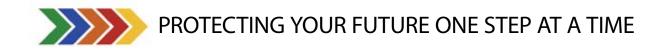




Missouri State Employees' Retirement System • A Component Unit of the State of Missouri Comprehensive Annual Financial Report • Fiscal Year Ended June 30, 2008



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, 2008





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**OUR MISSION** 



# **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.

DREAM OF A FOOTLOOSE AND FANCY FREE RETIREMENT — WE DO



# **INTRODUCTORY SECTION**

- 5 Professional Awards
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# Certificate of Achievement for Excellence in Financial Reporting

*MOSERS' Comprehensive Annual Financial Report* for the fiscal year ended June 30, 2007, 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 nineteenth consecutive year that MOSERS has received 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 2007, 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 13, 2008

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 the 2008 Comprehensive Annual Financial Report (CAFR) of the Missouri State Employees' Retirement System (MOSERS). Throughout this report, you will find reflections of our overarching purpose of helping to protect the financial future of present and former Missouri state employees. We do this by carefully monitoring and evaluating our day-to-day operations as well as prudently managing the \$8 billion of net assets in the fund with clear purpose and direction. The pursuit of excellence is a path we have consciously chosen, along which we strive daily to put our best foot forward by delivering the highest quality customer service and best risk adjusted investment results possible.

#### **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 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*.

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

#### **Profile of MOSERS**

MOSERS is an instrumentality of the state of Missouri established in 1957 by state law 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.

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 and long-term disability insurance plans are insured through The Standard Insurance Company.

Effective September 1, 2007, a law change 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. MOSERS provides investment options to participants who retain responsibility for their individual investments. Currently, the Missouri State Employees' Deferred Compensation Program is administered by third party administrator, ING. MOSERS operates the Missouri Deferred Compensation program as an internal service fund.

The MOSERS Board of Trustees annually approves the administrative expense budgets for 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 before the beginning of the fiscal year.

#### **Risk Management Enhancements**

Risk management is critical to positive investment performance. With that in mind, the investment staff implemented new quarterly risk reporting in FY08 to review risk reports that include liquidity risk, asset allocation adjusted for asset class exposure and beta adjusted exposure. Statistics at the sub-asset class level are also reviewed for contributions to return, tracking error, beta, alpha, Value at Risk (VaR) and contributions to VaR.

As a result of the FishNet information technology security audit, MOSERS has implemented an uninterruptible power supply (UPS) replacement, imaging scanner replacements and several server upgrades.

This year, capital asset record maintenance software was purchased and installed providing better documentation in the event of a disaster. Building security was also upgraded to provide enhanced security on access to the building and specific areas within the building. This also increased physical security access to internal areas of the building.

#### Web Enhancements

Rumor Central continues to be one of our most popular website features and was redesigned in a searchable blog format this year. This forum has increased member satisfaction and enhanced the system's stature as a reputable source of reliable information.

We expanded our internet payment option to include member insurance premiums. This provides our members with another payment option to pay their direct bill premiums online.

The new Statewide Employee Benefits Enrollment System (SEBES) for new state employees became mandatory January 1, 2008. SEBES allows new employees to enroll in all of their benefits at once while eliminating redundant demographic form completion. This process also allows MOSERS to make the proper deductions and reduce the size of the aged account report by 60%. SEBES has been submitted for the 2008 Governor's Award for Quality and Productivity, which is a team award that recognizes service excellence, efficiency, innovation, technology, process improvement, and employee development in Missouri state government.

#### **Technology Updates**

The backup domain (network) controller is in place and functioning. Warm-site mirroring is in place for the iSeries (member related data), Exchange (email), and FileNet (imaging). The business continuity plan was revised and training was held for all staff. Another technology update for this year was the replacement of the primary network file server. The IR-110 and IR-2200 printers were also replaced this year, allowing all printing equipment to be placed under one contract for a significantly lower fee.

This year, MOSERS began using a payroll processing service which resulted in a reduction in the cost of processing payroll internally as well as a reduction in software maintenance fees.

ISurvey, a new automated customer service survey for call-in members was implemented this year. This allowed MOSERS to eliminate production and distribution costs of the printed survey. The current phone system was also modified so that the upfront messages can be changed almost instantaneously when the need arises.

