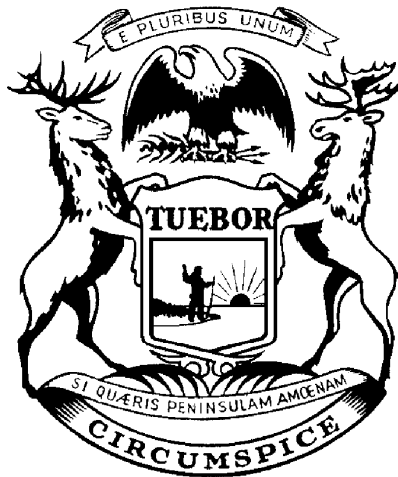


**Michigan State Police Retirement System**  
a Pension Trust Fund of the State of Michigan

**Comprehensive Annual Financial Report  
for the Fiscal Year Ended September 30, 2002**



**M S P R S**

**Prepared by:  
Financial Services  
for  
Office of Retirement Services  
P.O. Box 30171  
Lansing, Michigan 48909-7671  
517-322-5103  
1-800-381-5111**

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The cost of printing this report was \$1,165.35 (2.91 each), which was paid for by the System at no cost to taxpayers.

# INTRODUCTORY SECTION

Certificate of Achievement  
Letter of Transmittal  
Retirement Board Members  
Advisors & Consultants  
Organization Chart



# **INTRODUCTORY SECTION**

## **Certificate of Achievement**

# Certificate of Achievement for Excellence in Financial Reporting

Presented to

## Michigan State Police Retirement System

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended  
September 30, 2001

A Certificate of Achievement for Excellence in Financial Reporting is presented by the Government Finance Officers Association of the United States and Canada to government units and public employee retirement systems whose comprehensive annual financial reports (CAFRs) achieve the highest standards in government accounting and financial reporting.



*William Patrick Pate*  
President

*Jeffrey L. Esser*  
Executive Director

## Letter of Transmittal

State Police Retirement System  
P.O. Box 30171  
Lansing, Michigan 48909-7671  
Telephone 517-322-5103  
Outside Lansing 1-800-381-5111

### STATE OF MICHIGAN

JOHN ENGLER, Governor

## DEPARTMENT OF MANAGEMENT AND BUDGET

December 6, 2002

The Honorable John Engler  
Governor, State of Michigan,

Members of the Legislature  
State of Michigan,

Retirement Board Members  
and  
Members, Retirees and Beneficiaries

Ladies and Gentlemen:

We are pleased to present the comprehensive annual financial report of the Michigan State Police Retirement System (System) for fiscal year 2002.

Responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with the leadership team of the System. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the System.

The Michigan State Police Retirement System was established by legislation under Public Act 251 of 1935. It now operates under the provisions of Public Act 182 of 1986, as amended, and is administrated by the Office of Retirement Services (ORS). The number of active and retired members and beneficiaries of the System is presented in Note 1 of the financial statements in the Financial Section of this report. The purpose of the System is to provide benefits for all State Police. The services performed by the staff provide benefits to members.

The 2002 comprehensive annual financial report is presented in five sections. The Introductory Section contains the transmittal letter and identifies the administrative organization and professional consultants used by the System. The Financial Section contains the independent auditor's report, management's discussion and analysis, financial statements and notes of the System, and certain supplemental schedules. The Investment Section summarizes investment activities. The Actuarial Section contains the independent consulting actuary's certification, an outline of actuarial assumptions and methods, and other actuarial statistics. The Statistical Section contains statistical tables of significant data pertaining to the System.

# INTRODUCTORY SECTION

## Letter of Transmittal (Continued)

### MAJOR GOALS ACCOMPLISHED

The Michigan Department of Management and Budget, Office of Retirement Services (ORS) is a customer-focused organization whose primary purpose is to deliver pensions, related benefits, and services that will enhance the future financial security of its customers. Five years ago, ORS acknowledged that the organization would need to transform itself in order to meet the challenges posed by a substantial increase in the number of new retirees without a corresponding increase in the size of the staff. Starting with a vision to provide *fast, easy access to complete and accurate information and exceptional service*, ORS developed a sound strategic plan that would strengthen the organization and foster financial stability, without losing sight of the needs of the customer.

The world has changed dramatically since the terrorist attacks on the United States on September 11, 2001. Faced with uncertainty in their personal lives, people are seeking some sense of stability and security, not only for themselves but for their financial future. ORS has been able to respond quickly and efficiently to the changing environment. Heightened security in government buildings has enhanced the safety and security of personnel and physical property, while new safeguards were added to protect vital records and other critical member data. For example, the State's Information Technology Services Division (ITSD) moved the web servers off-site to facilitate system recovery in the event of a disaster. To better safeguard ORS's employer web site and retirement member information, ITSD moved the employers' Member Inquiry System application to a more secure server and added a second level of firewall protection. In addition, ITSD implemented greater controls over content to restrict unauthorized changes to web content and applications.

Even before the 9-11 tragedy, ORS was learning to be adaptable and flexible when faced with a changing environment. In today's society little remains the same for very long, so ORS continues to be a proactive organization, rather than a reactionary one. However, through it all, ORS continues to focus on three primary interconnected objectives: *provide excellent customer service; improve business processes; and optimize technology*. Some of our accomplishments in these areas are presented below.

#### ***Provide Excellent Service to All Customers***

*Easily Accessible Information*—ORS responded to customers' need for prompt, accurate information by offering several new and enhanced avenues for them to interact with their retirement system. In May 2002, ORS transitioned to a new [www.michigan.gov](http://www.michigan.gov) web site that offers quick customer access to retirement information as well as smooth interface with all other State of Michigan web sites.

*Personal Contact*—Customers who preferred face-to-face interactions were able to visit the newly renovated main office at the Secondary Complex in the Lansing area, or meet with Detroit office staff in their new offices at the Cadillac Center in Detroit. In August 2002, CitiStreet placed several of its representatives at ORS' main office. CitiStreet is the third party administrator and custodian for the deferred compensation/defined contribution plans. Customers can now obtain information about their defined benefit *and* their deferred compensation/defined contribution retirement benefits in a single location.

ORS continued to reach out to customers where they work and live by offering a variety of regional seminars. Approximately 165 pending state police retirees and guests attended two PreRetirement Information Meetings (PRIMs) to learn more about their retirement eligibility and benefits.

*Needs Assessment*— ORS continues to assess customer needs and the quality of the service ORS offers by surveying both active employees and retirees. Depending on the audience being targeted, ORS conducts these surveys on a regular basis: annually, semiannually, or quarterly. The information gathered from these surveys results in changing the way we do business to improve services to our customers.

*Enhanced Benefits—Long-Term Care Insurance*—In early 2002, ORS joined with the Office of the State Employer to make available a group long-term care (LTC) insurance plan for both active State employees and all ORS retirees. LTC insurance provides one of the few available means by which individuals can protect themselves against the cost of long-term care. The addition of the LTC insurance program helps promote the future financial security of ORS' customers. MetLife, the selected LTC carrier, offered 57 informational seminars in Michigan along with two seminars in Florida

## Letter of Transmittal (Continued)

and one seminar in Arizona over the course of 20 days. Approximately 1,345 interested retirees were able to learn more about this LTC insurance.

*Tax Relief*—The Economic Growth and Tax Relief Reconciliation Act of 2001, or EGTRRA, provided higher contribution limits and greater flexibility for deferred compensation retirement accounts. ORS implemented all of the major provisions of EGTRRA as of January 1, 2002, the earliest effective date allowed by law. These provisions include:

- Increases to the maximum contribution limits
- Removal of the coordination limits between 457 and 401(k) plans
- Addition of new age-50+ catch-up provisions
- Allowing the purchase of service credit with 457 and 401(k) funds
- Greater payout flexibility for those retirees with 457 plans
- Enhanced portability options

### *Continuously improve the processes that direct how ORS conducts its business*

Several years ago, ORS began implementing a process-based approach to conducting business. By focusing on how to eliminate unnecessary steps in the process and consolidate other parts of the process, ORS gained efficiencies and improved service to customers in a number of areas. Some of these successes are highlighted below.

*Employee Development*—One of the strategic goals this year for the Department of Management and Budget (DMB) was to invest in the workforce—providing employees with the knowledge they need to be successful. Using a Competency Based Training (CBT) approach, staff and supervisors work together to design an individualized development plan that will provide training targeted at the individual needs of each employee.

ORS has already seen the positive effects of this CBT effort. Employees are being cross-trained to fill a variety of roles, learning new skills that make them more adaptable to new job tasks and responsibilities, while promoting greater employee satisfaction. Employees feel they are valued members of the organization, and it shows through their positive interactions with co-workers and customers.

*Partnership Building*—ORS is building cooperative relationships not only internally with other DMB offices, but also outside the department with other State agencies and external partners. These partnerships improve the efficiency and quality of the product or service being provided. For example, ORS strengthened its relationship with the legislative process to facilitate more uniformity and consistency between the various retirement systems ORS oversees. ORS extended its partnership-building outside of the State to work with a representative group of school administrators and payroll personnel to prepare for upcoming system changes and how public schools will report wage and service information and submit contribution payments to ORS. By working cooperatively, potential problems can be identified earlier and resolved more efficiently.

*Records Consolidation*—ORS is preparing for the implementation of new technology and changes to its processes as they relate to storage and retrieval of records. In anticipation of this, staff purged unnecessary documents from member files in preparation for the future transfer of data to electronic imaging. Streamlining of the records retention process is underway. ORS completed several data purity projects to standardize existing data into uniform fields and formats, thereby facilitating the conversion to automated processing of records and applications.

*Measurement Tools*—ORS is an organization adept at implementing its strategic plan. In order to measure its success, ORS established quantifiable performance measures for its organizational goals along with metrics to measure the progress made towards attaining those goals. ORS has a clear direction—we can clearly see where we have been, where we are now, and what is still left to accomplish.

# INTRODUCTORY SECTION

## Letter of Transmittal (Continued)

### *Optimize technology*

ORS proceeded with its Vision ORS project to incorporate leading-edge technology into its process-based approach to business. As part of the implementation of the first stage of Vision ORS, the team introduced the Customer Relationship Management (CRM) tool. This tool assists in the capturing of data to determine who is calling ORS, for what purpose, and what additional requests for service were made previously.

The Vision ORS team also implemented the new stage 2 tool, the Retirement Processing Application (RPA), on a small scale as a pilot project to help process a test group of retirement applications.

To improve efficiencies, ORS streamlined the Common Pension Payroll system to reduce the number of transactions required to process pension payments. In addition, ORS facilitated the electronic transmission of this pension data to the Department of Treasury, thereby enhancing the accuracy of the data records.

### *Looking to the future*

In 1999, ORS embarked on a course of action that would produce an organization ready to provide for the changing needs of both active members and retirees. The plan requires ORS to invest in its *people*, its *processes*, and *technology*. By preparing staff for a changing environment through employee development, ORS invests in its *people*. By eliminating redundancies and becoming more efficient, ORS gains the benefits of a *process-based approach*. By implementing state-of-the-art *technology*, ORS has the tools it needs for the future. The future that ORS envisioned back in 1999 is nearly here, and ORS is well prepared to achieve its vision, to provide *fast, easy access to complete and accurate information and exceptional service*.

## **CERTIFICATE OF ACHIEVEMENT**

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the System for its comprehensive annual financial report for the fiscal year ended September 30, 2001. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both accounting principles generally accepted in the United States of America and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe our current report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

## **INTERNAL CONTROL**

The leadership team of the System is responsible for maintaining adequate internal accounting controls designed to provide reasonable assurance that transactions are executed in accordance with management's general or specific authorization, and are recorded as necessary to maintain accountability for assets and to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America. The internal control structure is designed to provide reasonable assurance regarding the safekeeping of assets and reliability of all financial records.

## **INVESTMENT**

The State Treasurer is the investment fiduciary and custodian of all investments of the System pursuant to State law. The primary investment objective is to maximize the rate of return on the total investment portfolio, consistent with a high degree of prudence and sufficient diversity to eliminate inordinate risks and to meet the actuarial assumption for the investment return rate. The investment activity for the year produced a total rate of return on the portfolio of (10.4)%. For the last five years, the System has experienced an annualized rate of return of 2.6%. A summary of asset allocation and rates of return can be found in the Investment Section of this report.



## Letter of Transmittal (Continued)

### FUNDING

Funds are derived from the excess of additions to plan net assets over deductions from plan net assets. Funds are accumulated by the System in order to meet future benefit obligations to retirees and beneficiaries. The percentage computed by dividing the actuarial value of assets by the actuarial accrued liability is referred to as the "funded ratio." This ratio provides an indication of the funding status of the System and generally, the greater this percentage, the stronger the System. Effective in fiscal year 2001, the System used the actuarial valuation from the previous fiscal year for this report. This approach is consistent with Governmental Accounting Standards Board (GASB) Statement Number 25. Consistent with this approach, the most recent actuarial valuation was performed as of September 30, 2001. The actuarial value of the assets and actuarial accrued liability of the System were \$1.149 billion and \$1.074 billion, respectively, resulting in a funded ratio of 107.0% at September 30, 2001. A historical perspective of funding levels for the System is presented on the Schedule of Funding Progress in the Required Supplementary Information in the Financial Section of this report.

### POSTEMPLOYMENT BENEFITS

The System also administers the postemployment health benefits (health, dental, and vision) offered to retirees. The benefits are funded on a cash or "pay as you go" basis. An actuarial valuation was completed as of September 30, 2001 to determine the actuarial accrued liability if the benefits were to be pre-funded. If these benefits were pre-funded, the actuarial accrued liability for these benefits would be approximately \$526 million and the employer contribution for health care benefits would be 32.1% of payroll.

### PROFESSIONAL SERVICES

An annual audit of the System was conducted by Andrews Hooper & Pavlik P.L.C., independent auditors. The independent auditor's report on the System's financial statements is included in the Financial Section of this report.

Statute requires that an annual actuarial valuation be conducted. The purpose of the valuation is to evaluate the mortality, service, compensation and other financial experience of the System and to recommend employer-funding rates for the subsequent year. This annual actuarial valuation was completed by the Segal Company for the fiscal year ended September 30, 2001. Actuarial certification and supporting statistics are included in the Actuarial Section of this report.

### ACKNOWLEDGMENTS

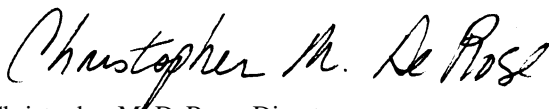
The preparation of this report was accomplished with the dedication and cooperation of many people. It is intended to provide complete and reliable information as a basis for making management decisions, as a means of determining compliance with legal provisions, and as a means for determining responsible stewardship of the funds of the System.

We would, therefore, like to express our appreciation for the assistance given by staff, advisors and many people who contributed to its preparation. We believe their combined efforts have produced a report that will enable the employers and plan members to better evaluate and understand the Michigan State Police Retirement System. Their cooperation contributes significantly to the success of the System.

Sincerely,



Duane E. Berger, Director  
Department of Management and Budget



Christopher M. DeRose, Director  
Office of Retirement Services

# INTRODUCTORY SECTION

## Administrative Organization

### Retirement Board Members

Capt. Richard J. Darling  
Representing Director, Dept. of State  
Police  
Statutory Member

George M. Elworth  
Representing Attorney General  
Statutory Member

Sergeant Richard Hale  
Representing Sergeants and Below  
Term Expires December 31, 2003

Kenneth Harb  
General Public  
Term Expires December 31, 2003

Jan Miller  
Representing State Employer  
Statutory Member

Dr. James S. Neubecker, C.P.A., Chair  
Representing Auditor General

Roy A. Pentilla, C.P.A.  
Representing State Treasurer  
Statutory Member

Inspector Brian Ray  
Representing Lieutenant and Above  
Term Expires December 31, 2004

Lt. Col. James R. Snody, Jr., Vice  
Chair  
Retiree Member  
Term Expires December 31, 2002

### Administrative Organization

**Department of Management and Budget**  
**Office of Retirement Services**  
**P.O. Box 30171**  
**Lansing, Michigan 48909-7671**  
**517-322-5103**  
**1-800-381-5111**

### Advisors and Consultants

**Actuary**  
The Segal Company  
Michael J. Karlin, F.S.A., M.A.A.A.  
New York, New York

**Auditors**  
Thomas H. McTavish, C.P.A.  
Auditor General  
State of Michigan

**Investment Manager and Custodian**  
Douglas B. Roberts  
State Treasurer  
State of Michigan

Andrews Hooper & Pavlik P.L.C.  
Jeffrey J. Fineis, C.P.A.  
Okemos, Michigan

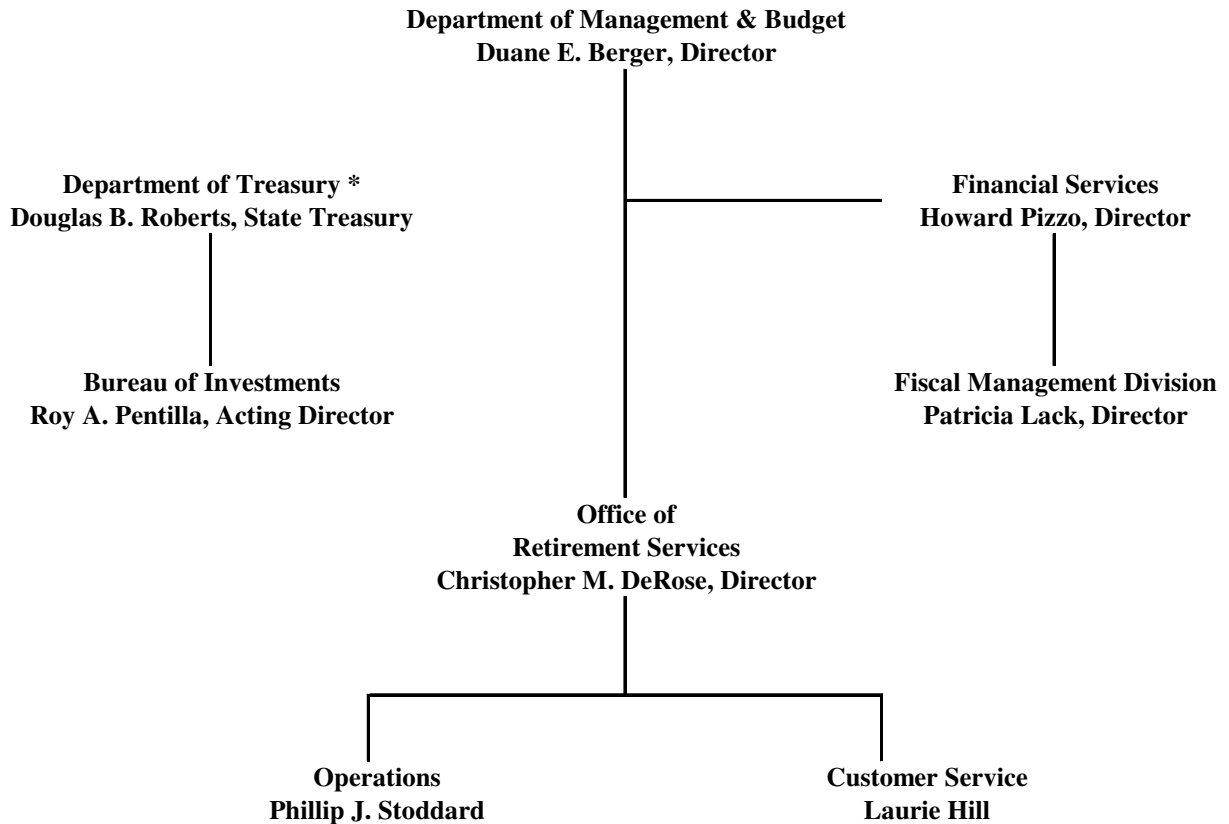
**Legal Advisor**  
Jennifer M. Granholm  
Attorney General  
State of Michigan

**Investment Performance  
Measurement**  
Capitol Resource Advisors  
Chicago, Illinois

# INTRODUCTORY SECTION

## Administrative Organization (Continued)

### Organization Chart



\* The investments of the System are managed by the Michigan Department of Treasury. Information on the investments and the fiduciary, Michigan Department of Treasury, can be found in the Investment Section, Introduction. In addition, see the Investment Section, Schedule of Investment Fees and Schedule of Investment Commissions, for information regarding the investment fees and commissions paid as well as investment professionals utilized by the system.

