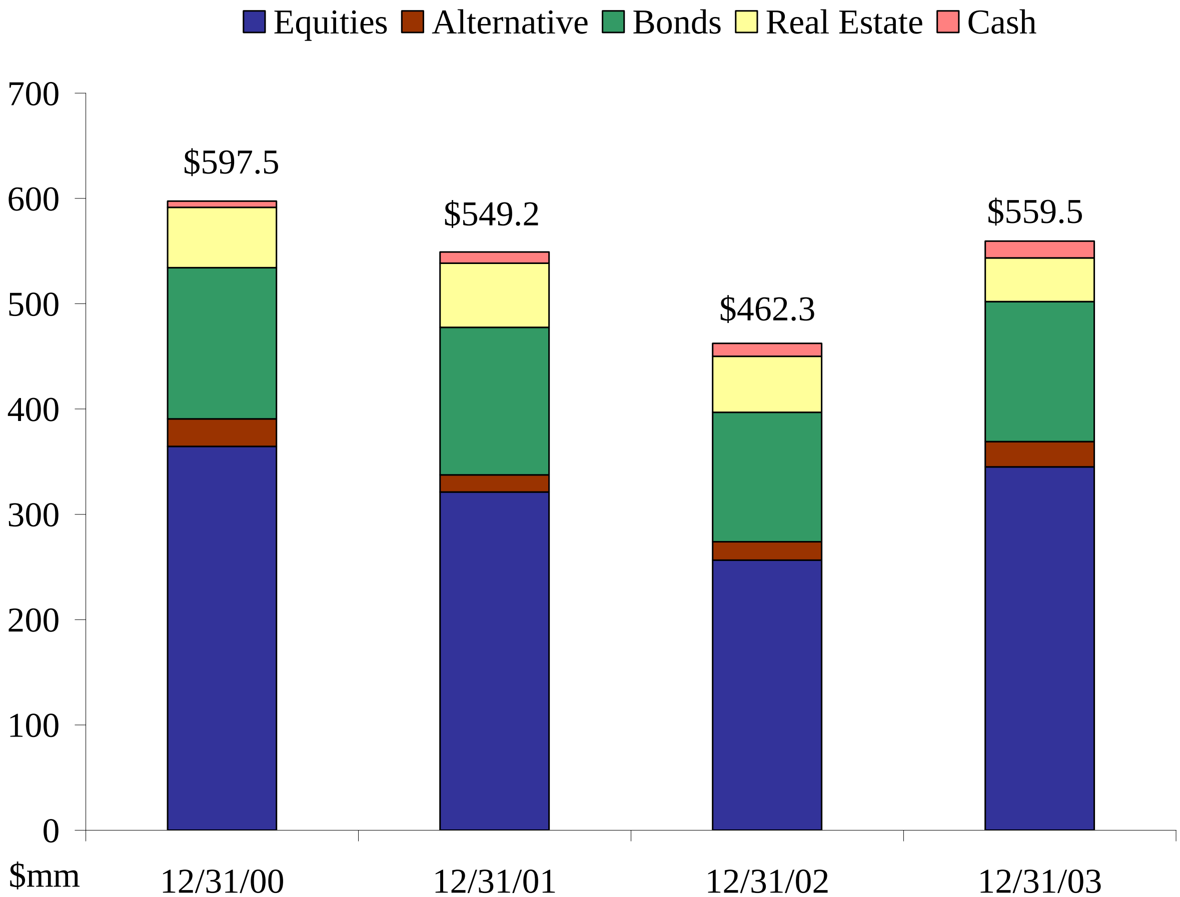
	4Q03	1 YR	3 YR	5 YR	Since 10/1/95
Total System	**9.4%**	**25.5**	**1.2**	**4.8**	**9.1**
CPI (inflation)	(0.5)	1.9	1.9	2.4	2.3
Total Equity	**13.6**	**37.4**	**(1.6)**	**3.6**	**NA**
Wilshire 5000	12.4	31.6	(2.5)	0.4	9.4
S&P 500	12.2	28.7	(4.1)	(0.6)	9.9
MSCI EAFE	17.1	39.2	(2.6)	0.3	4.0
Total Fixed Income	**2.8**	**10.4**	**8.2**	**6.9**	**NA**
Lehman Universal	0.8	5.8	7.9	6.9	7.3
Total Real Estate	**2.2**	**5.9**	**4.4**	**7.1**	**NA**
NCREIF Property (lagged)	2.0	7.8	7.9	9.5	10.6
Total Alternative Assets	**5.0**	**8.2**	**(19.1)**	**NA**	**NA**

The System’s policy is a time weighted average of the representative asset class benchmarks.

Manager returns include the effects of cash and equivalents; returns for all periods greater than one year are annualized. For pooled investments, returns are reported by the manager. Throughout this report, numbers may not sum due to rounding. Returns for private market assets, Real Estate and Private Equity, are lagged by one quarter.