#### **Cost Effectiveness 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 74 leading pension systems, including systems in the United States, Canada, Australia, and the Netherlands. Of the U.S. public pension plans, 14 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 91, relative to median scores of 78 and 73 for our peers and CEM's total universe, respectively. This was accomplished with a cost per active and retired member of \$72, which was equal to median costs within our peer group. In addition, our overall complexity score remains below the peer average.

#### 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, 2008, and June 30, 2007.

	Pension T	Pension Trust Funds		
	Year Ended June 30, 2008	Year Ended June 30, 2007		
Additions	\$ 391,378,235	\$1,562,344,891		
Deductions	(509,181,177)	(474,637,152)		
et change	\$(117,802,942)	\$1,087,707,739		

**Internal Service Fund** Year Ended Year Ended June 30, 2008\* June 30, 2007 Operating revenues \$ 88,888,132 \$ 27,538,433 Operating expenses (89,037,568) (27,628,971) 77,396 117,729 Nonoperating revenue \$ Net change (72.040)27,191

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, 2008, and June 30, 2007.

Includes Deferred Compensation activity for year ended June 30, 2008. The third party administration of individual accounts continues
 to be handled by an outside service provider paid from charges to the participants. Additional financial information can be found in the

to be handled by an outside service provider paid from charges to the participants. 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 FY08 return of 1.6% (net of fees and expenses). This return outpaced our policy benchmark return of -1.2% by 2.8%. This resulted in an extra \$224 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 six 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 which, had become the dominant forces 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.

The following table illustrates several relevant statistics for the old policy benchmark, the new policy benchmark, and our actual results for the six-year period ended June 30, 2008.

Statistics	Old Policy Benchmark Prior to June 30, 2002	New Policy Benchmark Effective After June 30, 2002	MOSERS Actual 6-Year Results
Annualized return	9.5%	9.7%	11.3%
Annualized standard deviation	9.2%	7.6%	7.2%
Sharpe ratio	.67	.84	1.09
Percentage of positive months	67%	72%	74%
Percentage of negative months	33%	28%	26%

There are several important things illustrated by 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 .67 to .84. Secondly, the actual portfolio, through a combination of staff initiated shifts and active manager performance generated a return of 1.6% per annum (net of expenses) at only a slight increase in risk relative to the new policy benchmark. This return outpaced our policy benchmark return of -1.2%. This impressive 2.8% out-performance resulted in an extra \$224 million generated for the fund this year above what would have been earned had the decision been made to passively invest the entire portfolio to match our policy portfolio benchmarks.

I believe a significant portion of our success can be attributed to an excellent 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 detail 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 47-52. During the year ended June 30, 2008, the funded ratio of the Missouri State Employees' Plan, which covers 101,743 participants, decreased from 86.8% to 85.9%, primarily as the result of favorable investment experience offset by unfavorable salary experience and the strengthening of our actuarial assumptions based on the results of a four-year experience study completed this year. Funding of the Judicial Plan, which covers 895 participants, began on July 1, 1998. During the year ended June 30, 2008, the funded ratio of the Judicial Plan increased from 19.0% to 20.6%, primarily as the result of favorable plan experience and change in actuarial assumptions 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

In March 2008, *PLANSPONSOR* magazine named MOSERS the 2008 Plan Sponsor of the Year in the Public Sector/ Defined Benefit Category. MOSERS was cited for its noteworthy governance standards, its well-designed operational structure, and for consistently producing stellar investment results.

## 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, 2007. This was the nineteenth consecutive year that MOSERS has received this prestigious award. 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.

#### Excellence in Government and Fiduciary Responsibility

In July 2007, Independent Fiduciary Services (IFS) and Information Management Network (IMN) presented MOSERS with the first annual Award for Excellence in Governance and Fiduciary Responsibility. This prestigious award was given to three state-level and three municipal-level public pension funds demonstrating excellence in the pursuit of organizational governance and fiduciary responsibility.

## 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,

Ham Linday

Gary Findlay Executive Director

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# 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 13, 2008

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, 2008. This report provides information on the financial status of your retirement system while also highlighting changes that occurred during the year.

In keeping with this year's annual report theme, "Our Sole Purpose" is to ensure that your retirement system remains well funded and your promised benefits secure. The MOSERS fund generated a notable return of 1.6% (net of expenses) for the year, which is impressive given that the one-year performance of most institutional portfolios was negative for the first time since March 2003. This positive return outpaced our policy benchmark by 2.8%, resulting in an extra \$224 million for the fund. For the eighth straight year, MOSERS' investments have generated returns in excess of the benchmark and have done so with less volatility. The incremental reward from these results over eight years has been an additional \$1.7 billion in MOSERS' coffers.

