



The essence of strength and stability
Growth and maturity
Lasting for generations
Their resources provide protection and security
They are dynamic
Changing with the seasons
Yet rooted in rich substance and history

These characteristics exemplify MOSERS.

Join us as we celebrate our 50<sup>th</sup> anniversary and revisit our roots while acknowledging the stability, growth, and development of the fund that provides protection and security to generations of state employees.



Gary Findlay
Executive Director

Gary Irwin
Chief Finance Officer



Missouri State Employees' Retirement System
A Component Unit of the State of Missouri

Comprehensive Annual Financial Report Fiscal Year Ended June 30, 2007



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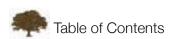
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\* Missouri State Employees' Plan





# Our Mission

To exceed customer expectations by providing outstanding benefit services through professional plan administration and sound investment practices.

# Core Values

# Quality

Strive to exceed the expectations of internal and external customers through innovation, competence, and teamwork. Seek to "do it right" the first time.

### Respect

Be sensitive to the needs of others, both within and outside the organization. Be courteous, considerate, responsive, and professional.

# Integrity

In all endeavors, act in an ethical, honest, and professional manner.

## **Openness**

Be willing to listen to, and share information with, others. Be receptive to new ideas. Be trusting of others.

# Accountability

Take ownership of and responsibility for actions and their results. Learn from mistakes. Control system risks and act to protect the security of member information and system assets.



The retirement system has been guided and nurtured by many talented and dedicated individuals since MOSERS was first established in 1957. As we celebrate our 50<sup>th</sup> anniversary, we commemorate their numerous and significant contributions toward the success of the plan.

Newton Atterbury, Executive Secretary, 1957-1958

John Schwada, Executive Secretary, 1958-1959

Ben Meyer, Executive Secretary, 1959-1961

William Hemphill, Executive Secretary, 1961-1965

Edwin Bode, Executive Secretary, 1965-1979

Al Holmes, Executive Secretary, 1980-1981

Mary-Jean Hackwood, Executive Director, 1981-1987

M. Steve Yoakum, Executive Director, 1987-1994

Gary Findlay, Executive Director, 1994 to present
Rick Dahl, Chief Investment Officer and Deputy Executive Director, 1995 to present
Karen Stohlgren, Chief Operations Officer and Deputy Executive Director, 1996 to present

We would be remiss if we did not specifically honor the many contributions of Rosemary Eppenauer, MOSERS' former Assistant Executive Director. Rosie opened the doors on MOSERS' first day of business in 1957 and dedicated nearly 40 years of her life to serving our membership until her retirement in 1996.

To all of MOSERS' former and present trustees, thank you for a job well done. Your dedication and commitment to your fiduciary responsibilities contributed greatly to the stability and growth of the system.

Lastly, to all of MOSERS' former and current employees, we express our gratitude for your individual contributions to the system. It is through your hard work, enthusiasm, and commitment to excellence that MOSERS has been able to accomplish its mission of exceeding customer expectations by providing outstanding benefit services through professional plan administration and sound investment practices.



# Introductory Section

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# Professional Awards

#### Certificate of Achievement for Excellence in Financial Reporting

MOSERS' Comprehensive Annual Financial Report for the fiscal year ended June 30, 2006, was awarded the Certificate of Achievement for Excellence in Financial Reporting by the Government Finance Officers Association of the United States and Canada (GFOA). This was the eighteenth consecutive year that MOSERS has achieved this prestigious award. The Certificate of Achievement is the highest form of recognition for excellence in state and local government financial reporting.

#### Public Pension Standards Award

MOSERS also received the Public Pension Coordinating Council (PPCC), Public Pension Standards Award in 2006, in recognition of meeting the professional standards for plan design and administration as set forth in the Public Pension Standards. This award is presented by the PPCC, a confederation of the National Association of State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS), and the National Council on Teacher Retirement (NCTR).



#### Letter of Transmittal



#### Missouri State Employees' Retirement System

**Mailing Address** 

PO Box 209 • Jefferson City, MO 65102-0209

**Building Location** 

907 Wildwood Drive • Jefferson City, MO

October 16, 2007

The Board of Trustees Missouri State Employees' Retirement System 907 Wildwood Drive Jefferson City, MO 65109

#### Dear Board Members:

It is with special pleasure that I submit to you this *Comprehensive Annual Financial Report* (CAFR) of the Missouri State Employees' Retirement System (MOSERS). As we go to print this year, we celebrate MOSERS' 50th anniversary. We have chosen the oak tree at the entrance to our building as the theme for this year's report to symbolize that, 50 years ago, a group of state employees planted the initial seed capital and then nourished the system to ensure that its roots provided a firm foundation for future growth. Like the mighty oak tree, MOSERS has weathered a number of storms and is all the stronger for having done so. The fund has matured over time and today has net assets totaling \$8.1 billion dollars, which provides economic shelter for thousands of participants who have come to rely on the system as a key component of their financial security.

#### Report Contents and Structure

This CAFR is designed to satisfy the reporting requirements of state law as stipulated in Sections 104.480, 104.1006, and 105.661 of the Revised Statutes of Missouri (RSMo), as amended. The financial information presented in the report is the responsibility of the management of MOSERS, and sufficient internal accounting controls exist to provide reasonable assurance regarding the safekeeping of assets and fair presentation of the financial statements, supporting schedules, and statistical tables. An independent auditing firm, Williams-Keepers LLC, has audited the financial statements included in this report and their opinion letter is presented in the *Financial Section* of this CAFR. The *Financial Section* also contains *Management's Discussion and Analysis* that serves as a narrative introduction to and overview of the financial statements. MOSERS is considered a component unit of the state of Missouri for financial reporting purposes and, as such, the financial statements in this report are also included in the *State of Missouri's Comprehensive Annual Financial Report*.

#### Profile of MOSERS

MOSERS is an instrumentality of the state of Missouri established in 1957 by state statutes for the purpose of providing retirement benefits to state employees not covered by another retirement system. MOSERS provides for those retirement benefits through pension trust funds.

Phone: (573) 632-6100 • (800) 827-1063 MO Relay: 7-1-1 (Voice) • (800) 735-2966 (TTY) Email: mosers@mosers.org • Website: www.mosers.org



Subsequent to its creation, MOSERS was given the task of also providing most members of the retirement system with life and long-term disability insurance. MOSERS operates an internal service fund for the state of Missouri and contracts with insurance companies to provide those benefits through insured defined benefit plans. MOSERS maintains membership information on those eligible for the insurance coverage and collects and remits the premiums to the insurance company. Currently, the life insurance and long-term disability plans are insured through The Standard Insurance Company.

The MOSERS Board of Trustees annually approves the administrative expense budgets of MOSERS' operation and investment divisions. MOSERS' governance policy requires an exception report to the board of trustees by the executive director if expenses are expected to exceed budgeted amounts by 10% or if there are any unscheduled salary increases or staff expansions not included in the budget approved by the board.

#### Long-Term Communication Plan

This year we finalized and implemented our long-term communications plan. The plan identifies our target audiences, key messages we want to get to those audiences and strategies for delivering those key messages. This new plan will assure consistency in the messages we send and will facilitate achieving multi-year communications.

#### Web Enhancements

The MOSERS website continues to be our most dynamic communications vehicle. Significant advancements were made this year in terms of online forms, reports, and processes.

Probably the most far-reaching project was the creation of online eStubs for employees whose payroll is processed through the state accounting system. A pilot project was implemented in April 2006, using the Office of Administration and MOSERS' employees. This project provided the foundation for paperless pay stubs, which will reduce costs and distribution time statewide as agencies implement this option. This is a major step for the state. By initiating this change, staff time will be reduced since pay stub information will no longer need to be printed, put into envelopes, and distributed, and employees will receive their pay information more quickly. Beyond that, it will dramatically increase the number of active members who request passwords for access to the "member only" secure areas of our website, thus increasing the potential for other aspects of customer self-service. In conjunction with the eStubs project and, at the recommendation of the Retiree Connection group, we stopped issuing paper stubs to members on direct deposit in August 2006. Instead, we offered retirees the option of getting email notification when their payments are deposited each month.

Rumor Central continues to be one of our most popular website features. Members, nonmembers, and the general public visit this site for factual information related to legislation, benefits, and rumors in the workplace. Since this is a time-consuming process for MOSERS' staff, we did ask that our members only post questions that are MOSERS-related. This forum has increased member satisfaction and enhanced the system's stature as a reputable source of reliable information.

Advances continue to be made in the online forms project. Online forms have been extremely popular with agency human resource staff and, over the past year, we received over 36% of forms electronically. This greatly facilitates forms submissions and substantially reduces the potential for errors associated with manual data entry. Phase II of the project began February 2006 and was completed ahead of schedule on September 8, 2006. Phase II completed the automation process by downloading information directly into our member database. Approximately 56% of electronically received forms are now processed without human intervention. This saves processing time, improves accuracy, and reduces costs to MOSERS. Several new online reports were made available to employers this year. Providing these reports electronically reduced distribution costs (printing, mailing, etc.) and improved response time on the receipt of information requests from employers.



#### Reduction in Optional Life Insurance Costs

The cost of optional life insurance for members was reduced this year. We were able to negotiate optional life rate decreases of approximately 6%, targeting mainly the older age bands. In addition, we obtained a three-year rate guarantee for basic life and long-term disability insurance.

#### **Technology Updates**

Several important achievements relating to the implementation of our disaster recovery plan were completed this year. In order to maintain the flow of business functions and to serve our customers in the event of a disaster, a diesel backup generator was installed for our primary location. A warm-site facility was also established along with a mobile recovery contract to supply mobile recovery units, computer hardware, and supplies in order to sustain essential operations in the event of major disaster. We are now more prepared and capable of sustaining mission critical operations in the event of a disaster. The current network domain controller and the email server were also replaced with up-to-date technology. With this upgrade, we were able to consolidate two email servers into one, which is faster and more reliable. In November, we purchased and installed a local firewall between MOSERS and the Office of Administration's private network. This provides improved security for our systems because access from the state's private network is now "locked-down" to allow only necessary connections. This is a better solution and is easier to maintain. The firewall appliance that was purchased will be reallocated to the business continuity plan warm-site.

#### Cost Effective Measurement

Customer service is a critical element in MOSERS' performance objectives and is the driving force behind many of our service improvements. One of the ways we measure our overall performance is through the Cost Effectiveness Measurement (CEM) Benefit Administration Benchmarking Analysis. CEM evaluated 55 leading pension systems, including systems in the United States, Canada, Australia, and the Netherlands. Of the U.S. public pension plans, 12 were identified as our most relevant peer group based on membership size and system assets. The CEM survey rated MOSERS' service as the highest in our peer group with a total service score of 89 while the peer average was 77. This ranked us number one in service among our peer group and number two overall in the CEM universe. This was accomplished with a cost per active and retired member of \$70 that was equal to the peer group median cost and below the CEM universe median cost of \$85 – in other words, a high service level at below median cost, which is our ultimate goal.

#### Legislation

House Joint Resolution (HJR) 55

Last year we reported that HJR 55 required submission to Missouri voters a constitutional amendment to existing language that would allow for automatic approval of the schedule of compensation developed by the Missouri Citizen's Commission on Compensation of Elected Officials. Recommendations of the Commission impact pay for all elected state officials, members of the General Assembly, and judges unless disapproved by a concurrent resolution adopted by the General Assembly. Missouri voters approved the constitutional amendment.

#### Senate Bill 406

The legislature passed an omnibus retirement bill this year that affects the retirement plans administered by MOSERS. The bill contains general, long-awaited "cleanup" provisions plus substantive changes involving the oversight of the state's Deferred Compensation Program and the establishment of a medical benefit trust fund (for actuarially funding retiree health care benefits).

This legislation transferred responsibility for the administration of the Missouri State Employees' Deferred Compensation Program from the Missouri State Public Employees' Deferred Compensation Commission to the MOSERS Board of Trustees effective September 1, 2007. In order to assist in the transition, two deferred compensation commissioners (the chair of the commission and the House Speaker's designee) will serve as ex-officio members on the MOSERS board for issues related to the deferred compensation program. The Commission chair will serve through December 2008; the House member will serve through December 2009. This change was initiated by a legislative member of the Deferred

Compensation Commission based on the belief that plan participants would benefit from MOSERS' investment and administrative expertise in monitoring the program. We anticipate this change will be transparent to plan participants. The third party administration of individual accounts and the investment products available will continue to be handled by outside service providers paid from charges to the participants as is the current practice.

The legislation also allows the MOSERS board to provide investment services in connection with medical benefit funds established for state employees, retirees, and their dependents who participate in a state medical plan administered by the Missouri Consolidated Health Care Plan (MCHCP) or other medical benefit plans established or maintained by the state. The MCHCP and the Commissioner of Administration asked the MOSERS board to assume this responsibility to take advantage of the investment expertise already in place at MOSERS. From MOSERS' perspective, investment of any assets will be contingent upon receipt of a private letter ruling from the IRS stating that health care funds can be commingled with retirement funds for purposes of investing. An application for such a ruling was filed several months ago and we are awaiting the IRS's decision. Subject to a favorable ruling, MOSERS will be able to invest funds that will be set aside by medical benefit plans to begin actuarially funding a portion of the retiree health care expenses.

As it affects public employee retirement plans in general, the legislation also includes pension reform measures that will require all public employee pension plans in the state to adhere to certain standards in the areas of funding, receipt of required contributions, ethics, and trustee education. As it relates to funded status, specific provisions will prohibit a retirement plan from providing benefit enhancements if the funded position of the plan falls below 80%. These provisions will (1) allow a plan with a funding ratio greater than 80% to implement a benefit increase or enhancement provided the funded ratio does not fall below 75% after implementation; (2) provide that increases in the unfunded actuarial accrued liability be amortized over a period not to exceed 30 years for purposes of calculating the contributions necessary to fund the benefit; and (3) require a plan with a funded ratio below 60% to have an actuary prepare an accelerated contribution schedule. These provisions exclude the Judicial Plan administered by MOSERS. For more detail on specific provisions of the bill, please refer to *Changes in Plan Provisions* on page 128.

#### Summary of Financial Information

The following schedule is a comparative summary of the pension trust funds' additions and deductions for the years ended June 30, 2007, and June 30, 2006.

|            | Pension Trust Funds         |                             |  |
|------------|-----------------------------|-----------------------------|--|
|            | Year Ended<br>June 30, 2007 | Year Ended<br>June 30, 2006 |  |
| Additions  | \$1,562,344,891             | \$ 987,834,791              |  |
| Deductions | _ (474,637,152)             | (425,935,784)               |  |
| Net change | \$1,087,707,739             | \$ 561,899,007              |  |

The following schedule is a comparative summary of the revenues and expenses of the Internal Service Fund (insurance activity) for the years ended June 30, 2007, and June 30, 2006.

|                       | Internal Service Fund |               |  |  |
|-----------------------|-----------------------|---------------|--|--|
|                       | Year Ended            | Year Ended    |  |  |
|                       | June 30, 2007         | June 30, 2006 |  |  |
| Operating revenues    | \$ 27,538,433         | \$ 26,851,737 |  |  |
| Operating expenses    | (27,628,971)          | (26,902,935)  |  |  |
| Nonoperating revenues | 117,729               | 85,124        |  |  |
| Net change            | \$ 27,191             | \$ 33,926     |  |  |

Additional financial information can be found in the *Management Discussion and Analysis Report*, the financial statements, and schedules included in the *Financial Section* of this report.



#### Investments

Strong returns in the emerging markets and developed international equity portfolios were key contributors to the fund's total FY07 return of 18.7% (net of fees and expenses). This return outpaced our policy benchmark return of 15.6% by 3.1%. This excess resulted in an extra \$215 million that was generated for the fund. MOSERS continues to rank in the top quartile when compared to our peer universe of other state-wide public pension funds across the country.

MOSERS' governance policies ensure that the investment portfolio is safeguarded. It has been five years since the MOSERS board made the difficult decision to move away from a more traditional approach to portfolio management toward a more dynamic process. That shift was prompted by a great deal of research and debate that concluded with the view that financial assets like stocks and bonds that had become the dominant force in our portfolio and most other pension fund portfolios over the last 20 years, were not likely to deliver the returns necessary to achieve our long-term investment objectives. As a result, in order to better position the fund to achieve its objectives, the following points were recognized: (i) there was a way to build a more economically diversified policy portfolio that was less dependent on U.S. stocks and bonds, which should lead to lower overall volatility without sacrificing returns, thus providing for more stability in the contribution rates; (ii) a higher level of active management should be emphasized in the portfolio in areas deemed the most inefficient, as a way to add incremental value to the fund; and (iii) staff should be given greater flexibility to maneuver the portfolio away from the broad policy targets when valuation discrepancies suggested that such a move would lead to better returns, less risk, or a combination of the two.

The following table illustrates several relevant statistics for the old policy benchmark, the new policy benchmark, and our actual results for the five-year period ended June 30, 2007.

|                               |  | New Policy                                 |                                 |  |  |  |
|-------------------------------|--|--|---------------------------------|--|--|--|
| Statistics                    | Old Policy Benchmark<br>Prior to June 30, 2002 | Benchmark Effective<br>After June 30, 2002 | MOSERS Actual<br>5-Year Results |  |  |  |
| Annualized return             | 12.6%  | 12.1%                                      | 13.3%                           |  |  |  |
| Annualized standard deviation | 8.7%   | 7.1%                                       | 7.3%                            |  |  |  |
| Sharpe ratio                  | 1.13   | 1.32                                       | 1.45                            |  |  |  |
| Percentage of positive months | 72%  | 77%  | 77%                             |  |  |  |
| Percentage of negative months | 28%  | 23%  | 23%                             |  |  |  |

There are several important things that are evident from the data in this table. The first is that the new policy benchmark has generated higher risk adjusted returns as witnessed by an improvement in the sharpe ratio from 1.13 to 1.32. Secondly, the actual portfolio, through a combination of staff initiated shifts and active manager performance has generated excess returns of 1.2% per annum at only a slight increase in risk relative to the new policy benchmark. The end result is an improvement in the sharpe ratio to 1.45. Finally, not only has the fund achieved its goal of adding value over its policy benchmark, it has continued to exceed the actuarially assumed return rate of 8.5%. In FY07 alone, our return of 18.7% resulted in over \$717 million in gains when compared to our actuarial rate.

I believe a significant portion of our success can be attributed to an excellent investment staff operating under governance policies that allow and encourage them to pursue excellence in investment policy implementation. These results support my belief that good governance policies produce good results. Additional detailed information regarding MOSERS' investments can be found in the *Investment Section* of this report.

#### Plan's Financial Condition

The funding objective of MOSERS' pension trust funds is to meet long-term benefit promises through contributions that remain approximately level as a percent of member payroll over decades of time. Historical information relating to progress in meeting this objective is presented on pages 45-48. During the year ended June 30, 2007, the funded ratio of



the Missouri State Employees' Plan, which covers 99,573 participants, increased from 85.3% to 86.8%, primarily as the result of experience that was more favorable than assumed. Funding of the Judicial Plan, which covers 897 participants, began on July 1, 1998. During the year ended June 30, 2007, the funded ratio of the Judicial Plan increased from 16.7% to 19.0%, primarily as the result of favorable plan experience during the year. Additional information regarding the financial condition of the pension trust funds can be found in the *Actuarial Section* of this report.

#### **Awards**

Certificate of Achievement for Excellence in Financial Reporting

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to MOSERS for its CAFR for the fiscal year ended June 30, 2006. This was the eighteenth consecutive year that MOSERS has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized CAFR. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current CAFR 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.

Public Pension Coordinating Council Public Pension Standards Award

MOSERS also received the Public Pension Coordinating Council (PPCC), Public Pension Standards Award in 2006 in recognition of meeting the professional standards for plan design and administration as set forth in the Public Pension Standards. This award is presented by the PPCC, a confederation of the National Association of State Retirement Administrators, the National Conference on Public Employee Retirement Systems, and the National Council on Teacher Retirement.

#### Conclusion

This report is a product of the combined efforts of the MOSERS staff and advisors functioning under your leadership. It is intended to provide complete and reliable information that will facilitate the management decision making process, serve as a means for determining compliance with legal requirements, and allow for the evaluation of responsible stewardship of the funds of the system. As in the past, MOSERS received an unqualified opinion from our independent auditors on the financial statements included in this report. The opinion of the independent auditor can be found on page 20.

Copies of this report are provided to the Governor, State Auditor, the Joint Committee on Public Employee Retirement of the General Assembly, and all state agencies that form the link between MOSERS and its members. Their cooperation contributes significantly to the success of MOSERS. We hope all recipients of this report find it informative and useful.

I would like to take this opportunity to express my gratitude to you, the staff, the advisors, and other people who have worked so diligently to assure the continued successful operation of the system.

Respectfully submitted,

Gary Findlay Executive Director



## Letter From the Board Chair



#### Missouri State Employees' Retirement System

**Mailing Address** 

PO Box 209 • Jefferson City, MO 65102-0209

**Building Location** 

907 Wildwood Drive • Jefferson City, MO

October 16, 2007

Dear Members:

On behalf of the board of trustees, I am pleased to present the MOSERS' Comprehensive Annual Financial Report for the fiscal year ended June 30, 2007. This report provides information on the financial status of your retirement system while also highlighting changes that occurred during the year.

First and foremost, I am pleased to report that your retirement system remains well funded and your promised benefits are secure. The MOSERS fund generated a return of 18.7% (net of expenses) for the year placing MOSERS' investment return in the top 15% of all public pension funds with assets in excess of \$1 billion as reported by the Independent Consultant Cooperative. This resulted in over \$717 million in excess of the return that would have been generated by the 8.5% return rate assumed for funding purposes. This type of performance makes your fund more secure while also reducing future costs to the taxpayers.

In keeping with this year's annual report theme, "A Strong Foundation Protects Your Future," I'm pleased to report that for the seventh straight year MOSERS' investments have generated returns in excess of our benchmark and have done so with less volatility. The incremental reward from these results over seven years has been an additional \$1.5 billion in MOSERS' coffers.

This year also marks the 50th anniversary of the fund since it was first established in 1957. Much of MOSERS' history has been highlighted in the pages that separate each section of this report. I encourage you to take a moment to learn about the very humble beginning of our investment program which was initiated when a single outside adviser placed \$100,000 in a 90-day U.S. Treasury Bill on behalf of participants. Today, 50 years later, I'm pleased to report your fund has assets totaling over \$8 billion.

On behalf of the board, I wish to thank Marsha Buckner for her many contributions to the system while serving as a both a trustee and former chair of the board. Bob Patterson joined the board this year as the newly elected active member representative. We look forward to working with him.

In closing, you can be assured that MOSERS' staff strives to provide the expertise and professionalism required for excellence in our retirement system. I would like to thank them for continuing to maintain a high level of commitment to serving our membership, and we look forward to meeting your future needs. If you have any questions regarding this report or any other aspect of MOSERS, please contact us at MOSERS, P.O. Box 209, Jefferson City, MO 65102, or by calling 1-800-827-1063.

Sincerely,

Todd Smith, Chair Board of Trustees

> Phone: (573) 632-6100 • (800) 827-1063 MO Relay: 7-1-1 (Voice) • (800) 735-2966 (TTY) Email: mosers@mosers.org • Website: www.mosers.org

# **Board of Trustees**



Todd Smith - Chair Governor Appointed Member



Senator Jason Crowell Senate Appointed Member



Senator Timothy Green Senate Appointed Member



**Bob Patterson** Elected Active Member



Wayne Bill - Vice-Chair Elected Active Member



Representative Bill Deeken House Appointed Member



Commissioner Mike Keathley Ex-Officio Member



John T. Russell Governor Appointed Member





Representative Tom Dempsey House Appointed Member



Don Martin Elected Retired Member



State Treasurer Sarah Steelman Ex-Officio Member

# Administrative Organization



Gary Findlay

Executive Director

Greg Beck
Chief Auditor

Jake McMahon *Chief Counsel* 

Lisa Verslues *Human Resources Coordinator* 

Judy Delaney

Legislative Coordinator



Karen Stohlgren
Deputy Executive Director
Chief Operations Officer (COO)

Gary Irwin

Chief Finance Officer

Diana Mosier *Manager of Administrative Services* 

Scott Simon

Manager of Benefit Services

Sandra Lynn *Manager of Communications* 

Stacy Gillmore

Manager of

Information Technology

JoAnn Looten *Manager of Records* 



Rick Dahl
Deputy Executive Director
Chief Investment Officer (CIO)

Tricia Scrivner

Manager of Alternatives

Shannon Davidson

Manager of Investment Operations

Christine Rackers

Manager of Investment Policy

and Communications

Pat Neylon

Manager of Public Equity

Jim Mullen *Manager of Public Debt* 



## **About MOSERS**

#### Purpose

MOSERS was established September 1, 1957, and is governed by laws of the state of Missouri.

MOSERS provides retirement, survivor, and disability benefits, as well as life insurance to its members.

MOSERS administers retirement benefits for most state employees, including members of the Missouri General Assembly, elected state officials, administrative law judges and legal advisors, and judges. MOSERS is responsible for administering the law in accordance with the expressed intent of the Missouri General Assembly and bears a fiduciary obligation to the state employees who are its members and beneficiaries.

#### Administration

State law provides that responsibility for the administration of MOSERS is vested in an 11-member board of trustees. The board is comprised of:

- Two members of the Senate appointed by the President Pro Tem of the Senate.
- Two members of the House of Representatives appointed by the Speaker of the House.
- Two members appointed by the Governor.
- The State Treasurer.
- The Commissioner of Administration.
- Three other members of the system: two active members elected by the active and terminated-vested members, and one retiree elected by the retired members.

The day-to-day management of MOSERS is delegated to the executive director who is appointed by the board and serves at its pleasure. The executive director acts as advisor to the board on all matters pertaining to the system, contracts for professional services, and employs the remaining staff needed to operate the system.

#### Organization

The executive director, COO, and CIO are responsible for planning, organizing, and administering the operations of the system under the broad policy guidance and direction of the board.

MOSERS' office is divided into eight administrative sections that perform specific functions for the system.

#### **Executive Services**

The executive services team provides administrative support by assisting the executive director, COO, and CIO in the major legal, operational, and oversight functions of the retirement, benefit, and communication programs.

#### Accounting

This section is responsible for all financial records of the programs administered by MOSERS, including the preparation of financial and statistical reports. Accounting performs the purchasing functions for MOSERS and interfaces with the investment custodian, Office of Administration accounting, various payroll and personnel departments, life insurance companies, actuaries, banks, and the IRS on all accounting-related issues.



#### **Benefit Services**

Benefit services is responsible for all contact with the membership regarding the benefit programs administered by MOSERS, which include retirement, life insurance, and long-term disability.

#### Communications

Communications is responsible for providing clearly written and attractively designed publications, and conducts educational seminars needed to inform all members about benefit programs administered by MOSERS. Communications and the information technology section are jointly responsible for MOSERS' website.

#### Information Technology

Utilizing an IBM AS400 minicomputer and high-end work stations, information technology provides all computer and technical design support for MOSERS' data processing activities. This group is responsible for establishing and updating computer programs to implement plan changes and also maintains members' folder information on FileNet - a magnetic disk image system that allows information to be stored and processed using computer displayed images of original documents. Information technology is also responsible for administration of the personal computer network and the telephone system. Information technology and the communications section are jointly responsible for MOSERS' website.

#### Investments

The primary function of the investment department is to provide internal investment management and consulting services to the board and the executive director. Other functions include hiring and terminating external investment managers, making strategic allocation decisions, analyzing and rebalancing the overall asset allocation and portfolio, and informing and advising the board and executive director on financial and economic developments which may affect the system. The investment staff also works with the asset consultant and the executive director in selecting and monitoring external money managers. Information regarding the investment professional service providers can be found in the *Investment Section*.

# Records Management

Records management is responsible for establishing and maintaining all membership records including maintenance of the data on the electronic imaging system, balancing payroll deductions for insurance, and entering the payroll, service, and leave data into the system's computerized database.

#### Administrative Services

Administrative services provides clerical support, mail services, and general building maintenance for MOSERS' personnel.

## **Outside Professional Services**

#### Actuary

Gabriel, Roeder, Smith & Co. Actuaries and Consultants Norman L. Jones, Brad Armstrong Southfield, Michigan

#### **Auditors**

Williams-Keepers, LLC
Certified Public Accountants
& Consultants
Heidi Chick, Anita Brand
Columbia/Jefferson City, Missouri

#### Legal Counsel

#### Thompson Coburn

Attorneys at Law General Counsel Allen Allred, Tom Litz St. Louis, Missouri

#### Perkins Coie, LLP

Attorneys at Law Timberland Counsel Bob Maynard Boise, Idaho

#### Master Custodian

#### Mellon Financial Corporation

Primary Custodian Mark Sullivan, Eleanor Amidon Boston, Massachusetts

# Investment Management Consultants

#### Summit Strategies Group

General Asset Consultant Steve Holmes, Tom Pollihan St. Louis, Missouri

#### TimberLink, LLC

Timberland Consultant Kate Robie, Gary Myers Atlanta, Georgia

#### Risk Management Consultants

Charlesworth & Associates, LC Art Charlesworth, Bob Charlesworth Overland Park, Kansas

#### Third-Party Administrators

#### The Standard Insurance Company Disability and Life Insurance Tom Trussell Overland Park, Kansas

#### **TIAA-CREF**

College & University Retirement Plan Bernard Slack, Thomas McGlynn Chicago, Illinois

#### Securities Lending Advisors

#### Credit Suisse

Dwight Skerritt New York, New York

#### Investment Advisors

#### Aetos Capital, LLC

Anne Casscells, Michael Klein Menlo Park, California New York, New York

#### Alinda Capital Partners

Chris Beale, John Laxmi New York, New York

#### AmeriCap Advisers, LLC

Michael Gayed, Nadia Albert, Steve Shobin New York, New York

#### **AQR** Capital Management

Clifford Asness, David Kabiller Greenwich, Connecticut

#### **Barclays Global Investors**

Russ Koesterich, Trey Heiskell San Francisco, California

# BlackRock Financial Management, Inc.

Rob Capaldi, Andy Phillips, Jim Keenan, Kevin Booth, Mark Williams New York, New York

#### Blackstone Group

John McCormick, Tom Hill, Hal Lindquist, Gary Sumers, Ken Whitney, John Dionne New York, New York

#### Blakeney Management

James Graham-Maw, Miles Morland London, England

#### Blum Capital Partners, LP

N. Colin Lind, Nadine Terman San Francisco, California

#### Bridgepoint Capital Limited

William Jackson, John Barber London, England

#### Bridgewater Associates, Inc.

Ray Dalio, Tom Bachner Westport, Connecticut

#### Bush O'Donnell

Jim O'Donnell, Mark Reed St. Louis, Missouri

#### The Campbell Group

John Gilleland, Julie Lawrence Portland, Oregon

#### CarVal Investors

Kerry Fauver, Tim Clark Minnetonka, Minnesota

#### **Catterton Partners**

J. Michael Chu, Scott Danke, John Scerbo Greenwich, Connecticut

#### Investment Advisors Continued

DDJ Capital Management, LLC Mike Yeomans, David Breazzano Waltham, Massachusetts

DG Capital Management C. Garrett Williams, Manu Daftary Boston, Massachusetts

Freeman Associates Investment Management, LLC John Freeman, Michael Bishopp San Diego, California

GFI Energy Ventures, LLC Larry Gilson Los Angeles, California

Global Forest Partners Peter Mertz, Tom Goodrich West Lebanon, New Hampshire

Grantham, Mayo, Van Otterloo & Co, LLC Tom Smith, Arjun Divecha Boston, Massachusetts

JLL Partners Paul Levy, Brian Wade New York, New York

Legg Mason Capital Management, Inc. Kyle Prechtl Legg, Tim McGurkin Baltimore, Maryland Leuthold Weeden Capital Management John Mueller, Eric Bjorgen Minneapolis, Minnesota

Mastholm Asset Management, LLC Thomas Garr, Theodore Tyson Bellevue, Washington

Merit Energy Bill Gayden, Meghan Cuddihy Dallas, Texas

MHR Fund Management, LLC Mark Rachesky, Hal Goldstein New York, New York

NISA Investment Advisors, LLC Bill Marshall, Robert Krebs St. Louis, Missouri

Oaktree Capital Management, LLC Howard Marks, Bruce Karsh, John Brady, Greg Brandner, Nazar Sharif Los Angeles, California London, England

Pacific Alternative Asset Management Company Jane Buchan, Kevin Williams Irvine, California

Parish Capital Advisors, LLC James Mason, Gabriele Bowers Chapel Hill, North Carolina Relational Investors, LLC Ralph Whitworth, Sandi Christian San Diego, California

Resource Management Services, LLC Phillip Woods, Craig Blair Birmingham, Alabama

Silchester International Investors Christopher Cowie, Stephen Butt London, England

Silver Creek Capital Eric Dillon, Byran Weeks Seattle, Washington

Silver Lake Partners Alan Austin, David Roux Menlo Park, California

Trust Company of the West Blair Thomas, Judy Hirsch Los Angeles, California

Veritas Capital Bob McKeon, Ramzi Musallam New York, New York



In 1956, an ambitious and enterprising group of state employees discussed the possibility of starting a retirement plan and requested their colleagues donate 50 cents if they were interested in participating. The proceeds of that fundraising effort were used to retain an actuarial firm to draft legislation that culminated in the creation of the Missouri State Employees' Retirement System (MOSERS), which today provides retirement, life insurance, and long-term disability coverage to nearly 100,000 active, retired, and terminated-vested members.

MOSERS was established in 1957 under an act of the 69th General Assembly (House Bill 188); however, funds were not appropriated for the system's operation until 1958. During this interim period, various state departments loaned MOSERS furniture and supplies and subsidized the salaries of the system's employees until the legislature convened and appropriated operating funds the following year.

The retirement system was initially established to provide only retirement and disability benefits for state employees not covered under other retirement plans. Members contributed 4% of their compensation with the state matching that amount and were entitled to receive a life income annuity (with no options) based on 0.83% of the 5-year average compensation (\$7,500 maximum) times the number of years of creditable service. Members could retire only at age 65 or age 60 with 20 years of service and the consent of the employing agency or, if disabled, with 15 years of service.

The retirement system became noncontributory in 1972, and under the Missouri State Employees' Plan 2000 (a new retirement plan that became effective in July 2000 which resolved many internal benefit equity issues), general employees can receive a benefit of 1.7% times their three-year highest average compensation times the number of years of creditable service.

Today, employees enjoy a wide array of benefit options as well as expanded retirement eligibilities that now include "Rule of 80." Along this journey, a permanent cost-of-living adjustment (COLA) was enacted that enables retirees to receive COLAs throughout their lifetimes.

# Financial Section

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# Management's Responsibility for Financial Reporting



Missouri State Employees' Retirement System

**Mailing Address** 

PO Box 209 • Jefferson City, MO 65102-0209

**Building Location** 

907 Wildwood Drive • Jefferson City, MO

October 16, 2007

Management has prepared the basic financial statements of the Missouri State Employees' Retirement System (MOSERS) and is responsible for the integrity and fairness of the information presented. Some amounts included in the financial statements may be based on estimates and judgments. These estimates and judgments were made utilizing the best business practices available. The accounting policies followed in the preparation of these basic financial statements conform with U.S. generally accepted accounting principles. Financial information presented throughout the annual report is consistent with the basic financial statements.

Ultimate responsibility for the basic financial statements and annual report rests with the board of trustees. The executive director and the rest of MOSERS' staff assist the board in its responsibilities. Systems of internal control and supporting procedures are maintained to provide assurance that transactions are authorized, assets safeguarded, and proper records maintained. These controls include standards in hiring and training of employees, the establishment of an organizational structure, and the communications of policies and guidelines throughout the organization. These internal controls are reviewed by internal audit programs. All internal audit reports are submitted to the board of trustees.

The system's external auditors, Williams-Keepers LLC, have conducted an independent audit of the basic financial statements in accordance with U.S. generally accepted auditing standards. This audit is described in their Independent Auditors' Report on page 20. Management has provided the external auditors with full and unrestricted access to MOSERS' staff to discuss their audit and related findings as to the integrity of the plan's financial reporting and the adequacy of internal controls for the preparation of financial statements.

Executive Director

Gary Irwin

Chief Finance Officer

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# Independent Auditor's Report



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3220 West Edgewood, Suite E, Jefferson City, MO 65109 OFFICE (573) 635-6196 FAX (573) 644-7240

www.williamskeepers.com

The Board of Trustees Missouri State Employees' Retirement System

We have audited the accompanying basic financial statements of the Missouri State Employees' Retirement System (MOSERS), a component unit of the state of Missouri, as of and for the year ended June 30, 2007, as listed in the accompanying table of contents. We have also audited the financial statements of MOSERS' internal service fund as of and for the year ended June 30, 2007, as displayed in MOSERS' basic financial statements. These financial statements are the responsibility of MOSERS' management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with U.S. generally accepted auditing standards. 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 position of MOSERS, as well as MOSERS' internal service fund, as of June 30, 2007, and the respective changes in financial position and cashflows, where applicable, for the year then ended, in conformity with U.S. generally accepted accounting principles.

The management's discussion and analysis and the schedules of funding progress and employer contributions as listed in the table of contents are not a required part of the basic financial statements but are supplementary information required by U.S. generally accepted accounting principles. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the required supplementary information for the years ended June 30, 2007 and 2006. However, we did not audit the information and express no opinion on it. Limited procedures were applied by other auditors to the required supplementary information for the years ended June 30, 2005, 2004, 2003, and 2002.

Our audits were made for the purpose of forming an opinion on the financial statements taken as a whole. The additional financial information as listed in the table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements of MOSERS. Such information has been subjected to the auditing procedures applied in the audits of the financial statements and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

The *Introductory, Investment, Actuarial, and Statistical Sections* have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we express no opinion on them.

Drilliams Keepers LLC

October 15, 2007

American Institute of Certified Public Accountants Missouri Society of Certified Public Accountants PKF North American Network

Superior service. Creative solutions. Exceptional clients.



# Management Discussion and Analysis

Required Supplementary Information

The basic financial statements contained in this section of the Comprehensive Annual Financial Report consist of:

The *Statements of Plan Net Assets* which report the pension trust funds assets, liabilities, and resulted net assets where Assets – Liabilities = Net Assets available at the end of the fiscal year. It can be thought of as a snapshot of the financial position of the pension trust funds of MOSERS at that specific point in time.

The *Statements of Changes in Plan Net Assets* which summarize the pension fund financial transactions that have occurred during the fiscal year where Additions – Deductions = Net Change in Net Assets. It supports the change that has occurred to the prior year's net asset value on the *Statements of Plan Net Assets*.

The *Balance Sheet* of the internal service fund is similar to the *Statements of Plan Net Assets* in that it also is a snapshot of the financial position of the internal service fund where Assets = Liabilities + Net Assets.

The **Statement of Revenues, Expenses, and Changes in Net Assets** of the internal service fund is similar to the **Statement of Changes in Plan Net Assets** in that it also reports the financial activity that occurred over the period of the fiscal year where Revenues – Expenses = Net Revenue and supports the change to the prior year's net assets.

The *Statement of Cash Flows* of the internal service fund reports the financial transactions for the fiscal year of the internal service fund on a cash basis. It is similar to the *Statement of Revenues, Expenses, and Changes in Net Assets*; however, the focus of this statement is on the change to cash balances with accrued income and accrued expense items eliminated.

The *Notes to the Financial Statements* are an integral part of the above financial statements and include additional information not readily evident in the statements themselves.

This *Required Supplementary Management Discussion and Analysis* information and the required supplementary information and other schedules following the *Notes to the Financial Statements* provide historical and detailed information considered useful in evaluating the condition of the plans administered by MOSERS.

Pages 22-25 contain summary comparative statements of MOSERS' pension trust funds and internal service fund and provide additional analysis of the changes noted on those schedules.



## **Pension Trust Funds**

MOSERS' overall financial condition improved during the fiscal year ended June 30, 2007. Pension funds net assets increased by \$1,087,707,739 during the fiscal year ended June 30, 2007, primarily as result of the investment earnings of the funds. The investments of the pension trust funds generated an 18.7% return for the year. The funded status of the pension plans increased by 1.5% for the MSEP and 2.3% for the Judicial Plan.

The internal service funds net assets increased by \$27,191. The goal of the internal service fund is to maintain the fund at a level that enables it to meet its obligations of contracting the premiums for the life and long-term disability benefits for state employees at a reasonable cost and maintaining the membership data necessary to track the premiums due from the state and its employees and payable to the insurance carrier.

The following schedules present comparative summary financial statements of the pension trust funds and internal service fund for FY07 and FY06. Following each schedule is a brief summary of the significant changes noted in those schedules.

Pension Trust Funds
Summary Comparative Statements of Plan Net Assets

|  | As of June 30, 2007 | As of<br>June 30, 2006 | Amount of Change | Percentage<br>Change |
|--|---------------------|------------------------|------------------|----------------------|
| Cash and short-term investments        | \$ 559,151,957      | \$ 688,443,267         | \$(129,291,310)  | (18.78)%             |
| Receivables                            | 266,136,960         | 196,389,135            | 69,747,825       | 35.52                |
| Investments                            | 7,591,560,532       | 6,399,798,514          | 1,191,762,018    | 18.62                |
| Invested securities lending collateral | 899,055,356         | 1,152,399,706          | (253,344,350)    | (21.98)              |
| Capital assets                         | 3,309,904           | 3,275,118              | 34,786           | 1.06                 |
| Other assets                           | 40,139              | 53,673                 | (13,534)         | (25.22)              |
| Total assets                           | 9,319,254,848       | 8,440,359,413          | 878,895,435      | 10.41                |
| Administrative expense payables        | 1,691,875           | 1,949,676              | (257,801)        | (13.22)              |
| Investment purchase payables           | 262,775,085         | 224,570,235            | 38,204,850       | 17.01                |
| Securities lending collateral          | 899,444,368         | 1,152,189,688          | (252,745,320)    | (21.94)              |
| Other liabilities                      | 26,169,163          | 20,183,196             | 5,985,967        | 29.66                |
| Total liabilities                      | 1,190,080,491       | 1,398,892,795          | (208,812,304)    | (14.93)              |
| Net assets                             | \$8,129,174,357     | \$7,041,466,618        | \$1,087,707,739  | 15.45%               |

# Summary Comparable Statements of Plan Net Assets Analysis

The decrease in cash and short-term investments is primarily attributable to normal fluctuations in the short-term investments. For the year ended June 30, 2007, the month-end balance of short-term investments ranged from a low of \$464,488,536 in April 2007, to a high of \$701,244,317 in January 2007, with an average balance of \$573,896,995 for the year.

The increase in receivables is attributable to normal fluctuations in investment sales receivables during the year. For the year ended June 30, 2007, the month-end balance of investment sales receivables ranged from a low of \$117,461,012 in November 2006, to a high of \$372,414,859 in March 2007, with an average investment sales receivable balance of \$279,368,190 for the year.

The increase in the fair value of investments is primarily attributable to the generally favorable market conditions experienced during FY07 as evidenced by MOSERS' total investment return for the year of 18.7%. Detailed information regarding MOSERS' investment portfolio is included in the *Investment Section* of this report.



The decrease in security lending collateral is primarily attributable to a reduction in the lendable securities as MOSERS increased its exposure to other alternative investments. Likewise, the investment of the collateral decreased.

The increase in capital assets was primarily due to the expansion of the investment department and purchase of a generator and other equipment for MOSERS' disaster recovery plan.

The decrease in other assets is primarily due to the fluctuation in the amount maintained in prepaid postage. For the year ended June 30, 2007, the month-end balance of prepaid postage ranged from a low of \$40,139 in June 2007, to a high of \$119,666 in November 2006, with an average month-end balance in prepaid postage of \$69,620.

The decrease in administrative expense payables is primarily attributable to the normal fluctuation in the investment fees payable. During the year, the month-end balance of investment manager fees payable ranged from a low of \$1,310,638 in June 2007, to a high of \$2,354,044 in July 2006, with an average month-end balance of \$1,653,451 for the year.

The increase in investment purchases payable is due to normal fluctuations in the amount of security purchases pending settlement at month-end. For the year ended June 30, 2007, the month-end balances of the investment purchase payables ranged from a low of \$131,637,927 in December 2006, to a high of \$287,052,353 in July 2006, with an average balance of \$214,406,852 for the year.

The increase in other liabilities is primarily attributable to the adjustment in the amount due for the investment manager incentive fees during the year. The amount represents the portion of the incentive fee calculated as earned through June 30, 2007, to be paid in the future subject to the investment managers' attainment of certain long-term performance measures.

Summary Comparative Statements of Changes in Plan Net Assets

|                               | Year Ended<br>June 30, 2007 | Year Ended<br>June 30, 2006 | Amount<br>of Change | Percentage<br>Change |
|-------------------------------|-----------------------------|-----------------------------|---------------------|----------------------|
| Contributions                 | \$ 266,868,077              | \$ 252,868,692              | \$ 13,999,385       | 5.54%                |
| Investment income             |                             |                             |                     |                      |
| Investing activities          | 1,292,070,457               | 730,783,761                 | 561,286,696         | 76.81                |
| Investment income             |                             |                             |                     |                      |
| Securities lending activities | 2,859,293                   | 3,676,741                   | (817,448)           | (22.23)              |
| Miscellaneous income          | 547,064                     | 505,597                     | 41,467              | 8.20                 |
| Total additions               | 1,562,344,891               | 987,834,791                 | 574,510,100         | 58.16                |
| Benefits                      | 467,836,275                 | 419,261,150                 | 48,575,125          | 11.59                |
| Contribution refunds          | 0                           | 1,341                       | (1,341)             | (100.00)             |
| Service transfers and refunds | 51,980                      | 133,866                     | (81,886)            | (61.17)              |
| Administrative expenses       | 6,748,897                   | 6,539,427                   | 209,470             | 3.20                 |
| Total deductions              | 474,637,152                 | 425,935,784                 | 48,701,368          | 11.43                |
| Net increase (decrease)       | 1,087,707,739               | 561,899,007                 | 525,808,732         | 93.58                |
| Net assets beginning of year  | 7,041,466,618               | 6,479,567,611               | 561,899,007         | 8.67                 |
| Net assets end of year        | \$8,129,174,357             | \$7,041,466,618             | \$1,087,707,739     | 15.45%               |

#### Summary Comparable Statements of Changes in Plan Net Assets Analysis

The increase in contributions received is primarily attributable to an increase in the contribution rate for the general employees group from 12.59% to 12.78% and a 4% cost-of-living adjustment on state payroll.



The increase in investment income in FY07 over FY06 is attributable to generally favorable market conditions experienced by the investments of the fund. The decrease in security lending income was primarily attributable to a reduction in lendable securities as MOSERS increased its exposure to other alternative investments. Additional information regarding the investments and security lending activity can be found in the *Investment Section* of this report.

Benefit payments increased due to changes in benefit rolls for the year. Detailed schedules of changes can be found on pages 112-117 of the *Actuarial Section* of this report.

Service transfers decreased primarily due to normal fluctuations in the amount of transfers processed, which are dependent on the number of members electing to transfer their service and the cost of the service transferred.

Internal Service Fund Summary Comparative Balance Sheets

|                                  | As of June 30, 2007 | As of<br>June 30, 2006 | Amount<br>of Change | Percentage<br>Change |
|----------------------------------|---------------------|------------------------|---------------------|----------------------|
| Cash                             | \$ 3,080            | \$ 0                   | \$ 3,080            | 100.00%              |
| Premiums receivable              | 983,424             | 972,669                | 10,755              | 1.11                 |
| Investments                      | 2,384,797           | 2,051,203              | 333,594             | 16.26                |
| Total assets                     | 3,371,301           | 3,023,872              | 347,429             | 11.49                |
| Premiums payable                 | 2,586,372           | 2,410,331              | 176,041             | 7.30                 |
| Other liabilities                | 387,167             | 242,970                | 144,197             | 59.35                |
| Total liabilities                | 2,973,539           | 2,653,301              | 320,238             | 12.07                |
| Unrestricted net assets          | 397,762             | 370,571                | 27,191              | 7.34                 |
| Total liabilities and net assets | \$3,371,301         | \$3,023,872            | \$347,429           | 11.49%               |

#### Summary Comparative Balance Sheets Analysis

Cash increased due to the receipt of a late direct deposit that was not invested at fiscal year end.

The increase in premiums receivable is attributable to normal fluctuations in the month-end balance of premiums receivable during the year. For the year ended June 30, 2007, the month-end balance of premiums receivable ranged from a low of \$950,316 in December 2006, to a high of \$983,424 in June 2007, with an average premiums receivable balance of \$965,365 for the year.

The increase in investments is attributable to normal fluctuations in the month-end balance of investments during the year. For the year ended June 30, 2007, the month-end balance of investments ranged from a low of \$1,972,459 in July 2006, to a high of \$4,226,092 in December 2006, with an average investment balance of \$2,319,820 for the year.

The increase in premiums payables is attributable to normal fluctuations in the month-end balances of premiums payable for the year, similar to the fluctuations of the premiums receivable.

Other liabilities increased primarily as a result of the reimbursements due to the pension trust funds for the internal service fund's portion of shared expenses.



#### Summary Comparative Statements of Revenues, Expenses, and Changes in Net Assets

|                              | Year Ended<br>June 30, 2007 | Year Ended<br>June 30, 2006 | Amount of Change | Percentage<br>Change |
|------------------------------|-----------------------------|-----------------------------|------------------|----------------------|
| Premium receipts             | \$27,101,931                | \$26,415,236                | \$686,695        | 2.60%                |
| Miscellaneous income         | 436,502                     | 436,501                     | 1                | 0.00                 |
| Total operating revenue      | 27,538,433                  | 26,851,737                  | 686,696          | 2.56                 |
| Premium disbursements        | 27,063,815                  | 26,379,919                  | 683,896          | 2.59                 |
| Premium refunds              | 38,116                      | 35,317                      | 2,799            | 7.93                 |
| Administrative expenses      | 527,040                     | 487,699                     | 39,341           | 8.07                 |
| Total operating expenses     | 27,628,971                  | 26,902,935                  | 726,036          | 2.70                 |
| Net operating income (loss)  | (90,538)                    | (51,198)                    | (39,340)         | 76.84                |
| Investment income            | 117,729                     | 85,124                      | 32,605           | 38.30                |
| Net revenues over expenses   | 27,191                      | 33,926                      | (6,735)          | (19.85)              |
| Net assets beginning of year | 370,571                     | 336,645                     | 33,926           | 10.08                |
| Net assets end of year       | \$ 397,762                  | \$ 370,571                  | \$ 27,191        | 7.34%                |

Summary Comparative Statements of Revenues, Expenses, and Changes in Net Assets Analysis Premium receipts and disbursements increased due to an increase in the overall state payroll and normal fluctuations in the amount of optional life insurance coverage selected by state employees.

Refunds increased slightly as a result of normal fluctuations in the amount of premium refunds issued to correct processing errors.

Administrative expenses increased primarily due to an increase in salary and fringes of \$25,310.

Investment income increased primarily due to an overall increase in the 90-day treasury bill rates during the fiscal year.

#### Summary Comparative Statements of Cash Flows

|  | Year Ended<br>June 30, 2007 | Year Ended<br>June 30, 2006 | Amount<br>of Change  | Percentage<br>Change |
|--|-----------------------------|-----------------------------|----------------------|----------------------|
| Cash flows from operating activities   | \$221,403                   | \$21,465                    | \$199,938            | 931.46%              |
| Cash flows from noncapital financing activities Cash flows from investing activities | (2,459)<br>(215,864)        | 2,162<br>(23,627)           | (4,621)<br>(192,237) | (213.74)<br>(813.63) |
| Net change in cash   | 3,080                       | 0                           | 3,080                |                      |
| Cash balances beginning of year  | 0                           | 0                           | 0                    |                      |
| Cash balances end of year  | \$ 3,080                    | \$ 0                        | \$ 3,080             |                      |

#### Summary Comparative Statements of Cash Flows Analysis

The increase in cash flows from operating activities is primarily attributable to an increase in cash payments received from employer and members over that of fiscal year 2006.

The decrease in cash flows from noncapital financing activities is primarily attributable to an increase in the amount of cash held at the bank at June 30, 2007, due to a late receipt of an employer deposit.

The decrease in cash flows from investing activities is primarily attributable to a decrease in the cash flows from net purchase and maturities of overnight repurchase agreements of \$224,842, plus an increase in the investment income received of \$32,605.



# Statements of Plan Net Assets

Pension Trust Funds - As of June 30, 2007

|   | MSEP            | Judicial Plan | Total           |
|---|-----------------|---------------|-----------------|
| Assets Cash and short-term investments                | \$ 554,248,289  | \$4,903,668   | \$ 559,151,957  |
| Receivables   |                 |               |                 |
| State contributions                                   | 11,275,755      | 996,972       | 12,272,727      |
| Investment income                                     | 7,667,535       | 67,838        | 7,735,373       |
| Investment sales                                      | 243,590,692     | 2,155,149     | 245,745,841     |
| Other   | 379,660         | 3,359         | 383,019         |
| Total receivables                                     | 262,913,642     | 3,223,318     | 266,136,960     |
| Investments at fair value                             |                 |               |                 |
| U.S. treasury securities                              | 621,741,955     | 5,500,812     | 627,242,767     |
| Corporate bonds                                       | 367,084,395     | 3,247,750     | 370,332,145     |
| Convertible bonds                                     | 3,744,081       | 33,125        | 3,777,206       |
| Government bonds & gov't mortgage-backed securities   | 212,099,235     | 1,876,531     | 213,975,766     |
| Real estate equity                                    | 727,598         | 6,437         | 734,035         |
| Common stock  | 949,688,733     | 8,402,296     | 958,091,029     |
| Preferred stock                                       | 11,811,778      | 104,504       | 11,916,282      |
| Limited partnerships                                  | 3,595,504,899   | 31,810,944    | 3,627,315,843   |
| Bank loans  | 85,529,328      | 756,714       | 86,286,042      |
| Collateralized mortgage obligations                   | 10,171,702      | 89,993        | 10,261,695      |
| Foreign currency                                      | 118,026,265     | 1,044,228     | 119,070,493     |
| International equities                                | 1,492,068,845   | 13,200,960    | 1,505,269,805   |
| U.S. dollar-denominated international corporate bonds | 56,785,023      | 502,401       | 57,287,424      |
| Total investments                                     | 7,524,983,837   | 66,576,695    | 7,591,560,532   |
| Securities lending collateral                         | 891,170,793     | 7,884,563     | 899,055,356     |
| Capital assets  |                 |               |                 |
| Land  | 264,942         | 2,344         | 267,286         |
| Building and building improvements                    | 3,390,794       | 30,000        | 3,420,794       |
| Furniture, fixtures, and equipment                    | 1,746,551       | 15,452        | 1,762,003       |
| Total capital assets                                  | 5,402,287       | 47,796        | 5,450,083       |
| Accumulated depreciation                              | (2,121,410)     | (18,769)      | (2,140,179)     |
| Net capital assets                                    | 3,280,877       | 29,027        | 3,309,904       |
| Prepaid expenses and other                            | 39,787          | 352           | 40,139          |
| Total assets  | 9,236,637,225   | 82,617,623    | 9,319,254,848   |
| Liabilities   |                 |               |                 |
| Administrative expense payables                       | 1,677,038       | 14,837        | 1,691,875       |
| Investment purchases payables                         | 260,470,592     | 2,304,493     | 262,775,085     |
| Securities lending collateral                         | 891,556,394     | 7,887,974     | 899,444,368     |
| Investment incentive fees payable                     | 25,575,591      | 226,278       | 25,801,869      |
| Employee vacation and overtime liability              | 364,073         | 3,221         | 367,294         |
| Total liabilities                                     | 1,179,643,688   | 10,436,803    | 1,190,080,491   |
| Net assets held in trust for pension benefits         | \$8,056,993,537 | \$72,180,820  | \$8,129,174,357 |

(A schedule of funding progress for each plan is presented on page 45.) See accompanying *Notes to the Financial Statements*.