(continued)

Asset Allocation



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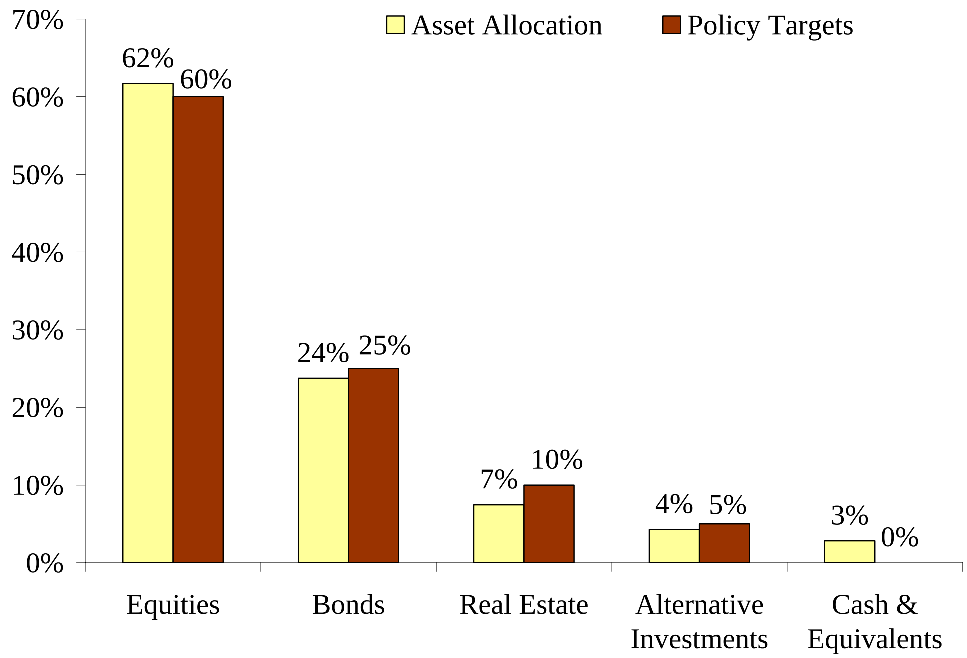
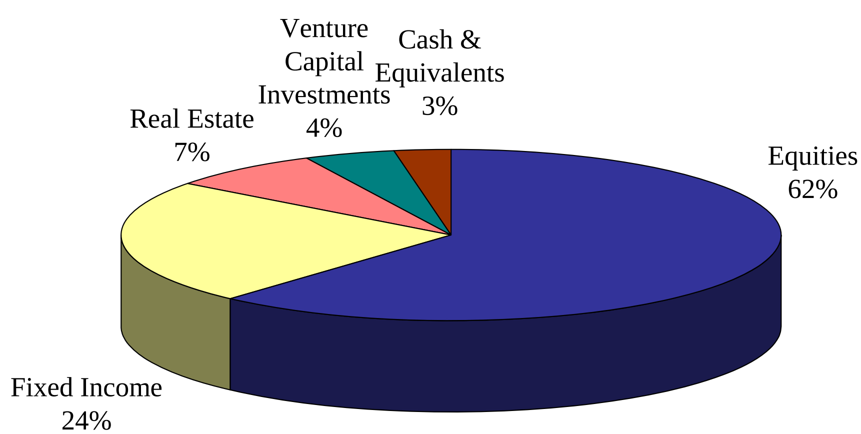
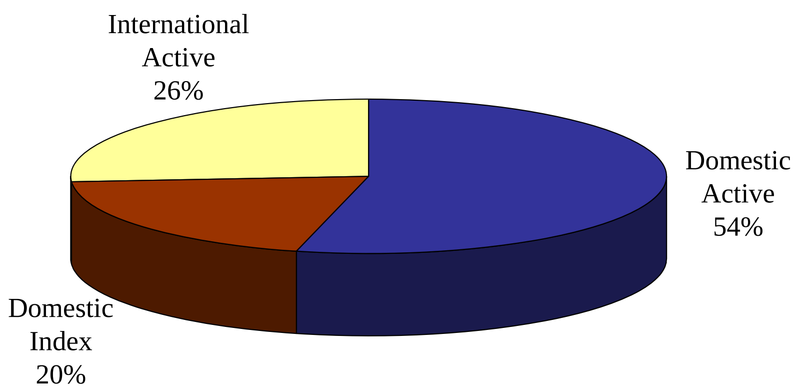
Aggregate Asset Allocation vs. Policy Targets



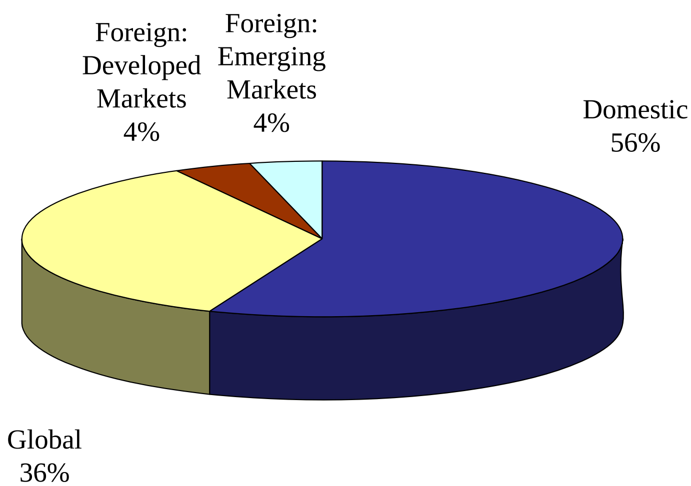


(continued)

Equity Allocation



Fixed Income Allocation



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Ten Largest Stock Holdings by Fair Value

Company	Number of Shares	Fair Value ($mm)	% of Domestic Stock	Industry
General Electric	147,663	$4.6	1.8%	Conglomerate
Pfizer	111,336	3.9	1.5	Healthcare-Drugs
Citigroup	69,447	3.4	1.3	Banking
Microsoft	112,257	3.1	1.2	Computer Software
AIG	40,177	2.7	1.0	Insurance
Cisco Systems	92,067	2.2	0.9	Communications Equipment
Intel	62,890	2.0	0.8	Electronic Components
Wal Mart	36,677	1.9	0.8	Retail
IBM	20,676	1.9	0.7	Computers
Bank of America	23,501	1.9	0.7	Banking