I am also pleased to report that your retirement system continues to achieve high marks in the delivery of customer service to our members. One of the ways we measure our overall performance is through the Cost Effectiveness Measurement (CEM) Benefit Administration Benchmarking Analysis. CEM evaluated 74 leading pension systems, including systems in the United States, Canada, Australia, and the Netherlands. Of the U.S. public pension plans, 14 were identified as our most relevant peer group based on membership size and system assets. The CEM survey rated MOSERS' service delivery as the highest in our peer group at median costs.

On a much sadder note, we said goodbye this year to Michael Keathley, the Commissioner of Administration and a MOSERS' trustee, who died this past year after a long and courageous battle with cancer. Mike's commitment to excellence, coupled with his quick wit and tireless energy, inspired everyone who served with him. On behalf of the entire board and staff, we extend our sincerest condolences to his beloved wife Julie, and their dear sons, Peyton and Mason.

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 call 1-800-827-1063. You can also visit our website at *www.mosers.org*.

Sincerely,

Wayne Bill, 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**



Wayne Bill - Chair Elected Active Member



Representative Bill Deeken House Appointed Member



Bob Patterson Elected Active Member



Todd Smith Governor Appointed Member



Don Martin - Vice Chair Elected Retired Member



Senator Timothy Green Senate Appointed Member



John T. Russell Governor Appointed Member



State Treasurer Sarah Steelman Ex-Officio Member



Senator Jason Crowell Senate Appointed Member



Speaker Rod Jetton House Appointed Member

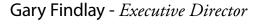


Commissioner of Administration Larry Schepker Ex-Officio Member

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# ADMINISTRATIVE ORGANIZATION





Greg Beck - Chief Auditor Judy Delaney - Legislative & Policy Coordinator Jake McMahon - Chief Counsel Lisa Verslues - Human Resources Coordinator





# Karen Stohlgren - Deputy Executive Director Chief Operations Officer (COO)

Stacy Gillmore - Manager of Information Technology Pam Henry - Manager of Communications Gary Irwin - Chief Finance Officer Lori Leeper - Operations Project Coordinator/Board Secretary JoAnn Looten - Manager of Records & Facility Scott Simon - Manager of Benefit Services

Rick Dahl - Deputy Executive Director Chief Investment Officer (CIO)

Shannon Davidson - Manager of Investment Risk & Performance Jim Mullen - Manager of Public Debt Pat Neylon - Manager of Public Equity Scott Peppard - Manager of Alternative Investments Christine Rackers - Manager of Investment Policy & Communications Cindy Rehmeier - Manager of Deferred Compensation Tricia Scrivner - Manager of Hedge Fund Investments

# **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, 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 manage 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 directly 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 to inform members about benefit programs administered by MOSERS. Communications and the information technology section are jointly responsible for MOSERS' website.

## Information Technology

Information technology is responsible for establishing and maintaining the automated systems that support MOSERS' daily operations. MOSERS takes full advantage of technology to automate and integrate almost every aspect of the business. Key technologies include, a document imaging system, a custom-built benefits management system and a computer-based telephone system.

## 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 the overall asset allocation, rebalancing the 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 and Facility**

Records and facility 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. This section is also responsible for mail services, and general building maintenance.

# **Executive Support Staff**

Executive support staff provides clerical services.

# 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, Amanda Gaither Columbia/Jefferson City, Missouri

## Legal Counsel

**Perkins Coie, LLP** Attorneys at Law Timberland Counsel Bob Maynard Boise, Idaho

#### **Steptoe & Johnson, LLP** Attorneys at Law Donald J. Wellington Los Angeles, California

# Thompson Coburn

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

# Master Custodian

**Bank of New York Mellon** 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**

**ING** Deferred Compensation Plan Jane Spatola Quincy, Massachusetts

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

#### **TIAA-CREF** College & University Retirement Plan Bernard Slack, Thomas McGlynn Denver, Colorado

# Securities Lending Advisors

**Credit Suisse** Dwight Skerritt New York, New York

## **Investment Advisors**

Actis Capital, LLP Paul Fletcher, Alistar Mackintosh, Jonathan Bond London, England