# FINANCIAL SECTION

Independent Auditor's Report  
Management's Discussion and Analysis  
Basic Financial Statements  
Notes to Basic Financial Statements  
Required Supplementary Information  
Notes to Required Supplementary Information  
Supporting Schedules

## Independent Auditor's Report



**ANDREWS HOOPER & PAVLIK P.L.C.**  
Certified Public Accountants

Mr. Duane E. Berger, Director, Department of Management and Budget  
Mr. Christopher M. DeRose, Director, Office of Retirement Services  
Mr. Thomas H. McTavish, CPA, Auditor General, Office of the Auditor General  
Michigan State Police Retirement System Board

We have audited the accompanying statements of pension plan and postemployment healthcare plan net assets of the Michigan State Police Retirement System, as of September 30, 2002 and 2001, and the related statements of changes in pension plan and postemployment healthcare plan net assets for the years then ended. These financial statements are the responsibility of the management of the Michigan State Police Retirement System. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits 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 audits 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 audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial status of the Michigan State Police Retirement System, as of September 30, 2002 and 2001, and the changes in its financial status for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The required supplementary information and supporting schedules listed in the table of contents are presented for the purpose of additional analysis and are not a required part of the basic financial statements. The required supplementary information and supporting schedules are the responsibility of the Michigan State Police Retirement System's management. The Schedules of Funding Progress and Employer Contributions and related notes and the supporting schedules have been subjected to the auditing procedures applied in our audits of the basic financial statements, and in our opinion, are fairly stated in all material respects when considered in relation to the basic financial statements taken as a whole.

The Management's Discussion and Analysis (MD&A) is not a required part of the basic financial statements but is supplemental information required by the Governmental Accounting Standards Board. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of this supplemental information. However, we did not audit the information and express no opinion on it. The Introductory, Investment, Actuarial, and Statistical Sections were not audited by us and, accordingly, we express no opinion on those sections.

In accordance with *Government Auditing Standards*, we have also issued a report dated November 25, 2002 on our consideration of the Michigan State Police Retirement System'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.

*Andrews Hooper & Pavlik P.L.C.*

Okemos, Michigan  
November 25, 2002

4295 Okemos Road, Suite 200 • Okemos, Michigan 48864 • ph 517.487.5000 fx 517.487.9535 • www.ahppc.com

# FINANCIAL SECTION

## Management's Discussion and Analysis

Our discussion and analysis of the Michigan State Police Retirement System's (System) financial performance provides an overview of the System's financial activities for the fiscal year ended September 30, 2002. Please read it in conjunction with the transmittal letter in the Introductory Section on page 5 and the basic financial statements, which follow this discussion.

### FINANCIAL HIGHLIGHTS

- System assets exceeded its liabilities at the close of fiscal year 2002 by \$886.3 million (reported as *net assets*). Net assets are held in trust to meet future benefit payments.
- System funding objective is to meet long-term benefit obligations through contributions and investment income. As of September 30, 2001, the funded ratio was approximately 107.0%.
- Revenues for the year were (\$58.8 million), which is comprised of contributions of \$49.2 million and investment losses of (\$108.0 million).
- Expenses increased over the prior year from \$83.7 million to \$90.8 million or 8.4%. Most of this increase represented increased retirement benefits paid.

### THE STATEMENT OF PLAN NET ASSETS AND THE STATEMENT OF CHANGES IN PLAN NET ASSETS

This Comprehensive Annual Financial Report (CAFR) consists of two financial statements; *The Statement of Pension Plan and Postemployment Healthcare Plan Net Assets* (page 18) and *The Statement of Changes in Pension Plan and Postemployment Healthcare Plan Net Assets* (page 19). These financial statements report information about the System, as a whole, and about its financial condition that should help answer the question: Is the System, as a whole, better off or worse off as a result of this year's activities? These statements include all assets and liabilities using the economic resources measurement focus and the accrual basis of accounting. Under the accrual basis of accounting, all revenues and expenses are taken into account regardless of when cash is received or paid.

*The Statement of Pension Plan and Postemployment Healthcare Plan Net Assets* presents all of the System's assets and liabilities, with the difference between the two reported as net assets. Over time, increases and decreases in net assets measure whether the System's financial position is improving or deteriorating. *The Statement of Changes in Pension Plan and Postemployment Healthcare Plan Net Assets* presents how the System's net assets changed during the most recent fiscal year. These two financial statements should be reviewed along with the Schedule of Funding Progress and Schedule of Employer Contributions to determine whether the System is becoming financially stronger or weaker and to understand changes over time in the funded status of the System.

### FINANCIAL ANALYSIS

System total assets as of September 30, 2002, were \$927.6 million and were mostly comprised of cash, investments and contributions due from employers. Total assets decreased \$157.8 million or 14.5% from the prior year primarily due to decreased investment earnings.

# FINANCIAL SECTION

## Management's Discussion and Analysis (Continued)

Total liabilities as of September 30, 2002, were \$41.3 million and were mostly comprised of warrants outstanding, administrative costs, and obligations under securities lending. Total liabilities decreased \$8.2 million or 16.6% from the prior year primarily due to a decrease in obligations under securities lending and a decrease in payables from the purchase of investments.

System assets exceeded its liabilities at the close of fiscal year 2002 by \$886.3 million. Total net assets held in trust for pension and health benefits decreased \$149.6 million or 14.4% from the previous year, primarily due to adverse market conditions and a decrease in investment earnings. This is similar to the previous year, when net assets decreased by \$175.4 million or 14.5% from the prior year.

### Michigan State Police Retirement System

#### Net Assets (In Thousands)

|   | <u>2002</u>       | <u>2001</u>         | <u>Total<br/>Percentage<br/>Change</u> |
|---|-------------------|---------------------|--|
| <b>Assets</b>                                     |                   |                     |  |
| Cash  | \$ 1,626          | \$ 7,020            | (76.8) %                               |
| Receivables                                       | 5,559             | 5,559               | 0.0                                    |
| Investments                                       | <u>920,401</u>    | <u>1,072,818</u>    | <u>(14.2)</u>                          |
| <b>Total Assets</b>                               | 927,586           | 1,085,397           | (14.5)                                 |
| <b>Liabilities</b>                                |                   |                     |  |
| Warrants outstanding                              | 223               | 331                 | (32.6)                                 |
| Accounts payable and<br>other accrued liabilities | 908               | 4,373               | (79.2)                                 |
| Obligations under securities lending              | <u>40,124</u>     | <u>44,764</u>       | <u>(10.4)</u>                          |
| <b>Total Liabilities</b>                          | <u>41,255</u>     | <u>49,468</u>       | <u>(16.6)</u>                          |
| <b>Total Net Assets</b>                           | <u>\$ 886,331</u> | <u>\$ 1,035,929</u> | <u>(14.4) %</u>                        |

### REVENUES - ADDITIONS TO PLAN NET ASSETS

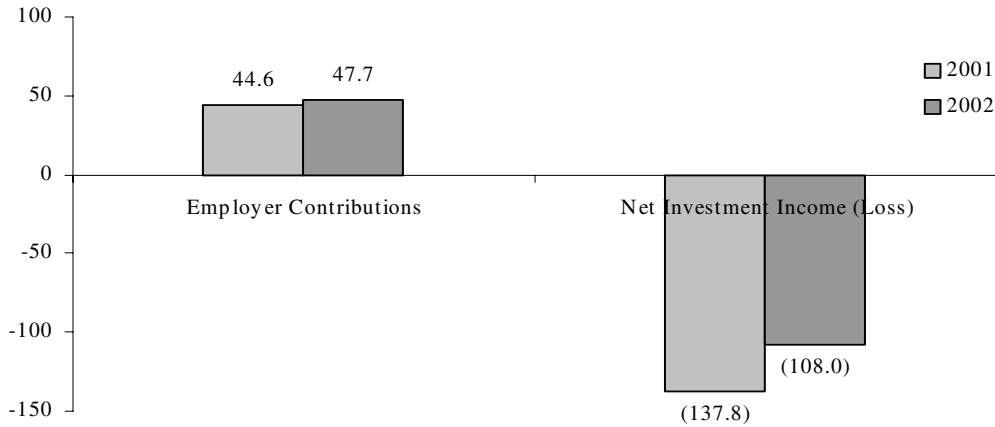
The reserves needed to finance retirement and health benefits are accumulated through the collection of employer contributions and through earnings on investments. Contributions and net investment income/(losses) for fiscal year 2002 totaled (\$58.8 million).

Total contributions and net investment income increased \$32.9 million or 35.9% from those of the prior year, due primarily to market conditions and investment earnings. Total contributions increased from the previous year by \$3.1 million or 6.7%. This increase is primarily due to an increase in contribution rate. Investment income increased from the previous year by \$29.8 million or 21.6%. The Investment Section of this report reviews the results of investment activity for 2002.

# FINANCIAL SECTION

## Management's Discussion and Analysis (Continued)

**Additions to Plan Net Assets  
(In Millions)**

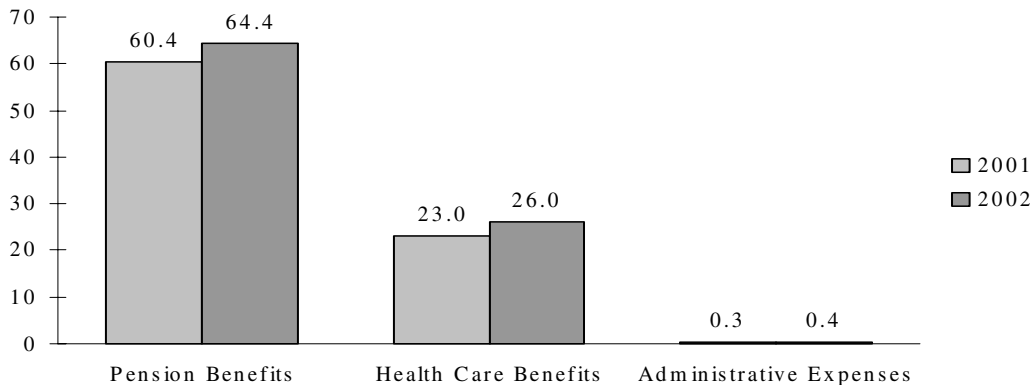


### EXPENSES - DEDUCTIONS FROM PLAN NET ASSETS

The primary expenses of the System include the payment of pension benefits to members and beneficiaries, payment for health, dental and vision benefits, refund of contributions to former members, and the cost of administering the System. Total deductions for fiscal year 2002 were \$90.8 million, an increase of 8.4% over year 2001 expenditures.

The growth of health, dental and vision care expenditures continued during the year and increased by \$3.0 million or 13.1% from \$23.0 million to \$26.0 million during the fiscal year. The payment of pension benefits increased by \$4.0 million or 6.6% from the previous year. The increase in pension benefit expenditures resulted from an increase in retirees (80) and an increase in benefit payments to retirees. Administrative expenses increased by \$54,692 or 18.3% from the previous year, primarily due to a reallocation of expenses in the prior year for postage, telephone, and other, and an increase in professional services during the current year for special actuarial studies.

**Deductions from Plan Net Assets  
(In Millions)**





# **FINANCIAL SECTION**

## **Management's Discussion and Analysis (Continued)**

### **RETIREMENT SYSTEM AS A WHOLE**

The System's combined net assets have experienced two years of decreases over the last 5 years. Again, this decrease is a result of a national economic slowdown that resulted in investment income decreases. Management believes, and actuarial studies concur, that the System is in a financial position to meet its current obligations. We believe the current financial position will improve due to a prudent investment program, cost controls, and strategic planning.

### **CONTACTING SYSTEM FINANCIAL MANAGEMENT**

This financial report is designed to provide the Retirement Board, our membership, taxpayers, investors, and creditors with a general overview of the System's finances and to demonstrate the System's accountability for the money it receives. If you have any questions about this report or need additional financial information, contact the Office of Retirement Services, P.O. Box 30171, Lansing, MI 48909-7671.

# FINANCIAL SECTION

## Statements of Pension Plan and Postemployment Healthcare Plan Net Assets

As of Fiscal Years Ending September 30, 2002 and 2001

|  | September 30, 2002    |                       |                       | September 30, 2001      |                       |                         |
|--|-----------------------|-----------------------|-----------------------|-------------------------|-----------------------|-------------------------|
|  | Pension               | Health                | Total                 | Pension                 | Health                | Total                   |
|  | Plan                  | Plan                  |                       | Plan                    | Plan                  |                         |
| <b>Assets:</b>   |                       |                       |                       |                         |                       |                         |
| Cash   | \$ 1,625,869          |                       | \$ 1,625,869          | \$ 7,019,863            |                       | \$ 7,019,863            |
| Receivables:   |                       |                       |                       |                         |                       |                         |
| Amounts due  |                       |                       |                       |                         |                       |                         |
| from employer  | 918,162               | \$ 1,031,534          | 1,949,696             | 1,075,156               | \$ 687,395            | 1,762,551               |
| Interest and dividends   | 3,461,313             |                       | 3,461,313             | 3,780,875               |                       | 3,780,875               |
| Sale of investments  | 148,165               |                       | 148,165               | 15,671                  |                       | 15,671                  |
| Total receivables  | 4,527,640             | 1,031,534             | 5,559,174             | 4,871,702               | 687,395               | 5,559,097               |
| Investments:   |                       |                       |                       |                         |                       |                         |
| Short term investments   | 10,176,919            |                       | 10,176,919            | 60,017,257              |                       | 60,017,257              |
| Bonds, notes, mortgages,<br>and preferred stock                                    | 208,333,807           |                       | 208,333,807           | 213,395,873             |                       | 213,395,873             |
| Common stock   | 371,603,617           |                       | 371,603,617           | 427,070,730             |                       | 427,070,730             |
| Real estate  | 90,920,398            |                       | 90,920,398            | 98,236,348              |                       | 98,236,348              |
| Alternative investments  | 131,176,474           |                       | 131,176,474           | 160,314,731             |                       | 160,314,731             |
| International investments  | 68,066,066            |                       | 68,066,066            | 69,019,156              |                       | 69,019,156              |
| Collateral on<br>loaned securities   | 40,124,269            |                       | 40,124,269            | 44,764,027              |                       | 44,764,027              |
| Total investments  | 920,401,550           |                       | 920,401,550           | 1,072,818,122           |                       | 1,072,818,122           |
| <b>Total assets</b>  | <b>926,555,059</b>    | <b>1,031,534</b>      | <b>927,586,593</b>    | <b>1,084,709,687</b>    | <b>687,395</b>        | <b>1,085,397,082</b>    |
| <b>Liabilities:</b>  |                       |                       |                       |                         |                       |                         |
| Warrants outstanding   | 222,538               |                       | 222,538               | 330,942                 |                       | 330,942                 |
| Accounts payable and<br>other accrued liabilities                                  | 908,486               |                       | 908,486               | 4,372,931               |                       | 4,372,931               |
| Internal Balances  | (2,920,880)           | 2,920,880             | -                     | (3,198,057)             | 3,198,057             | -                       |
| Obligations under<br>securities lending  | 40,124,269            |                       | 40,124,269            | 44,764,027              |                       | 44,764,027              |
| <b>Total liabilities</b>   | <b>38,334,413</b>     | <b>2,920,880</b>      | <b>41,255,293</b>     | <b>46,269,843</b>       | <b>3,198,057</b>      | <b>49,467,900</b>       |
| <b>Net Assets (Liabilities) Held in Trust<br/>for Pension and Health Benefits*</b> | <b>\$ 888,220,646</b> | <b>\$ (1,889,346)</b> | <b>\$ 886,331,300</b> | <b>\$ 1,038,439,844</b> | <b>\$ (2,510,662)</b> | <b>\$ 1,035,929,182</b> |

\*A schedule of funding progress is presented in the Required Supplementary Information of the Financial Section.  
The accompanying notes are an integral part of these financial statements.