Ten Largest Fixed Income Holdings by Fair Value

Security	Coupon %	Maturity Date	Par Value	Fair Value ($mm)	% of Domestic Bonds
U.S. Treasury Note Inflation Index	1.9%	07/15/2013	$8,662,866	$8.60	6.4%
U.S. Treasury Bond Inflation Index	3.9	04/15/2029	5,739,489	7.44	5.6
U.S. Treasury Bond Inflation Index	3.6	04/15/2028	4,694,172	5.82	4.4
U.S. Treasury Note	1.1	06/30/2005	2,640,000	2.63	2.0
U.S. Treasury Note	5.3	05/15/2004	1,200,000	1.22	0.9
FNMA Pool	4.8	02/21/2013	1,025,000	1.01	0.8
FNMA Pool	2.9	10/15/2005	985,000	1.00	0.8
FHLMC Gold #A16641	5.5	12/01/2033	825,000	0.84	0.6
U.S. Treasury Bond	7.5	11/15/2016	595,000	0.76	0.6
Bausch & Lomb	7.1	08/01/2028	650,000	0.66	0.5

A complete portfolio is available upon request.

(continued)

Schedule of Fees & Commissions

Investment Fees December 31, 2003	
Columbia Management Adv. Inc.	$231,168
Hutchens Investment Mgt. Inc.	177,290
Loomis Sayles & Company, L.P.	119,993
SSR Equity Management	(18,487)
Enhancement Investment Tech. LLC	40,160
Bank of Ireland Asset Mgt. Limited	205,606
Boston Company Asset Mgt. LLC(ACWI)	283,135
State Street Global Advisors	26,692
Boston Company Asset Mgt. (Premier)	268,420
OPUS Investment Mgt. Inc.	71,025
OPUS Investment Mgt. Inc. (Tips)	5,507
Loomis Sayles & Company, L.P.	137,227
Northern Trust Company	27,600
Invesco Private Capital, Inc.	37,500
Bailard, Biehl & Kaiser	206,093
Henderson Global Investors	83,626
L&B Realty Advisors Inc. (L&B 90s)	20,747
Lend Lease Real Estate Inv. Inc. II	11,618
Lend Lease Real Estate Inv. Inc. III	17,461
Lend Lease Real Estate Inv. Inc. IV	41,487
SSR Realty Advisors, Inc.	4,412
Evergreen Timberland Inv. Mgt.	63,185
Ascent Venture Management, Inc. II	53,671
Ascent Venture Management, Inc. III	114,883
Boston Capital Ventures	7,650
Boston Millennium Partners	77,540
Charlesbank Capital Partners	51,640
Concord Partners LP (Ticond.)	4,552
Duke Street Capital	(9,226)
New England Partners Capital I	45
New England Partners Capital II	28,604
Northstar Capital LLC	277,319
Riverside Company 2000	41,859
Riverside Company 2003	29,782
Standard Life Investments Limited	14,816
Total Investment Managers Fees	**2,754,600**
IBT (Custodian Bank Fee)	205,993
Meketa Investment Consultant Fee	108,000
Security Lending Fees	58,222
Total Other Fees	**372,215**
Total Investment Fees	$ **3,126,815**

(continued)

Broker Name	Shares	Total Commissions	Commissions Per Share
A.G. EDWARDS & SONS	41,796	$ 1,988	$ 0.05
ABEL/NOSER CORP.	53,059	1,061	0.02
ADAMS, HARKNESS & HILL, INC.	96,700	4,835	0.05
ALLEN & CO., INC.	10,700	535	0.05
ALPHA EQUITY RESEARCH	1,400	70	0.05
AMERICAS GROWTH CAPITAL	2,275	114	0.05
ARCHIPELAGO	131,350	2,073	0.02
BAIRD ROBERT W. & CO., INC.	56,690	2,777	0.05
B-TRADE SERVICES, LLC	308,325	6,148	0.02
BAIRD, ROBERT W., & COMPANY	15,200	760	0.05
BANC/AMERICA SECUR., MONTGOMERY	62,950	2,345	0.02
BANK OF NEW YORK	130,685	1,960	0.02
BEAR STEARNS & CO.	169,750	8,113	0.05
BERNSTEIN, SANFORD G. & CO., INC.	18,675	871	0.05
BLAIR, WILLIAM & CO.	3,900	195	0.05
BLAYLOCK & PARTNERS, L.P.	7,000	350	0.05
BRICK SECURITIES	4,400	220	0.05
BRIDGE TRADING COMPANY	3,900	195	0.05
BROCKHOUSE COOPER	2,700	135	0.05
BURLINGTON CAPITAL MARKETS, INC.	3,300	165	0.05
C.I.S.	1,127,580	22,552	0.02
C.L. KING & ASSOCIATES	5,500	275	0.05
CANTOR FITZGERALD	62,275	2,972	0.05
C.E. UNTERBERG TOWBIN	13,000	650	0.05
CIBC OPPENHEIMER	157,920	7,188	0.05
CITIGROUP	67,225	3,274	0.05
CITIGROUP GLOBAL MARKETS	13,400	670	0.05
CJS SECURITIES	60,425	7,188	0.05
CL KING & ASSOCIATES	51,700	2,571	0.05
COWEN & CO.	87,749	4,272	0.05
CRAIG-HALLUN CAP. GROUP	34,400	1,720	0.05
CRAIG-HALLUM	5,175	215	0.04

(continued)