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 AQR Capital Management Clifford Asness, David Kabiller Greenwich, Connecticut

**Barclays Global Investors** Russ Koesterich, Trey Heiskell San Francisco, California

**Bayview Asset Management, LLC** David Ertel Coral Gables, Florida

**BlackRock Financial Management, Inc.** Rob Capaldi, Andy Phillips, James Keenan, Eric Pellicciaro Mark Williams New York, New York

**Blackstone Group** Tom Hill, Hal Lindquist, Mimi Gamill, Gary Sumers, Ken Whitney, John Dionne New York, New York

**Blakeney Management** James Graham-Maw London, England

**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

#### INTRODUCTORY SECTION

#### Investment Advisors Continued

**CarVal Investors** Tim Clark, Matt Hanson Minnetonka, Minnesota

**Catterton Partners** J. Michael Chu, Scott Danke, John Scerbo Greenwich, Connecticut

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

**Development Partners International, LLP** Miles Morland, Runa Alam London, England

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

Fortress Investment Group Walter Lee, Andrew Dempsey, Douglas Greenig New York, New York

**GFI Energy Ventures, LLC** Larry Gilson Los Angeles, California

**Global Forest Partners** Peter Mertz West Lebanon, New Hampshire

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

Harvest Fund Advisors, LLC Eric Conklin, David Martinelli Wayne, Pennsylvania **JLL Partners** Paul Levy, Brian Wade New York, New York

Legg Mason Capital Management, Inc. Bill Miller, Jane Trust Baltimore, Maryland

Leuthold Weeden Capital Management John Mueller, Eric Bjorgen Minneapolis, Minnesota

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

Merit Energy Partners Bill Gayden, Meghan Cuddihy Dallas, Texas

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

**Morant Wright Management Limited** Stephen Morant, Alasdair McKerrell London, England

**New Mountain Capital, LLC** Steven Klinsky, Michael Flaherman New York, New York

**Nippon Value Investors** Yoshihiko Ito, Christopher Cowie Tokyo, Japan

NISA Investment Advisors, LLC Bill Marshall, Dan Scholz 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 Service, 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

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# **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 13, 2008

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 are safeguarded, and proper records are maintained. These controls include standards in hiring and training of employees, the establishment of an organizational structure, and the communication of policies and guidelines throughout the organization. Internal controls are reviewed through internal audit programs and all internal audit reports are submitted to the board of trustees.

The system's external auditors, Williams-Keepers LLC, conducted an independent audit of the basic financial statements in accordance with U.S. generally accepted auditing standards. This audit is described in the 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.

Gary Findlay Executive Director

Gary Irwin Chief Finance Officer

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# INDEPENDENT AUDITOR'S REPORT



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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, 2008, 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, 2008, 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, 2008, and the respective changes in financial position and cash flows, 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, 2008, 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, and 2003.

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.

Ir celiams Keepers LLC

October 13, 2008

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

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# 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 resulting 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 *Statements 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 detailed information considered useful in evaluating the condition of the plans administered by MOSERS.

Pages 22-26 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

Pension fund net assets decreased by \$117,802,942 during the fiscal year ended June 30, 2008, primarily as result of a reduction in investment earnings and an increase in benefits paid. The investments of the pension trust funds generated a 1.6% return for the year, down from the prior year's return of 18.7%. The funded status of the pension plans decreased by 0.9% for the MSEP and increased 1.6% for the Judicial Plan.

The internal service fund's net assets decreased by \$72,040. The goal of the internal service fund is to maintain the fund at a level that enables it to meet its obligations of paying the premiums for the life and long-term disability benefits for state employees; managing the state employees deferred compensation program; maintaining the membership data necessary to track the premiums due from the state and its employees and payable to the insurance carrier; and collecting and remitting the state and employee contributions to the deferred compensation plan's third party administrator.

MOSERS implemented GASB Statement 45 Accounting and Financial Reporting by Employers for Post-employment Benefits Other Than Pensions which requires the note disclosures on page 45.