# Statements of Changes in Plan Net Assets Pension Trust Funds - Year Ended June 30, 2007

|   | MSEP            | Judicial Plan      | Total           |
|---|-----------------|--------------------|-----------------|
| Additions                                     |                 |                    |                 |
| Contributions                                 |                 |                    |                 |
| State contributions                           | \$ 239,488,751  | \$23,745,467       | \$ 263,234,218  |
| Member purchases of service credit            | 3,460,923       | 0                  | 3,460,923       |
| Service transfer contributions                | 172,936         | 0                  | 172,936         |
| Total contributions                           | 243,122,610     | 23,745,467         | 266,868,077     |
| Investment income                             |                 |                    |                 |
| From investing activities                     |                 |                    |                 |
| Net appreciation in fair value of investments | 972,838,344     | 8,607,110          | 981,445,454     |
| Interest                                      | 359,794,296     | 3,183,251          | 362,977,547     |
| Dividends                                     | 10,575,703      | 93,568             | 10,669,271      |
| Other   | 22,159,582      | 196,055            | 22,355,637      |
| Total investing activity income               | 1,365,367,925   | 12,079,984         | 1,377,447,909   |
| Investing activity expenses:                  |                 |                    |                 |
| Management fees                               | (80,676,808)    | (713,782)          | (81,390,590)    |
| Custody fees                                  | (676,131)       | (5,982)            | (682,113)       |
| Consultant fees                               | (792,180)       | (7,009)            | (799,189)       |
| Performance measurement fees                  | (357,028)       | (3,159)            | (360,187)       |
| Internal investment activity expenses         | (2,126,558)     | (18,815)           | (2,145,373)     |
| Total investing activity expenses             | (84,628,705)    | (748,747)          | (85,377,452)    |
| Net income from investing activities          | 1,280,739,220   | 11,331,237         | 1,292,070,457   |
| From securities lending activities            |                 |                    |                 |
| Securities lending income                     | 55,914,997      | 494,703            | 56,409,700      |
| Securities lending expenses                   |                 | ·                  |                 |
| Borrower rebates                              | (52,449,770)    | (464,045)          | (52,913,815)    |
| Management fees                               | (631,009)       | (5,583)            | (636,592)       |
| Total securities lending activities expenses  | (53,080,779)    | (469,628)          | (53,550,407)    |
| Net income from securities lending activities | 2,834,218       | 25,075             | 2,859,293       |
| Total net investment income                   | 1,283,573,438   | 11,356,312         | 1,294,929,750   |
| Miscellaneous income                          | 542,266         | 4,798              | 547,064         |
| Total additions                               | 1,527,238,314   | 35,106,577         | 1,562,344,891   |
| Deductions                                    |                 |                    |                 |
| Benefits                                      | 395,568,727     | 20,595,504         | 416,164,231     |
| BackDROP and lump sum benefits                | 51,672,044      | 20,777,704         | 51,672,044      |
| Service transfer payments                     | 51,980          | 0                  | 51,980          |
| Administrative expenses                       | 6,689,710       | 59,187             | 6,748,897       |
| Total deductions                              | 453,982,461     | 20,654,691         | 474,637,152     |
| Net increase                                  |                 |                    |                 |
| Net increase                                  | 1,073,255,853   | 14,451,886         | 1,087,707,739   |
| Net assets held in trust for pension benefits | (000 -0- (0)    | <b>55 5</b> 0 00 / | 70/1/CCC:-      |
| Beginning of year                             | 6,983,737,684   | 57,728,934         | 7,041,466,618   |
| End of year                                   | \$8,056,993,537 | \$72,180,820       | \$8,129,174,357 |



# Balance Sheet

Internal Service Fund - As of June 30, 2007

#### Assets

| Cash                      | \$  | 3,080     |
|---------------------------|-----|-----------|
| Premiums receivable       |     | 983,424   |
| Investments at fair value | 2   | 2,384,797 |
| Total assets              | \$3 | 3,371,301 |

#### Liabilities and net assets

Liabilities

| Premiums payable                 | \$2,586,372 |
|----------------------------------|-------------|
| Other                            | 387,167     |
| Total liabilities                | 2,973,539   |
| Unrestricted net assets          | 397,762     |
| Total liabilities and net assets | \$3,371,301 |
|                                  |             |



# Statement of Revenues, Expenses, and Changes in Plan Net Assets Internal Service Fund - Year Ended June 30, 2007

| Operating revenues |
|--------------------|
|--------------------|

| Premium receipts         | \$27,101,931 |
|--------------------------|--------------|
| Miscellaneous income     | 436,502      |
| Total operating revenues | 27,538,433   |

#### Operating expenses

| Operating expenses                          |            |
|---|------------|
| Premium disbursements                       | 27,063,815 |
| Premium refunds                             | 38,116     |
| Administrative expenses                     | 527,040    |
| Total operating expenses                    | 27,628,971 |
| Operating revenues under operating expenses | (90,538)   |

#### Nonoperating revenues

| Investment income            | 117,729    |
|------------------------------|------------|
| Net revenues over expenses   | 27,191     |
| Net assets beginning of year | 370,571    |
| Net assets end of year       | \$ 397,762 |



# Statement of Cash Flows

Internal Service Fund - Year Ended June 30, 2007

| Cash flows from operating activities                                 |               |
|--|---------------|
| Cash received from employer and members                              | \$27,525,153  |
| Miscellaneous income   | 14            |
| Premium payments to outside carriers                                 | (26,623,499)  |
| Refunds of premiums to members                                       | (38,116)      |
| Cash payments to employees for services                              | (370,061)     |
| Cash payments to other suppliers of goods and services               | (272,088)     |
| Net cash provided by operating activities                            | 221,403       |
| Cash flows from noncapital financing activities                      |               |
| Implicit repayment of prior years checks outstanding net of deposits | (2,459)       |
| Net cash used in noncapital financing activities                     | (2,459)       |
| Cash flows from investing activities                                 |               |
| Purchase of investment securities                                    | (559,611,438) |
| Proceeds from sale and maturities of investment securities           | 559,277,845   |
| Cash received from investment income                                 | 117,729       |
| Net cash used in investing activities                                | (215,864)     |
| Net increase in cash   | 3,080         |
| Cash balances beginning of year                                      | 0             |
| Cash balances end of year  | \$ 3,080      |
| Reconciliation of operating revenues under operating                 |               |
| expenses to net cash provided by operating activities                |               |
| Operating revenues under operating expenses                          | \$ (90,538)   |
| Adjustments to reconcile operating revenues under                    |               |
| operating expenses to net cash provided by operating activities      |               |
| Change in assets and liabilities:                                    |               |
| Decease in operational accounts receivable                           | (13,266)      |
| Increase in operational accounts payable                             | 325,207       |
| Total adjustments  | 311,941       |
| Net cash provided by operating activities                            | \$ 221,403    |



#### Notes to the Financial Statements

Year Ended June 30, 2007

#### (1) PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION

#### Missouri State Employees' Plan (MSEP)

The MSEP is a single-employer, public employee retirement plan with two benefit structures known as the MSEP (closed plan) and MSEP 2000 (new plan), which are administered by the Missouri State Employees' Retirement System (MOSERS) in accordance with Sections 104.010 and 104.312 to 104.1215 of the Revised Statutes of Missouri (RSMo). As established under Section 104.320, RSMo, MOSERS is a body corporate and an instrumentality of the state. In the system are vested the powers and duties specified in Sections 104.010 and 104.312 to 104.1215, RSMo and such other powers as may be necessary or proper to enable it, its officers, employees, and agents to carry out fully and effectively all the purposes of Sections 104.010 and 104.312 to 104.1215, RSMo.

Responsibility for the operation and administration of the system is vested in MOSERS Board of Trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the MSEP is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Generally, all full-time state employees hired before July 2000, who were not covered under another state-sponsored retirement plan are eligible for membership in the MSEP (closed plan). All full-time state employees hired after July 2000 are eligible for membership in the MSEP 2000 (new plan). MOSERS participates as an employer in the MSEP.

#### As of the June 30, 2007 valuation, membership in the MSEP consisted of the following:

| Retirees and beneficiaries currently receiving benefits          |        | 28,692 |
|--|--------|--------|
| Terminated employees entitled to, but not yet receiving benefits |        | 16,518 |
| Active   |        |        |
| Vested   | 37,067 |        |
| Nonvested  | 17,296 | 54,363 |
| Total membership   |        | 99,573 |

The MSEP provides retirement, survivor, and disability benefits.

#### MSEP (closed plan)

General state employees are fully vested for benefits upon receiving 5 years of credited service. Under the MSEP (closed plan), general employees may retire with full benefits upon the earliest of attaining:

- Age 65 and active with 4 years of service;
- Age 65 with 5 years of service;
- Age 60 with 15 years of service; or
- Age 48 with age and service equaling 80 or more "Rule of 80."

General employees may retire early at age 55 with at least 10 years of service with reduced benefits.

The base benefit in the general employee plan is equal to 1.6% multiplied by the final average pay multiplied by years of credited service.



For members hired prior to August 28, 1997, cost-of-living adjustments (COLAs) are provided annually based on 80% of the change in the consumer price index (CPI) with a minimum rate of 4% and maximum rate of 5% until the cumulative amount of COLAs equals 65% of the original benefit. Thereafter, the 4% minimum rate is eliminated. For members hired on or after August 28, 1997, COLAs are provided annually based on 80% of the change in the CPI up to a maximum rate of 5%.

Qualified, terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least 5, but less than 10 years of service, be less than age 60, and have a benefit present value of less than \$10,000.

Contributions are determined through annual actuarial valuations. Administration of the MSEP is financed through contributions to this plan from the state of Missouri and investment earnings.

#### MSEP 2000 (new plan)

General state employees are fully vested for benefits upon receiving 5 years of credited service. Under the MSEP 2000 (new plan), general employees may retire with full benefits upon the earliest of attaining:

- Age 62 with 5 years of service; or
- Age 48 with age and service equaling 80 or more "Rule of 80."

General employees may retire early at age 57 with at least 5 years of service with reduced benefits.

The base benefit in the general employee plan is equal to 1.7% multiplied by final average pay multiplied by years of credited service. For those retiring under "Rule of 80," an additional temporary benefit equivalent to 0.8% multiplied by final average pay multiplied by years of credited service is payable until age 62.

COLAs are provided annually based on 80% of the change in the CPI up to a maximum rate of 5%.

Contributions are determined through annual actuarial valuations. Administration of the MSEP 2000 is financed through contributions to this plan from the state of Missouri and investment earnings.

The state of Missouri is required to make all contributions to the MSEP. Prior to September 1, 1972, contributions by members were required. Accumulated employee contributions made prior to that time, plus interest through August 28, 1997, are refundable to the member or designated beneficiaries upon request.

For a more detailed summary of benefits for general employees and a description of benefits available to legislators and elected officials under the MSEP (closed plan) and the MSEP 2000 (new plan), refer to the Summary of Plan Provisions contained in the *Actuarial Section* of this report.

#### **Judicial Plan**

The Judicial Plan is a single-employer, public employee retirement plan administered in accordance with Sections 476.445 to 476.690, RSMo. Responsibility for the operation and administration of the Judicial Plan is vested in MOSERS Board of Trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the Judicial Plan is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Judges and commissioners of the supreme court or the court of appeals, judges of the circuit court, probate court, magistrate court, court of common pleas, court of criminal corrections, a justice of the peace, or a commissioner or deputy commissioner of the circuit court appointed after February 29, 1972, commissioner of the juvenile division of the circuit court appointed pursuant to Section 211.023, RSMo, commissioner of the drug court pursuant to Section 478.466, RSMo, or a commissioner of the family court are eligible for membership in the Judicial Plan.



#### As of the June 30, 2007 valuation, membership in the Judicial Plan consisted of the following:

|     | 437 |
|-----|-----|
|     | 60  |
|     |     |
| 400 |     |
| 0   | 400 |
|     | 897 |
|     | 400 |

The Judicial Plan provides retirement, survivor, and disability benefits. Members are immediately eligible for benefits.

Under the Judicial Plan, members may retire with full benefits upon the earliest of attaining:

- Age 62 with 12 years of service;
- Age 60 with 15 years of service; or
- Age 55 with 20 years of service.

Employees may retire early at age 62 with less than 12 years of service or age 60 with less than 15 years of service with a reduced benefit that is based upon years of service relative to 12 or 15 years.

In the Judicial Plan, the base benefit for members with 12 or more years of service is equivalent to 50% of compensation on the highest court served.

For members hired prior to August 28, 1997, COLAs are provided annually based on 80% of the change in the CPI with a minimum rate of 4% and maximum rate of 5% until the cumulative amount of COLAs equals 65% of the original benefit. Thereafter, the 4% minimum rate is eliminated. For members hired on or after August 28, 1997, COLAs are provided annually based on 80% of the change in the CPI up to a maximum rate of 5%.

Qualified, terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least 5, but less than 10 years of service, be less than age 60, and have a benefit present value of less than \$10,000.

Funding of the Judicial Plan on an actuarial basis began on July 1, 1998. Contributions are determined through annual actuarial valuations. The state of Missouri is required to make all contributions to the Judicial Plan. Administration of the Judicial Plan is financed through contributions to this plan from the state of Missouri and investment earnings.

For a more detailed summary of benefits for members of the Judicial Plan, refer to the Summary of Plan Provisions contained in the *Actuarial Section* of this report.

Schedule of Funded Status and Funding Progress

|        | <del>-</del> ' |                 | Actuarial Accrued<br>Liability (AAL)<br>Entry Age<br>(b) | Entry Age (UAAL) |       | Annual<br>Covered<br>Payroll<br>(c) | UAAL Percentage<br>of Covered<br>Payroll<br>((b-a)/c) |
|--------|----------------|-----------------|--|------------------|-------|-------------------------------------|---|
| MSEP   | 6/30/2007      | \$7,377,289,283 | \$8,500,428,641  | \$1,123,139,358  | 86.8% | \$1,846,643,330                     |   |
| Judges | 6/30/2007      | 61,903,516      | 326,666,373  | 264,762,857      | 19.0  | 40,846,581                          |   |



Multi-year trend information regarding whether the actuarial value of plan assets are increasing or decreasing over time relative to the actuarial accrued liabilities for benefits can be found in the required supplementary information following the *Notes to the Financial Statements*.

#### Additional information as of the June 30, 2007 actuarial valuation follows:

|                               | MSEP          | Judicial Plan |
|-------------------------------|---------------|---------------|
| Valuation date                | 6/30/2007     | 6/30/2007     |
| Actuarial cost method         | Entry Age     | Entry Age     |
| Amortization method           | Level Percent | Level Percent |
| Remaining amortization period | 30 years      | 30 years      |
| -                             | open          | open          |
| Asset valuation method        | 5-year        | 5-year        |
|                               | smoothed      | smoothed      |
|                               | market        | market        |
| Actuarial assumptions:        |               |               |
| Investment rate of return     | 8.5%          | 8.5%          |
| Projected salary increases    | 4.0-6.7%      | 4.0-5.6%      |
| COLAs*                        | 4%            | 4%            |
| Price inflation               | 3.5%          | 3.5%          |

#### Missouri State Insured Defined Benefit Insurance Plan

The Missouri State Insured Defined Benefit Insurance Plan is accounted for as an internal service fund of the state of Missouri and is administered by MOSERS. It provides basic life insurance in an amount equal to one times annual salary while actively employed (with a \$15,000 minimum) to:

- Eligible members of the MSEP and MSEP 2000 (except employees of the Missouri Department of Conservation and certain state colleges and universities).
- Members of the Judicial Plan and certain members of the Public School Retirement System.

The plan also provides duty-related death benefits, optional life insurance for active employees and retirees who are eligible for basic coverage, and a long-term disability plan for certain eligible members.

For a more detailed description of insurance benefits, refer to the Summary of Plan Provisions-Life Insurance Plans in the *Actuarial Section* of this report.

Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the Missouri State Insured Defined Benefit Insurance Plan is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as an internal service fund. Administration of the Missouri State Insured Defined Benefit Insurance Plan is financed through contributions to this plan from the state of Missouri.



#### (2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND PLAN ASSET MATTERS

#### **Basis of Accounting**

The financial statements of the MSEP, the Judicial Plan, and the Missouri State Insured Defined Benefit Insurance Plan were prepared using the accrual basis of accounting.

Contributions are due to MOSERS when employee services have been performed and paid. Contributions are recognized as revenues when due pursuant to statutory requirements. Benefits and refunds are recognized when due and payable and expenses are recorded when the corresponding liabilities are incurred, regardless of when contributions are received or payment is made. The direct method of reporting cash flows is used.

#### Method Used to Value Investments

Section 104.440, RSMo allows the board of trustees to invest the trust fund assets in accordance with the prudent person rule. Investments of the pension trust funds and the internal service fund are reported at fair value.

The schedule on page 41 provides a summary of the fair values of the investments as reported on the *Statements of Plan Net Assets* of the pension trust funds and balance sheet of the internal service fund. Fair values for the equity real estate investments are based on appraisals. Fair values of the limited partnership investments are based on valuations of the underlying companies of the limited partnerships as reported by the general partner. Fair value of the commingled funds are determined based on the underlying asset values. The remaining assets are primarily valued by the investment custodian using the last trade price information supplied by various pricing data vendors.

#### Cash

The board has no formal policy specific to custodial credit risk. Custodial credit risk for cash deposits and investments is the risk that in the event of a bank failure, the system and plans' deposits may not be returned to them. The system mitigates custodial credit risk for deposits and investments by requiring the bank to pledge securities from an acceptable list in an amount over the Federal Deposit Insurance Corporation (FDIC) insured amount of at least equal in market value to 100% of the aggregate amount of the deposits. These securities are required to be delivered to a third-party institution mutually agreed upon by the bank and MOSERS. The deposits are held in one financial institution with a balance of up to \$100,000 insured by the FDIC.

Cash balances represent both operating cash accounts held by the banks and investment cash on deposit with the investment custodian. To maximize investment income, the float caused by outstanding checks is invested, thus causing a possible negative book balance. Negative book balances are reflected in the liabilities section of the balance sheet of the internal service fund and included in the cash and short-term investments on the *Statements of Plan Net Assets* of the pension trust funds. The table below is a schedule of the aggregate book and bank balances of all cash accounts. In addition to the FDIC insurance coverage on the accounts of MOSERS, the Central Trust Bank pledged the following securities to MOSERS on June 30, 2007, as collateral for overnight repurchase agreements:

- \$800,000 Federal Home Loan Bank Discount Note Maturity Date 08/22/2007
- \$438,200 Small Business Association Pool #505410 Maturity Date 04/25/2014
- \$930,570 Small Business Association Pool #507926 Maturity date 03/25/2018
- \$1,466,739 Small Business Association Pool #507285 Maturity Date 05/25/2019
- \$440,673 Small Business Association Pool #504845 Maturity Date 02/25/2025

|                       | Cash Balances |                           |  |
|-----------------------|---------------|---------------------------|--|
|                       | Book          | Bank/Investment Custodian |  |
| Pension Trust Funds   | \$20,088,742  | \$29,007,301              |  |
| Internal Service Fund | 3,080         | 7,689                     |  |



#### Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to MOSERS. As of June 30, 2007, MOSERS' fixed income assets that are not government guaranteed represented 77% of the fixed income portfolio. In preparing this report, credit risk associated with all fixed income holdings including collateral for repurchase agreements and securities lending collateral has been included. The tables above summarize MOSERS' fixed income portfolio exposure levels and credit qualities.

As a matter of practice, there are no overarching limitations for credit risk exposures within the overall fixed income portfolio. Each individual portfolio within fixed income is managed in accordance with operational guidelines that are specific as to permissible credit quality ranges, exposure levels within individual quality tiers, and average credit quality. A quality rating of CC or lower is not permissible in any of the guidelines except in those circumstances of downgrades subsequent to purchase, in which case the investment manager has been given permission to hold the security usually due to mitigating circumstances such as a very short maturity or a much higher rating from one of the other ratings agencies.

Average Credit Quality and Exposure Levels of Nongovernment Guaranteed Securities

| Fixed Income<br>Security Type        | Market Value<br>June 30, 2007 | Percent of All<br>Fixed Income<br>Assets | Weighted<br>Average Credit<br>Quality | Ratings Dispersion<br>Requiring<br>Further Disclosure |
|--------------------------------------|-------------------------------|--|---------------------------------------|---|
| Mortgages                            | \$ 87,979,357                 | 3%                                       | Agency                                | See below   |
| Agencies                             | 13,734,787                    | 0  | Agency                                | None  |
| Collateralized mortgage obligations  | 29,769,253                    | 1  | Agency                                | See below   |
| Asset-backed securities              | 413,638,049                   | 15                                       | AAA                                   | See below   |
| Corporate bonds                      | 1,037,122,637                 | 37                                       | A                                     | See below   |
| Bank loans                           | 86,952,752                    | 3  | BB                                    | See below   |
| Commercial paper                     | 325,827,741                   | 12                                       | Tier 2                                | See below   |
| Preferred stock                      | 31,350,960                    | 1  | AAA                                   | See below   |
| Pooled investments                   | 149,347,238                   | 5  | Not rated                             | None  |
| Total nongov't guaranteed securities | \$2,175,722,774               | 77                                       |                                       |   |
| Total fixed incomes securities       | \$2,819,475,516               |  |                                       |   |

#### Ratings Dispersion Detail - Market Value

| Credit<br>Rating<br>Level | Collateralized<br>Mortgage<br>Obligations | Asset-<br>Backed<br>Securities | Corporate<br>Bonds | Commercial<br>Paper | Preferred<br>Stock | Mortgages    | Bank<br>Loans |
|---------------------------|---|--------------------------------|--------------------|---------------------|--------------------|--------------|---------------|
| Agency                    | \$21,385,117                              | \$ 3,220,043                   |                    |                     |                    | \$84,708,092 |               |
| AAA                       | 8,384,136                                 | 405,939,045                    | \$ 63,454,202      |                     | \$30,624,995       | 3,271,265    |               |
| AA                        |   | 4,224,877                      | 481,395,402        |                     |                    |              |               |
| A                         |   | 254,084                        | 268,088,426        |                     |                    |              |               |
| BBB                       |   |                                | 42,333,907         |                     | 717,600            |              | \$ 1,016,664  |
| BB                        |   |                                | 52,588,496         |                     |                    |              | 24,172,266    |
| В                         |   |                                | 92,442,527         |                     |                    |              | 41,633,019    |
| CCC                       |   |                                | 31,814,873         |                     | 8,365              |              | 9,979,185     |
| Tier 1                    |   |                                |                    | \$ 9,231,740        |                    |              |               |
| Tier 2                    |   |                                |                    | 316,596,001         |                    |              |               |
| Not rated                 |   |                                | 5,004,804          |                     |                    |              | 10,151,618    |
| Total                     | \$29,769,253                              | \$413,638,049                  | \$1,037,122,637    | \$325,827,741       | \$31,350,960       | \$87,979,357 | \$86,952,752  |



Credit risk for derivative instruments held by the system results from counterparty risk assumed by MOSERS. This is essentially the risk that the counterparty to a MOSERS' transaction will be unable to meet its obligation. Information regarding MOSERS' credit risk related to derivatives is found under the derivatives disclosures on pages 39-40 of these notes.

Policies related to credit risk pertaining to MOSERS' securities lending program is found under the securities lending disclosures found on page 40 of these notes.

#### Concentration of Credit Risk

Concentration of credit risk is the risk of loss that may be attributed to the magnitude of a government's investment in a single-issuer. There is no single-issuer exposure within the MOSERS' portfolio that comprises 5% or more of the overall portfolio. Therefore, there is no concentration of credit risk.

#### Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. This risk is managed by using the effective duration or option adjusted methodology. It is widely used in the management of fixed income portfolios by quantifying the risk of interest rate changes. This methodology takes into account optionality on bonds and scales the risk of price changes on bonds depending upon the degree of change in rates and the slope of the yield curve. Operational guidelines specify the degree of interest rate risk taken within the system's fixed income portfolios, with the exception of one portfolio in which credit risk is the predominant factor and is also controlled by specific guidelines. It is believed that the reporting of effective duration found in the tables below quantifies to the fullest extent possible the interest rate risk of the system's fixed income assets. Floating rate assets that are structurally complex and contain inappropriate coupon adjustment mechanisms are expressly forbidden by the guidelines and are not present in any of the portfolios.

Effective Duration of Fixed Income Assets by Security Type

| Fixed Income<br>Security Type       | Market Value<br>June 30, 2007 | Percent of All<br>Fixed Income Assets | Weighted Average<br>Effective Duration<br>(Years) | Interest Rate<br>Risk Requiring<br>Future Disclosure |
|-------------------------------------|-------------------------------|---------------------------------------|---|--|
| U.S. Treasuries                     | \$ 634,620,734                | 23%                                   | 4.9   | See below  |
| Government guaranteed mortgages     | 9,132,008                     | 0                                     | 2.1   | None   |
| Mortgages                           | 87,979,357                    | 3                                     | 3.6   | None   |
| Agencies                            | 13,734,787                    | 0                                     | 0.3   | None   |
| Collateralized mortgage obligations | 29,769,253                    | 1                                     | 3.5   | None   |
| Asset-backed securities             | 413,638,049                   | 15                                    | 1.1   | None   |
| Corporate bonds                     | 1,037,122,637                 | 37                                    | 1.2   | None   |
| Bank loans                          | 86,952,752                    | 3                                     | 2.6   | None   |
| Commercial paper                    | 325,827,741                   | 12                                    | 0.1   | None   |
| Preferred stock                     | 31,350,960                    | 1                                     | 0.1   | None   |
| Pooled investments                  | 149,347,238                   | 5                                     | 0.1   | None   |
|                                     | \$2,819,475,516               | 100%                                  | 1.9   |  |

Effective Duration Analysis of U.S. Treasuries

| Fixed Income<br>Security Type | Market Value<br>June 30, 2007 | Average Effective Duration of the Security Type | Contribution<br>to Effective Duration |
|-------------------------------|-------------------------------|---|---------------------------------------|
| 1 to 10 year maturities       | \$393,205,805                 | 2.3   | 1.4                                   |
| Long-coupon treasuries        | 210,438,448                   | 7.9   | 2.6                                   |
| Long-stripped treasuries      | 30,976,481                    | 17.3  | 0.8                                   |
|                               | \$634,620,734                 |   | 4.9                                   |



#### Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. MOSERS' currency risk exposure, or exchange rate risk, primarily resides within MOSERS' international equity investment holdings. MOSERS' implementation policy allows MOSERS' external managers to decide what action to take regarding their respective portfolio's foreign currency exposures using currency forward contracts. MOSERS' exposure to foreign currency risk in U.S. dollars as of June 30, 2007, is highlighted in the table below.

#### Currency Exposures by Asset Class

| Currency           | Cash &<br>Cash Equivalents | Equities        | Fixed<br>Income | Alternatives | Total           |
|--------------------|----------------------------|-----------------|-----------------|--------------|-----------------|
| Argentine Peso     | \$ 2,956                   |                 |                 |              | \$ 2,956        |
| Australian Dollar  | φ 2,770                    | \$ 18,745,323   |                 |              | 18,745,323      |
| Brazilian Real     | 92,117                     | 26,821,648      |                 |              | 26,913,765      |
| Chilean Peso       | 9                          | 20,021,040      |                 |              | 20,713,707      |
| Czech Koruna       | 15                         |                 |                 |              | 15              |
| Danish Krone       | 1)                         | 5,321,249       |                 |              | 5,321,249       |
| Egyptian Pound     | 297                        | 10              |                 |              | 307             |
| Euro               | 6,936,025                  | 369,007,236     | \$16,712,459    | \$73,084,762 | 465,740,482     |
| Hong Kong Dollar   | 48,094                     | 84,334,072      | \$10,/12,439    | \$/3,064,/62 | 84,382,166      |
| Hungarian Forint   | 40,074                     | 879,556         |                 |              | 879,556         |
|                    | 523,022                    | 3,730,860       |                 |              | 4,253,882       |
| Indian Rupee       | (32,720)                   | 1,210,625       |                 |              | 1,177,905       |
| Indonesian Rupiah  | , , ,                      |                 |                 |              |                 |
| Israeli New Shekel | 171.006.077                | 1,717,347       |                 |              | 1,717,348       |
| Japanese Yen       | 171,806,077                | 308,167,298     |                 |              | 479,973,375     |
| Malaysian Ringgit  | 1,646                      | 17,827,089      |                 |              | 17,828,735      |
| Mexican Peso       | 53                         | 23,494,789      |                 |              | 23,494,842      |
| Norwegian Krone    |                            | 26,603,859      |                 |              | 26,603,859      |
| Peruvian Nuevo Sol |                            | 6,169           |                 |              | 6,169           |
| Philippine Peso    | 1,225                      | 5,445,840       |                 |              | 5,447,065       |
| Polish Zloty       | 1                          | 3,457,575       |                 |              | 3,457,576       |
| Russian Ruble      |                            | 2,265,259       |                 |              | 2,265,259       |
| Singapore Dollar   | 245,628                    | 81,009,486      |                 |              | 81,255,114      |
| South African Rand | 3                          | 5,148,236       |                 |              | 5,148,239       |
| South Korean Won   | (63,288)                   | 56,180,090      | 4,324,265       |              | 60,441,067      |
| Sri Lanka Rupee    |                            | 2,936           |                 |              | 2,936           |
| Swedish Krona      | (130,981)                  | 43,752,315      |                 |              | 43,621,334      |
| Swiss Franc        | 2,526,433                  | 79,119,204      |                 |              | 81,645,637      |
| Taiwan Dollar      | 596,545                    | 39,898,206      |                 |              | 40,494,751      |
| Thai Baht          | (42,222)                   | 16,427,975      |                 |              | 16,385,753      |
| Turkish Lira       | 2                          | 2,153,150       |                 |              | 2,153,152       |
| British Pound      | (51,513,380)               | 268,661,324     | 5,197,186       |              | 222,345,130     |
| Venezuelan Bolivar | 107,248                    |                 |                 |              | 107,248         |
| Maltese Lira       |                            | 20,576          |                 |              | 20,576          |
| Colombian Peso     | 164                        |                 |                 |              | 164             |
| Total              | \$131,104,970              | \$1,491,409,302 | \$26,233,910    | \$73,084,762 | \$1,721,832,944 |



#### **Futures Contracts**

| Futures Contract            | 2007<br>Expiration Date | Long/<br>Short | Notional/<br>Fair Value | Exposure    |
|-----------------------------|-------------------------|----------------|-------------------------|-------------|
| U.S. 5-year Treasury Notes  | September               | Short          | \$ (5,203,906)          | \$ (15,625) |
| U.S. 2-year Treasury Notes  | September               | Short          | (15,894,938)            | (23,156)    |
| U.S. 10-year Treasury Notes | September               | Long           | 9,407,578               | 44,500      |
| Topix Index                 | September               | Long           | 120,877,367             | 550,055     |
| SPI 200 Index               | September               | Short          | (16,242,491)            | (1,115)     |
| FTSE 100 Index              | September               | Short          | (49,809,886)            | (359,618)   |
| DJ Euro Stoxx 50            | September               | Short          | (58,782,149)            | (391,563)   |
| SPI 200 Index               | September               | Long           | 2,529,568               | 667         |
| FTSE 100 Index              | September               | Long           | 7,990,891               | 59,320      |
| Topix Index                 | September               | Long           | 5,605,490               | 57,035      |
| DJ Euro Stoxx 50            | September               | Long           | 9,573,441               | 73,692      |
| Total                       | •                       | C              | \$10,050,965            | \$ (5,808)  |

#### Swaps

| Туре                              | MOSERS Pays         | MOSERS Receives           | Maturity<br>Date | Notional<br>Value | Exposure      | Counterparty  |
|-----------------------------------|---------------------|---------------------------|------------------|-------------------|---------------|---------------|
| S&P 500 total return to LIBOR     | LIBOR               | S&P 500 total return      | 10/31/07         | \$ 297,475,354    | \$(1,316,458) | Goldman Sachs |
| S&P 100 total return to LIBOR     | LIBOR plus 3.25 bps | S&P 100 total return      | 04/30/08         | 409,113,761       | (1,804,993)   | Barclays      |
| S&P 500 total return to LIBOR     | LIBOR               | S&P 500 total return      | 10/31/07         | 75,409,837        | (342,408)     | Goldman Sachs |
| Russell 2000 to LIBOR             | LIBOR minus 67 bps  | Russell 2000 total return | 04/30/08         | 15,027,258        | (51,159)      | Goldman Sachs |
| S&P 100 Total return to LIBOR     | LIBOR plus 3.25 bps | S&P 100 total return      | 04/30/08         | 125,822,610       | (544,231)     | Barclays      |
| S&P 100 Total return to LIBOR     | LIBOR plus 3 bps    | S&P 100 total return      | 03/31/08         | 8,192,390         | (202,330)     | Goldman Sachs |
| Interest rate swap                | LIBOR               | Fixed 5.255%              | 02/02/12         | 8,611,727         | 77,812        | JP Morgan     |
| Interest rate swap                | LIBOR               | Fixed 5.345%              | 02/02/17         | 9,300,000         | (37,107)      | Barclays      |
| Interest rate swap                | LIBOR               | Fixed 5.172%              | 05/02/17         | 4,100,000         | (16,359)      | Lehman        |
| Interest rate swap                | LIBOR               | Fixed 5.32%               | 06/04/17         | 1,000,000         | (3,990)       | Barclays      |
| Interest rate swap                | LIBOR               | Fixed 5.35%               | 07/30/09         | 37,400,000        | 0             | JP Morgan     |
| Interest rate swap                | LIBOR               | Fixed 5.813%              | 07/03/37         | 2,500,000         | 0             | Lehman        |
| Interest rate swap                | LIBOR               | Fixed 5.48%               | 07/03/12         | 15,100,000        | 0             | Barclays      |
| Interest rate swap                | LIBOR               | Fixed 5.801%              | 07/03/27         | 3,500,000         | 0             | JP Morgan     |
| Lehman U.S. Agency Index to LIBOR | LIBOR               | Lehman U.S. Agency Index  | 04/30/08         | 18,184,005        | (80,616)      | Lehman        |
| Lehman U.S. MBS Index to LIBOR    | LIBOR minus 3 bps   | Lehman U.S. MBS Index     | 06/30/08         | 31,060,000        | 0             | Lehman        |
| Lehman U.S. MBS Index to LIBOR    | LIBOR               | Lehman U.S. MBS Index     | 09/28/07         | 130,248,942       | (577,437)     | Lehman        |
| Credit Default Swap               | Fixed 2.75%         | CDX N. American HY Index  | 06/20/12         | (50,042,014)      | 1,295,692     | Lehman        |
| GSCI Excess Return                | Fixed 14 bps        | GSCI Excess Return        | 04/30/08         | 24,997,219        | 688,366       | Merrill Lynch |
| GSCI Excess Return                | GSCI Excess Return  | Fixed 3 bps               | 04/30/08         | (26,418,050)      | (709,025)     | Lehman        |
| GSCI Total Return                 | T-Bills + 8 bps     | GSCI Total Return Index   | 11/30/07         | 186,451,986       | 5,013,169     | AIG Int'l     |
| Total                             |                     |                           | -                | \$1,327,035,025   | \$ 1,388,926  |               |

#### **Derivatives**

Derivative instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates, or financial indexes. They include futures contracts, swap contracts, options contracts, and forward foreign currency exchange. While the board has no formal policy specific to derivatives, MOSERS' investment implementation program, through its external managers, holds investments in futures contracts, swap contracts, and forward foreign currency exchange. MOSERS enters into these certain derivative instruments primarily to enhance the performance and reduce the volatility of its portfolio. It enters into swaps and futures contracts to gain or hedge exposure to certain markets and to manage interest rate risk and forward foreign exchange contracts primarily to hedge foreign currency exposure. The tables above summarize the various contracts in the portfolio as of June 30, 2007. The notional values associated with



these derivative instruments are generally not recorded on the financial statements; however, the amounts for the exposure (unrealized gains/losses) on these instruments are recorded. Interest risks associated with these investments are reported on the tables on page 36. MOSERS does not anticipate additional significant market risk from the swap arrangements.

MOSERS could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. MOSERS' investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures. MOSERS anticipates that the counterparties will be able to satisfy their obligations under the contracts. Investments in limited partnerships and commingled funds may include derivatives that are not shown in the derivative totals.

MOSERS invests in mortgage-backed securities, which are reported at fair value in the *Statements of Plan Net Assets* of pension trust funds and are based on the cash flows from interest and principal payments by the underlying mortgages. As a result, they are sensitive to prepayments by mortgagees, which are likely in declining interest rate environments, thereby reducing the value of these securities. MOSERS invests in mortgage-backed securities to diversify the portfolio and increase the return while minimizing the extent of risk. Details regarding interest rate risks for these investments are included under the interest rate risk disclosures on page 36.

#### Securities Lending Program

The board of trustees' investment policy permits the pension trust funds to participate in a securities lending program. Fixed income, international equity, and domestic equity securities of the pension trust funds are loaned to participating brokers who provide collateral in the form of cash, U.S. treasury or government agency securities, or letters of credit issued by approved banks. Collateral must be provided in the amount of 102% of market value for domestic loans and 105% of market value for international loans. MOSERS does not have the authority to pledge or sell collateral securities, without borrower default. Securities on loan at fiscal year end for cash collateral and on loan for noncash collateral are presented in the schedule on page 41. On June 30, 2007, MOSERS had no credit risk exposure to borrowers because the collateral amounts received exceeded amounts out on loan.

As of June 30, 2007, Credit Suisse/First Boston, New York Branch (CSFB), served as the agent for the fixed income, domestic equity, and international equity securities lending programs. In this capacity, MOSERS reduces credit risk by allowing CSFB to lend these securities to a diverse group of dealers on behalf of MOSERS. Indemnification against dealer default is provided by CSFB, an "AA-rated" bank. With each of MOSERS' securities lending programs, a majority of loans are open loans and can be terminated on demand by either MOSERS or the borrower. Net income from the three lending programs is split on an 85/15 basis between MOSERS and CSFB respectively.

Daily monitoring of securities that are on loan ensure proper collateralization levels and mitigate counterparty risk. Cash collateral from all three programs is commingled and invested in a separately managed short-term investment fund for MOSERS. This cash collateral fund is managed by CSFB. On June 30, 2007, the cash collateral fund had a market value of \$899,055,356 and a weighted average maturity of 31 days. For all of the securities lending operational services, the custodian is paid an annual fee, which is netted out against MOSERS' earnings in the securities lending programs managed by CSFB.

#### Limited Partnerships

Many of MOSERS' alternative investments are organized in the form of limited partnerships. In these partnerships, the manager is the general partner and the limited partners are the investors. As of June 30, 2007, MOSERS had contracts with 41 limited partnerships across various types of alternative investments. These partnerships collectively represent 47.44% of the total fund. A schedule of limited partnerships is presented on page 42.



#### Investments as of June 30, 2007

|   | Pension         | Trust Funds     | Internal Se   | rvice Fund    |
|---|-----------------|-----------------|---------------|---------------|
|   | Investments     | Investments     | Investments   | Investments   |
| Type of Investment                                | at Cost Value   | at Fair Value   | at Cost Value | at Fair Value |
| Common stocks                                     |                 |                 |               |               |
| Out on loan                                       | \$ 183,218,428  | \$ 216,605,009  |               |               |
| Not on securities loan                            | 645,194,475     | 741,486,020     |               |               |
| Total   | 828,412,903     | 958,091,029     |               |               |
| International equities                            |                 |                 |               |               |
| Out on loan                                       | 65,603,724      | 101,534,489     |               |               |
| Not on securities loan                            | 882,494,445     | 1,403,735,316   |               |               |
| Total   | 948,098,169     | 1,505,269,805   |               |               |
| International Corporate bonds                     |                 | 1,505,205,005   |               |               |
| Out on loan                                       | 1,007,700       | 980,100         |               |               |
| Not on securities loan                            | 53,670,204      | 56,307,324      |               |               |
| Total   | 54,677,904      | 57,287,424      |               |               |
| Preferred stocks                                  | 9,198,564       | 11,916,282      |               |               |
| Treasury bonds, notes and bills                   | 7,170,701       | 11,710,202      |               |               |
| Out on loan                                       | 600,998,109     | 600,043,087     |               |               |
| Not on securities loan                            | 27,325,265      | 27,199,680      |               |               |
| Total   | 628,323,374     | 627,242,767     |               |               |
| Government bonds and gov't                        | 020,323,3/4     | 02/,242,/0/     |               |               |
| mortgage-backed securities                        | 216,053,929     | 213,975,766     |               |               |
| Corporate bonds                                   | 210,073,727     | 213,7/3,/00     |               |               |
| Out on loan                                       | 22,191,246      | 20.011.400      |               |               |
| Not on securities loan                            |                 | 20,911,400      |               |               |
| Total   | 1,044,898,185   | 1,046,906,823   |               |               |
|   | 1,067,089,431   | 1,067,818,223   |               |               |
| Convertible bonds                                 | 3,256,081       | 3,777,206       | ¢2 294 707    | ¢2 20/ 707    |
| Repurchase agreements                             | 600,979         | 600,979         | \$2,384,797   | \$2,384,797   |
| Short-term investment funds                       | 722,843,355     | 722,843,355     |               |               |
| Collateralized mortgage obligations               | 10,332,344      | 10,261,695      |               |               |
| Real estate equity holdings                       | 734,035         | 734,035         |               |               |
| Foreign currencies                                | 120,535,889     | 119,070,493     |               |               |
| Limited partnerships                              | 2,591,840,877   | 3,627,315,843   |               |               |
| Bank loans  | 85,081,653      | 86,286,042      |               |               |
| Total investments                                 |                 |                 |               |               |
| Out on loan                                       | 873,019,207     | 940,074,085     |               |               |
| Not on securities loan                            | 6,414,060,280   | 8,072,416,859   | 2,384,797     | 2,384,797     |
| Total   | \$7,287,079,487 | \$9,012,490,944 | \$2,384,797   | \$2,384,797   |
| Reconciliation to investments on Statements of Pl | lan Net Assets  |                 |               |               |
| T . 16 1  |                 | ¢0.012.400.044  |               |               |
| Total from above                                  |                 | \$9,012,490,944 |               |               |
| Less short-term investments                       |                 | ((00.070)       |               |               |
| Repurchase agreements                             |                 | (600,979)       |               |               |
| Short-term investment funds                       |                 | (521,274,355)   |               |               |
| Less invested securities lending collateral       |                 | (201 5 (2 222)  |               |               |
| Short-term investment funds                       |                 | (201,569,000)   |               |               |
| Corporate bonds                                   |                 | (697,486,078)   |               |               |
| Investments on Statement of Plan Net Assets       |                 | \$7,591,560,532 |               |               |
|   |                 |                 |               |               |



#### Limited Partnerships

| Partnership Name                           | Style                              | Investments at Fair Value as of June 30, 2007 |
|--|------------------------------------|---|
| Blackstone Real Estate Partners IV         | Active real estate                 | \$81,527,354                                  |
| Blackstone Real Estate Partners V          | Active real estate                 | 92,429,570                                    |
| Blackstone Real Estate Partners VI         | Active real estate                 | 32,165,596                                    |
| OCM Real Estate Opportunites Fund III      | Active real estate                 | 80,658,687                                    |
| RH Fund 7                                  | Activist equity                    | 81,285,873                                    |
| Stinson Capital Partners                   | Activist equity                    | 40,308,972                                    |
| Bridgepoint Europe III A                   | Corporate buyout                   | 13,501,755                                    |
| Catterton Partners V                       | Corporate buyout                   | 24,192,041                                    |
| Catterton Partners VI                      | Corporate buyout                   | 8,871,910                                     |
| JLL Partners Fund V                        | Corporate buyout                   | 15,266,818                                    |
| OCM/GFI Power Opportunities Fund II        | Corporate buyout                   | 9,481,916                                     |
| Silver Lake Partners II                    | Corporate buyout                   | 27,036,051                                    |
| The Veritas Capital Fund III               | Corporate buyout                   | 6,064,855                                     |
| Alinda Infrastructure Fund I               | Corporate buyout                   | 8,692,177                                     |
| Parish Capital Buyout Fund I               | Corporate buyout - fund-of-funds   | 11,548,616                                    |
| Parish Capital Buyout Fund II              | Corporate buyout - fund-of-funds   | 6,590,942                                     |
| Parish Opportunity Fund                    | Private equity co-investment       | 21,250,000                                    |
| TCW Energy Fund XD-NL                      | Private equity co-investment       | 40,810,739                                    |
| TCW Energy Partners I                      | Private equity co-investment       | 10,095,991                                    |
| B IV Capital Partners                      | Distressed debt                    | 39,816,037                                    |
| Blackstone Distressed Securities Fund      | Distressed debt                    | 58,648,636                                    |
| MHR Institutional Partners II              | Distressed debt                    | 88,026,417                                    |
| MHR Institutional Partners III             | Distressed debt                    | 20,341,305                                    |
| OCM Opportunities Fund IV B                | Distressed debt                    | 13,323,828                                    |
| CVI Global Value Fund A                    | Distressed real estate and debt    | 43,400,000                                    |
| OCM European Credit                        | European loans                     | 59,583,343                                    |
| Onyx Partnership                           | Emerging markets                   | 193,423,580                                   |
| Merit Energy Partners F-II                 | Energy - oil & gas                 | 3,396,851                                     |
| Blackstone Hedged Equity Fund              | Long/short                         | 420,368,617                                   |
| Freeman Fair Value Fund                    | Long/short                         | 49,615,026                                    |
| AQR Absolute Return Institutional Fund     | Market neutral                     | 191,620,875                                   |
| BGI Global Market Neutral Fund             | Market neutral                     | 232,787,408                                   |
| Blackstone Topaz Fund                      | Market neutral                     | 332,567,093                                   |
| Diamond Ridge                              | Market neutral                     | 140,761,329                                   |
| Jade Ridge                                 | Market neutral                     | 445,216,889                                   |
| Newport Pioneer                            | Market neutral                     | 370,419,510                                   |
| Silver Creek Special Opportunities Fund I  | Special situations - fund-of-funds | 56,191,742                                    |
| Silver Creek Special Opportunities Fund II | Special situations - fund-of-funds | 35,897,982                                    |
| Campbell Group                             | Timberland                         | 50,000,000                                    |
| Global Timber Investors 7                  | Timberland                         | 56,292,515                                    |
| Wildwood Timberlands                       | Timberland                         | 113,836,997                                   |
| Total                                      |                                    | \$3,627,315,843                               |
|  |                                    |   |

#### Capital Assets

Office building, furniture, fixtures, and equipment costing \$250 or more when acquired are capitalized at cost. Improvements, which increase the useful life of the property, are capitalized. Maintenance and repairs are charged to expense as incurred. Depreciation is computed using the straight-line method over the estimated useful life of the related assets according to the following schedule:

- 5 years for furniture, fixtures, and equipment
- 40 years for building



The following is a schedule of the capital asset account balances as of June 30, 2006, and June 30, 2007, and changes to those account balances during the year ended June 30, 2007.

#### Capital Asset Account

| Capital Assets                   | Land      | Building and<br>Building<br>Improvements | Furniture,<br>Fixtures, and<br>Equipment | Total<br>Capital Assets |
|----------------------------------|-----------|--|--|-------------------------|
| Balances June 30, 2006           | \$267,286 | \$3,364,425                              | \$1,619,650                              | \$5,251,361             |
| Additions                        | 0         | 56,369                                   | 222,449                                  | 278,818                 |
| Deletions                        | 0         | 0  | (80,096)                                 | (80,096)                |
| Balances June 30, 2007           | 267,286   | 3,420,794                                | 1,762,003                                | 5,450,083               |
| Accumulated depreciation         |           |  |  |                         |
| Balances June 30, 2006           | 0         | 654,358                                  | 1,321,885                                | 1,976,243               |
| Depreciation expense             | 0         | 86,393                                   | 156,083                                  | 242,476                 |
| Deletions                        | 0         | 0  | (78,540)                                 | (78,540)                |
| Balances June 30, 2007           | 0         | 740,751                                  | 1,399,428                                | 2,140,179               |
| Net capital assets June 30, 2007 | \$267,286 | \$ 2,680,043                             | \$ 362,575                               | \$3,309,904             |

#### (3) CONTRIBUTIONS AND RESERVES

The MSEP and the Judicial Plan are pension plans covering substantially all state of Missouri employees, administrative law judges and legal advisors in the Division of Workers' Compensation, and judges. The state of Missouri is obligated by state law to make all required contributions to the plans. The required contributions are expressed as a level percentage of covered payroll and are actuarially determined using an individual entry-age actuarial cost method. The unfunded accrued liabilities are amortized over an open 30-year period. Costs of administering the plans are financed from the contributions to the pension trust funds and investment earnings.

#### (4) OTHER POST EMPLOYMENT BENEFITS (OPEB)

In addition to the retirement benefits provided through MOSERS, the state of Missouri also funds, either partially or in its entirety, OPEB for eligible retirees as follow:

#### Retiree Life Insurance

Members, who retire on or after October 1, 1985, are eligible for \$5,000 of state-sponsored, basic life insurance coverage if they retire directly from active employment. As of June 30, 2007, 15,872 retirees were eligible and participating in the program. This insured defined benefit coverage is financed on a percent of payroll (.13%) and is purchased as a group policy through competitive bids. The cost for year ended June 30, 2007, was \$1,786,799. Premiums are contributed entirely by the state as provided for by Section 104.515, RSMo.

Retirees of the Department of Labor and Industrial Relations (DOLIR), who retired prior to January 1, 1996, are eligible for state-sponsored insured defined benefit insurance coverage in the same amount of coverage they were receiving through the DOLIR. As of June 30, 2007, 436 retirees were eligible and participating in the program. The coverage of this closed group is purchased as a group policy through competitive bids at a current cost of \$2.07 per thousand dollars of coverage, per month, per eligible participant (\$51,331 for the year ended June 30, 2006). Premiums are paid entirely by the DOLIR as provided for by Section 228.225, RSMo. Retirees of the DOLIR who retired on or after January 1, 1996, are eligible for \$5,000 of state-sponsored life insurance coverage if they retire directly from active employment. They are included in the group described in the preceding paragraph.



#### Long-Term Disability Insurance

MOSERS also provides for long-term disability coverage for eligible members. Membership generally includes those active members of MOSERS' retirement plans that do not have other disability coverage or are not yet eligible to receive normal (unreduced) retirement benefits. As of June 30, 2007, 41,034 members were eligible and covered under the program. This insured defined benefit coverage is financed on a percentage of covered payroll (.55%) and is purchased as group policy through competitive bids and is currently administered through The Standard Insurance Company. The cost for the year ended June 30, 2007, was \$8,054,084. Premiums are contributed by the state as provided for by Section 104.515, RSMo.

#### (5) PLAN TERMINATION

MOSERS and its related plans are administered in accordance with Missouri statutes. Plans can only be terminated by an amendment to these statutes by the Missouri legislature.

On April 26, 2005, Governor Matt Blunt signed into law Senate Bill 202 that terminated the Administrative Law Judges and Legal Advisors' Plan (ALJLAP) for new hires only. Under this legislation, individuals who assume a position after April 26, 2005, who would have otherwise been covered by the ALJLAP will instead participate in the MSEP or the MSEP 2000, depending on when they initially became state employees. For fiscal years 2005 and after, all liabilities and assets of the ALJLAP were transferred and combined with the MSEP. Membership totals for ALJLAP members are reflected as combined with the MSEP in all relevant sections of this report.

#### (6) CONTINGENCIES

MOSERS is a defendant in six lawsuits that, in management's opinion, will not have a material effect on the financial statements.



#### Required Supplementary Information

## Schedules of Funding Progress Pension Trust Funds - Last Six Years

**MSEP** 

|                             |                                     | Actuarial<br>Accrued                |                                 |                            | Annual                    | UAAL<br>Percentage                 |
|-----------------------------|-------------------------------------|-------------------------------------|---------------------------------|----------------------------|---------------------------|------------------------------------|
| Actuarial<br>Valuation Date | Actuarial Value<br>of Assets<br>(a) | Liability (AAL)<br>Entry Age<br>(b) | Unfunded AAL<br>(UAAL)<br>(b-a) | Percent<br>Funded<br>(a/b) | Covered<br>Payroll<br>(c) | of Covered<br>Payroll<br>((b-a)/c) |
| 6/30/2002                   | \$6,033,133,598                     | \$6,294,272,275                     | \$ 261,138,677                  | 95.9%                      | \$1,773,283,484           | 14.7%                              |
| 6/30/2003                   | 6,057,329,072                       | 6,662,291,406                       | 604,962,334                     | 90.9                       | 1,739,895,364             | 34.8                               |
| 6/30/2004                   | 6,118,214,495                       | 7,230,010,928                       | 1,111,796,433                   | 84.6                       | 1,737,454,454             | 64.0                               |
| 6/30/2005                   | 6,435,344,102                       | 7,578,028,017                       | 1,142,683,915                   | 84.9                       | 1,806,600,560             | 63.3                               |
| 6/30/2006                   | 6,836,567,188                       | 8,013,205,414                       | 1,176,638,226                   | 85.3                       | 1,777,277,138             | 66.2                               |
| 6/30/2007                   | 7,377,289,283                       | 8,500,428,641                       | 1,123,139,358                   | 86.8                       | 1,846,643,330             | 60.8                               |

ALJLAP\*

|                                     |  | Actuarial<br>Accrued                     |                                       |                            | Annual                                | UAAL<br>Percentage                 |
|-------------------------------------|--|--|---------------------------------------|----------------------------|---------------------------------------|------------------------------------|
| Actuarial<br>Valuation Date         | Actuarial Value<br>of Assets<br>(a)      | Liability (AAL)<br>Entry Age<br>(b)      | Unfunded AAL<br>(UAAL)<br>(b-a)       | Percent<br>Funded<br>(a/b) | Covered<br>Payroll<br>(c)             | of Covered<br>Payroll<br>((b-a)/c) |
| 6/30/2002<br>6/30/2003<br>6/30/2004 | \$15,172,619<br>15,626,461<br>16,238,804 | \$18,175,342<br>19,946,487<br>20,384,213 | \$3,002,723<br>4,320,026<br>4,145,409 | 83.5%<br>78.3<br>79.7      | \$4,779,504<br>4,657,896<br>4,655,340 | 62.8%<br>92.7<br>89.0              |

<sup>\*</sup>Assets and liabilities of the ALJLAP were transferred to the MSEP during FY05.

#### Judicial Plan

| Actuarial<br>Valuation Date | Actuarial Value<br>of Assets<br>(a) | Actuarial<br>Accrued<br>Liability (AAL)<br>Entry Age<br>(b) | Unfunded AAL<br>(UAAL)<br>(b-a) | Percent<br>Funded<br>(a/b) | Annual<br>Covered<br>Payroll<br>(c) | UAAL Percentage of Covered Payroll ((b-a)/c) |
|-----------------------------|-------------------------------------|---|---------------------------------|----------------------------|-------------------------------------|--|
| 6/30/2002                   | \$29,651,113                        | \$256,115,452   | \$226,464,339                   | 11.6%                      | \$40,068,744                        | 565.2%                                       |
| 6/30/2003                   | 34,566,516                          | 267,049,857   | 232,483,341                     | 12.9                       | 40,052,952                          | 580.4  |
| 6/30/2004                   | 39,120,142                          | 280,397,464   | 241,277,322                     | 14.0                       | 39,878,499                          | 605.0  |
| 6/30/2005                   | 44,223,509                          | 292,303,886   | 248,080,377                     | 15.1                       | 40,016,098                          | 620.0  |
| 6/30/2006                   | 51,652,867                          | 309,002,752   | 257,349,885                     | 16.7                       | 40,270,535                          | 639.1  |
| 6/30/2007                   | 61,903,516                          | 326,666,373   | 264,762,857                     | 19.0                       | 40,846,581                          | 648.2  |

See Notes to the Schedules of Required Supplementary Information.



Required Supplementary Information

# Schedules of Employer Contributions Pension Trust Funds - Last Six Years

**MSEP** 

**Annual Required Contribution** 

| Year Ended June 30 | Percent | Dollar Amount | Percentage Contributed |
|--------------------|---------|---------------|------------------------|
| 2002               | 11.59%  | \$209,515,026 | 100%                   |
| 2003               | 8.81    | 156,576,150   | 100                    |
| 2004               | 9.35    | 164,691,836   | 100                    |
| 2005               | 10.64   | 194,524,059   | 100                    |
| 2006               | 12.59   | 226,338,183   | 100                    |
| 2007               | 12.78   | 239,488,751   | 100                    |

**ALJLAP** 

**Annual Required Contribution** 

| Percent | Dollar Amount                     | Percentage Contributed  |
|---------|-----------------------------------|---|
|         | 4.070.70                          | 1000/   |
| 22.32%  | \$1,072,562                       | 100%  |
| 20.02   | 951,023                           | 100   |
| 20.12   | 945,950                           | 100   |
| 22.13   | 1,124,924                         | 100   |
| 21.79   | 895,012                           | 100   |
|         | 22.32%<br>20.02<br>20.12<br>22.13 | 22.32% \$1,072,562<br>20.02 951,023<br>20.12 945,950<br>22.13 1,124,924 |

The ALJLAP was transitioned to the MSEP in FY05. 2006 is the last year for separate ALJLAP contributions; future contributions will be included in the MSEP rate.

Judicial Plan

**Annual Required Contribution** 

| Year Ended June 30 | Percent        | Dollar Amount | Percentage Contributed |
|--------------------|----------------|---------------|------------------------|
|                    | <b>44</b> 200/ | 400.000 (05   | 1000/                  |
| 2002               | 55.30%         | \$22,088,485  | 100%                   |
| 2003               | 52.12          | 20,802,140    | 100                    |
| 2004               | 51.68          | 20,636,314    | 100                    |
| 2005               | 54.51          | 21,852,985    | 100                    |
| 2006               | 55.76          | 22,401,569    | 100                    |
| 2007               | 58.48          | 23,745,467    | 100                    |
|                    |                |               |                        |

See Notes to the Schedules of Required Supplementary Information.



Required Supplementary Information

#### Notes to the Schedules of Required Supplementary Information

Pension Trust Funds - Last Six Years

#### Actuarial Methods and Assumptions for Valuations Performed June 30, 2007

The entry-age actuarial cost method of valuation is used in determining liabilities and normal cost. Differences in the past between assumed experience and actual experience (actuarial gains and losses) become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments (principal and interest), which are expressed as a percent of payroll. An open 30-year amortization period was used for the June 30, 2007, valuations. The actuarial value of assets is based on a method that fully recognizes expected investment returns and averages unanticipated market return over a 5-year period. However, at their meeting on September 15, 2005, the MOSERS board considered the extreme volatility in the markets during the last 5 years and the statutory funding objective to employ methods, which establish contribution rates that are likely to remain level from one period to another. As a result, the board elected to set the actuarial value of assets to market value as of June 30, 2005. Consequently, all remaining unrecognized investment gains or losses that would have otherwise been recognized over a period of years were fully recognized as of June 30, 2005. No change was made to the asset valuation method for future years, so it is anticipated that future investment gains or losses above or below the assumed investment return of 8.5% will continue to be recognized over discrete 5-year periods. The investment return rate assumption used is 8.5% per year, compounded annually (net of investment expenses). The price inflation assumption used is 3.5% per year. Projected salary increase assumptions are based on 4% per year for wage inflation plus an additional 0% to 2.7% per year for the MSEP and 0% to 1.6% per year for the Judicial Plan (depending on age, attributable to seniority, and/or merit increases). The assumption used for annual post-retirement benefit increases is 4% (on a compound basis) for approximately the first 12 years, 3.1% for the 13th year, and 2.8% per year thereafter or 2.8% per year, depending upon the date of hire and benefit election.