# FINANCIAL SECTION

## Statements of Changes in Pension Plan and Postemployment Healthcare Plan Net Assets

For Fiscal Years Ended September 30, 2002 and 2001

|  | September 30, 2002 |                |                | September 30, 2001 |                |                  |
|--|--------------------|----------------|----------------|--------------------|----------------|------------------|
|  | Pension<br>Plan    | Health<br>Plan | Total          | Pension<br>Plan    | Health<br>Plan | Total            |
| <b>Additions:</b>  |                    |                |                |                    |                |                  |
| Contributions:   |                    |                |                |                    |                |                  |
| Member contributions   | \$ 113,114         | \$ 1,380,199   | \$ 1,493,313   | \$ 197,234         | \$ 1,265,408   | \$ 1,462,642     |
| Employer contributions   | 22,456,469         | 25,270,639     | 47,727,108     | 24,064,039         | 20,581,979     | 44,646,018       |
| Total contributions  | 22,569,583         | 26,650,838     | 49,220,421     | 24,261,273         | 21,847,387     | 46,108,660       |
| Investment income (loss):  |                    |                |                |                    |                |                  |
| Investment income (loss)   | (106,273,180)      |                | (106,273,180)  | (136,267,361)      |                | (136,267,361)    |
| Securities lending income  | 1,043,303          |                | 1,043,303      | 1,485,616          |                | 1,485,616        |
| Investment expenses:   |                    |                |                |                    |                |                  |
| Real estate operating expenses   | (11,561)           |                | (11,561)       | (43,182)           |                | (43,182)         |
| Securities lending expenses  | (836,020)          |                | (836,020)      | (1,367,693)        |                | (1,367,693)      |
| Other investment expenses  | (1,939,805)        |                | (1,939,805)    | (1,605,909)        |                | (1,605,909)      |
| Net investment income (Loss)   | (108,017,263)      | -              | (108,017,263)  | (137,798,529)      | -              | (137,798,529)    |
| Miscellaneous income   | 15                 |                | 15             | 6                  |                | 6                |
| <b>Total additions</b>   | (85,447,665)       | 26,650,838     | (58,796,827)   | (113,537,250)      | 21,847,387     | (91,689,863)     |
| <b>Deductions:</b>   |                    |                |                |                    |                |                  |
| Benefits paid to plan members and beneficiaries:                               |                    |                |                |                    |                |                  |
| Retirement benefits  | 64,418,130         |                | 64,418,130     | 60,407,395         |                | 60,407,395       |
| Health benefits  |                    | 24,354,075     | 24,354,075     |                    | 21,598,014     | 21,598,014       |
| Dental/vision benefits   |                    | 1,675,447      | 1,675,447      |                    | 1,426,090      | 1,426,090        |
| Refunds of member contributions  |                    |                | -              |                    | 6              | 6                |
| Administrative expenses  | 353,403            |                | 353,403        | 298,711            |                | 298,711          |
| <b>Total deductions</b>  | 64,771,533         | 26,029,522     | 90,801,055     | 60,706,106         | 23,024,110     | 83,730,216       |
| <b>Net Increase (Decrease)</b>   | (150,219,198)      | 621,316        | (149,597,882)  | (174,243,356)      | (1,176,723)    | (175,420,079)    |
| <b>Net Assets (Liabilities) Held in Trust for Pension and Health Benefits:</b> |                    |                |                |                    |                |                  |
| <b>Beginning of Year</b>   | 1,038,439,844      | (2,510,662)    | 1,035,929,182  | 1,212,683,200      | (1,333,939)    | 1,211,349,261    |
| <b>End of Year*</b>  | \$ 888,220,646     | \$ (1,889,346) | \$ 886,331,300 | \$ 1,038,439,844   | \$ (2,510,662) | \$ 1,035,929,182 |

\* A schedule of funding progress is presented in the Required Supplementary Information of the Financial Section. The accompanying notes are an integral part of these financial statements.

# FINANCIAL SECTION

## Notes to Basic Financial Statements

### NOTE 1 - PLAN DESCRIPTION

#### ORGANIZATION

The Michigan State Police Retirement System (System) is a single employer, state-wide, defined benefit public employee retirement plan governed by the State of Michigan (State), originally created under Public Act 251 of 1935, recodified and currently operating under Public Act 182 of 1986. The System was established by the State to provide retirement, survivor and disability benefits to Michigan State Police. The System is a qualified trust fund under section 401(a) of the Internal Revenue Code.

The System's financial statements are included as a pension trust fund in the combined financial statements of the State.

The System is administered by the Office of Retirement Services within the Michigan Department of Management and Budget. The Department Director appoints the Office Director who serves as Executive Secretary to the System's Board, with whom the general oversight of the System resides. The State Treasurer serves as the investment officer and custodian for the System.

#### MEMBERSHIP

At September 30, 2002 and 2001, the System's membership consisted of the following:

|                               |                     |                     |
|-------------------------------|---------------------|---------------------|
| Retirees and beneficiaries    |                     |                     |
| currently receiving benefits: | <b><u>2002</u></b>  | <b><u>2001</u></b>  |
| Regular Benefits              | 1,956               | 1,890               |
| Survivor benefits             | 367                 | 359                 |
| Disability benefits           | 139                 | 133                 |
| <b>Total</b>                  | <b><u>2,462</u></b> | <b><u>2,382</u></b> |
| <br>                          |                     |                     |
| Current Employees:            |                     |                     |
| Vested                        | 1,058               | 1,136               |
| Non-vested                    | 990                 | 1,001               |
| <b>Total</b>                  | <b><u>2,048</u></b> | <b><u>2,137</u></b> |
| <br>                          |                     |                     |
| Inactive employees entitled   |                     |                     |
| to benefits and not yet       |                     |                     |
| receiving them                | 14                  | 24                  |
| <br>                          |                     |                     |
| <b>Total All Members</b>      | <b><u>4,524</u></b> | <b><u>4,543</u></b> |

Enrollment in health plan is voluntary. The number of participants is as follows:

|                                  |                    |                    |
|----------------------------------|--------------------|--------------------|
| <b>Health/Dental/Vision Plan</b> | <b><u>2002</u></b> | <b><u>2001</u></b> |
| Eligible participants            | 2,462              | 2,382              |
| Participants receiving benefits: |                    |                    |
| Health                           | 2,125              | 2,130              |
| Dental                           | 2,172              | 2,099              |
| Vision                           | 2,175              | 2,102              |

# FINANCIAL SECTION

## Notes to Basic Financial Statements (Continued)

### BENEFIT PROVISIONS

#### *Introduction*

Benefit provisions of the defined benefit pension plan are established by State statute, which may be amended. Public Act 182 of 1986, Michigan State Police Retirement Act, as amended, establishes eligibility and benefit provisions for the defined benefit pension plan. Retirement benefits are determined by final average compensation. Members are eligible to receive a monthly benefit when they meet certain age and service requirements. The System also provides duty disability, non-duty disability, and survivor benefits.

A member who leaves Michigan State Police employment may request a refund of his or her member contribution account. (The System is currently non-contributory). A refund cancels a former member's rights to future benefits and there is no provision for repaying the refund of contributions to restore the service represented by the refund.

#### *Regular Retirement*

The retirement benefit is available if a member retires after 25 years of credited service (employment). The retirement benefit equals 60% of a member's final average compensation and is payable monthly over the lifetime of a member. Final average compensation is the average annual salary for a member's last two years of service with the Department of State Police.

#### *Deferred Retirement*

Any member with 10 or more years of credited service who terminates employment but has not reached the age of 50 is a deferred member and is entitled to receive a monthly allowance upon reaching age 50, provided the member's accumulated contributions have not been refunded. The deferred benefit is equal to two percent of the final average compensation times the years and partial years of service credit.

#### *Non-Duty Disability Benefit*

A member with 10 or more years of credited service who becomes totally and permanently disabled not due to performing duties as an employee of the Michigan State Police is eligible for a non-duty disability pension. The non-duty disability benefit is 2.4% of the final average compensation times years and partial years of credited service (but not more than 25 years).

#### *Duty Disability Benefit*

A member who becomes totally and permanently disabled from performing duties as a Michigan State Police Officer is eligible for a duty disability pension. The amount, payable monthly, is equal to 60% of the final average compensation.

#### *Survivor Benefit*

Upon the death of a member who completed at least 10 years of service, the surviving spouse receives a benefit based on 2.4% of the final average compensation for each year and partial years of credited service. If there is no spouse, surviving children are entitled to equally share the benefit until age 18. If death occurs in the line of duty, the surviving spouse receives a benefit of 60% of the final average compensation. Children receive \$100 each month until age 18. A \$1,500 funeral expense is also authorized by State statute.

Effective October 1, 1996, the monthly pension paid to beneficiaries was increased 10% if certain requirements were met. This was a one-time increase.

Each October 1, the benefit increases 2% (not to exceed \$500). This non-compounding increase is paid to beneficiaries who have been receiving benefits for 12 months.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (Continued)

### *Post Retirement Adjustments*

Effective October 1, 1996, the monthly pension was increased 10% if certain requirements were met. This was a one time increase.

Each October 1, the benefits of all pension recipients increase 2% (not to exceed \$500). This non-compounding increase is paid to persons who have been retired 12 months.

### *Contributions*

Member Contributions — Members currently participate on a noncontributory basis. Under certain circumstances, members may contribute to the System for the purchase of creditable service, such as military, maternity or paternity leave, Peace Corps or VISTA service. If a member terminates employment before a retirement benefit is payable, the member's contribution and interest on deposit are refunded. If the member dies before being vested, the member's contribution and interest are refunded to the designated beneficiaries.

Employer Contributions — The statute requires that the employer contribute to finance the benefits of plan members. These employer contributions are determined annually by the System's actuary and are based upon level-percent-of-payroll funding principles so that the contribution rates do not have to increase over time. A chart showing the employer contribution rates is included on the Schedule of Revenues by Source in the Statistical Section.

### *Other Post Employment Benefits*

Under the Michigan State Police Retirement Act, all retirees have the option of continuing health, dental, and vision coverage. Retirees with this coverage contribute 5% and 10% of the monthly premium amount for the health, dental, and vision coverage, respectively. The State funds 95% of the health and 90% of the dental and vision insurance. The employer payroll contribution rate for health was 21.2% and 17% for 2002 and 2001, respectively.

Retirees are provided with life insurance coverage equal to 25% of the active life insurance coverage, \$1,000 for spouse and \$1,000 for each dependent under age 23. Premiums are fully paid by the State.

## NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### *Basis of Accounting and Presentation*

Financial statements are prepared using the accrual basis of accounting. Contributions from the State are recognized as revenue in the period in which employees provide service. Benefits and refunds are recognized when due and payable in accordance with the terms of the System.

### *Reserves*

Public Act 182 of 1986, as amended, created the Reserve for Employees' Contributions, Reserve for Retired Benefit Payments, Reserve for Employer Contributions, Reserve for Undistributed Investment Income, and Reserve for Health Benefits and Dental and Vision Benefits. The financial transactions of the System are recorded in these accounts as required by Public Act 182 of 1986, as amended.

Reserve for Employee Contributions — Members do not contribute to this fund except to purchase eligible service credit. This fund represents active member contributions and interest less amounts transferred to the Pension Reserve for regular and disability retirement, amounts refunded to terminated members, and unclaimed amounts transferred to the income account. At September 30, 2002, and 2001, the balance in this account was \$328.6 thousand and \$368.2 thousand, respectively.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (Continued)

Reserve for Retired Benefit Payments — This represents the reserves for payment of future retirement benefits to persons already on the retirement rolls. At retirement, a member's accumulated contributions plus interest are transferred into this reserve from the Reserve for Employees' Contributions. Monthly benefits, which are paid to the retirees, reduce this reserve. At the end of each fiscal year, an amount is transferred from the Reserve for Employer Contributions to bring the reserve into balance with the actuarial present value of retirement allowances. At September 30, 2002, and 2001, the balance in this account was \$707.1 million and \$675.8 million, respectively.

Reserve for Employer Contributions — All employer contributions are credited to this reserve. Interest from the Reserve for Undistributed Investment Income is credited annually. Amounts are transferred annually from this reserve to the Reserve for Retired Benefit Payments to fund that reserve. At September 30, 2002, and 2001, the balance in this account was \$177.6 million and \$182.1 million, respectively.

Reserve for Undistributed Investment Income — The reserve is credited with all investment earnings and changes in fair value of assets. Interest is transferred annually to the other reserves. Administrative expenses are paid from this reserve account. The legislature appropriates the funds necessary to defray and cover the administration of the plan. At September 30, 2002 and 2001, the balance of this reserve was \$3.2 million and \$180.2 million, respectively.

Reserve for Health Related Benefits — This reserve is credited with employer contributions for retirees' health benefits. From this reserve, the System pays 95% of the premiums for hospitalization and medical coverage insurance and 90% of the monthly premium for dental and vision coverage insurance. At September 30, 2002 and 2001, the balance in this account was a negative \$1.9 million and a negative \$2.5 million, respectively.

Internal Balances — At September 30, 2002, the System reported a deficit in the Health Plan. As a result, amounts reported in the Statement of Plan Net Assets have been recognized and eliminated using the internal balances process described in GASB Statement No. 34. While this concept was devised to eliminate the "grossing-up" effect within the governmental and business-type activities columns of the primary government, because of the relationship of the Health Plan to the Pension Plan, the concept was deemed to be appropriate for System presentation.

### ***Reporting Entity***

The System is a pension trust fund of the State. As such, the System is considered part of the State and is included in the State's Comprehensive Annual Financial Report as a pension trust fund. The System and its Board are not financially accountable for any other entities or other organizations. Accordingly, the System is the only entity included in this financial report.

### ***Benefit Protection***

Public Act 100 of 2002 was passed by the Michigan Legislature to protect pension benefits of public employees from alienation (being transferred). Alienation is attachment, garnishment, levy, execution, bankruptcy or other legal process except for divorce orders or eligible domestic relation orders. The statutes governing the System contained an "anti-alienation" clause to provide for this protection; however, many smaller public pension systems did not have the benefit of this protection. Therefore, Public Act 100 of 2002 was passed to establish legal protection of pension assets that encompasses all public employees.

### ***Fair Value of Investments***

Plan investments are reported at fair value, except for short-term investments. Short-term investments are carried at cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Corporate bonds not traded on a national or international exchange are based on equivalent values of comparable securities with similar yield and risk. Real estate debt is valued on the basis of future principal and interest payments and is discounted at prevailing interest rates for similar instruments. The fair value of real estate investments is based on independent appraisals. Other investments that do not have an established market are recorded at estimated fair value.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (Continued)

### *Investment Income*

Dividend income is recognized based on the ex-dividend date and interest income is recognized on the accrual basis as earned. Fair value changes are recorded as investment income or loss. Purchases and sales of investments are recorded as of the trade date (the date upon which the transaction is initiated), except for purchase and sale of mortgages, real estate, and alternative investments which are recorded as of the settlement date (the date upon which the transaction is ultimately completed). The effect of recording such transactions as of the settlement date does not materially affect the financial statements.

### *Costs of Administering the System*

Each year a restricted general fund appropriation is requested to fund the on-going business operations of the System. These administrative costs are ultimately funded by the System through the regular transfer of funds from the System to the general fund appropriation based on either a direct cost or allocation basis depending on the nature of the expense.

### *Property and Equipment*

Office space is leased from the State on a year to year basis. Office equipment is capitalized if the value exceeds \$5,000. These assets are recorded at cost and are reported net of depreciation in the Statement of Pension Plan and Postemployment Healthcare Plan Net Assets. Such assets are depreciated on a straight line basis over 10 years. The System does not have equipment that falls within these parameters.

### *Related Party Transactions*

Leases and Services — The System leases operating space and purchases certain administrative, data processing, legal and investment services from the State. The space and services are not otherwise available by competitive bid. The following summarizes costs incurred by the System for such services.

|                       | <u>2002</u> | <u>2001</u> |
|-----------------------|-------------|-------------|
| Building Rentals      | \$ 20,401   | \$ 8,558    |
| Technological Support | 84,556      | 38,942      |
| Attorney General      | 8,716       | 12,682      |
| Investment Services   | 226,368     | 227,350     |
| Personnel Services    | 63,740      | 80,099      |

Commitment and Contingency – The State has signed a contract with a vendor for technological support through 2004. As of September 30, 2002, the System's portion of this commitment remaining is approximately \$193 thousand.

Cash — On September 30, 2002 and 2001, the System had \$1.6 million and \$7.0 million, respectively in a common cash investment pool maintained for various State operating funds. The participating funds in the common cash pool earn interest at various rates depending upon prevailing short-term interest rates. Earnings from these activities amounted to \$60,875 and \$176,893 for the years ended September 30, 2002 and 2001, respectively.

### *Reclassification of Prior Year Amounts*

Certain prior year amounts have been reclassified to conform with the current year presentation.



# FINANCIAL SECTION

## Notes to Basic Financial Statements (Continued)

### NOTE 3 - CONTRIBUTIONS

Members currently participate in the System on a noncontributory basis. Under certain circumstances, members may contribute to the System for the purchase of creditable service, such as military service or maternity leave. The State is required by Public Act 182 of 1986, as amended, to contribute amounts necessary to finance the benefits of its employees. Contribution provisions are specified by State statute and may be amended only by action of the State Legislature.

Periodic employer contributions to the System are determined on an actuarial basis using the entry age normal actuarial cost method. Under this method, the actuarial present value of the projected benefits of each individual included in the actuarial valuation is allocated on a level basis over the service of the individual between entry age and assumed exit age. The portion of this cost allocated to the current valuation year is called the normal cost. The remainder is called the actuarial accrued liability. Normal cost is funded on a current basis. The unfunded (overfunded) actuarial accrued liability is amortized over a 35-year period for the 2001 fiscal year and a 34-year period for the 2002 fiscal year.

Actual employer contributions for retirement benefits were \$22.5 million and \$24.1 million for fiscal years 2002 and 2001, respectively, representing 20.3% of annual covered payroll for the year ended September 30, 2001. The fiscal year 2002 annual covered payroll is not yet available. Required employer contributions for pensions included:

1. \$25.9 million and \$25.7 million for fiscal years 2002 and 2001, respectively, for the normal cost of pensions representing 21.6% of annual covered payroll for fiscal year 2001.
2. (\$3.9) million and (\$3.7) million for fiscal years 2002 and 2001, respectively, for amortization of overfunded actuarial accrued liability representing (3.1%) of annual covered payroll for fiscal year 2001.

### NOTE 4 - INVESTMENTS

#### *Risks and Uncertainties*

The System's investments are exposed to various risks, such as interest rate, market, credit, and other. Due to these various risks, it is at least reasonably possible that changes in market values will occur in the near term and that such changes could materially affect the System and the amount reported in the statement of net assets as available for benefits.

#### *Investment Authority*

Under Public Act 380 of 1965, as amended, the authority for the purchase and the sale of investments resides with the State Treasurer. Investments are made subject to the Michigan Public Pension Investment Act, Public Act 314 of 1965, as amended. The Michigan Public Pension Investment Act authorizes, with certain restrictions, the investment of pension fund assets in stock, corporate and government bonds and notes, mortgages, real estate, and certain short-term and alternative investments. Investments must be made for the exclusive purposes of providing benefits to active members, retired members and beneficiaries, and for defraying the expenses of investing the assets.

Under Public Act 314 of 1965, as amended, the State Treasurer may invest up to 5% of the System's assets in small businesses having more than one-half of assets or employees in Michigan as described in section 20(a) of the act and up to 20% of the System's assets in investments not otherwise qualified under the act as described in section 20(d). Alternative investments include limited partnerships and distributions from these partnerships in the form of bonds, preferred stock, common stock and direct investments.