## **Pension Trust Funds**

Summary Comparative Statements of Plan Net Assets

	As of June 30, 2008	As of June 30, 2007	Amount of Change	Percentage Change
Cash and short-term investments	\$ 721,501,696	\$ 559,151,957	\$ 162,349,739	29.03%
Receivables	99,212,664	266,136,960	(166,924,296)	(62.72)
Investments at fair value	7,356,225,040	7,591,560,532	(235,335,492)	(3.10)
Invested securities lending collateral	990,447,379	899,055,356	91,392,023	10.17
Capital assets	3,328,380	3,309,904	18,476	0.56
Other assets	83,927	40,139	43,788	109.09
Total assets	9,170,799,086	9,319,254,848	(148,455,762)	(1.59)
Administrative expense payables	1,320,282	1,691,875	(371,593)	(21.96)
Investment expense payable	35,094,903	0	35,094,903	100.00
Investment purchase payables	98,784,467	262,775,085	(163,990,618)	(62.41)
Securities lending collateral	1,006,614,299	899,444,368	107,169,931	11.92
Other liabilities	17,613,720	26,169,163	(8,555,443)	(32.69)
Total liabilities	1,159,427,671	1,190,080,491	(30,652,820)	(2.58)
Net assets	\$8,011,371,415	\$8,129,174,357	\$(117,802,942)	(1.45)%

The following schedules present comparative summary financial statements of the pension trust funds and internal service fund for FY08 and FY07. Following each schedule is a brief summary of the significant changes noted in those schedules.

# Summary Comparable Statements of Plan Net Assets Analysis

The increase in cash and short-term investments is primarily attributable to normal fluctuations in the short-term investments. The decrease in receivables is attributable to a decrease in investment sales receivables for the year due to unfavorable market conditions during the year.

The decrease in the fair value of investments is primarily attributable to the generally unfavorable market conditions experienced during FY08 as evidenced by a decrease in MOSERS' total investment return from 18.7% last year to 1.6% this year. Detailed information regarding MOSERS' investment portfolio is included in the *Investment Section* of this report.

The increase in securities lending collateral is primarily attributable to an increase in the demand for lendable securities in the domestic fixed income area. Likewise, the investment of the collateral increased, partially offset by the decrease in market value of some of the invested collateral.

The decrease in investment purchase payables is due to unfavorable market conditions during the year.

The decrease in other liabilities is primarily attributable to the adjustment in the amount due for investment manager incentive fees during the year. The amount represents the portion of the incentive fee calculated as earned through June 30, 2008, 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 June 30, 2008	Year Ended June 30, 2007	Amount of Change	Percentage Change
Contributions	\$ 279,108,667	\$ 266,868,077	\$ 12,240,590	4.59%
Investment income - investing activities	103,249,161	1,292,070,457	(1,188,821,296)	(92.01)
Investment income - securities lending activities	8,442,627	2,859,293	5,583,334	195.27
Miscellaneous income	577,780	547,064	30,716	5.61
Total additions	391,378,235	1,562,344,891	(1,170,966,656)	(74.95)
Benefits	501,911,976	467,836,275	34,075,701	7.28
Service transfers and refunds	251,443	51,980	199,463	383.73
Administrative expenses	7,017,758	6,748,897	268,861	3.98
Total deductions	509,181,177	474,637,152	34,544,025	7.28
Net increase (decrease)	(117,802,942)	1,087,707,739	(1,205,510,681)	(110.83)
Net assets beginning of year	8,129,174,357	7,041,466,618	1,087,707,739	15.45
Net assets end of year	\$8,011,371,415	\$8,129,174,357	\$ (117,802,942)	(1.45)%

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

The increase in contributions received is primarily attributable to an increase in state payroll for the year and an increase in the contribution rate for the general employees group from 12.78% to 12.84%.

The decrease in investment income in FY08 relative to FY07 is attributable to generally unfavorable market conditions during the fiscal year.

The increase in securities lending income was primarily attributed to an increase in demand for lendable securities, primarily in the domestic fixed income area and increases in the margin basis points. Additional information regarding the investments and securities 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 in the *Actuarial Section* of this report.

Service transfers increased 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 that service transferred.