CREDIT SUISSE FIRST BOSTON CORP.	74,775	3,521	0.05
CUTTONE & CO.	2,800	120	0.04
D.A. DAVIDSON & CO.	6,625	331	0.05
DAIN BOSWORTH, INC.	3,905	195	0.05
DEUTSCHE BANC ALEX BROWN	160,725	6,816	0.05

DONALDSON & CO., INC.	216,850	5,703	0.05
EXECUTION SERVICES, INC.	4,900	245	0.05
FACTSET	5,600	280	0.05
FACTSET DATA SYSTEMS, INC./BCC CLRG	10,100	505	0.05
FERRIS BAKER WATTS	3,600	90	0.03
FIDELITY CAP MARKETS C/T 0226	200	10	0.05
FIDELITY CAPITAL MARKETS	494,640	24,732	0.05
FIRST ALBANY CORP.	122,200	6,084	0.05
FIRST ANALYSIS SECURITIES CORP.	31,500	1,575	0.05
FIRST BOSTON CORP.	130,387	5,834	0.05
FIRST UNION CAPITAL MARKETS	38,352	1,918	0.05
FLEET INSTITUTIONAL TRADING	68,020	34,040	0.05
FOX-PITT, KELTON, INC.	6,500	234	0.03
FRIEDMAN BILLINGS & RAMSEY	200	-	--
FUTURE TRADE	400	6	0.02
GERARD,KLAUER & MATTISON, INC.	13,400	586	0.04
GOLDMAN SACHS & CO.	20,600	412	0.02
GUZMAN & CO.	25,700	514	0.02
HAMBRECHT	27,250	1,363	0.05
HARBORSIDEPLUS	6,225	65	0.02
HOWARD WEIL LABOUISSE FRIEDRICHS	1,200	60	0.05
I.T.G. C/T JEFFRIES (0019)	421,031	8,421	0.02
INSTINET	69,500	1,746	0.02
ISI GROUP, INC.	11,825	591	0.05
IVY SECURITIES	750	38	0.05
J.P. MORGAN SECURITIES, INC.	172,406	8,324	0.05
JANNEY MONTGOMERY SCOTT, INC.	2,700	135	0.05
JEFFERIES & CO., INC.	307,145	8,629	0.02
JOLSON MERCHANT PARTNERS	1,800	90	0.05
JONES & ASSOC/NATL FINC'L	12,800	640	0.05
KEEFE,BRUYETTE,WOODS/PERSHING	49,441	2,247	0.05

(continued)

KNIGHT SECURITIES, INC.	126,010	4,829	0.03
LAZARD FRERES & CO.	3,000	150	0.05
LEERINK SWANN & CO.	22,465	1,123	0.05
LEGG MASON WOOD WALKER	71,375	3,148	0.05
LEHMAN BROTHERS, INC.	119,680	5,360	0.03
LIQUIDNET, INC.	198,975	3,980	0.02
LYNCH JONES & RYAN	1,371,710	47,265	0.05
MCDONALD & CO SECURITIES, INC.	47,185	2,349	0.05
MERRILL LYNCH	345,150	16,508	0.04

MERRIMAN CURHAN FORD	875	44	0.05
MID WEST RESEARCH	12,600	630	0.05
MISC BROKERS - DIRECTED	1,200	60	0.05
MORGAN KEEGAN & CO, INC.	16,770	839	0.05
MORGAN STANLEY & CO, INC.	92,975	4,524	0.01
MORGAN, J.P. SECURITIES	6,100	145	0.02
NATIONSBANC MONTGOMERY SEC.	23,000	1,074	0.05
NEEDHAM & CO. C/T BEAR STEARNS	99,800	4,678	0.05
OPPENHEIMER & CO., INC	24,000	1,200	0.05
PACIFIC CREST SECURITIES, INC.	19,900	995	0.05
PACIFIC GROWTH	5,750	288	0.05
PERSHING DIVISION OF DLJ	11,200	560	0.05
PETRIE PARKMAN	2,600	130	0.05
PIPER, JAFFRAY & HOPWOOD, INC.	6,700	335	0.05
PRITCHARD CAPITAL	1,975	99	0.05
PRUDENTIAL SECURITIES, INC.	93,725	4,392	0.05
RAGEN MACKENZIE, INC.	3,600	180	0.05
RAYMOND JAMES & ASSOCIATES, INC.	45,050	2,253	0.05
RBC CAPITAL MARKETS	67,375	3,231	0.05
REDI INSTITUTIONAL	12,000	240	0.02
REORGANIZATION	1	--	--
RICHARD ROSENBLATT	95,600	1,912	0.02
ROBINSON-HUMPHREY	18,000	900	0.05
ROCHDALE SECURITIES CORP.	4,300	215	0.05
RYAN BECK & CO.	3,900	95	0.02
SALOMON SMITH BARNEY	67,000	3,350	0.05
SANDLER O'NEIL	5,525	276	0.05

(continued)

SBC WARBURG-DILLON	188,950	3,779	0.02
SBCI SWISS BK CORP. INV. BANKING	18,500	925	0.05
SCHWAB SOUNDVIEW CAPITAL MARKETS	47,500	2,299	0.05
SCOTT & STRINGFELLOW INV. CORP.	10,700	535	0.05
SG COWEN SECURITIES	50,000	--	--
SG COWEN	61,225	3,061	0.05
SIDOTI & CO.	41,475	2,076	0.05
SOUNDVIEW TECHNOLOGY GROUP, INC.	39,925	1,887	0.05
SOUTHWEST SECURITIES	14,975	749	0.05
SPEAR LEEDS & KELLOGG	601	12	0.02
STANDARD & POORS	7,500	375	0.05
STEPHENS & CO.	11,975	559	0.04
STERLING FINANCIAL INVESTMENT GROU	1,600	80	0.05