#### Factors That Have Significantly Affected Trends

2000

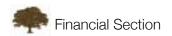
The actuarial valuations as of June 30, 2000, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2002.

|                                   | Amount         | Percent of<br>Payroll |
|-----------------------------------|----------------|-----------------------|
| MSEP                              |                |                       |
| Changes in assumptions            | \$ (5,051,091) | (.30)%                |
| Experience and nonrecurring items | (10,438,922)   | (.62)                 |
| ALJLAP                            |                |                       |
| Change in assumptions             | 36,656         | .90                   |
| Experience and nonrecurring items | (51,726)       | (1.27)                |
| Judicial Plan                     |                |                       |
| Change in assumptions             | (315,414)      | (.85)                 |
| Experience and nonrecurring items | (352,521)      | (.95)                 |

2001

The actuarial valuations as of June 30, 2001, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2003.

|                                  | Amount         | Percent of<br>Payroll |
|----------------------------------|----------------|-----------------------|
| MSEP                             |                |                       |
| Change in assumptions            | \$(41,844,928) | (2.38)%               |
| Release of asset funding margin  | (15,647,893)   | (.89)                 |
| Change in asset valuation method | (3,868,019)    | (.22)                 |
| Plan experience                  | 12,483,151     | .71                   |
| ALJLAP                           |                |                       |
| Change in assumptions            | (105,339)      | (2.26)                |
| Change in amortization of UAAL   | (88,559)       | (1.90)                |
| Change in asset valuation method | (4,195)        | (.09)                 |
| Plan experience                  | 49,873         | 1.07                  |
| Judicial Plan                    |                |                       |
| Change in assumptions            | (1,133,552)    | (2.93)                |
| Change in asset valuation method | (197,308)      | (.51)                 |
| Plan experience                  | 441,041        | 1.14                  |



#### 2002

The actuarial valuations as of June 30, 2002, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2004.

|                                   |               | Percent of |
|-----------------------------------|---------------|------------|
|                                   | Amount        | Payroll    |
| MSEP                              |               |            |
| Recognizing state pay freeze FY03 | \$(6,206,492) | (.35)%     |
| Plan experience                   | 15,782,223    | .89        |
| ALJLAP                            |               |            |
| Recognizing state pay freeze FY03 | (20,074)      | (.42)      |
| Plan experience                   | 23,420        | .49        |
| Judicial Plan                     |               |            |
| Recognizing state pay freeze FY03 | (208,357)     | (.52)      |
| Plan experience                   | 32,055        | .08        |
|                                   |               |            |

#### 2003

The actuarial valuations as of June 30, 2003, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2005.

| -                                   | Amount        | Percent of Payroll |
|-------------------------------------|---------------|--------------------|
| MSEP                                |               | <u> </u>           |
| Reduction in projected              |               |                    |
| across-the-board pay increases      |               |                    |
| to 1.67% for the fiscal year ending |               |                    |
| June 30, 2005                       | \$(6,089,634) | (.35)%             |
| Plan experience                     | 28,543,284    | 1.64               |
| ALJLAP                              |               |                    |
| Recognizing state pay freeze        |               |                    |
| for annual salaries above \$40,000  | (18,632)      | (.40)              |
| Plan experience                     | 112,255       | 2.41               |
| Judicial Plan                       |               |                    |
| Recognizing state pay freeze for    |               |                    |
| annual salaries above \$40,000      | (224,297)     | (.56)              |
| Plan experience                     | 1,357,795     | 3.39               |

#### 2004

The actuarial valuations as of June 30, 2004, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2006.

|                                   | Amount       | Percent of Payroll |
|-----------------------------------|--------------|--------------------|
| MSEP                              |              | <u> </u>           |
| Change in assumptions             | \$ 8,166,036 | .47%               |
| Experience and nonrecurring items | 25,714,326   | 1.48               |
| ALJLAP                            |              |                    |
| Change in assumptions             | 466          | .01                |
| Experience and nonrecurring items | (16,294)     | (.35)              |
| Judicial Plan                     |              |                    |
| Change in assumptions             | (15,951)     | (.04)              |
| Experience and nonrecurring items | 514,433      | 1.29               |

#### 2005

The actuarial valuations as of June 30, 2005, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2007.

|  | Amount         | Percent of Payroll |
|--|----------------|--------------------|
| MSEP                                   | - Infount      | 1 ayıon            |
| Mark-to-market asset valuation         |                |                    |
| method adjustment                      | \$(10,116,963) | (.56)%             |
| Recognition of state pay freeze on     |                |                    |
| across-the-board increases for FY06    | (3,793,861)    | (.21)              |
| Experience and nonrecurring items      |                |                    |
| including the addition of the assets   | S              |                    |
| and liabilities from the ALJLAP        | 17,162,705     | .95                |
| Judicial Plan                          |                |                    |
| Mark-to-market asset valuation         |                |                    |
| method adjustment                      | 28,011         | .07                |
| Recognition of state pay freeze on     |                |                    |
| across-the-board increases or FY06     | (136,055)      | (.34)              |
| Change in amortization factor to refle | ct             |                    |
| the state pay freeze for fiscal year   |                |                    |
| ending June 30, 2006                   | 556,224        | 1.39               |
| Experience and nonrecurring items      | 640,258        | 1.60               |
|  |                |                    |

#### 2006

The actuarial valuations as of June 30, 2006, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2008.

|                                   | Amount        | Percent of Payroll |
|-----------------------------------|---------------|--------------------|
| MSEP                              |               |                    |
| Change to an open 30-year         |               |                    |
| amortization period               | \$(1,244,094) | (.07)%             |
| Experience and nonrecurring items | 2,310,460     | .13                |
| Judicial Plan                     |               |                    |
| Change to an open 30-year         |               |                    |
| amortization period               | (265,786)     | (.66)              |
| Experience and nonrecurring items | 334,245       | .83                |

#### 2007

The actuarial valuations as of June 30, 2007, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2009.

|                                   | Amount       | Percent of Payroll |
|-----------------------------------|--------------|--------------------|
| MSEP                              |              | ,                  |
| Change in assumptions or methods  | \$ (369,329) | (0.02)%            |
| Experience and nonrecurring items | (5,355,266)  | (0.29)             |
| Judicial Plan                     |              |                    |
| Change in assumptions or methods  | (273,672)    | (0.67)             |
| Experience and nonrecurring items | 853,694      | 2.09               |
|                                   |              |                    |



# Schedule of Investment Expenses Pension Trust Funds - Year Ended June 30, 2007

|   | MSEP        | Judicial Plan  | Total           |
|---|-------------|----------------|-----------------|
| Investing activity  |             |                |                 |
| Investment management and administration fees                                 |             |                |                 |
| Aetos Capital Management - alpha pool   | \$1,784,205 | \$15,786       | \$1,799,991     |
| Alinda Capital Partners - private equity                                      | 309,702     | 2,740          | 312,442         |
| Americap Advisors domestic all-cap  | 148,243     | 1,312          | 149,555         |
| AQR Capital Management - alpha pool   | 6,878,571   | 60,858         | 6,939,429       |
| Barclays Global Investors - alpha pool  | 2,240,245   | 19,820         | 2,260,065       |
| BlackRock Financial Management L.P high yield                                 | 1,163,782   | 10,296         | 1,174,078       |
| BlackRock Financial Management L.P MBS/ABS                                    | 199,509     | 1,765          | 201,274         |
| Blackstone - private debt   | 2,122,373   | 18,778         | 2,141,151       |
| Blackstone BREP V - real estate   | 852,836     | 7,545          | 860,381         |
| Blackstone - hedged equity  | 3,930,021   | 34,771         | 3,964,792       |
| Blackstone Alternative Asset Management - alpha pool                          | 4,251,560   | 37,615         | 4,289,175       |
| Blackstone - real estate  | 3,140,257   | 27,783         | 3,168,040       |
| Blakeney - emerging markets   | 15,610,032  | 138,104        | 15,748,136      |
| Blum Capital Stinson - private equity   | 1,444,912   | 12,784         | 1,457,696       |
| Bridgewater Associates, Inc alpha pool  | 3,004,039   | 26,578         | 3,030,617       |
| Bridgepoint Capital - private equity  | 475,631     | 4,208          | 479,839         |
| Bush O'Donnell - real estate  | 74,342      | 658            | 75,000          |
| Capital Guardian Trust - domestic all-cap                                     | 89,493      | 792            | 90,285          |
| Catterton Partners - private equity   | 741,534     | 6,561          | 748,095         |
| CVI Global Value Fund - real estate   | 1,168,771   | 10,341         | 1,179,112       |
| DDJ Capital Management - private debt   | 1,361,552   | 12,046         | 1,373,598       |
| DG Capital Management - domestic equity                                       | 7,340       | 65             | 7,405           |
| Freeman Associates Investment Management - hedged equity                      | 205,206     | 1,816          | 207,022         |
| Global Forest Partners - timber   | 199,226     | 1,763          | 200,989         |
| GMO - emerging markets  | 1,410,857   | 12,482         | 1,423,339       |
| Hoisington Investment Management Co U.S. Treasuries                           | 90,432      | 800            | 91,232          |
| JLL Partners V -  | 803,984     | 7,113          | 811,097         |
| Legg Mason - domestic all-cap   | (1,907,101) | (16,873)       | (1,923,974)     |
| Legg Mason Value Trust - domestic equity                                      | 144,339     | 1,277          | 145,616         |
| Leuthold Weeden Capital Management - domestic equity                          | 449,349     | 3,976          | 453,325         |
| Mastholm Investment Managers - int'l developed                                | 985,770     | 8,722          | 994,492         |
| MHR Institutional Partners - private debt                                     | 7,581,997   | 67,081         | 7,649,078       |
| MOSERS Inc alpha pool   | 56          | 0              | 56              |
| NISA Investment Advisors, LLC - commodities                                   | 651,382     | 5,763          | 657,145         |
| NISA Investment Advisors, LLC - fixed income                                  | 212,041     | 1,876          | 213,917         |
| NISA Investment Advisors, LLC - beta program domestic equity                  | 206,006     | 1,823          | 207,829         |
| NISA Investment Advisors, LLC - beta program hedged equity                    | 31,503      | 279            | 31,782          |
| NISA Investment Advisors, LLC - beta program fixed income                     | 80,551      | 713            | 81,264          |
| Oaktree Capital Management European Credit - high yield                       | 179,716     | 1,590          | 181,306         |
| Oaktree Capital Management - real estate                                      | 5,691,566   | 50,356         | 5,741,922       |
| Oaktree Capital Management - private debt                                     | 2,297,162   | 20,324         | 2,317,486       |
| Oaktree Capital Management GFI Power - private equity                         | 443,104     | 3,920          | 447,024         |
| Pacific Alternative Asset Management Co alpha pool                            | 4,435,966   | 39,247         | 4,475,213       |
| Parish Capital - private equity   | 636,178     | 5,629          | 641,807         |
| Relational Investors, LLC private equity                                      | 660,509     | 5,844          | 666,353         |
| Resource Management Service - timber  | 628,041     | 5,557          | 633,598         |
| Silchester International Investors - int'l developed                          | 2,643,815   | 23,391         | 2,667,206       |
| Silver Lake Partners - private equity   | 64,426      | 570            | 64,996          |
| Trust Company of the West Energy Fund - real estate                           | 409,129     | 3,620          | 412,749         |
|   | 299,813     | 2,653          | 302,466         |
| Veritas Capital- private equity<br>Wayzata Investment Partners - private debt | 142,835     | 2,633<br>1,264 | 144,099         |
|   | 80,676,808  | 713,782        | 81,390,590      |
| Total investment management fees  | 00,0/0,000  |                | nued on page 50 |



# Schedule of Investment Expenses Pension Trust Funds - Year Ended June 30, 2007

Continued from page 49

|  | MSEP          | <b>Judicial Plan</b> | Total         |
|--|---------------|----------------------|---------------|
| Other investment fees                      |               |                      |               |
| Investment consultant fees                 |               |                      |               |
| Summit Strategies Group                    | 770,179       | 6,814                | 776,993       |
| TimberLink Consulting                      | 22,001        | 195                  | 22,196        |
| Investment custodial fees                  |               |                      |               |
| Mellon Bank                                | 676,131       | 5,982                | 682,113       |
| Performance measurement fees               |               |                      |               |
| Mellon Bank                                | 357,028       | 3,159                | 360,187       |
| Internal investment activity expenses      | 2,126,558     | 18,815               | 2,145,373     |
| Total investing activity expenses          | 84,628,705    | 748,747              | 85,377,452    |
| Securities lending activity                |               |                      |               |
| Securities lending borrower rebates        | 52,449,770    | 464,045              | 52,913,815    |
| Securities lending management fees         | 0             | 0                    | 0             |
| Mellon Bank                                | 134,231       | 1,188                | 135,419       |
| Credit Suisse First Boston                 | 496,778       | 4,395                | 501,173       |
| Total securities lending activity expenses | 53,080,779    | 469,628              | 53,550,407    |
| Total investment expenses                  | \$137,709,484 | \$1,218,375          | \$138,927,859 |



# Schedule of Internal Investment Activity Expenses Pension Trust Funds - Year Ended June 30, 2007

|                               | MSEP        | Judicial Plan | Total       |
|-------------------------------|-------------|---------------|-------------|
| Personnel services            |             |               |             |
| Salaries                      | \$1,227,216 | \$10,859      | \$1,238,075 |
| Employee fringe benefits      | 346,506     | 3,066         | 349,572     |
| Total personnel services      | 1,573,722   | 13,925        | 1,587,647   |
| Professional services         |             |               |             |
| Attorney services             | 112,522     | 996           | 113,518     |
| Consulting services           | 116,913     | 1,034         | 117,947     |
| Total professional services   | 229,435     | 2,030         | 231,465     |
| Communications                |             |               |             |
| Telephone                     | 2,647       | 23            | 2,670       |
| Total communications          | 2,647       | 23            | 2,670       |
| Building and grounds          |             |               |             |
| Utilities                     | 215         | 2             | 217         |
| Total building and grounds    | 215         | 2             | 217         |
| Equipment                     |             |               |             |
| Maintenance                   | 119         | 1             | 120         |
| Total equipment               | 119         | 1             | 120         |
| Travel and meetings           |             |               |             |
| Staff travel and meetings     | 80,392      | 711           | 81,103      |
| Total travel and meetings     | 80,392      | 711           | 81,103      |
| General                       |             |               |             |
| Educational materials         | 2,962       | 26            | 2,988       |
| Office supplies               | 2,858       | 25            | 2,883       |
| Subscriptions and dues        | 231,674     | 2,050         | 233,724     |
| Advertising                   | 2,499       | 22            | 2,521       |
| Miscellaneous                 | 35          | 0             | 35          |
| Total general                 | 240,028     | 2,123         | 242,151     |
| Total administrative expenses | \$2,126,558 | \$18,815      | \$2,145,373 |



## Schedule of Administrative Expenses Pension Trust Funds - Year Ended June 30, 2007

|                                   | MSEP        | Judicial Plan      | Total                    |
|-----------------------------------|-------------|--------------------|--------------------------|
| Personnel services Salaries       | \$3,066,779 | ¢27 122            | \$2,002,012              |
| Employee fringe benefits          | 1,152,627   | \$27,133<br>10,198 | \$3,093,912<br>1,162,825 |
| Total personnel services          | 4,219,406   | 37,331             | 4,256,737                |
| Total personner services          | 1,217,100   | 37,331             | 1,270,737                |
| Professional services             |             |                    |                          |
| Actuarial services                | 187,479     | 1,659              | 189,138                  |
| Attorney services                 | 107,464     | 951                | 108,415                  |
| Auditing services                 | 36,676      | 324                | 37,000                   |
| Banking services                  | 23,597      | 209                | 23,806                   |
| Consulting services               | 91,483      | 809                | 92,292                   |
| Total professional services       | 446,699     | 3,952              | 450,651                  |
| Communications                    |             |                    |                          |
| Postage and mailing               | 252,744     | 2,236              | 254,980                  |
| Telephone                         | 69,539      | 615                | 70,154                   |
| Printing                          | 151,406     | 1,340              | 152,746                  |
| Total communications              | 473,689     | 4,191              | 477,880                  |
| 2.44                              |             |                    |                          |
| Building and grounds              | 25 (25      | <b></b>            | 26.222                   |
| Depreciation                      | 85,635      | 758                | 86,393                   |
| Utilities                         | 62,194      | 550                | 62,744                   |
| Maintenance                       | 46,133      | 408                | 46,541                   |
| Total building and grounds        | 193,962     | 1,716              | 195,678                  |
| Equipment                         |             |                    |                          |
| Depreciation                      | 154,714     | 1,369              | 156,083                  |
| Maintenance                       | 291,408     | 2,578              | 293,986                  |
| Rental                            | 134,015     | 1,186              | 135,201                  |
| Gain on sale of equipment         | (5,089)     | (45)               | (5,134)                  |
| Total equipment                   | 575,048     | 5,088              | 580,136                  |
| Travel and meetings               |             |                    |                          |
| Board travel and meetings         | 30,617      | 271                | 30,888                   |
| Staff travel and meetings         | 200,784     | 1,776              | 202,560                  |
| Vehicle maintenance and operation | 6,639       | 59                 | 6,698                    |
| Total travel and meetings         | 238,040     | 2,106              | 240,146                  |
| General                           |             |                    |                          |
| Educational materials             | 15,641      | 138                | 15,779                   |
| Office supplies                   | 171,695     | 1,519              | 173,214                  |
| Subscriptions and dues            | 166,479     | 1,473              | 167,952                  |
| Insurance                         | 116,138     | 1,028              | 117,166                  |
| Advertising                       | 8,474       |                    | 8,549                    |
| Miscellaneous                     |             | 75<br>570          |                          |
|                                   | 64,439      | 570                | 65,009                   |
| Total general                     | \$6,680,710 | 4,803<br>\$50,187  | 547,669                  |
| Total administrative expenses     | \$6,689,710 | \$59,187           | \$6,748,897              |



## Schedule of Administrative Expenses Internal Service Fund - Year Ended June 30, 2007

| Personnel services                |                  |
|-----------------------------------|------------------|
| Salaries                          | \$298,474        |
| Employee fringe benefits          | 104,204          |
| Total personnel services          | 402,678          |
| •                                 |                  |
| Professional services             |                  |
| Attorney services                 | 665              |
| Auditing services                 | 2,549            |
| Banking services                  | 646              |
| Total professional services       | 3,860            |
| Communications                    |                  |
| Postage and mailing               | 987              |
| Telephone                         | 5,018            |
| Total communications              | 6,005            |
| Building and grounds              |                  |
| Building use charge               | 8,639            |
| Utilities                         | 4,338            |
| Maintenance                       | 3,207            |
| Total building and grounds        | 16,184           |
| Equipment                         |                  |
| Equipment use charge              | 15,820           |
| Maintenance                       | 20,053           |
| Rental                            | 9,315            |
| Total equipment                   | 45,188           |
| Travel and meetings               |                  |
| Board travel and meetings         | 2,128            |
| Staff travel and meetings         | 19,544           |
| Vehicle maintenance and operation | 461              |
| Total travel and meetings         | 22,133           |
|                                   |                  |
| General                           |                  |
| Educational materials             | 1,293            |
| Office supplies                   | 12,131           |
| Subscriptions and dues            | 4,253            |
| Insurance                         | 8,073            |
| Advertising                       | 763              |
| Miscellaneous                     | 4,479            |
| Total general                     | 30,992           |
| Total administrative expenses     | <u>\$527,040</u> |



### Schedule of Professional/Consultant Fees

Year Ended June 30, 2007

|  |                                   | Per       | Internal<br>Service<br>Fund |           |                               |
|--|-----------------------------------|-----------|-----------------------------|-----------|-------------------------------|
| Professional/Consultant                        | Nature of Service                 | MSEP      | Judicial<br>Plan            | Total     | MO State<br>Insurance<br>Plan |
| Operation administrative expenses              |                                   |           |                             |           |                               |
| Central Bank                                   | Banking                           | \$ 23,597 | \$ 209                      | \$ 23,806 | \$ 646                        |
| Charlesworth & Associates                      | Risk management consulting        | 7,171     | 63                          | 7,234     | 0                             |
| Claire West Consulting                         | Governmental pension consulting   | 11,565    | 102                         | 11,667    | 0                             |
| Fishnet Security                               | Enterprise security assessment    | 47,183    | 418                         | 47,601    | 0                             |
| Gabriel, Roeder, Smith & Co.                   | Actuarial                         | 187,479   | 1,659                       | 189,138   | 0                             |
| Gamble & Schlemeier, LTD                       | Governmental pension consulting   | 9,912     | 88                          | 10,000    | 0                             |
| Hubber & Associates                            | Information technology consulting | 15,652    | 138                         | 15,790    | 0                             |
| Thompson Coburn LLP                            | Legal counsel                     | 107,464   | 951                         | 108,415   | 665                           |
| Williams Keepers LLC                           | Financial audit                   | 36,676    | 324                         | 37,000    | 2,549                         |
| Operation administrative expenses subtotal     |                                   | 446,699   | 3,952                       | 450,651   | 3,860                         |
| Internal investment administrative expenses    |                                   |           |                             |           |                               |
| CT Corporation                                 | Legal services                    | 544       | 5                           | 549       | 0                             |
| Independent Fiduciary Services, Inc.           | Fiduciary performance review      | 96,050    | 850                         | 96,900    | 0                             |
| KPMG of Taiwan                                 | Tax services                      | 2,277     | 20                          | 2,297     | 0                             |
| Perkins Coie                                   | Legal counsel (credit)            | 29,341    | 260                         | 29,601    | 0                             |
| Thompson Coburn LLP                            | Legal counsel                     | 81,995    | 725                         | 82,720    | 0                             |
| Timberlink                                     |                                   | 19,228    | 170                         | 19,398    | 0                             |
| Internal investment administrative expenses su | btotal                            | 229,435   | 2,030                       | 231,465   | 0                             |
| Total professional/consultant fees             |                                   | \$676,134 | \$5,982                     | \$682,116 | \$3,860                       |

See accompanying Independent Auditors' Report.

Information on investment management and consulting fees can be found in the Schedule of Investment Expenses on page 49-50.



Investment Summary
Pension Trust Funds - Year Ended June 30, 2007

|   | June 3                | 60, 2006                              |                                    |                          | June 30                               | 0, 2007         |                     |
|---|-----------------------|---------------------------------------|------------------------------------|--------------------------|---------------------------------------|-----------------|---------------------|
|   |                       |                                       | Purchases and<br>Capital Additions | Sales and<br>Redemptions |                                       |                 | Percent<br>of Total |
| Type of Investment                            | Cost Value            | Fair Value                            | at Cost                            | at Cost                  | Cost Value                            | Fair Value      | Fair Value          |
| Fixed income                                  |                       |                                       |                                    |                          |                                       |                 |                     |
| Treasury bonds, notes, and bills              | \$ 701,430,087        | \$ 718,158,174                        | \$ 142,125,054                     | \$ (215,231,767)         | \$ 628,323,374                        | \$ 627,242,767  | 8%                  |
| Government bonds and gov't                    | + , ==,===,==,        | + /,-,-,-,-                           | +,,,-,                             | + (=->)=0-), -, )        | + ===,e==,e,=                         | +, ,,, -,       |                     |
| mortgage-backed securities                    | 222,544,305           | 219,911,924                           | 346,717,027                        | (353,207,403)            | 216,053,929                           | 213,975,766     | 3                   |
| Corporate bonds                               | 502,765,787           | 494,927,167                           | 102,200,837                        | (235,752,282)            | 369,214,342                           | 370,332,145     | 5                   |
| Convertible bonds                             | 7,103,792             | 7,383,417                             | 938,991                            | (4,786,701)              | 3,256,082                             | 3,777,206       | 0                   |
| Collateralized mortgage obligations           | 10,475,662            | 10,184,835                            | 15,237,671                         | (15,380,989)             | 10,332,344                            | 10,261,695      | 0                   |
| International corporate bonds                 | 41,559,952            | 40,570,429                            | 28,946,263                         | (15,828,311)             | 54,677,904                            | 57,287,424      | 0                   |
| Bank loans                                    | 0                     | 0                                     | 99,758,589                         | (14,676,936)             | 85,081,653                            | 86,286,042      | 1_                  |
| Total fixed income                            | 1,485,879,585         | 1,491,135,946                         | 735,924,432                        | (854,864,389)            | 1,366,939,628                         | 1,369,163,045   | 17                  |
| Common stock                                  | 728,299,273           | 809,269,933                           | 562,019,619                        | (461,905,989)            | 828,412,903                           | 958,091,029     | 13                  |
| Preferred stock                               | 8,406,115             | 8,543,288                             | 6,926,479                          | (6,134,030)              | 9,198,564                             | 11,916,282      | 0                   |
| International investments                     |                       |                                       |                                    |                          |                                       |                 |                     |
| International equities                        | 843,152,292           | 1,225,696,067                         | 226,836,766                        | (121,890,889)            | 948,098,169                           | 1,505,269,805   | 20                  |
| Foreign currency                              | 98,384,743            | 97,654,292                            | 1,144,885,096                      | (1,122,733,950)          | 120,535,889                           | 119,070,493     | 2                   |
| Total international investments               | 941,537,035           | 1,323,350,359                         | 1,371,721,862                      | (1,244,624,839)          | 1,068,634,058                         | 1,624,340,298   | 22                  |
| p. 1  |                       |                                       |                                    |                          |                                       |                 |                     |
| Real estate                                   | 72 / 025              | 72 / 025                              | 0                                  | 0                        | 72/025                                | 72/025          | 0                   |
| Equity holdings<br>REITs                      | 734,035<br>65,854,040 | 734,035<br>111,541,494                | 0<br>6,086,843                     | 0<br>(71,940,883)        | 734,035<br>0                          | 734,035<br>0    | 0<br>0              |
| Total real estate                             | 66,588,075            |                                       | 6,086,843                          |                          | 734,035                               | 734,035         | 0                   |
| Total real estate                             | 00,366,0/3            | 112,275,529                           | 0,000,043                          | (71,940,883)             | /34,03)                               | /34,03)         | 0                   |
| Limited partnerships                          | 2,141,155,569         | 2,655,223,459                         | 695,609,757                        | (244,924,450)            | 2,591,840,876                         | 3,627,315,843   | 48_                 |
| Investments (per Statement                    |                       |                                       |                                    |                          |                                       |                 |                     |
| of Plan Net Assets page 26)                   | 5,371,865,652         | 6,399,798,514                         | 3,378,288,992                      | (2,884,394,580)          | 5,865,760,064                         | 7,591,560,532   | 100%                |
| Short-term investments                        |                       |                                       |                                    |                          |                                       |                 |                     |
| Short-term investment funds                   | 665,241,678           | 665,241,678                           | 756,581,183                        | (900,548,506)            | 521,274,355                           | 521,274,355     |                     |
| Repurchase agreements                         | 578,835               | 578,835                               | 146,098,328                        | (146,076,184)            | 600,979                               | 600,979         |                     |
| Total short-term investments                  | 665,820,513           | 665,820,513                           | 902,679,511                        | (1,046,624,690)          | 521,875,334                           | 521,875,334     |                     |
| *   |                       |                                       |                                    |                          |                                       |                 |                     |
| Invested securities                           |                       |                                       |                                    |                          |                                       |                 |                     |
| lending collateral                            | 010.762.065           | 012.072.00/                           | 206561.0/6                         | (501 //0.022)            | (07.075.000                           | (07 /0/ 070     |                     |
| Corporate bonds                               | 912,763,965           | 912,973,984                           | 286,561,046                        | (501,449,922)            | 697,875,089                           | 697,486,078     |                     |
| Short-term investment funds                   | 239,425,723           | 239,425,723                           | 29,842,873,432                     | (29,880,730,155)         | 201,569,000                           | 201,569,000     |                     |
| Total invested securities lending collateral* | 1,152,189,688         | 1,152,399,707                         | 30,129,434,478                     | (30,382,180,077)         | 899,444,089                           | 899,055,078     |                     |
| Total investments                             | \$7,189,875,853       | \$8,218,018,734                       | \$34,410,402,981                   | \$(34,313,199,347)       | \$7,287,079,487                       | \$9,012,490,944 |                     |
|   |                       | · · · · · · · · · · · · · · · · · · · |                                    |                          | · · · · · · · · · · · · · · · · · · · |                 |                     |

<sup>\*</sup> Securities lending collateral on page 26 includes \$278 in uninvested cash.

See accompanying Independent Auditors' Report.

Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review as an appendix to this report at the MOSERS' office.



Investment Summary
Internal Service Fund - Year Ended June 30, 2007

|                       | June 3      | 0, 2006     | June 30, 2007                                 |                                     |             |             |                                   |
|-----------------------|-------------|-------------|---|-------------------------------------|-------------|-------------|-----------------------------------|
| Type of Investment    | Cost Value  | Fair Value  | Purchases and<br>Capital Additions<br>at Cost | Sales and<br>Redemptions<br>at Cost | Cost Value  | Fair Value  | Percent<br>of Total<br>Fair Value |
| Repurchase agreements | \$2,051,203 | \$2,051,203 | \$559,611,439                                 | \$(559,277,845)                     | \$2,384,797 | \$2,384,797 | 100%                              |

See accompanying Independent Auditors' Report.

Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review as an appendix to this report at the MOSERS' office.

# Growth and Maturity

MOSERS' first investment transaction occurred in November 1957 when a single outside advisor placed \$100,000 in a 90-day U.S. Treasury Bill on behalf of plan participants. Today, the MOSERS fund is managed by a 14 member internal investment team and nearly 40 external investment managers. The investment income earned for fiscal year 2007 totaled \$1.3 billion – a remarkable amount considering it took 30 years for the total fund to reach its first \$1 billion in assets.

The fund's initial investments were handled by third party investment managers and overseen by an outside investment consultant and the board of trustees – a strategy that worked for most public pension plans throughout the 1980s and 1990s during the greatest bull market in U.S. history. This is exemplified by the fund's growth during this period – the total fund reached \$2 billion in 1991, \$3 billion in 1993, and \$5 billion in 1999.

While the markets were delivering double digit returns, the board decided to extract additional costs savings by managing various portfolios internally. Their strategy was to employ skilled staff and proper risk controls while gradually layering a mix of internally managed portfolios into the fund. The board began this initiative by internally managing a U.S. government bond portfolio and soon added corporate bonds to the mix. By the end of the 1990s, internal management had expanded to include the S&P 500, U.S. Treasury inflation protected securities, and a real estate investment trust portfolio.

As the Bull Run ended in 2000, the MOSERS board recognized it would be difficult to continue to achieve stellar returns during the next decade employing the same approach they had used in the past. As a result, the board adopted a governance structure that positioned the fund to be more nimble in a rapidly changing investment world and to further expose the fund to alternative asset classes and strategies. Today, the fund has assets exceeding \$8 billion, and MOSERS' alternative assets have evolved to now consist of investments in private debt, private equity, treasury inflation protected securities, commodities, real estate, and timberland, to name a few.

An important contributor to our long-term success has been the governance structure and policies adopted by the board of trustees. Good governance policies allow an organizational culture where individual decision-makers work together to produce results which benefit the system. This structure has resulted in a more fluid investment decision-making process that has allowed the fund to move quickly when investment opportunities are presented. The end result is that across periods of 1, 3, 5, 10, and 15 years, MOSERS' investment performance has been excellent relative to other pension funds and a variety of market-related benchmarks.



## Investment Section

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#### Chief Investment Officer's Report



#### Missouri State Employees' Retirement System

**Mailing Address** 

PO Box 209 • Jefferson City, MO 65102-0209

**Building Location** 

907 Wildwood Drive • Jefferson City, MO

October 16, 2007

#### Dear Members:

It is my pleasure to present to you the *Investment Section* of the *MOSERS' Comprehensive Annual Financial Report*. As of the fiscal year ended June 30, 2007, your pension fund has total assets of \$8.1 billion. During the year, the investments generated over \$1.3 billion in return.

Our investment management practices are rooted in generating investment returns to assure that retirement benefits promised you by the state of Missouri are secure and will be paid at the lowest possible cost to the taxpayers. The most important objective of the MOSERS' investment program is to generate investment returns that exceed our long-term actuarial assumption of 8.5%. Our 10- and 15-year annualized results of 9.2% and 10.3%, respectively, suggest that our program has been successful in achieving that objective. I would add that over these time periods the returns were generated while taking below market risk.

As you have likely already seen in earlier sections of this report, MOSERS is celebrating its 50th anniversary and our report theme is "A Strong Foundation Protects Your Future." The fund has certainly grown and matured since its humble beginning 50 years ago. I couldn't agree more with the theme. In my 15 years at MOSERS (13 as the fund's Chief Investment Officer), I have witnessed significant changes, growth, and maturity in how we manage your assets. However, before I delve into comparing our investment program to our anniversary theme as reflected by the mighty oak tree that stands at the entrance to MOSERS' office, let me first discuss some key highlights from the fiscal year just ended.

- Our return for the fiscal year was 18.7% (net of fees and expenses), which compared very favorably to the actuarially assumed rate of 8.5%. This resulted in over \$717 million in gains to the system, making pensions more secure and reducing future costs to taxpayers.
- For the seventh straight fiscal year, MOSERS' investments have generated returns in excess of our policy benchmark and have done so at a lower level of realized volatility. The cumulative incremental earnings resulting from these excess returns have added an additional \$1.5 billion to MOSERS' coffers. During FY07 alone, we added roughly \$215 million relative to our policy benchmark.
- At the broad asset class level, public equities contributed strongly to the fund's performance producing returns of 24.2%, our public debt portfolio generated 8.9%, while alternatives produced results of 18.6%.

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- Our strongest performing subclasses included real estate delivering returns of 48.4%, emerging market equities producing 46.4%, developed international equities generating 25.5%, domestic equities posting 22.3%, and private investments in equity and debt adding 20.5% and 20.4%, respectively.
- Over most measurement periods including 1-, 3-, 5-, 10- and 15-years, our investment performance has outpaced 75% of the large public pension funds across the country.

Whether relative to our assumed actuarial rate, our internal benchmarks, or our peers FY07 was a strong year for the MOSERS' investment program.

Those of you, who know me, know that one of my passions in life (other than my family and managing your money) is spending time on my farm located in central Missouri. Since acquiring this piece of property jointly with a good friend back in 2003, I have become more knowledgeable about and respectful of many of nature's wonders, including trees in their abundant varieties. In the last five years, we have planted over 4,000 new seedlings of various types on our farm. Prior to planting, I spent a considerable amount of time learning about trees. It was during this time that I came across a poem written by Dr. Karen I. Shragg, a naturalist at Wood Lake Nature Center in Minnesota. The poem, "Think like a Tree," reminds me of how we try to manage your money.

## How Success in Investment Management Requires You to Think Like A Tree

I have selected a few excerpts from Dr. Shragg's poem that I think touch on many important aspects of the MOSERS investment program.

Stay deeply rooted, while reaching for the sky. One thing we know about trees is that their underground root system is as big as or bigger than what we see above ground. The roots are the tree's strong foundation, providing the tree with the moisture it needs to grow. At MOSERS, our investment beliefs form the complex root system that allows the investment program to access the moisture it needs to thrive through the market's ups and downs. These beliefs (page 63) didn't just happen. They have come with time, knowledge and maturity. It is with them at the forefront of our thinking that we consider all new investment opportunities.

#### Soak up the sun.

Trees need sunlight to grow. Our investment portfolio's "sun" is a well diversified combination of assets. One of our key beliefs is that diversification is critical because the future is unknown. Our asset mix has been selected based on the belief that different types of assets are expected to



Think Like A Tree

by Karen I. Shragg

Soak up the sun
Affirm life's magic
Be graceful in the wind
Stand tall after a storm
Feel refreshed after it rains
Grow strong without notice
Be prepared for each season
Provide shelter to strangers
Hang tough through a cold spell
Emerge renewed at the first signs of spring
Stay deeply rooted while reaching for the sky
Be still long enough to
Hear your own leaves rustling.



perform well at different stages of the economic cycle. By having a portfolio that is economically diversified we are better positioned to achieve our 8.5% actuarial return hurdle while providing the state with stability in the contribution rate.

#### Be prepared for each season.

Trees indigenous to Missouri must be very adaptable. Each year they have to be prepared for temperature swings of over 100 degrees from winter to summer. They also must be prepared for wide swings in rainfall year-to-year. Our investment portfolio must be adaptable as well. Opportunities present themselves over both short and long periods of time. Our governance process allows us to act quickly if needed while at the same time allowing us to spend a considerable amount of time thinking about how the investment landscape is changing over the longer term. This flexibility in our program has been a key component of success.

#### Stand tall after the storm.

Trees are unbelievably pliable. I have watched in disbelief, a 100-year-old post oak tree that stands in front of our house at the farm, take 60-mile-an-hour wind gusts and come out on the other side with just a few small broken limbs. The complex limb structure provides protection against the wind's impact on any one of the bigger limbs or on the tree's trunk. In my 15 years at MOSERS, we have been through several storms. Four major credit events, a recession which involved the second worst protracted bear market for stocks in history and what now appears to be the bursting of a residential real estate bubble that will produce the worst year-over-year price declines in residential real estate in history. While all these storms have been a bit different, one common thread throughout is how the MOSERS portfolio absorbed the storm's fury, and came out on the other side with only a few small broken limbs.

#### Grow strong without notice.

Trees can grow for years and never be recognized. As a matter of fact, while they are maturing, the less exposed they are to deer and rabbits and other animals that find their young bark to be quite tasty, the better their chances for survival. At MOSERS, we spend little time promoting our results or discussing our portfolio outside the confines of this report and our website. Through these two venues we are able to provide you with information endowed with relevance and purpose. While the press would probably prefer us to be more responsive, our experience has been that urgent article deadlines possess all the wrong ingredients for balanced reporting. To further explain, our portfolio contains over 6,000 different investments. A well diversified portfolio, like ours, will always have some underperforming investments. If this were not the case, I would be uncomfortable with our diversification. An unfortunate conclusion of our past experience with the press is that, more often than not, there is a desire to discuss and sensationalize negative performers without a desire to understand how the overall portfolio is performing. When these types of stories are released, it creates distractions within the organization that tear us away from our central mission of providing strong overall performance. It is for these reasons that you will most likely find us hidden in the weeds with our treebark protectors wrapped tightly around our trunk.

#### Be still long enough to hear your own leaves rustling.

Autumn is my favorite time of year. The weather is cooling down from the long hot summer, the daylight hours are getting shorter and trees begin to provide us with beautiful fall colors. It is a time of quiet reflection. At the same time, Mother Nature has started the process of harvesting the mast crop she has spent the summer nurturing. These mast producing trees (oak, walnut, hickory, persimmon and pecan just to name a few) will supply the winter fat reserves necessary to many of the animals that call my farm "home." Making investments at MOSERS is a recurring process much like the one of planting trees and ultimately having them bear fruit. We plant, we nurture and reflect and, ultimately, we harvest. Sometimes this process takes several years and sometimes it happens much more quickly. Like the fall mast, sometimes the harvest is large and bountiful and sometimes it's lean. I'm pleased to report that our experience has more of the former than the latter.



Hang tough through a cold spell.

Last year, spring came early in Missouri. March temperatures warmed well above average for several days in a row. Our trees were well along in the budding process only to be nipped by record cold in early April. While the end result is a lean year for fall mast, most tress went on to survive and prosper as spring arrived for good. One important component of our investing process is leaning against the wind (being contrarian). Contrarian investing in the short-term can result in an appearance similar to our trees getting their buds nipped off by a late spring freeze. However, because our board of trustees has established a well documented governance process, we are well positioned to withstand short-term underperformance. This allows us to buy assets for the long-term at points in time when their prices have been overly depressed. These opportunities usually go on to be some of our strongest performers in future years.

In closing, as a kid, I was introduced to the outdoors by my father and grandfather. Over the years, many of life's lessons (my strong foundation) have come from the time we shared outdoors in nature. The gobble of a wild turkey in springtime, the croak of a bullfrog at sunset on a hot July evening, and the site of hundreds of butterflies attracted by blooming wildflowers dotting one of our warm season grass plantings are some of nature's gifts that now, my son and I share as we enjoy life experiences together on the farm. Taking time to appreciate the outdoors makes the stress of managing a large pool of capital (destined to provide you financial security in retirement) seem a little less stressful for me. I believe that the best investment decisions are made with a clear head and rational forethought, much of which is provided to me by nature's gifts.

I would like to thank the board of trustees, the ultimate fiduciaries of this pension fund, for their willingness to stand outside the pack and embrace a governance structure that allows the investment program to be well positioned to "*stay deeply rooted while reaching for the sky*." To you, the members, my team and I are humbled to have responsibility for such an important part of your financial future. As we celebrate MOSERS 50th anniversary, I hope you now have a better understanding of our approach to investment management and realize that it is built on a strong foundation, in many ways created by nature's simplest lessons.

Until next year,

Eh Dapl

Rick Dahl

Chief Investment Officer



#### Investment Consultant's Report



October 16, 2007

Dear Members,

Happy 50th! And let me just say you don't look a day over 45! As I began to compose my thoughts on this jubilee occasion, I quickly thought back on our 17 years of partnership and realized that I have only known MOSERS for the last third of its existence. While 17 years is a long time, it makes me realize how little I know about 2/3<sup>rds</sup> of the MOSERS story. So I will eagerly read about the early years with the rest of you, but please allow me to share a first hand perspective on these last couple decades.

In 1990, MOSERS had the same number of board members but three-fold as many meetings, primarily because the MOSERS board was also responsible for administering the health plan. In those days, little time was available for the investment program because health care monopolized the board's time and attention. At that time, the investment program was pretty simple. The portfolio was made up entirely of large cap U.S. stocks and core U.S. bonds. There were several managers investing in each asset class but they were all buying from the same menu. A brand new investment department of three had just been created (two new hires, one internal transfer) where before there had been none. Each manager was given 20 minutes of board time twice a year. If you've ever tried to discuss anything in any meaningful depth with a group of 11 board members and staff and the press in twenty minutes, let me tell you from experience that it can't be done. The "best" manager was a guy from Kansas City who had decent performance and did a 20-minute standup routine. (I'm not being critical, it was really funny!) The portfolio was approximately \$1.2 billion.

The big issues at the time were legislatively mandated in-state venture capital investments and real estate. Both were in need of immediate and longer term attention. Divestiture was another big topic, as several groups put pressure on MOSERS and other public funds to use its investment program to try to influence behavior in South Africa. MOSERS took a leading role in the nation-wide debate over whether a fiduciary could take noninvestment issues into account when charting investment strategy. It seems like a long time ago that South African divestment was the topic as Nelson Mandela was released from prison in 1990, the same year Bush the elder was elected President, but that still happened in the last third of MOSERS 50 years.

The early and mid-1990's were when the seeds of the current MOSERS program were planted. The health care responsibility was lifted from the board, the original three investment department staff all moved on and a new group was hired. The current executive director came on board in the middle of the decade and brought a focus on excellence and accountability that was new to public funds. Investments into broader asset categories like international and small cap stocks were made for the first time. A chief investment officer position was created and the current CIO was named. A "healthcare-free" board allowed for an expansion of opportunities, staffing and responsibilities. The investment staff grew and a significant amount of money was brought "inside" to be managed

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by the investment staff. By the mid-90's, the U.S. stock market was creating giant firms like Cisco, Microsoft and Intel to rival in size 100-year-old giants like GE and the oil companies, and Wal-Mart continued to redefine retail.

If the seeds of the current MOSERS investment program were sown in the early to mid-1990's, the critical growth of the program that allowed it to mature to the fruit-bearing years of this decade took place in the late-1990s. Specifically, in 1998 the MOSERS board took an incredible leap forward for a public fund when it delegated the manager selection responsibility to staff and the consultant. This was unheard of in the public arena. An enormous educational effort focused on board governance and goal setting took place, as did an equally big effort on shaping and defining the investment policies and procedures necessary to properly control this newly granted latitude. Finally, I believe the credibility earned by staff over the years by flawlessly investing billions of dollars of the program gave the board the structure and confidence to make this leap forward.

If I had to point to one decision that set the stage for the future, it was this decision in 1998. In the markets, Y2K was the big concern, the Russian Default and Long-Term Capital were the big headlines as the board considered this decision. From a longer perspective, the market return for 1996 - 1999 was the most generous four year period of returns for U.S. equity investors in history. We later came to call this period the internet bubble but that was not to be known for a couple of years yet.

The "wild party" of the late 1990's turned into the "hangover" of 2000 to 2003, the second worst market decline behind the Great Depression. But as markets were collapsing, creativity was exploding. Dramatic moves by the Fed in the aftermath of 9/11 flooded the global markets with money. As this money was pushed into the system, it seemed to ooze out mostly through our houses, which went up fantastically in price. Markets rebounded, the U.S. consumer went on the greatest shopping spree ever and China truly emerged as a global economic force. The telecom companies that threw billions of dollars at fiber optic infrastructure might have been casualties of the internet bubble burst but the millions of miles of cable they laid allowed the internet to become the extraordinary force that it is today and the global economy to become even more so. Hedge funds, homeowners, buyout funds, Wall Street firms, oil companies, emerging market economies and sub prime mortgage originators . . . every investor and every investment seemed to participate in a world awash in money. And then, June and July of this year suddenly came along and now this world is getting turned on its ear . . . and so it goes.

We don't know how this one will play out any more than we knew how the others were going to, until they did. It's been a fascinating time and I see no reason why that won't continue. Greed and fear drive the markets and this will never change . . . at least not for another 50 years!

Thanks again for letting us be a part of this very proud and deserving program.

Stephen P. Holmes, CFA

President

#### Investment Policy Summary

MOSERS Board of Trustees is charged with the responsibility for investing the assets of the system in a manner consistent with fiduciary standards set forth in the "prudent person" rule. To that end, the board has adopted the following principles to guide all investment-related decisions:

- Preserve the long-term corpus of the fund.
- Maximize total return within prudent risk parameters.
- Act in the exclusive interest of the members of the system.

The investment policy summary serves as a reference point for management of system assets and outlines MOSERS' investment philosophy and practices.

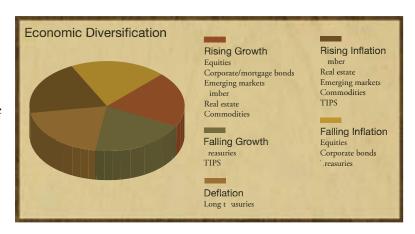
#### Investment Objective

In keeping with the three guiding principles, the board has established the following broad investment objectives:

- Develop a real return objective (RRO)<sup>1</sup> that will:
  - Keep contribution rates reasonably level over long periods of time, absent changes in actuarial assumptions.
  - Maintain contribution rates consistent with historical levels ranging from 8% to 12% of covered payroll.
- Establish an asset allocation policy that is expected to meet the RRO over long periods of time, while minimizing volatility.
- Minimize the costs associated with implementation of the asset allocation through the efficient use of internal and external resources.

#### Investment Beliefs

MOSERS' internal investment staff and external asset consultant have established investment beliefs, which have served as a guiding light in the implementation of the investment objectives adopted by the board. These beliefs have helped to form the basis of every decision made within MOSERS' portfolio. From time to time, these beliefs may need slight modification to keep pace with the changing investment landscape; however, the fundamental concepts outlined in these beliefs should stand the test of time. The primary beliefs underlying MOSERS' investment program are as follows:

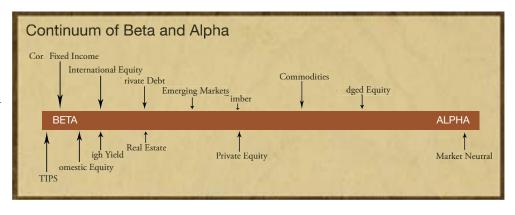


• **Diversification is critical because the future is unknown**. MOSERS' investment portfolio has been built upon the premise that very little is known about what the future holds and as a result, the portfolio is structured to combat a variety of economic outcomes. The pie chart above reflects the various economic environments and the types of investments that should be expected to perform well in those environments. While staff may have views on the direction of the markets over the short term, the adjustments to the portfolio will only be made at the margins to match those views. As a result, the portfolio will have significant diversification to provide risk reduction in a variety of markets.

The RRO is the rate by which the total return exceeds the inflation rate as measured by the CPI, U.S. City Average for all Urban Consumers (CPI-U). MOSERS' real return is the excess return over the CPI utilizing the formula: Real = (1+Nominal) ÷ (1 + CPI). As of June 30, 2007, the RRO was 5%.



be examined in the context of the two distinct return components – beta and alpha. Beta is the return which is expected from simply having exposure to the asset class. It is the return that can be earned by investing passively within a specific asset class. Exposures to beta can be purchased very



cheaply and, over long periods of time, it is expected that returns from beta should be positive and coincide with the risk associated with a given asset class. In contrast, alpha is the return generated through a manager's ability to select particular investments that perform better than the asset class as a whole. Alpha is a zero-sum game. For every winner, there is a loser on the other side. Historically, MOSERS' portfolio has been heavily weighted towards investments that provided mainly beta returns. In 2002, after a formal asset/liability study, a greater emphasis was placed upon generating alpha returns within the portfolio. It was expected that returns strictly from beta would not generate the returns necessary to fund the liabilities of the system. As reflected in the chart above, several alpha-generating strategies are in place within the portfolio today.

- Asset classes will be in and out of favor at different times and they all tend to be cyclical, thus flexibility is key. This belief acknowledges that economies are cyclical; thus, it is only logical that certain investments will fair better than others depending upon the current economic environment. In order to make a "good" investment, the price one pays for an investment must be considered. No investment offers the birthright of a high return. In order to capitalize on potential opportunities that may arise due to asset classes being "cheap" or "expensive" relative to their historical norms, the board has granted the CIO the ability to make strategic subasset class allocation decisions at the margins subject to predefined ranges.
- This isn't about risk or return. It's about risk-adjusted returns with a long-term focus on the liabilities. While it is easy to focus all attention on the returns a portfolio is able to generate, the risks relative to the liabilities of the system must be taken into consideration. Despite MOSERS' infinite time horizon, it must not be overlooked that there are benefits to be paid in the short run. In addition, the "cost of volatility" within the portfolio must not be underestimated as volatility has a dramatic impact on the contribution rate and thus the state's ability to fund the plan going forward.

#### Roles and Responsibilities

#### **Board of Trustees**

The board of trustees bears the ultimate fiduciary responsibility for the investment of system assets. Members of the board must adhere to state law and prudent standards of diligence with respect to their duties as investment fiduciaries. Accordingly, they are required to discharge their duties in the interest of plan participants. They must also "act with the same care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a similar capacity and familiar with those matters would use in the conduct of a similar enterprise with similar aims." Specifically related to investments, the board is charged with the duties of establishing and maintaining broad policies and objectives for the investment program along with the recommendations of staff and the external asset consultant.

#### **Executive Director**

The executive director is appointed by and serves at the pleasure of the board. The board has given the executive director broad authority for planning, organizing, and administering the operations and investments of the system under broad policy guidance from the board. Specifically with regard to investments, the executive director is broadly responsible for the oversight of the investment program. He or she must ensure the system assets are invested in accordance with the board's

Section 105.688, RSMo - Investment Fiduciaries, Duties.



policies and that internal controls are in place to safeguard system assets. The executive director must also certify that all manager hiring and firing decisions were made in accordance with the board's governance policy. In addition, the executive director certifies strategic allocation decisions made by the CIO and external asset consultant.

#### Chief Investment Officer and Internal Staff

The CIO serves at the pleasure of the executive director, yet has a direct line of communication with the board on investment related issues. The CIO has primary responsibility for the overall direction of the investment program. The CIO works with the external asset consultant and executive director in advising the board on policies related to the investment program. The CIO has primary responsibility to make hiring and firing decisions related to money managers with the approval of the external asset consultant. The CIO is also charged with the responsibility of making strategic allocation decisions with the approval of the external asset consultant. Other responsibilities of the CIO include monitoring the investment of system assets, oversight of external money managers and the internally managed portfolios, and keeping the board apprised of situations, which merit their attention. The internal investment staff is accountable to the CIO.

#### External Asset Consultant

Summit Strategies Group of St. Louis, Missouri, serves as the system's external asset consultant. The external asset consultant serves at the pleasure of the board. The primary duties of the external asset consultant are to advise the board on policies related to the investment program and to provide a third-party perspective and level of oversight to the system's investment program. The external asset consultant must also approve all manager hiring and firing decisions and strategic allocation decisions made by the CIO. The external asset consultant also provides advice and input to the CIO and internal investment staff on investment-related issues and money manager searches.

#### Chief Auditor

The chief auditor reports directly to the executive director and, if in the opinion of the chief auditor circumstances warrant, may report directly to the board. The chief auditor is independent of the system's investment operations and, among other things, is responsible for providing objective audit and review services for the investment operations. It is the chief auditor's objective to promote adequate and effective internal controls at a reasonable cost, which results in suggested improvements that will lead to economies and efficiencies in the system's investment operations.

#### Master Custodian

Mellon Financial Corp. of Boston, Massachusetts serves as the master custodian of the system's assets, except in cases where investments are held in partnerships, commingled accounts, or unique asset classes where it is impossible for them to do so. The master custodian is responsible for maintaining the official book of records, providing performance reports, and serving as an additional layer of risk control in the safekeeping of system assets.

#### Asset Allocation

The system's asset allocation is regarded as one of the most important decisions in the investment management process. The current asset allocation is designed to achieve the long-term required return objectives of the system, given certain risk constraints. The current asset allocation reflects the need for a diversified portfolio, which will perform well in a variety of economic conditions and will help reduce the portfolio's overall volatility. In determining the optimum mix of assets, the board considers five factors:

- The expected rate of return for each asset class.
- The expected risk of each asset class.
- The correlation between the rates of return of the asset classes.
- The investment objectives and risk constraints of the fund.
- The impact of the portfolio's volatility on the contribution rate.



The policy allocation as of June 30, 2007, is illustrated in the table below.

| Asset Class/Sub-Asset Class    | Target Allocation | Strategic Allocation Ranges |
|--------------------------------|-------------------|-----------------------------|
| Public equity                  | 50.0%             | 47.50 to 52.50%             |
| Domestic equity                | 27.5              | 15.0 to 40.0                |
| Hedged equity                  | 5.0               | 0.0 to 10.0                 |
| International developed equity | 15.0              | 5.0 to 25.0                 |
| Emerging market equity         | 2.5               | 0.0 to 5.0                  |
| Public debt                    | 30.0              | 27.50 to 32.50              |
| Core fixed income              | 10.0              | 5.0 to 15.0                 |
| High yield bonds               | 5.0               | 0.0 to 10.0                 |
| TIPS                           | 10.0              | 5.0 to 15.0                 |
| Market neutral                 | 5.0               | 0.0 to 10.0                 |
| Alternatives                   | 20.0              | 18.75 to 21.25              |
| Real estate                    | 5.0               | 2.5 to 7.5                  |
| Commodities                    | 2.5               | 0.0 to 5.0                  |
| Private debt                   | 2.5               | 0.0 to 5.0                  |
| Timber                         | 5.0               | 2.5 to 7.5                  |
| Private equity                 | 5.0               | 2.5 to 7.5                  |

While the board maintains a set policy allocation mix, they have taken steps to provide flexibility at the sub-asset class level by granting authority to the CIO, with the approval of the external asset consultant and certification of the executive director, to make sub-asset class allocation decisions based upon expectations for each sub-asset class. This flexibility has allowed the system to take advantage of changing market conditions. The board has placed ranges on the sub-asset class allocations in order to maintain appropriate risk controls. These ranges are included in the table above.

#### Rebalancing

It is the responsibility of staff to ensure that the asset allocation adheres to the system's rebalancing policy. Staff has engaged NISA Investment Advisors, LLC of St. Louis, Missouri, to assist in the oversight and implementation of the rebalancing policy. MOSERS utilizes a combination of cash market and exchange traded futures transactions to maintain the total fund's allocation at the broad policy level. Month-end reviews are conducted to bring the portfolio back within allowable ranges of the broad policy targets.

#### Risk Controls

MOSERS' investment program faces numerous risks; however, the primary risk to MOSERS is that the assets will not support the liabilities over long periods of time. In order to control this risk and numerous other risks that face the system, the board has taken the following steps, on an ongoing basis, to help protect the system:

- Actuarial valuations are performed each year to ensure the system is on track to meet the funding objectives of the
  plan. In addition, every five years an external audit of the actuary is conducted to ensure that the assumptions being
  made and calculation methods being utilized are resulting in properly computed liabilities.
- Asset/liability studies are conducted at least once every five years. The purpose of these studies is to ensure that the
  current portfolio design is structured to meet the system's liabilities. During these studies, investment expectations are
  also reexamined in more detail.
- A governance policy, which incorporates investment limitations, is in place to ensure that board policies are clearly identified.
  Within these documents, the desired outcomes are outlined, individuals are identified as to their responsibility for particular areas of the portfolio's management, and details are lined out as to how the outcomes will be measured by the board.
  Reporting requirements are clearly identified to ensure appropriate checks and balances are in place. In addition, annual performance audits are conducted to ensure the measurement tools and methodology being utilized to gauge performance are proper.



## Performance Objectives and Monitoring Process

#### Total Fund

Generating returns net of expenses equalling the RRO of 5% plus inflation remains the primary performance objective for the total fund over the long term. The reason for the long-term focus on this objective is to preclude the temptation to overreact to events in the marketplace that have no relevance in the management of the relationship between the system's assets and liabilities. The resulting dilemma is the conflicting need to evaluate investment policy implementation decisions over shorter time frames while maintaining the longer-term focus necessary to manage and measure the fund's performance relative to the RRO. To address this problem, the board evaluates performance relative to policy and strategy benchmarks, which help to evaluate the board's broad policy decisions and the staff and external consultant's implementation decisions. Policy benchmarks measure broad investment opportunities of each sub-asset class in which MOSERS has chosen to invest. The strategy benchmarks represent decisions made by the CIO to strategically deviate from the policy asset allocation for each sub-asset class (mid-point of the strategic allocation range). The return of the strategy benchmarks are determined based upon the actual weight of the asset class multiplied by the appropriate benchmark.

The policy and strategy benchmarks are used in the following manner to evaluate decisions made by the board and staff:

- Board Decisions: The value added through board policy decisions is measured by the difference between the total fund policy benchmark return and the RRO. This difference captures the value added by the board through their policy asset allocation decisions relative to the return necessary to fund the system's liabilities. A policy benchmark return greater than the RRO reflects value added through board decisions. A policy benchmark return less than the RRO reflects losses or shortfalls in performance in funding the liabilities. These policy decisions are measured over long periods of time.
- CIO and External Asset Consultant Decisions: There are two components to decisions made by the CIO and external asset consultant, which are monitored by the board on an ongoing basis. These include 1) strategic sub-asset class allocation decisions, and 2) implementation decisions.

Strategy Decisions are sub-asset class allocation choices made by the CIO with the approval of the external asset consultant and the certification of the executive director to deviate from the policy benchmark weight. The value added through these decisions to overweight or underweight these sub-asset classes is measured by the difference between the strategy benchmark return and the policy benchmark return. This difference captures the value added by the CIO through sub-asset class strategic decisions relative to the board's broad policy allocation decisions. A strategy benchmark return greater than the policy benchmark return reflects value added through the sub-asset class allocation decisions. A strategy benchmark return less than the policy benchmark return reflects losses to the fund's performance based upon strategy decisions. Strategy decisions should be measured over all periods of time with majority weight placed on outcomes that have occurred over a market cycle.

Implementation Decisions are money manager selection choices made by the CIO with the approval of the external asset consultant and the certification of the executive director that the decision was made in accordance within the board's adopted governance policy. The value added through these decisions is measured by the difference between the actual portfolio return and the strategy benchmark return. This difference captures the value added through these manager selection decisions. An actual portfolio return greater than the strategy benchmark return reflects value added through these manager selection decisions. An actual portfolio return less than the strategy benchmark return reflects losses to the fund's performance based upon implementation decisions. Implementation decisions should be measured over all periods of time with a majority weight placed on outcomes that have occurred over a market cycle.

The board receives performance information on a quarterly basis to help ensure adequate monitoring of the fund's overall performance objectives.

#### Asset Classes

At the broad asset class level, policy and strategy benchmarks have been established to measure board, strategic, and implementation decisions. At the manager level, performance is measured against appropriate benchmarks for each particular investment mandate. Investment guidelines have been established for each manager outlining specific expectations for each portfolio. Many managers are employed with performance-based fee structures, which help to align the manager's interest with the total fund objectives.



## **Total Fund Review**

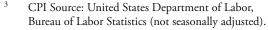
As of June 30, 2007, the MOSERS investment portfolio had a market value of \$8.1 billion. The graph to the right illustrates the growth of MOSERS' portfolio since the system's inception.

#### Investment Performance

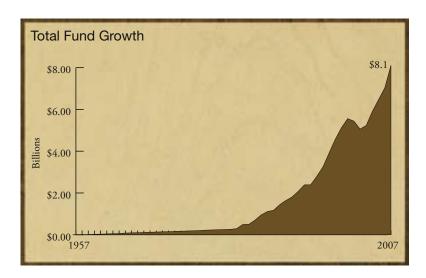
MOSERS generated a return of 18.7% on investments for the fiscal year ended June 30, 2007. During the year, the public equity portfolio generated returns of 24.2%; public debt added 8.9% while the alternatives portfolio produced results of 18.6%. Performance for the fiscal year may be attributed to the various asset classes. The table to the right illustrates each sub-asset classes' contribution to the total return.