#### *Derivatives*

The State Treasurer does not employ the use of derivatives in the investment of the Common Cash or the investment of trust funds other than the pension trust funds.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (Continued)

Derivatives are used in managing pension trust fund portfolios, but uses do not include speculation or leverage of investments. Less than 8% of the total pension trust fund's portfolio has been invested from time to time in futures contracts, collateralized mortgages and swap agreements. State investment statutes limit total derivative exposure to 15% of a fund's total asset value, and restrict uses to replication of returns and hedging of assets. Swap agreements represent the largest category of derivatives used, and they represented 7.7% of market value of total assets on September 30, 2002, and 6.5% of market value of total assets on September 30, 2001.

To diversify the pension fund's portfolio into international equities, the State Treasurer has entered into swap agreements with investment grade counterparties, which are tied to stock market indices in twenty-three foreign countries. The notional amounts of the swap agreements at September 30, 2002 and 2001, were \$96.3 million and \$84.9 million, respectively. Approximately one half of the notional amount is hedged against foreign currency fluctuations. The swap agreements provide that the System will pay quarterly, over the term of the swap agreements, interest indexed to the three month London InterBank Offer Rate (LIBOR), adjusted for an interest rate spread, on the notional amount stated in the agreements. At the maturity of the swap agreements, the pension fund will either receive the increase in the value of the international equity indices from the level at the inception of the agreements, or pay the decrease in the value of the indices. Swap agreement maturity dates range from October 2002 to September 2005. U.S. domestic LIBOR based floating rate notes were purchased in the open market to correspond with the notional amount of the swap agreements. The State Treasurer maintains custody and control of these notes.

The value of these synthetic equity structures is a combination of the value of the swap agreements and the value of the notes. The book value represents the cost of the notes. The current value represents the current value of the notes and the change in value of the underlying indices from the inception of the swap agreements. The current value is used as a representation of the fair value based on the intention to hold all swap agreements until maturity.

Since the inception of the international equity investment program, over \$22.9 million of gains on international equity exposure and excess interest received have been realized. The unrealized loss of \$30.4 million at September 30, 2002, reflects the decline in international stock indices and changes in currency exchange rates. Many of the international indices peaked in 1999 and 2000, and the combined swap structure realizes gains and losses on a rolling three-year basis.

To complete domestic market exposure, in June 2002, the State Treasurer entered into two swap agreements, which are tied to the S&P 600 Small Cap index. The notional and current values of these swaps are \$2.2 and \$1.7, in millions, respectively, as of September 30, 2002.

The unrealized loss of \$540 thousand on September 30, 2002 reflects the decline in the S&P 600 Small Cap index due to market conditions. The swap agreements provide that the System will pay quarterly, over the term of the swap agreements, interest indexed to the three month LIBOR, adjusted for an interest rate spread, on the notional amount stated in the agreements. At the maturity of the swap agreements, the pension fund will either receive the increase in the value of the international equity indices from the level at the inception of the agreements, or pay the decrease in the value of the index. U.S. domestic LIBOR based floating rate notes were purchased in the open market to correspond with the notional amount of the swap agreements. The State Treasurer maintains custody and control of these notes.

The respective September 30, 2002 and 2001 values are as follows:

|                               | <u>Notional Value</u> | <u>Current Value</u> |
|-------------------------------|-----------------------|----------------------|
| 9/30/02 (dollars in millions) | \$ 96.3               | \$ 65.9              |
| 9/30/01 (dollars in millions) | \$ 84.9               | \$ 67.2              |

The amounts shown for September 30, 2002 reflect both the total international swap exposure, and the smaller derivative exposure to the S&P 600.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (Continued)

### *Investments Exceeding 5% of Plan Net Assets*

The System did not hold an individual investment (other than U.S. Government securities) that exceeded 5% of net assets available for benefits at September 30, 2002 or 2001.

### *Securities Lending*

State statutes allow the System to participate in securities lending transactions, and the System has, via a Securities Lending Authorization Agreement, authorized the agent bank to lend its securities to broker-dealers and banks pursuant to a form of loan agreement.

During the fiscal year, the agent bank lent, at the direction of the System, the System's securities and received cash (United States and foreign currency), securities issued or guaranteed by the United States government, sovereign debt rated A or better, convertible bonds and irrevocable bank letters of credit as collateral. The agent bank did not have the ability to pledge or sell collateral securities delivered absent a borrower default. Borrowers were required to deliver collateral for each loan equal to (i) at least 102% of the market value of the loaned securities in the case of loaned securities denominated in the United States dollars or whose primary trading market was located in the United States or sovereign debt issued by foreign governments or (ii) 105% of the market value of the loaned securities in the case of loaned securities not denominated in the United States dollars or whose primary trading market was not located in the United States.

The System did not impose any restrictions during the fiscal year on the amount of the loans that the agent bank made on its behalf. There were no failures by any borrowers to return loaned securities or pay distributions thereon during the fiscal year. Moreover, there were no losses during the fiscal year resulting from a default of the borrowers or the agent bank.

During the fiscal year, the System and the borrowers maintained the right to terminate all securities lending transactions on demand. The cash collateral received on each loan was invested, together with the cash collateral or other qualified tax-exempt plan lenders, in a collective investment pool. As of September 30, 2002, such investment pool had an average duration of 66 days and an average weighted maturity of 471 days. Because the loans were terminable at will, their duration did not generally match the duration of the investments made with cash collateral. On September 30, 2002, the System had no credit risk exposure to borrowers. The collateral held and the market value of securities on loan for the System as of September 30, 2002, were \$40,783,811 and \$39,339,904, respectively.

Gross income from security lending for the fiscal year was \$1,043,303. Expenses associated with this income amounted to \$766,090 for the borrower's rebate and \$69,930 for fees paid to the agent.

### *Categories of Investment Risk*

Investments made by the fund are summarized on the following page. The investments that are represented by specific identifiable investment securities are classified as to credit risk in three categories.

Category 1 includes investments that are insured, registered, or held by the System or its agent in the System's name. Category 3 includes uninsured and unregistered investments that are held by the counterparty, its trust department, or agent, but not in the System's name.

At September 30, 2002, all investments of the System were classified as Category 1 or Category 3, except for certain investments that were not categorized.

The table on the following page summarizes the investments at market value:

# FINANCIAL SECTION

## Notes to Basic Financial Statements (Continued)

| <u>Category 1</u>            | <u>2002</u>           | <u>2001</u>               |
|------------------------------|-----------------------|---------------------------|
| Prime Commercial Paper       | \$ 10,176,919         | \$ 53,117,257             |
| Short Term Note              | -                     | 4,600,000                 |
| Government Securities        | 94,650,499            | 72,594,812                |
| Corporate Bonds & Notes      | 86,059,348            | 104,353,248               |
| Preferred Stock              | 29,806                | 42                        |
| Common Stock                 | 358,096,643           | 417,861,039               |
| Real Estate                  | -                     | 2,165,692 <sup>1</sup>    |
| Alternative Investments      | 1,682,835             | 6,670,612 <sup>3</sup>    |
| International Investments    | 65,928,340            | 69,019,156                |
| <b>Total Category 1</b>      | <b>\$ 616,624,390</b> | <b>\$ 730,381,858</b>     |
|                              |                       |                           |
| <u>Category 3</u>            |                       |                           |
| Government Securities        | \$ 2,300,000          | \$ 1,879,215              |
|                              |                       |                           |
| <u>Non-Categorized</u>       |                       |                           |
| Short Term                   | \$ -                  | \$ 2,300,000 <sup>2</sup> |
| Mortgages                    | 70,938                | 360,416                   |
| Real Estate                  | 90,920,398            | 96,070,656 <sup>1</sup>   |
| Alternative Investments      | 129,493,639           | 153,644,119 <sup>3</sup>  |
| International Investments    | 2,137,726             | -                         |
| Cash Collateral              | 40,124,269            | 44,764,027                |
| Securities on Loan:          |                       |                           |
| Government Securities        | 23,059,150            | 32,834,098                |
| Corporate Bonds & Notes      | 2,164,066             | 1,374,042                 |
| Common Stock                 | 13,506,974            | 9,209,691                 |
| <b>Total Non-Categorized</b> | <b>\$ 301,477,160</b> | <b>\$ 340,557,049</b>     |
| <b>Grand Total</b>           | <b>\$ 920,401,550</b> | <b>\$ 1,072,818,122</b>   |

<sup>1</sup> In Category 1, the Real Estate investments are all publicly traded real estate investment trusts. Non-Categorized Real Estate consists of investments through various legal entities.

<sup>2</sup> Non-Categorized Short-Term Investments relate to an STIF (Short-Term Investment Fund).

<sup>3</sup> In Category 1, the Alternative Investments are small-cap equities. Non-Categorized Alternative Investments consist of limited partnerships.

# **FINANCIAL SECTION**

## **Notes to Basic Financial Statements (Continued)**

### **NOTE 5 - COMMITMENTS AND CONTINGENCIES**

Under the Administrative Procedures Act, members may appeal a decision by the Board. Once the administrative procedure has been exhausted, the decision may be appealed in Michigan's court system. Various cases that have exhausted the administrative procedures have been appealed in the court system. These cases are in the normal course of business and the System does not anticipate any material loss as a result of the contingent liabilities.

### **NOTE 6 – SUBSEQUENT EVENTS**

On October 12, 2002, an agreement was reached between the Michigan State Troopers Association and the Office of the State Employer that provides for retroactive wage increases for each of the fiscal years beginning October 1, 1999, 2000, and 2001. At this writing, there is no wage increase set for fiscal year 2002, as negotiations have not yet begun. Retroactive wages for the affected employees will include payment into the System for contributions related to those wages. The required legislative waiver to process payments has not yet been acquired.

# FINANCIAL SECTION

## Required Supplementary Information

### Schedule of Funding Progress

Expressing the net assets available for benefits as a percentage of the actuarial accrued liability provides one indication of the System's funding status. Analysis of this percentage over time indicates whether the System is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the System. Trends in unfunded actuarial accrued liability and annual covered payroll are both affected by inflation. Expressing the unfunded or over funded actuarial accrued liability as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the System.

#### Retirement Benefits (\$ in Millions)

| Valuation Date<br>Sept 30 | Actuarial Value of Assets<br>(a) | Actuarial Accrued Liability <sup>(1)</sup><br>(AAL) Entry Age<br>(b) | Unfunded (Overfunded) Accrued Liability<br>(UAAL)<br>(b-a) | Funded Ratio<br>AAL<br>(a/b) | Covered Payroll<br>(c) | UAAL as a %<br>of Covered Payroll<br>((b-a)/c) |
|---------------------------|----------------------------------|--|--|------------------------------|------------------------|--|
| 1992                      | \$ 488.7                         | \$ 632.0   | \$ 143.3   | 77.3 %                       | \$ 89.9                | 159.4 %  |
| 1992 <sup>(1)</sup>       | 488.7                            | 644.4  | 155.7  | 75.8                         | 89.9                   | 173.1  |
| 1993                      | 526.2                            | 680.5  | 154.3  | 77.3                         | 86.8                   | 177.8  |
| 1993 <sup>(2)</sup>       | 530.9                            | 680.5  | 149.6  | 78.0                         | 86.8                   | 172.3  |
| 1994                      | 566.5                            | 709.3  | 142.8  | 79.9                         | 88.6                   | 161.1  |
| 1994 <sup>(4)</sup>       | 566.5                            | 711.8  | 145.3  | 79.6                         | 88.6                   | 164.0  |
| 1995                      | 622.6                            | 798.8  | 176.2  | 77.9                         | 104.5                  | 168.6  |
| 1996                      | 697.9                            | 823.5  | 125.5  | 84.8                         | 106.8                  | 117.5  |
| 1997                      | 787.2                            | 880.3  | 93.1   | 89.4                         | 110.1                  | 84.6   |
| 1997 <sup>(2)</sup>       | 928.7                            | 880.3  | (48.4)   | 105.5                        | 110.1                  | (44.0)   |
| 1997 <sup>(5)</sup>       | 928.7                            | 876.8  | (52.0)   | 105.9                        | 110.1                  | (47.2)   |
| 1998                      | 974.4                            | 943.7  | (30.6)   | 103.2                        | 108.2                  | (28.3)   |
| 1998 <sup>(4)</sup>       | 974.4                            | 962.5  | (11.9)   | 101.2                        | 108.2                  | (11.0)   |
| 1999                      | 1,036.8                          | 1,006.5  | (30.3)   | 103.0                        | 116.9                  | (25.9)   |
| 2000                      | 1,113.1                          | 1,040.7  | (72.4)   | 107.0                        | 116.6                  | (62.1)   |
| 2001                      | 1,148.6                          | 1,073.6  | (75.0)   | 107.0                        | 118.8                  | (63.1)   |

(1) Benefits amended.

(2) Change in asset valuation method.

(3) Based on entry age normal actuarial method.

(4) Assumption change.

(5) Change in inflation.

# FINANCIAL SECTION

## Required Supplementary Information (Continued)

### Schedule of Employer Contributions

| <u>Fiscal Year<br/>Ended<br/>Sept. 30</u> | <u>Actuarial<br/>Required<br/>Contribution<br/>(ARC)</u> | <u>Actual<br/>Contributions</u> | <u>Percentage<br/>Contributed</u> |
|---|--|---------------------------------|-----------------------------------|
| 1993                                      | \$ 23,909,930  | \$ 22,997,155                   | 96.2 %                            |
| 1994                                      | 23,768,031   | 23,360,943                      | 98.3                              |
| 1995                                      | 27,916,677   | 25,047,023                      | 89.7                              |
| 1996                                      | 35,149,438   | 35,994,833                      | 102.4                             |
| 1997                                      | 30,821,696   | 35,142,572                      | 114.0                             |
| 1998                                      | 20,257,237   | 20,003,807                      | 98.7                              |
| 1999                                      | 22,733,833   | 21,609,520                      | 95.1                              |
| 2000                                      | 24,266,567   | 22,107,292                      | 91.1                              |
| 2001                                      | 21,989,439   | 24,064,039                      | 109.4                             |
| 2002                                      | 22,041,827   | 22,456,469                      | 101.9                             |

# FINANCIAL SECTION

## Notes to Required Supplementary Information

### NOTE A - DESCRIPTION

Ten year historical trend information designed to provide information about the System's progress made in accumulating sufficient assets to pay benefits when due is presented in the preceding schedules. Other ten year historical trend information related to the System is presented in the Statistical and Actuarial Sections of the report. This information is presented to enable the reader to assess the progress made by the System in accumulating sufficient assets to pay pension benefits as they become due.

The comparability of trend information is affected by changes in actuarial assumptions, benefit provisions, actuarial funding methods, accounting policies, and other changes. Those changes usually affect trends in contribution requirements and in ratios that use the pension benefit obligation as a factor.

The Schedule of Funding Progress and Schedule of Employer Contributions are reported as historical trend information. The Schedule of Funding Progress is presented to measure the progress being made to accumulate sufficient assets to pay benefits when due. The Schedule of Employer Contributions is presented to show the responsibility of the Employer in meeting the actuarial requirements to maintain the System on a sound financial basis.

### NOTE B - SUMMARY OF ACTUARIAL ASSUMPTIONS

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

|                               |  |
|-------------------------------|--|
| Valuation Date                | 9/30/2001  |
| Actuarial Cost Method         | Entry Age, Normal  |
| Amortization Method           | Level Percent of Payroll, Closed                               |
| Remaining Amortization Period | 35 Years   |
| Asset Valuation Method        | 5-Year Smoothed Market Value                                   |
| Actuarial Assumptions:        |  |
| Investment Rate of Return     | 8%   |
| Projected Salary Increases    | 4.7% - 8.4%  |
| Includes Inflation at         | 4%   |
| Cost of Living Adjustments    | 2% annual non-compounded with maximum annual increase of \$500 |



# FINANCIAL SECTION

## Supporting Schedules

### Comparative Summary Schedule of Pension Plan Administrative Expenses For the Years Ended September 30, 2002 and 2001

|  | <u>2002</u>       | <u>2001</u>       |
|--|-------------------|-------------------|
| <b>Personnel Services:</b>                   |                   |                   |
| Staff Salaries                               | \$ 45,066         | \$ 57,986         |
| Retirement and Social Security               | 10,167            | 12,390            |
| Other Fringe Benefits                        | <u>8,507</u>      | <u>9,723</u>      |
| <b>Total</b>                                 | <u>63,740</u>     | <u>80,099</u>     |
| <b>Professional Services:</b>                |                   |                   |
| Actuarial                                    | 64,102            | 76,165            |
| Attorney General                             | 8,716             | 12,682            |
| Audit  | 32,952            | 21,887            |
| Consulting                                   | 10,890            | 14,806            |
| Medical                                      | <u>401</u>        | <u>5,714</u>      |
| <b>Total</b>                                 | <u>117,061</u>    | <u>131,254</u>    |
| <b>Building Equipment</b>                    |                   |                   |
| Building Rentals                             | 20,401            | 8,558             |
| Equipment Purchase, Maintenance, and Rentals | <u>2,773</u>      | <u>2,741</u>      |
| <b>Total</b>                                 | <u>23,174</u>     | <u>11,299</u>     |
| <b>Miscellaneous:</b>                        |                   |                   |
| Travel and Board Meetings                    | 608               | 965               |
| Office Supplies                              | 861               | 1,447             |
| Postage, Telephone and Other                 | 58,723            | 30,850            |
| Printing                                     | 4,680             | 3,855             |
| Technological Support                        | <u>84,556</u>     | <u>38,942</u>     |
| <b>Total</b>                                 | <u>149,428</u>    | <u>76,059</u>     |
| <b>Total Administrative Expenses</b>         | <u>\$ 353,403</u> | <u>\$ 298,711</u> |

# FINANCIAL SECTION

## Supporting Schedules (Continued)

### Schedule of Investment Expenses

|                                  | <u>2002</u>                | <u>2001</u>                |
|----------------------------------|----------------------------|----------------------------|
| Securities Lending Expenses      | \$ 836,020                 | \$ 1,367,693               |
| Real Estate Operating Expenses   | 11,561                     | 43,182                     |
| Other Investment Expenses*       | <u>1,939,805</u>           | <u>1,605,909</u>           |
| <b>Total Investment Expenses</b> | <u><u>\$ 2,787,386</u></u> | <u><u>\$ 3,016,784</u></u> |

\* See Investment Section for fees paid to investment professionals

### Schedule of Payments to Consultants

|                                     | <u>2002</u>              | <u>2001</u>              |
|-------------------------------------|--------------------------|--------------------------|
| Independent Auditors                | \$ 32,952                | \$ 21,887                |
| Consulting                          | 10,890                   | 14,806                   |
| Medical                             | 401                      | 5,714                    |
| Attorney General                    | 8,716                    | 12,682                   |
| Actuary                             | <u>64,102</u>            | <u>76,165</u>            |
| <b>Total Payment to Consultants</b> | <u><u>\$ 117,061</u></u> | <u><u>\$ 131,254</u></u> |