STIFEL, NICOLAUS & CO., INC.	2,800	140	0.05
SUMMER STREET PARTNERS, LLC	4,200	210	0.05
SUNTRUST ROBINSON-HUMPHREY CO.	4,875	244	0.05
THINK EQUITY	8,275	414	0.05
THOMAS WEISEL PARTNERS , LLC	128,675	5,872	0.05
TUCKER ANTHONY & RL DAY, INC.	1,000	50	0.05
US BANCORP PIPER JAFFRAY	108,650	4,960	0.05
UBS FINANCIAL SERVICES	12,200	600	0.05
UBS WARBURG, LLC	76,275	3,738	0.05
UNTERBERG(C.E.),TOWBIN	1,100	55	0.05
VAND HAM SECURITIES CORP.	200	10	0.05
VOLUNTARY TENDER	21,708	--	--
WACHOVIA SECURITIES, INC.	78,125	3,747	0.05
WAGNER STOTT CLEARING CORP.	1,500	75	0.05
WARBURG DILLION READ, LLC	32,600	1,630	0.05
WEDBUSH MORGAN SEC.	3,500	175	0.05
WEEDEN AND CO.	107,808	2,156	0.02
WELLS FARGO /VAN KASPER & CO.	6,300	315	0.05
WESTMINSTER (MONTGOMERY SECURITI	4,425	221	0.05
WHEAT FIRST SECURITIES	19,550	973	0.05
WILLIAM BLAIR & COMPANY, LLC	27,075	1,354	0.05
WILLIAM O'NEIL & CO.	5,100	255	0.05
TOTAL	9,535,094	375,443	

INVESTMENT SUMMARY

	Assets ($mm)	% of System	% of Aggregate
Total System	**$559.5**	**100**	**100**
Total Domestic Equities	**255.5**	**100**	**45**
Information Technology	62.3	24	11
Financials	42.5	17	7
Health Care	35.7	14	6
Consumer Discretionary	33.4	13	6
Industrials	25.8	10	5
Energy	15.4	6	3
Consumer Staples	14.0	6	3
Materials	11.4	5	2
Utilities	7.6	3	1
Telecommunications Services	7.4	2	1
Total Fixed Income	**132.9**	**100**	**25**
Credit	53.3	40	10
U.S. Treasury	36.9	28	7
Mortgage Backed	26.7	20	5
U.S. Agency	8.8	7	2
Commercial Mortgage Backed	2.6	2	0
Cash Equivalent	4.6	3	1
Total International Equities	**89.5**	**100**	**16**
Europe - Developed	61.0	68	11
Pacific Rim/Australasia - Developed	19.3	22	3
Other (Non-EAFE)	6.8	8	1
Americas (Non-EAFE)	2.4	3	0
Total Alternative Investments	**65.8**	**100**	**11**
Real Estate	41.7	63	7
Private Markets	24.1	37	4
Cash & Equivalents	**15.8**	**100**	**3**

(continued)

LIQUIDITY PROFILE

Benefits payments totaled approximately $47.8 million during the year and along with other payments of $4.3 million resulted in total cash outflows of $52.1 million in 2003. These payments were partially offset by a contribution of approximately $19 million from employers and other cash receipts of $14.4 million for a total $33.4 million in 2003 on July 1. This resulted in a negative cash flow of approximately $18.7 million for the calendar year. Note that these figures do not incorporate expected income and asset gains from the System's investments. The System's portfolio is structured with a long-term expected return of 8.8%.

Actuarial Section

SEGAL
THE SEGAL COMPANY
116 Huntington Avenue, 8th Floor Boston, MA 02116
T 617.424.7336 F 617.424.7390 www.segalco.com

Kathleen A. Riley, FSA, MAAA, EA
Senior Vice President & Actuary
kriley@Segalco.com

June 7, 2004

City of Worcester Retirement Board
City Hall, Room 103,
455 Main Street
Worcester, MA 01608

Dear Board Members:

The Segal Company has performed a January 1, 2004 actuarial valuation of the City of Worcester Retirement System. This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Retirement Board are reasonably related to the experience of and the expectations for the System.

As part of performing the valuation, The Segal Company was furnished member data by the City of Worcester Retirement System's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary. In addition, the administrative staff furnished financial statements that were not audited by the actuary.

The funding objective of the plan is to provide for the current cost of benefits (*i.e.*, normal cost) and to reduce the unfunded liability to zero by June 30, 2025. The normal cost is expected to remain at a level percentage of payroll. The remaining liability of the 2002 ERI is amortized over a 14-year period in payments, which increase at the rate of 1.5% per year. The 2003 ERI liability is amortized over a 15-year period with level payments. The remaining unfunded liability is amortized over a 21-year period with payments increasing at the rate of 4.5% per year. The contribution will increase by approximately 4.5% per year, except for years when the ERI liability is fully amortized.

The funding objective as of the prior valuation was to reduce the unfunded liability to zero by June 30, 2028.

(continued)

Actuarial valuations have been performed annually. This is consistent with the guidelines promulgated by PERAC and GASB. The last valuation was performed as of January 1, 2003.

The Segal Company has prepared the supporting schedules for the Actuarial Section and Statistical Section of the CAFR. The Schedules of Funding Progress and the Schedule of Employer Contributions found in the Financial Section of the CAFR are shown in the January 1, 2004 valuation report.

Please let us know if you have any questions on this material.