# Investment Performance vs. the Required Rate of Return

The first measure of comparison for the portfolio's investment performance is to determine how well the fund performed relative to the required rate of return. The RRO is the rate established by the board that MOSERS' investment portfolio must earn in order to meet future plan obligations after accounting for inflation. The funding objective is to produce a return that equals RRO (5%) plus inflation. The best known measure of inflation is the Consumer Price Index (CPI).<sup>3</sup> For purposes of examining fund performance relative to the required rate of return, we are interested in long periods of time. Given the volatile nature of the investment markets, we should not expect the portfolio to always meet the required rate of return in the short term. The bar chart to the right reflects that MOSERS' investment returns have exceeded the required rate of return over long periods of time.4



Performance returns were calculated using a timeweighted rate of return on market values.



Sub-Asset Class Returns for Fiscal Year Ended June 30, 2007

| Asset Class                    | Fiscal Year<br>Return | Contribution to<br>Total Return |
|--------------------------------|-----------------------|---------------------------------|
| Domestic equity                | 22.3%                 | 4.7%                            |
| Hedged equity                  | 16.1                  | 1.4                             |
| International developed equity | 25.5                  | 4.4                             |
| Emerging market equity         | 46.4                  | 1.9                             |
| Total public equity            | 24.2                  | 12.4                            |
| Core fixed income              | 9.1                   | 0.9                             |
| High yield bonds               | 14.5                  | 0.7                             |
| TIPS                           | 4.0                   | 0.3                             |
| Market neutral                 | 10.2                  | 0.8                             |
| Total public debt              | 8.9                   | 2.7                             |
| Real estate                    | 48.4                  | 2.3                             |
| Commodities                    | (14.1)                | (0.5)                           |
| Private debt                   | 20.4                  | 0.5                             |
| Timber                         | 7.9                   | 0.3                             |
| Private equity                 | 20.5                  | 1.0                             |
| Total alternatives             | 18.6                  | 3.6                             |
| Total fund                     | 18.7%                 | 18.7%                           |





# Investment Performance vs. Benchmark Comparisons

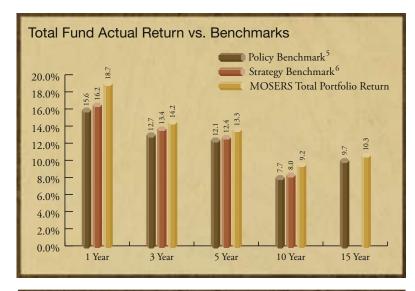
In addition to measuring performance relative to the RRO, the board also compares fund returns to the following two market benchmarks: the policy benchmark and the strategy benchmark. Descriptions of the policy and strategy benchmarks follow.

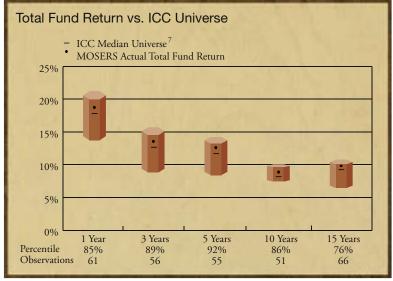
The policy benchmark provides an indication of the returns that have been achieved (excluding transaction costs) by a portfolio invested passively in the broad market with percentage weights allocated to each asset class in MOSERS' policy asset allocation.

The strategy benchmark is more narrowly defined and focuses on the sub-asset class allocation decisions made by the CIO.

By comparing the policy benchmark to the strategy benchmark, the board is able to determine what value is being added through strategic decisions made by the CIO to position the fund away from the policy allocation. Value is being created if the strategy benchmark returns exceed the policy benchmark returns. The historical returns for the total fund versus these benchmarks are displayed in the bar graph to the right.

Similarly, by comparing the actual return to the strategy benchmark, the board will, over time, be able to judge the success or failure of the staff and the consultant in implementing the CIO's strategic





decisions. The primary implementation decision is in determining which managers the fund should employ. Value is being added from manager selection if the total fund return exceeds the strategy benchmark return.

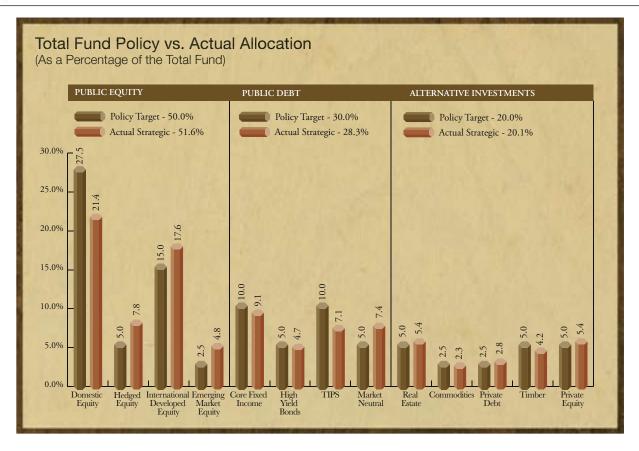
#### Investment Performance vs. Peer Universe

To a lesser extent, the board compares total fund performance to the returns generated by a peer group of public pension funds and compiled by the Independent Consultants Cooperative (ICC). For the past fiscal year, MOSERS' total fund return outperformed 85% of the ICC universe of public pension plans with assets in excess of \$1 billion. Historical data about MOSERS' total fund performance within the ICC universe is provided in the graph directly above.

#### Total Fund Asset Allocation Overview

As of June 30, 2007, the board's broad policy allocation mix was 50% public equity, 30% public debt, and 20% alternative investments. The graph located on the following page illustrates the policy target as of June 30, 2007, for each sub-asset class, along with the actual strategic allocation to each type of investment.

- As of 6/30/07, the policy benchmark was comprised of the following components: 50% total public equity policy benchmark, 30% total public debt policy benchmark, and 20% total alternative investments policy benchmark.
- As of 6/30/07, the strategy benchmark was comprised of the following components: 51.6% total public equity strategy benchmark, 28.3% total public debt strategy benchmark, and 20.1% total alternative investments strategy benchmark. A strategy benchmark for the 15-year period is not available.
- The ICC is a cooperative of 17 independent consultants from across the U.S. and one major custodial bank that collectively provide performance data to create the universe of funds with assets in excess of \$1 billion. Note that performance within this universe is captured gross of fees.



A formal asset/liability study is conducted every five years to examine the portfolio's ability to generate the required rate of the return given return expectations from the various asset classes represented in the portfolio and to lower the total portfolio volatility. The most recent study conducted in 2002 revealed that the MOSERS' portfolio could be further diversified in order to protect it from a variety of economic scenarios that might play out over time, thus, reducing the portfolio volatility and ultimately contribution rates.

In addition, the board granted flexibility to the CIO to make strategic decisions related to the allocation subject to predefined ranges. A strategic decision should be thought of as any decision that might cause MOSERS' actual portfolio to differ from the policy asset allocation. This has allowed MOSERS to capitalize on investment opportunities at the margin by overweighting asset classes that are viewed as "cheap" relative to their historical norm and underweighting asset classes that are "expensive" relative to their historical norm. Since being granted this authority in 2002, the ability to make strategic asset allocation decisions has added .94% of return annually or approximately \$355 million of additional assets annually to the portfolio.

Statistics
The table below displays the statistical performance data (net of fees) of the total fund as of June 30, 2007.

| Portfolio Characteristics     | 1 Year | 3 Year | 5 Year | 10 Year | 15 Year |
|-------------------------------|--------|--------|--------|---------|---------|
| Annualized return             | 18.7%  | 14.2%  | 13.3%  | 10.3%   | 10.4%   |
| Annualized standard deviation | 2.9%   | 4.9%   | 7.3%   | 9.7%    | 8.7%    |
| Sharpe ratio                  | 4.5    | 2.1    | 1.5    | .5      | .8      |
| Beta*                         | .6     | .9     | 1.0    | 1.0     | 1.0     |
| Annualized alpha*             | 8.0%   | 2.1%   | 1.1%   | 1.7%    | 1.1%    |
| Correlation*                  | .8     | .9     | 1.0    | 1.0     | 1.0     |

<sup>\*</sup>As compared to total fund policy benchmark.



## Schedule of Investment Results

1-, 3-, 5-, 10- and 15-Year Periods

|                                       | 1<br>Year | 3<br>Year | 5<br>Year | 10<br>Year | 15<br>Year |
|---------------------------------------|-----------|-----------|-----------|------------|------------|
| Total Fund                            |           |           |           |            | _          |
| MOSERS                                | 18.7%     | 14.2%     | 13.3%     | 9.2%       | 10.3%      |
| Custom Benchmark**                    | 15.6      | 12.7      | 12.1      | 7.7        | 9.7        |
| Public Equity                         |           |           |           |            |            |
| MOSERS                                | 24.2%     | 17.8%     | 15.4%     | 9.6%       | 11.6%      |
| Public Equity Composite Benchmark***  | 23.3      | 16.6      | 14.2      | 8.1        | 10.8       |
| Public Debt                           |           |           |           |            |            |
| MOSERS                                | 8.9%      | 6.5%      | 8.0%      | 8.2%       | 8.2%       |
| Public Debt Composite Benchmark****   | 6.8       | 5.4       | 7.0       | 7.8        | 7.7        |
| Alternatives                          |           |           |           |            |            |
| MOSERS                                | 18.6%     | 16.3%     | 16.4%     | N/A        | N/A        |
| Alternatives Composite Benchmark***** | 10.6      | 13.8      | 14.8      | N/A        | N/A        |

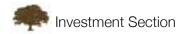
Time-weighted rates of return on market values adjusted for cash flows.

As of 6/30/07, the total fund policy benchmark was comprised of the following components: 50% total public equity policy benchmark, 30% total public debt policy benchmark, and 20% total alternative investments policy benchmark.

As of 6/30/07, the public equity policy benchmark was comprised of the following components: 65% Russell 3000, 30% MSCI EAFE Net, and 5% MSCI EMF. Similar benchmarks were used in previous years.

As of 6/30/07, the public debt policy benchmark was comprised of 33.3% Lehman Aggregate, 33.3% Lehman U.S. TIPS, 16.7% Lehman High Yield, and 16.7% T-Bills + 4%. Similar benchmarks were used in previous years.

As of 6/30/07, the alternative investments policy benchmark was comprised of the following components: 25% Wilshire REIT, 25% actual return of the timber component, 25% actual return of the private equity component, 12.5% Lehman Brothers CCC + 2%, and 12.5% GSCI (Goldman Sachs Commodity Index). Similar benchmarks were used in previous years.



# Schedule of Investment Portfolios by Asset Class As of June 30, 2007

|   | Fair Value      | Percentage of<br>Investments at<br>Fair Value |
|---|-----------------|---|
| Public equity                                   | Tail value      | Tur vuide                                     |
| Domestic equity                                 | \$1,615,176,545 | 19.9%   |
| International developed equity                  | 1,548,645,776   | 19.1  |
| Emerging market equity                          | 388,764,390     | 4.8   |
| Hedged equity                                   | 633,563,483     | 7.8   |
| Total public equity                             | 4,186,150,194   | 51.6  |
| Public debt                                     |                 |   |
| Core fixed income                               | 733,745,502     | 9.0   |
| High yield bonds                                | 382,731,362     | 4.7   |
| TIPS  | 571,091,105     | 7.0   |
| Market neutral                                  | 598,535,249     | 7.4   |
| Total public debt                               | 2,286,103,218   | 28.1  |
| Alternative investments                         |                 |   |
| Real estate                                     | 436,574,202     | 5.4   |
| Commodities                                     | 187,194,491     | 2.3   |
| Distressed debt                                 | 229,927,578     | 2.8   |
| Private equity - temporary                      | 438,856,470     | 5.4   |
| Timber - temporary                              | 341,081,071     | 4.2   |
| Total alternative investment                    | 1,633,633,812   | 20.1  |
| Other portfolios                                |                 |   |
| Other investments                               | 1,108,647       | 0.0   |
| Cash reserve*                                   | 16,271,600      | 0.2   |
| Total other                                     | 17,380,247      | 0.2   |
| Grand total                                     | \$8,123,267,471 | 100.0%  |
|   |                 |   |
| Reconciliation to Statements of Plan Net Assets |                 |   |
| Total portfolio value                           | \$8,123,267,471 |   |
| STIF  | (521,274,354)   |   |
| Uninvested cash                                 | (28,933,715)    |   |
| Cash collateral for futures                     | (17,007,241)    |   |
| Interest and dividend receivable                | (7,464,159)     |   |
| Accounts receivable for securities sold         | (245,728,967)   |   |
| Accounts payable for securities purchased       | 262,881,419     |   |
| Incentive fees payable                          | 25,820,078      |   |
| Investments per Statement of Plan Assets        | \$7,591,560,532 |   |

<sup>\*</sup> Cash reserve is not reflected as an individual asset class; therefore, minor rounding differences exist between the percentages reported in this schedule and other information contained in this section.



# Investment Manager Fees\*

| For the Year Ended June 30, 2007  | Total<br>Fees Paid      | Change in<br>Incentive Fee Accrual |
|---|-------------------------|------------------------------------|
| Public equity managers<br>AmeriCap Advisers, LLC                                  | \$149,555               | \$ 0                               |
| Capital Guardian Trust  | 90,285                  | Ť                                  |
| Legg Mason Capital Management, Inc.   | 859,610                 | (2,637,968)                        |
| Leuthold Weeden Capital Management  | 453,325                 |                                    |
| Mastholm Asset Management, LLC  | 994,492                 |                                    |
| Silchester International Investors  | 2,667,206               |                                    |
| Blakeney Management   | 15,748,136              |                                    |
| Grantham, Mayo, and Van Otterloo & Co.  | 1,423,339<br>207,022    |                                    |
| Freeman Associates Investment Management, LLC<br>Blackstone Group - hedged equity | 3,964,792               |                                    |
| Total public equity managers  | 26,557,762              | (2,637,968)                        |
| roun puono equity munugero  | 20,557,702              | (2,037,700)                        |
| Public debt managers  |                         |                                    |
| BlackRock Financial Management - MBS/ABS  | 201,274                 |                                    |
| NISA Investment Advisors - fixed income   | 213,917                 |                                    |
| BlackRock Finanicial Management - high yield                                      | 1,174,078               |                                    |
| Oaktree Capital Management - European credit                                      | 181,306                 | 0                                  |
| Total public debt managers  | 1,770,575               | 0                                  |
| Alternative investment managers   |                         |                                    |
| Blackstone Group - real estate  | 4,028,421               |                                    |
| Oaktree Capital Management - real estate  | 575,795                 | 5,166,127                          |
| Trust Company of the West   | 412,749                 | 3,100,127                          |
| Bush O'Donnell  | 75,000                  |                                    |
| NISA Investment Advisors, LLC - commodities                                       | 657,145                 |                                    |
| DDJ Capital Management, LLC   | 750,000                 | 623,598                            |
| Oaktree Capital Management - distressed debt                                      | 1,355,150               | 962,336                            |
| Wayzata Advisers  | 1,493                   | 142,606                            |
| MHR Fund Management, LLC  | 2,019,504               | 5,629,574                          |
| Blackstone Group - distressed debt<br>CarVal Investors                            | 2,141,151<br>1,179,112  |                                    |
| Relational Investors, LLC   | 666,353                 |                                    |
| Blum Capital Partners, LP   | 1,457,696               |                                    |
| Alinda Capital Partners   | 312,442                 |                                    |
| Catterton Partners  | 748,095                 |                                    |
| Silver Lake Partners  | 64,996                  |                                    |
| Parish Capital Advisors, LLC  | 641,807                 |                                    |
| OCM GFI Power Opportunity   | 447,024                 |                                    |
| Bridgepoint Capital Limited   | 357,552                 |                                    |
| JLL Partners<br>Veritas Capital   | 811,097                 |                                    |
| Resource Management Services, LLC   | 181,366<br>633,598      |                                    |
| Global Forest Partners  | 71,742                  |                                    |
| Global Forest Partners - coinvestment   | 129,247                 |                                    |
| Hoisington Investment Management Co.  | 91,232                  |                                    |
| Total alternative investment managers   | 19,809,767              | 12,524,241                         |
|   |                         |                                    |
| Alpha pool managers   | 1 700 001               |                                    |
| Actos Capital, LLC  | 1,799,991               |                                    |
| AQR Capital Management<br>Barclays Global Investors                               | 6,939,429<br>2,260,065  |                                    |
| Bridgewater Associates, Inc.  | 3,030,617               |                                    |
| Pacific Alternative Asset Management Co.  | 4,475,213               |                                    |
| Blackstone Group  | 4,289,175               |                                    |
| Total alpha pool managers   | 22,794,490              | 0                                  |
|   |                         |                                    |
| Other managers  | 226.575                 |                                    |
| NISA Investment Advisors, LLC - beta program                                      | 320,875                 |                                    |
| MOSERS Inc.   | 56<br>320.931           | 0                                  |
| Total other managers<br>Grand totals  | 320,931<br>\$71,253,525 | \$9,886,273                        |
| Grand totals  | \$\phi/1,433,343        | \$7,000,2/3                        |

<sup>\*</sup> Amounts do not include reimbursed administration fees of \$250,792



## Public Equity Asset Class Summary

As of June 30, 2007, the public equity portfolio had a market value of \$4.2 billion, representing 51.6 % of the total fund. Performance for the fiscal year was 24.2% net of fees and expenses.

## Highlights

The public equity portfolio underwent some minor changes during the year. Two managers were terminated and some tactical positions were added to the portfolio. Here are a few of the highlights:

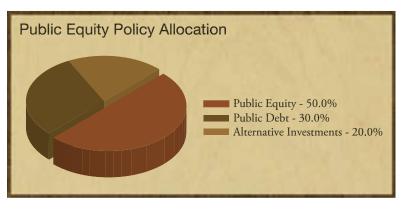
- The domestic equity portfolio was altered to add diversification and alpha.
- Two money managers were hired in the domestic equity portfolio.
- A second manager was added to the hedged equity portfolio.

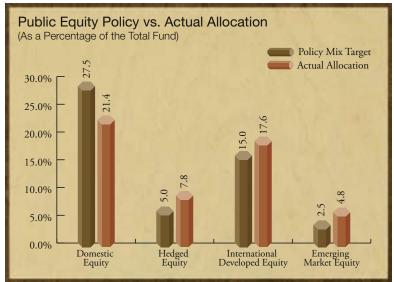
## Portfolio Structure

The public equity portfolio has a target allocation of 50% of the total fund. The portfolio is comprised of four sub-asset classes which include domestic equity, hedged equity, international developed equity, and emerging market equity. The bar chart to the right illustrates the actual sub-asset allocation relative to the board's policy allocation for each asset class. This reflects the CIO's strategic decisions to overweight or underweight sub-asset classes as of June 30, 2007. These decisions are confined to pre-established ranges set by the board to provide risk controls within the portfolio. The table below the bar chart summarizes the sub-allocation ranges established by the board.

#### Market Overview

The equity markets in FY07 contributed positive returns for the fourth consecutive year. The Russell 3000 Index U.S. Equities returned 20.1% for FY07.





Strategic Sub-Asset Allocation Ranges (As a Percentage of the Total Fund)

| Sub-Asset Class        | Minimum | Maximum | Policy Target |
|------------------------|---------|---------|---------------|
| Domestic equity        | 15.0%   | 40.0%   | 27.5%         |
| Hedged equity          | 0.0     | 10.0    | 5.0           |
| Int'l developed equity | 5.0     | 25.0    | 15.0          |
| Emerging market equity | 0.0     | 5.0     | 2.5           |

For the third consecutive year, public equity performance in the first half of the year was greater than the second half.

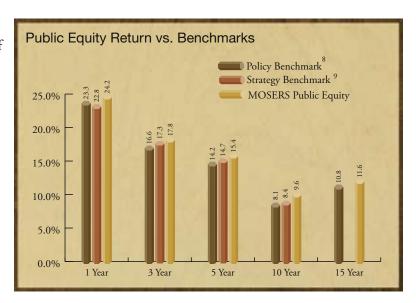
The impressive returns in the global equity markets were a pleasant surprise. The relative stability in interest rates, economic growth and energy costs provided a backdrop for the strong equity returns. As the year ended, cracks were beginning to appear in the markets. REITs were down nearly 10% in the last quarter of the fiscal year and commodities, as measured by the GSCI Index were off 14% for the year. These two areas may be signaling a decline in growth over the coming years. The depth of the U.S. sub-prime mortgage problem and the impact on U.S. housing was causing concern in the equity markets. How this will affect the U.S. consumer's ability and willingness to spend is a key variable in the global economy. The equity markets have profited from record earnings across the globe. In the coming months, the extent to which these earnings are impacted by the housing market problems will be critical to the direction of stock prices.

The international markets returned 27% for the year as measured by the MSCI EAFE Index. The major developed markets were strong across the board. The U.S. dollar weakened over the year; therefore, the currency impact on unhedged portfolios was positive in total. The weakened dollar added about 3% to the international developed return. The emerging markets were up 42% in local currency but the weakening dollar versus this index provided 3% of additional return as unhedged dollar returns came in just above 45%.

Expected returns from equities are still of concern. It appears that most markets are fundamentally overvalued. The fallout from the housing slowdown and the sub-prime mortgage problems will continue to be a concern going forward. The U.S. consumer has long supported the global economy by buying all sorts of consumer products, often with money extracted from home equity. Now that home prices are falling instead of rising this source of money is no longer available. If the U.S. consumer stops spending, it could set off a series of events leading to a global slowdown or recession. The jury is still out on if, when, and to what degree this might take place. The global economy has seemed to digest the higher oil prices that were a concern a year ago. Over the fiscal year, the price of oil dropped about \$4 to \$69 per barrel. The threat of terrorism continues to be a wild card in the market outlook. The geopolitical situation has not changed much from a year ago with concerns in Iran, Iraq, North Korea and the Middle East all presenting potential problems for world markets. The U.S. presidential election will also introduce uncertainty into the markets as parties choose candidates over the coming months for the election next fall.

#### Performance

The public equity portfolio returned 24.2% for the fiscal year, exceeding the policy benchmark return of 23.3% and the strategy benchmark return of 22.8% as illustrated in the bar chart to the right. FY07 proved to be another strong year for the public equity markets, both domestic and international. The positive performance of the actual portfolio relative to the policy benchmark shows value added by staff and the external asset consultant through strategic decisions and manager selection decisions. The strategy benchmark is compared to the policy benchmark to capture the value added by strategic allocation decisions. In FY07, strategic decisions detracted from performance primarily as a result of a decision to overweight hedged equity at the expense of domestic equity.



Within public equity, emerging markets and developed international were the best performers. Emerging markets led the pack with a return of 46.4% and the international developed markets posted a 25.5% return as reflected in the table on page 68.

As of 6/30/07, the public equity policy benchmark was comprised of the following components: 65% Russell 3000, 30% MSCI EAFE Net, and 5% MSCI EMF.

As of 6/30/07, the public equity strategy benchmark was comprised of the following components: 41.5% domestic equity strategy benchmark (comprised of the S&P 500, and Russell 3000), 15.1% hedged equity strategy (40% of S&P 500 + 5%), 34.0% MSCI EAFE Net, and 9.3% MSCI EMF. A strategy benchmark for the 15-year period is not available.



## Top 10 Holdings

The top ten holdings within the public equity portfolio as of June 30, 2007, are illustrated below. A detailed listing of holdings is available upon request.

| Ten Largest Holdings as of June 30, 2007 | Market Value | Percent of Total MOSERS Public Equity Portfolio |  |
|--|--------------|---|--|
| Petroleo Brasileiro Sa                   | \$28,255,910 | 0.67%   |  |
| E.On Ag Npv                              | 28,032,597   | 0.67  |  |
| Nestlee SA                               | 24,848,883   | 0.59  |  |
| Hong Kong Electric Hlds, Ltd             | 21,745,070   | 0.52  |  |
| Royal Dutch Shell PLC.                   | 19,648,097   | 0.47  |  |
| Nintendo Co                              | 19,245,881   | 0.46  |  |
| Diageo PLC                               | 18,498,183   | 0.44  |  |
| Unilever PLC                             | 18,305,583   | 0.44  |  |
| United Overseas Bank Ltd                 | 18,259,321   | 0.44  |  |
| Metro Ag Ord Npv                         | 18,134,148   | 0.43  |  |

### DOMESTIC EQUITY

#### Market Value

The domestic equity allocation was \$1.7 billion, or 21.4% of the total fund as of June 30, 2007.

## Summary of Portfolio

MOSERS maintains a significant allocation to publicly traded shares of corporations domiciled in the U.S. Domestic equity exposure is achieved through broadly diversified portfolios representing a variety of styles, sectors, and market capitalizations and an allocation to the beta/alpha program (see page 99 for further details). The domestic equity component is expected to contribute significantly to the fund's achievement of a long-term real return in excess of the 5% objective set by the board due to equities' historic return premium over inflation. In addition, we would expect this component to perform well in periods of falling inflation and rising growth and offer income potential through dividend payments. As of June 30, 2007, MOSERS was underweight the policy benchmark in this sub-asset class as valuations are unattractive relative to the other subclasses within public equity. The housing and debt markets also present concerns for the domestic economy.

## **Statistics**

The table below displays the statistical performance data (net of fees) of the domestic equity portfolio as of June 30, 2007.

| Portfolio Characteristics     | 1 Year | 3 Year | 5 Year | 10 Year |
|-------------------------------|--------|--------|--------|---------|
| Annualized return             | 22.3%  | 13.0%  | 13.3%  | 9.0%    |
| Annualized standard deviation | 7.6%   | 9.2%   | 14.2%  | 16.2%   |
| Sharpe ratio                  | 2.2    | 1.0    | 0.7    | 0.3     |
| Beta*                         | 1.1    | 1.1    | 1.2    | 1.1     |
| Annualized alpha*             | 0.3%   | (1.1)% | (0.4)% | 1.0%    |
| Correlation*                  | 1.0    | 1.0    | 1.0    | 1.0     |

<sup>\*</sup> As compared to the Russell 3000 Index



### **Investment Advisors**

As of June 30, 2007, MOSERS had contracts with four external investment advisors who manage five portfolios that comprise 52.2% of the domestic equity portfolio. The remaining 47.8% of the portfolio is in the beta/alpha program.

In FY07, there were two managers hired and two terminated in the domestic equity portfolio. There was also a change in an existing manager. The manager's original portfolio was closed and money was put into two different portfolios with the same manager. Management expenses for these managers can be found on page 73 under the total fund overview section of this report.

| nvestment Advisors Style     |                | Portfolio Market Val |  |
|------------------------------|----------------|----------------------|--|
| AmeriCap Advisers, LLC       | Active all-cap | \$ 201,973,428       |  |
| Legg Mason Opportunity Trust | Active all-cap | 207,630,221          |  |
| Legg Mason Value Trust       | Active all-cap | 87,456,833           |  |
| Leuthold Weedon              | Active all-cap | 162,396,027          |  |
| DG Capital                   | Active all-cap | 184,492,594          |  |
| Beta/alpha program           | Active         | 752,063,148          |  |
| NISA S&P 100 Long            | Index          | 19,164,295           |  |
| Total                        |                | \$1,615,176,546      |  |

## **Brokerage Activity**

The following brokerage activity occurred within the domestic equity portfolio throughout the fiscal year:

|   |                  |                            | Commissions      |                    |
|---|------------------|----------------------------|------------------|--------------------|
| Brokerage Firm                                    | Shares<br>Traded | Dollar Volume<br>of Trades | Dollar<br>Amount | Value<br>Per Share |
| U.S. Clearing Institutional Trading               | 27,816,130       | \$ 540,128,677             | \$ 461,624       | \$0.02             |
| Weeden & Co.                                      | 9,662,292        | 359,638,339                | 220,299          | 0.02               |
| National Financial Services Corp.                 | 4,431,990        | 167,663,227                | 201,429          | 0.05               |
| Bear Stearns                                      | 9,482,569        | 290,129,566                | 163,865          | 0.02               |
| Banc of America                                   | 9,449,300        | 244,070,971                | 156,950          | 0.02               |
| Goldman Sachs                                     | 3,824,230        | 155,926,461                | 114,459          | 0.03               |
| Instinet  | 7,015,128        | 205,108,567                | 90,140           | 0.01               |
| Sanford C Bernstein & Co.                         | 1,764,534        | 65,955,376                 | 57,907           | 0.03               |
| Pershing LLC                                      | 1,572,712        | 65,705,724                 | 56,956           | 0.04               |
| Merrill Lynch                                     | 1,426,113        | 54,448,351                 | 55,351           | 0.04               |
| Broadcourt Cap Corp.                              | 2,044,500        | 56,246,471                 | 54,734           | 0.03               |
| Credit Suisse                                     | 2,630,290        | 134,663,385                | 50,056           | 0.02               |
| Morgan Stanley                                    | 1,406,929        | 54,555,264                 | 44,978           | 0.03               |
| Sanders Morris Harris Group                       | 870,800          | 37,389,076                 | 43,540           | 0.05               |
| UBS Securities                                    | 897,042          | 28,064,473                 | 38,312           | 0.04               |
| Citigroup   | 1,641,973        | 41,407,240                 | 35,619           | 0.02               |
| Lehman Brothers                                   | 1,149,971        | 49,993,612                 | 31,688           | 0.03               |
| CIBC World Markets                                | 622,800          | 26,251,560                 | 30,191           | 0.05               |
| Wachovia Capital Markets                          | 644,700          | 17,411,356                 | 29,705           | 0.05               |
| Liquidnet Inc.                                    | 810,900          | 24,145,068                 | 28,806           | 0.04               |
| Fidelity Capital Markets                          | 1,431,611        | 64,450,262                 | 28,693           | 0.02               |
| J.P. Morgan Securities Inc.                       | 596,400          | 24,110,197                 | 27,532           | 0.05               |
| BMO Capital Markets Corp.                         | 527,000          | 19,063,708                 | 24,270           | 0.05               |
| Other (includes 64, each contributing 1% or less) | 6,578,681        | 204,771,092                | 268,891          | 0.04               |
| Total   | 98,298,595       | \$2,931,298,023            | \$2,315,995      | 0.02               |



## Soft Dollar Expenditures

In the fiscal year ended June 30, 2007, MOSERS' domestic equity managers declared \$244,908 of the commissions generated were utilized to acquire a variety of services and research information. These expenditures, referred to as soft dollars (expendable excess commissions), are permitted under current Securities Exchange Commission (SEC) guidelines and represent less than 11% of MOSERS' agency commissions.

| Types of Services Acquired   | Commissions Used | Percentage of Total |
|------------------------------|------------------|---------------------|
| Consulting/benchmarks        | \$ 1,419         | 0.6%                |
| Trading/analytic systems     | 67,323           | 27.5                |
| Portfolio management systems | 18,503           | 7.6                 |
| Pricing services             | 6,254            | 2.6                 |
| Proxy services               | 0                | 0.0                 |
| Research services            | 65,206           | 26.6                |
| Exchange fees                | 8,416            | 3.4                 |
| Transaction cost analysis    | 52               | 0.0                 |
| Market research              | 77,735           | 31.7                |
| Total                        | \$244,908        | 100.0%              |

#### HEDGED EQUITY

#### Market Value

The hedged equity allocation was \$633.6 million or 7.8% of the total fund as of June 30, 2007.

## Summary of Portfolio

MOSERS added the hedged equity portfolio to the total fund in fiscal year 2003. Hedged equity managers utilize skill-based investment strategies, which allow them to take advantage of periodic inefficiencies that may exist within the market. Hedged equity managers seek to produce consistent returns in various economic environments. The ultimate goal within the public equity portfolio is to provide downside protection in extended down equity markets. This portfolio targets about 40% of the U.S. equity market volatility which is expected to cushion fund returns during periods of negative returns from stocks. As of June 30, 2007, MOSERS' weight to this sub-asset class was 7.8% (the maximum weight is 10.0%) and above the policy target weight of 5.0%.

#### **Statistics**

The table below displays the statistical performance data (net of fees) of the hedged equity portfolio as of June 30, 2007.

| Portfolio Characteristics     | 1 Year | 3 Year | Since Inception* |
|-------------------------------|--------|--------|------------------|
| Annualized return             | 16.1%  | 10.8%  | 10.6%            |
| Annualized standard deviation | 3.7%   | 5.4%   | 4.9%             |
| Sharpe ratio                  | 2.9    | 1.3    | 1.6              |
| Beta**                        | 0.4    | 0.6    | 0.4              |
| Annualized alpha**            | 7.1%   | 3.3%   | 4.0%             |
| Correlation**                 | 0.7    | 0.9    | 0.8              |

<sup>\*</sup> Inception date January 2003

<sup>\*\*</sup> As compared to the S&P 500 Index



#### **Investment Advisors**

Blackstone Alternative Asset Management, Freeman Associates and the beta/alpha program are the three investments in the hedged equity portfolio. The beta/alpha program was added to the hedged equity portfolio in FY05. The table below summarizes our investments with them as of June 30, 2007. Management fee information may be found on page 73 of this report.

| Investment Advisors                     | Style             | Portfolio Market Value |
|---|-------------------|------------------------|
| Blackstone Alternative Asset Management | Long/short equity | \$356,568,323          |
| Freeman Fair Value                      | Long/short equity | 49,165,026             |
| Beta/alpha program                      | Active            | 227,380,134            |
| Total                                   |                   | \$633,113,483          |

#### INTERNATIONAL DEVELOPED EQUITY

#### Market Value

As of June 30, 2007, the international developed equity portfolio was \$1.4 billion, or 17.6% of the total fund.

## Summary of Portfolio

MOSERS' international developed equity allocation allows for the participation in the growth of non-U.S. companies. Historically, this asset class has delivered returns at a premium relative to inflation, thus enhancing the total fund's ability to achieve the long-term real rate of return objective of 5.0%. It is anticipated that this sub-asset class will perform well in periods of falling inflation and periods of rising growth. In addition, this asset class provides diversification associated with holding non-dollar assets. As of June 30, 2007, MOSERS' allocation was above the policy allocation target of 15.0%. The size of the overweight to international developed equity did not change over the course of the year.

#### **Statistics**

The table below displays the statistical characteristics (net of fees) of the international developed equity portfolio as of June 30, 2007.

| Portfolio Characteristics     | 1 Year | 3 Year | 5 Year | 10 Year |
|-------------------------------|--------|--------|--------|---------|
| Annualized return             | 25.5%  | 21.8%  | 17.2%  | 9.9%    |
| Annualized standard deviation | 5.3%   | 9.4%   | 12.0%  | 13.9%   |
| Sharpe ratio                  | 3.8    | 1.9    | 1.2    | 0.4     |
| Beta*                         | 0.9    | 1.0    | 0.9    | 0.9     |
| Annualized alpha*             | 0.5%   | 0.2%   | 1.0%   | 2.7%    |
| Correlation*                  | 0.9    | 1.0    | 1.0    | 1.0     |

<sup>\*</sup> As compared to the MSCI EAFE Index

## **Investment Advisors**

As of June 30, 2007, MOSERS had contracts with three external investment advisors for the management of three separate international developed equity portfolios. Two of these advisors are managing active portfolios and are expected to add incremental returns over the MSCI EAFE index through stock selection, country selection, and small amounts of currency hedging. The third manager holds Japanese equity index swaps to express a strategic view that Japanese stocks will outperform the MSCI EAFE index.



The following table displays the firms that were under contract with MOSERS during FY07 for management of international developed equity portfolios. Information on management fees paid may be found on page 73 of this report.

| Investment Advisors                | Style         | Portfolio Market Value |
|------------------------------------|---------------|------------------------|
| Mastholm Asset Management          | Active growth | \$ 715,606,290         |
| Silchester International Investors | Active value  | 695,074,350            |
| NISA EAFE Short                    | Index         | (8,971,163)            |
| NISA Topix Index Futures           | Index         | 120,638,078            |
| Beta/alpha program                 | Active        | 26,298,221             |
| Total                              |               | \$1,548,645,776        |

## **Brokerage Activity**

The following brokerage activity occurred within the international developed equity portfolio throughout the fiscal year:

|   | Shares      | <b>Dollar Volume</b> | Commis        | sions      |
|---|-------------|----------------------|---------------|------------|
| Brokerage Firm                                    | Traded      | of Trades            | Dollar Amount | Percentage |
| Merrill Lynch                                     | 24,171,323  | \$ 228,308,965       | \$ 441,964    | 0.19%      |
| Credit Suisse                                     | 14,163,151  | 162,658,595          | 328,399       | 0.20       |
| Morgan Stanley                                    | 9,198,649   | 189,911,246          | 326,962       | 0.17       |
| GTrade Services                                   | 23,670,609  | 374,372,965          | 321,768       | 0.09       |
| J.P. Morgan                                       | 9,010,181   | 148,425,399          | 258,093       | 0.17       |
| Nomura Securities                                 | 12,756,790  | 85,346,904           | 204,062       | 0.24       |
| Union Bank  | 4,462,069   | 102,490,287          | 200,762       | 0.20       |
| Neonet Securities AB                              | 17,773,432  | 379,356,604          | 199,958       | 0.05       |
| SG Securities                                     | 4,651,573   | 102,379,645          | 195,217       | 0.19       |
| Credit Lyonnais Securities                        | 8,669,532   | 69,196,663           | 127,403       | 0.18       |
| Sanford C Bernstein & Co.                         | 3,914,600   | 67,847,045           | 122,591       | 0.18       |
| UBS Securities                                    | 3,926,542   | 75,433,929           | 112,931       | 0.15       |
| Credit Agricole                                   | 2,202,800   | 47,881,721           | 90,208        | 0.19       |
| Jefferies & Co.                                   | 1,669,767   | 39,765,089           | 75,740        | 0.19       |
| Mainfirst Bank AG                                 | 529,885     | 37,422,160           | 74,807        | 0.20       |
| Anderson Bratenius Grundberg                      | 2,206,600   | 34,795,655           | 69,556        | 0.20       |
| Dresdner Kleinwort Securities                     | 3,017,000   | 32,232,816           | 61,902        | 0.19       |
| ABG Securities                                    | 1,101,105   | 23,101,370           | 46,195        | 0.20       |
| Bank Am Bellevue                                  | 294,317     | 22,293,537           | 44,550        | 0.20       |
| Other (Includes 14, each contributing 1% or less) | 6,338,129   | 134,862,017          | 189,843       | 0.14       |
| Total   | 153,728,054 | \$2,358,082,612      | \$3,492,911   |            |



## Soft Dollar Expenditures

In the fiscal year ended June 30, 2007, MOSERS' international developed equity managers declared \$86,371 of the commissions generated were utilized to acquire a variety of services and research information. These expenditures, referred to as soft dollars (expendable excess commissions), are permitted under current SEC guidelines, and represent 2% of MOSERS' agency commissions.

| Types of Services Acquired   | Commissions Used | Percentage of Total |
|------------------------------|------------------|---------------------|
| Consulting/benchmarks        |                  | 0.0%                |
| Trading/analytic systems     |                  | 0.0                 |
| Research services            | \$86,371         | 100.0               |
| Portfolio management systems |                  | 0.0                 |
| Pricing services             |                  | 0.0                 |
| Proxy services               |                  | 0.0                 |
| Exchange fees                |                  | 0.0                 |
| Transaction cost analysis    |                  | 0.0                 |
| Market research              |                  | 0.0                 |
| Total                        | \$86,371         | 100.0%              |

#### EMERGING MARKET EQUITY

#### Market Value

As of June 30, 2007, the emerging market equity portfolio was \$388.8 million, or 4.8 % of the total fund.

## Summary of Portfolio

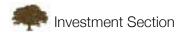
The emerging market equity allocation allows for the participation in the growth of companies in emerging economies outside of the U.S. It is anticipated that this sub-asset class will perform well in periods of rising inflation, as these economies tend to be driven by commodity businesses. In addition, this asset class provides diversification associated with holding non-dollar assets and currently offers some of the best fundamental valuations available from equity markets around the globe. As of June 30, 2007, MOSERS' allocation was 4.8% of the total fund, above the policy allocation target of 2.5%.

#### **Statistics**

The table below displays the statistical performance data of the emerging market equity portfolio as of June 30, 2007.

| Portfolio Characteristics     | 1 Year | 3 Year | 5 Year | 10 Year |
|-------------------------------|--------|--------|--------|---------|
| Annualized return             | 46.4%  | 39.9%  | 31.7%  | 10.5%   |
| Annualized standard deviation | 6.8%   | 12.7%  | 15.1%  | 23.4%   |
| Sharpe ratio                  | 6.0    | 2.8    | 1.9    | 0.3     |
| Beta*                         | 0.4    | 0.7    | 0.8    | 1.0     |
| Annualized alpha*             | 22.6%  | 9.9%   | 5.4%   | 1.5%    |
| Correlation*                  | 0.6    | 0.9    | 1.0    | 1.0     |

<sup>\*</sup> As compared to the MSCI EMF Index



## **Investment Advisors**

As of June 30, 2007, MOSERS had four emerging market equity managers. Throughout the fiscal year, there were no manager changes.

The following table displays the firms under contract with MOSERS during FY07 for the management of emerging market equity portfolios. Information regarding management fees may be found on page 73 of this report.

| Style         | Portfolio Market Value           |
|---------------|----------------------------------|
| Active growth | \$194,702,592                    |
| Active value  | 193,423,580                      |
| Index         | 417,167                          |
| Index         | 221,051                          |
|               | \$388,764,390                    |
| -             | Active growth Active value Index |

## **Brokerage Activity**

No brokerage activity occurred in the emerging market equity portfolio during the fiscal year.

## Soft Dollar Expenditures

No soft dollar activity occurred within this sub-asset class in FY07.

## Public Debt Asset Class Summary

As of June 30, 2007, the public debt allocation had a market value of \$2.3 billion, representing 28.1% of the total fund. Performance for the fiscal year was 8.9% net of fees and expenses.

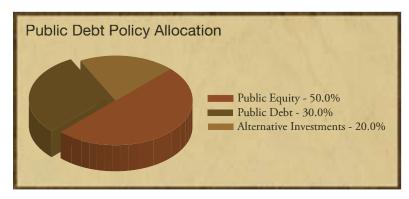
## Highlights

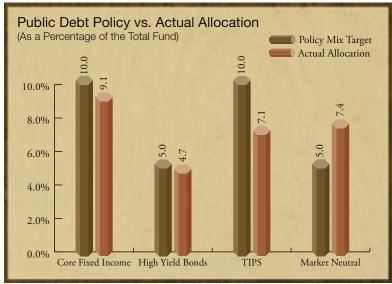
There were some modest tactical changes made to the public debt portfolio during the fiscal year. Here are a few of the highlights:

- The beta/alpha program within the core fixed income sub-asset class continued to expand, as it has been viewed as a far more efficient method of gaining core exposure.
- Due to concerns about the possibility of a downturn in the economy and subsequent credit deterioration, steps were taken to reduce risk in the high yield portfolio. While exposure levels remained about the same, there was a significant shift to debt instruments more senior in the issuers' capital structure, and a portion of the portfolio was hedged against credit deterioration. Additionally, a manager was hired to offer European exposure in order to gain better geographic diversification for the portfolio and less dependence upon the U.S. economy as the sole engine of economic growth.

#### Portfolio Structure

The public debt portfolio has a target allocation of 30.0% of the total fund. This portfolio is comprised of four sub-asset classes which include core fixed income, high yield bonds, Treasury Inflation Protected Securities (TIPS), and market neutral. The above bar chart illustrates the actual sub-asset allocations relative to the board's policy





Strategic Sub-Asset Allocation Ranges (as a Percentage of the Total Fund)

| Sub-Asset Class   | Minimum | Maximum | Policy Target |
|-------------------|---------|---------|---------------|
| Core fixed income | 5.0%    | 15.0%   | 10.0%         |
| High yield bonds  | 0.0     | 10.0    | 5.0           |
| TIPS              | 5.0     | 15.0    | 10.0          |
| Market neutral    | 0.0     | 10.0    | 5.0           |

allocation for each of these sub-asset classes. Differences reflect the CIO's strategic decisions to overweight or underweight sub-asset classes as of June 30, 2007. These decisions are confined to preestablished ranges that have been set by the board. The table below the bar chart summarizes the sub-asset ranges established by the board.

#### Market Overview

June 29, 2006, marked the Federal Reserve Board's (Fed) last action of "measured" tightening, elevating the federal funds rate to 5.25%. Throughout FY07, the Fed has chosen to maintain this rate accompanied by messages of "inflation risk" reiterated during their past eight open market committee meetings. Long treasury rates, exhibiting some amount of volatility throughout the year, started the fiscal year at 5.2% and ended the fiscal year at 5.1%, but had several significant directional changes during the period. Short-term rates declined modestly as there were expectations that the tightening cycle was over. This led to a somewhat steeper yield curve as contrasted to the flat curve seen at the end of the previous

fiscal year. On the economic front, declines were visible in all areas of the housing market in FY07 from building to home sales. GDP growth was slightly below normal while CPI, although lower than that of FY06, still prompted the Fed to worry about looming inflation. As for oil, prices demonstrated volatility throughout the year, but ended at a slightly lower level than that of June 30, 2006.

The broad debt market as represented by the Lehman Aggregate Index experienced a return of 6.1% for FY07. The investment grade corporate market gained 6.7% during the fiscal year while the high yield market had a return of 11.5%. Investment grade credit spreads remained relatively unchanged in FY07, while high yield spreads actually contracted by approximately 25 basis points.

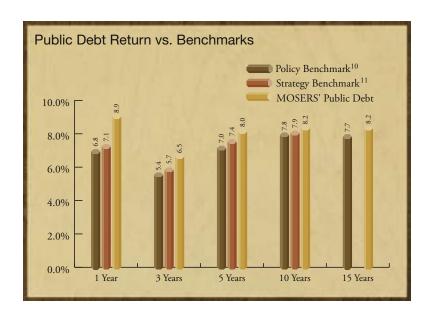
Overall, the general theme for FY07 was that the economy experienced continued modest growth, but the question still remains as to what the Fed's next move will be regarding short-term rates. The reasoning seems mixed as to whether the Fed will ease or tighten policy. The ever present fear of default (including that of the consumer) suggests that the Fed may ease, but the need for market stability without encouraging additional leverage suggests tightening or perhaps no change.

#### Performance

The public debt portfolio returned 8.9% for the fiscal year, exceeding the policy benchmark return of 6.8% and the strategy benchmark return of 7.1%. During the fiscal year, the outperformance over the policy benchmark was attributable primarily to a strategic overweight to market neutral and superior performance from high yield bonds, in conjuction with a strategic underweight to TIPS. Longer--term portfolio returns compare well to the policy and strategy benchmarks. The bar chart to the right illustrates performance over longer periods of time.

## Top Ten Holdings

The top ten holdings within the public debt portfolio as of June 30, 2007 are illustrated in the table below. A complete list of holdings within the public debt portfolio is available upon request.



| Ten Largest Holdings as of June 30, 2007          | Market Value  | Percent of Total MOSERS<br>Public Debt Portfolio |
|---|---------------|--|
| U.S. Treasury Inflation Index Bond - 2.375%, 2025 | \$120,997,202 | 5.3%   |
| U.S. Treasury Inflation Index Note - 2.000%, 2014 | 117,805,252   | 5.2  |
| U.S. Treasury Inflation Index Note - 4.250%, 2010 | 98,892,713    | 4.3  |
| U.S. Treasury Inflation Index Note - 3.000%, 2012 | 79,454,585    | 3.5  |
| U.S. Treasury Inflation Index Note - 2.375%, 2017 | 41,237,386    | 1.8  |
| U.S. Treasury Inflation Index Bond - 2.000%, 2026 | 37,329,745    | 1.6  |
| U.S. Treasury Inflation Index Note - 2.000%, 2012 | 29,653,566    | 1.3  |
| U.S. Treasury Inflation Index Note - 1.875%, 2015 | 19,336,882    | 0.8  |
| Freddie Mac Gold SF Mortgage - 5.500%, 2037       | 12,632,330    | 0.6  |
| U.S. Treasury Inflation Index Bond - 3.875%, 2029 | 12,294,305    | 0.5  |

As of 6/30/07, the public debt policy benchmark was comprised of 33.3% Lehman Aggregate, 33.3% Lehman U.S. TIPS, 16.7% Lehman High Yield, and 16.7% T-Bills + 4%.

As of 6/30/07, the public debt strategy benchmark was comprised of the following components; 32.1% Lehman Aggregate, 25.0% Lehman U.S. TIPS, 16.7% High Yield Strategy Benchmark comprised of Leman HY Index and CSFB Leverage Loan Index, and 26.2% T-Bills + 4%. A strategic benchmark for the 15-year period is not available.



#### CORE FIXED INCOME

#### Market Value

The core fixed income allocation was \$733.7 million as of June 30, 2007, or 9.1% of the total fund, slightly below its policy target of 10.0%.

## Summary of Portfolio

The core fixed income sub-asset class gives the total fund exposure to high quality fixed income instruments which, in turn, provides stable cash flows and excellent liquidity to the portfolio. Types of fixed income securities held within this portfolio may include U.S. Treasuries, mortgage-backed securities, asset-backed securities, agency securities and investment grade corporate bonds. The addition of the beta/alpha program, commencing in FY05, to the core segment of the portfolio has proved to be an efficient means of achieving superior risk adjusted returns. Please refer to the section on beta/alpha later in this report for a more complete description of the program and its rationale. While historically fixed income has not outperformed equities, the asset class does provide diversification to the portfolio in a variety of different economic scenarios. Core fixed income performs well particularly in periods of good economic growth and falling inflation. In addition, because of the generally high quality nature of the core segment, one can also expect adequate performance from the core portfolio in periods of modestly falling growth and stable inflation.

#### **Statistics**

The table below displays statistical performance data (net of fees) for the core fixed income portfolio as of June 30, 2007, with comparisons shown to the Lehman Aggregate Bond Index.

| Portfolio characteristics     | 1 Year | 3 Year | 5 Year | 10 Year |
|-------------------------------|--------|--------|--------|---------|
| Annualized return             | 9.1%   | 5.3%   | 5.3%   | 6.4%    |
| Annualized standard deviation | 2.0%   | 2.5%   | 3.9%   | 3.7%    |
| Sharpe ratio                  | 1.9    | 0.5    | 0.6    | 0.7     |
| Beta*                         | 0.7    | 0.8    | 1.0    | 1.0     |
| Annualized alpha*             | 4.8%   | 1.9%   | 0.9%   | 0.1%    |
| Correlation*                  | 0.9    | 1.0    | 0.9    | 1.0     |

<sup>\*</sup> As compared to the Lehman Aggregate Bond Index

#### **Investment Advisors**

As of June 30, 2007, MOSERS had contracts with two external investment advisors for the management of two separate fixed income portfolios – one for mortgage-backed/asset-backed securities and one for corporate securities. Additionally, the core segment participates in the beta/alpha program as mentioned. In the program, beta and alpha are completely separated such that the beta exposure is gained through synthetic replication of the core components (also managed by our corporate manager) and the alpha is gained through the manager pool.

The table below displays the investment advisors that were under contract with MOSERS during FY07 for management of core fixed income portfolios. Information regarding management fees paid to these managers may be found on page 73 of this report.

| Investment Advisor                   | Style                         | Portfolio Market Value |
|--------------------------------------|-------------------------------|------------------------|
| BlackRock Financial Management, Inc. | Enhanced mortgage-backed and  |                        |
|                                      | asset-backed securities index | \$149,760,123          |
| NISA Investment Advisors, LLC        | Enhanced gov't/corp index     | 132,064,454            |
| Beta/alpha program                   | Active                        | 451,920,926            |
| Total                                |                               | \$733,745,503          |



## **Brokerage Activity**

In FY07, MOSERS generated the following core fixed income brokerage activity ranked by percentage of total, through the purchase and sale of core fixed income assets.

| Broker/Dealer Firm                                  | Par Amount Traded | Market Value Traded | Percent of Total<br>Trading Volume<br>by Market Value |
|---|-------------------|---------------------|---|
| Deutsche Bank                                       | \$1,362,338,003   | \$1,343,666,653     | 18.6%   |
| Lehman Brothers                                     | 1,264,032,717     | 1,254,677,208       | 17.4  |
| Goldman Sachs                                       | 1,194,323,111     | 1,172,872,686       | 16.3  |
| Credit Suisse                                       | 1,053,914,071     | 1,033,194,519       | 14.4  |
| Citigroup   | 430,929,978       | 425,406,915         | 5.9   |
| Bear Stearns  | 385,681,658       | 378,025,991         | 5.3   |
| Morgan Stanley                                      | 344,129,337       | 338,155,093         | 4.7   |
| Barclays Capital                                    | 314,388,092       | 312,505,138         | 4.3   |
| Banc of America                                     | 238,969,365       | 236,143,364         | 3.3   |
| UBS Securities                                      | 181,255,256       | 175,821,166         | 2.4   |
| HSBC SECS   | 132,469,600       | 131,318,382         | 1.8   |
| J.P. Morgan Chase                                   | 105,112,354       | 104,770,531         | 1.5   |
| Other (Includes 24, each contributing less than 1%) | 292,461,969       | 293,175,189         | 4.1   |
| Total   | \$7,300,005,511   | \$7,199,732,835     | 100.0%  |

#### HIGH YIELD BONDS

#### Market Value

The high yield bond allocation was \$382.7 million as of June 30, 2007, or 4.7% of the total fund.

## Summary of Portfolio

The high yield bond portfolio invests in debt securities whose credit ratings are below investment grade quality. Relative to the core fixed income portfolio, this sub-asset class provides superior coupon cash flow, as well as some diversification benefit due to a reduced sensitivity to changes in interest rates. MOSERS views this allocation as one that is likely to be variable and very much dependent upon the particular stage of the economic cycle being experienced at the time of the allocation decision. As of June 30, 2007, MOSERS is slightly under the 5.0% policy target allocation to high yield bonds.

#### **Statistics**

The table below displays the statistical performance data for the high yield bond portfolio as of June 30, 2007, with comparisons shown to the Lehman High Yield Bond Index.

| Portfolio Characteristics     | 1 Year | 3 Year | 5 Year | Since Inception* |
|-------------------------------|--------|--------|--------|------------------|
| Annualized return             | 14.5%  | 10.2%  | 12.4%  | 11.7%            |
| Annualized standard deviation | 1.5%   | 3.5%   | 4.4%   | 4.8%             |
| Sharpe ratio                  | 5.9    | 1.8    | 2.1    | 1.9              |
| Beta**                        | 0.4    | 0.9    | 0.7    | 0.7              |
| Annualized alpha**            | 8.9%   | 2.4%   | 4.0%   | 4.6%             |
| Correlation**                 | 0.9    | 0.9    | 0.9    | 0.9              |

<sup>\*</sup> Since inception date October 2001

<sup>\*\*</sup> As compared to the Lehman High Yield Bond Index



## **Investment Advisors**

As of June 30, 2007, MOSERS had contracts with three external investment advisors for the management of the high yield bond portfolio. Information related to these managers is included in the table below. For information on management fees paid, consult the table on page 73 of this report.

| Investment Advisor                     | Style                  | Portfolio Market Value |
|--|------------------------|------------------------|
| BlackRock Financial Management, Inc.   | Active high yield bond | \$321,555,452          |
| NISA                                   | Credit hedge           | 1,592,567              |
| OCM European Credit Opportunities Fund | Opportunistic European | 59,583,343             |
| Total                                  | 1                      | \$382,731,362          |

## **Brokerage Activity**

In FY07, MOSERS generated the following high yield bond brokerage activity ranked by percentage of total, through the purchase and sale of high yield assets.

| Broker/Dealer Firm                                  | Par Amount Traded | Market Value Traded | Percent of Total<br>Trading Volume<br>by Market Value |
|---|-------------------|---------------------|---|
| Deutsche Bank                                       | \$76,563,519      | \$80,224,263        | 13.9%   |
| J.P. Morgan Chase                                   | 71,814,621        | 73,886,396          | 12.7  |
| Lehman Brothers                                     | 70,733,589        | 70,943,480          | 12.3  |
| Credit Suisse                                       | 65,560,218        | 65,737,799          | 11.4  |
| Bank of America                                     | 44,737,494        | 44,387,072          | 7.7   |
| Barclays Capital                                    | 41,112,415        | 41,765,976          | 7.2   |
| Citigroup   | 34,246,024        | 35,431,755          | 6.1   |
| Morgan Stanley                                      | 22,257,107        | 22,081,037          | 3.8   |
| Goldman Sachs & Co.                                 | 20,424,887        | 21,213,775          | 3.7   |
| Wachovia Securities                                 | 20,390,134        | 20,486,657          | 3.5   |
| Mizuho Securities                                   | 16,400,000        | 16,397,677          | 2.8   |
| Merrill Lynch                                       | 16,201,709        | 16,019,513          | 2.8   |
| UBS Securities                                      | 15,000,000        | 14,666,618          | 2.5   |
| Bear Stearns  | 13,150,000        | 12,536,130          | 2.2   |
| Other (Includes 23, each contributing less than 1%) | 41,860,006        | 42,848,985          | 7.4   |
| Total   | \$570,451,723     | \$578,627,133       | 100.0%  |

#### TREASURY INFLATION PROTECTED SECURITIES (TIPS)

#### Market Value

The TIPS allocation was \$571.0 million, or 7.1% of the total fund as of June 30, 2007.

#### Summary of Portfolio

TIPS are fixed income securities issued and guaranteed by the U.S. government. The yield on these securities is specifically tied to inflation, as measured by the U.S. consumer price index, plus a predetermined yield above and beyond inflation. The TIPS allocation provides an excellent match relative to the system's liabilities in terms of its ability to provide inflation protection. As of June 30, 2007, MOSERS is 2.9% under the 10.0% policy target allocation to TIPS, a factor that can be attributed in part to a strategic shift to an overweight policy target for the market neutral sub-asset class, given its alpha generating capabilities along with a slight bias, in our view, as to the direction of interest rates likely being higher rather than lower.



### **Statistics**

The table below displays the statistical performance data (net of fees) for the TIPS portfolio as of June 30, 2007, with comparisons shown to the Lehman U.S. TIPS Index.

| Portfolio Characteristics     | 1 Year | 3 Year | 5 Year | Since Inception* |
|-------------------------------|--------|--------|--------|------------------|
| Annualized return             | 4.0%   | 4.0%   | 7.5%   | 8.4%             |
| Annualized standard deviation | 4.4%   | 4.2%   | 9.4%   | 7.9%             |
| Sharpe ratio                  | (0.3)  | 0.0    | 0.5    | 0.6              |
| Beta**                        | 1.0    | 1.0    | 1.0    | 1.0              |
| Annualized alpha**            | 0.1%   | 0.2%   | 0.1%   | 0.1%             |
| Correlation**                 | 1.0    | 1.0    | 1.0    | 1.0              |

<sup>\*</sup> Since inception date November 1998

## **Investment Advisors**

As of June 30, 2007, the TIPS portfolio was 100% internally managed. The following table summarizes the details.

| Investment Advisor      | Style   | Portfolio Market Value         |
|-------------------------|---------|--------------------------------|
| Internal staff<br>Total | Passive | \$571,091,105<br>\$571,091,105 |

## **Brokerage Activity**

In FY07, MOSERS generated the following TIPS brokerage activity ranked by percentage of total, through the purchase and sale of TIPS.

| Broker/Dealer Firm | Par Amount Traded | Market Value Traded | Percent of Total<br>Trading Volume<br>by Market Value |
|--------------------|-------------------|---------------------|---|
| Barclay's          | \$ 53,350,000     | \$ 53,514,022       | 42.0%   |
| Deutsche Bank      | 45,250,000        | 50,437,754          | 39.6  |
| Citigroup          | 20,300,000        | 23,386,972          | 18.4  |
| Total              | \$118,900,000     | \$127,338,748       | 100.0%  |

<sup>\*\*</sup> As compared to the Lehman U.S. TIPS Bond Index



#### MARKET NEUTRAL

#### Market Value

As of June 30, 2007, the market neutral allocation was \$598.5 million, or 7.4% of the total fund.