# *FINANCIAL SECTION*

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# FINANCIAL SECTION

## Supporting Schedules (Continued)

### Detail of Changes in Plan Net Assets (Pension and Postemployment Healthcare Benefits) For the Year Ended September 30, 2002

|  | Employee<br>Contributions | Employer<br>Contributions | Retired<br>Benefit<br>Payments* | Undistributed<br>Investment<br>Income | Health<br>Related<br>Benefits | Total          |
|--|---------------------------|---------------------------|---------------------------------|---------------------------------------|-------------------------------|----------------|
| <b>Additions:</b>  |                           |                           |                                 |                                       |                               |                |
| Contributions:   |                           |                           |                                 |                                       |                               |                |
| Member contributions   | \$ 113,114                |                           |                                 |                                       | \$ 1,380,199                  | \$ 1,493,313   |
| Employer contributions   |                           | \$ 22,456,469             |                                 |                                       | 25,270,639                    | 47,727,108     |
| Total Contributions  | 113,114                   | 22,456,469                | -                               | -                                     | 26,650,838                    | 49,220,421     |
| Investment income (loss):  |                           |                           |                                 |                                       |                               |                |
| Investment income (loss)   |                           |                           |                                 | \$ (106,273,180)                      |                               | (106,273,180)  |
| Securities lending income  |                           |                           |                                 | 1,043,303                             |                               | 1,043,303      |
| Investment expenses:   |                           |                           |                                 |                                       |                               |                |
| Real estate operating expenses   |                           |                           |                                 | (11,561)                              |                               | (11,561)       |
| Securities lending expenses  |                           |                           |                                 | (836,020)                             |                               | (836,020)      |
| Other investment expenses  |                           |                           |                                 | (1,939,805)                           |                               | (1,939,805)    |
| Net investment income (loss)   | -                         | -                         | -                               | (108,017,263)                         | -                             | (108,017,263)  |
| Miscellaneous income   |                           |                           |                                 | 15                                    |                               | 15             |
| <b>Total additions</b>   | 113,114                   | 22,456,469                | -                               | (108,017,248)                         | 26,650,838                    | (58,796,827)   |
| <b>Deductions:</b>   |                           |                           |                                 |                                       |                               |                |
| Benefits paid to plan members<br>and beneficiaries:                                |                           |                           |                                 |                                       |                               |                |
| Retirement benefits  |                           |                           | \$ 64,418,130                   |                                       |                               | 64,418,130     |
| Health benefits  |                           |                           |                                 |                                       | 24,354,075                    | 24,354,075     |
| Dental/vision benefits   |                           |                           |                                 |                                       | 1,675,447                     | 1,675,447      |
| Refunds of member contributions  |                           |                           |                                 |                                       |                               | -              |
| Administrative expenses  |                           |                           |                                 | 353,403                               |                               | 353,403        |
| <b>Total deductions</b>  | -                         | -                         | 64,418,130                      | 353,403                               | 26,029,522                    | 90,801,055     |
| <b>Net Increase (Decrease)</b>   | 113,114                   | 22,456,469                | (64,418,130)                    | (108,370,651)                         | 621,316                       | (149,597,882)  |
| <b>Other Changes in Net Assets:</b>  |                           |                           |                                 |                                       |                               |                |
| Interest allocation  | 11,739                    | 14,567,398                | 54,060,238                      | (68,639,375)                          |                               | -              |
| Transfers upon retirement  | (164,455)                 |                           | 164,455                         |                                       |                               | -              |
| Transfers of employer shares   |                           | (41,491,285)              | 41,491,285                      |                                       |                               | -              |
| Total other changes in net assets  | (152,716)                 | (26,923,887)              | 95,715,978                      | (68,639,375)                          | -                             | -              |
| <b>Net Increase (Decrease)<br/>After Other Changes</b>                             | (39,602)                  | (4,467,418)               | 31,297,848                      | (177,010,026)                         | 621,316                       | (149,597,882)  |
| <b>Net Assets (Liabilities) Held in Trust for<br/>Pension and Health Benefits:</b> |                           |                           |                                 |                                       |                               |                |
| <b>Beginning of Year</b>   | 368,158                   | 182,092,472               | 675,752,981                     | 180,226,233                           | (2,510,662)                   | 1,035,929,182  |
| <b>End of Year</b>   | \$ 328,556                | \$ 177,625,054            | \$ 707,050,829                  | \$ 3,216,207                          | \$ (1,889,346)                | \$ 886,331,300 |

\*Casualty Reserve is included.

# FINANCIAL SECTION

## Supporting Schedules (Continued)

### Detail of Changes in Plan Net Assets (Pension and Postemployment Healthcare Benefits)

For the Year Ended September 30, 2001

|  | Employee<br>Contributions | Employer<br>Contributions | Retired<br>Benefit<br>Payments* | Undistributed<br>Investment<br>Income | Health<br>Related<br>Benefits | Total                   |
|--|---------------------------|---------------------------|---------------------------------|---------------------------------------|-------------------------------|-------------------------|
| <b>Additions:</b>  |                           |                           |                                 |                                       |                               |                         |
| Contributions:   |                           |                           |                                 |                                       |                               |                         |
| Member contributions   | \$ 197,234                |                           |                                 |                                       | \$ 1,265,408                  | \$ 1,462,642            |
| Employer contributions   |                           | \$ 24,064,039             |                                 |                                       | 20,581,979                    | 44,646,018              |
| Total Contributions  | <u>197,234</u>            | <u>24,064,039</u>         | <u>-</u>                        | <u>-</u>                              | <u>21,847,387</u>             | <u>46,108,660</u>       |
| Investment income (loss):  |                           |                           |                                 |                                       |                               |                         |
| Investment income (loss)   |                           |                           |                                 | \$ (136,267,361)                      |                               | (136,267,361)           |
| Securities lending income  |                           |                           |                                 | 1,485,616                             |                               | 1,485,616               |
| Investment expenses:   |                           |                           |                                 |                                       |                               |                         |
| Real estate operating expenses   |                           |                           |                                 | (43,182)                              |                               | (43,182)                |
| Securities lending expenses  |                           |                           |                                 | (1,367,693)                           |                               | (1,367,693)             |
| Other investment expenses  |                           |                           |                                 | (1,605,909)                           |                               | (1,605,909)             |
| Net investment income (loss)   | <u>-</u>                  | <u>-</u>                  | <u>-</u>                        | <u>(137,798,529)</u>                  | <u>-</u>                      | <u>(137,798,529)</u>    |
| Miscellaneous income   |                           |                           |                                 | 6                                     |                               | 6                       |
| <b>Total additions</b>   | <u>197,234</u>            | <u>24,064,039</u>         | <u>-</u>                        | <u>(137,798,523)</u>                  | <u>21,847,387</u>             | <u>(91,689,863)</u>     |
| <b>Deductions:</b>   |                           |                           |                                 |                                       |                               |                         |
| Benefits paid to plan members and beneficiaries:                               |                           |                           |                                 |                                       |                               |                         |
| Retirement benefits  |                           |                           | \$ 60,407,395                   |                                       |                               | 60,407,395              |
| Health benefits  |                           |                           |                                 |                                       | 21,598,014                    | 21,598,014              |
| Dental/vision benefits   |                           |                           |                                 |                                       | 1,426,090                     | 1,426,090               |
| Refunds of member contributions  |                           |                           |                                 |                                       | 6                             | 6                       |
| Administrative expenses  |                           |                           |                                 | 298,711                               |                               | 298,711                 |
| <b>Total deductions</b>  | <u>-</u>                  | <u>-</u>                  | <u>60,407,395</u>               | <u>298,711</u>                        | <u>23,024,110</u>             | <u>83,730,216</u>       |
| <b>Net Increase (Decrease)</b>   | <u>197,234</u>            | <u>24,064,039</u>         | <u>(60,407,395)</u>             | <u>(138,097,234)</u>                  | <u>(1,176,723)</u>            | <u>(175,420,079)</u>    |
| <b>Other Changes in Net Assets:</b>  |                           |                           |                                 |                                       |                               |                         |
| Interest allocation  | 11,347                    | 15,554,813                | 50,664,828                      | (66,230,988)                          |                               | -                       |
| Transfers upon retirement  | (223,662)                 |                           | 223,662                         |                                       |                               | -                       |
| Transfers of employer shares   |                           | (51,961,538)              | 51,961,538                      |                                       |                               | -                       |
| Total other changes in net assets  | <u>(212,315)</u>          | <u>(36,406,725)</u>       | <u>102,850,028</u>              | <u>(66,230,988)</u>                   | <u>-</u>                      | <u>-</u>                |
| <b>Net Increase (Decrease) After Other Changes</b>                             | <u>(15,081)</u>           | <u>(12,342,686)</u>       | <u>42,442,633</u>               | <u>(204,328,222)</u>                  | <u>(1,176,723)</u>            | <u>(175,420,079)</u>    |
| <b>Net Assets (Liabilities) Held in Trust for Pension and Health Benefits:</b> |                           |                           |                                 |                                       |                               |                         |
| <b>Beginning of Year</b>   | <u>383,239</u>            | <u>194,435,158</u>        | <u>633,310,348</u>              | <u>384,554,455</u>                    | <u>(1,333,939)</u>            | <u>1,211,349,261</u>    |
| <b>End of Year</b>   | <u>\$ 368,158</u>         | <u>\$ 182,092,472</u>     | <u>\$ 675,752,981</u>           | <u>\$ 180,226,233</u>                 | <u>\$ (2,510,662)</u>         | <u>\$ 1,035,929,182</u> |

\*Casualty Reserve is included.

# INVESTMENT SECTION

Prepared by Michigan Department of Treasury, Bureau of Investments

Roy A. Pentilla, Acting Director

Report on Investment Activity  
Asset Allocation  
Investment Results  
List of Largest Stock Holdings  
List of Largest Bond Holdings  
Schedule of Investment Fees  
Schedule of Investment Commissions  
Investment Summary

# INVESTMENT SECTION

## Report on Investment Activity

### INTRODUCTION

The State Treasurer reports quarterly the investment activity to the Investment Advisory Committee, which reviews the investments, goals and objectives of the retirement funds and may submit recommendations regarding them to the State Treasurer. The Investment Advisory Committee may also, by a majority vote, direct the State Treasurer to dispose of any holdings that, in the Committee's judgment, are not suitable for the funds involved, and may, by unanimous vote, direct the State Treasurer to make specific investments.

The Investment Advisory Committee was created by Act 380 of the Public Acts of 1965. The three public members of the five-member Committee are appointed by the Governor, with the advice and consent of the Senate, for three-year terms. The Director of the Department of Consumer and Industry Services and the Director of the Department of Management and Budget are ex-officio members. The members of the Committee are as follows: James B. Henry, PHD (public member), Robert E. Swaney, CFA (public member), David G. Sowerby (public member), Noelle Clark (ex-officio member), and Duane E. Berger (ex-officio member). The public members serve without pay, but are paid actual and necessary travel and other expenses.

### INVESTMENT POLICY & GOAL

The primary function of the System is to provide retirement, survivor and disability benefits to its members. The State Treasurer is the sole investment fiduciary and custodian of the System's investments pursuant to State law. The primary investment objective is to maximize the rate of return on the total investment portfolio, consistent with a high degree of prudence and sufficient diversity to eliminate inordinate risks and to meet the actuarial assumption for the investment rate of return, at a reasonable cost achieved by cultivating a motivated team of dedicated professionals. The goals of the fund are:

1. Assure the availability of sufficient assets to pay benefits.
2. Achieve the optimal rate of return possible within prudent levels of risk and liquidity.
3. To outperform the actuarial assumption over the long term.
4. To perform in the top half of the Capital Resource Advisors public plan universe.
5. To exceed individual asset class benchmarks over the long term.
6. To produce competitive results while operating in a cost-effective manner relative to peers.
7. Maintain sufficient diversification to avoid large losses and preserve capital.

The strategy for achieving these goals is carried out by investing the assets of the System according to a five-year asset allocation model. The System currently has six different asset classes, which provides for a well-diversified portfolio.

#### Asset Allocation (Excludes Collateral on Loaned Securities)

| <u>Investment Category</u>     | <u>As of 9/30/02<br/>Actual %</u> | <u>Five-Year<br/>Target %</u> |
|--------------------------------|-----------------------------------|-------------------------------|
| International Equities-Passive | 7.7%                              | 9.0%                          |
| Real Estate                    | 10.3%                             | 9.0%                          |
| Alternative Investments        | 14.9%                             | 10.0%                         |
| Short Term Investments         | 1.3%                              | 1.0%                          |
| Fixed Income                   | 23.6%                             | 21.0%                         |
| Domestic Equity                | 42.2%                             | 50.0%                         |
| TOTAL                          | <u>100.0%</u>                     | <u>100.0%</u>                 |

# INVESTMENT SECTION

## Report on Investment Activity (Continued)

### STATE LAW

Pursuant to State Law (Section 91 of Act No. 380 of the Public Acts of 1965, as amended), the State Treasurer, State of Michigan, is the investment fiduciary for the following four State sponsored retirement systems: Michigan Public School Employees' Retirement System, Michigan State Employees' Retirement System, Michigan State Police Retirement System, and Michigan Judges' Retirement System.

Act No. 314 of the Public Acts of 1965, as amended, authorizes the investment of assets of public employee retirement systems or plans created and established by the state or any political subdivision.

### PROXY VOTING POLICY

The System's Proxy Voting Policy sets forth directives on the following issues: Board of Directors, corporate governance, social issues, corporate restructurings and defenses. All proxies are reviewed and voted in accordance with the above-mentioned items.

### INVESTMENT RESULTS

#### *Total Portfolio Result*

For the fiscal year ended September 30, 2002, the total portfolio returned -10.4% as compiled by Capital Resource Advisors. Annualized for the three-year period, the fund returned -3.2%; for the five-year period, the fund returned 2.6%; and for the ten-year period, the fund returned 8.0%.

During the fiscal year ending September 30, 2002, the nation's economy experienced a slow economic recovery and reduced consumer spending with corporate earnings slowly recovering. The real economy is doing better than the financial markets. Uncertainty caused by the possibility of war in Iraq and the frauds and accounting irregularities are all negatively impacting the markets.

As a result of the economic conditions, the broad based S&P 500 index declined -20.5% over the fiscal year with the Dow Jones Industrial Average off -12.5%. Growth stocks outperformed value stocks during this period. Given an accommodative Federal Reserve, the Lehman Brothers Government/Corporate bond index appreciated 9.2%.

The returns were calculated using a time-weighted rate of return in accordance with standards of the Association for Investment Management and Research (AIMR), unless a modification is described in the discussion of the return.

The System is well diversified among asset classes. As of September 30, 2002, the portfolio consisted of 42.2% domestic equities, 23.6% fixed income, 14.9% alternative investments, 10.3% real estate, 1.3% short-term investments, and 7.7% international equities.

#### *Domestic Stocks - Active*

The objective of actively managed domestic stock investments is long-term capital appreciation by investing in publicly traded stocks of primarily U.S. -based companies. Monies are invested in a portfolio of large company value stocks and a portfolio of large company growth stocks. Since historical rates of return for value and growth strategies have been negatively correlated, this allows for further diversification and focused selection of investments. Value investing derives its returns from the market's tendency to periodically undershoot a stock's fair value and then eventually corrects to fair value. Growth stock returns accrue from longer-term broad themes from which companies evolve that will grow faster than the economy. Both portfolios are diversified among various securities and industries.



# INVESTMENT SECTION

## Report on Investment Activity (Continued)

The U.S. economy began fiscal year 2002 on the heels of a recession marked by three consecutive quarters of negative real GDP and reeling from the terrorist attacks of September 11, 2001. Corporate earnings continued the double-digit declines begun in fiscal 2001, finally showing positive comparisons in the quarter ending March of 2002. The Federal Reserve lowered rates four times between September 2001 and December 2001, taking the Federal Funds rate from 3.50% to 1.75%. Inflation, as measured by the CPI, remained subdued at an annualized rate of 1.5%. Interest rates plummeted, with ten-year U.S. Treasury notes yielding 3.60% by the end of fiscal 2002 compared to 4.59% at the end of the prior fiscal year. A number of retailers even offered 0% financing.

The U.S. economy staged a modest recovery and U.S. equity markets bounced back remarkably from the lows reached after the events of September 11, 2001. However, incessant news of accounting fraud and management scandals, combined with escalating fears of military action against Iraq, rocked the equity markets throughout the remainder of the year. Total return for the Dow Jones Industrial Average was -12.5% for the 12 months ending September 2002, while return for the broader S&P 500 was -20.5%. The NASDAQ's price fell by 21.8% during the fiscal year.

The System's large company Value portfolio achieved a total rate of return of -15.1% for fiscal 2002. This compared favorably with -22.2% for the S&P 500 BARRA Value Index due to the fund's investments in defense and financial stocks and little exposure to technology and telecommunication stocks. The large company Growth portfolio's total rate of return was -24.6% for the fiscal year versus -19.5% for the S&P 500 BARRA Growth Index. Relative underperformance can be attributed to positioning the portfolio for strong economic and market recoveries that failed to materialize before the end of the fiscal year. Because these two portfolios were created effective January 31, 2000, three-year or five-year rates of return are not available.

On a consolidated basis, the actively managed large company domestic stock portfolio had a total rate of return of -19.9% for fiscal year 2002 compared to -20.5% for the S&P 500 Index. Three-year and five-year annualized returns were -11.3% and -2.2%. This compared with -12.9% and -1.6% for the S&P 500.

At the close of fiscal year 2002, large company value stocks represented 13.9% of the System's total investments versus 14.1% at the end of fiscal year 2001. Large company growth stocks represented 13.7% of total investments versus 13.1% at the end of fiscal 2001. Consolidated actively managed large company domestic stocks represented 27.6% of total investments, compared to 27.2% at the end of fiscal year 2001.

The System established an investment position with the small company growth managers at Delaware Investment Advisors (Delaware) and Putnam Investments (Putnam). An initial investment of \$1.15 million was placed with each of these managers as of October 1, 2001.

The System's small company growth portfolio invested with Delaware achieved a total rate of return of -8.0% for fiscal 2002. This compares favorably with -18.2% for the Russell 2000 Growth Index. An underweight and positive selectivity in the technology sector provided much of the outperformance. This positive result was partially offset by underperformance in the consumer/retail sector in which the fund had an overweight position.