Sincerely,

THE SEGAL COMPANY

By: ______________________________

Kathleen A. Riley, FSA, MAAA
Senior Vice President and Actuary

I. Actuarial Assumptions and Actuarial Cost Method

Mortality Rates

Healthy	1994 Group Annuity Mortality Table
Disabled	1994 Group Annuity Mortality Table set forward 10 years

Termination Rates before Retirement

	Rate (%)			
	Mortality		Groups 1 and 2	
Age	**Male**	**Female**	**Disability**	**Withdrawal**
20	0.05	0.03	0.02	12.00
25	0.07	0.03	0.03	8.78
30	0.08	0.04	0.04	5.55
35	0.09	0.05	0.05	3.93
40	0.11	0.07	0.07	2.31
45	0.16	0.10	0.13	1.89
50	0.26	0.14	0.19	1.46
55	0.44	0.23	0.29	0.00
60	0.80	0.44	0.38	0.00

Notes: *55% of the disability rates shown represent accidental disability.*
20% of the accidental disabilities will die from the same cause as the disability.
55% of the death rates shown represent accidental death.

	Mortality		Group 4	
Age	**Male**	**Female**	**Disability**	**Withdrawal**
20	0.05	0.03	0.08	2.10
25	0.07	0.03	0.12	1.88
30	0.08	0.04	0.17	1.65
35	0.09	0.05	0.41	1.11
40	0.11	0.07	0.65	0.56
45	0.16	0.10	0.89	0.28
50	0.26	0.14	1.13	0.00
55	0.44	0.23	1.33	0.00
60	0.80	0.44	1.53	0.00

Notes: *90% of the disability rates shown represent accidental disability.*
60% of the accidental disabilities will die from the same cause as the disability.
90% of the death rates shown represent accidental death. (continued)

Retirement Rates

	Rate (%)		
Age	Groups 1 and 2	Age	Group 4
55	12.55	50	32.00
56	3.21	51	7.21
57	3.10	52	5.90
58	3.34	53	8.00
59	3.48	54	7.71
60	7.84	55	15.51
61	6.92	56	9.11
62	15.11	57	9.09
63	10.71	58	11.90
64	10.37	59	11.42
65	35.68	60	23.95
66	22.14	61	13.60
67	21.59	62	19.50
68	21.64	63	12.53
69	25.36	64	18.73
70	100.00	65	100.00

Unknown Data for Participants

Same as those exhibited by participants with similar known characteristics.

Age of Spouse

Female (or male) spouses 3 years younger (or older) than their spouses.

Percent Married 80%

Net Investment Return 8.50%

(continued)

Salary Increases

Age	Present salary as a percent of salary at 65	Annual increase rate (%)
20	11.13	5.00
25	14.20	5.00
30	18.13	5.00
35	23.14	5.00
40	29.53	5.00
45	37.69	5.00
50	48.10	5.00
55	61.39	5.00
60	78.35	5.00

Includes allowance for inflation of 4.00%.

Administrative Expenses

$600,000 for calendar 2004

Actuarial Value of Assets

A preliminary actuarial value is first determined by taking the actuarial value of assets at the beginning of the year and adding assumed investment earnings (at the assumed actuarial rate of return) and the net new money during the year (contributions less benefit payments and administrative expenses). Twenty percent of the difference between the market value of assets and the preliminary actuarial value of assets is added to the preliminary actuarial value. In order that the actuarial value not differ too significantly from the market value of assets, the final actuarial value of assets must be within 20% of the market value of assets.
(Previously, the actuarial value of assets is equal to the market value of assets less unrecognized returns in each of the last three years. Unrecognized return is equal to the difference between the actual market return and the expected return on the actuarial value, and is recognized over a three-year period. The actuarial value is further adjusted, if necessary, to be within 20% of the market value.)

Actuarial Cost Method

Entry Age Normal Actuarial Cost Method. Entry Age is the age of the participant at the Adjusted Date of Hire. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salary.

(continued)

Recent Changes

The salary increase assumption was lowered January 1, 2003 from 5.50% to 5.00%. An asset smoothing method was first applied with the January 1, 2000 valuation and modified as of January 1, 2004 (see above).

II. Schedule of Active Member Valuation Data

Valuation date	Number	Projected annual payroll	Annual average pay	% Increase in average pay
01/01/1999	3,662	$115,742,392	31,606	0.39
01/01/2000	3,840	130,376,689	33,952	7.42
01/01/2001	3,910	136,000,517	34,783	2.45
01/01/2002	4,080	148,764,543	36,462	4.82
01/01/2003	3,679	142,802,508	38,816	6.45
01/01/2004	3,409	138,796,895	40,715	4.89

III. Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

	Added to Rolls		Removed from Rolls		Rolls – end of year			
Year ended	Number	Annual allowances[1]	Number	Annual allowances	Number	Annual Allowances[1]	% Increase in annual allowances	Average annual allowances
1998	N/A	N/A	N/A	N/A	3,004	36,224,794	N/A	12,059
1999	75	$1,538,292	107	N/A	2,972	37,104,177	2.43	12,485
2000	106	2,338,770	128	N/A	2,950	40,034,838	7.90	13,571
2001	86	2,057,603	131	N/A	2,905	41,736,155	4.25	14,367
2002	216	6,081,952	120	N/A	3,001	47,173,651	13.03	15,719
2003	115	3,212,097	120	N/A	2,996	49,606,369	5.16	16,558

(continued)

[1] Annual allowances are shown for retirees in pay status at the end of the year.