## Summary of Portfolio

The market neutral portfolio consists of a variety of managers who utilize skill-based investment strategies, which allow them to take advantage of periodic inefficiencies that may exist within the market. The expectation for this sub-asset class is to produce consistent absolute returns in various economic environments. More directly, it is expected that this portfolio will generate returns of 4% in excess of returns on 90-day Treasury bills with similar volatility to what is expected from the core fixed income portfolio. Market neutral investments also provide diversification and downside protection to the portfolio. MOSERS utilizes its beta/alpha program described on page 99 to gain exposure to this sub-asset class. This allows MOSERS to invest in an extremely diversified pool comprised of a variety of different types of strategies that provide additional risk protection and alpha that is uncorrelated to both the stock and the bond markets. As of June 30, 2007, MOSERS is 2.4% over the 5.0% policy target allocation to market neutral.

#### **Statistics**

The table below displays the statistical performance data (net of fees) for the market neutral portfolio as of June 30, 2007.

| Portfolio Characteristics                | 1 Year | 3 Year | Since Inception* |
|--|--------|--------|------------------|
| Annualized return                        | 10.2%  | 7.7%   | 7.3%             |
| Annualized standard deviation            | 1.8%   | 2.1%   | 2.1%             |
| Sharpe ratio                             | 2.7    | 1.8    | 2.1              |
| Beta as compared to the S&P 500          | 0.0    | 0.1    | 0.1              |
| Beta as compared to the Lehman Aggregate | (0.5)  | (0.4)  | 0.0              |

<sup>\*</sup> Since inception date December 2002

#### Investment Advisors

MOSERS' market neutral exposure is captured through the six managers comprising the alpha program, which is detailed on page 100. Below is a table summarizing MOSERS' market neutral investment within this pool as of June 30, 2007. Information on manager fees paid can be found on page 73 of this report.

| Investment Advisor          | Style          | Portfolio Market Value         |
|-----------------------------|----------------|--------------------------------|
| Beta/alpha program<br>Total | Market neutral | \$598,535,249<br>\$598,535,249 |



## Alternative Investments Asset Class Summary

As of June 30, 2007, the alternative investments portfolio had a market value of \$1.6 billion, representing 20.1% of the total fund. Performance for the fiscal year was 18.6% net of fees and expenses.

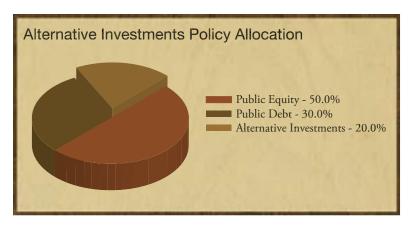
#### Highlights

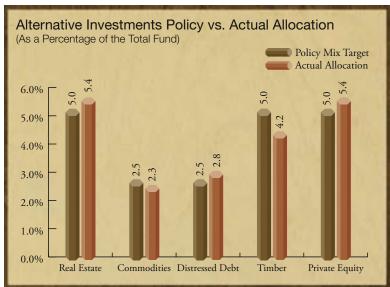
There were several changes to the alternative investments portfolio in FY07. The highlights are as follows:

- MOSERS committed additional assets to existing managers in the alternatives portfolio. These firms include Blackstone Real Estate Partners, Parish Capital, Silver Creek Management, MHR Fund Management, and Oaktree Capital Management.
- An opportunistic manager of distressed real estate and debt investments was added to the portfolio in January 2007. The commitment was split evenly between the real estate allocation and the private debt allocation.
- Near the end of FY07, the remaining assets invested in public Real Estate Investment Trusts (REITs) were sold, with the proceeds being added to the investment in energy and natural resource-related Master Limited Partnerships (MLPs).
- Over \$100 million was invested in timberland during FY07, primarily in the northwestern and southeastern U.S.
- In total, MOSERS made seven new commitments to alternative asset funds in FY07 totaling \$455 million.

#### Portfolio Structure

The alternative investments portfolio has a target allocation of 20% of the total fund. Within this





Strategic Sub-Asset Allocation Ranges (as a Percentage of the Total Fund)

| Sub-Asset Class | Minimum | Maximum | Policy Target |
|-----------------|---------|---------|---------------|
|                 |         |         |               |
| Real estate     | 2.5%    | 7.5%    | 5.0%          |
| Commodities     | 0.0     | 5.0     | 2.5           |
| Private debt    | 0.0     | 5.0     | 2.5           |
| Timber          | 2.5     | 7.5     | 5.0           |
| Private equity  | 2.5     | 7.5     | 5.0           |

broad allocation are five sub-asset classes, which include real estate, commodities, private debt, timber, and private equity. Over the past year, new investments were made in private debt, real estate, private equity, and timber while a portion continues to be invested in temporary placeholders awaiting deployment. It is anticipated that achieving full investment in these sub-asset classes will take several years due to the nature of these strategies. The bar chart above illustrates the actual sub-asset allocation relative to the board's policy allocation for each sub-asset class as of June 30, 2007. Differences reflect strategic decisions to overweight or underweight allocations relative to the policy mix. The table below the bar chart summarizes the sub-asset class allocation ranges established by the board.



#### Market Overview

The alternative investment allocation was added to the portfolio mix by the board in June 2002. Alternative investments are expected to provide various benefits to the overall fund. Some of these benefits include enhanced returns, current income, diversification, inflation hedging, and deflation hedging. For example, the real assets in the program are expected to provide a hedge against inflation and diversify the total fund. In addition, many of the sub-asset classes such as private equity and private debt are expected to produce returns greater than those expected from the equity and fixed income markets. Timberland and real estate investments are expected to produce less volatile return streams than traditional assets due to their meaningful cash flows, therefore, lowering the risk of the entire fund.

Despite the fact that the program is not fully implemented, returns produced by the existing alternative investment portfolio in FY07 were strong in nearly every sub-asset class. Although the commodities allocation generated a return of -14.1% last year, it continues to add diversification benefits to the overall fund. We expect the lack of correlation that commodities maintain to the other assets in the fund to be very valuable over long periods of time. The strong returns from the majority of the alternatives allocation can be attributed to a persistence of ample liquidity in the global markets, exhibited through low lending standards and increased use of leverage to buy assets.

The largest contributor to the alternative investment allocation return was the real estate portfolio with a return of 48.4%. Equity real estate funds produced substantial returns over the past twelve months as the investment advisors took advantage of easy lending markets that continue to provide low cost financing for opportunities around the world. The demand for real estate assets has led to inflated valuations in many sectors of the market, which essentially increased the profits of funds that were in a position to sell properties over the past year. The MLP portion of the portfolio also generated large returns, only to reinforce our belief that there is a great demand for these income-producing securities. Fundamentally, the U.S. is in dire need of expanding the infrastructure used to transport natural resources. It is advantageous for these assets to lie within MLP structures to avoid excessive taxation. As the MLP market increases in size, institutional investors that desire stable income will enter the asset class which should place upward pressure on the price of the securities.

Private debt continued to register strong performance in FY07, generating a return of 20.4%. Since inception in July 2002, the private debt portfolio has produced annualized returns of 27.3%. Of particular note were outsized returns generated from specific late stage investments of one of the control-oriented managers who reaped the benefits of a long-term focus and multi-year strategy of guiding troubled portfolio companies out of bankruptcy or severe distress and back into profitability and balance sheet stability. This fund continues to profit from the equity holdings gained as a result of taking the restructured company public. One private debt manager continues to liquidate a portfolio that was purchased nearly five years ago and is generating outsized returns by successfully exiting the few remaining positions in the portfolio. An opportunistic manager that specializes in distressed loans and non-U.S. real estate was added to the allocation in FY07. MOSERS also made a sizable commitment to an existing manager's new fund, with capital to be called when distressed opportunities are identified.

Throughout FY07, MOSERS' timber portfolio returned 7.9% as we continued to make progress in the implementation of this sub-asset class. A diversified group of timber advisors were previously retained and multiple properties were purchased on MOSERS' behalf in the last twelve months. MOSERS participated in a large timberland transaction in the southeastern U.S. in 2006. Additionally, our initial acquisition of timberland in the northwestern U.S. was completed in early 2007. The advisors continue their efforts to identify and purchase properties in their respective geographic regions, including countries in the southern hemisphere. However, the popularity of this sub-asset class and the ever increasing number and size of timber investors has led to a highly competitive market. It has become increasingly difficult to buy timber assets at fair prices. Timberland sales continue to be massive in size, resulting in the need for timber advisors to form large investment vehicles with multiple investors to simply pursue transactions in today's market. MOSERS continues to hold cash and U.S. Treasuries as placeholders in the timber allocation. These funds are earmarked for future timber investments.

Finally, the private equity program produced a 20.5% return for FY07. While a portion of this return reflects the J-curve effect of newer partnerships, many of the funds that are well into the investment phase have offset the negative returns. MOSERS continues to employ a strategy of vintage year diversification to mitigate the negative returns of the J-curve effect that occurs early in the life of a partnership as the fund managers are identifying assets and fees are being paid by the limited partners.

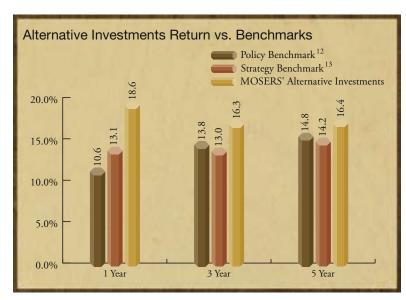


MOSERS invests in several private equity styles, including corporate buyouts, activist equity, and special situations. Private equity commitments to corporate buyout firms were initiated in 2004 and will continue to be made over various geographies throughout the life of the program. In FY07, follow-on commitments were made to two of our previously hired managers, and a new manager was hired to focus on infrastructure investments that exhibit private equity-like returns. MOSERS believes that the venture capital market fundamentals, combined with the inability of new investors to access the best funds, are not enticing at this time and, therefore, no commitments to venture capital funds were made throughout FY07.

#### Performance

MOSERS' alternative investments portfolio returned 18.6% for the fiscal year, outperforming the 10.6% return for the policy benchmark. The portfolio also outperformed the 13.1% return for the strategy benchmark as illustrated in the bar chart to the right.

The outperformance is significant and can be explained almost entirely by the real estate sub-asset class versus the real estate policy benchmark. At the inception of the real estate sub-asset class in 2002, MOSERS held publicly-traded REITs in the portfolio. The policy benchmark for the subasset class was designated to be a diversified REIT index. Over time, MOSERS diversified a portion of the allocation to private real estate, publicly-traded MLPs, and assets that exhibited the risk/return profile of core real estate.



The REITs appeared to be overvalued and the dividend yield had decreased from 6% to less than 4%. Until FY07, the movement to a more diversified real estate portfolio hurt the performance relative to the REIT benchmark although it lowered the risk of the total fund. In late FY07, MOSERS continued to believe that REITs were overvalued when compared to their underlying assets so the remaining REITs were sold. With the exception of a fund that is still in the investment period phase, all of the private real estate funds and the MLP portfolio outperformed the REIT benchmark. The allocation to real estate was slightly higher than the 5% neutral target, and therefore added dollars to the overall fund.

Strong real estate markets and the low cost to finance acquisitions have led to nonstop demand for the sub-asset class in general. Overwhelming demand for institutional-quality real estate properties has also fueled the machine with quick turnover and large profits resulting from taking advantage of easy borrowing. As our private real estate advisors scour the marketplace for unique opportunities, it is our continued belief that they are buying real estate assets that will outperform REITs over an extended period of time. If the prices attached to REITs eventually reflect a significant discount to the underlying assets, MOSERS will not hesitate to shift the portfolio to take advantage of a cheap market.

As of 6/30/07, the alternative investments policy benchmark was comprised of the following components: 25% Wilshire REIT, 25% actual return of the timber component, 25% actual return of the private equity component, 12.5% Lehman Brothers CCC + 2%, and 12.5% GSCI.

As of 6/30/07, the alternative investments strategy benchmark was comprised of the following components: 26.35% real estate strategy (composed of the NCREIF National Council of Real Estate Investment Fiduciaries, Mellon STIF Return, and Atlantic Asset Management MLP Natural Resources Index), 21.17% actual return of the timber component, 27.10% actual return of the private equity component, 14.12% Lehman Brothers CCC + 2%, and 11.26% GSCI.



#### RFAL ESTATE

#### Market Value

The real estate allocation was \$436.6 million or 5.4% of the total fund as of June 30, 2007.

## Summary of Portfolio

Investments in the real estate allocation take the form of equity real estate through closed-end funds, publicly-traded REITs and MLPs, and other investments that exhibit the beneficial risk/return characteristics of real estate. Investments in real estate provide meaningful cash flows and should act as a hedge against inflation. Opportunistic real estate funds should provide returns in excess of those expected from the public equity markets due to the illiquidity premium associated with owning real assets, the inefficiencies in this market, and the ability to capitalize on very large acquisitions. Manager skill is expected to add value to the performance of these private partnerships. As of fiscal year-end, MOSERS was invested in MLPs, closed-end opportunistic real estate funds, a closed-end mezzanine loan fund, a fund that purchases mature oil and gas assets, an opportunistic debt and real estate fund, and publicly-traded MLPs. A temporary holding account resides in the real estate allocation in order to invest the assets needed for funding the private portfolios when capital is called for investment. This placeholder account is invested in the internally-managed cash fund.

#### **Statistics**

The corresponding table displays the statistical performance data (net of fees) of the real estate portfolio as of June 30, 2007, with comparisons shown to the Wilshire REIT Index.

| Portfolio Characteristics     | 1 Year | 3 Year | Since Inception* |
|-------------------------------|--------|--------|------------------|
| Annualized return             | 48.4%  | 31.3%  | 22.5%            |
| Annualized standard deviation | 7.4%   | 9.0%   | 10.9%            |
| Sharpe ratio                  | 5.8    | 3.0    | 1.8              |
| Beta**                        | 0.2    | 0.2    | 0.4              |
| Annualized alpha**            | 42.6%  | 23.5%  | 12.6%            |
| Correlation**                 | 0.4    | 0.4    | 0.7              |

<sup>\*</sup> Inception date July 2002

#### **Investment Advisors**

During FY07, MOSERS committed assets to a new distressed real estate and debt fund, and a fund raised by an existing private real estate advisor. Blackstone Real Estate Partners IV and V have been strong performers in the real estate allocation and, therefore, a continued relationship was warranted. Funds were committed to CarVal Investors in January 2007 and Blackstone Real Estate Partners VI in February 2007. The table below summarizes MOSERS' real estate investment advisors at the end of FY07.

| Investment Advisor                 | Style                         | Portfolio Market Value |
|------------------------------------|-------------------------------|------------------------|
| Blackstone Real Estate Advisors    | Active real estate            | \$206,122,520          |
| CarVal Investors                   | Distressed real estate & debt | 21,700,000             |
| Bush O'Donnell Investment Advisors | Passive MLP index             | 74,494,945             |
| Internal Staff*                    | Cash                          | 7,454,646              |
| Merit Energy                       | Oil & gas                     | 3,396,851              |
| Oaktree Capital Management         | Active real estate            | 72,498,510             |
| Trust Company of the West          | Mezzanine debt; oil & gas     | 50,906,729             |
| Total                              |                               | \$436,574,201          |

<sup>\*</sup> Temporary place holder for future capital drawdowns to fund real estate managers.

<sup>\*\*</sup> As compared to the Wilshire REIT Index



## **Brokerage Activity**

The following brokerage activity occurred within the REIT and MLP portfolios during the fiscal year:

|                   |               |                         | Commi         | ssions          |
|-------------------|---------------|-------------------------|---------------|-----------------|
| Broker Firm       | Shares Traded | Dollar Volume of Trades | Dollar Amount | Value Per Share |
| Instinet          | 2,519,914     | \$137,757,245           | \$ 75,597     | \$0.03          |
| AG Edwards & Sons | 613,500       | 24,421,269              | 24,540        | \$0.04          |
| Total             | 3,133,414     | \$162,178,514           | \$100,137     |                 |
| Total             | 3,133,414     | \$162,178,514           | \$100,137     |                 |

## Soft Dollar Expenditures

There were no soft dollars utilized within the REIT and MLP portfolios in the fiscal year ended June 30, 2007.

#### **COMMODITIES**

#### Market Value

The commodities allocation was \$187.2 million as of June 30, 2007, representing 2.3% of the total fund.

## Summary of Portfolio

MOSERS gains exposure to commodities through an account managed by NISA Investment Advisors. This sub-asset class benchmark is the GSCI. The commodities portfolio has provided exceptional diversification benefits to MOSERS and continues to provide a hedge against unexpected spikes in inflation. Although volatile at times, the low to negative correlation of commodities to traditional asset classes provides protection to the total fund when financial assets experience periods of poor performance. As energy and natural gas prices fell from their peaks in FY06, the commodities portfolio generated the only negative performance of a sub-asset class in the alternative investment allocation; however, longer-term returns remain attractive.

#### **Statistics**

The table below displays the statistical performance data (net of fees) of the commodities portfolio as of June 30, 2007.

| Portfolio Characteristics     | 1 Year  | 3 Year | 5 Year | Since Inception* |
|-------------------------------|---------|--------|--------|------------------|
| Annualized return             | (14.0)% | 6.1%   | 14.1%  | 12.5%            |
| Annualized standard deviation | 18.1%   | 22.7%  | 21.9%  | 22.1%            |
| Sharpe ratio                  | (1.1)   | 0.1    | 0.5    | 0.4              |
| Beta**                        | 1.0     | 1.0    | 1.0    | 1.0              |
| Annualized alpha**            | 0.2%    | 0.4%   | 0.8%   | 0.9%             |
| Correlation**                 | 1.0     | 1.0    | 1.0    | 1.0              |

Inception date November 1998

#### Investment Advisors

MOSERS has had one manager in the commodities allocation since its inception in 1998.

| Investment Advisor       | Style          | Portfolio Market Value |
|--------------------------|----------------|------------------------|
| NISA Investment Advisors | Enhanced index | \$187,194,491          |

<sup>\*\*</sup> As compared to the GSCI Index



#### PRIVATE DEBT

#### Market Value

The private debt allocation was \$229.9 million or 2.8% of the total fund as of June 30, 2007.

#### Summary of Portfolio

Private debt investments are expected to provide capital appreciation as funds are used in most cases to purchase debt securities to gain controlling interest in a company at a significant discount to fair value. The inefficiency of the private debt market, lack of participants in this sector, and the return premium expected due to the illiquid nature of this strategy are all factors that lead to the possibility of enhanced returns versus traditional assets. Participation as a limited partner in closed-end funds has been the primary method of implementation for this strategy. The fund managers typically buy undervalued debt securities and then pursue active strategies to change the credit profile of the company in an attempt to realize a gain on the investment. More recently, this allocation was diversified in style and strategy with the commitment to a long/short opportunistic manager at the beginning of FY06 and the commitment to a distressed debt and real estate fund in FY07. Flexibility in this extended low default environment is the key to profits should the corporate environment suffer as a result of the sub-prime debt market that has been battered in recent months. The distressed debt and real estate manager has demonstrated the ability to move into unpopular, niche markets, prior to their recognition by the institutional community. Consequently, it was deemed appropriate to diversify private debt by investing in this opportunistic fund, splitting the commitment to the manager with the real estate allocation. Near the end of FY07, a commitment to a new fund raised by an existing manager was made to prepare for a sudden turn of events in the credit cycle. This commitment is currently unfunded, but will be drawn down by the manager when opportunities are identified. Over a full market cycle, returns in excess of public debt and, in particular, high yield debt (the more relevant comparison) are expected from private debt investments.

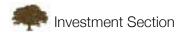
The portfolio's exposure of 2.8% to private debt securities is up slightly from last year's weight of 2.2%. Maintenance of a slight overweight to the policy benchmark is reflective of a view that new additions to private debt will add value in all market environments. The default rate for corporate debt, although accelerating, continues to be below the 35-year average. In general, corporate credit quality is still strong, so a significant underweighting to private debt is not contemplated at this time.

# Statistics The table below displays the statistical performance data (net of fees) of the private debt portfolio as of June 30, 2007.

| Portfolio Characteristics     | 1 Year | 3 Year | Since Inception* |
|-------------------------------|--------|--------|------------------|
| Annualized return             | 20.4%  | 21.4%  | 27.3%            |
| Annualized standard deviation | 4.1%   | 5.3%   | 11.9%            |
| Sharpe ratio                  | 3.7    | 3.3    | 2.1              |
| Beta**                        | 0.4    | 0.5    | 0.9              |
| Annualized alpha**            | 12.3%  | 13.2%  | 5.7%             |
| Correlation**                 | 0.4    | 0.5    | 0.7              |

<sup>\*</sup> Inception date September 2002

<sup>\*\*</sup> As compared to the Lehman CCC



#### Investment Advisors

During FY07, MOSERS was invested with five external private debt managers, one being in the form of an open-end partnership with stipulations as to liquidity. The other relationships are closed-end limited partnerships.

| Investment Advisor                        | Style                          | Portfolio Market Value |
|---|--------------------------------|------------------------|
| Blackstone Distressed Securities Advisors | Long/short; trading            | \$ 58,648,636          |
| CarVal Investors                          | Distressed real estate & debt  | 21,700,000             |
| DDJ Capital Management                    | Small-cap; control             | 37,553,095             |
| Internal Staff*                           | Cash                           | 5,771,495              |
| MHR Fund Management                       | Small-cap; control             | 95,595,289             |
| Oaktree Capital Management                | Large/mid-cap; trading/control | 10,659,063             |
| Total                                     |                                | \$229,927,578          |

<sup>\*</sup> Temporary place holder for future capital drawdowns to fund private debt managers.

#### **TIMBER**

#### Market Value

The market value of assets currently held in the timber allocation is \$341.0 million or 4.2% of the total fund.

## Summary of Portfolio

Currently, there is \$220 million invested in timberland assets while the remaining dollars in the timber allocation are being held in U.S. Treasury portfolios and a cash account. These funds will be drawn by the timber investment managers when properties are purchased for MOSERS' accounts. The choice to hold a portion of the earmarked funds in long-dated U.S. Treasuries is a conscious decision to provide MOSERS' total fund some protection against the risk of deflation. Although deflation has not been a meaningful concern recently, when it does appear to be a threat, there are very few investments that can protect the fund in these periods.

The timber portfolio will continue to be built over time through a diversified approach. MOSERS has committed assets to three timber investment management companies to purchase and manage timber in the northwestern U.S., southeastern U.S., and outside of the U.S. (focused on the southern hemisphere). The timber allocation will possess geographical, age, tree species, and timber market diversification. These factors are carefully considered to mitigate risks within the timber portfolio. It was originally anticipated that it would take two to three years to fully invest the funds committed to this sub-asset class; however, increased competition for timber assets has led to an unexpectedly slow investment phase. Timber returns over a full market cycle are expected to be similar to those we expect from the public equity markets but should exhibit lower volatility, similar to public debt investments. An allocation to timber and other real assets also provides a hedge against inflation, additional cash flows, and diversification to the fund that will be beneficial when financial assets are experiencing poor performance.

#### **Statistics**

The table below displays the statistical performance data (net of fees) of the timber portfolio as of June 30, 2007. Currently timber is benchmarked to itself; therefore, there is no benchmark correlation at this time.

| Portfolio Characteristics     | 1 Year | 3 Year | Since Inception* |
|-------------------------------|--------|--------|------------------|
| Annualized return             | 7.9%   | 8.8%   | 4.2%             |
| Annualized standard deviation | 3.1%   | 6.9%   | 10.8%            |
| Sharpe ratio                  | 0.8    | 0.7    | 0.1              |

<sup>\*</sup> Inception date June 2003



#### **Investment Advisors**

MOSERS committed assets to three timber investment managers since the allocation to timber was approved in June 2002. The managers are listed in the table below. MOSERS has \$350 million committed for investment, with approximately 58% having been invested in timberland to date. Timber investing is a relatively slow process of identifying, evaluating, structuring, and eventually purchasing attractive timberland properties. There has been increased competition to buy timber by institutional investors, private equity firms, and high net worth families. While MOSERS waits for attractive timber opportunities, the funds that have been earmarked for deployment into timber transactions are invested in U.S. Treasury securities and a cash account. Information regarding the managers of these portfolios is as follows:

| Investment Advisor          | Style                           | Portfolio Market Value |
|-----------------------------|---------------------------------|------------------------|
| Global Forest Partners      | International                   | \$ 56,292,515          |
| Internal Staff*             | Active duration U.S. Treasuries | 59,943,773             |
| Internal Staff*             | Cash                            | 61,007,786             |
| Resource Management Service | Southeastern U.S.               | 113,836,997            |
| The Campbell Group          | Northwestern U.S.               | 50,000,000             |
| Total                       |                                 | \$341,081,071          |

<sup>\*</sup> Temporary place holders for future capital drawdowns to fund timber managers.

#### PRIVATE EQUITY

#### Market Value

The market value of assets currently being held in the private equity allocation is \$438.9 million or 5.4% of the total fund. In FY07, MOSERS made commitments to three private equity managers. Two of the commitments were to advisors that were already in the private equity portfolio. As these advisors (Parish Capital Partners and Silver Creek Management) raised their subsequent funds, MOSERS made commitments to extend the relationships that are intended to be long-term, mutually beneficial partnerships. Less than 20% of the dollars in the private equity allocation are held in accounts that serve as temporary place holders until the assets are ready to be both committed and deployed to the private equity advisors. The private equity portfolio is expected to be invested up to the target allocation of 5% over the next several years. Ongoing investments will be made in order to maintain the target allocation when distributions from mature funds become routine.

Private equity investments have been allocated to several strategies including: corporate buyouts, venture capital, special situations/opportunistic and activist equity strategies. Each of these strategies has a different level of risk and expected return. Diversification and enhanced returns are the key benefits of the private equity portfolio. Currently, we have not committed assets to venture capital funds as the general category appears to have a less attractive risk/return profile than corporate buyouts and special situations. Additionally, top-tier funds rarely allow new investors to participate in their offerings, making it even less attractive to investors that may have to settle with second-tier investment advisors. Historically, there has been a huge dispersion in the returns of top-tier funds and those that are not in the top quartile. The private equity portfolio is expected to produce returns of 3% in excess of the public equity markets over a full-market cycle.



#### **Statistics**

The table below displays the statistical performance data (net of fees) of the private equity portfolio as of June 30, 2007. Currently private equity is benchmarked to itself; therefore, there is no benchmark correlation at this time.

| Portfolio Characteristics     | 1 Year | 3 Year | Since Inception* |
|-------------------------------|--------|--------|------------------|
| Annualized return             | 20.5%  | 12.0%  | 12.2%            |
| Annualized standard deviation | 4.2%   | 6.6%   | 6.2%             |
| Sharpe ratio                  | 3.6    | 1.2    | 1.5              |

<sup>\*</sup> Inception date June 2003

### **Investment Advisors**

Currently, 84% of the assets in this sub-asset class are invested in private equity and the remaining 16% reside in temporary place holder accounts for future private equity funding purposes. Information regarding managers in this sub-asset class is summarized in the table below.

| Investment Advisor                       | Style                            | Portfolio Market Value |
|--|----------------------------------|------------------------|
| Alinda Capital Partners                  | Corporate buyout; infrastructure | \$ 8,692,177           |
| Blackstone Alternative Asset Management* | Long/short equity                | 63,800,294             |
| Blum Capital Partners                    | Activist equity                  | 40,308,972             |
| Bridgepoint Capital Partners             | Corporate buyout; foreign        | 13,501,755             |
| Catterton Partners                       | Corporate buyout                 | 33,063,951             |
| JLL Partners                             | Corporate buyout                 | 15,266,818             |
| NISA Investment Advisors*                | Equity futures                   | 8,874,526              |
| OCM/GFI Power Opportunities              | Corporate buyout                 | 9,481,916              |
| Parish Capital Partners                  | Corp. buyout; fundoffunds        | 39,389,558             |
| Relational Investors                     | Activist equity                  | 81,285,873             |
| Silver Creek Management                  | Special situations               | 92,089,724             |
| Silver Lake Partners                     | Corporate buyout                 | 27,036,051             |
| Veritas Capital Partners                 | Corporate buyout                 | 6,064,855              |
| Total                                    |                                  | \$438,856,470          |

<sup>\*</sup> Temporary place holder for future capital drawdowns to private equity managers.



# Beta/Alpha Program

The beta/alpha program consists of two parts, beta and alpha. This program began as a result of our belief that returns from these two components should be separated and managed separately.

The beta portion of the program is managed by NISA Investment Advisors. NISA uses futures and/or total return swaps to gain market exposure to various predefined asset classes.

The alpha program is a group of active managers with little or no systematic beta exposure. The objective of the alpha component is to provide a net of fees alpha return of 4% with similar to slightly higher volatility. This return can then be applied to various asset classes.

The combination of the two components produces an efficient total return and also provides MOSERS a great deal of flexibility in the management of the fund.

#### BETA PROGRAM

#### Market Value

The total notional exposure was \$1.2 billion as of June 30, 2007. The beta component contained total return swaps and futures as of June 30, 2007. MOSERS is utilizing the beta component within the domestic equity, international equity, hedged equity, and core fixed income sub-asset classes.

## Summary of Program

The beta component was added to the total fund in FY05. The beta manager seeks market exposure in the most cost efficient manner. The beta manager seeks to produce a market return gross of the financing cost to gain beta exposure. The manager's goal is to provide market exposure.

#### **Statistics**

The impact of the exposures is contained in the portfolios where the beta resides. Further information regarding swaps and futures can be found in the *Notes to the Financial Statements* on page 39.

## **Investment Advisors**

NISA Investment Advisors is the only manager in the beta program. The table below summarizes our investments within the beta pool as of June 30, 2007. Management fee information may be found on page 73 of this report.

| Investment Advisor       | Style                   | Portfolio Market Value |
|--------------------------|-------------------------|------------------------|
| NISA Investment Advisors | Synthetic beta exposure | \$1,233,102,274        |



#### ALPHA PROGRAM

#### Market Value

The alpha program allocation was \$1.97 billion or 24.3% of the total fund as of June 30, 2007.

## Summary of Portfolio

The alpha program portfolio was added to the total fund in FY05. Alpha program managers utilize skill-based investment strategies, which allow them to take advantage of periodic inefficiencies that may exist within the market. Alpha program managers seek to produce consistent returns in various economic environments. The ultimate goal within the alpha program is to provide consistent alpha with little correlation to other areas of the fund. MOSERS utilizes several different strategies within the alpha program including relative value, arbitrage, and event driven to name a few. This portfolio targets the return of cash plus 4% net of fees over long periods of time.

#### **Statistics**

The table below displays the statistical performance data (net of fees) of the alpha program portfolio as of June 30, 2007.

| Portfolio Characteristics                | 1 Year | Since Inception* |
|--|--------|------------------|
| Annualized return                        | 6.4%   | 5.7%             |
| Annualized standard deviation            | 1.8%   | 2.2%             |
| Sharpe ratio                             | 0.6    | 0.7              |
| Beta as compared to the S&P 500          | 0.0    | 0.1              |
| Beta as compared to the Lehman Aggregate | -0.5   | -0.4             |

<sup>\*</sup> Inception date October 2004

#### **Investment Advisors**

The alpha program was started in FY05. Blackstone Alternative Asset Management, an existing manager, was transferred into the alpha program. The following five managers were hired and added to the pool: Aetos Capital, AQR Capital Management, Barclays Global Investors, Bridgewater Associates, and Pacific Alternative Asset Management (PAAMCO). The table below summarizes our investments with the managers as of June 30, 2007. Management fee information may be found on page 73 of this report.

| Style                     | Portfolio Market Value  |
|---------------------------|---|
| Fund-of-funds             | \$ 445,219,007  |
| Multi-strategy hedge fund | 191,620,875   |
| Multi-strategy hedge fund | 232,787,408   |
| Fund-of-funds             | 332,567,093   |
| Multi-strategy hedge fund | 140,762,594   |
| Fund-of-funds             | 370,420,744   |
| Short-term cash           | 258,082,256   |
|                           | \$1,971,459,977   |
|                           | Fund-of-funds Multi-strategy hedge fund Multi-strategy hedge fund Fund-of-funds Multi-strategy hedge fund Fund-of-funds |



### Securities Lending Summary

#### Summary of Program

In FY07, MOSERS earned net income of \$2,859,293 through its securities lending programs. This incremental income contributed 3.5 basis points to MOSERS' total fund and 13.3 basis points to MOSERS' lendable assets. MOSERS lends its domestic equities, international equities, and domestic fixed income to a borrower that manages an agent lending program.

In an agent lending program, a large custodial bank or investment banking institution acts on behalf of the beneficial owner to lend its securities. This type of lending program is essentially a "one-stop" shopping process in which all operational aspects of the program are centered exclusively with one entity. The agent lender is responsible for making the loans to various broker-dealers, investing the cash collateral associated with the loaned securities, marking the loans and collateral to market on a daily basis, and, in most cases, indemnifying the lender against the default of a broker-dealer to whom they have loaned securities on behalf of the beneficial owner.

#### **Domestic Equity**

MOSERS generated total income from the domestic equity agent-lending program of \$994,416 in FY07. Revenue from this program was \$223,829 less than FY06 stemming from a slight decrease in lendable assets and decreased utilization of MOSERS' lendable securities leading to decreased collateral reinvestment income. Credit Suisse First Boston (CSFB) is the agent lender of MOSERS' securities for this program.

The table below highlights statistics for the last six fiscal years relating to the domestic equity securities lending program.

| Year | Average<br>Lendable | Average<br>on Loan | Average<br>Utilization | Return Added to<br>Lendable Domestic<br>Equities (basis points) | Net<br>Income |  |
|------|---------------------|--------------------|------------------------|---|---------------|--|
| FY07 | \$ 711,856,029      | \$281,338,681      | 39.5%                  | 14.0  | \$ 994,416    |  |
| FY06 | 856,712,658         | 377,314,359        | 44.0                   | 14.2  | 1,218,245     |  |
| FY05 | 775,821,287         | 247,175,198        | 31.9                   | 8.4   | 648,218       |  |
| FY04 | 1,552,186,713       | 176,626,818        | 11.4                   | 7.2   | 1,114,144     |  |
| FY03 | 1,420,413,446       | 234,776,497        | 16.5                   | 10.6  | 1,504,152     |  |
| FY02 | 2,347,223,937       | 254,035,429        | 10.8                   | 8.6   | 2,027,903     |  |

#### International Equity

MOSERS generated total income from the international equity securities lending program of \$395,017 in FY07. The revenue earned decreased by \$210,297 due to decreased utilization of lendable securities leading to decreased cash collateral income, and less attractive intrinsic values associated with securities on loan. Credit Suisse First Boston (CSFB) manages this program in an agent capacity.

The table below contains the international equity securities lending program statistics from FY02 through FY07.

| Year | Average<br>Lendable | Average<br>on Loan | Average<br>Utilization | Return Added to<br>Lendable International<br>Equities (basis points) | Net<br>Income |
|------|---------------------|--------------------|------------------------|--|---------------|
| FY07 | \$485,230,034       | \$41,033,858       | 8.5%                   | 8.1  | \$ 395,017    |
| FY06 | 483,512,648         | 48,077,237         | 9.9                    | 12.9   | 605,315       |
| FY05 | 360,790,809         | 39,881,555         | 11.1                   | 13.2   | 476,226       |
| FY04 | 462,783,570         | 53,655,836         | 11.6                   | 9.7  | 446,880       |
| FY03 | 544,976,709         | 36,820,686         | 6.8                    | 13.7   | 744,985       |
| FY02 | 728,081,371         | 70,020,289         | 9.6                    | 15.5   | 1,130,928     |

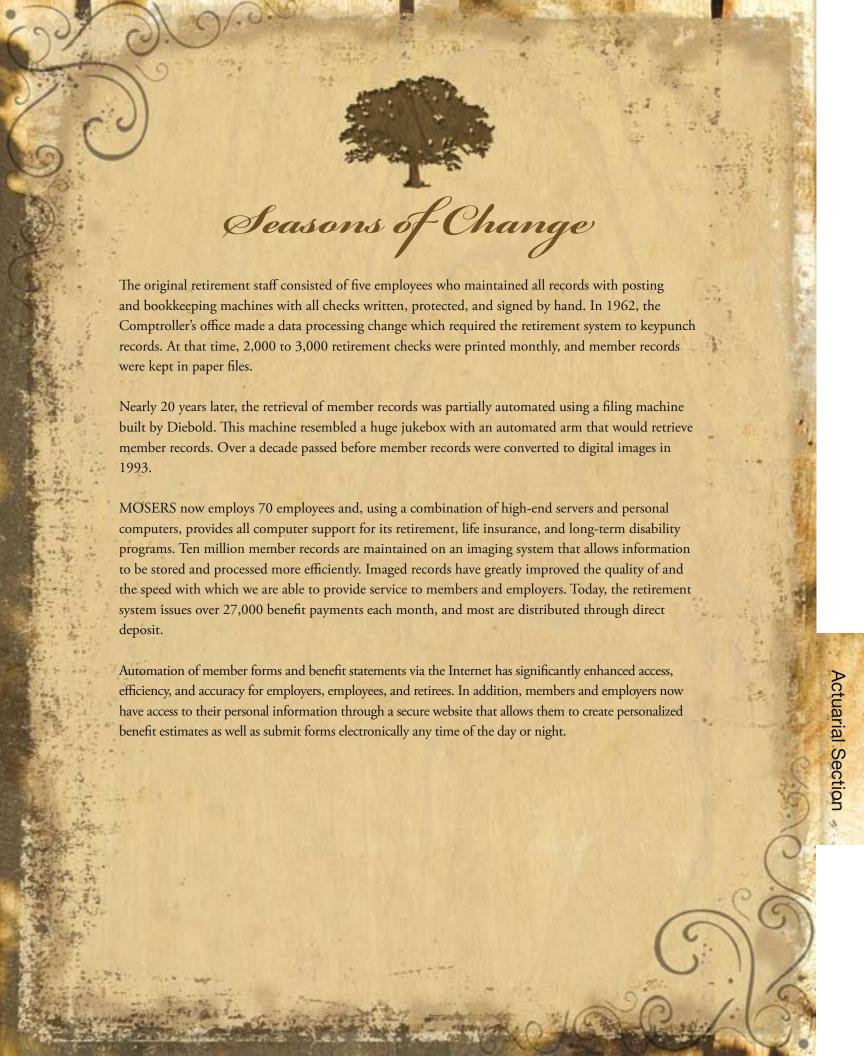


#### **Domestic Fixed Income**

MOSERS generated total income from the domestic fixed income securities lending program of \$1,469,860 during FY07. Income from this program decreased due a reduction in lendable treasury securities (attractive assets from a lending standpoint) and the decrease of the average on-loan balance caused a decrease in the cash collateral reinvestment income. CSFB manages this program in an agent capacity.

The table below presents the statistics for the domestic fixed income securities lending program for FY02 through FY07.

| Year | Average<br>Lendable | Average<br>on Loan | Average<br>Utilization | Return Added to<br>Lendable Fixed Income<br>(basis points) | Net<br>Income |
|------|---------------------|--------------------|------------------------|--|---------------|
| FY07 | \$ 950,069,746      | \$ 695,743,093     | 73.2%                  | 15.5   | \$1,469,860   |
| FY06 | 1,183,366,350       | 776,959,063        | 65.7                   | 15.7   | 1,853,181     |
| FY05 | 1,091,262,589       | 776,038,981        | 71.1                   | 19.5   | 2,126,695     |
| FY04 | 1,231,730,491       | 1,043,891,521      | 84.7                   | 20.1   | 2,475,630     |
| FY03 | 969,156,824         | 757,537,477        | 78.2                   | 17.6   | 1,707,400     |
| FY02 | 899,565,271         | 720,912,307        | 80.1                   | 19.5   | 1,750,764     |





# Actuarial Section

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## Actuary's Certification Letter



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October 2, 2007

The Board of Trustees Missouri State Employees' Retirement System 907 Wildwood Drive Jefferson City, Missouri 65102

Dear Board Members:

The basic financial objective of the Missouri State Employees' Retirement System (MOSERS) is to establish and receive contributions which:

- 1. when expressed in terms of percents of active member payroll will remain approximately level from generation to generation of Missouri citizens, and which
- 2. when combined with present assets and future investment return will be sufficient to meet the present and future financial obligations of MOSERS.

In order to measure progress toward this fundamental objective, MOSERS has annual actuarial valuations performed. The valuations (i) measure present financial position, and (ii) establish contribution rates that provide for the normal cost and level percent of payroll amortization of unfunded actuarial accrued liabilities over a reasonable period. The latest completed actuarial valuations were based upon data and assumptions as of June 30, 2007. These valuations indicate that the contribution rates for the fiscal year ending June 30, 2009, adopted by the board of trustees for the benefits scheduled to be in effect on July 1, 2007, meet the basic financial objective. These contribution rates are 12.53% of payroll for 54,363 General State Employees, and 60.07% of payroll for 400 Judges.

The actuarial valuations are based upon financial and participant data which is prepared by retirement system staff, assumptions regarding future rates of investment return and inflation, and assumptions regarding rates of retirement, turnover, death, and disability among MOSERS' members and their beneficiaries. The data is reviewed by us for internal and year-to-year consistency as well as general reasonableness prior to its use in the actuarial valuations. It is also summarized and tabulated for the purpose of analyzing trends. The demographic assumptions were adopted by the board of trustees in January, 2004 based upon recommendations made in an experience study covering the period from 1999 to 2003. The economic assumptions were adopted by the board of trustees in September, 2001 and reaffirmed in January, 2004. The assumptions and methods used in this valuation, in our opinion, meet the parameters established by Governmental Accounting Standards Board Statement No. 25.

The current benefit structure is outlined in the *Actuarial Section*. Benefit provisions evaluated were unchanged from the previous valuation. We provided the information used in the supporting schedules in the *Actuarial Section* and the *Schedules of Funding Progress* in the *Financial Section*, as well as the employer contribution rates shown in the *Schedule of Employer Contributions* in the *Financial Section*.

Based upon the valuation results, it is our opinion that the Missouri State Employees' Retirement System continues to operate in accordance with actuarial principles of level percent of payroll financing.

Respectfully submitted,

Norman L. Jones, F.S.A.

Senior Consultant & Actuary

Brad Lee Armstrong, A.S.A. Senior Consultant & Actuary



## Summary of Actuarial Assumptions

### **Economic Assumptions**

The investment return rate used in the valuations was 8.5% per year, compounded annually (net after investment expenses). This assumption is used to account for the fact that equal amounts of money payable at different points in time in the future do not have the same value presently.

Pay increase assumptions for individual active members are shown for sample ages on page 105. Part of the assumption for each age is for merit and/or seniority increase, and the other 4% recognizes wage inflation. This assumption is used to project a member's current salary to the salary upon which benefits will be based.

The active member payroll is assumed to increase 4% annually, which is the portion of the individual pay increase assumptions attributable to inflation.

The annual COLA is assumed to be 4% per year on a compounded basis when a minimum COLA of 4% is in effect and 2.8% per year on a compounded basis when no minimum COLA is in effect.

The number of active members in the MSEP is assumed to remain constant although certain new hires on or after July 1, 2002, will participate in the College and University Retirement Plan (CURP). The number of active members in the Judicial Plan is assumed to continue at the present number. Active and retired member data is reported as of May 31, 2007. It is assumed for valuation purposes that there is no turnover among members and no new entrants during the month of June.

#### Noneconomic Assumptions

The mortality table for post-retirement mortality used in evaluating allowances to be paid was the 1971 Group Annuity Mortality Table projected to the year 2000 with a 1-year age setback for men and a 7-year age setback for women. Related values are shown on page 106. This assumption is used to measure the probabilities of each benefit payment being made after retirement.

The probabilities of age and service retirement are shown on page 106. It was assumed that each member will be granted one-half year of service credit for unused leave upon retirement and military service purchases.

The probabilities of withdrawal from service, death-inservice, and disability are shown for sample ages on page 105. For disability retirement, impaired longevity was recognized by use of special mortality tables. The entry-age normal actuarial cost method of valuation was used in determining liabilities and normal cost. The normal cost was based on the benefit provisions affecting new employees (MSEP 2000). Differences in the past between assumed experience and actual experience (actuarial gains and losses) become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments (principal and interest), which are a level percent of payroll contributions.

Employer contribution dollars were assumed to be paid in equal installments throughout the employer's fiscal year.

Valuation assets recognize assumed investment return fully each year. Differences between actual and assumed investment return are phased in over a closed 5-year period. Valuation assets are not permitted to deviate from the market value by more than 20%.

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 was not audited by the actuary.

It is assumed that among active members, 80% are married at retirement, 70% of those dying in active service are married, and men are three years older than their spouses.

The liabilities for active members hired on or after July 1, 2000 (April 26, 2005 for administrative law judges) were based on MSEP 2000 benefits. The liabilities for active members hired before July 1, 2000, for male general employees with an age at hire of 35 years or less, for females general employees, for contract employees, for elected and for General assembly were based on MSEP 2000 benefits. All others were based on MSEP benefits. The BackDROP was only explicitly valued for those assumed to receive MSEP 2000 benefits.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).



Summary of Actuarial Assumptions Separations From Active Employment Before Service Retirement and Individual Pay Increase Assumptions - June 30, 2007

**MSEP** 

|                |                     | Percent of Active Members Separating Within the Next Year |                  |      |                |                    | Pay Increase Assumptions for an Individual Employee |                          |                   |                       |
|----------------|---------------------|---|------------------|------|----------------|--------------------|---|--------------------------|-------------------|-----------------------|
| Sample<br>Ages | Years of<br>Service | <u>With</u><br>Men  | ndrawal<br>Women | Do   | eath*<br>Women | <u>Disa</u><br>Men | <u>bility</u><br>Women                              | Merit and<br>Seniority** | Base<br>(Economy) | Increase<br>Next Year |
|                | 0                   | 23.8%   | 24.7%            |      |                |                    |   |                          |                   |                       |
|                | 1                   | 16.5  | 17.2             |      |                |                    |   |                          |                   |                       |
|                | 2                   | 13.4  | 13.5             |      |                |                    |   |                          |                   |                       |
|                | 3                   | 11.9  | 10.7             |      |                |                    |   |                          |                   |                       |
|                | 4                   | 12.0  | 10.7             |      |                |                    |   |                          |                   |                       |
| 20             | +5                  | 12.0  | 11.0             | .04% | .03%           | .16%               | .18%  | 2.7%                     | 4.0%              | 6.7%                  |
| 25             |                     | 12.0  | 11.0             | .05  | .04            | .16                | .18   | 2.6                      | 4.0               | 6.6                   |
| 30             |                     | 8.8   | 9.9              | .06  | .04            | .16                | .18   | 2.2                      | 4.0               | 6.2                   |
| 35             |                     | 6.2   | 6.8              | .08  | .06            | .21                | .19   | 1.9                      | 4.0               | 5.9                   |
| 40             |                     | 4.6   | 4.9              | .12  | .08            | .26                | .32   | 1.4                      | 4.0               | 5.4                   |
| 45             |                     | 3.5   | 4.3              | .19  | .11            | .34                | .37   | 1.2                      | 4.0               | 5.2                   |
| 50             |                     | 2.8   | 3.6              | .35  | .17            | .49                | .57   | 0.7                      | 4.0               | 4.7                   |
| 55             |                     | 2.4   | 2.9              | .59  | .31            | 1.07               | .89   | 0.7                      | 4.0               | 4.7                   |
| 60             |                     | 2.4   | 2.9              | .90  | .54            | 1.50               | 1.50  | 0.0                      | 4.0               | 4.0                   |
| 65             |                     | 2.4   | 2.9              | 1.44 | .83            | 1.60               | 1.70  | 0.0                      | 4.0               | 4.0                   |

Judicial Plan

|                |             |                 |           | tive Membe<br>in the Next |                   |                  | Pay Increase Assumptions for an Individual Employee |                   |                       |  |
|----------------|-------------|-----------------|-----------|---------------------------|-------------------|------------------|---|-------------------|-----------------------|--|
| Sample<br>Ages | With<br>Men | drawal<br>Women | De<br>Men | wath<br>Women             | <u>Dis</u><br>Men | ability<br>Women | Merit and<br>Seniority                              | Base<br>(Economy) | Increase<br>Next Year |  |
| 25             | 6.2%        | 4.5%            | .05%      | .04%                      | .02%              | .02%             | 1.6%  | 4.0%              | 5.6%                  |  |
| 30             | 5.5         | 3.7             | .06       | .04                       | .03               | .03              | 1.2   | 4.0               | 5.2                   |  |
| 35             | 3.8         | 2.6             | .08       | .06                       | .03               | .07              | 0.9   | 4.0               | 4.9                   |  |
| 40             | 2.7         | 2.1             | .12       | .08                       | .04               | .11              | 0.4   | 4.0               | 4.4                   |  |
| 45             | 2.1         | 1.9             | .19       | .11                       | .09               | .17              | 0.3   | 4.0               | 4.3                   |  |
| 50             | 2.1         | 1.7             | .35       | .17                       | .12               | .35              | 0.2   | 4.0               | 4.2                   |  |
| 55             | 2.1         | 1.2             | .59       | .31                       | .23               | .49              | 0.2   | 4.0               | 4.2                   |  |
| 60             | 1.7         | 0.6             | .90       | .54                       | .33               | .53              | 0.0   | 4.0               | 4.0                   |  |
| 65             | 1.2         | 0.4             | 1.44      | .83                       | .00               | .00              | 0.0   | 4.0               | 4.0                   |  |

<sup>\* 2%</sup> of the deaths in active service are assumed to be duty-related.

<sup>\*\*</sup> Does not apply to members of the General Assembly.



# Summary of Actuarial Assumptions Single Life Retirement Values - June 30, 2007

All Plans

#### Present Value of \$1/Month the First Year Increasing 4%/2.8% Yearly

Future Life Expectancy (Years)

| Sample<br>Attained | Service  |          | Disability |          | Ser   | vice  | Disability |       |
|--------------------|----------|----------|------------|----------|-------|-------|------------|-------|
| Ages               | Men      | Women    | Men        | Women    | Men   | Women | Men        | Women |
| 40                 | \$203.29 | \$213.24 | \$135.93   | \$157.34 | 38.46 | 44.22 | 19.70      | 26.02 |
| 45                 | 192.77   | 205.14   | 126.72     | 150.77   | 33.73 | 39.41 | 17.50      | 23.70 |
| 50                 | 180.29   | 195.04   | 116.43     | 143.29   | 29.17 | 34.67 | 15.35      | 21.39 |
| 55                 | 165.93   | 182.93   | 106.32     | 135.58   | 24.82 | 30.06 | 13.43      | 19.18 |
| 60                 | 149.43   | 168.96   | 97.83      | 127.14   | 20.70 | 25.67 | 11.87      | 17.01 |
| 65                 | 130.80   | 152.92   | 90.83      | 117.40   | 16.82 | 21.50 | 10.56      | 14.82 |
| 70                 | 111.02   | 134.67   | 82.22      | 105.26   | 13.32 | 17.57 | 9.13       | 12.50 |
| 75                 | 91.88    | 114.99   | 70.84      | 89.45    | 10.36 | 13.99 | 7.49       | 10.00 |
| 80                 | 73.43    | 95.64    | 56.19      | 71.98    | 7.83  | 10.91 | 5.66       | 7.62  |
| 85                 | 57.86    | 76.96    | 42.26      | 56.19    | 5.89  | 8.29  | 4.08       | 5.66  |

# Summary of Actuarial Assumptions Percent of Eligible Active Members Retiring Next Year - June 30, 2007

| I | Ν/ | $\sim$ | $\Box$ |
|---|----|--------|--------|
|   | IV | S      | _      |

### Judicial Plan

| Retirement | ,        | Year of Eligibility |            | Retirement | Percent | Percent |
|------------|----------|---------------------|------------|------------|---------|---------|
| Ages       | 1st Year | 2nd Year            | 3rd Year   | Ages       | Men     | Women   |
|            |          |                     | 0100 21002 |            |         |         |
| 48         | 20.0%    | 10.0%               | 8.0%       | 55         | 5.0%    | 8.0%    |
| 49         | 20.0     | 10.0                | 8.0        | 56         | 5.0     | 8.0     |
| 50         | 20.0     | 10.0                | 8.0        | 57         | 5.0     | 8.0     |
| 51         | 20.0     | 10.0                | 8.0        | 58         | 5.0     | 8.0     |
| 52         | 20.0     | 10.0                | 8.0        | 59         | 5.0     | 8.0     |
| 53         | 20.0     | 10.0                | 8.0        | 60         | 15.0    | 15.0    |
| 54         | 20.0     | 10.0                | 8.0        | 61         | 10.0    | 10.0    |
| 55         | 25.0     | 10.0                | 12.0       | 62         | 15.0    | 15.0    |
| 56         | 20.0     | 10.0                | 12.0       | 63         | 10.0    | 10.0    |
| 57         | 20.0     | 10.0                | 12.0       | 64         | 10.0    | 10.0    |
| 58         | 20.0     | 10.0                | 12.0       | 65         | 25.0    | 40.0    |
| 59         | 20.0     | 10.0                | 12.0       | 66         | 20.0    | 25.0    |
| 60         | 25.0     | 10.0                | 12.0       | 67         | 20.0    | 25.0    |
| 61         | 20.0     | 10.0                | 12.0       | 68         | 20.0    | 25.0    |
| 62         | 30.0     | 15.0                | 30.0       | 69         | 30.0    | 50.0    |
| 63         | 20.0     | 12.0                | 20.0       | 70         | 100.0   | 100.0   |
| 64         | 20.0     | 12.0                | 20.0       |            |         |         |
| 65         | 30.0     | 15.0                | 30.0       |            |         |         |
| 66         | 20.0     | 12.0                | 20.0       |            |         |         |
| 67         | 20.0     | 12.0                | 20.0       |            |         |         |
| 68         | 20.0     | 12.0                | 20.0       |            |         |         |
| 69         | 20.0     | 12.0                | 20.0       |            |         |         |
| 70         | 20.0     | 12.0                | 20.0       |            |         |         |
| 71         | 20.0     | 12.0                | 20.0       |            |         |         |
| 72         | 20.0     | 12.0                | 20.0       |            |         |         |
| 73         | 20.0     | 12.0                | 20.0       |            |         |         |
| 74         | 20.0     | 12.0                | 20.0       |            |         |         |
| 75 & over  | 20.0     | 12.0                | 100.0      |            |         |         |

Early retirement rates were assumed to be 5.0% from ages 57-61.



### Summary of Actuarial Assumptions

Miscellaneous and Technical Assumptions - June 30, 2007

### Pay Increase Timing

Middle of fiscal year for MSEP. Beginning of fiscal year for judges.

### **Decrement Timing**

Decrements of all types are assumed to occur mid-year.

### **Eligibility Testing**

Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

#### Benefit Service

Exact fractional service is used to determine the amount of benefit payable.

#### **Decrement Relativity**

Decrement rates are used directly from the experience study, without adjustments for multiple decrement table effects.

### Decrement Operation

Disability and mortality decrements do not operate during the first five years of service. Disability and withdrawal do not operate during normal retirement eligibility.

#### Normal Form of Benefit

The assumed normal form of benefit is the straight life form for the MSEP 2000 with 50% continuing to an eligible surviving spouse for the MSEP. No adjustment has been made for post-retirement option election changes. For judges, the assumed normal form of benefit is the straight-life form with 50% continuing to an eligible surviving spouse.

# Other Liability Adjustments MSEP Benefits for Current Retirees

- Pop-up factor for 50% survivor benefits: 1.005
- Pop-up factor for 75% survivor benefits: 1.0075
- Pop-up factor for 100% survivor benefits: 1.010

#### MSEP 2000 Benefits for Current Retirees

• Pop-up factor for 100% survivor benefits: 1.005

#### Pre-Retirement Survivor Benefits for Spouse of Terminated-Vested Member

| Age   | Factor |
|-------|--------|
| <30   | 1.11   |
| 30-39 | 1.10   |
| 40-49 | 1.08   |
| >50   | 1.04   |

There are no other liability adjustments for judges.

#### Incidence of Contributions

Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

Active and retired member data was reported as of May 31, 2007. It was brought forward to June 30, 2007, by adding one month of service for all active members and the June COLA for certain retired members. It is expected that this procedure resulted in a slight overstatement of total liabilities as of June 30, 2007. Financial information continues to be reported as of June 30. This procedure was instituted to provide sufficient time for the board of trustees to certify the appropriate contribution rate prior to the October 1 statutory deadline.