The System's small company growth portfolio invested with Putnam achieved a total rate of return of -18.5% for fiscal 2002. This compares unfavorably with -18.2% for the Russell 2000 Growth Index. Performance was negatively impacted by two sectors: financials in which the portfolio was under weighted and technology in which underperformance was the culprit. This was offset somewhat by strength in the portfolio's investments in consumer cyclicals.

At the close of fiscal year 2002, small company growth stocks represented 0.23% of total investments

### ***Domestic Stocks - Passive***

The objective of the enhanced S&P 500 and S&P MidCap Index Funds is to closely match the return performance of their benchmarks, and use low risk strategies to offset transaction costs and add to performance when possible. The S&P 500 Index Fund return for the fiscal year was -20.0% versus the benchmark's -20.5%. The S&P MidCap Index Fund return for the fiscal year was -4.9% versus its benchmark's -4.7%. The relative enhancement to the S&P 500

# INVESTMENT SECTION

## Report on Investment Activity (Continued)

Index Fund return was the result of strategic allocations of additional funds to passive equity investments during market corrections and the opportunistic use of derivative programs. An S&P Small Cap Index Fund was established in June of 2002 to match the return of that targeted benchmark. During fiscal year 2002, \$5.4 million was added to U.S. index funds. At the end of the fiscal year, passive domestic stock portfolios represented 14.4% of total assets, the S&P 500 Index Fund accounting for 12.7%, the S&P MidCap Index Fund 1.5%, and the S&P Small Cap Index Fund 0.2% of total investment assets. Indexed stock portfolios represented 14.2% of total investment assets at the end of the prior fiscal year.

### *International Equities - Passive*

The objective of passive international equity portfolios is to match the return performance of the Salomon Smith Barney Broad Market Index (BMI) Europe and Pacific Composite (EPAC) adjusted for net dividends. Fifty percent of the benchmark is hedged to the U.S. Dollar and the other half is impacted by foreign currency exchange rate changes. The total passive international return of -16.0% in the fiscal year approximately matched the Salomon Smith Barney BMI-EPAC return of -15.5%. The passive international return of -12.2% for three years approximately matched the benchmark's return of -12.3% over the same period.

Core passive exposure to international equity returns is achieved primarily by investing in a combination of fixed income notes and equity swap agreements on foreign stock indices in developed markets. Interest on the dedicated notes is exchanged for international stock returns, and the total notional amount of the swap agreements is invested in the approximate proportions of the Salomon Smith Barney Broad Market Index (BMI) Europe and Pacific Composite (EPAC) country weightings in related indices. Use of swap agreements for a core position began in 1993, and an American Depository Receipts (ADR) and index-related security portfolio was added in June of 1999 to increase management flexibility, and a country fund portfolio was added in September of 2002 to improve exposure to the smallest companies in the BMI index. During fiscal year 2002, \$12.3 million of exposure was added, raising passive international investments to 7.7% of total investment assets.

The combination of fixed income LIBOR notes and equity swap agreements was valued at \$64.2 million on September 30, 2002. That valuation included a net unrealized loss of \$30.4 million on equity index exposures and an unrealized gain of \$337 thousand on LIBOR note investments held. The combined swap agreement and LIBOR portfolio structure continues to perform like a stock index fund that realizes all gains and losses on a rolling three-year basis. During fiscal year 2002, \$2.6 million of losses on equity exposures were realized, \$915 thousand of interest in excess of obligations on completed swaps, and 65.8 thousand of gains on LIBOR notes were realized. At the end of the fiscal year, total realized gains and net interest received in excess of counterparty obligations on completed agreements were \$22.9 million since the program began.

### *Fixed Income (Excluding Mortgages)*

For the fiscal year ending September 30, 2002, the fixed income portfolio returned 7.7% as compiled by Capital Resource Advisors. The portfolio also returned 8.9% for three years, and 7.2% for five-years.

Rates continued to decline during the year in response to the Federal Reserve's repeated reductions in rates and the flight to quality in view of stock market declines. In addition to rates declining in all maturities there was also the continuation of a steep yield curve. Given the mathematics of bond calculation, long-term government bonds tended to outperform most other sectors.

As rates approached their lowest levels in forty or more years, a defensive reinvestment program concentrating on shorter-term intermediate issues and floating rate securities was chosen. While offering greater liquidity and protection from rising rates they tend to underperform in a declining rate market.

Fixed income represented 23.6% of the total portfolio compared with 20.6% last year. The corporate sector represented 42.4% of fixed income securities with government securities accounting for 57.6%. Last year corporates were 49.6% of the total with government securities representing 50.4%. The increased level of government securities was in response to increased uncertainty and volatility in the corporate sector.

# INVESTMENT SECTION

## Report on Investment Activity (Continued)

### *Real Estate (Including Mortgages)*

A majority of the direct mortgage holdings were sold in 1997 and 1998, and the equity real estate portfolio and mortgage portfolio were, therefore, combined into a single "Real Estate" allocation during the current fiscal year. For the fiscal year ending September 30, 2002, 10.3% of the System's total investment portfolio was invested in real estate. This compares to 9.5% and 8.3% for the fiscal years ending September 30, 2001 and 2000, respectively. The current target allocation to real estate is 8.5%, and the five-year target asset allocation for real estate is 9%.

The one-year, three-year, five-year, and ten-year net real estate returns for the fiscal year ending September 30, 2002, were 8.1%, 9.6%, 10.6%, and 8.9% respectively, as compiled by Capital Resource Advisors. This compares to the National Council of Real Estate Investment Fiduciaries Property Index (NCREIF) returns of 4.8%, 8.4%, 10.6%, and 8.0% relating to same periods. As of September 30, 2002, the NCREIF portfolio of properties is more weighted in the office sector at 42%, versus the System's portfolio at 25%. Because the NCREIF returns are calculated before advisor fees/overhead and the System's returns are calculated after all advisor fees/overhead, the NCREIF returns stated above have been adjusted downward by 75 basis points to approximate comparable returns.

The real estate portfolio is broadly diversified geographically across the country, by type of property and class of property, to reduce risk. Major property types as of September 30, 2002, included apartments (44%); retail centers, including regional malls and grocery-anchored neighborhood/community shopping centers (23%); commercial office buildings (25%); and miscellaneous other property types, such as industrial and self storage (8%). The System, through its advisors and operating joint ventures, acquires, develops, redevelops, and disposes of real estate with the goal of maximizing returns while maintaining an acceptable level of risk. The properties are held in various investment vehicles: partnerships, LLCs and trusts. These legal entities allow the System to enjoy the benefits of real estate ownership while limiting the liability associated with the asset class. In all new investments, the System negotiates key terms in order to further mitigate risk. The properties are regularly valued by independent third parties to establish fair market values.

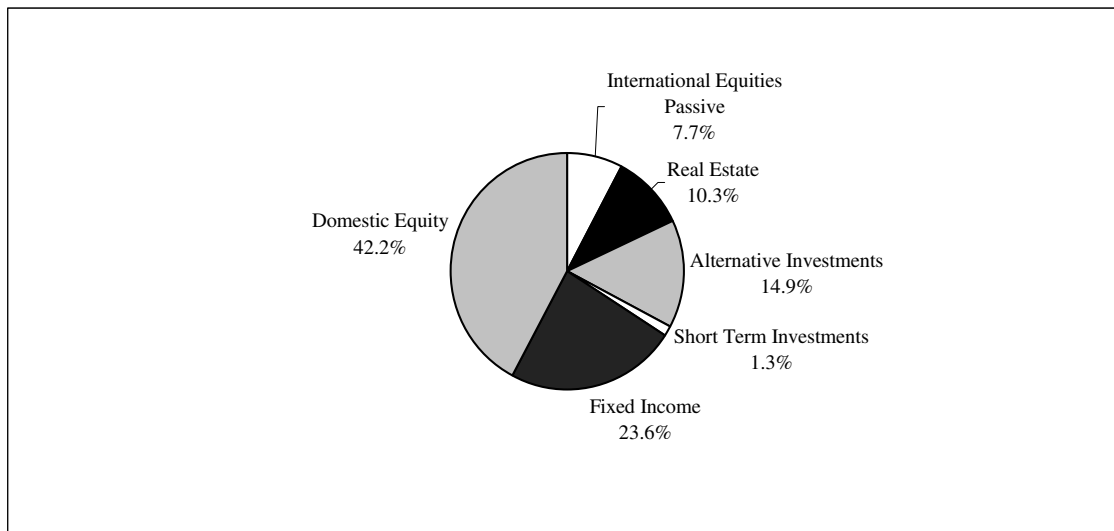
### *Alternative Investments*

Alternative Investments are investments in the private equity market, either directly in companies or indirectly through limited partnerships. Through September 30, 2002, approximately 92% of alternative investments were made through limited partnerships. Of the investments in limited partnerships, approximately 14% were in partnerships investing internationally, 15% in venture capital and 63% in special situations/LBOs. The remaining 8% were direct private equity investments and public stock distributions received from the limited partnerships. The percentage of assets in alternative investments has consistently increased from 4.8% as of September 30, 1993, to 14.9% as of September 30, 2002. The asset allocation range for alternative investments is 14% to 20% while the long-term target asset allocation is 10%.

The one-year, three-year, five-year, and ten-year total alternative investment returns for the fiscal year ending September 30, 2002, were -16.3%, -0.1%, 7.1%, and 12.9%, respectively.

# INVESTMENT SECTION

## Asset Allocation



## Investment Results for the Period Ending September 30, 2002

| Investment Category                                    | Current Year | Annualized Rate of Return |         |          |
|--|--------------|---------------------------|---------|----------|
|  |              | 3 Years                   | 5 Years | 10 Years |
| Total Portfolio  | (10.4) %     | (3.2) %                   | 2.6 %   | 8.0 %    |
| Domestic Equities Stock - Active                       | (19.9)       | (11.3)                    | (2.2)   | 9.4      |
| Domestic Equities Stock - Passive*                     | (18.7)       | (11.3)                    | (0.7)   | 9.8      |
| Standard & Poor's (S&P 500)                            | (20.5)       | (12.9)                    | (1.6)   | 9.0      |
| Standard & Poor's (MidCap)                             | (4.7)        | 3.4                       | 5.4     | 12.6     |
| International Equities - Passive                       | (16.0)       | (12.2)                    | (3.2)   | N/A      |
| Net Salomon BMI - EPAC 50/50                           | (15.5)       | (12.3)                    | (4.0)   | N/A      |
| Fixed Income Bonds ( U.S. Corp and Govt )              | 7.7          | 8.9                       | 7.2     | 7.4      |
| Salomon Smith Barney Broad Investment Grade Bond Index | 8.4          | 9.4                       | 7.8     | 7.4      |
| Lehman Brothers Government/Corporate                   | 9.2          | 9.7                       | 7.9     | 7.4      |
| Real Estate **   | 8.1          | 9.6                       | 10.6    | 8.9      |
| NCREIF minus 75 Basis Points                           | 4.8          | 8.4                       | 10.6    | 8.0      |
| Alternative Investments                                | (16.3)       | (0.1)                     | 7.1     | 12.9     |

\* Passive portfolio consists of a S&P 500 fund and a S&P Midcap fund. The return is a weighted average of the two funds.

\*\* Real Estate includes mortgages

N/A Not available.

# INVESTMENT SECTION

## Largest Assets Held

### Largest Stock Holdings (By Market Value)\* September 30, 2002

| Rank | Shares  | Stocks                                | Market Value  |
|------|---------|---------------------------------------|---------------|
| 1    | 158,560 | Ishares S & P Midcap 400              | \$ 12,914,712 |
| 2    | 432,085 | Pfizer Incorporated                   | 12,539,107    |
| 3    | 493,750 | General Electric Corporation          | 12,170,938    |
| 4    | 270,820 | Microsoft Corporation                 | 11,845,667    |
| 5    | 237,200 | Wal-Mart Stores Incorporated          | 11,679,728    |
| 6    | 349,483 | Citigroup Incorporated                | 10,362,171    |
| 7    | 312,525 | Exxon Mobil Corporation               | 9,969,548     |
| 8    | 155,750 | Wells Fargo & Company                 | 7,500,920     |
| 9    | 107,289 | Federal National Mortgage Association | 6,387,987     |
| 10   | 98,071  | Bank of America Corporation           | 6,256,930     |

### Largest Bond Holdings (By Market Value)\* September 30, 2002

| Rank | Par Amount   | Bonds & Notes                                    | Market Value |
|------|--------------|--|--------------|
| 1    | \$ 7,957,000 | U.S. Treasury Bonds at 9.125% Due 5-15-2009      | \$ 8,897,517 |
| 2    | 5,243,700    | U.S. Treasury 0% Coupon Strips Due 11-15-2011    | 4,904,957    |
| 3    | 4,460,000    | FHLB 2.51% FRN Due 1-12-2007                     | 4,455,897    |
| 4    | 3,680,000    | Bank One NA Chicago ILL MTN 2.026% Due 3-16-2004 | 3,681,877    |
| 5    | 3,685,000    | U.S. Treasury Tiger 0% Coupon Due 8-15-2004      | 3,546,665    |
| 6    | 2,808,890    | Chase Manhattan Bank FRN 4.20% Due 7-29-2003     | 2,862,905    |
| 7    | 2,724,916    | First Chicago Corp FRN 4.25% Due 7-28-2003       | 2,776,852    |
| 8    | 2,725,000    | VW Credit Inc FRN 2.14% Due 1-21-2005            | 2,729,224    |
| 9    | 2,530,000    | MTN Nations Bank FRN 1.926% Due 1-05-2004        | 2,531,088    |
| 10   | 2,300,000    | Federal Home Loan 6.5% Due 5-23-2011             | 2,395,795    |

\* A complete list of stock and bond holdings is available from the Michigan Department of Treasury.

# INVESTMENT SECTION

## Schedule of Investment Fees

The State Treasurer is the investment fiduciary and custodian of the System's funds pursuant to State law. Outside advisors are utilized to augment the State Treasurer's internal staff in the real estate and alternative investment markets. Only 15.4% of the total investment portfolio is managed by fully discretionary outside advisors. Outside advisors' fees are netted against the partnership or trust fund income. The Michigan Department of Treasury's cost of operations applicable to the System for the fiscal year amounted to \$226.4 thousand or less than three basis points (.03%) of the market value of the portfolio.

State law created an Investment Advisory Committee comprised of the directors of the Department of Consumer and Industry Services and Management and Budget, or their duly authorized representatives, and three public members appointed by the Governor with the advice and consent of the Senate. The public members serve without pay, but are paid actual and necessary travel and other expenses. The committee meets quarterly to review investments, goals and objectives and may submit recommendations to the State Treasurer. The committee may also, by a majority vote, direct the State Treasurer to dispose of any holding, which in the committee's judgment is not suitable for the fund involved, and may by unanimous vote direct the State Treasurer to make specific investments.

### Schedule of Investment Fees

#### *Investment Managers' Fees:*

|                                | <b>Assets under<br/>Management<br/>( in thousands)</b> | <b>Fees<br/>( in thousands)</b> | <b>Basis<br/>Points*</b> |
|--------------------------------|--|---------------------------------|--------------------------|
| State Treasurer                | \$ 745,856.8   | \$ 226.4                        | 3.0                      |
| Outside Advisors - Alternative | 131,176.5  | 1,662.5                         | 126.7                    |
| Real Estate                    | 4,869.9  | -                               | -                        |
| <b>Total</b>                   | <b>\$ 881,903.2</b>                                    |                                 |                          |

#### *Other Investment Services Fees:*

|                    |              |         |
|--------------------|--------------|---------|
| Assets in Custody  | \$ 878,369.0 | \$ 50.9 |
| Securities on Loan | 39,339.9     | 836.0   |

\* Outside Advisors Fees are netted against the income of the partnership and trust income. The partnership agreements define the management fees, which range from 150 to 250 basis points of the committed capital, in most cases the fees are netted against income. For Real Estate the asset management fee normally ranges from 25 to 90 basis points and is netted against current year's income.

# INVESTMENT SECTION

## Schedule of Investment Commissions

|                                  | Fiscal Year Ended September 30, 2002 |                            |                                      |
|----------------------------------|--------------------------------------|----------------------------|--------------------------------------|
|                                  | Commissions<br>Paid <sup>(1)</sup>   | Number of<br>Shares Traded | Average Commission<br>Rate Per Share |
|                                  | <b>Investment Brokerage Firms:</b>   |                            |                                      |
| Salomon Smith Barney, Inc.       | \$ 18,392                            | 598,210                    | \$ 0.03                              |
| Bear Stearns & Co.               | 13,755                               | 338,412                    | 0.04                                 |
| Bridge Trading Company           | 12,309                               | 246,179                    | 0.05                                 |
| C.S. First Boston Corporation    | 11,528                               | 268,779                    | 0.04                                 |
| Lehman Brothers, Inc.            | 11,170                               | 290,969                    | 0.04                                 |
| Goldman, Sachs & Co.             | 10,408                               | 226,650                    | 0.05                                 |
| Merrill Lynch & Co.              | 7,648                                | 275,704                    | 0.03                                 |
| Morgan Stanley Dean Witter & Co. | 7,324                                | 157,636                    | 0.05                                 |
| J. P. Morgan Securities, Inc.    | 7,021                                | 140,412                    | 0.05                                 |
| UBS Warburg LLC.                 | 5,568                                | 111,355                    | 0.05                                 |
| Deutsche Bank                    | 2,874                                | 57,480                     | 0.05                                 |
| Sanford C. Bernstein & Co.       | 2,529                                | 50,572                     | 0.05                                 |
| ISI Group, Inc.                  | 2,387                                | 47,463                     | 0.05                                 |
| S.G. Cowen & Company             | 2,303                                | 46,052                     | 0.05                                 |
| Prudential Securities, Inc.      | 2,264                                | 45,280                     | 0.05                                 |
| Charles Schwab & Co., Inc.       | 2,092                                | 41,835                     | 0.05                                 |
| OTA Research                     | 1,297                                | 25,934                     | 0.05                                 |
| Soundview Financial              | 1,168                                | 23,368                     | 0.05                                 |
| CIBC World Markets Corp.         | 1,147                                | 22,938                     | 0.05                                 |
| Instinet Group Inc.              | 954                                  | 38,288                     | 0.02                                 |
| Banc of America Securities, LLC. | 807                                  | 16,145                     | 0.05                                 |
| Barrington Research              | 575                                  | 11,502                     | 0.05                                 |
| Keefe Bruyette                   | 366                                  | 7,314                      | 0.05                                 |
| Howard Weil                      | 363                                  | 7,265                      | 0.05                                 |
| Total                            | \$ 126,249                           | 3,095,742                  | \$ 0.04 <sup>(2)</sup>               |

<sup>(1)</sup> These amounts are included in purchase and sale prices of investments.

<sup>(2)</sup> The average commission rate per share for all brokerage firms.