IV. Solvency Test

	Actuarial Accrued Liability				Portion of Actuarial Accrued Liability Covered by Assets		
Valuation date	(1) Active member contributions	(2) Retirees and beneficiaries	(3) Active/Inactive members (Employer financed)	Actuarial value of assets	(1)	(2)	(3)
1/1/1999	$90,779,855	276,983,281	171,039,873	529,999,363	100%	100	95
1/1/2000	97,983,371	303,781,700	196,414,063	614,894,920	100	100	100
1/1/2001	104,242,043	327,801,840	196,637,600	630,714,618	100	100	100
1/1/2002	111,769,704	342,266,770	217,840,469	620,814,307	100	100	77
1/1/2003	111,507,319	397,136,220	207,212,025	554,190,090	100	100	22
1/1/2004	115,779,891	418,037,422	209,753,127	577,123,067	100	100	21

V. Analysis of Financial Experience

	Year Ended December 31,			
	2003	2002	2001	2000
1. Unfunded actuarial accrued liability as of January 1	$ 161,665,474	51,062,636	(2,033,135)	(16,715,786)
2. Normal cost as of January 1	19,902,898	21,597,468	19,661,748	18,918,212
3. Employer and employee contributions during year	(29,261,377)	(24,139,117)	(20,965,327)	(18,500,182)
4. Interest				
(a) For whole year on (1)+(2)	15,433,311	6,176,109	1,498,432	187,206
(b) For half year on (3)	(1,123,184)	(926,569)	(804,760)	(710,121)
(c) Total interest	14,310,127	524,940	693,672	(522,915)
5. Expected unfunded actuarial liability	166,617,122	53,770,527	(2,643,042)	(16,820,671)
6. Actual unfunded actuarial accrued liability	166,447,373	161,665,474	51,062,636	(2,033,135)
7. (Gain) or loss for the year: (6)-(5)	$ (169,749)	107,894,947	53,705,678	14,787,536
8. Investment (gain) or loss	$ 4,639,654	98,499,864	43,913,891	16,317,143
9. (Gains) or losses from sources other than investments	(8,634,577)	3,781,977	9,791,787	(7,563,739)
10. Plan changes	3,825,174	12,987,821	-	6,034,142
11. Assumption changes	-	(7,347,715)	-	-

VI. Summary of Plan Provisions

This exhibit summarizes the major provisions of Chapter 32 of the Laws of Massachusetts.

Plan Year

January 1 – December 31

Retirement Benefit

Employees covered by the Contributory Retirement Law are classified into one of four groups depending on job classification. Group 1 comprises most positions in state and local government. It is the general category of public employees. Group 4 comprises mainly police and firefighters. Group 2 is for other specified hazardous occupations. (Officers and inspectors of the State Police are classified as Group 3.)

The annual amount of the retirement allowance is based on the member's final three-year average salary multiplied by the number of years and full months of creditable service at the time of retirement and multiplied by a percentage according to the following table based on the age of the member at retirement.

	Age Last Birthday at Date of Retirement		
Percent	**Group 1**	**Group 2**	**Group 4**
2.5	65 or over	60 or over	55 or over
2.4	64	59	54
2.3	63	58	53
2.2	62	57	52
2.1	61	56	51
2.0	60	55	50
1.9	59	--	49
1.8	58	--	48
1.7	57	--	47
1.6	56	--	46
1.5	55	--	45

A member's final three-year average salary is defined as the greater of the highest consecutive three-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last three years of creditable service prior to retirement. The $30,000 cap on salary used in a benefit determination for any employee hired after January 1, 1979 has been removed.

The maximum annual amount of the retirement allowance is 80 percent of the member's final three-year average salary. Any member who is a veteran also receives an additional yearly retirement allowance of fifteen dollars per year of creditable service, not exceeding three hundred dollars. The veteran allowance is paid in addition to the 80 percent maximum.

(continued)

Employee Contributions

Employees hired before January 1, 1975 contribute 5 percent of their salary; employees hired after December 31, 1974 and before January 1, 1984 contribute 7 percent; employees hired after January 1, 1984 contribute 8 percent; employees hired after July 1, 1996 contribute 9 percent.

In addition, employees hired after December 31, 1978 contribute an additional 2 percent of salary in excess of $30,000.

Employees hired after 1983 who leave with less than five years of credited service receive no interest on their contributions and employees who leave with five but less than ten years receive one-half the rate of regular interest otherwise payable.

Retirement Benefits (Superannuation)

Members of Group 1, 2 or 4 may retire upon the attainment of age 55. For retirement at ages below 55, twenty years of creditable service is required.

Members who terminate before age 55 with ten or more years of creditable service are eligible for a retirement allowance upon the attainment of age 55 (provided they have not withdrawn their accumulated deductions from the Annuity Savings Fund of the System).

Ordinary Disability Benefits

A member who is unable to perform his job due to a non-occupational disability will receive a retirement allowance if he has ten or more years of creditable service and has not reached age 55. The annual amount of such allowance shall be determined as if the member retired for superannuation at age 55, based on the amount of creditable service at the date of disability. For veterans, there is a minimum benefit of 50 percent of the member's most recent year's pay plus an annuity based on his own contributions.

Accidental Disability Benefit

For a job-connected disability the benefit is 72 percent of the member's most recent annual pay plus an annuity based on his own contributions, plus additional amounts for surviving children. Benefits are capped at 75 percent of annual rate of regular compensation for employees who become members after January 1, 1988.

Death Benefits

In general, the beneficiary of an employee who dies in active service will receive a refund of the employee's own contributions. Alternatively, if the employee were eligible to retire on the date of his death, a spouse's benefit will be paid equal to the amount the employee would have received under Option C. The surviving spouse of a member who dies with two or more years of credited service has the option of a refund of the employee's contributions or a monthly benefit regardless of eligibility to retire, if they were married for at least one year. There is also a minimum widow's pension of $500 per month, and there are additional amounts for surviving children.