# Summary of Member Data Included in Valuations Pension Trust Funds - June 30, 2007

#### **Active Members**

|                                |        |                 |           | Group Averages |                  |
|--------------------------------|--------|-----------------|-----------|----------------|------------------|
| Valuation Group                | Number | Payroll         | Salary    | Age<br>(Yrs)   | Service<br>(Yrs) |
| MSEP                           |        |                 |           |                |                  |
| Regular state employees        | 50,331 | \$1,640,905,677 | \$ 32,602 | 44.6           | 10.3             |
| Elected officials              | 6      | 592,060         | 98,677    | 47.4           | 6.3              |
| Legislative clerks             | 55     | 1,666,865       | 30,307    | 57.9           | 18.3             |
| Legislators                    | 198    | 6,219,774       | 31,413    | 49.7           | 1.6              |
| Uniformed water patrol         | 92     | 4,415,599       | 47,996    | 39.2           | 14.0             |
| Conservation department        | 1,541  | 62,182,642      | 40,352    | 43.9           | 13.5             |
| School-term salaried employees | 2,099  | 127,066,006     | 60,536    | 53.6           | 17.8             |
| Administrative law judges      | 41     | 3,594,707       | 87,676    | 52.4           | 13.3             |
| Total MSEP group               | 54,363 | \$1,846,643,330 | 33,969    | 45.0           | 10.7             |
| Judicial Plan                  | 400    | \$ 40,846,581   | \$102,116 | 54.4           | 11.2             |

#### **Retired Members**

|                            |        |                 | Group A   | verages      |
|----------------------------|--------|-----------------|-----------|--------------|
| Type of Benefit Payment    | Number | Annual Benefits | Benefit   | Age<br>(Yrs) |
| MSEP                       |        |                 |           |              |
| Retirement                 | 25,287 | \$ 376,052,427  | \$ 14,871 | 69.1         |
| Disability                 | 12     | 39,588          | 3,299     | 57.3         |
| Survivor of active member  | 1,318  | 11,016,328      | 8,358     | 59.6         |
| Survivor of retired member | 2,075  | 19,329,851      | 9,316     | 74.0         |
| Total MSEP group           | 28,692 | \$ 406,438,194  | 14,166    | 69.0         |
| Judicial Plan              | 437    | \$ 21,666,281   | \$ 49,580 | 72.8         |

#### Others

| Group         | Terminated<br>Vested | Leave of<br>Absence | Long-Term<br>Disability |
|---------------|----------------------|---------------------|-------------------------|
| MSEP          | 16,518               | 277                 | 1,031                   |
| Judicial Plan | 60                   | 0                   | 0                       |



# Active Members by Attained Age and Years of Service June 30, 2007

**MSEP** 

|              |        |        | Years |       |       | Totals |         |        |                   |
|--------------|--------|--------|-------|-------|-------|--------|---------|--------|-------------------|
| Attained Age | 0-4    | 5-9    | 10-14 | 15-19 | 20-24 | 25-29  | 30 Plus | No.    | Valuation Payroll |
| 15-19        | 47     |        |       |       |       |        |         | 47     | \$ 926,565        |
| 20-24        | 1,580  | 18     |       |       |       |        |         | 1,598  | 37,261,740        |
| 25-29        | 3,811  | 811    | 10    |       |       |        |         | 4,632  | 128,408,471       |
| 30-34        | 2,502  | 2,177  | 480   | 5     |       |        |         | 5,164  | 157,926,545       |
| 35-39        | 2,066  | 2,196  | 1,769 | 378   | 27    |        |         | 6,436  | 208,102,452       |
| 40-44        | 1,839  | 1,831  | 1,456 | 1,210 | 592   | 33     |         | 6,961  | 236,292,484       |
| 45-49        | 1,832  | 1,899  | 1,415 | 1,255 | 1,230 | 748    | 79      | 8,458  | 296,581,060       |
| 50-54        | 1,549  | 1,761  | 1,382 | 1,287 | 1,176 | 1,023  | 479     | 8,657  | 314,968,885       |
| 55-59        | 1,280  | 1,497  | 1,160 | 1,201 | 1,010 | 622    | 564     | 7,334  | 270,871,970       |
| 60           | 210    | 248    | 224   | 193   | 146   | 60     | 76      | 1,157  | 42,713,970        |
| 61           | 165    | 205    | 192   | 176   | 118   | 73     | 72      | 1,001  | 37,745,041        |
| 62           | 100    | 161    | 132   | 113   | 86    | 42     | 39      | 673    | 26,103,554        |
| 63           | 76     | 126    | 93    | 83    | 65    | 28     | 34      | 505    | 19,265,394        |
| 64           | 64     | 99     | 110   | 72    | 52    | 28     | 47      | 472    | 18,937,010        |
| 65           | 62     | 95     | 63    | 62    | 31    | 13     | 39      | 365    | 14,373,272        |
| 66           | 14     | 53     | 56    | 46    | 17    | 11     | 28      | 225    | 8,595,405         |
| 67           | 17     | 41     | 26    | 29    | 14    | 7      | 15      | 149    | 6,252,303         |
| 68           | 20     | 24     | 21    | 20    | 9     | 6      | 22      | 122    | 5,145,162         |
| 69           | 20     | 16     | 21    | 17    | 6     | 6      | 18      | 104    | 4,445,001         |
| 70 & Over    | 42     | 57     | 61    | 56    | 35    | 15     | 37      | 303    | 11,727,046        |
| Totals       | 17,296 | 13,315 | 8,671 | 6,203 | 4,614 | 2,715  | 1,549   | 54,363 | \$1,846,643,330   |

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

#### **Group Averages:**

Age 45.0 years Service 10.7 years Annual pay \$33,969



# Active Members by Attained Age and Years of Service June 30, 2007

Judicial Plan

|              | Years of Service to Valuation Date |     |       |       |       |       |         |     | Totals            |
|--------------|------------------------------------|-----|-------|-------|-------|-------|---------|-----|-------------------|
| Attained Age | 0-4                                | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 Plus | No. | Valuation Payroll |
| 30-34        | 4                                  |     |       |       |       |       |         | 4   | \$ 384,000        |
| 35-39        | 10                                 | 2   |       |       |       |       |         | 12  | 1,152,000         |
| 40-44        | 18                                 | 11  | 1     |       |       |       |         | 30  | 2,931,000         |
| 45-49        | 16                                 | 18  | 13    | 3     | 1     |       |         | 51  | 5,193,097         |
| 50-54        | 20                                 | 20  | 24    | 11    | 7     | 4     |         | 86  | 8,760,002         |
| 55-59        | 23                                 | 30  | 23    | 13    | 12    | 6     | 2       | 109 | 11,197,992        |
| 60           | 2                                  | 7   | 6     | 3     | 1     | 2     | 1       | 22  | 2,271,000         |
| 61           | 2                                  | 6   | 6     | 3     |       | 2     | 1       | 20  | 2,041,998         |
| 62           | 2                                  | 1   | 2     | 4     | 5     | 2     | 1       | 17  | 1,826,496         |
| 63           | 1                                  | 2   | 3     | 4     | 2     |       |         | 12  | 1,188,000         |
| 64           |                                    | 3   | 1     |       |       | 2     |         | 6   | 612,000           |
| 65           | 1                                  | 4   | 2     |       | 2     | 1     |         | 10  | 1,052,999         |
| 66           |                                    | 2   | 1     | 2     | 2     |       |         | 7   | 750,999           |
| 67           |                                    | 1   | 1     | 1     |       | 1     | 1       | 5   | 535,000           |
| 68           | 1                                  |     |       | 1     | 1     |       | 1       | 4   | 414,999           |
| 69           |                                    |     |       | 3     |       |       |         | 3   | 312,000           |
| 70           |                                    |     |       | 1     |       |       | 1       | 2   | 222,999           |
| Totals       | 100                                | 107 | 83    | 49    | 33    | 20    | 8       | 400 | \$ 40,846,581     |

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

#### **Group Averages:**

Age 54.4 years
Service 11.2 years
Annual pay \$102,116



## Schedules of Active Member Valuation Data

Six Years Ended June 30, 2007

#### **MSEP**

| Valuation Date | Number | Annual Payroll  | Annual Average Pay | % Increase<br>in Average Pay |
|----------------|--------|-----------------|--------------------|------------------------------|
| June 30, 2002  | 58,616 | \$1,773,283,484 | \$30,253           | 0.54%                        |
| June 30, 2003  | 57,558 | 1,739,895,364   | 30,229             | (0.08)                       |
| June 30, 2004  | 55,914 | 1,737,454,454   | 31,074             | 2.80                         |
| June 30, 2005  | 55,944 | 1,806,600,560   | 32,293             | 3.92                         |
| June 30, 2006  | 54,493 | 1,777,277,138   | 32,615             | 1.00                         |
| June 30, 2007  | 54,363 | 1,846,643,330   | 33,969             | 4.15                         |

#### ALJLAP\*

| Valuation Date | Number | Annual Payroll | Annual Average Pay | % Increase<br>in Average Pay |
|----------------|--------|----------------|--------------------|------------------------------|
| June 30, 2002  | 58     | \$4,779,504    | \$82,405           | 0.77%                        |
| June 30, 2003  | 57     | 4,657,896      | 81,717             | (0.83)                       |
| June 30, 2004  | 57     | 4,655,340      | 81,673             | (0.05)                       |

<sup>\*</sup> Transferred to the MSEP during the year ended June 30, 2005.

#### Judicial Plan

| Valuation Date | Number | Annual Payroll | Annual Average Pay | % Increase<br>in Average Pay |
|----------------|--------|----------------|--------------------|------------------------------|
| June 30, 2002  | 392    | \$40,068,744   | \$102,216          | 0.66%                        |
| June 30, 2003  | 392    | 40,052,952     | 102,176            | (0.04)                       |
| June 30, 2004  | 391    | 39,878,499     | 101,991            | (0.18)                       |
| June 30, 2005  | 392    | 40,016,098     | 102,082            | 0.09                         |
| June 30, 2006  | 394    | 40,270,535     | 102,209            | 0.12                         |
| June 30, 2007  | 400    | 40,846,581     | 102,116            | (0.09)                       |



# Retirees and Beneficiaries Added and Removed

Six Years Ended June 30, 2007

**MSEP** 

Added to Rolls

| Fiscal Year Ended | Classification                        | Benefit Type                           | Number | Annual<br>Allowances |  |
|-------------------|---------------------------------------|--|--------|----------------------|--|
| June 30, 2002     | General employees                     | Retirement                             | 1,840  | \$32,360,047         |  |
| , ,               | 1 /                                   | Survivor of active                     | 84     | 842,611              |  |
|                   |                                       | Survivor of retired                    | 209    | 1,805,486            |  |
|                   |                                       | Disability                             | 0      | 3,474                |  |
|                   |                                       | Occupational disability                | 0      | 0                    |  |
|                   | Lincoln University - vested           | Retirement                             | 2      | 6,061                |  |
|                   | ,                                     | Survivor of active                     | 0      | 0                    |  |
|                   | Legislators                           | Retirement                             | 8      | 238,058              |  |
|                   | 0                                     | Survivor of active                     | 1      | 6,950                |  |
|                   |                                       | Survivor of retired                    | 4      | 59,947               |  |
|                   | Elected officials                     | Retirement                             | 0      | 304                  |  |
|                   |                                       | Survivor of active                     | 0      | 2,277                |  |
|                   |                                       | Survivor of retired                    | 0      | 968                  |  |
|                   | Administrative law judges             | Retirement                             | 1      | 67,877               |  |
|                   | and legal advisors                    | Survivor of active                     | 0      | 0                    |  |
|                   |                                       | Survivor of retired                    | 0      | 5,582                |  |
| June 30, 2003     | General employees                     | Retirement                             | 1,819  | 33,654,082           |  |
|                   | 1 /                                   | Survivor of active                     | 76     | 808,507              |  |
|                   |                                       | Survivor of retired                    | 206    | 1,944,744            |  |
|                   |                                       | Disability                             | 0      | 2,109                |  |
|                   |                                       | Occupational disability                | 0      | 0                    |  |
|                   | Lincoln University - vested           | Retirement                             | 0      | 0                    |  |
|                   |                                       | Survivor of active                     | 0      | 0                    |  |
|                   | Legislators                           | Retirement                             | 45     | 880,632              |  |
|                   | 2661011110110                         | Survivor of active                     | 1      | 27,031               |  |
|                   |                                       | Survivor of retired                    | 4      | 65,987               |  |
|                   | Elected officials                     | Retirement                             | 0      | (13,546)             |  |
|                   | Elected officials                     | Survivor of active                     | 0      | 2,369                |  |
|                   |                                       | Survivor of retired                    | 0      | 1,007                |  |
|                   | Administrative law judges             | Retirement                             | 3      | 166,161              |  |
|                   | and legal advisors                    | Survivor of active                     | 0      | 0                    |  |
|                   | and legal advisors                    | Survivor of retired                    | 0      | 5,601                |  |
| June 30, 2004     | General employees                     | Retirement                             | 2,454  | 42,366,392           |  |
| Julie 30, 2004    | General employees                     | Survivor of active                     | 91     | 926,617              |  |
|                   |                                       | Survivor of retired                    | 171    | 1,965,930            |  |
|                   |                                       | Disability                             | 1      | 6,657                |  |
|                   |                                       | Occupational disability                | 0      | 0,07/                |  |
|                   | Lincoln University - vested           | Retirement                             | 0      | 0                    |  |
|                   | Lincoln Oniversity - vested           | Survivor of active                     | 0      | 0                    |  |
|                   | Legislators                           | Retirement                             | 10     | 182,124              |  |
|                   | Legislators                           | Survivor of active                     |        |                      |  |
|                   |                                       | Survivor of active Survivor of retired | 1      | 16,311               |  |
|                   | $\mathbf{E}^{1}$ . 1 $\mathbf{C}$ : 1 |  | 3      | 73,196               |  |
|                   | Elected officials                     | Retirement                             | 0      | 2.464                |  |
|                   |                                       | Survivor of active                     | 0      | 2,464                |  |
|                   | A.1 1 1                               | Survivor of retired                    | 0      | 1,045                |  |
|                   | Administrative law judges             | Retirement                             | 1      | 62,331               |  |
|                   | and legal advisors                    | Survivor of active                     | 0      | 0                    |  |
|                   |                                       | Survivor of retired                    | 2      | 58,362               |  |



Source of Data: MOSERS benefit payment database as of June 30, 2007. Other *Actuarial Section* information reported based on MOSERS valuation data as of May 31, 2007.

| Remove | d From Rolls         | Rolls at End of Year |                      |  |                                |  |
|--------|----------------------|----------------------|----------------------|--|--------------------------------|--|
| Number | Annual<br>Allowances | Number               | Annual<br>Allowances | Percentage<br>Increase (Decrease)<br>in Annual<br>Allowances | Average<br>Annual<br>Allowance | Percentage<br>Increase (Decrease)<br>in Average<br>Annual<br>Allowance |
| 685    | \$6,249,943          | 18,930               | \$236,193,447        | 12.43%   | \$12,477                       | 5.57%  |
| 30     | 137,619              | 1,094                | 7,262,392            | 10.75  | 6,638                          | 5.28   |
| 67     | 378,545              | 1,456                | 10,545,180           | 15.65  | 7,243                          | 4.38   |
| 7      | 32,754               | 31                   | 108,906              | (21.19)  | 3,513                          | (3.38)   |
| 0      | 0                    | 1                    | 17,448               | 0.00   | 17,448                         | 0.00   |
| 0      | 0                    | 10                   | 44,905               | 15.60  | 4,491                          | (7.52)   |
| 0      | 0                    | 1                    | 2,624                | 0.00   | 2,624                          | 0.00   |
| 4      | 80,340               | 175                  | 3,385,372            | 4.89   | 19,345                         | 2.49   |
| 0      | 0                    | 9                    | 79,454               | 9.59   | 8,828                          | (2.59)   |
| 1      | 4,195                | 39                   | 367,509              | 17.88  | 9,423                          | 8.81   |
| 0      | 0                    | 9                    | 373,707              | 0.08   | 41,523                         | 0.08   |
| 0      | 0                    | 1                    | 59,215               | 4.00   | 59,215                         | 4.00   |
| 0      | 0                    | 1                    | 25,167               | 4.00   | 25,167                         | 4.00   |
| 1      | 46,580               | 16                   | 660,874              | 3.33   | 41,305                         | 3.33   |
| 0      | 0                    | 0                    | 0                    | 0.00   | 0                              | 0.00   |
| 0      | 0                    | 8                    | 157,691              | 3.67   | 19,711                         | 3.67   |
| 734    | 6,798,563            | 20,015               | 263,048,966          | 11.37  | 13,143                         | 5.34   |
| 28     | 97,740               | 1,142                | 7,973,159            | 9.79   | 6,982                          | 5.18   |
| 71     | 368,959              | 1,591                | 12,120,965           | 14.94  | 7,618                          | 5.18   |
| 3      | 15,849               | 28                   | 95,166               | (12.62)  | 3,399                          | (3.25)   |
| 0      | 0                    | 1                    | 17,448               | 0.00   | 17,448                         | 0.00   |
| 1      | 1,051                | 9                    | 43,854               | (2.34)   | 4,873                          | 8.51   |
| 0      | 0                    | 1                    | 2,624                | 0.00   | 2,624                          | 0.00   |
| 4      | 71,803               | 216                  | 4,194,201            | 23.89  | 19,418                         | 0.38   |
| 0      | 0                    | 10                   | 106,485              | 34.02  | 10,649                         | 20.63  |
| 3      | 20,943               | 40                   | 412,553              | 12.26  | 10,314                         | 9.46   |
| 0      | 0                    | 9                    | 360,161              | (3.62)   | 40,018                         | (3.62)   |
| 0      | 0                    | 1                    | 61,584               | 4.00   | 61,584                         | 4.00   |
| 0      | 0                    | 1                    | 26,174               | 4.00   | 26,174                         | 4.00   |
| 0      | 0                    | 19                   | 827,035              | 25.14  | 43,528                         | 5.38   |
| 0      | 0                    | 0                    | 0                    | 0.00   | 0                              | 0.00   |
| 0      | 0                    | 8                    | 163,292              | 3.55   | 20,412                         | 3.56   |
| 733    | 7,302,918            | 21,736               | 298,112,440          | 13.33  | 13,715                         | 4.35   |
| 38     | 197,250              | 1,195                | 8,702,526            | 9.15   | 7,282                          | 4.30   |
| 96     | 623,128              | 1,666                | 13,463,767           | 11.08  | 8,081                          | 6.08   |
| 5      | 21,761               | 24                   | 80,062               | (15.87)  | 3,336                          | (1.85)   |
| 0      | 0                    | 1                    | 17,448               | 0.00   | 17,448                         | 0.00   |
| 0      | 0                    | 9                    | 43,854               | 0.00   | 4,873                          | 0.00   |
| 0      | 0                    | 1                    | 2,624                | 0.00   | 2,624                          | 0.00   |
| 5      | 116,367              | 221                  | 4,259,958            | 1.57   | 19,276                         | (0.73)   |
| 0      | 0                    | 11                   | 122,796              | 15.32  | 11,163                         | 4.83   |
| 1      | 20,633               | 42                   | 465,116              | 12.74  | 11,074                         | 7.37   |
| 0      | 0                    | 9                    | 360,161              | 0.00   | 40,018                         | 0.00   |
| 0      | 0                    | 1                    | 64,048               | 4.00   | 64,048                         | 4.00   |
| 0      | 0                    | 1                    | 27,219               | 3.99   | 27,219                         | 3.99   |
| 3      | 152,311              | 17                   | 737,055              | (10.88)  | 43,356                         | (0.40)   |
| 0      | 49.206               | 0                    | 172 249              | 0.00   | 0                              | 0.00   |
| 2      | 48,306               | 8                    | 173,348              | 6.16   | 21,669                         | 6.16   |

MSEP continued on pages 114-115



# Retirees and Beneficiaries Added and Removed

Six Years Ended June 30, 2007

MSEP continued from pages 112-113

Added to Rolls

| Fiscal Year Ended | Classification                               | Benefit Type                              | Number | Annual<br>Allowances |  |
|-------------------|--|---|--------|----------------------|--|
| June 30, 2005     | General employees                            | Retirement                                | 1,719  | \$27,796,807         |  |
| , . , .           | 1 /  | Survivor of active                        | 78     | 891,051              |  |
|                   |  | Survivor of retired                       | 206    | 2,036,085            |  |
|                   |  | Disability                                | 0      | 1,409                |  |
|                   |  | Occupational disability                   | 0      | 0                    |  |
|                   | Lincoln University - vested                  | Retirement                                | 1      | 3,086                |  |
|                   | ,  | Survivor of active                        | 0      | 0                    |  |
|                   | Legislators                                  | Retirement                                | 31     | 606,743              |  |
|                   | 8  | Survivor of active                        | 2      | 15,361               |  |
|                   |  | Survivor of retired                       | 3      | 47,695               |  |
|                   | Elected officials                            | Retirement                                | 2      | 92,916               |  |
|                   | Exected officials                            | Survivor of active                        | 0      | 2,562                |  |
|                   |  | Survivor of retired                       | 0      | 1,089                |  |
|                   | Administrative law judges                    | Retirement                                | 4      | 203,829              |  |
|                   | and legal advisors                           | Survivor of active                        | 0      | 0                    |  |
|                   | and legal advisors                           | Survivor of retired                       | 0      | 4,987                |  |
|                   |  | Survivor or retired                       |        | 1,707                |  |
| June 30, 2006     | General employees                            | Retirement                                | 1,853  | 30,323,860           |  |
|                   |  | Survivor of active                        | 76     | 997,296              |  |
|                   |  | Survivor of retired                       | 214    | 2,460,805            |  |
|                   |  | Disability                                | 0      | 1,356                |  |
|                   |  | Occupational disability                   | 0      | 0                    |  |
|                   | Lincoln University - vested                  | Retirement                                | 1      | 3,535                |  |
|                   | ,  | Survivor of active                        | 0      | 0                    |  |
|                   | Legislators                                  | Retirement                                | 6      | 141,548              |  |
|                   | 8  | Survivor of active                        | 0      | 4,398                |  |
|                   |  | Survivor of retired                       | 5      | 53,788               |  |
|                   | Elected officials                            | Retirement                                | 1      | 24,113               |  |
|                   | Exected officials                            | Survivor of active                        | 0      | 2,664                |  |
|                   |  | Survivor of retired                       | 0      | 1,132                |  |
|                   | Administrative law judges                    | Retirement                                | 6      | 219,793              |  |
|                   | and legal advisors                           | Survivor of active                        | 0      | 0                    |  |
|                   | and legal advisors                           | Survivor of retired                       | 1      | 30,686               |  |
| I 20 2007         | 6 - 1 - 1                                    | Details                                   | 2 211  | 27 020 150           |  |
| June 30, 2007     | General employees                            | Retirement                                | 2,211  | 37,839,159           |  |
|                   |  | Survivor of active                        | 89     | 897,874              |  |
|                   |  | Survivor of retired                       | 213    | 2,630,107            |  |
|                   |  | Disability                                | 0      | 1,104                |  |
|                   |  | Occupational disability                   | 0      | 0                    |  |
|                   | Lincoln University - vested                  | Retirement                                | 0      | 0                    |  |
|                   | <b>.</b>                                     | Survivor of active                        | 0      | 0                    |  |
|                   | Legislators                                  | Retirement                                | 19     | 303,741              |  |
|                   |  | Survivor of active                        | 1      | 8,157                |  |
|                   |  | Survivor of retired                       | 5      | 95,976               |  |
|                   | Elected officials                            | Retirement                                | 0      | 0                    |  |
|                   |  | Survivor of active                        | 0      | 2,771                |  |
|                   | A 1 1 1                                      | Survivor of retired                       | 0      | 1,178                |  |
|                   | Administrative law judges and legal advisors | Retirement                                | 0      | 35,846               |  |
|                   | and legal advisors                           | Survivor of active                        | 0      | 0                    |  |
|                   |  | Survivor of active<br>Survivor of retired | 0      | 6,071                |  |
|                   |  | Survivor of retired                       | U      | 0,0/1                |  |



Source of Data: MOSERS benefit payment database as of June 30, 2007. Other *Actuarial Section* information reported based on MOSERS valuation data as of May 31, 2007.

| Removed From Rolls |                      | Rolls at | t End of Year        |  |                                |  |
|--------------------|----------------------|----------|----------------------|--|--------------------------------|--|
| Number             | Annual<br>Allowances | Number   | Annual<br>Allowances | Percentage<br>Increase (Decrease)<br>in Annual<br>Allowances | Average<br>Annual<br>Allowance | Percentage<br>Increase (Decrease)<br>in Average<br>Annual<br>Allowance |
| 737                | \$6,879,542          | 22,718   | \$319,029,705        | 7.02%  | \$14,043                       | 2.39%  |
| 47                 | 227,380              | 1,226    | 9,366,197            | 7.63   | 7,640                          | 4.92   |
| 92                 | 632,735              | 1,780    | 14,867,117           | 10.42  | 8,352                          | 3.35   |
| 3                  | 12,123               | 21       | 69,348               | (13.38)  | 3,302                          | (1.02)   |
| 1                  | 17,448               | 0        | 0                    | (100.00)   | 0                              | (100.00)   |
| 0                  | 0                    | 10       | 46,940               | 7.04   | 4,694                          | (3.67)   |
| 0                  | 0                    | 1        | 2,624                | 0.00   | 2,624                          | 0.00   |
| 14                 | 274,590              | 238      | 4,592,111            | 7.80   | 19,295                         | 0.10   |
| 0                  | 0                    | 13       | 138,157              | 12.51  | 10,627                         | (4.80)   |
| 1                  | 4,156                | 44       | 508,655              | 9.36   | 11,560                         | 4.39   |
| 0                  | 0                    | 11       | 453,077              | 25.80  | 41,189                         | 2.93   |
| 0                  | 0                    | 1        | 66,610               | 4.00   | 66,610                         | 4.00   |
| 0                  | 0                    | 1        | 28,308               | 4.00   | 28,308                         | 4.00   |
| 0                  | 0                    | 21       | 940,884              | 27.65  | 44,804                         | 3.34   |
| 0                  | 0                    | 0        | 0                    | 0.00   | 0                              | 0.00   |
| 0                  | 0                    | 8        | 178,335              | 2.88   | 22,292                         | 2.88   |
| 749                | 7,656,047            | 23,822   | 341,697,518          | 7.11   | 14,344                         | 2.14   |
| 48                 | 201,958              | 1,254    | 10,161,535           | 8.49   | 8,103                          | 6.06   |
| 80                 | 658,501              | 1,914    | 16,669,421           | 12.12  | 8,709                          | 4.27   |
| 5                  | 13,560               | 16       | 57,144               | (17.60)  | 3,572                          | 8.18   |
| 0                  | 0                    | 0        | 0                    | 0.00   | 0                              | 0.00   |
| 0                  | 0                    | 11       | 50,475               | 7.53   | 4,589                          | (2.24)   |
| 0                  | 0                    | 1        | 2,624                | 0.00   | 2,624                          | 0.00   |
| 6                  | 124,079              | 238      | 4,609,580            | 0.38   | 19,368                         | 0.38   |
| 0                  | 0                    | 13       | 142,555              | 3.18   | 10,966                         | 3.19   |
| 2                  | 39,490               | 47       | 522,953              | 2.81   | 11,127                         | (3.75)   |
| 0                  | 0                    | 12       | 477,190              | 5.32   | 39,766                         | (3.45)   |
| 0                  | 0                    | 1        | 69,274               | 4.00   | 69,274                         | 4.00   |
| 0                  | 0                    | 1        | 29,440               | 4.00   | 29,440                         | 4.00   |
| 2                  | 105,777              | 25       | 1,054,900            | 12.12  | 42,196                         | (5.82)   |
| 0                  | 0                    | 0        | 0                    | 0.00   | 0                              | 0.00   |
| 0                  | 0                    | 9        | 209,021              | 17.21  | 23,225                         | 4.19   |
| 740                | 8,391,528            | 25,293   | 371,145,149          | 8.62   | 14,674                         | 2.30   |
| 39                 | 281,916              | 1,304    | 10,777,493           | 6.06   | 8,265                          | 2.00   |
| 106                | 810,074              | 2,021    | 18,489,454           | 10.92  | 9,149                          | 5.05   |
| 4                  | 18,658               | 12       | 39,590               | (30.72)  | 3,299                          | (7.64)   |
| 0                  | 0                    | 0        | 0                    | 0.00   | 0                              | 0.00   |
| 0                  | 0                    | 11       | 50,475               | 0.00   | 4,589                          | 0.00   |
| 0                  | 0                    | 1        | 2,624                | 0.00   | 2,624                          | 0.00   |
| 7                  | 178,306              | 250      | 4,735,015            | 2.72   | 18,940                         | (2.21)   |
| 0                  | 0                    | 14       | 150,712              | 5.72   | 10,765                         | (1.83)   |
| 0                  | 0                    | 52       | 618,929              | 18.35  | 11,902                         | 6.97   |
| 0                  | 0                    | 12       | 477,190              | 0.00   | 39,766                         | 0.00   |
| 0                  | 0                    | 1        | 72,045               | 4.00   | 72,045                         | 4.00   |
| 0                  | 0                    | 1        | 30,618               | 4.00   | 30,618                         | 4.00   |
| 0                  | 0                    | 25       | 1,090,746            | 3.40   | 43,630                         | 3.40   |
| 0                  | 0                    | 0        | 0                    | 0.00   | 0                              | 0.00   |
| 0                  | 0                    | 9        | 215,092              | 2.90   | 23,899                         | 2.90   |
|                    |                      |          |                      |  |                                |  |



## Retirees and Beneficiaries Added and Removed

Six Years Ended June 30, 2007

Judicial Plan

| Fiscal Year Ended | Benefit Type        | Number | Annual<br>Allowances | Number | Annual<br>Allowances |  |
|-------------------|---------------------|--------|----------------------|--------|----------------------|--|
| June 30, 2002     | Retirement          | 11     | \$ 984,612           | 9      | \$455,021            |  |
| June 50, 2002     | Survivor of active  | 1      | 57,051               | ĺ      | 28,541               |  |
|                   | Survivor of retired | 5      | 195,971              | 5      | 84,932               |  |
|                   | Disability          | 0      | 0                    | 1      | 48,000               |  |
| June 30, 2003     | Retirement          | 23     | 1,445,716            | 10     | 560,588              |  |
| , . ,             | Survivor of active  | 0      | 34,820               | 0      | 0                    |  |
|                   | Survivor of retired | 6      | 214,029              | 7      | 101,944              |  |
|                   | Disability          | 0      | 0                    | 0      | 0                    |  |
| June 30, 2004     | Retirement          | 12     | 1,076,421            | 11     | 652,803              |  |
|                   | Survivor of active  | 0      | 36,471               | 2      | 56,802               |  |
|                   | Survivor of retired | 7      | 269,344              | 4      | 86,633               |  |
|                   | Disability          | 0      | 0                    | 0      | 0                    |  |
| June 30, 2005     | Retirement          | 12     | 1,159,324            | 8      | 402,329              |  |
|                   | Survivor of active  | 0      | 35,224               | 1      | 14,247               |  |
|                   | Survivor of retired | 6      | 211,269              | 6      | 75,799               |  |
|                   | Disability          | 0      | 0                    | 0      | 0                    |  |
| June 30, 2006     | Retirement          | 11     | 952,792              | 11     | 583,695              |  |
|                   | Survivor of active  | 2      | 89,661               | 2      | 33,794               |  |
|                   | Survivor of retired | 6      | 219,711              | 4      | 79,701               |  |
|                   | Disability          | 1      | 54,000               | 0      | 0                    |  |
| June 30, 2007     | Retirement          | 47     | 2,802,873            | 15     | 967,969              |  |
| -                 | Survivor of active  | 1      | 64,452               | 2      | 40,742               |  |
|                   | Survivor of retired | 13     | 526,008              | 4      | 91,948               |  |
|                   | Disability          | 0      | 0                    | 1      | 54,000               |  |

Added to Rolls

**Removed From Rolls** 



| D 1 | 1 |     | -   | 1 | CT | 7   |
|-----|---|-----|-----|---|----|-----|
| RΛ  |   | nt. | Hne | പ | ŧν | ear |
|     |   |     |     |   |    |     |

| Number | Annual<br>Allowances | Percentage<br>Increase (Decrease)<br>in Annual<br>Allowance | Average<br>Annual<br>Allowance | Percentage<br>Increase (Decrease)<br>in Average<br>Annual<br>Allowance |
|--------|----------------------|---|--------------------------------|--|
| 257    | \$13,782,720         | 4.00%   | \$53,629                       | 3.19%  |
| 44     | 903,906              | 3.26  | 20,543                         | 3.26   |
| 80     | 1,572,764            | 7.60  | 19,660                         | 7.60   |
| 0      | 0                    | (100.00)  | 0                              | (100.00)   |
| 270    | 14,667,848           | 6.42  | 54,325                         | 1.30   |
| 44     | 938,726              | 3.85  | 21,335                         | 3.86   |
| 79     | 1,684,849            | 7.13  | 21,327                         | 8.48   |
| 0      | 0                    | 0.00  | 0                              | 0.00   |
| 271    | 15,091,466           | 2.89  | 55,688                         | 2.51   |
| 42     | 918,395              | (2.17)  | 21,867                         | 2.49   |
| 82     | 1,867,560            | 10.84   | 22,775                         | 6.79   |
| 0      | 0                    | 0.00  | 0                              | 0.00   |
| 275    | 15,848,461           | 5.02  | 57,631                         | 3.49   |
| 41     | 939,372              | 2.28  | 22,912                         | 4.78   |
| 82     | 2,003,030            | 7.25  | 24,427                         | 7.25   |
| 0      | 0                    | 0.00  | 0                              | 0.00   |
| 275    | 16,217,558           | 2.33  | 58,973                         | 2.33   |
| 41     | 995,239              | 5.95  | 24,274                         | 5.94   |
| 84     | 2,143,040            | 6.99  | 25,512                         | 4.44   |
| 1      | 54,000               | 0.00  | 54,000                         | 0.00   |
| 307    | 18,052,462           | 11.31   | 58,803                         | (0.29)   |
| 40     | 1,018,949            | 2.38  | 25,474                         | 4.71   |
| 93     | 2,577,100            | 20.25   | 27,711                         | 7.94   |
| 0      | 0                    | (100.00)  | 0                              | (100.00)   |

Source of Data: MOSERS benefit payment database as of June 30, 2007. Other *Actuarial Section* information reported based on MOSERS valuation data as of May 31, 2007.



# Short-Term Solvency Test Pension Trust Funds - Ten Years Ended June 30, 2007

**MSEP** 

| 1        | 1 4     | 1 T .  | 1 .1     | c   |
|----------|---------|--------|----------|-----|
| Actuaria | Accrise | 1 1 12 | hilities | tor |
|          |         |        |          |     |

| F: 1           | Member            | Retirees and      | Members, Employer    | Actuarial Value                     | Act          | Percentage of<br>uarial Liabiliti |       |
|----------------|-------------------|-------------------|----------------------|-------------------------------------|--------------|-----------------------------------|-------|
| Fiscal<br>Year | Contributions (1) | Beneficiaries (2) | Financed Portion (3) | of Assets Available<br>for Benefits | Coverage (1) | by Assets Avail                   |       |
| Icai           | (1)               | (2)               | (3)                  | 101 Delicits                        | (1)          | (2)                               | (3)   |
| 1998           | \$447,716         | \$1,688,502,950   | \$3,229,936,517      | \$4,210,635,094                     | 100.0%       | 100.0%                            | 78.1% |
| 1999           | 0                 | 1,970,504,367     | 3,535,464,262        | 4,908,820,033                       | 100.0        | 100.0                             | 83.1  |
| 2000           | 0                 | 2,142,487,495     | 3,778,196,697        | 5,511,714,616                       | 100.0        | 100.0                             | 89.2  |
| 2001           | 0                 | 2,496,277,500     | 3,568,889,216        | 5,881,232,850                       | 100.0        | 100.0                             | 94.8  |
| 2002           | 0                 | 2,716,457,033     | 3,577,815,242        | 6,033,133,598                       | 100.0        | 100.0                             | 92.7  |
| 2003           | 0                 | 3,016,029,050     | 3,646,262,356        | 6,057,329,072                       | 100.0        | 100.0                             | 83.4  |
| 2004           | 0                 | 3,405,053,804     | 3,824,957,124        | 6,118,214,495                       | 100.0        | 100.0                             | 70.9  |
| 2005           | 0                 | 3,629,506,014     | 3,948,522,003        | 6,435,344,102                       | 100.0        | 100.0                             | 71.1  |
| 2006           | 0                 | 3,876,349,145     | 4,136,856,269        | 6,836,567,188                       | 100.0        | 100.0                             | 71.6  |
| 2007           | 0                 | 4,208,621,537     | 4,291,807,104        | 7,377,289,283                       | 100.0        | 100.0                             | 73.8  |

ALJLAP\*

#### **Actuarial Accrued Liabilities for**

| Fiscal | Member<br>Contributions | Retirees and<br>Beneficiaries | Members, Employer<br>Financed Portion | Actuarial Value<br>of Assets Available | Act    | Percentage of<br>uarial Liabiliti<br>by Assets Avail |       |
|--------|-------------------------|-------------------------------|---------------------------------------|--|--------|--|-------|
| Year   | (1)                     | (2)                           | (3)                                   | for Benefits                           | (1)    | (2)  | (3)   |
| 1997   | \$0                     | \$6,569,957                   | \$ 4,857,224                          | \$ 8,864,395                           | 100.0% | 100.0%   | 47.2% |
| 1998   | 0                       | 7,415,852                     | 5,471,056                             | 10,285,233                             | 100.0  | 100.0  | 52.4  |
| 1999   | 0                       | 7,883,988                     | 6,890,537                             | 11,763,737                             | 100.0  | 100.0  | 56.3  |
| 2000   | 0                       | 7,526,118                     | 8,995,625                             | 13,191,825                             | 100.0  | 100.0  | 63.0  |
| 2001   | 0                       | 7,534,368                     | 9,275,594                             | 14,410,199                             | 100.0  | 100.0  | 74.1  |
| 2002   | 0                       | 8,268,650                     | 9,906,692                             | 15,172,619                             | 100.0  | 100.0  | 69.7  |
| 2003   | 0                       | 9,709,096                     | 10,237,391                            | 15,626,461                             | 100.0  | 100.0  | 57.8  |
| 2004   | 0                       | 9,188,086                     | 11,196,127                            | 16,238,804                             | 100.0  | 100.0  | 63.0  |

<sup>\*</sup>Assets and liabilities transferred to the MSEP during FY05.

#### Judicial Plan

#### **Actuarial Accrued Liabilities for**

| Fiscal | Member<br>Contributions | Retirees and<br>Beneficiaries | Members, Employer<br>Financed Portion | Actuarial Value<br>of Assets Available | Act    | Percentage of<br>uarial Liabilition<br>by Assets Avail |      |
|--------|-------------------------|-------------------------------|---------------------------------------|--|--------|--|------|
| Year   | (1)                     | (2)                           | (3)                                   | for Benefits                           | (1)    | (2)  | (3)  |
| 1998   | \$0                     | \$108,392,273                 | \$ 99,187,524                         | \$ 0                                   | 100.0% | 0.0%   | 0.0% |
| 1999   | 0                       | 120,543,611                   | 107,258,730                           | 6,067,305                              | 100.0  | 5.0  | 0.0  |
| 2000   | 0                       | 131,199,867                   | 110,597,474                           | 13,861,769                             | 100.0  | 10.6   | 0.0  |
| 2001   | 0                       | 143,163,718                   | 104,815,186                           | 22,613,050                             | 100.0  | 15.8   | 0.0  |
| 2002   | 0                       | 149,135,989                   | 106,979,463                           | 29,651,113                             | 100.0  | 19.9   | 0.0  |
| 2003   | 0                       | 157,923,805                   | 109,126,052                           | 34,566,516                             | 100.0  | 21.9   | 0.0  |
| 2004   | 0                       | 162,539,486                   | 117,857,978                           | 39,120,142                             | 100.0  | 24.1   | 0.0  |
| 2005   | 0                       | 168,703,822                   | 123,600,064                           | 44,223,509                             | 100.0  | 26.2   | 0.0  |
| 2006   | 0                       | 171,677,032                   | 137,325,720                           | 51,652,867                             | 100.0  | 30.1   | 0.0  |
| 2007   | 0                       | 199,489,503                   | 127,176,870                           | 61,903,516                             | 100.0  | 31.0   | 0.0  |



## Derivation of Experience Gain (Loss)

#### **MSEP**

Actual experience will never coincide exactly with assumed experience (except by coincidence). Gains and losses may offset each other over a period of years but sizeable year-to-year variations from assumed experience are common. Detail on the derivation of the experience gain (loss) is shown below.

Actuarial Gain (Loss) as a

|      |  | \$ Millions | % of Beginning Ac (Valuation Date | crued Liabilities |
|------|--|-------------|-----------------------------------|-------------------|
| (1)  | Unfunded actuarial accrued liability (UAAL) at beginning of year           | 1,176.6     | 1998                              | 5.5%              |
| (2)  | Normal cost from last valuation  | 157.6       | 1999                              | 4.7               |
| (3)  | Actual employer contributions  | 243.1       | 2000                              | 2.7               |
| (4)  | Interest accrual: (1) x .085 + [(2) - (3)] x (.085 $\div$ 2)               | 96.4        | 2001                              | (4.4)             |
| (5)  | Expected UAAL before changes: (1) + (2) - (3) + (4)                        | 1,187.5     | 2002                              | (3.8)             |
| (6)  | Change from any changes in benefits, assumptions, or methods               | 12.8        | 2003                              | (6.4)             |
| (7)  | Expected UAAL after changes: (5) + (6)                                     | 1,200.3     | 2004                              | (6.0)             |
| (8)  | Actual UAAL at end of year   | 1,123.1     | 2005                              | (3.4)             |
| (9)  | Gain (loss) (7) - (8)  | 77.2        | 2006                              | (0.1)             |
| (10) | Gain (loss) as a percent of actuarial accrued liabilities at start of year | 1.0%        | 2007                              | 1.0               |

#### Judicial Plan

The actuarial gains or losses realized in the operation of the retirement system provide an experience test. Gains and losses are expected to cancel each other over a period of years but sizable year-to-year fluctuations are common. Detail on the derivation of the actuarial gain (loss) is shown below, along with a year-by-year comparative schedule.

|      |  | \$ Millions | Actuarial Gain<br>% of Beginning Acc<br>(Valuation Date : | crued Liabilities |
|------|--|-------------|---|-------------------|
| (1)  | Unfunded actuarial accrued liability (UAAL) at beginning of year           | 257.3       | 2000  | (1.7)%            |
| (2)  | Employer normal cost middle of year  | 8.2         | 2001  | (3.2)             |
| (3)  | Employer contributions   | 23.7        | 2002  | (0.2)             |
| (4)  | Interest   |             | 2003  | (1.6)             |
|      | a. on (1)  | 21.9        | 2004  | (1.0)             |
|      | b. on (2)  | 0.3         | 2005  | (0.1)             |
|      | c. on (3)  | 1.0         | 2006  | (1.1)             |
|      | d. total [a + b - c)]  | 21.2        | 2007  | (0.6)             |
| (5)  | Expected UAAL end of year before changes                                   | 263.0       |   |                   |
| (6)  | Change in UAAL end of year   |             |   |                   |
|      | a. amendments  | 0.0         |   |                   |
|      | b. assumptions   | 0.0         |   |                   |
|      | c. methods   | 0.0         |   |                   |
|      | d. total   | 0.0         |   |                   |
| (7)  | Expected UAAL after changes: (5) + (6d.)                                   | 263.0       |   |                   |
| (8)  | Actual UAAL at end of year   | 264.8       |   |                   |
| (9)  | Gain (loss) (7)- (8)   | (1.8)       |   |                   |
| (10) | Gain (loss) as a percent of actuarial accrued liabilities at start of year | (0.6)%      |   |                   |



Summary of Plan Provisions\*

MSEP and MSEP 2000 - Comparison of Plans for General State Employees - June 30, 2007

| Plan Provision  | MSEP   | MSEP 2000   |
|---|--|---|
| Membership eligibility  | Members who work in a position normally requiring at least 1,000 hours of work a year.   | Members hired for the first time on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.  Members who left state employment prior to becoming vested and return to work on or after       |
|   |  | July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.   |
| Normal retirement eligibility                                     | Age 65 and active with 4 years of service,<br>Age 65 with 5 years of service,<br>Age 60 with 15 years of service,<br>or "Rule of 80" - minimum age 48.   | Age 62 with 5 years of service or "Rule of 80" - minimum age 48.  |
| Early retirement eligibility                                      | Age 55 with 10 years of service.   | Age 57 with 5 years of service.   |
| Benefit<br>Life benefit   | 1.6% x final average pay (FAP) x service.  | 1.7% x FAP x service.   |
| Temporary benefit   | Not available.   | 0.8% x FAP x service (until age 62 - only if retiring under "Rule of 80").  |
| Vesting   | 5 years of service.  | 5 years of service.   |
| In-service cost-of-living adjustment (COLA)                       | COLA given for service beyond age 65. COLA provisions are determined by employment date.   | Not available.  |
| COLA  | If hired before August 28, 1997, annual COLA is equal to 80% of the change in the consumer price index (CPI) with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.  If hired on or after August 28, 1997, annual | Annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.   |
|   | COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.   |   |
| Survivor benefit (Death before retirement) Non duty-related death | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.  | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the members' Life Income Annuity paid to eligible children.   |
| Duty-related death  | Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).  | Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).   |
| Optional forms of payment (Death after retirement)                | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  • Life Income Annuity  • Unreduced Joint & 50% Survivor  • Joint & 100% Survivor  • 60 or 120 Guaranteed Payments  • BackDROP   | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  • Life Income Annuity  • Joint & 50% Survivor  • Joint & 100% Survivor  • 120 or 180 Guaranteed Payments  • BackDROP |

This summary describes the plan provisions of the RSMo, as amended, that governed the programs, which MOSERS administered during the period covered by this report. It does not overrule any applicable statute or administrative rule and, in the event of a conflict, the applicable statute or rule would apply. The MSEP 2000 became effective July 1, 2000.



Summary of Plan Provisions

MSEP and MSEP 2000 - Comparison of Plans for Uniformed Member of the Water Patrol - June 30, 2007

| Plan Provision  | MSEP   | MSEP 2000   |
|---|--|---|
| Membership eligibility  | Members who work in a position normally requiring at least 1,000 hours of work a year.   | Members hired for the first time on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.  Members who left state employment prior to becoming vested and return to work on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year. |
| Normal retirement eligibility   | Age 55 and active with 4 years of service,<br>Age 55 with 5 years of service,<br>or "Rule of 80" - minimum age 48.   | Age 62 with 5 years of service or "Rule of 80" - minimum age 48.  |
| Early retirement eligibility  | Not available.   | Age 57 with 5 years of service.   |
| Benefit Life benefit Temporary benefit  | 1.6% x FAP x service increased by 33.3%.  Not available.   | 1.7% x FAP x service.  0.8% x FAP x service (until age 62 - only if   |
|   |  | retiring under "Rule of 80").   |
| Vesting   | 5 years of service.  | 5 years of service.   |
| In-service COLA   | COLA given for service beyond age 65. COLA provisions are determined by employment date.   | Not available.  |
| COLA  | If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.  If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%. | Annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.   |
| Survivor benefit (Death before retirement) Non duty-related death  Duty-related death | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.  Survivor benefit to eligible spouse or children no less than 50% of current pay (no service   | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.  Survivor benefit to eligible spouse or children no less than 50% of current pay (no service  |
|   | requirement).  | requirement).   |
| Optional forms of payment (Death after retirement)                                    | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  • Life Income Annuity  • Unreduced Joint & 50% Survivor  • Joint & 100% Survivor  • 60 or 120 Guaranteed Payments  • BackDROP   | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  • Life Income Annuity  • Joint & 50% Survivor  • Joint & 100% Survivor  • 120 or 180 Guaranteed Payments  • BackDROP   |



Summary of Plan Provisions

MSEP and MSEP 2000 - Comparison of Plans for Legislators - June 30, 2007

| Plan Provision  | MSEP   | MSEP 2000  |
|---|--|--|
| Membership eligibility  | Elected to the General Assembly.   | Elected to the General Assembly on or after July 1, 2000.  |
| Normal retirement eligibility   | Age 55 with 3 full-biennial assemblies.  | Age 55 with 3 full-biennial assemblies or "Rule of 80" - minimum age 50.   |
| Early retirement eligibility  | Not available.   | Not available.   |
| Benefit<br>Life benefit   | \$150 per month per biennial assembly.   | (Monthly base pay ÷ 24) x service capped at 100% of pay.   |
| Temporary benefit   | Not available.   | Not available.   |
| Vesting   | 3 full-biennial assemblies.  | 3 full-biennial assemblies.  |
| In-service COLA   | COLA given for service beyond age 65. COLA provisions are determined by employment date.   | Not available.   |
| COLA  | If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.  If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%. | Benefit adjusted each year based on the percentage increase in the current pay for an active member of the General Assembly.   |
| Survivor benefit (Death before retirement) Non duty-related death  Duty-related death | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.  Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).   | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.  Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement). |
| Optional forms of payment (Death after retirement)                                    | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  • Life Income Annuity  • Unreduced Joint & 50% Survivor  • Joint & 100% Survivor  • 60 or 120 Guaranteed Payments   | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  • Life Income Annuity  • Joint & 50% Survivor  • Joint & 100% Survivor  • 120 or 180 Guaranteed Payments  |



Summary of Plan Provisions

MSEP and MSEP 2000 - Comparison of Plans for Elected Officials - June 30, 2007

| Plan Provision  | MSEP  | MSEP 2000  |
|---|---|--|
| Membership eligibility  | Elected to state office.  | Elected to state office on or after July 1, 2000.  |
| Normal retirement eligibility   | Age 65 with 4 years of service,<br>Age 60 with 15 years of service, or<br>"Rule of 80" - minimum age 48.  | Age 55 with 4 years of service or "Rule of 80" - minimum age 50.   |
| Early retirement eligibility  | Age 55 with 10 years of service.  | Not available.   |
| Benefit<br>Life benefit   | 12 or more years of service 50% or current pay for highest position held. Less than 12 years of service 1.6% x FAP x service.   | (Monthly base pay ÷ 24) x service capped at 12 years or 50% of pay.  |
| Temporary benefit   | Not available.  | Not available.   |
| Vesting   | 4 years of service.   | 4 years of service.  |
| In-service COLA   | COLA provisions determined by amount of service relative to 12 years and date of employment.  | Not available.   |
| COLA  | 12 or more years of service COLA is equal to the percentage increase in the current pay of an active elected state official in the highest position held.  Less than 12 years of service If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.  If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%. | Benefit adjusted each year based on the percentage increase in the current pay for an active elected state official in the highest position held.  |
| Survivor benefit (Death before retirement) Non duty-related death  Duty-related death | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.  Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).  | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.  Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement). |
| Optional forms of payment (Death after retirement)                                    | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  • Life Income Annuity  • Unreduced Joint & 50% Survivor  • Joint & 100% Survivor  • 60 or 120 Guaranteed Payments  | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  • Life Income Annuity  • Joint & 50% Survivor  • Joint & 100% Survivor  • 120 or 180 Guaranteed Payments  |



Summary of Plan Provisions\*

MSEP and MSEP 2000 - Administrative Law Judges and Legal Advisors - June 30, 2007

| Plan Provision                                | Requirement   |
|---|---|
| Membership eligibility                        | Administrative law judge or legal advisor in the Division of Workers' Compensation, a member or legal counsel of the Labor and Industrial Relations Commission, chairperson of the State Board of Mediation, or an administrative hearing commissioner hired prior to April 26, 2005. |
| Normal retirement eligibility                 | Age 62 with 12 years of service, Age 60 with 15 year of service, or Age 55 with 20 years of service.  |
| Reduced retirement eligibility                | Age 65 with less than 12 years of service with reduced benefit, based upon years of service relative to 12 years.   |
| Benefit formula                               | 12 or more years of service 50% of the average highest 12 consecutive months of salary.   |
| Vesting                                       | Immediate.  |
| In-service COLA                               | Not available.  |
| COLA  | If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.   |
|   | If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.   |
| Survivor benefit<br>(Death before retirement) | Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service at age 70.  |
| Survivor benefit<br>(Death after retirement)  | Survivor benefit to eligible spouse equal to 50% of the member's annuity at the time of death.  |

All new administrative law judges and legal advisors hired on or after April 26, 2005, who had not been previously covered by a retirement system under Chapter 287, RSMo, participate in the MSEP, which is covered under Chapter 104, RSMo.



# Summary of Plan Provisions Judicial Plan - June 30, 2007

| Plan Provision                                | Requirement  |
|---|--|
| Membership eligibility                        | Must be a judge or commissioner of the supreme court or the court of appeals, a judge of the circuit court, probate court, magistrate court, court of common pleas, court of criminal corrections, a justice of the peace, or a commissioner or deputy commissioner of the circuit court appointed after February 29, 1972, a commissioner of the juvenile division of the circuit court appointed pursuant to Section 211.023, RSMo, a commissioner of the drug court pursuant to Section 478.466, RSMo, or a commissioner of the family court. |
| Normal retirement eligibility                 | Age 62 with 12 years of service, Age 60 with 15 year of service, or Age 55 with 20 years of service.   |
| Reduced retirement eligibility                | Age 62 with less than 12 years of service or age 60 with less than 15 years of service with a reduced benefit based on years of service relative to 12 or 15 years.  |
| Benefit formula                               | 12 or 15 more years of service 50% of the FAP.  Less than 12 or 15 years of service  If between age 60 and 62  (years of service ÷ 15) x 50% of compensation on the highest court served.  If age 62  (years of service ÷ 12) x 50% of compensation on the highest court served.   |
| Vesting                                       | Immediate.   |
| In-service COLA                               | Judges who are at least age 60 and work beyond the date first eligible for unreduced benefits will receive COLAs for each year worked beyond normal retirement eligibility. COLA provisions are determined by date of employment.  |
| COLA  | If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.  If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.   |
| Survivor benefit<br>(Death before retirement) | Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service at age 70.   |
| Survivor benefit<br>(Death after retirement)  | Survivor benefit to eligible spouse equal to 50% of the member's annuity at the time of death.   |



# Summary of Plan Provisions Life Insurance Plans - June 30, 2007

MOSERS administers basic and optional term life insurance plans for eligible state employees and retirees.

| Active Members*   | Requirement  |  |  |
|---|--|--|--|
| Basic life insurance An amount equal to one times annual salary (with a minimum of \$15,000) while actively employed.   | Actively employed in an eligible state position resulting in membership in MOSERS. |  |  |
| Duty-related death benefit  Duty-related death benefit equivalent to two times the annual salary the member was earning at the time of death in addition to the basic life insurance amount of one times annual salary.   | Actively employed in an eligible state position resulting in membership in MOSERS. |  |  |
| Optional life insurance Additional life insurance may be purchased in a flat amount in multiples of \$10,000 not to exceed the maximum (lesser of six times annual salary or \$800,000). Spouse coverage may be purchased in multiples of \$10,000 up to a maximum of \$100,000; however, the amount of spouse coverage cannot exceed the amount of optional life insurance coverage the member has purchased. Coverage for children is available in a flat amount of \$10,000 per child. | Actively employed in an eligible state position resulting in membership in MOSERS. |  |  |
| * Terminating employees may convert coverage up to the amount they had as an active employee at individual rates.   |  |  |  |

| Retired Members   | Requirement                                  |
|---|--|
| <b>Basic life insurance at retirement</b> \$5,000 basic life insurance during retirement.   | Must retire directly from active employment. |
| Optional life insurance at retirement (MSEP) An employee may retain up to the lesser of \$60,000 or the amount of optional life insurance coverage held at the time of retirement at the group rate and may convert any remaining basic and optional life insurance at individual rates.  | Must retire directly from active employment. |
| Optional life insurance at retirement (MSEP 2000) Under "Rule of 80" an employee may retain the current amount of coverage prior to retirement until age 62 at which time coverage is reduced to \$60,000, and may convert any remaining basic and optional life insurance at individual rates. Coverage for spouse and/or children ends at member's retirement and may be converted at individual rates. | Must retire directly from active employment. |



# Summary of Plan Provisions Long-Term Disability (LTD) Plans - June 30, 2007

MOSERS administers the LTD Plan for eligible state employees who become disabled during active employment.

| Active Members   | Requirement   |
|--|---|
| General State Employees, Legislators, and Elected State Officials Members of MOSERS in a position normally requiring 1,000 hours of work a year are covered under the LTD plan, unless they work for a state agency, which has its own LTD plan. | Long-term disability - Eligible participants receive 60% of their compensation minus primary social security, workers' compensation, and employer provided income. Benefits commence after 90 days of disability or after sick leave expires, whichever occurs last. LTD benefits cease upon the earliest of (i) when disability ends, (ii) when the member is first eligible for normal retirement benefits or is receiving early retirement benefits, (iii) when the member returns to work, or (iv) upon a member's death. |
| Water Patrol   | Uniformed members who are eligible for statutory occupational disability receive benefits equal to 50% of compensation with no offset for social security at the time of disability. For nonoccupational disabilities, eligible participants receive the same benefit as general employees.   |
| Judges   | In addition to the disability benefits provided to general employees, judges also receive benefits under the state constitution. Participants receive 50% of salary until the current term expires.   |



### Changes in Plan Provisions

#### Senate Bill 406

This year, the Governor signed an omnibus retirement bill that affects the retirement plans administered by MOSERS. The bill contains general, long-awaited "cleanup" provisions and several substantive changes involving the oversight of the state's Deferred Compensation Program and the establishment of a medical benefit trust fund.

This legislation transfered responsibility for the administration of the Missouri State Employees' Deferred Compensation Program from the Missouri State Public Employees' Deferred Compensation Commission to the MOSERS Board of Trustees effective September 1. In order to assist in the transition, two deferred compensation commissioners (the chair of the commission and the House Speaker's designee) will serve as ex-officio members on the MOSERS board for issues related to the deferred compensation program. The commission chair will serve through December 2008; the House member will serve through December 2009. This change was initiated by a legislative member of the Deferred Compensation Commission based on the belief that plan participants would benefit from MOSERS' investment and administrative expertise in monitoring the program. We anticipate this change will be transparent to plan participants. The third party administration of individual accounts and the investment products available will continue to be handled by outside service providers paid from charges to the participants as is the current practice.

The legislation also allows the MOSERS Board of Trustees to provide investment services in connection with medical benefit funds established for state employees, retirees, and their dependents who participate in a state medical plan administered by the Missouri Consolidated Health Care Plan (MCHCP) or other medical benefit plans established or maintained by the state. The MCHCP and the Commissioner of Administration asked the MOSERS board to assume this responsibility to take advantage of the investment expertise already in place at MOSERS. From MOSERS' perspective, investment of any assets will be contingent upon the receipt of a private letter ruling from the IRS stating that health care funds can be commingled with retirement funds for purposes of investing. An application for such ruling was filed several months ago and we anticipate receiving a response from the IRS in the near future. Subject to a favorable ruling, MOSERS will be able to invest funds that will be set aside to begin pre-funding a portion of the retiree health care expenses.

As it affects public employee retirement plans in general, the legislation also includes pension reform measures that will require all public employee pension plans in the state to adhere to certain standards in the areas of funding, payment of contributions, ethics, and trustee education. As it relates to funding, specific provisions will prohibit a retirement plan from providing benefit enhancements if the funded ratio of the plan falls below 80%. These provisions will (1) allow a plan with a funding ratio greater than 80% to adopt or implement a benefit increase or enhancement provided the funded ratio does not fall below 75% after implementation; (2) provide that increases in the unfunded actuarial accrued liability be amortized over a period not to exceed 30 years for purposes of calculating the contributions necessary to fund the benefit; and (3) require a plan with a funded ratio below 60% to have an actuary prepare an accelerated contribution schedule. These provisions exclude the Judicial Plan administered by MOSERS.

All provisions of the bill that affect MOSERS plans, including the general cleanup, are described in the following section-by-section analysis:

#### Chapter 104, RSMo – Legislative Changes Affecting MOSERS

- Section 104.010(7) Adds language that would allow the board to promulgate rules necessary to accommodate any change in the state payroll system as it relates to how final average compensation is calculated for purposes of determining a retirement benefit. (The state presently is using a bi-monthly pay system and there have been discussion about moving to two-week pay periods in the future.)
- Section 104.010.1(20)(a) Changes the required hours for benefit eligibility under the definition of employee from 1000 hours to 1040 hours to be consistent with the personnel advisory board rules and removes existing language that is no longer necessary.