# INVESTMENT SECTION

## Investment Summary Fiscal Year Ended September 30, 2002

|                                       | <u>Market Value *</u>        | <u>Percent of Total<br/>Market Value</u> | <u>Investment &amp;<br/>Interest Income ***</u> | <u>Percent of<br/>Investment &amp;<br/>Interest Income</u> |
|---------------------------------------|------------------------------|--|---|--|
| Fixed Income:                         |                              |  |   |  |
| Government Bonds                      | \$ 120,009,649               | 13.6%                                    | \$ 8,531,291                                    | -8.0%  |
| Corporate Bonds &<br>Preferred Stocks | 88,253,220                   | 10.0%                                    | 7,564,275                                       | -7.1%  |
| Mortgages                             | 70,938                       | 0.0%                                     | 6,617   | 0.0%   |
| Total Fixed Income                    | <u>208,333,807</u>           | <u>23.6%</u>                             | <u>16,102,183</u>                               | <u>-15.1%</u>  |
| Common Stock                          | 371,603,617                  | 42.2%                                    | (88,653,674)                                    | 83.4%  |
| Real Estate                           | 90,920,398                   | 10.3%                                    | 7,307,793                                       | -6.9%  |
| Alternative Investments               | 131,176,474                  | 14.9%                                    | (29,359,523)                                    | 27.6%  |
| International Equities                | 68,066,066                   | 7.7%                                     | (12,516,316)                                    | 11.8%  |
| Short Term Investments **             | <u>11,802,788</u>            | <u>1.3%</u>                              | <u>846,357</u>                                  | <u>-0.8%</u>   |
| <b>Total</b>                          | <u><u>\$ 881,903,150</u></u> | <u><u>100.0%</u></u>                     | <u><u>\$ (106,273,180)</u></u>                  | <u><u>100.0%</u></u>                                       |

\* Short Term Investments are at cost, which approximates market value.

\*\* Excludes the amounts payable and receivable for sales and purchases of securities with a settlement date after September for each fiscal year. Amount also excludes \$40,124,269 in cash collateral for security lending for fiscal year 2002.

\*\*\* Total Investment & Interest Income excludes net security lending income of \$207,283 for fiscal year 2002.



# INVESTMENT SECTION

## Investment Summary (Continued) Fiscal Year Ended September 30, 2001

|                                       | Market Value *                 | Percent of Total<br>Market Value | Investment &<br>Interest Income *** | Percent of<br>Investment &<br>Interest Income |
|---------------------------------------|--------------------------------|----------------------------------|-------------------------------------|---|
| Fixed Income:                         |                                |                                  |                                     |   |
| Government Bonds                      | \$ 107,308,125                 | 10.4%                            | \$ 17,211,848                       | -12.6%  |
| Corporate Bonds &<br>Preferred Stocks | 105,727,332                    | 10.2%                            | 10,638,077                          | -7.9%   |
| Mortgages                             | 360,416                        | 0.0%                             | 33,117                              | 0.0%  |
| Total Fixed Income                    | <u>213,395,873</u>             | <u>20.6%</u>                     | <u>27,883,042</u>                   | <u>-20.5%</u>                                 |
| Common Stock                          | 427,070,730                    | 41.3%                            | (123,780,776)                       | 90.8%   |
| Real Estate                           | 98,236,348                     | 9.5%                             | 8,853,016                           | -6.5%   |
| Alternative Investments               | 160,314,731                    | 15.5%                            | (27,464,761)                        | 20.2%   |
| International Equities                | 69,019,156                     | 6.7%                             | (24,099,675)                        | 17.7%   |
| Short Term Investments **             | <u>67,037,120</u>              | <u>6.4%</u>                      | <u>2,341,793</u>                    | <u>-1.7%</u>                                  |
| <b>Total</b>                          | <u><u>\$ 1,035,073,958</u></u> | <u><u>100.0%</u></u>             | <u><u>\$ (136,267,361)</u></u>      | <u><u>100.0%</u></u>                          |

\* Short Term Investments are at cost, which approximates market value.

\*\* Excludes the amounts payable and receivable for sales and purchases of securities with a settlement date after September for each fiscal year. Amount also excludes \$44,764,027 in cash collateral for security lending for fiscal year 2001.

\*\*\* Total Investment & Interest Income excludes net security lending income of \$117,923 for fiscal year 2001.

# ACTUARIAL SECTION

Actuary's Certification  
Summary of Actuarial Assumptions and Methods  
Schedule of Active Member Valuation Data  
Retirant and Beneficiary Data  
Prioritized Solvency Test  
Analysis of Financial Experience  
Summary of Plan Provisions

## Actuary's Certification



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Michael J. Karlin, F.S.A., M.A.A.A.  
Senior Vice President & Actuary  
mkarlin@segalco.com

December 3, 2002

Mr. Duane E. Berger  
Director  
Department of Management and Budget  
and  
Retirement Board  
Michigan State Police Retirement System  
P.O. Box 30176  
Lansing, Michigan 48909

Ladies and Gentlemen:

The Michigan State Police Retirement System (MSPRS) is funded on an actuarial reserve basis. The basic financial objective of MSPRS is to establish and receive contributions that remain approximately level as a percentage of active member payroll over a long period of years.

Actuarial valuations are prepared annually to determine MSPRS's actuarial liabilities and the employer contributions required to fund the System in accordance with the actuarial reserve funding provisions of the governing State Statute. The most recent actuarial valuation as of September 30, 2001 included a total of 4,543 members of MSPRS. The actuarial value of MSPRS's assets amounted to approximately \$1,148.6 million on September 30, 2001.

The actuarial assumptions used in the 2001 valuation are the same as those used in the previous annual actuarial valuation. These assumptions produce valuation results which we consider to be reasonably indicative of the plan's underlying cost. Also, in our opinion, the actuarial assumptions and methods used for funding purposes meet the parameters for the disclosures presented in the financial section by GASB Statement No. 25.

Our actuarial valuation of MSPRS as of September 30, 2001 was performed by qualified actuaries in accordance with accepted actuarial procedures. In our opinion, the calculated contribution rate meets the fundamental objectives of State law. Based on the 2001 valuation results, it is also our opinion that the Michigan State Police Retirement Retirement System continues in sound condition, in accordance with actuarial principles of level cost financing.

Most of the information used in the supporting schedules in the Actuarial and Statistical Sections, as well as the Schedules of Funding Progress and the employer contributions shown in the Schedules of Employer Contributions in the Financial Section of this report were provided by our firm.

Sincerely,

Michael Karlin, F.S.A., M.A.A.A.  
Senior Vice President & Actuary

Benefits, Compensation and HR Consulting ATLANTA BOSTON CHICAGO CLEVELAND DENVER HARTFORD HOUSTON LOS ANGELES MINNEAPOLIS  
NEW ORLEANS NEW YORK PHILADELPHIA PHOENIX SAN FRANCISCO SEATTLE TORONTO WASHINGTON, DC



Multinational Group of Actuaries and Consultants AMSTERDAM BARCELONA GENEVA HAMBURG LONDON MELBOURNE MEXICO CITY OSLO PARIS

# **ACTUARIAL SECTION**

## **Summary of Actuarial Assumptions and Methods**

1. The investment return rate used in making the valuations was 8% per year, compounded annually. This rate of return is not the assumed real rate of return. Considering other financial assumptions, this 8% investment return rate translates to an assumed real rate of return of 4%. Adopted 1994.
2. The mortality table used in evaluating allowances to be paid was the 1994 Group Annuity Mortality Table, set forward one year for both men and women. Adopted 1998.
3. Sample probabilities of retirement with an age and service allowance are shown in Schedule 1 on the next page. Adopted 1998.
4. Sample probabilities of withdrawal from service and disability, together with individual pay increase assumptions, are shown in Schedule 2 on the next page. Adopted 1998.
5. Total active member payroll is assumed to increase 4% per year. This represents the portion of the individual pay increase assumptions attributable to inflation. In effect, this assumes no change in the number of active members. Adopted 1998.
6. An individual entry age actuarial cost method of valuation was used in determining age and service allowance actuarial liabilities and normal cost. Unfunded actuarial accrued liabilities, including actuarial gains and losses, are financed over a period of 50 years and over a declining 40 year period for years beginning October 1, 1986. Adopted 1986.
7. During 1998, the Department of Management and Budget approved the use of market value of assets as of September 30, 1997, for actuarial valuation purposes. For investment gains or losses that occur after that date, a 5-year smoothing technique will be used. Specifically, the excess (shortfall) of actual investment income (including interest, dividends, realized and unrealized gains or losses) over the imputed income at the valuation interest rate is considered the gain (loss), which is spread over 5 years.
8. The data about persons now covered and about present assets was furnished by the System's administrative staff. Although examined for general reasonableness, the data were not audited by the actuary.
9. The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA). The assumptions used in the actuarial valuations were adopted by the System's Board after consulting with the actuary.

# ACTUARIAL SECTION

## Summary of Actuarial Assumptions and Methods (Continued)

### SCHEDULE 1

#### Percent of Eligible Active Members Retiring Within Next Year

| <u>Retirement<br/>Ages</u>                  | <u>Percent of Eligible Active<br/>Members Retiring Within<br/>Next Year</u> |
|---|---|
| 44-49 (first year eligible to retire)       | 50 %  |
| 44-49 (after first year eligible to retire) | 25  |
| 50-57                                       | 25  |
| 58  | 35  |
| 59  | 50  |
| 60  | 65  |
| 61  | 80  |
| 62-63                                       | 100   |

### SCHEDULE 2

#### Separation From Active Employment Before Age & Service Retirement & Individual Pay Increase Assumptions

| <u>Sample<br/>Ages</u> | <u>Years of<br/>Service</u> | <u>Percent of Active<br/>Members Withdrawing<br/>Within Next Year<br/>(Men and Women)</u> | <u>Percent of<br/>Active Members<br/>Becoming Disabled<br/>Within<br/>Next Year</u> | <u>Percent<br/>Increase<br/>In Pay During<br/>Next Year*</u> |
|------------------------|-----------------------------|---|---|--|
| All                    | 0                           | 6.50 %  |   |  |
|                        | 1                           | 4.00  |   |  |
| 20                     | 2 & Over                    | 2.00  | 0.30 %  | 11.30 %  |
| 25                     | "                           | 2.00  | 0.31  | 10.70  |
| 30                     | "                           | 1.50  | 0.31  | 7.85   |
| 35                     | "                           | 0.60  | 0.32  | 6.10   |
| 40                     | "                           | 0.35  | 0.36  | 5.24   |
| 45                     | "                           | 0.35  | 0.43  | 4.89   |
| 50                     | "                           | 0.35  | 0.53  | 4.86   |
| 55                     | "                           |   | 0.63  | 4.68   |
| 60                     | "                           |   | 0.75  | 4.68   |

\*These rates apply after 3 years of service. During the first 3 years, the assumed increases are 84%, 19% and 14% respectively.

# ACTUARIAL SECTION

## Actuarial Valuation Data

### Schedule of Active Member Valuation Data

| <u>Valuation<br/>Date<br/>Sept. 30</u> | <u>Number</u> | <u>Reported<br/>Annual<br/>Payroll</u> | <u>Average<br/>Annual<br/>Pay</u> | <u>%<br/>Increase</u> | <u>Average<br/>Age</u> | <u>Average<br/>Service</u> |
|--|---------------|--|-----------------------------------|-----------------------|------------------------|----------------------------|
| 1992                                   | 1,985         | \$ 89,899,102                          | \$ 45,289                         | 5.7 %                 | 39.4                   | 15.3                       |
| 1993                                   | 1,885         | 86,791,793                             | 46,043                            | 1.7                   | 39.9                   | 15.1                       |
| 1994                                   | 1,992         | 88,623,068                             | 44,490                            | (3.4)                 | 38.8                   | 13.7                       |
| 1995                                   | 2,181         | 104,500,048                            | 47,914                            | 7.7                   | 37.9                   | 13.0                       |
| 1996                                   | 2,135         | 106,826,272                            | 50,036                            | 4.4                   | 38.2                   | 13.1                       |
| 1997                                   | 2,090         | 110,085,960                            | 52,673                            | 5.3                   | 38.2                   | 12.9                       |
| 1998                                   | 2,220         | 108,183,040                            | 48,731                            | (7.5)                 | 37.5                   | 11.6                       |
| 1999                                   | 2,216         | 116,910,216                            | 52,757                            | 8.3                   | 37.0                   | 11.5                       |
| 2000                                   | 2,210         | 116,558,417                            | 52,741                            | (0.0)                 | 37.2                   | 11.6                       |
| 2001                                   | 2137          | 118,788,227                            | 55,586                            | 5.4                   | 37.9                   | 12.2                       |

### Retirant and Beneficiary Data Rolls End of Year

| <u>Year<br/>Ended<br/>Sept. 30</u> | <u>Number</u>     |               |                 | <u>Average Monthly Benefit</u> |               |                 | <u>Average Age</u> |               |                 |
|------------------------------------|-------------------|---------------|-----------------|--------------------------------|---------------|-----------------|--------------------|---------------|-----------------|
|                                    | <u>Pensioners</u> | <u>Widows</u> | <u>Children</u> | <u>Pensioners</u>              | <u>Widows</u> | <u>Children</u> | <u>Pensioners</u>  | <u>Widows</u> | <u>Children</u> |
| 1992                               | 1,267             | 281           | 3               | \$ 1,620                       | \$ 868        | \$ 100          | 60.4               | 66.6          | 14.4            |
| 1993                               | 1,357             | 282           | 3               | 1,697                          | 879           | 100             | 60.4               | 66.7          | 15.3            |
| 1994                               | 1,483             | 273           | 3               | 1,721                          | 938           | 100             | 60.5               | 69.5          | 16.4            |
| 1995                               | 1,548             | 279           | 4               | 1,770                          | 962           | 100             | 60.8               | 69.6          | 14.8            |
| 1996                               | 1,612             | 397           | 6               | 1,845                          | 1,001         | 100             | 61.6               | 69.3          | 10.3            |
| 1997                               | 1,703             | 310           | 5               | 1,963                          | 1,192         | 419             | 62.5               | 70.4          | 10.7            |
| 1998                               | 1,820             | 314           | 5               | 2,062                          | 1,225         | 499             | 62.8               | 71.0          | 10.1            |
| 1999                               | 1,893             | 334           | 4               | 2,141                          | 1,263         | 499             | 63.1               | 71.5          | 10.8            |
| 2000                               | 1,968             | 345           | 6               | 2,227                          | 1,308         | 366             | 61.9               | 71.9          | 10.4            |
| 2001                               | 2,023             | 353           | 6               | 2,298                          | 1,357         | 366             | 62.5               | 73.3          | 11.4            |

## Prioritized Solvency Test

The System's funding objective is to meet long term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will pay all promised benefits when due, the ultimate test of financial soundness. Testing for level contribution rates is the long-term solvency test.

A prioritized solvency test is another means of checking a system's progress under its funding program. In a short condition test, the plan's present assets (cash and investments) are compared with: (1) active member contributions on deposit; (2) the liabilities for future benefits to present retired lives; and (3) the liabilities for service already rendered by active and inactive members. In a system that has been following the discipline of level percent of payroll financing, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (liability 3) is normally partially covered by the remainder of present assets. Generally, if the System has been using level-cost financing, the funded portion of liability 3 will increase over time. Liability 3 being fully funded is not necessarily a byproduct of level percent of payroll funding methods.

The schedule below illustrates the history of the liabilities of the System and is indicative of the System's policy of following the discipline of level percent of payroll financing.

| Valuation Date    | Actuarial Accrued Liability (\$ in Thousands) |                             |   |   | Valuation Assets | Portion of Present Value Covered by Assets |        |        |                  |
|-------------------|---|-----------------------------|---|---|------------------|--|--------|--------|------------------|
|                   | (1)   | (2)                         | (3)   | Active and Inactive Members (Employer Financed Portion) |                  | (1)  | (2)    | (3)    | (4) <sup>3</sup> |
|                   | Active Member Contributions                   | Retirants and Beneficiaries | Active and Inactive Members (Employer Financed Portion) |   |                  | Assets                                     | (1)    | (2)    | (3)              |
| Sept. 30          |   |                             |   |   |                  |  |        |        |                  |
| 1992              | \$ 2,127                                      | \$ 301,927                  | \$ 340,316  | \$ 488,711  | 100 %            | 100 %                                      | 54.3 % | 75.8 % |                  |
| 1993              | 2,133   | 330,629                     | 347,749   | 526,193   | 100              | 100  | 55.6   | 77.3   |                  |
| 1993 <sup>2</sup> | 2,133   | 330,629                     | 347,749   | 530,936   | 100              | 100  | 57.0   | 78.0   |                  |
| 1994              | 1,770   | 370,681                     | 336,847   | 566,541   | 100              | 100  | 57.6   | 79.9   |                  |
| 1994 <sup>1</sup> | 1,770   | 394,292                     | 315,779   | 566,541   | 100              | 100  | 54.0   | 79.6   |                  |
| 1995              | 1,497   | 422,960                     | 374,363   | 622,626   | 100              | 100  | 52.9   | 77.9   |                  |
| 1996              | 1,183   | 459,985                     | 362,293   | 697,923   | 100              | 100  | 65.3   | 84.8   |                  |
| 1997              | 847   | 516,379                     | 363,100   | 787,240   | 100              | 100  | 74.4   | 89.4   |                  |
| 1997 <sup>2</sup> | 847   | 516,379                     | 363,100   | 928,714   | 100              | 100  | 113.3  | 105.5  |                  |
| 1997 <sup>4</sup> | 847   | 516,379                     | 395,533   | 928,714   | 100              | 100  | 104.0  | 105.9  |                  |
| 1998              | 614   | 593,169                     | 349,941   | 974,365   | 100              | 100  | 108.8  | 103.2  |                  |
| 1998 <sup>1</sup> | 614   | 604,724                     | 357,130   | 974,365   | 100              | 100  | 103.3  | 101.2  |                  |
| 1999              | 273   | 643,284                     | 362,971   | 1,036,840   | 100              | 100  | 108.4  | 103.0  |                  |
| 2000              | 198   | 685,272                     | 355,244   | 1,113,065   | 100              | 100  | 120.4  | 107.0  |                  |
| 2001              | 197   | 717,244                     | 356,192   | 1,148,609   | 100              | 100  | 121.0  | 107.0  |                  |

<sup>1</sup> Revised asset valuation assumptions.

<sup>2</sup> Revised asset valuation method.

<sup>3</sup> Percents funded on a total valuation asset and total actuarial accrued liability basis.

<sup>4</sup> Revised inflation assumption.