(continued)

If an employee's death is job-connected, the spouse will receive 72 percent of the member's most recent annual pay in addition to a refund of the member's accumulated deductions, plus additional amounts for surviving children. However, in accordance with Section 100 of Chapter 32, the surviving spouse of a police officer, firefighter or corrections officer is killed in the line of duty will be eligible to receive an annual benefit equal to the maximum salary held be the member at the time of death.

"Heart And Lung Law" And Cancer Presumption

Any case of hypertension or heart disease resulting in total or partial disability or death to a uniformed fireman or permanent member of a police department is presumed to have been suffered in the line of duty, unless the contrary is shown by competent evidence. Any case of disease of the lungs or respiratory tract resulting in total disability or death to a uniformed fireman is presumed to have been suffered in the line of duty, unless the contrary is shown by competent evidence. There is an additional presumption for uniformed firemen that certain types of cancer are job-related if onset occurs while actively employed or within five years of retirement.

Options

Members may elect to receive a full retirement allowance payable for life under Option A. Under Option B a member may elect to receive a lower monthly allowance in exchange for a guarantee that at his death any of his contributions not expended for annuity payments will be refunded to his beneficiary. Option C allows the member to take a lesser retirement allowance in exchange for providing his survivor with two-thirds of the lesser amount. Option C pensioners will have their benefits converted from a reduced to a full retirement if the beneficiary predeceases the retiree.

Post-Retirement Benefits

The Board has adopted the provisions of Section 51 Chapter 127 of the Acts of 1999, which provide that the Retirement Board may approve an annual COLA in excess of the Consumer Price Index but not to exceed a 3% COLA on the first $12,000 of a retirement allowance. Cost-of-living increases granted prior to July 1, 1998 are reimbursed by the Commonwealth and not reflected in this report.

Statistical Section

Schedule of Revenue by Source

Fiscal Year	Employee Contributions	Employer Contributions	Employer Contributions as % of Covered Payroll	Investment Income (a)	Other (b)	Total
1998*	$ 9,278,830	23,813,847	21.00	$39,160,437	5,553,943	77,807,057
1999	9,991,998	8,606,751	7.40	101,675,377	3,008,009	123,282,135
2000	10,641,408	8,343,309	6.70	3,874,421	4,517,210	27,376,348
2001	11,875,466	9,480,000	6.52	(29,629,122)	3,442,841	(4,830,815)
2002	12,393,094	12,956,778	8.52	(67,805,128)	3,615,546	(38,839,710)
2003	11,691,887	18,928,252	13.00	115,614,944	2,783,268	149,018,351

* Does not include Pension Obligation Bonds reported in the Actuary Report of $217,399,984.

(a) Net of Investment expenses

(b) Includes state pension reimbursements and transfer of employee' contributions from other public pension plans as defined by Massachusetts General Law, Chapter 32.

Schedule of Expenses by Type

Fiscal Year	Benefits	Operating Expenses	Withdrawals©	Total
1998	$ 36,110,088	745,995	2,844,845	39,700,928
1999	36,868,926	1,131,072	2,716,627	40,716,625
2000	39,696,596	1,428,037	2,659,748	43,784,381
2001	41,095,678	811,315	3,129,455	45,036,448
2002	43,540,572	561,697	3,802,339	47,904,608
2003	47,848,502	440,294	3,866,838	52,155,634

© Includes amounts for employee withdrawals and employee transfers to other state agencies.

Schedule of Retired Members by Type of Retirement

	12/31/2003	12/31/2002	12/31/2001	12/31/2000	12/31/1999	12/31/1998
Superannuation						
Group 1	1,653	1,653	1,589	1,621	1,567	1,594
Group 2&4	262	254	220	224	221	221
Total	1,915	1,907	1,809	1,845	1,788	1,815
Ordinary Disability						
Group 1	42	42	41	46	45	47
Group 2&4	7	6	6	6	6	6
Total	49	48	47	52	51	53
Accidental Disability						
Group 1	140	147	147	152	150	160
Group 2&4	315	319	316	313	306	305
Total	455	466	463	465	456	465
Beneficiaries						
Group 1	408	417	427	438	491	500
Group 2&4	169	163	159	150	160	146
Total	577	580	586	588	651	646
Total Retired Members						
Group 1	2,243	2,259	2,204	2,257	2,253	2,301
Group 2&4	753	742	701	693	693	678
Total	2,996	3,001	2,905	2,950	2,946	2,979

Schedule of Benefit Expenses by Type

Fiscal Year Ended Dec. 31	Regular	Disability	Beneficiary	COLA's pd	Annuities	Total
1998	$ 15,810,293	7,349,712	3,819,833	4,933,854	4,196,396	36,110,088
1999	16,157,845	7,476,154	3,914,648	5,152,920	4,167,359	36,868,926
2000	16,423,542	7,785,392	4,352,677	6,486,457	4,648,528	39,696,596
2001	17,082,481	7,872,843	4,574,323	6,934,675	4,631,355	41,095,677
2002	18,332,032	8,532,815	4,739,722	7,088,637	4,847,366	43,540,572
2003	21,186,242	8,706,365	4,793,618	7,734,349	5,427,928	47,848,502

Schedule of Average Benefit Payments

Year ended December 31	Number	Annual benefits	Annual average	% Increase
1998	2,979	$36,110,088	12,122	6.10
1999	2,946	36,868,926	12,515	3.14
2000	2,950	39,696,596	13,456	6.99
2001	2,905	41,095,677	14,146	4.88
2002	3,001	43,540,572	14,509	2.50
2003	2,996	47,848,502	15,971	9.15