- Section 104.010.1(20)(b) Clarifies that a retiree is not an employee. Also changes the required hours for benefit eligibility from 1000 hours to 1040 hours to be consistent with the personnel advisory board rules and further, requires that part-time legislative employees, employed on or after August 28, 2007, be treated like all other state employees with regard to retirement eligibility (on a prospective basis only).
- **Section 104.010.1(20)(d)** Removes reference to required hours for benefit eligibility since it is not accurate nor necessary (the requirement has been in effect since 1984 rather than 1988 as presently stated in this provision).
- Section 104.010(27) Changes the highways and transportation and highway patrol employees' retirement system to the Missouri department of transportation and highway patrol employees' retirement system (MPERS) to reflect the most recent name change and clarifies the definition of a member for both plans (MPERS and MOSERS).
- Section 104.010(36) Changes the highways and transportation and highway patrol employees' retirement system to the Missouri department of transportation and highway patrol employees' retirement system to reflect the most recent name change.
- **Section 104.010.2** Adds language to allow MOSERS to pay benefits under a benefit plan in excess of the limitations established by Section 415 of the Internal Revenue Code.
- Section 104.312.1(3) Clarifies the reduction for a spousal benefit is to be equally distributed between the member and the ex-spouse under a division of benefits order whenever the ex-spouse is also the beneficiary of a joint and survivor option.
- **Section 104.312.4** Clarifies that division of benefits orders will be applied to the plan the member is participating in on the date of dissolution.
- Section 104.320.2 Allows the MOSERS Board of Trustees to provide investment services in connection with medical benefit funds established for state employees, retirees, and their dependents who participate in a state medical plan administered by the Missouri Consolidated Health Care Plan or other medical benefit plans established or maintained by the state. Also allows the board to assist with procedures relating to state payroll, or any other state employee benefits, as requested by the office of administration or other state agency. Adds language that allows MOSERS board to contract with third party administrators for investing monies for the medical trust fund. Also adds language that allows the MOSERS board to borrow money and issue negotiable notes, bonds, or other instruments associated with the medical trust.
- Section 104.344 Removes language that allows members to purchase contract service. Presently, most persons who had contract service have already made application for the service credit. The remaining applicants are often ineligible for credit due to a lack of appropriate documentation necessary to certify service. Also changes the service purchase provisions to be consistent with the practice in place for purchase of military service (clarifies that the salary and contribution rates are determined when a member is initially covered by MPERS or MOSERS). Adds language to prohibit receiving duplicate credit for purchased service in more than one retirement system for the same period of service.
- **Section 104.352.1** Eliminates prior service credit for part-time legislative service that does not qualify for retirement eligibility (on a prospective basis only).
- **Section 104.352.2 and .3** Corrects the numerical statutory reference throughout this section.
- Section 104.354 Corrects the numerical statutory reference (consistent with change cited above).
- Section 104.380 Changes the required hours for benefit eligibility under the definition of employee from 1000 hours to 1040 hours to be consistent with the personnel advisory board rules and requires a reemployed retiree to work continuously for at least one year in order to receive an additional annuity.



- Section 104.395.1, 3, 4, and 8 Clarifies that a member must request a pop-up in the event of a spouse's death, states when such an election can occur, and references Section 104.620, which contains the provisions for resolving final payments. This language is consistent with the language in the new plan that governs this provision, and also affirms the present practice regarding changing member elections.
- **Section 104.606** New language clarifies that members must apply and complete service credit purchases under Chapters 104 and 105 prior to applying for retirement.
- **Section 104.805** Allows Department of Revenue employees previously transferred to MoDOT to elect MPERS participation within a sixty-day window.
- **Section 104.1003(9)** Clarifies that a member may receive only one day of credited service for any one calendar day of service.
- **Section 104.1003(13)** Changes the required hours for benefit eligibility from 1000 hours to 1040 hours to be consistent with the personnel advisory board rules.
- Section 104.1003(13)(e) Corrects an oversight made when the MSEP 2000 became law by amending the definition of employee in the new plan to include part-time legislative employees employed on or after July 1, 2000, but prior to August 28, 2007.
- Section 104.1003(16) Adds language that would allow the board to promulgate rules necessary to accommodate any change in the state payroll system as it relates to how final average compensation is calculated for purposes of determining a retirement benefit. (The state presently is using a bi-monthly pay system and there have been discussions about moving to two-week pay periods in the future.)
- Section 104.1003(21)(e) Adds language clarifying that pay does not include any amounts for which contributions have not been made.
- Section 104.1003(24) Changes the highways and transportation and highway patrol employees' retirement system to the Missouri department of transportation and highway patrol employees' retirement system to reflect the most recent name change.
- **Section 104.1003.2** Adds language to allow MOSERS to pay benefits under a benefit plan in excess of the limitations established by Section 415 of the Internal Revenue Code.
- **Section 104.1012.3** Adds safe harbor provisions for the board related to education and advice given to members for retirement planning.
- **Section 104.1015(9)** Adds language that requires any change in plan election to be completed prior to mailing or electronically transferring the first annuity payment to retiring members.
- Section 104.1021.11 Corrects the numerical statutory reference (consistent with changes cited previously) and changes the legislative service requirement for purchasing service from two to three biennial assemblies to be consistent with the legislative vesting requirement.
- **Section 104.1024.1** Adds clarifying language stating that annuity payments will be issued by the last day of each month provided all documentation required for the calculation and payment of benefits has been received.
- **Section 104.1024.4** Clarifies that the temporary benefit ceases at age 62, which is currently the earliest eligibility age for social security.
- Section 104.1027.1, 3, and 7 Inserts references to Section 104.1054, which contain the provisions for resolving final payments and clarifies the latest time when a member can change a benefit election. Also removes an inaccurate formula for calculating an option which should have been removed when the minimum eligibility age for Rule of 80 was changed from 50 to 48.



- **Section 104.1039** Requires a reemployed retiree to work continuously for at least one year in order to receive an additional annuity.
- **Section 104.1051.1(3)** Clarifies the reduction for a spousal benefit to be equally distributed between the member and the ex-spouse under a division of benefits order whenever the ex-spouse is also the beneficiary of a joint and survivor option.
- **Section 104.1051.4** Clarifies that a division of benefits order will be applied to the year 2000 plan if a closed plan member elects coverage under the year 2000 plan prior to the date of dissolution.
- **Section 104.1072.4** Clarifies that optional life insurance in excess of \$60,000 ceases at age 62 for retirees who retired under Rule of 80.
- **Section 104.1087.1** Corrects the numerical statutory reference (consistent with changes cited previously).
- Section 104.1090.1(5) Adds language to require agreements between retirement plans for transfer of service credit.

Chapter 105, RSMo - Pension Reform Provisions Affecting All Public Employee Retirement Plans

• Section 105.660, 105.666, 105.667, and 105.684 – As it relates to MOSERS, the legislation will require unfunded accrued liabilities to be amortized over a period not to exceed 30 years (which is consistent with current policy). These provisions also require each plan, in conjunction with staff and advisors, to establish a board member education program beginning on January 1, 2008. The curriculum must include, at a minimum, education in the areas of duties and responsibilities of board members as trustees, ethics, governance process and procedure, pension plan design and administration of benefits, investments including but not limited to fiduciary duties, legal liability and risks associated with plan administration, sunshine law requirements under Chapter 610, actuarial principles, and the role of staff and consultants in plan administration. The legislation requires new board members appointed or elected to a board after January 1, 2008, to complete such education within 90 days of becoming a new board member. Board members who have served one or more years are required to attend at least two continuing education programs each year.

The plan is also required, upon the request of any individual participant, to provide an annual pension benefit statement that is written in a manner that can be understood by the average plan participant. The statement is required to include total benefits accrued, date first eligible for a normal retirement benefit, and projected benefit at normal retirement. Any plan failing to do so shall submit in writing to the Joint Committee on Public Employee Retirement why such information cannot be provided as requested.

The legislation also contains provisions that prohibit board members from receiving any gain or profit from any funds or transaction of the plan, except benefits from interest in investments common to all members of the plan, if entitled. Additional provisions exist that prohibit a board member or employee from accepting any political contribution, gratuity, or compensation for the purpose of influencing action with respect to the investment of the funds of the system, and describe the penalties for such action to include forfeiture of office in addition to being subject to any penalties described for bribery. Any trustee or employee that is convicted of a felony in conjunction with their duties would not be eligible to receive any retirement benefits from the retirement plan.

Provisions also exist that would prohibit a retirement plan from providing benefit enhancements if the funded ratio for the plan falls below 80%. Specifically, these provisions:

- Allow a plan with a funding ratio greater than 80% to implement a benefit increase or enhancement provided the funded ratio does not fall below 75% after implementation.
- Provide that increases in the unfunded actuarial accrued liability (UAAL) in connection with benefit increases be amortized over a period not to exceed 30 years for purposes of calculating the contributions necessary to fund the benefit.



- Require a plan with a funded ratio below 60% to have an actuary prepare an accelerated contribution schedule.
- Exclude the Judicial Plan administered under Chapter 476, RSMo.
- Section 105.910 Contains provisions that will transfer the administration of the Missouri State Employees' Deferred
  Compensation Program from the Missouri State Public Employees' Deferred Compensation Commission to the
  MOSERS Board of Trustees.
- **Section 211.393** Treats juvenile court grant service as follows:
  - All prior and future grant service will be allowable for service credit under the definition of juvenile court employee.
  - Juvenile officers covered by MOSERS in single county circuits will receive prior service credit for all multi-county circuit grant service after July 1999.
  - Juvenile court employees covered by MOSERS in multi-county circuits will receive prior service credit for all multi-county circuit grant service after July 1999.
  - Any MOSERS member who has multi-county circuit grant service as a juvenile court employee after July 1999 will receive prior service credit.
- Single county juvenile court circuit service will be treated as follows:
  - Juvenile officers covered by MOSERS in single county circuits will receive prior service credit for single county service prior to July 1999.
  - Juvenile court employees covered by MOSERS in multi-county circuits will receive prior service credit for single county service prior to July 1999.
  - Any MOSERS member who has single county circuit service as a juvenile court employee will receive prior service credit for single county service prior to July 1999.

All of the juvenile court provisions mentioned previously will apply retroactively to terminated-vested members and retirees and allow for refunds if such service was purchased in MOSERS.



# Actuarial Present Values

As of June 30, 2007

MSEP

| Actuarial Present Value<br>as of June 30, 2007   | Actuarial<br>Present Value | Portion Covered by Future<br>Normal Cost Contributions | Actuarial<br>Accrued liabilities  |
|--|----------------------------|--|---|
| Active members Service retirement benefits based on services rendered before and likely to be rendered after valuation date                                    | \$4,247,177,841            | \$ 828,007,948   | \$3,419,169,893   |
| Disability benefits likely to be paid to present active members who become totally and permanently disabled  | 124,921,972                | 55,045,315   | 69,876,657  |
| Survivor benefits likely to be paid to widows and children of present active members who die before retiring   | 158,026,870                | 43,530,628   | 114,496,242   |
| Separation benefits likely to be paid to present active members  | 416,674,319                | 206,573,593  | 210,100,726   |
| Active member totals   | \$4,946,801,002            | \$1,133,157,484  | 3,813,643,518   |
| Members on leave of absence & LTD Service retirement benefits based on service rendered before the valuation date  Terminated-vested members                   |                            |  | 89,677,437  |
| Service retirement benefits based on service rendered before the valuation date  |                            |  | 388,486,149   |
| Retired lives BackDROP installment payments incurred, but not Total actuarial accrued liability Actuarial value of assets Unfunded actuarial accrued liability | yet paid                   |  | 4,208,258,030<br>363,507<br>8,500,428,641<br>7,377,289,283<br>\$1,123,139,358 |

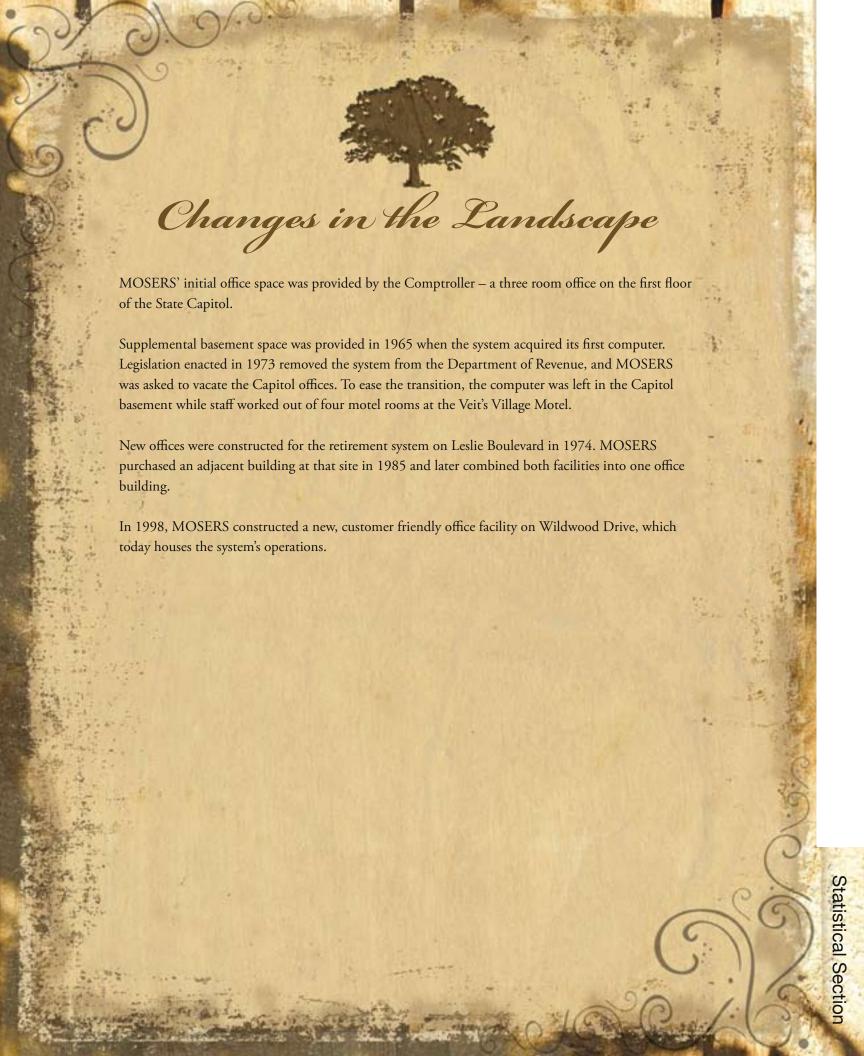


# Actuarial Present Values

As of June 30, 2007

Judicial Plan

| Actuarial Present Value as of June 30, 2007  | Actuarial<br>Present Value | Portion Covered by Future<br>Normal Cost Contributions | Actuarial<br>Accrued liabilities |
|--|----------------------------|--|----------------------------------|
| Active members Service retirement benefits based on services rendered before and likely to |                            |  |                                  |
| be rendered after valuation date   | \$162,474,512              | \$52,083,988   | \$110,390,524                    |
| Disability benefits likely to be paid to present active members who become                 |                            |  |                                  |
| totally and permanently disabled   | 1,665,431                  | 1,406,051  | 259,380                          |
| Survivor benefits likely to be paid to widows and children of present active               |                            |  |                                  |
| members who die before retiring  | 5,637,401                  | 3,264,874  | 2,372,527                        |
| Active member totals   | \$169,777,344              | \$56,754,913   | 113,022,431                      |
| Terminated-vested members Service retirement benefits based on                             |                            |  |                                  |
| service rendered before the valuation date   |                            |  | 14,154,439                       |
| Retired lives  |                            |  | 199,489,503                      |
| Total actuarial accrued liability  |                            |  | 326,666,373                      |
| Actuarial value of assets  |                            |  | 61,903,516                       |
| Unfunded actuarial accrued liability   |                            |  | \$264,762,857                    |





### Statistical Section

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### Summary

#### Plan Membership

Membership in the pension trusts administered by MOSERS increased by 2,304. Active members decreased by 124, retired members and their beneficiaries increased by 1,679, and terminated-vested members increased by 749. Membership data for the last ten years ended June 30, 2007, can be found on page 145. Page 148 depicts the location of benefit recipients, showing that the majority remain in the state of Missouri after retirement.

#### Net Assets vs. Liabilities

The charts on page 140-143 graphically represent the funding progress of the pension plans for the ten years ended June 30, 2007. The area charts in the middle of the pages show the portion of the pension liabilities that are unfunded compared to the portion covered by assets in the trust funds. The charts on the bottom of the pages illustrates the funded ratio of the plans for the ten years ended June 30, 2007.

The existence of the unfunded actuarial accrued liabilities is not necessarily an indication of financial problems, but the fluctuations are important and must be monitored and controlled.

The remainder of this section contains various statistical and historical data considered useful in evaluating the condition of the plans.

All nonaccounting data is taken from MOSERS' internal sources except for that information which is derived from the actuarial valuations (pages 140-145, 149, and 158-159).



# Changes in Net Assets Last Ten Fiscal Years

| Fiscal Year                              | 1998               | 1999                                    | 2000                       | 2001                       |
|--|--------------------|---|----------------------------|----------------------------|
| MSEP                                     |                    |   |                            |                            |
| Employer contributions                   | \$152,090,687      | \$197,909,834                           | \$202,330,547              | \$ 215,750,128             |
| Member service purchases                 | 1,035,738          | 1,151,328                               | 1,991,206                  | 1,918,572                  |
| Service transfers in                     | 36,908             | 147,315                                 | 3,468,697                  | 167,640                    |
| Investment income (net of expense)       | 661,480,958        | 504,026,290                             | 402,878,683                | (112,164,123)              |
| Other                                    | 14,925             | 659,215                                 | 629,924                    | 418,663                    |
| Total additions to plan net assets       | 814,659,216        | 703,893,982                             | 611,299,057                | 106,090,880                |
| Deductions                               |                    | , |                            | ,.,.,                      |
| Benefits                                 | 149,261,681        | 155,299,924                             | 179,690,822                | 217,862,853                |
| Refunds                                  | 1,514              | 0                                       | 889                        | 0                          |
| Service transfers out                    | 0                  | 0                                       | 18,609                     | 31,482                     |
| Administrative expenses                  | 4,500,944          | 5,763,229                               | 5,487,531                  | 5,749,965                  |
| Legal settlements                        | 18,998             | 0                                       | 0                          | 0                          |
| Total deductions from plan net assets    | 153,783,137        | 161,063,153                             | 185,197,851                | 223,644,300                |
| Transfer from ALJLAP plan                | 0                  | 0                                       | 0                          | 0                          |
| Change in net assets                     | \$660,876,079      | \$542,830,829                           | \$426,101,206              | \$(117,553,420)            |
| ALJLAP Plan                              |                    |   |                            |                            |
| Additions                                |                    |   |                            |                            |
| Employer contributions                   | \$ 564,295         | \$ 639,285                              | \$ 807,022                 | \$ 1,074,946               |
| Investment income (net of expense)       | 1,613,972          | 1,205,813                               | 961,336                    | (273,380)                  |
| Other                                    | 36                 | 1,577                                   | 1,503                      | 1,020                      |
| Total additions to plan net assets       | 2,178,303          | 1,846,675                               | 1,769,861                  | 802,586                    |
| Deductions  Deductions                   | 2,1/8,303          | 1,040,0/)                               | 1,/09,001                  | 802,780                    |
| Benefits                                 | 677,213            | 747,663                                 | 755,574                    | 776,422                    |
| Administrative expenses                  | 10,981             | 13,788                                  | 13,094                     | 14,015                     |
| Legal settlements                        | 46                 | 0                                       | 15,094                     | 14,01)                     |
| Total deductions from plan net assets    | 688,240            | 761,451                                 | 768,668                    | 790,437                    |
| Transfer to MSEP plan                    | 088,240            | 0                                       | 00,000                     | 7 90,437                   |
| Change in net assets                     | \$ 1,490,063       | \$ 1,085,224                            | \$ 1,001,193               | \$ 12,149                  |
| Judicial Plan                            |                    |   |                            |                            |
| Additions                                |                    |   |                            |                            |
|  | ¢ 11 /22 /57       | ¢ 17 062 252                            | ¢ 10 000 676               | ¢ 22 /72 012               |
| Employer contributions                   | \$ 11,433,457      | \$ 17,862,353                           | \$ 19,988,676              | \$ 22,473,913              |
| Investment income (net of expense)       | 0                  | 452,499                                 | 869,566                    | (391,124)                  |
| Other Total additions to plan net assets | 11 /22 /57         | 592                                     | 1,360                      | 1,460                      |
| Deductions  Deductions                   | 11,433,457         | 18,315,444                              | 20,859,602                 | 22,084,249                 |
| Benefits                                 | 11 422 457         | 12 220 225                              | 12 202 100                 | 15 010 000                 |
|  | 11,433,457<br>0    | 12,229,325<br>5,174                     | 13,292,188<br>11,844       | 15,010,098                 |
| Administrative expenses                  |                    |   |                            | 20,051                     |
| Total deductions from plan net assets    | 11,433,457<br>\$ 0 | 12,234,499<br>\$ 6,080,945              | 13,304,032<br>\$ 7,555,570 | 15,030,149<br>\$ 7,054,100 |
| Change in net assets                     | <b>ў</b> О         | \$ 0,000,943                            | \$ 7,333,370               | \$ 7,034,100               |
| Internal Service Fund                    |                    |   |                            |                            |
| Operating revenues                       |                    |   |                            |                            |
| Premium receipts                         | \$ 16,720,199      | \$ 18,942,592                           | \$ 20,119,784              | \$ 23,185,529              |
| Miscellaneous income                     | 423,419            | 444,617                                 | 436,488                    | 464,351                    |
| Total operating revenues                 | 17,143,618         | 19,387,209                              | 20,556,272                 | 23,649,880                 |
| Operating expenses                       |                    |   |                            |                            |
| Premium disbursements                    | 16,653,714         | 18,877,414                              | 20,049,507                 | 22,480,704                 |
| Premium refunds                          | 66,485             | 65,177                                  | 70,277                     | 704,825                    |
| Administrative expenses                  | 470,791            | 622,545                                 | 519,271                    | 410,906                    |
| Other                                    | 0                  | 5,000                                   | 0                          | 0                          |
| Total operating expenses                 | 17,190,990         | 19,570,136                              | 20,639,055                 | 23,596,435                 |
| Non-operating revenues                   |                    |   |                            |                            |
| Investment income                        | 58,889             | 55,323                                  | 68,349                     | 81,717                     |
| Change in net assets                     | \$ 11,517          | \$ (127,604)                            | \$ (14,434)                | \$ 135,162                 |
|  |                    |   |                            |                            |

| 2002                     | 2003                                      | 2004                   | 2005                      | 2006                   | 2007                     |
|--------------------------|---|------------------------|---------------------------|------------------------|--------------------------|
|                          |   |                        |                           |                        |                          |
| \$ 209,515,026           | \$156,576,150                             | \$164,691,836          | \$194,524,059             | \$227,233,195          | \$ 239,488,751           |
| 3,913,426                | 3,690,820                                 | 3,426,367              | 4,122,001                 | 3,072,315              | 3,460,923                |
| 48,840                   | 53,119                                    | 166,510                | 29,397                    | 161,613                | 172,936                  |
| (348,106,057)<br>447,462 | 332,901,027<br>437,574                    | 873,793,645<br>469,959 | 727,341,314               | 728,526,971            | 1,283,573,438<br>542,266 |
| (134,181,303)            | 493,658,690                               | 1,042,548,317          | 1,231,658<br>927,248,429  | 501,512<br>959,495,606 | 1,527,238,314            |
| (134,101,303)            | 473,070,070                               | 1,042,740,717          | 72/,240,427               | 9,79,497,000           | 1,72/,230,314            |
| 268,480,982              | 319,607,447                               | 367,248,099            | 367,431,297               | 400,169,563            | 447,240,771              |
| 0                        | 4,019                                     | 8,585                  | 0                         | 1,341                  | 0                        |
| 27,970                   | 2,191,487                                 | 529,177                | 199,201                   | 133,866                | 51,980                   |
| 5,753,812                | 5,954,365                                 | 5,694,082              | 6,228,609                 | 6,486,597              | 6,689,710                |
| 0                        | 227.757.219                               | 272 470 042            | 272 950 107               | 406 701 267            | <u>(52.092.461</u>       |
| 274,262,764              | 327,757,318                               | 373,479,943            | 373,859,107<br>18,157,148 | 406,791,367            | 453,982,461<br>0         |
| \$(408,444,067)          | \$165,901,372                             | \$669,068,374          | \$571,546,470             | \$552,704,239          | \$1,073,255,853          |
| + (,,-                   | <del>+ - • &gt; , &gt; • - , = , = </del> | + 000)000007           | +27 -32 -47 -7            | +22=31 = -3=02         | +-,-,-,-,-,-,-,-,-,-,-   |
| \$ 1,072,562             | \$ 951,023                                | \$ 945,950             | \$ 1,124,924              | \$ 0                   | \$ 0                     |
| (874,249)                | 862,381                                   | 2,344,262              | 2,057,375                 | 0                      | 0                        |
| 1,124                    | 1,134                                     | 1,261                  | 3,484                     | 0                      | 0                        |
| 199,437                  | 1,814,538                                 | 3,291,473              | 3,185,783                 | 0                      | 0                        |
| 02/ (15                  | 0/0.010                                   | 1 002 255              | 7/0 107                   | 0                      | 0                        |
| 836,615<br>14,450        | 969,918<br>15,425                         | 1,003,355<br>15,276    | 749,197<br>17,618         | 0                      | 0                        |
| 14,430                   | 0   | 0                      | 0                         | 0                      | 0                        |
| 851,065                  | 985,343                                   | 1,018,631              | 766,815                   | 0                      | 0                        |
| 0                        | 0   | 0                      | (18,157,148)              | 0                      | 0                        |
| \$ (651,628)             | \$ 829,195                                | \$ 2,272,842           | \$(15,738,180)            | \$ 0                   | \$ 0                     |
|                          |   |                        |                           |                        |                          |
| \$ 22,088,485            | \$ 20,802,140                             | \$ 20,636,314          | \$ 21,852,985             | \$ 22,401,569          | \$ 23,745,467            |
| (1,680,566)              | 1,932,815                                 | 5,800,076              | 5,409,107                 | 5,933,531              | 11,356,312               |
| 2,160                    | 2,541                                     | 3,119                  | 9,160                     | 4,085                  | 4,798                    |
| 20,410,079               | 22,737,496                                | 26,439,509             | 27,271,252                | 28,339,185             | 35,106,577               |
| 15,943,642               | 16,870,011                                | 17,658,269             | 18,396,397                | 19,091,587             | 20,595,504               |
| 27,778                   | 34,571                                    | 37,796                 | 46,321                    | 52,830                 | 59,187                   |
| 15,971,420               | 16,904,582                                | 17,696,065             | 18,442,718                | 19,144,417             | 20,654,691               |
| \$ 4,438,659             | \$ 5,832,914                              | \$ 8,743,444           | \$ 8,828,534              | \$ 9,194,768           | \$ 14,451,886            |
|                          |   |                        |                           |                        |                          |
| \$ 24,753,708            | \$ 25,223,043                             | \$ 25,771,703          | \$ 27,305,305             | \$ 26,415,236          | \$ 27,101,931            |
| 436,489                  | 436,494                                   | 436,489                | 436,489                   | 436,501                | 436,502                  |
| 25,190,197               | 25,659,537                                | 26,208,192             | 27,741,794                | 26,851,737             | 27,538,433               |
| 2/ (75.522               | 25.162.222                                | 25 524 222             | 27.271.272                | 26.272.212             | 27.040.017               |
| 24,675,520               | 25,169,883                                | 25,736,083             | 27,271,948                | 26,379,919             | 27,063,815               |
| 78,188                   | 53,160                                    | 35,620                 | 33,357                    | 35,317                 | 38,116                   |
| 439,232                  | 421,507<br>0                              | 474,040<br>0           | 466,531<br>0              | 487,699<br>0           | 527,040<br>0             |
| 25,192,940               | 25,644,550                                | 26,245,743             | 27,771,836                | 26,902,935             | 27,628,971               |
|                          |   |                        |                           |                        | . , , . ,                |
| 47,767                   | 31,179                                    | 24,353                 | 49,326                    | 85,124                 | 117,729                  |
| \$ 45,024                | \$ 46,166                                 | \$ (13,198)            | \$ 19,284                 | \$ 33,926              | \$ 27,191                |



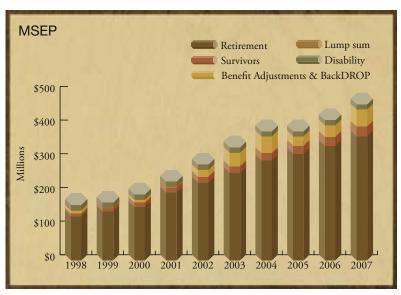
### Deductions From Net Assets for Benefits and Refunds by Type Last Ten Fiscal Years

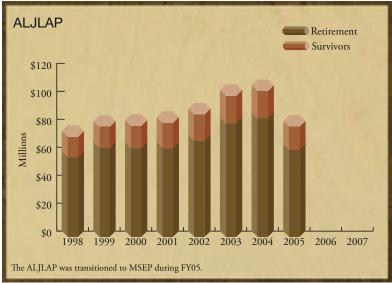
| Fiscal Year   | 1998  | 1999  | 2000   | 2001  | 2002   |
|---|---|---|--|---|--|
| MSEP  |   |   |  |   |  |
| Type of benefit   |   |   |  |   |  |
| Retirement  | \$129,252,252   | \$143,330,197   | \$157,184,011  | \$199,479,082   | \$229,333,190  |
| Survivors   | 8,498,948   | 9,812,877   | 12,602,200   | 15,184,214  | 17,482,292   |
| Disability  | 279,617   | 245,284   | 219,550  | 178,337   | 145,856  |
| Lump sum  | 3,178,164   | 1,871,798   | 1,522,312  | 1,886,958   | 1,893,194  |
| Benefit Adjustments & BackDROPs   | 8,052,700   | 39,768  | 8,162,749  | 1,134,262   | 19,626,450   |
| Total benefits  | \$149,261,681   | \$155,299,924   | \$179,690,822  | \$217,862,853   | \$268,480,982  |
| Refunds   | \$ 1,514  | \$ 0  | \$ 889   | \$ 0  | \$ 0   |
| ALJLAP*   |   |   |  |   |  |
| Type of benefit   |   |   |  |   |  |
| Retirement  | \$ 564,230  | \$ 630,161  | \$ 627,865   | \$ 629,094  | \$ 680,391   |
| Survivors   | 112,983   | 117,502   | 127,709  | 147,328   | 156,224  |
| Total benefits  | \$ 677,213  | \$ 747,663  | \$ 755,574   | \$ 776,422  | \$ 836,615   |
| Judicial Plan   |   |   |  |   |  |
| Type of benefit   |   |   |  |   |  |
| Retirement  | \$ 9,499,727  | \$ 10,202,222   | \$ 11,054,218  | \$ 12,621,473   | \$ 13,525,249  |
| Survivors   | 1,850,701   | 1,969,206   | 2,192,748  | 2,340,625   | 2,379,860  |
| Disability  | 83,029  | 57,897  | 45,222   | 48,000  | 38,533   |
| Total benefits  | \$ 11,433,457   | \$ 12,229,325   | \$ 13,292,188  | \$ 15,010,098   | \$ 15,943,642  |
|   |   |   |  |   |  |
| Fiscal Year   | 2003  | 2004  | 2005   | 2006  | 2007   |
| Fiscal Year MSEP  | 2003  | 2004  | 2005   | 2006  | 2007   |
| MSEP  | 2003  | 2004  | 2005   | 2006  | 2007   |
|   | <b>2003</b><br>\$257,883,204  | <b>2004</b><br>\$295,200,938  | <b>2005</b><br>\$314,623,851   | <b>2006</b><br>\$338,449,307  | <b>200</b> 7<br>\$366,185,990  |
| MSEP Type of benefit  |   |   |  |   |  |
| MSEP Type of benefit Retirement   | \$257,883,204<br>19,689,766<br>118,279  | \$295,200,938<br>21,930,438<br>102,696  | \$314,623,851<br>24,251,854<br>82,246  | \$338,449,307<br>26,944,984<br>62,324   | \$366,185,990<br>29,340,464<br>42,273  |
| MSEP Type of benefit Retirement Survivors Disability Lump sum   | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599   | \$295,200,938<br>21,930,438<br>102,696<br>320,267   | \$314,623,851<br>24,251,854<br>82,246<br>342,720   | \$338,449,307<br>26,944,984<br>62,324<br>459,398  | \$366,185,990<br>29,340,464<br>42,273<br>556,568   |
| MSEP Type of benefit Retirement Survivors Disability Lump sum Benefit Adjustments & BackDROPs   | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599<br>40,531,599   | \$295,200,938<br>21,930,438<br>102,696<br>320,267<br>49,693,761   | \$314,623,851<br>24,251,854<br>82,246<br>342,720<br>28,130,626   | \$338,449,307<br>26,944,984<br>62,324<br>459,398<br>34,253,550  | \$366,185,990<br>29,340,464<br>42,273<br>556,568<br>51,115,476   |
| MSEP Type of benefit Retirement Survivors Disability Lump sum   | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599   | \$295,200,938<br>21,930,438<br>102,696<br>320,267   | \$314,623,851<br>24,251,854<br>82,246<br>342,720   | \$338,449,307<br>26,944,984<br>62,324<br>459,398  | \$366,185,990<br>29,340,464<br>42,273<br>556,568   |
| MSEP Type of benefit Retirement Survivors Disability Lump sum Benefit Adjustments & BackDROPs   | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599<br>40,531,599   | \$295,200,938<br>21,930,438<br>102,696<br>320,267<br>49,693,761   | \$314,623,851<br>24,251,854<br>82,246<br>342,720<br>28,130,626   | \$338,449,307<br>26,944,984<br>62,324<br>459,398<br>34,253,550  | \$366,185,990<br>29,340,464<br>42,273<br>556,568<br>51,115,476   |
| MSEP Type of benefit Retirement Survivors Disability Lump sum Benefit Adjustments & BackDROPs Total benefits  | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599<br>40,531,599<br>\$319,607,447  | \$295,200,938<br>21,930,438<br>102,696<br>320,267<br>49,693,761<br>\$367,248,100  | \$314,623,851<br>24,251,854<br>82,246<br>342,720<br>28,130,626<br>\$367,431,297  | \$338,449,307<br>26,944,984<br>62,324<br>459,398<br>34,253,550<br>\$400,169,563   | \$366,185,990<br>29,340,464<br>42,273<br>556,568<br>51,115,476<br>\$447,240,771  |
| MSEP Type of benefit Retirement Survivors Disability Lump sum Benefit Adjustments & BackDROPs Total benefits Refunds  | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599<br>40,531,599<br>\$319,607,447  | \$295,200,938<br>21,930,438<br>102,696<br>320,267<br>49,693,761<br>\$367,248,100  | \$314,623,851<br>24,251,854<br>82,246<br>342,720<br>28,130,626<br>\$367,431,297  | \$338,449,307<br>26,944,984<br>62,324<br>459,398<br>34,253,550<br>\$400,169,563   | \$366,185,990<br>29,340,464<br>42,273<br>556,568<br>51,115,476<br>\$447,240,771  |
| MSEP Type of benefit Retirement Survivors Disability Lump sum Benefit Adjustments & BackDROPs Total benefits  Refunds  ALJLAP*  | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599<br>40,531,599<br>\$319,607,447<br>\$4,019   | \$295,200,938<br>21,930,438<br>102,696<br>320,267<br>49,693,761<br>\$367,248,100  | \$314,623,851<br>24,251,854<br>82,246<br>342,720<br>28,130,626<br>\$367,431,297  | \$338,449,307<br>26,944,984<br>62,324<br>459,398<br>34,253,550<br>\$400,169,563   | \$366,185,990<br>29,340,464<br>42,273<br>556,568<br>51,115,476<br>\$447,240,771  |
| MSEP Type of benefit Retirement Survivors Disability Lump sum Benefit Adjustments & BackDROPs Total benefits  Refunds  ALJLAP* Type of benefit Retirement Survivors   | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599<br>40,531,599<br>\$319,607,447<br>\$ 4,019<br>\$ 808,124<br>161,794   | \$295,200,938<br>21,930,438<br>102,696<br>320,267<br>49,693,761<br>\$367,248,100<br>\$ 8,585<br>\$ 840,963<br>162,392   | \$314,623,851<br>24,251,854<br>82,246<br>342,720<br>28,130,626<br>\$367,431,297<br>\$ 0  | \$338,449,307<br>26,944,984<br>62,324<br>459,398<br>34,253,550<br>\$400,169,563<br>\$1,341<br>\$0<br>0                                | \$366,185,990<br>29,340,464<br>42,273<br>556,568<br>51,115,476<br>\$447,240,771<br>\$ 0  |
| MSEP Type of benefit Retirement Survivors Disability Lump sum Benefit Adjustments & BackDROPs Total benefits  Refunds  ALJLAP* Type of benefit Retirement   | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599<br>40,531,599<br>\$319,607,447<br>\$4,019   | \$295,200,938<br>21,930,438<br>102,696<br>320,267<br>49,693,761<br>\$367,248,100<br>\$ 8,585  | \$314,623,851<br>24,251,854<br>82,246<br>342,720<br>28,130,626<br>\$367,431,297<br>\$ 0  | \$338,449,307<br>26,944,984<br>62,324<br>459,398<br>34,253,550<br>\$400,169,563<br>\$1,341  | \$366,185,990<br>29,340,464<br>42,273<br>556,568<br>51,115,476<br>\$447,240,771<br>\$ 0  |
| MSEP Type of benefit Retirement Survivors Disability Lump sum Benefit Adjustments & BackDROPs Total benefits  Refunds  ALJLAP* Type of benefit Retirement Survivors Total benefits  Judicial Plan                                       | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599<br>40,531,599<br>\$319,607,447<br>\$ 4,019<br>\$ 808,124<br>161,794   | \$295,200,938<br>21,930,438<br>102,696<br>320,267<br>49,693,761<br>\$367,248,100<br>\$ 8,585<br>\$ 840,963<br>162,392   | \$314,623,851<br>24,251,854<br>82,246<br>342,720<br>28,130,626<br>\$367,431,297<br>\$ 0  | \$338,449,307<br>26,944,984<br>62,324<br>459,398<br>34,253,550<br>\$400,169,563<br>\$1,341<br>\$0<br>0                                | \$366,185,990<br>29,340,464<br>42,273<br>556,568<br>51,115,476<br>\$447,240,771<br>\$ 0  |
| MSEP Type of benefit Retirement Survivors Disability Lump sum Benefit Adjustments & BackDROPs Total benefits  Refunds  ALJLAP* Type of benefit Retirement Survivors Total benefits  Judicial Plan Type of benefit                       | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599<br>40,531,599<br>\$319,607,447<br>\$4,019<br>\$808,124<br>161,794<br>\$969,918                                  | \$295,200,938<br>21,930,438<br>102,696<br>320,267<br>49,693,761<br>\$367,248,100<br>\$8,585<br>\$840,963<br>162,392<br>\$1,003,355                                  | \$314,623,851<br>24,251,854<br>82,246<br>342,720<br>28,130,626<br>\$367,431,297<br>\$ 0<br>\$ 616,370<br>132,827<br>\$ 749,197                               | \$338,449,307<br>26,944,984<br>62,324<br>459,398<br>34,253,550<br>\$400,169,563<br>\$1,341<br>\$0<br>0                                | \$366,185,990<br>29,340,464<br>42,273<br>556,568<br>51,115,476<br>\$447,240,771<br>\$ 0<br>\$ 0<br>\$ 0  |
| MSEP Type of benefit Retirement Survivors Disability Lump sum Benefit Adjustments & BackDROPs Total benefits  Refunds  ALJLAP* Type of benefit Retirement Survivors Total benefits  Judicial Plan Type of benefit Retirement Retirement | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599<br>40,531,599<br>\$319,607,447<br>\$4,019<br>\$808,124<br>161,794<br>\$969,918                                  | \$295,200,938<br>21,930,438<br>102,696<br>320,267<br>49,693,761<br>\$367,248,100<br>\$ 8,585<br>\$ 840,963<br>162,392<br>\$ 1,003,355                               | \$314,623,851<br>24,251,854<br>82,246<br>342,720<br>28,130,626<br>\$367,431,297<br>\$ 0<br>\$ 616,370<br>132,827<br>\$ 749,197                               | \$338,449,307<br>26,944,984<br>62,324<br>459,398<br>34,253,550<br>\$400,169,563<br>\$1,341<br>\$0<br>0<br>\$0                         | \$366,185,990<br>29,340,464<br>42,273<br>556,568<br>51,115,476<br>\$4447,240,771<br>\$ 0<br>\$ 0<br>\$ 0<br>\$ 0                               |
| MSEP Type of benefit Retirement Survivors Disability Lump sum Benefit Adjustments & BackDROPs Total benefits  Refunds  ALJLAP* Type of benefit Retirement Survivors Total benefits  Judicial Plan Type of benefit Retirement Survivors  | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599<br>40,531,599<br>\$319,607,447<br>\$ 4,019<br>\$ 808,124<br>161,794<br>\$ 969,918<br>\$ 14,256,361<br>2,613,650 | \$295,200,938<br>21,930,438<br>102,696<br>320,267<br>49,693,761<br>\$367,248,100<br>\$ 8,585<br>\$ 840,963<br>162,392<br>\$ 1,003,355<br>\$ 14,913,678<br>2,744,591 | \$314,623,851<br>24,251,854<br>82,246<br>342,720<br>28,130,626<br>\$367,431,297<br>\$ 0<br>\$ 616,370<br>132,827<br>\$ 749,197<br>\$ 15,513,182<br>2,883,215 | \$338,449,307<br>26,944,984<br>62,324<br>459,398<br>34,253,550<br>\$400,169,563<br>\$1,341<br>\$0<br>\$0<br>\$15,989,341<br>3,070,746 | \$366,185,990<br>29,340,464<br>42,273<br>556,568<br>51,115,476<br>\$4447,240,771<br>\$ 0<br>\$ 0<br>\$ 0<br>\$ 0<br>\$ 17,135,426<br>3,433,078 |
| MSEP Type of benefit Retirement Survivors Disability Lump sum Benefit Adjustments & BackDROPs Total benefits  Refunds  ALJLAP* Type of benefit Retirement Survivors Total benefits  Judicial Plan Type of benefit Retirement Retirement | \$257,883,204<br>19,689,766<br>118,279<br>1,384,599<br>40,531,599<br>\$319,607,447<br>\$4,019<br>\$808,124<br>161,794<br>\$969,918                                  | \$295,200,938<br>21,930,438<br>102,696<br>320,267<br>49,693,761<br>\$367,248,100<br>\$ 8,585<br>\$ 840,963<br>162,392<br>\$ 1,003,355                               | \$314,623,851<br>24,251,854<br>82,246<br>342,720<br>28,130,626<br>\$367,431,297<br>\$ 0<br>\$ 616,370<br>132,827<br>\$ 749,197                               | \$338,449,307<br>26,944,984<br>62,324<br>459,398<br>34,253,550<br>\$400,169,563<br>\$1,341<br>\$0<br>0<br>\$0                         | \$366,185,990<br>29,340,464<br>42,273<br>556,568<br>51,115,476<br>\$447,240,771<br>\$ 0<br>\$ 0<br>\$ 0<br>\$ 0                                |

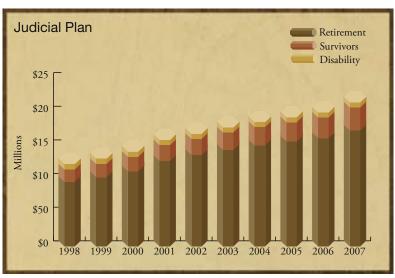
<sup>\*</sup>ALJLAP transitioned to the MSEP in FY05.



### Deductions From Net Assets for Benefits and Refunds by Type Last Ten Fiscal Years







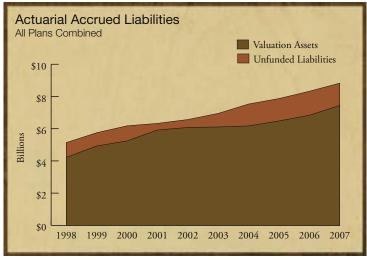
Pension Trust Funds - All Plans Combined

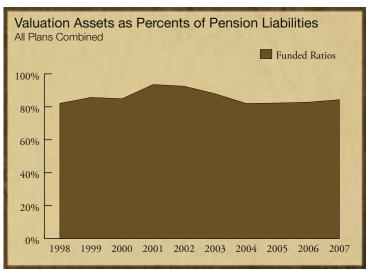
### Valuation Assets vs. Pension Liabilities

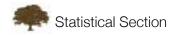
Last Ten Fiscal Years

### Valuation Assets (at market) vs. Pension Liabilities

|                | 1                   | Dollars in Billions     | 6                      |                  |
|----------------|---------------------|-------------------------|------------------------|------------------|
| Fiscal<br>Year | Valuation<br>Assets | Unfunded<br>Liabilities | Accrued<br>Liabilities | Funded<br>Ratios |
| 1998           | \$4.2209            | \$0.9185                | \$5.1394               | 82.1%            |
| 1999           | 4.9267              | 0.8219                  | 5.7486                 | 85.7             |
| 2000           | 5.2433              | 0.9357                  | 6.1790                 | 84.9             |
| 2001           | 5.9182              | 0.4118                  | 6.3300                 | 93.5             |
| 2002           | 6.0780              | 0.4906                  | 6.5686                 | 92.5             |
| 2003           | 6.1075              | 0.8417                  | 6.9492                 | 87.9             |
| 2004           | 6.1735              | 1.3573                  | 7.5308                 | 82.0             |
| 2005           | 6.4795              | 1.3908                  | 7.8703                 | 82.3             |
| 2006           | 6.8883              | 1.4339                  | 8.3222                 | 82.8             |
| 2007           | 7.4392              | 1.3879                  | 8.8271                 | 84.3             |







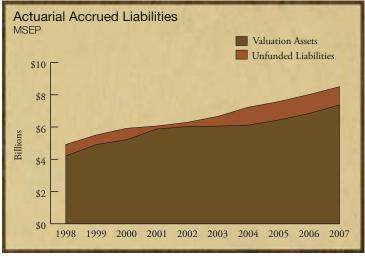
Pension Trust Funds - MSEP

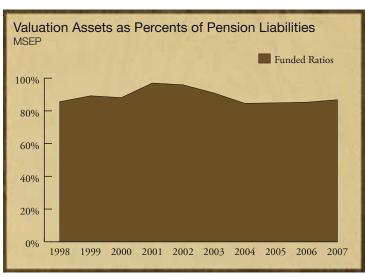
### Valuation Assets vs. Pension Liabilities

Last Ten Fiscal Years

#### Valuation Assets (at market) vs. Pension Liabilities

|                | I                   | Dollars in Billions     | 6                      |                  |
|----------------|---------------------|-------------------------|------------------------|------------------|
| Fiscal<br>Year | Valuation<br>Assets | Unfunded<br>Liabilities | Accrued<br>Liabilities | Funded<br>Ratios |
| 1998           | \$4.2106            | \$0.7083                | \$4.9189               | 85.6%            |
| 1999           | 4.9088              | 0.5972                  | 5.5060                 | 89.2             |
| 2000           | 5.2169              | 0.7038                  | 5.9207                 | 88.1             |
| 2001           | 5.8812              | 0.1840                  | 6.0652                 | 97.0             |
| 2002           | 6.0331              | 0.2612                  | 6.2943                 | 95.9             |
| 2003           | 6.0573              | 0.6050                  | 6.6623                 | 90.9             |
| 2004           | 6.1182              | 1.1118                  | 7.2300                 | 84.6             |
| 2005           | 6.4353              | 1.1427                  | 7.5780                 | 84.9             |
| 2006           | 6.8366              | 1.1766                  | 8.0132                 | 85.3             |
| 2007           | 7.3773              | 1.1231                  | 8.5004                 | 86.8             |





Pension Trust Funds - ALJLAP\*

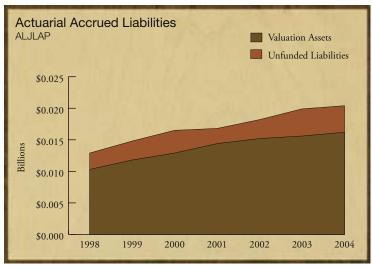
### Valuation Assets vs. Pension Liabilities

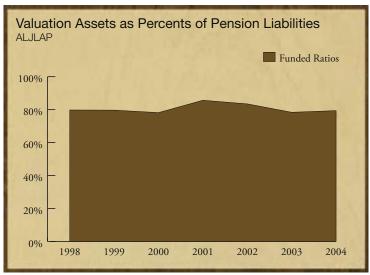
Last Ten Fiscal Years

#### Valuation Assets (at market) vs. Pension Liabilities

|                | ]                   | Dollars in Billions     | 6                      |                  |
|----------------|---------------------|-------------------------|------------------------|------------------|
| Fiscal<br>Year | Valuation<br>Assets | Unfunded<br>Liabilities | Accrued<br>Liabilities | Funded<br>Ratios |
| 1998           | 0.0103              | 0.0026                  | 0.0129                 | 79.8             |
| 1999           | 0.0118              | 0.0030                  | 0.0148                 | 79.7             |
| 2000           | 0.0129              | 0.0036                  | 0.0165                 | 78.2             |
| 2001           | 0.0144              | 0.0024                  | 0.0168                 | 85.7             |
| 2002           | 0.0152              | 0.0030                  | 0.0182                 | 83.5             |
| 2003           | 0.0156              | 0.0043                  | 0.0199                 | 78.4             |
| 2004           | 0.0162              | 0.0042                  | 0.0204                 | 79.4             |

<sup>\*</sup>Assets and liabilities transferred to MSEP during FY05.







Pension Trust Funds - Judicial Plan

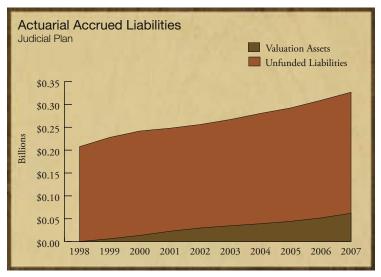
### Valuation Assets vs. Pension Liabilities

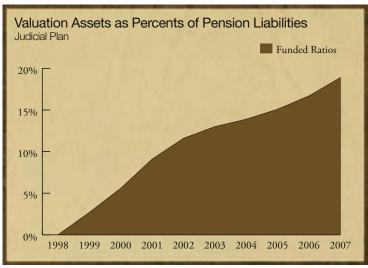
Last Ten Fiscal Years

#### Valuation Assets (at market) vs. Pension Liabilities

|                | Dollars in Billions |                         |                        |                  |  |  |  |
|----------------|---------------------|-------------------------|------------------------|------------------|--|--|--|
| Fiscal<br>Year | Valuation<br>Assets | Unfunded<br>Liabilities | Accrued<br>Liabilities | Funded<br>Ratios |  |  |  |
| 1998           | \$0.0000            | \$0.2076                | \$0.2076               | 0.0%             |  |  |  |
| 1999           | 0.0061              | 0.2217                  | 0.2278                 | 2.7              |  |  |  |
| 2000           | 0.0135              | 0.2283                  | 0.2418                 | 5.6              |  |  |  |
| 2001           | 0.0226              | 0.2254                  | 0.2480                 | 9.1              |  |  |  |
| 2002           | 0.0297              | 0.2264                  | 0.2561                 | 11.6             |  |  |  |
| 2003           | 0.0346              | 0.2324                  | 0.2670                 | 13.0             |  |  |  |
| 2004           | 0.0391              | 0.2413                  | 0.2804                 | 13.9             |  |  |  |
| 2005           | 0.0442              | 0.2481                  | 0.2923                 | 15.1             |  |  |  |
| 2006           | 0.0517              | 0.2573                  | 0.3090                 | 16.7             |  |  |  |
| 2007           | 0.0619              | 0.2648                  | 0.3267                 | 19.0             |  |  |  |

Prior to FY99 the Judicial Plan was on a pay-as-you-go basis



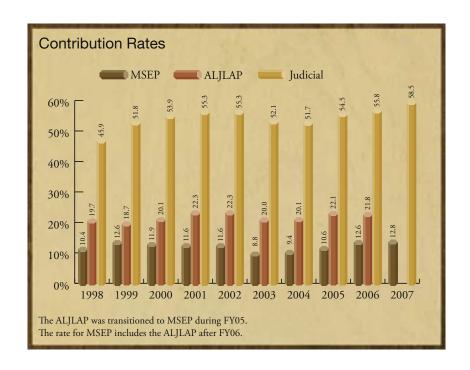




### Contribution Rates

Last Ten Fiscal Years

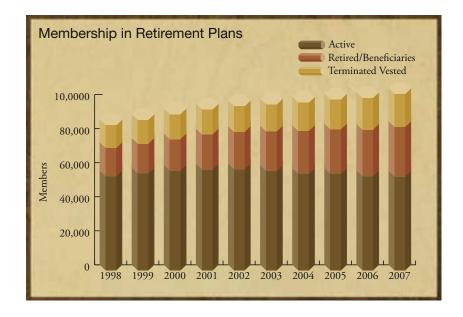
|             | Percent of Payroll |        |               |  |  |  |
|-------------|--------------------|--------|---------------|--|--|--|
| Fiscal Year | MSEP               | ALJLAP | Judicial Plan |  |  |  |
| 1998        | 10.40%             | 19.66% | 45.91%        |  |  |  |
| 1999        | 12.58              | 18.70  | 51.81         |  |  |  |
| 2000        | 11.91              | 20.10  | 53.92         |  |  |  |
| 2001        | 11.59              | 22.32  | 55.30         |  |  |  |
| 2002        | 11.59              | 22.32  | 55.30         |  |  |  |
| 2003        | 8.81               | 20.02  | 52.12         |  |  |  |
| 2004        | 9.35               | 20.12  | 51.68         |  |  |  |
| 2005        | 10.64              | 22.13  | 54.51         |  |  |  |
| 2006        | 12.59              | 21.79  | 55.76         |  |  |  |
| 2007        | 12.78              |        | 58.48         |  |  |  |





# Membership in Retirement Plans Last Ten Fiscal Years

| Fiscal Year | Active | Retired/Beneficiaries | Terminated-Vested | Totals  |
|-------------|--------|-----------------------|-------------------|---------|
| 1998        | 54,951 | 16,616                | 10,561            | 82,128  |
| 1999        | 56,571 | 17,495                | 11,181            | 85,247  |
| 2000        | 58,201 | 18,582                | 11,858            | 88,641  |
| 2001        | 58,869 | 20,642                | 11,837            | 91,348  |
| 2002        | 59,066 | 21,910                | 12,339            | 93,315  |
| 2003        | 58,007 | 23,292                | 13,073            | 94,372  |
| 2004        | 56,362 | 25,179                | 13,898            | 95,439  |
| 2005        | 56,336 | 26,177                | 14,789            | 97,302  |
| 2006        | 54,887 | 27,450                | 15,829            | 98,166  |
| 2007        | 54,763 | 29,129                | 16,578            | 100,470 |





## Benefit Recipients by Type of Retirement and Option Selected June 30, 2007

**MSEP** 

|                           |                                 | Type of Retirement |       |       |       |    |   |     |
|---------------------------|---------------------------------|--------------------|-------|-------|-------|----|---|-----|
| Amount of Monthly Benefit | Number of<br>Benefit Recipients | A                  | В     | С     | D     | E  | F | G   |
| 1-250                     | 3,652                           | 1,459              | 1,395 | 323   | 438   | 5  | 0 | 32  |
| 251-500                   | 5,228                           | 2,684              | 1,585 | 369   | 545   | 7  | 0 | 38  |
| 501-750                   | 4,206                           | 2,856              | 695   | 244   | 384   | 0  | 0 | 27  |
| 751-1000                  | 3,173                           | 2,574              | 268   | 114   | 207   | 0  | 0 | 10  |
| 1001-1250                 | 2,454                           | 2,101              | 103   | 93    | 155   | 0  | 0 | 2   |
| 1251-1500                 | 1,937                           | 1,741              | 53    | 52    | 90    | 0  | 0 | 1   |
| 1501-1750                 | 1,658                           | 1,527              | 28    | 36    | 64    | 0  | 0 | 3   |
| 1751-2000                 | 1,500                           | 1,421              | 12    | 25    | 41    | 0  | 0 | 1   |
| Over 2000                 | 5,198                           | 4,945              | 30    | 64    | 159   | 0  | 0 | 0   |
| Total                     | 29,006                          | 21,308             | 4,169 | 1,320 | 2,083 | 12 | 0 | 114 |

Judicial Plan

|                           |                                 |     |    | Type of | Retirement |   |   |   |
|---------------------------|---------------------------------|-----|----|---------|------------|---|---|---|
| Amount of Monthly Benefit | Number of<br>Benefit Recipients | A   | В  | С       | D          | E | F | G |
| 1-250                     | 2                               | 0   | 1  | 0       | 1          | 0 | 0 | 0 |
| 251-500                   | 9                               | 0   | 6  | 0       | 3          | 0 | 0 | 0 |
| 501-750                   | 6                               | 0   | 0  | 2       | 3          | 0 | 0 | 1 |
| 751-1000                  | 11                              | 0   | 2  | 1       | 8          | 0 | 0 | 0 |
| 1001-1250                 | 7                               | 0   | 3  | 3       | 1          | 0 | 0 | 0 |
| 1251-1500                 | 4                               | 0   | 3  | 0       | 1          | 0 | 0 | 0 |
| 1501-1750                 | 14                              | 1   | 6  | 4       | 3          | 0 | 0 | 0 |
| 1751-2000                 | 12                              | 0   | 4  | 2       | 6          | 0 | 0 | 0 |
| Over 2000                 | <u>375</u>                      | 249 | 30 | 28      | 67         | 0 | 0 | 1 |
| Total                     | 440                             | 250 | 55 | 40      | 93         | 0 | 0 | 2 |

### Type of Retirement

- A Normal retirement
- B Early retirement
- C Survivor of active
- D Survivor of retired
- E Disability
- F Occupational disability (Water Patrol)
- G Ex-spouse



#### **Option Selected**

| 1   | 2   | 3   | 4   | 5     | 6  | 7     | 8     | 9  | 10     |
|-----|-----|-----|-----|-------|----|-------|-------|----|--------|
| 0   | 26  | 106 | 81  | 186   | 1  | 688   | 670   | 52 | 1,842  |
| 10  | 36  | 123 | 48  | 156   | 6  | 1,048 | 1,110 | 19 | 2,672  |
| 9   | 36  | 81  | 39  | 133   | 5  | 850   | 1,092 | 5  | 1,956  |
| 7   | 21  | 49  | 18  | 180   | 2  | 581   | 843   | 3  | 1,469  |
| 12  | 18  | 40  | 15  | 179   | 1  | 466   | 556   | 1  | 1,166  |
| 16  | 8   | 29  | 13  | 178   | 1  | 367   | 409   | 0  | 916    |
| 7   | 7   | 22  | 12  | 222   | 0  | 292   | 288   | 1  | 807    |
| 10  | 8   | 21  | 7   | 237   | 0  | 319   | 175   | 1  | 722    |
| 62  | 16  | 54  | 19  | 742   | 3  | 1,356 | 806   | 0  | 2,140  |
| 133 | 176 | 525 | 252 | 2,213 | 19 | 5,967 | 5,949 | 82 | 13,690 |

#### **Option Selected**

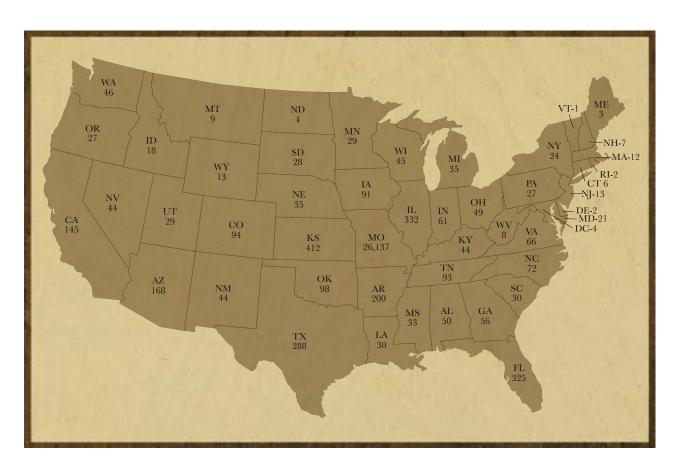
| 1   | 2 | 3 | 4 | 5  | 6 | 7 | 8 | 9 | 10 |
|-----|---|---|---|----|---|---|---|---|----|
| 2   | 0 | 0 | 0 | 0  | 0 | 0 | 0 | 0 | 0  |
| 7   | 0 | 0 | 0 | 1  | 0 | 0 | 0 | 0 | 1  |
| 0   | 0 | 0 | 0 | 3  | 0 | 0 | 0 | 0 | 3  |
| 3   | 0 | 0 | 0 | 4  | 0 | 0 | 0 | 0 | 4  |
| 3   | 0 | 0 | 0 | 0  | 0 | 0 | 0 | 0 | 4  |
| 3   | 0 | 0 | 0 | 1  | 0 | 0 | 0 | 0 | 0  |
| 7   | 0 | 0 | 0 | 1  | 0 | 0 | 0 | 0 | 6  |
| 5   | 0 | 0 | 0 | 3  | 0 | 0 | 0 | 0 | 4  |
| 334 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 9  |
| 364 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 | 31 |

### **Option Selected**

- 1 Automatic 50% joint & survivor
- 2 60-month guaranteed
- 3 120-month guaranteed
- 4 180-month guaranteed
- 5 50% joint & survivor
- 6 75% joint & survivor
- 7 100% joint & survivor
- 8 Unreduced 50% joint & survivor
- 9 Automatic minor survivor
- 10 No survivor option (includes pop-ups)



## Distribution of Benefit Recipients by Location June 30, 2007



### Benefit Recipients Outside the Continental United States

| 9 - Alaska                  | 1 - Ireland         |
|-----------------------------|---------------------|
| 2 - APO                     | 1 - Israel          |
| 1 - Argentina               | 1 - Italy           |
| 1 - Australia               | 2 - Mexico          |
| 4 - Canada                  | 1 - Panama          |
| 1 - Colombia, South America | 1 - Puerto Rico     |
| 1 - Germany                 | 1 - Sweden          |
| 2 - Guam                    | 1 - The Netherlands |
| 5 - Hawaii                  | 1 - United Kingdom  |



# Benefits Payable June 30, 2007 Tabulated by Option and Type of Benefit

MSEP \*

| Type of Benefit          | Number | Annual Funded Benefits | Average Annual Benefits |
|--------------------------|--------|------------------------|-------------------------|
| Service retirement       |        |                        |                         |
| Life annuity             | 4,764  | \$ 50,725,961          | \$10,648                |
| 50% joint and survivor   | 5,099  | 73,679,258             | 14,450                  |
| 75% joint and survivor   | 3      | 47,168                 | 15,723                  |
| 100% joint and survivor  | 2,363  | 40,219,201             | 17,020                  |
| 5-year certain and life  | 120    | 1,153,106              | 9,609                   |
| 10-year certain and life | 112    | 900,360                | 8,039                   |
| Survivor beneficiary     | 1,841  | 17,132,116             | 9,306                   |
| Total                    | 14,302 | 183,857,170            | 12,855                  |
| Disability retirement    | 12     | 39,588                 | 3,299                   |
| Death-in-service         | 1,303  | 10,980,615             | 8,427                   |
| Grand totals             | 15,617 | \$194,877,373          | 12,479                  |

<sup>\*</sup> Count includes 11 Lincoln University members and 35 members of the ALJLAP.