# ACTUARIAL SECTION

## Analysis of Financial Experience

### Gains/(Losses) in Accrued Liabilities During Year Ended September 30, 2001 Resulting from Differences Between Assumed Experience & Actual Experience

| <u>Type of Activity</u>   | <u>Gain/(Loss)</u>        |
|---|---------------------------|
| 1. <b>Retirements (including Disability Retirement).</b> If members retire at older ages or with lower final average pay than assumed, there is a gain. If younger ages or higher average pays, a loss. | (\$588,300)               |
| 2. <b>Withdrawal From Employment</b> (including death-in-service). If more liabilities are released by withdrawals and deaths than assumed, there is a gain. If smaller releases, a loss.               | 220,500                   |
| 3. <b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.  | 12,770,500                |
| 4. <b>Investment Income.</b> If there is greater investment income than assumed, there is a gain. If less income, a loss.   | (15,909,632)              |
| 5. <b>Death After Retirement.</b> If retirants live longer than assumed, there is a loss. If not as long, a gain.   | (1,925,500)               |
| 6. <b>New entrants.</b> New entrants into the plan will generally result in an actuarial loss. This does not apply to plans closed to new entrants.   | (395,645)                 |
| 7. <b>Other.</b> Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, etc.   | <u>5,373,962</u>          |
| 8. <b>Composite Gain (or Loss) During Year</b>  | <u><u>(\$454,115)</u></u> |



## Summary of Plan Provisions

Our actuarial valuation of the System as of September 30, 2001, is based on the present provisions of Public Act 182 of 1986, as amended.

### ***Regular Retirement***

Eligibility — 25 years of credited service with no age requirement; or age 50 with 10 years credited service.

Annual Amount — If member has 25 or more years of credited service, 60% of final average compensation; if member has less than 25 years of credited service, total credited service times 2% of final average compensation.

Type of Final Annual Compensation — Average of 2 final years.

### ***Early Retirement***

None.

### ***Deferred Retirement (vested benefit)***

Eligibility — 10 years of credited service. Benefit commences at age 50.

Annual Amount — Computed as Regular Retirement benefit based on credited service and final average compensation at termination.

### ***Duty-Disability Retirement***

Eligibility — No age or service requirement.

Annual Amount — 60% of final average compensation. Disability benefit plus workers' compensation benefit, if any, shall not exceed 100% of final average compensation.

### ***Non-Duty Disability Retirement***

Eligibility — 10 years of credited service.

Annual Amount — 2.4% of final average compensation times years of credited service, to a maximum of 60% of final average compensation.

### ***Duty Death Before Retirement***

Eligibility — No age or service requirement.

Annual Amount — 60% of final average compensation is payable to surviving spouse; additional \$1,200 per year for each child under 18 is also payable. If no surviving spouse, children under 18 share in 60% benefit until attainment of age 18. If no spouse or children, dependent parents are eligible for 60% benefit (plus \$1,200 per dependent sibling under 18). Retirement benefit plus workers' compensation, if any, shall not exceed 100% of final average compensation.

Lump Sum Payment — A \$1,500 funeral benefit is also payable.

# **ACTUARIAL SECTION**

## **Summary of Plan Provisions (Continued)**

### ***Non-Duty Death Before Retirement***

Eligibility — 10 years of credited service.

Annual Amount — 2.4% of final average compensation times years of credited service, to a maximum of 60% of final average compensation, payable to surviving spouse. If no surviving spouse, children under 18 share in benefit until attainment of age 18.

### ***Death After Retirement***

The retired member's benefit continues to the surviving spouse. If no surviving spouse, children under 18 share in the continued benefit until attainment of age 18.

### ***Post-Retirement Cost-of-Living Adjustments***

All members retiring (or leaving employment with vested benefits), and their survivors, are eligible for automatic 2% annual (non-compounded) benefit increases, with a maximum annual increase of \$500.

### ***Post-Retirement Health Insurance Coverage***

Persons in receipt of retirement allowances, and their dependents, are eligible for 95% State-paid health insurance coverage and 90% State-paid dental and vision insurance.

### ***Member Contributions***

None.

# STATISTICAL SECTION

Schedule of Revenues by Source  
Schedule of Expenses by Type  
Schedule of Benefit Expenses by Type  
Schedule of Retired Members by Type of Benefit  
Schedule of Average Benefit Payments  
Ten Year History of Membership

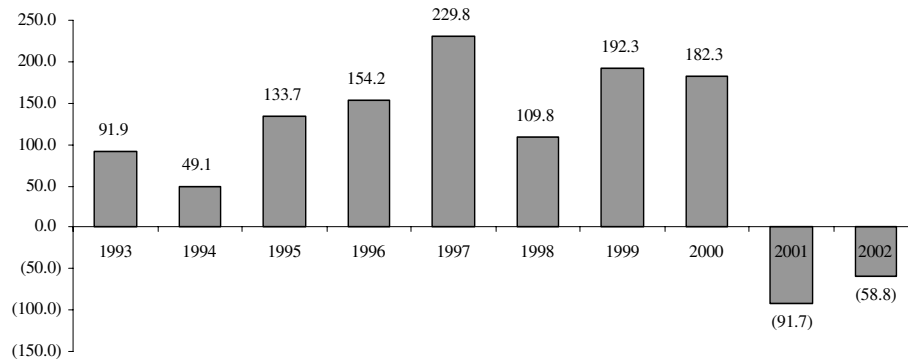
# STATISTICAL SECTION

## Schedule of Revenues by Source

| Fiscal Year<br>Ended<br>Sept. 30 | Member<br>Contributions | Employer Contributions |                                | Net Investment &<br>Other Income | Total         |
|----------------------------------|-------------------------|------------------------|--------------------------------|----------------------------------|---------------|
|                                  |                         | Dollars                | % of Annual<br>Covered Payroll |                                  |               |
| 1993                             | \$ 30,065               | \$ 31,183,021          | 35.9 %                         | \$ 60,657,772                    | \$ 91,870,858 |
| 1994                             | 45,384                  | 35,945,995             | 40.6                           | 13,065,959                       | 49,057,338    |
| 1995                             | 71,008                  | 37,754,338             | 36.1                           | 95,862,258                       | 133,687,604   |
| 1996                             | 76,743                  | 53,135,642             | 49.7                           | 100,983,575                      | 154,195,960   |
| 1997                             | 712,799                 | 51,851,631             | 47.1                           | 177,235,892                      | 229,800,322   |
| 1998                             | 922,736                 | 33,123,384             | 30.6                           | 75,726,277                       | 109,772,397   |
| 1999                             | 1,000,518               | 34,447,886             | 29.5                           | 156,896,728                      | 192,345,132   |
| 2000                             | 1,115,233               | 36,528,809             | 31.3                           | 144,657,843                      | 182,301,885   |
| 2001                             | 1,462,642               | 44,646,018             | 37.6                           | (137,798,523)                    | (91,689,863)  |
| 2002                             | 1,493,313               | 47,727,108             | N/A                            | (108,017,248)                    | (58,796,827)  |

N/A Not Available

**Total Revenue**  
Year Ended September 30  
(In Millions)



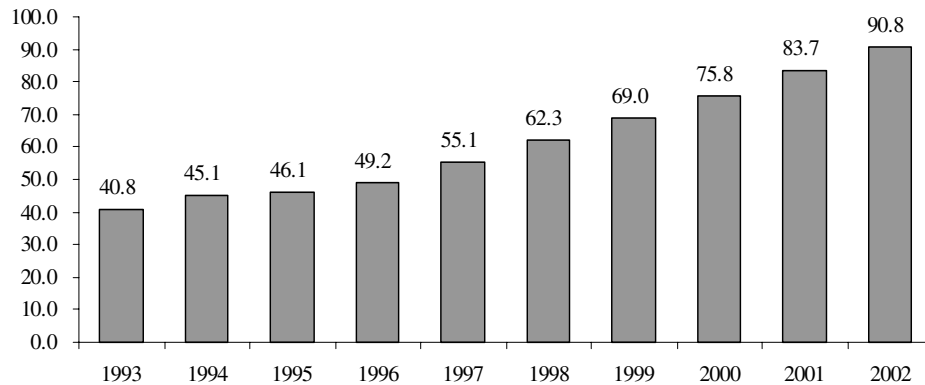
# STATISTICAL SECTION

## Schedule of Expenses by Type

| <u>Fiscal Year<br/>Ended<br/>Sept. 30</u> | <u>Benefit<br/>Payments*</u> | <u>Refunds<br/>and Transfers</u> | <u>Administrative<br/>and Other<br/>Expenses</u> | <u>Total</u>  |
|---|------------------------------|----------------------------------|--|---------------|
| 1993                                      | \$ 40,446,933                | \$ 1,743                         | \$ 359,160                                       | \$ 40,807,836 |
| 1994                                      | 44,629,521                   |                                  | 449,033  | 45,078,554    |
| 1995                                      | 45,639,290                   |                                  | 493,400  | 46,132,690    |
| 1996                                      | 48,795,509                   |                                  | 429,986  | 49,225,495    |
| 1997                                      | 54,912,395                   |                                  | 202,828  | 55,115,223    |
| 1998                                      | 62,083,435                   |                                  | 225,327  | 62,308,762    |
| 1999                                      | 68,693,133                   | 4,694                            | 322,997  | 69,020,824    |
| 2000                                      | 75,631,405                   |                                  | 158,935  | 75,790,340    |
| 2001                                      | 83,431,499                   | 6                                | 298,711  | 83,730,216    |
| 2002                                      | 90,447,652                   |                                  | 353,403  | 90,801,055    |

\*Includes health, dental and vision benefits.

**Total Expenses**  
**Year Ended September 30**  
**(In Millions)**

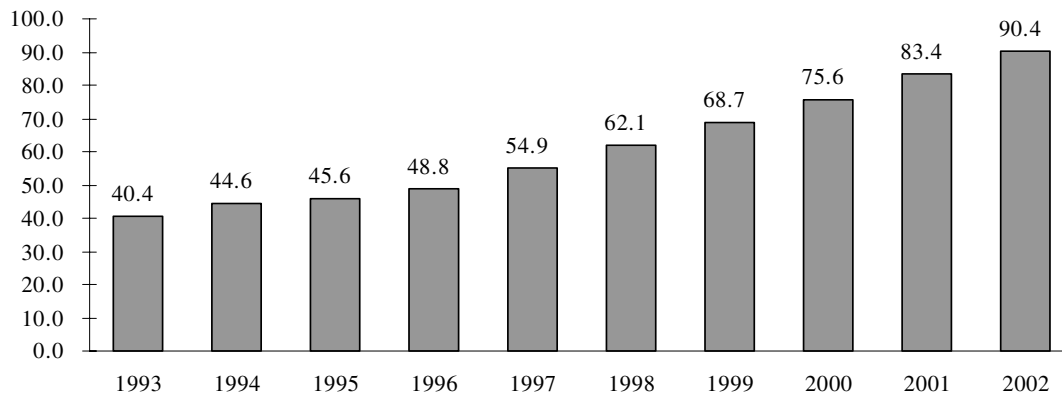


# STATISTICAL SECTION

## Schedule of Benefit Expenses by Type

| <u>Fiscal Year<br/>Ended<br/>Sept. 30</u> | <u>Regular<br/>Benefits</u> | <u>Disability<br/>Benefits</u> | <u>Funeral<br/>Benefits</u> | <u>Health<br/>Benefits</u> | <u>Total</u>  |
|---|-----------------------------|--------------------------------|-----------------------------|----------------------------|---------------|
| 1993                                      | \$27,681,161                | \$ 1,957,605                   | \$ 1,500                    | \$ 10,806,667              | \$ 40,446,933 |
| 1994                                      | 30,915,357                  | 2,127,957                      | 3,000                       | 11,583,207                 | 44,629,521    |
| 1995                                      | 33,141,186                  | 2,366,398                      |                             | 10,131,706                 | 45,639,290    |
| 1996                                      | 35,794,961                  | 2,482,429                      | 1,500                       | 10,516,619                 | 48,795,509    |
| 1997                                      | 40,536,134                  | 2,782,100                      |                             | 11,594,161                 | 54,912,395    |
| 1998                                      | 45,216,692                  | 3,010,640                      |                             | 13,856,103                 | 62,083,435    |
| 1999                                      | 49,330,784                  | 3,155,805                      |                             | 16,206,544                 | 68,693,133    |
| 2000                                      | 53,466,267                  | 3,223,915                      | 3,000                       | 18,938,222                 | 75,631,405    |
| 2001                                      | 57,019,158                  | 3,388,237                      |                             | 23,024,104                 | 83,431,499    |
| 2002                                      | 60,747,711                  | 3,670,419                      |                             | 26,029,522                 | 90,447,652    |

**Total Benefit Expenses**  
**For Year Ended September 30**  
**(In Millions)**



# STATISTICAL SECTION

## Schedule of Retired Members by Type of Benefit September 30, 2001

| Amount<br>Monthly<br>Benefit | Number of<br>Retirees | Type of Retirement * |            |            |           |           |           | Option **    |
|------------------------------|-----------------------|----------------------|------------|------------|-----------|-----------|-----------|--------------|
|                              |                       | 1                    | 2          | 3          | 4         | 5         | 6         | Life         |
| \$ 001 - 400                 | 41                    | 31                   | 2          | 1          | 2         | 3         | 2         | 41           |
| 401 - 800                    | 128                   | 97                   | 6          | 4          | 7         | 0         | 14        | 128          |
| 801 - 1,200                  | 396                   | 190                  | 148        | 28         | 4         | 17        | 9         | 396          |
| 1,201 - 1,600                | 299                   | 202                  | 49         | 26         | 11        | 5         | 6         | 299          |
| 1,601 - 2,000                | 178                   | 134                  | 15         | 12         | 5         | 4         | 8         | 178          |
| 2,001 - 2,400                | 197                   | 146                  | 22         | 18         | 7         | 1         | 3         | 197          |
| 2,401 - 2,800                | 391                   | 356                  | 11         | 15         | 3         | 2         | 4         | 391          |
| 2,801 - 3,200                | 440                   | 426                  | 8          | 4          | 2         | 0         | 0         | 440          |
| 3,201 - 3,600                | 204                   | 201                  | 0          | 1          | 0         | 0         | 2         | 204          |
| 3,601 - 4,000                | 74                    | 73                   | 0          | 1          | 0         | 0         | 0         | 74           |
| Over 4,000                   | 34                    | 34                   | 0          | 0          | 0         | 0         | 0         | 34           |
| Totals                       | <u>2,382</u>          | <u>1,890</u>         | <u>261</u> | <u>110</u> | <u>41</u> | <u>32</u> | <u>48</u> | <u>2,382</u> |

\* Type of Retirement

- 1 - Normal retirement for age & service
- 2 - Survivor payment - normal retirement
- 3 - Duty disability retirement
- 4 - Non-duty disability retirement
- 5 - Survivor payment - duty death in service
- 6 - Survivor payment - non-duty death in service

\*\*Selected Option

Life - 100% Joint and Survivors

Source: The Segal Company

# STATISTICAL SECTION

## Schedule of Average Benefit Payments

| Retirement Effective Dates   | Years Credited Service |          |        |          |          |          |          | Total    |
|------------------------------|------------------------|----------|--------|----------|----------|----------|----------|----------|
|                              | 0-5                    | 5-10     | 10-15  | 15-20    | 20-25    | 25-30    | 30+      |          |
| Period 10/1/95 to 9/30/96:   |                        |          |        |          |          |          |          |          |
| Average Monthly Benefit      | \$ 757                 | \$ 952   | \$ 775 | \$ 959   | \$ 1,255 | \$ 1,814 | \$ 2,180 | \$ 1,709 |
| Average Final Average Salary | 3,752                  | 18,858   | 20,419 | 20,860   | 25,543   | 33,351   | 41,832   | 31,620   |
| Number of Active Retirants   | 82                     | 20       | 61     | 64       | 98       | 1,383    | 207      | 1,915    |
| Period 10/1/96 to 9/30/97:   |                        |          |        |          |          |          |          |          |
| Average Monthly Benefit      | \$ 750                 | \$ 1,112 | \$ 789 | \$ 1,016 | \$ 1,324 | \$ 1,971 | \$ 2,295 | \$ 1,840 |
| Average Final Average Salary | 2,411                  | 18,858   | 21,369 | 21,482   | 25,967   | 34,903   | 42,786   | 32,846   |
| Number of Active Retirants   | 86                     | 20       | 70     | 67       | 98       | 1,463    | 214      | 2,018    |
| Period 10/1/97 to 9/30/98:   |                        |          |        |          |          |          |          |          |
| Average Monthly Benefit      | \$ 731                 | \$ 1,188 | \$ 819 | \$ 1,114 | \$ 1,351 | \$ 2,084 | \$ 2,392 | \$ 1,936 |
| Average Final Average Salary | 2,116                  | 21,238   | 23,006 | 22,791   | 26,112   | 36,912   | 44,432   | 34,509   |
| Number of Active Retirants   | 98                     | 22       | 75     | 70       | 98       | 1,548    | 227      | 2,138    |
| Period 10/1/98 to 9/30/99:   |                        |          |        |          |          |          |          |          |
| Average Monthly Benefit      | \$ 746                 | \$ 1,196 | \$ 856 | \$ 1,120 | \$ 1,401 | \$ 2,173 | \$ 2,489 | \$ 2,006 |
| Average Final Average Salary | 1,852                  | 22,257   | 24,530 | 22,790   | 27,318   | 38,441   | 45,879   | 35,702   |
| Number of Active Retirants   | 112                    | 23       | 85     | 70       | 102      | 1,601    | 238      | 2,231    |
| Period 10/1/99 to 9/30/00:   |                        |          |        |          |          |          |          |          |
| Average Monthly Benefit      | \$ 938                 | \$ 1,408 | \$ 854 | \$ 1,124 | \$ 1,421 | \$ 2,267 | \$ 2,569 | \$ 2,086 |
| Average Final Average Salary | 8,313                  | 25,199   | 24,827 | 23,537   | 27,727   | 39,975   | 47,088   | 37,065   |
| Number of Active Retirants   | 141                    | 25       | 86     | 67       | 103      | 1,651    | 246      | 2,319    |
| Period 10/1/00 to 9/30/01:   |                        |          |        |          |          |          |          |          |
| Average Monthly Benefit      | \$ 771                 | \$ -     | \$ 900 | \$ 1,150 | \$ 1,471 | \$ 2,341 | \$ 2,509 | \$ 2,154 |
| Average Final Average Salary | 0                      | -        | 25,419 | 24,870   | 27,684   | 41,415   | 45,631   | 38,158   |
| Number of Active Retirants   | 117                    | -        | 93     | 68       | 109      | 1,711    | 284      | 2,382    |

Source: The Segal Company



## Ten Year History of Membership Fiscal Year Ended September 30



Source: The Segal Company