### MSEP 2000

| Type of Benefit          | Number | <b>Annual Funded Benefits</b> | Average Annual Benefits |
|--------------------------|--------|-------------------------------|-------------------------|
| Service retirement       |        |                               |                         |
| Life annuity             | 8,475  | \$126,942,766                 | \$14,978                |
| 50% joint and survivor   | 1,982  | 42,968,886                    | 21,680                  |
| 100% joint and survivor  | 1,754  | 32,576,523                    | 18,573                  |
| 5-year certain and life  | 50     | 698,011                       | 13,960                  |
| 10-year certain and life | 341    | 4,133,280                     | 12,121                  |
| 15-Year certain and life | 224    | 2,007,907                     | 8,964                   |
| Survivor beneficiary     | 234    | 2,197,735                     | 9,392                   |
| Total                    | 13,060 | 211,525,108                   | 16,196                  |
| Death-in-service         | 15     | 35,713                        | 2,381                   |
| Grand totals             | 13,075 | \$211,560,821                 | 16,181                  |

### Judicial Plan

| Type of Benefit        | Number | <b>Annual Funded Benefits</b> | Average Annual Benefits |
|------------------------|--------|-------------------------------|-------------------------|
| Service retirement     |        |                               |                         |
| Life annuity           | 6      | \$ 316,344                    | \$52,724                |
| 50% joint and survivor | 298    | 17,744,236                    | 59,544                  |
| Survivor beneficiary   | 93     | 2,580,953                     | 27,752                  |
| Total                  | 397    | 20,641,533                    | 51,994                  |
| Death-in-service       | 40     | 1,024,748                     | 25,619                  |
| Grand totals           | 437    | \$21,666,281                  | 49,580                  |



### Average Monthly Benefit Amounts

Ten Years Ended June 30, 2007

**MSEP** 

Years Credited Service by Category All Members 5-10 10-15 15-20 25-30 Member Retiring During Fiscal Year: <5 20-25 30+ \$ 925 1998 Average monthly benefit \$ 154 \$ 247 \$ 555 \$ 863 \$ 382 \$1,280 \$1,676 Average final average salary \$2,179 \$1,897 \$2,024 \$1,987 \$2,331 \$2,661 \$2,924 \$2,374 185 Number of retirees 114 169 157 163 236 1,031 1999 Average monthly benefit \$ 126 \$ 233 \$ 372 \$ 611 \$ 862 \$1,244 \$1,871 \$ 998 Average final average salary \$1,870 \$2,001 \$2,083 \$2,260 \$2,359 \$2,642 \$3,281 \$2,538 Number of retirees 104 174 174 226 256 167 1,105 2000 Average monthly benefit \$ 175 \$ 240 \$ 365 \$ 648 \$ 842 \$1,362 \$1,905 \$1,043 Average final average salary \$2,700 \$1,973 \$2,032 \$2,336 \$2,316 \$2,904 \$3,309 \$2,605 Number of retirees 115 178 166 184 247 282 1,179 2001 Average monthly benefit \$ 232 \$ 256 \$ 431 \$ 680 \$ 972 \$1,386 \$1,748 \$1,081 Average final average salary \$2,318 \$2,080 \$2,117 \$2,435 \$2,524 \$2,907 \$3,067 \$2,635 Number of retirees 12 361 334 209 259 467 741 2,383 2002 \$ 97 \$ 654 \$1,004 \$ 974 Average monthly benefit \$ 258 \$ 427 \$1,445 \$1,889 \$1,373 \$2,429 \$2,624 \$3,042 \$2,656 Average final average salary \$2,235 \$2,171 \$3,331 Number of retirees 239 288 245 259 371 251 6 1,659 2003 \$ 113 \$ 767 \$1,050 Average monthly benefit \$ 286 \$ 504 \$1,449 \$1,811 \$1,049 \$1,574 \$2,617 \$2,707 \$3,049 Average final average salary \$2,164 \$2,417 \$3,271 \$2,753 Number of retirees 6 218 253 242 298 452 259 1,728 2004 Average monthly benefit \$ 134 \$ 281 \$ 423 \$ 687 \$1,036 \$1,445 \$1,650 \$1,000 \$1,945 \$2,378 \$2,264 \$2,554 \$2,698 \$3,043 \$3,034 \$2,715 Average final average salary Number of retirees 7 404 2,318 311 314 325 605 352 2005 \$ 281 \$ 285 \$ 463 \$ 676 \$1,188 \$1,564 \$1,960 \$ 938 Average monthly benefit Average final average salary \$3,990 \$2,358 \$2,244 \$2,554 \$3,077 \$3,343 \$3,500 \$2,796 Number of retirees 4 321 277 288 279 343 132 1,644 2006 \$ 426 \$ 279 \$ 438 \$ 699 \$1,033 \$1,570 \$1,856 \$ 901 Average monthly benefit Average final average salary \$3,520 \$2,389 \$2,336 \$2,687 \$2,742 \$3,322 \$3,447 \$2,770 Number of retirees 3 363 318 299 300 357 163 1,803 2007 Average monthly benefit \$ 150 \$ 279 \$ 479 \$ 698 \$1,112 \$1,562 \$1,865 \$ 942 Average final average salary \$2,613 \$2,359 \$2,479 \$2,666 \$2,951 \$3,314 \$3,420 \$2,831 Number of retirees 1 453 332 351 363 457 212 2,169 Ten years ended June 30, 2007 \$ 988 Average monthly benefit \$ 181 \$ 270 \$ 436 \$ 676 \$1,019 \$1,450 \$1,799 Average final average salary \$2,279 \$2,498 \$2,683 \$3,062 \$3,202 \$2,691 \$2,247 \$2,241 17,019 Number of retirees 57 2,599 2,630 2,456 2,683 3,710 2,884



General Employees in the MSEP

|          |                                | Years Credited Service by Category |         |         |         |         |         |         |                |  |  |  |
|----------|--------------------------------|------------------------------------|---------|---------|---------|---------|---------|---------|----------------|--|--|--|
| Membe    | r Retiring During Fiscal Year: | <5                                 | 5-10    | 10-15   | 15-20   | 20-25   | 25-30   | 30+     | All<br>Members |  |  |  |
| 1998     | Average monthly benefit        | \$ 154                             | \$ 213  | \$ 354  | \$ 537  | \$ 838  | \$1,277 | \$1,672 | \$ 915         |  |  |  |
|          | Average final average salary   | \$2,179                            | \$1,857 | \$2,006 | \$1,979 | \$2,289 | \$2,659 | \$2,927 | \$2,364        |  |  |  |
|          | Number of retirees             | 7                                  | 108     | 165     | 155     | 161     | 184     | 235     | 1,015          |  |  |  |
| 1999     | Average monthly benefit        | \$ 126                             | \$ 224  | \$ 344  | \$ 598  | \$ 862  | \$1,238 | \$1,868 | \$ 992         |  |  |  |
|          | Average final average salary   | \$1,870                            | \$1,991 | \$2,044 | \$2,256 | \$2,359 | \$2,642 | \$3,279 | \$2,531        |  |  |  |
|          | Number of retirees             | 4                                  | 102     | 165     | 172     | 174     | 225     | 255     | 1,097          |  |  |  |
| 2000     | Average monthly benefit        | \$ 175                             | \$ 221  | \$ 358  | \$ 641  | \$ 842  | \$1,362 | \$1,900 | \$1,041        |  |  |  |
|          | Average final average salary   | \$2,700                            | \$1,950 | \$2,029 | \$2,334 | \$2,316 | \$2,904 | \$3,306 | \$2,604        |  |  |  |
|          | Number of retirees             | 7                                  | 111     | 177     | 165     | 184     | 247     | 281     | 1,172          |  |  |  |
| 2001     | Average monthly benefit        | \$ 101                             | \$ 240  | \$ 395  | \$ 638  | \$ 964  | \$1,379 | \$1,746 | \$1,070        |  |  |  |
|          | Average final average salary   | \$1,619                            | \$2,057 | \$2,055 | \$2,395 | \$2,511 | \$2,908 | \$3,065 | \$2,616        |  |  |  |
|          | Number of retirees             | 11                                 | 356     | 329     | 204     | 258     | 464     | 740     | 2,362          |  |  |  |
| 2002     | Average monthly benefit        | \$ 97                              | \$ 255  | \$ 416  | \$ 642  | \$ 993  | \$1,441 | \$1,883 | \$ 967         |  |  |  |
|          | Average final average salary   | \$1,373                            | \$2,233 | \$2,167 | \$2,427 | \$2,605 | \$3,043 | \$3,333 | \$2,653        |  |  |  |
|          | Number of retirees             | 6                                  | 238     | 285     | 243     | 258     | 370     | 249     | 1,649          |  |  |  |
| 2003     | Average monthly benefit        | \$ 113                             | \$ 243  | \$ 471  | \$ 674  | \$1,026 | \$1,445 | \$1,808 | \$1,031        |  |  |  |
|          | Average final average salary   | \$1,574                            | \$2,138 | \$2,410 | \$2,556 | \$2,709 | \$3,050 | \$3,274 | \$2,749        |  |  |  |
|          | Number of retirees             | 6                                  | 206     | 244     | 227     | 293     | 451     | 258     | 1,685          |  |  |  |
| 2004     | Average monthly benefit        | \$ 134                             | \$ 271  | \$ 423  | \$ 675  | \$1,036 | \$1,445 | \$1,650 | \$ 999         |  |  |  |
|          | Average final average salary   | \$1,945                            | \$2,373 | \$2,264 | \$2,553 | \$2,698 | \$3,042 | \$3,034 | \$2,715        |  |  |  |
|          | Number of retirees             | 7                                  | 305     | 314     | 322     | 404     | 604     | 352     | 2,308          |  |  |  |
| 2005     | Average monthly benefit        | \$ 229                             | \$ 262  | \$ 410  | \$ 666  | \$1,136 | \$1,564 | \$1,915 | \$ 915         |  |  |  |
|          | Average final average salary   | \$4,449                            | \$2,348 | \$2,169 | \$2,551 | \$3,025 | \$3,343 | \$3,528 | \$2,778        |  |  |  |
|          | Number of retirees             | 3                                  | 309     | 270     | 285     | 271     | 343     | 128     | 1,609          |  |  |  |
| 2006     | Average monthly benefit        | \$ 95                              | \$ 265  | \$ 428  | \$ 699  | \$1,033 | \$1,556 | \$1,839 | \$ 892         |  |  |  |
|          | Average final average salary   | \$1,362                            | \$2,361 | \$2,333 | \$2,687 | \$2,742 | \$3,299 | \$3,419 | \$2,754        |  |  |  |
|          | Number of retirees             | 2                                  | 358     | 315     | 299     | 300     | 354     | 161     | 1,789          |  |  |  |
| 2007     | Average monthly benefit        | \$ 0                               | \$ 260  | \$ 474  | \$ 691  | \$1,112 | \$1,562 | \$1,857 | 940            |  |  |  |
|          | Average final average salary   | \$ 0                               | \$2,339 | \$2,478 | \$2,666 | \$2,951 | \$3,314 | \$3,424 | \$2,830        |  |  |  |
|          | Number of retirees             | 0                                  | 440     | 330     | 349     | 363     | 457     | 211     | \$2,150        |  |  |  |
| Ten year | rs ended June 30, 2007         |                                    |         |         |         |         |         |         |                |  |  |  |
|          | Average monthly benefit        | \$ 132                             | \$ 252  | \$ 415  | \$ 656  | \$1,007 | \$1,446 | \$1,792 | \$ 980         |  |  |  |
|          | Average final average salary   | \$2,015                            | \$2,230 | \$2,220 | \$2,487 | \$2,672 | \$3,060 | \$3,201 | \$2,682        |  |  |  |
|          | Number of retirees             | 53                                 | 2,533   | 2,594   | 2,421   | 2,666   | 3,699   | 2,870   | 16,836         |  |  |  |



Uniformed Members of the Water Patrol in the MSEP

|          |                                | Years Credited Service by Category |      |      |      |      |      |       |      |     |      |     |         | All         |
|----------|--------------------------------|------------------------------------|------|------|------|------|------|-------|------|-----|------|-----|---------|-------------|
| Membe    | r Retiring During Fiscal Year: | <5                                 | 5-10 | 10   | )-15 | 15   | 5-20 | 20-25 | 25-  | -30 | 3    | 0+  |         | ll<br>ibers |
| 1998     | Average monthly benefit        | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | 1,   | 782 | \$   | 0   | \$3,001 | 782         |
|          | Average final average salary   | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | 3,   | 001 | \$   | 0   | \$3,    | 001         |
|          | Number of retirees             | 0                                  | 0    |      | 0    |      | 0    | 0     |      | 1   |      | 0   |         | 1           |
| 1999     | Average monthly benefit        | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | \$   | 0   | \$2, | 567 | \$2,    | 567         |
|          | Average final average salary   | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | \$   | 0   | \$3, | 767 | \$3,    | 767         |
|          | Number of retirees             | 0                                  | 0    |      | 0    |      | 0    | 0     |      | 0   |      | 1   |         | 1           |
| 2000     | Average monthly benefit        | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | \$   | 0   | \$3, | 297 | \$3,    | 297         |
|          | Average final average salary   | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | \$   | 0   | \$4, | 014 | \$4,    | 014         |
|          | Number of retirees             | 0                                  | 0    |      | 0    |      | 0    | 0     |      | 0   |      | 1   |         | 1           |
| 2001     | Average monthly benefit        | \$ 0                               | \$ 0 | \$1, | 664  | \$   | 0    | \$ 0  | 1,   | 923 | \$3, | 236 | \$2,    | 274         |
|          | Average final average salary   | \$ 0                               | \$ 0 | \$5, | 833  | \$   | 0    | \$ 0  | 3,   | 172 | \$4, | 274 | \$4,    | 426         |
|          | Number of retirees             | 0                                  | 0    |      | 1    |      | 0    | 0     |      | 1   |      | 1   |         | 3           |
| 2002     | Average monthly benefit        | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | \$   | 0   | \$1, | 843 | \$1,    | 843         |
|          | Average final average salary   | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | \$   | 0   | \$3, | 432 | \$3,    | 432         |
|          | Number of retirees             | 0                                  | 0    |      | 0    |      | 0    | 0     |      | 0   |      | 1   |         | 1           |
| 2003     | Average monthly benefit        | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | \$   | 0   | \$   | 0   | \$      | 0           |
|          | Average final average salary   | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | \$   | 0   | \$   | 0   | \$      | 0           |
|          | Number of retirees             | 0                                  | 0    |      | 0    |      | 0    | 0     |      | 0   |      | 0   |         | 0           |
| 2004     | Average monthly benefit        | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  |      | 743 | \$   | 0   |         | 743         |
|          | Average final average salary   | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | 3,   | 628 | \$   | 0   | \$3,    | 628         |
|          | Number of retirees             | 0                                  | 0    |      | 0    |      | 0    | 0     |      | 1   |      | 0   |         | 1           |
| 2005     | Average monthly benefit        | \$ 0                               | \$ 0 | \$   | 0    |      | 267  | \$ 0  | \$   | 0   | \$   | 0   |         | 267         |
|          | Average final average salary   | \$ 0                               | \$ 0 | \$   | 0    | \$3, | 254  | \$ 0  | \$   | 0   | \$   | 0   | \$3,    | 254         |
|          | Number of retirees             | 0                                  | 0    |      | 0    |      | 1    | 0     |      | 0   |      | 0   |         | 1           |
| 2006     | Average monthly benefit        | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  |      | 848 | \$3, | 090 | \$2,    | 969         |
|          | Average final average salary   | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | 4,   | 657 | \$4, | 710 | \$4,    | 684         |
|          | Number of retirees             | 0                                  | 0    |      | 0    |      | 0    | 0     |      | 1   |      | 1   |         | 2           |
| 2007     | Average monthly benefit        | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | \$   | 0   | \$   | 0   | \$      | 0           |
|          | Average final average salary   | \$ 0                               | \$ 0 | \$   | 0    | \$   | 0    | \$ 0  | \$   | 0   | \$   | 0   | \$      | 0           |
|          | Number of retirees             | 0                                  | 0    |      | 0    |      | 0    | 0     |      | 0   |      | 0   |         | 0           |
| Ten year | rs ended June 30, 2007         |                                    |      |      |      |      |      |       |      |     |      |     |         |             |
|          | Average monthly benefit        | \$ 0                               | \$ 0 |      | 664  |      | 267  | \$ 0  |      | 074 | \$2, |     |         | 297         |
|          | Average final average salary   | \$ 0                               | \$ 0 | \$5, | 833  | \$3, | 254  | \$ 0  | \$3, | 615 | \$4, | 039 | \$3,    | 977         |
|          | Number of retirees             | 0                                  | 0    |      | 1    |      | 1    | 0     |      | 4   |      | 5   |         | 11          |



Legislators in the MSEP

|          |                                | Years Credited Service by Cate |     |          |         |         |      |     |      |      |     | Category |                |  |  |  |  |
|----------|--------------------------------|--------------------------------|-----|----------|---------|---------|------|-----|------|------|-----|----------|----------------|--|--|--|--|
| Membe    | r Retiring During Fiscal Year: | <                              | 5   | 5-10     | 10-15   | 15-20   | 20-  | -25 | 25   | 5-30 | 30  | 0+       | All<br>Members |  |  |  |  |
| 1998     | Average monthly benefit        | \$                             | 0   | \$ 868   | \$1,054 | \$1,953 | \$   | 0   | \$   | 0    | \$2 | ,700     | \$1,248        |  |  |  |  |
|          | Average final average salary   | \$                             | 0   | \$2,613  | \$1,739 | \$2,613 | \$   | 0   | \$   | 0    | \$2 | ,298     | \$2,368        |  |  |  |  |
|          | Number of retirees             |                                | 0   | 6        | 3       | 2       |      | 0   |      | 0    |     | 1        | 12             |  |  |  |  |
| 1999     | Average monthly benefit        | \$                             | 0   | \$ 700   | \$1,302 | \$1,736 | \$   | 0   |      | 604  | \$  | 0        | \$1,463        |  |  |  |  |
|          | Average final average salary   | \$                             | 0   | \$2,518  | \$2,613 | \$2,613 | \$   | 0   | \$2, | ,613 | \$  | 0        | \$2,581        |  |  |  |  |
|          | Number of retirees             |                                | 0   | 2        | 1       | 2       |      | 0   |      | 1    |     | 0        | 6              |  |  |  |  |
| 2000     | Average monthly benefit        | \$                             | 0   | \$ 759   | \$1,519 | \$1,736 | \$   | 0   | \$   | 0    | \$  | 0        | \$1,049        |  |  |  |  |
|          | Average final average salary   | \$                             | 0   | \$ 2,613 | \$2,613 | \$2,613 | \$   | 0   | \$   | 0    | \$  | 0        | \$2,613        |  |  |  |  |
|          | Number of retirees             |                                | 0   | 4        | 1       | 1       |      | 0   |      | 0    |     | 0        | 6              |  |  |  |  |
| 2001     | Average monthly benefit        | \$                             | 0   | \$ 925   | \$1,302 | \$1,750 | \$   | 0   |      | ,649 | \$  | 0        | \$1,550        |  |  |  |  |
|          | Average final average salary   | \$                             | 0   | \$2,613  | \$2,613 | \$2,608 | \$   | 0   | \$2, | ,604 | \$  | 0        | \$2,610        |  |  |  |  |
|          | Number of retirees             |                                | 0   | 4        | 2       | 4       |      | 0   |      | 2    |     | 0        | 12             |  |  |  |  |
| 2002     | Average monthly benefit        | \$                             | 0   | \$ 871   | \$1,451 | \$2,068 | \$   | 0   |      | ,830 |     | ,365     | \$1,944        |  |  |  |  |
|          | Average final average salary   | \$                             | 0   | \$2,613  | \$2,550 | \$2,613 | \$   | 0   | \$2, | ,613 | \$2 | ,613     | \$2,589        |  |  |  |  |
|          | Number of retirees             |                                | 0   | 1        | 3       | 2       |      | 0   |      | 1    |     | 1        | 8              |  |  |  |  |
| 2003     | Average monthly benefit        | \$                             | 0   | \$1,016  | \$1,403 | \$1,816 |      | 482 |      | ,048 |     | ,700     | \$1,619        |  |  |  |  |
|          | Average final average salary   | \$                             | 0   | \$2,613  | \$2,613 | \$2,613 | \$2, | 613 | \$2, | ,613 | \$2 | ,613     | \$2,613        |  |  |  |  |
|          | Number of retirees             |                                | 0   | 12       | 9       | 12      |      | 5   |      | 1    |     | 1        | 40             |  |  |  |  |
| 2004     | Average monthly benefit        | \$                             | 0   | \$ 797   | \$ 0    | \$1,959 | \$   | 0   | \$   | 0    | \$  | 0        | \$1,184        |  |  |  |  |
|          | Average final average salary   | \$                             | 0   | \$2,613  | \$ 0    | \$2,613 | \$   | 0   | \$   | 0    | \$  | 0        | \$2,613        |  |  |  |  |
|          | Number of retirees             |                                | 0   | 6        | 0       | 3       |      | 0   | \$   | 0    |     | 0        | 9              |  |  |  |  |
| 2005     | Average monthly benefit        | \$                             | 435 | \$ 889   | \$1,361 | \$1,742 |      | 409 | \$   | 0    | \$3 | ,411     | \$1,604        |  |  |  |  |
|          | Average final average salary   | \$2,                           |     | \$2,613  | \$2,613 | \$2,613 | \$2, | 613 | \$   | 0    | \$2 | ,613     | \$2,613        |  |  |  |  |
|          | Number of retirees             |                                | 1   | 12       | 4       | 2       |      | 4   |      | 0    |     | 4        | 27             |  |  |  |  |
| 2006     | Average monthly benefit        | \$                             | 0   | \$ 943   | \$1,524 | \$ 0    | \$   | 0   | \$   | 0    | \$  | 0        | \$1,234        |  |  |  |  |
|          | Average final average salary   | \$                             | 0   | \$2,613  | \$2,613 | \$ 0    | \$   | 0   | \$   | 0    | \$  | 0        | \$2,613        |  |  |  |  |
|          | Number of retirees             |                                | 0   | 3        | 3       | 0       |      | 0   |      | 0    |     | 0        | 6              |  |  |  |  |
| 2007     | Average monthly benefit        | \$                             |     | \$ 852   | \$1,306 | \$1,855 | \$   | 0   | \$   | 0    | \$3 | ,484     | \$1,121        |  |  |  |  |
|          | Average final average salary   | \$2,                           | 613 | \$2,613  | \$2,613 | \$2,613 | \$   | 0   | \$   | 0    | \$2 | ,613     | \$2,613        |  |  |  |  |
|          | Number of retirees             |                                | 1   | 12       | 2       | 2       |      | 0   |      | 0    |     | 1        | 18             |  |  |  |  |
| Ten year | rs ended June 30, 2007         |                                |     |          |         |         |      |     |      |      |     |          |                |  |  |  |  |
|          | Average monthly benefit        |                                | 293 | \$ 886   | \$1,364 | \$1,837 |      | 450 |      | 756  |     | ,237     | \$1,462        |  |  |  |  |
|          | Average final average salary   | \$2,                           | 613 | \$2,610  | \$2,513 | \$2,612 | \$2, | 613 | \$2, | ,609 | \$2 | ,574     | \$2,590        |  |  |  |  |
|          | Number of retirees             |                                | 2   | 62       | 28      | 30      |      | 9   |      | 5    |     | 8        | 144            |  |  |  |  |

Elected Officials in the MSEP

|          |                                |      | Years Credited Service by Category |      |     |    |        |      |       |    |     |    |     | All |     |           |      |
|----------|--------------------------------|------|------------------------------------|------|-----|----|--------|------|-------|----|-----|----|-----|-----|-----|-----------|------|
| Membe    | r Retiring During Fiscal Year: |      | <5                                 | 5    | -10 |    | 10-15  | 15   | -20   | 20 | -25 | 25 | -30 | ŝ   | 30+ | Al<br>Mem | _    |
| 1998     | Average monthly benefit        | \$   | 0                                  | \$   | 0   | \$ | 0      | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$        | 0    |
|          | Average final average salary   | \$   | 0                                  | \$   | 0   | \$ |        | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$        | 0    |
|          | Number of retirees             |      | 0                                  |      | 0   |    | 0      |      | 0     |    | 0   |    | 0   | \$  | 0   |           | 0    |
| 1999     | Average monthly benefit        | \$   | 0                                  | \$   | 0   |    | 4,019  | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$4,      | ,019 |
|          | Average final average salary   | \$   | 0                                  | \$   | 0   | \$ | 8,038  | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$8,      | ,038 |
|          | Number of retirees             |      | 0                                  |      | 0   |    | 1      |      | 0     |    | 0   |    | 0   |     | 0   |           | 1    |
| 2000     | Average monthly benefit        | \$   | 0                                  | \$   | 0   | \$ |        | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$        | 0    |
|          | Average final average salary   | \$   | 0                                  | \$   | 0   | \$ |        | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$        | 0    |
|          | Number of retirees             |      | 0                                  |      | 0   |    | 0      |      | 0     |    | 0   |    | 0   |     | 0   |           | 0    |
| 2001     | Average monthly benefit        |      | ,668                               |      | 154 |    | 4,882  |      | 5,004 | \$ | 0   | \$ | 0   | \$  | 0   |           | ,918 |
|          | Average final average salary   | \$10 | ,007                               | \$8, | 038 | \$ | 10,007 | \$10 | ,007  | \$ | 0   | \$ | 0   | \$  | 0   | \$9,      | ,613 |
|          | Number of retirees             |      | 1                                  |      | 1   |    | 2      |      | 1     |    | 0   |    | 0   |     | 0   |           | 5    |
| 2002     | Average monthly benefit        | \$   | 0                                  | \$   | 0   | \$ |        | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$        | 0    |
|          | Average final average salary   | \$   | 0                                  | \$   | 0   | \$ |        | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$        | 0    |
|          | Number of retirees             |      | 0                                  |      | 0   |    | 0      |      | 0     |    | 0   |    | 0   |     | 0   |           | 0    |
| 2003     | Average monthly benefit        | \$   | 0                                  | \$   | 0   | \$ |        | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$        | 0    |
|          | Average final average salary   | \$   | 0                                  | \$   | 0   | \$ |        | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$        | 0    |
|          | Number of retirees             |      | 0                                  |      | 0   |    | 0      |      | 0     |    | 0   |    | 0   |     | 0   |           | 0    |
| 2004     | Average monthly benefit        | \$   | 0                                  | \$   | 0   | \$ |        | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$        | 0    |
|          | Average final average salary   | \$   | 0                                  | \$   | 0   | \$ |        | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$        | 0    |
|          | Number of retirees             |      | 0                                  |      | 0   |    | 0      |      | 0     |    | 0   |    | 0   |     | 0   |           | 0    |
| 2005     | Average monthly benefit        | \$   | 0                                  | \$   | 0   |    | 4,218  | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   |           | ,218 |
|          | Average final average salary   | \$   | 0                                  | \$   | 0   | \$ | 9,023  | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$9,      | ,023 |
|          | Number of retirees             |      | 0                                  |      | 0   |    | 2      |      | 0     |    | 0   |    | 0   |     | 0   |           | 2    |
| 2006     | Average monthly benefit        | \$   | 0                                  |      | 009 | \$ |        | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   |           | ,009 |
|          | Average final average salary   | \$   | 0                                  | \$8, | 038 | \$ |        | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$8,      | ,038 |
|          | Number of retirees             |      | 0                                  |      | 1   |    | 0      |      | 0     |    | 0   |    | 0   |     | 0   |           | 1    |
| 2007     | Average monthly benefit        | \$   | 0                                  | \$   | 0   | \$ |        | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$        | 0    |
|          | Average final average salary   | \$   | 0                                  | \$   | 0   | \$ |        | \$   | 0     | \$ | 0   | \$ | 0   | \$  | 0   | \$        | 0    |
|          | Number of retirees             |      | 0                                  |      | 0   |    | 0      |      | 0     |    | 0   |    | 0   |     | 0   |           | 0    |
| Ten year | rs ended June 30, 2007         |      |                                    |      |     |    |        |      |       |    |     |    |     |     |     |           |      |
|          | Average monthly benefit        |      | ,668                               |      | 582 |    | 4,444  | , -  | ,004  | \$ | 0   | \$ | 0   | \$  | 0   | , . ,     | ,784 |
|          | Average final average salary   | \$10 | ),007                              | \$8, | 038 | \$ | 9,220  | \$10 | ,007  | \$ | 0   | \$ | 0   | \$  | 0   | \$9,      | ,132 |
|          | Number of retirees             |      | 1                                  |      | 2   |    | 5      |      | 1     |    | 0   |    | 0   |     | 0   |           | 9    |

Note: COLA increases are excluded from the above for comparison purposes.



Administrative Law Judges and Legal Advisors in the MSEP

|         |                                | _   | Years Credited Service by Category |      |     |     |      |      |     |      |      |       |      | All  |      |     |      |
|---------|--------------------------------|-----|------------------------------------|------|-----|-----|------|------|-----|------|------|-------|------|------|------|-----|------|
| Membe   | r Retiring During Fiscal Year: |     | <5                                 | 5    | -10 | 10  | )-15 | 15-  | 20  | 20   | )-25 | 2     | 5-30 |      | 30+  | Mem |      |
| 1998    | Average monthly benefit        | \$  | 0                                  | \$   | 0   | \$2 | ,927 | \$   | 0   | \$2, | 875  | \$    | 0    | \$   | 0    | \$2 | ,892 |
|         | Average final average salary   | \$  | 0                                  | \$   | 0   | \$5 | ,854 | \$   | 0   | \$5  | 749  | \$    | 0    | \$   | 0    | \$5 | ,784 |
|         | Number of retirees             |     | 0                                  |      | 0   |     | 1    |      | 0   |      | 2    |       | 0    |      | 0    |     | 3    |
| 1999    | Average monthly benefit        | \$  | 0                                  | \$   | 0   | \$  | 0    | \$   | 0   | \$   | 0    | \$    | 0    | \$   | 0    | \$  | 0    |
|         | Average final average salary   | \$  | 0                                  | \$   | 0   | \$  | 0    | \$   | 0   | \$   | 0    | \$    | 0    | \$   | 0    | \$  | 0    |
|         | Number of retirees             |     | 0                                  |      | 0   |     | 0    |      | 0   |      | 0    |       | 0    |      | 0    |     | 0    |
| 2000    | Average monthly benefit        | \$  | 0                                  | \$   | 0   | \$  | 0    | \$   | 0   | \$   | 0    | \$    | 0    | \$   | 0    | \$  | 0    |
|         | Average final average salary   | \$  | 0                                  | \$   | 0   | \$  | 0    | \$   | 0   | \$   | 0    | \$    | 0    | \$   | 0    | \$  | 0    |
|         | Number of retirees             |     | 0                                  |      | 0   |     | 0    |      | 0   |      | 0    |       | 0    | \$   | 0    |     | 0    |
| 2001    | Average monthly benefit        | \$  | 0                                  | \$   | 0   | \$  | 0    | \$   | 0   |      | 982  | \$    | 0    | \$   | 0    |     | ,982 |
|         | Average final average salary   | \$  | 0                                  | \$   | 0   | \$  | 0    | \$   | 0   | \$5. | 965  | \$    | 0    | \$   | 0    | \$5 | ,965 |
|         | Number of retirees             |     | 0                                  |      | 0   |     | 0    |      | 0   |      | 1    |       | 0    |      | 0    |     | 1    |
| 2002    | Average monthly benefit        | \$  | 0                                  | \$   | 0   | \$  | 0    | \$   | 0   | \$3. | 739  | \$    | 0    | \$   | 0    | \$3 | ,739 |
|         | Average final average salary   | \$  | 0                                  | \$   | 0   | \$  | 0    | \$   | 0   | \$7  | 478  | \$    | 0    | \$   | 0    | \$7 | ,478 |
|         | Number of retirees             |     | 0                                  |      | 0   |     | 0    |      | 0   |      | 1    |       | 0    |      | 0    |     | 1    |
| 2003    | Average monthly benefit        | \$  | 0                                  | \$   | 0   | \$  | 0    |      | 615 | \$   | 0    | \$    | 0    | \$   | 0    |     | ,615 |
|         | Average final average salary   | \$  | 0                                  | \$   | 0   | \$  | 0    | \$7, | 231 | \$   | 0    | \$    | 0    | \$   | 0    | \$7 | ,231 |
|         | Number of retirees             |     | 0                                  |      | 0   |     | 0    |      | 3   |      | 0    |       | 0    |      | 0    |     | 3    |
| 2004    | Average monthly benefit        | \$  | 0                                  | \$   | 0   | \$  | 0    | \$   | 0   | \$   | 0    | \$    | 0    | \$   | 0    | \$  | 0    |
|         | Average final average salary   | \$  | 0                                  | \$   | 0   | \$  | 0    | \$   | 0   | \$   | 0    | \$    | 0    | \$   | 0    | \$  | 0    |
|         | Number of retirees             |     | 0                                  |      | 0   |     | 0    |      | 0   | \$   | 0    |       | 0    |      | 0    |     | 0    |
| 2005    | Average monthly benefit        | \$  | 0                                  | \$   | 0   |     | ,750 | \$   | 0   |      | 522  | \$    | 0    | \$   | 0    |     | ,567 |
|         | Average final average salary   | \$  | 0                                  | \$   | 0   | \$7 | ,500 | \$   | 0   | 7,   | 043  | \$    | 0    | \$   | 0    | \$7 | ,135 |
|         | Number of retirees             |     | 0                                  |      | 0   |     | 1    |      | 0   |      | 4    |       | 0    |      | 0    |     | 5    |
| 2006    | Average monthly benefit        |     | ,088                               |      | 669 | \$  | 0    | \$   | 0   | \$   | 0    | , - , | ,333 |      | 333  |     | ,551 |
|         | Average final average salary   | \$7 | ,836                               | \$5, | 933 | \$  | 0    | \$   | 0   | \$   | 0    | \$6,  | ,667 | \$6, | 667  | \$6 | ,754 |
|         | Number of retirees             |     | 1                                  |      | 1   |     | 0    |      | 0   |      | 0    |       | 2    |      | 1    |     | 5    |
| 2007    | Average monthly benefit        | \$  | 0                                  |      | 800 | \$  | 0    | \$   | 0   | \$   | 0    | \$    | 0    | \$   | 0    |     | ,800 |
|         | Average final average salary   | \$  | 0                                  | \$8, | 000 | \$  | 0    | \$   | 0   | \$   | 0    | \$    | 0    | \$   | 0    | \$8 | ,000 |
|         | Number of retirees             |     | 0                                  |      | 1   |     | 0    |      | 0   |      | 0    |       | 0    |      | 0    |     | 1    |
| Ten yea | rs ended June 30, 2007         |     |                                    |      |     |     |      |      |     |      |      |       |      |      |      |     |      |
|         | Average monthly benefit        |     | ,088                               |      | 734 |     | ,338 |      | 615 |      | 320  |       | 333  |      | 333  |     | ,086 |
|         | Average final average salary   | \$7 | ,836                               | \$6, | 967 | 6   | ,677 | \$7, | 231 | \$6, | 639  | \$6,  | ,667 | \$6, | ,667 | \$6 | ,839 |
|         | Number of retirees             |     | 1                                  |      | 2   |     | 2    |      | 3   |      | 8    |       | 2    |      | 1    |     | 19   |

Note: COLA increases are excluded from the above for comparison purposes.



Judicial Plan

|         |                                | _    | Years Credited Service by Category |      |     |         |         |         |         |         |                |  |
|---------|--------------------------------|------|------------------------------------|------|-----|---------|---------|---------|---------|---------|----------------|--|
| Membe   | r Retiring During Fiscal Year: |      | <5                                 | 5-   | -10 | 10-15   | 15-20   | 20-25   | 25-30   | 30+     | All<br>Members |  |
| 1998    | Average monthly benefit        | \$   | 243                                | \$1, | 567 | \$3,689 | \$3,484 | \$3,651 | \$3,999 | \$3,921 | \$3,418        |  |
|         | Average final average salary   | \$5, | 824                                | \$5, | 129 | \$7,378 | \$6,969 | \$7,301 | \$7,999 | \$7,843 | \$7,223        |  |
|         | Number of retirees             |      | 1                                  |      | 1   | 2       | 4       | 6       | 4       | 1       | 19             |  |
| 1999    | Average monthly benefit        |      | 702                                | \$2, | 429 | \$3,732 | \$3,776 | \$ 0    | \$4,450 | \$4,123 | \$3,282        |  |
|         | Average final average salary   | \$6, | 598                                | \$7, |     | \$7,465 | \$7,553 | \$ 0    | \$8,900 | \$8,246 | \$7,466        |  |
|         | Number of retirees             |      | 2                                  |      | 3   | 5       | 7       | 0       | 1       | 1       | 19             |  |
| 2000    | Average monthly benefit        | \$   | 0                                  |      | 282 | \$3,368 | \$4,030 | 3,991   | \$4,139 | \$4,375 | \$3,725        |  |
|         | Average final average salary   | \$   | 0                                  | \$5, | 129 | 6,735   | \$8,059 | 7,982   | \$8,278 | \$8,750 | \$7,610        |  |
|         | Number of retirees             |      | 0                                  |      | 1   | 4       | 3       | 4       | 3       | 1       | 16             |  |
| 2001    | Average monthly benefit        | \$   | 0                                  |      | 044 | \$4,216 | \$3,849 | \$4,500 | \$4,573 | \$4,250 | \$4,213        |  |
|         | Average final average salary   | \$   | 0                                  | \$8, |     | \$8,519 | \$7,698 | \$9,000 | \$9,146 | \$8,500 | \$8,632        |  |
|         | Number of retirees             |      | 0                                  |      | 1   | 5       | 3       | 6       | 4       | 2       | 21             |  |
| 2002    | Average monthly benefit        | \$   | 0                                  |      | 337 | \$3,606 | \$4,093 | \$4,000 | \$4,576 | \$ 0    | \$3,877        |  |
|         | Average final average salary   | \$   | 0                                  | \$6, |     | \$7,405 | \$8,186 | \$8,000 | \$9,153 | \$ 0    | \$8,101        |  |
|         | Number of retirees             |      | 0                                  |      | 1   | 2       | 4       | 1       | 3       | \$ 0    | 11             |  |
| 2003    | Average monthly benefit        |      | 756                                |      | 946 | \$4,042 | \$3,849 | \$4,000 | \$4,500 | \$4,167 | \$3,408        |  |
|         | Average final average salary   | \$8, | ,000                               | \$6, | 317 | \$8,333 | \$7,697 | \$8,000 | \$9,000 | \$8,333 | \$7,816        |  |
|         | Number of retirees             |      | 2                                  |      | 3   | 3       | 6       | 3       | 1       | 3       | 21             |  |
| 2004    | Average monthly benefit        |      | 855                                | \$3, |     | \$4,500 | \$4,061 | \$4,597 | \$ 0    | \$4,500 | \$3,952        |  |
|         | Average final average salary   | \$5, | 129                                | \$8, | 000 | \$9,000 | \$8,121 | \$9,194 | \$ 0    | \$9,000 | \$8,350        |  |
|         | Number of retirees             |      | 1                                  |      | 1   | 2       | 4       | 3       | 0       | 1       | 12             |  |
| 2005    | Average monthly benefit        | \$   | 0                                  | \$   | 0   | \$3,935 | \$4,500 | \$4,142 | \$4,300 | \$4,396 | \$4,216        |  |
|         | Average final average salary   | \$   | 0                                  | \$   | 0   | \$8,423 | \$9,000 | \$8,284 | \$8,600 | \$8,792 | \$8,550        |  |
|         | Number of retirees             |      | 0                                  |      | 0   | 3       | 1       | 3       | 5       | 2       | 14             |  |
| 2006    | Average monthly benefit        |      | 592                                |      | 946 | \$4,500 | \$4,000 | \$ 0    | \$4,396 | \$ 0    | \$2,930        |  |
|         | Average final average salary   | \$5, | 875                                | \$6, |     | \$9,000 | \$8,000 | \$ 0    | \$8,792 | \$ 0    | \$7,496        |  |
|         | Number of retirees             |      | 2                                  |      | 2   | 1       | 2       | 0       | 2       | \$ 0    | 9              |  |
| 2007    | Average monthly benefit        |      | 207                                | \$2, |     | \$3,995 | \$4,260 | \$4,357 | \$4,071 | \$4,250 | \$3,843        |  |
|         | Average final average salary   | \$5, | 875                                | \$7, | 862 | \$7,990 | \$8,521 | \$8,714 | \$8,143 | \$8,500 | \$8,249        |  |
|         | Number of retirees             |      | 2                                  |      | 4   | 5       | 15      | 7       | 7       | 4       | 44             |  |
| Ten yea | rs ended June 30, 2007         |      |                                    |      |     |         |         |         |         |         |                |  |
|         | Average monthly benefit        |      | 561                                |      | 063 | \$3,913 | \$4,002 | \$4,169 | \$4,272 | \$4,247 | \$3,718        |  |
|         | Average final average salary   | \$6, | 365                                | \$6, | 894 | \$7,926 | \$8,005 | \$8,338 | \$8,545 | \$8,495 | \$7,988        |  |
|         | Number of retirees             |      | 10                                 |      | 17  | 32      | 49      | 33      | 30      | 15      | 186            |  |

Note: COLA increases are excluded from the above for comparison purposes.



### Retirees and Beneficiaries

Tabulated by Fiscal Year of Retirement

### **MSEP**

| Fiscal       |        | Total         | Average |
|--------------|--------|---------------|---------|
| Year of      |        | Annual        | Monthly |
| Retirement   | Number | Benefits      | Benefit |
| ,            |        |               |         |
| 1971 & prior | 5      | \$32,952      | \$549   |
| 1972         | 5      | 29,951        | 499     |
| 1973         | 16     | 110,459       | 575     |
| 1974         | 20     | 130,229       | 543     |
| 1975         | 44     | 303,381       | 575     |
| 1976         | 60     | 420,817       | 584     |
| 1977         | 79     | 534,210       | 564     |
| 1978         | 85     | 545,992       | 535     |
| 1979         | 76     | 582,766       | 639     |
| 1980         | 93     | 764,200       | 685     |
| 1981         | 135    | 1,099,080     | 678     |
| 1982         | 189    | 1,606,081     | 708     |
| 1983         | 208    | 1,969,126     | 789     |
| 1984         | 235    | 1,909,165     | 677     |
| 1985         | 256    | 2,495,719     | 812     |
| 1986         | 332    | 2,690,607     | 675     |
| 1987         | 380    | 3,740,104     | 820     |
| 1988         | 449    | 5,236,076     | 972     |
| 1989         | 509    | 6,540,145     | 1,071   |
| 1990         | 514    | 6,303,900     | 1,022   |
| 1991         | 623    | 8,971,149     | 1,200   |
| 1992         | 686    | 9,347,613     | 1,136   |
| 1993         | 776    | 10,359,500    | 1,112   |
| 1994         | 766    | 10,209,222    | 1,111   |
| 1995         | 1,011  | 14,149,555    | 1,166   |
| 1996         | 1,000  | 14,253,330    | 1,188   |
| 1997         | 1,015  | 14,890,171    | 1,223   |
| 1998         | 1,189  | 17,131,459    | 1,201   |
| 1999         | 1,303  | 19,383,387    | 1,240   |
| 2000         | 1,373  | 21,487,957    | 1,304   |
| 2001         | 2,625  | 42,990,952    | 1,365   |
| 2002         | 1,909  | 27,679,890    | 1,208   |
| 2003         | 1,979  | 30,953,580    | 1,303   |
| 2004         | 2,569  | 40,234,986    | 1,305   |
| 2005         | 1,932  | 26,294,412    | 1,134   |
| 2006         | 2,095  | 28,189,349    | 1,121   |
| 2007         | 2,465  | 34,323,661    | 1,160   |
|              | 29,006 | \$407,895,133 | 1,172   |

### Judicial Plan

| Fiscal<br>Year of<br>Retirement | Year of |              | Average<br>Monthly<br>Benefit |  |
|---------------------------------|---------|--------------|-------------------------------|--|
| 1076 87 maior                   | 4       | \$35,640     | \$742                         |  |
| 1976 & prior<br>1978            | 1       | 13,613       | 1,134                         |  |
| 1978                            | 2       | 53,772       | 2,241                         |  |
| 1980                            | 2       | 30,112       | 1,255                         |  |
| 1981                            | 3       | 129,876      | 3,608                         |  |
| 1982                            | 1       | 10,725       | 894                           |  |
| 1983                            | 6       | 247,739      | 3,441                         |  |
| 1984                            | 1       | 19,379       | 1,615                         |  |
| 1985                            | 4       | 174,544      | 3,636                         |  |
| 1986                            | 6       | 197,481      | 2,743                         |  |
| 1987                            | 20      | 843,404      | 3,514                         |  |
| 1988                            | 10      | 459,932      | 3,833                         |  |
| 1989                            | 13      | 717,790      | 4,601                         |  |
| 1990                            | 8       | 381,491      | 3,974                         |  |
| 1991                            | 23      | 1,186,814    | 4,300                         |  |
| 1992                            | 12      | 605,791      | 4,207                         |  |
| 1993                            | 14      | 619,964      | 3,690                         |  |
| 1994                            | 10      | 435,142      | 3,626                         |  |
| 1995                            | 23      | 1,414,653    | 5,126                         |  |
| 1996                            | 12      | 575,940      | 4,000                         |  |
| 1997                            | 7       | 333,016      | 3,964                         |  |
| 1998                            | 26      | 1,480,413    | 4,745                         |  |
| 1999                            | 26      | 1,307,131    | 4,190                         |  |
| 2000                            | 27      | 1,416,384    | 4,372                         |  |
| 2001                            | 22      | 1,528,166    | 5,789                         |  |
| 2002                            | 16      | 834,256      | 4,345                         |  |
| 2003                            | 26      | 1,279,613    | 4,101                         |  |
| 2004                            | 19      | 983,091      | 4,312                         |  |
| 2005                            | 19      | 1,019,596    | 4,472                         |  |
| 2006                            | 18      | 617,034      | 2,857                         |  |
| 2007                            | 59      | 2,696,012    | 3,808                         |  |
|                                 | 440     | \$21,648,514 | 4,100                         |  |
|                                 |         |              |                               |  |

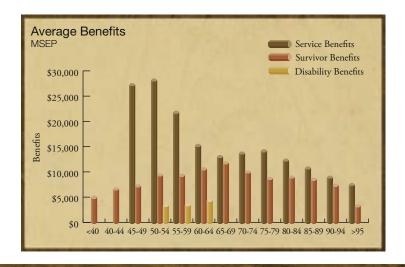


Total Benefits Payable
Tabulated by Attained Ages of Benefit Recipients As of June 30, 2007

**MSEP** 

|                  |        | Service<br>etirement |     | Disability etirement |       | Survivors and<br>Beneficiaries |        | Totals                 |
|------------------|--------|----------------------|-----|----------------------|-------|--------------------------------|--------|------------------------|
| Attained<br>Ages | No.    | Annual<br>Benefits   | No. | Annual<br>Benefits   |       | Annual<br>No. Benefits         | ]      | Annual<br>No. Benefits |
| Under 20         |        |                      |     |                      | 74    | \$ 290,577                     | 74     | \$ 290,577             |
| 20-24            |        |                      |     |                      | 25    | 77,155                         | 25     | 77,155                 |
| 25-29            |        |                      |     |                      | 7     | 51,300                         | 7      | 51,300                 |
| 30-34            |        |                      |     |                      | 23    | 131,679                        | 23     | 131,679                |
| 35-39            |        |                      |     |                      | 39    | 235,126                        | 39     | 235,126                |
| 40-44            |        |                      |     |                      | 56    | 352,935                        | 56     | 352,935                |
| 45-49            | 14     | \$ 377,280           |     |                      | 105   | 726,800                        | 119    | 1,104,080              |
| 50-54            | 770    | 21,460,655           | 2   | \$ 6,072             | 197   | 1,788,178                      | 969    | 23,254,905             |
| 55-59            | 3,513  | 75,417,914           | 8   | 25,404               | 300   | 2,714,561                      | 3,821  | 78,157,879             |
| 60-64            | 5,366  | 80,089,309           | 2   | 8,112                | 337   | 3,472,501                      | 5,705  | 83,569,922             |
| 65-69            | 5,102  | 64,849,203           |     |                      | 406   | 4,661,467                      | 5,508  | 69,510,670             |
| 70-74            | 3,932  | 52,691,556           |     |                      | 515   | 4,972,238                      | 4,447  | 57,663,794             |
| 75-79            | 2,934  | 40,690,490           |     |                      | 551   | 4,625,841                      | 3,485  | 45,316,331             |
| 80-84            | 2,105  | 25,290,301           |     |                      | 437   | 3,783,883                      | 2,542  | 29,074,184             |
| 85-89            | 1,073  | 11,216,536           |     |                      | 230   | 1,896,974                      | 1,303  | 13,113,510             |
| 90-94            | 372    | 3,211,182            |     |                      | 72    | 508,571                        | 444    | 3,719,753              |
| 95               | 44     | 294,015              |     |                      | 6     | 20,097                         | 50     | 314,112                |
| 96               | 23     | 196,580              |     |                      | 2     | 11,436                         | 25     | 208,016                |
| 97               | 15     | 123,890              |     |                      | 3     | 7,932                          | 18     | 131,822                |
| 98               | 14     | 76,340               |     |                      | 1     | 4,296                          | 15     | 80,636                 |
| 99               | 7      | 44,196               |     |                      | 1     | 2,421                          | 8      | 46,617                 |
| 100              | 2      | 17,136               |     |                      | 1     | 2,784                          | 3      | 19,920                 |
| 103              | 1      | 5,844                |     |                      | 1     | 816                            | 2      | 6,660                  |
| 105              |        |                      |     |                      | 1     | 2,016                          | 1      | 2,016                  |
| 106              |        |                      |     |                      | 1     | 911                            | 1      | 911                    |
| 107              |        |                      |     |                      | 2     | 3,684                          | 2      | 3,684                  |
| Totals           | 25,287 | \$376,052,427        | 12  | \$39,588             | 3,393 | \$30,346,179                   | 28,692 | \$406,438,194          |

Includes 35 administrative law judges Average age at retirement 60.4 years Average age now 69.0 years





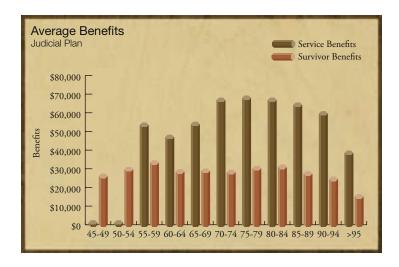
Total Benefits Payable
Tabulated by Attained Ages of Benefit Recipients As of June 30, 2007

Judicial Plan

|                  |     | Service <u>Retirement</u> |     | Survivors and Beneficiaries |     | Totals             |  |
|------------------|-----|---------------------------|-----|-----------------------------|-----|--------------------|--|
| Attained<br>Ages | No. | Annual<br>Benefits        | No. | Annual<br>Benefits          | No. | Annual<br>Benefits |  |
| 45-49            |     |                           | 1   | \$ 24,960                   | 1   | \$ 24,960          |  |
| 50-54            |     |                           | 2   | 57,043                      | 2   | 57,043             |  |
| 55-59            | 17  | \$ 889,399                | 7   | 224,820                     | 24  | 1,114,219          |  |
| 60-64            | 35  | 1,603,344                 | 15  | 410,388                     | 50  | 2,013,732          |  |
| 65-69            | 64  | 3,376,587                 | 7   | 193,932                     | 71  | 3,570,519          |  |
| 70-74            | 54  | 3,546,182                 | 5   | 135,216                     | 59  | 3,681,398          |  |
| 75-79            | 54  | 3,608,399                 | 27  | 785,557                     | 81  | 4,393,956          |  |
| 80-84            | 43  | 2,826,063                 | 26  | 774,821                     | 69  | 3,600,884          |  |
| 85-89            | 24  | 1,514,022                 | 21  | 551,072                     | 45  | 2,065,094          |  |
| 90-94            | 10  | 584,564                   | 15  | 350,416                     | 25  | 934,980            |  |
| 95 and over      | 3   | 112,020                   | 7   | 97,476                      | 10  | 209,496            |  |
| Totals           | 304 | \$18,060,580              | 133 | \$3,605,701                 | 437 | \$21,666,281       |  |

Average age at retirement Average age now

65.3 years 75.2 years





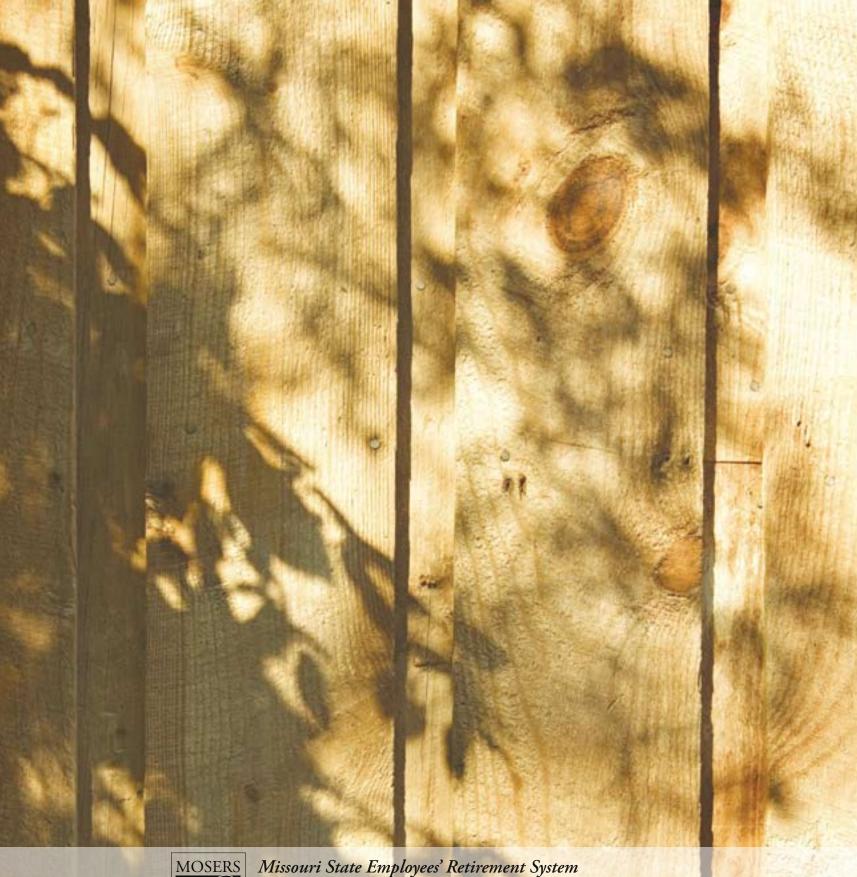
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