### Internal Service Fund

Summary Comparative Balance Sheets

	As of June 30, 2008	As of June 30, 2007	Amount of Change	Percentage Change
Cash	\$ 38	\$ 3,080	\$ (3,042)	(98.77)%
Premiums receivable	1,008,772	983,424	25,348	2.58
Accounts receivable - other	25,000	0	25,000	100.00
Investments at fair value	2,343,991	2,384,797	(40,806)	(1.71)
Total assets	3,377,801	3,371,301	6,500	0.19
Premiums payable	2,800,812	2,586,372	214,440	8.29
Other liabilities	251,267	387,167	(135,900)	(35.10)
Total liabilities	3,052,079	2,973,539	78,540	2.64
Unrestricted net assets	325,722	397,762	(72,040)	(18.11)
Total liabilities and net assets	\$3,377,801	\$3,371,301	\$ 6,500	0.19%

## Summary Comparative Balance Sheets Analysis

Cash decreased due to the receipt of a late fiscal year-end direct deposit that went uninvested at year-end in FY07.

The increase in premiums receivable is attributable to normal fluctuations in the month end balance of premiums receivable during the year.

The accounts receivable-other increase is due to a revenue sharing arrangement with the deferred compensation third party administrator. MOSERS receives \$100,000 per year from the arrangement to cover the administration costs of the program. The fourth quarter payment remained receivable at year-end.

The decrease in investments is attributable to normal fluctuations in the investment in overnight repurchase agreements of the funds held pending transmission of the insurance premiums and deferred compensation contributions.

The increase in premiums payable 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 decreased primarily as a result of the reduction in reimbursements due to the pension trust fund for the internal service fund's portion of shared expenses.

	Year Ended June 30, 2008	Year Ended June 30, 2007	Amount of Change	Percentage Change
Premium receipts	\$27,957,666	\$27,101,931	\$ 855,735	3.16%
Deferred compensation receipts	60,393,973	0	60,393,973	100.00
Miscellaneous income	536,493	436,502	99,991	22.91
Total operating revenue	88,888,132	27,538,433	61,349,699	222.78
Premium disbursements	27,927,265	27,063,815	863,450	3.19
Deferred compensation disbursements	60,371,802	0	60,371,802	100.00
Premium refunds	30,401	38,116	(7,715)	(20.24)
Administrative expenses	708,100	527,040	181,060	34.35
Total operating expenses	89,037,568	27,628,971	61,408,597	222.26
Net operating income (loss)	(149,436)	(90,538)	(58,898)	65.05
Investment income	77,396	117,729	(40,333)	(34.26)
Net revenues over expenses	(72,040)	27,191	(99,231)	(364.94)
Net assets beginning of year	397,762	370,571	27,191	7.34
Net assets end of year	\$ 325,722	\$ 397,762	\$ (72,040)	(18.11)%

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

#### 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.

Deferred compensation receipts and disbursements were new this year due to the transition of the management of the State of Missouri Deferred Compensation Fund from the State of Missouri Deferred Compensation to MOSERS.

Miscellaneous income increased primarily as a result of the addition of the revenue sharing arrangement with the deferred compensation third party administrator.

Refunds decreased slightly as a result of normal fluctuations in the amount of premium refunds issued to correct over payments received.

Administrative expenses increased primarily due to the allocation of salary and legal expenses for the start up of the deferred compensation administration.

Investment income decreased primarily due to an overall decrease in the 90-day Treasury bill rates during the fiscal year.

#### FINANCIAL SECTION

#### Summary Comparative Statements of Cash Flows

	Year Ended June 30, 2008	Year Ended June 30, 2007	Amount of Change	Percentage Change
Cash flows from operating activities	\$ (123,763)	\$ 221,403	\$ (345,166)	(155.90)%
Cash flows from noncapital financing activities	2,519	(2,459)	4,978	(202.44)
Cash flows from investing activities	118,202	(215,864)	334,066	(154.76)
Net change in cash	(3,042)	3,080	(6,122)	
Cash balances beginning of year	3,080	0	3,080	
Cash balances end of year	\$ 38	\$ 3,080	\$ (3,042)	

## Summary Comparative Statements of Cash Flows Analysis

The decrease in cash flows from operating activities is primarily attributable to a decrease in cash payments received from employers and members over that of fiscal year 2007.

The increase in cash flows from noncapital financing activities is primarily attributable to a decrease in the amount of cash held at the bank at June 30, 2008 over that of June 30, 2007, due to a late receipt of an employer deposit that occurred last fiscal year.

The increase in cash flows from investing activities is primarily attributable to an increase in the cash flows from net purchase and maturities of overnight repurchase agreements of \$371,400 plus a decrease in the investment income received of \$40,333.

# STATEMENTS OF PLAN NET ASSETS

Pension Trust Funds - As of June 30, 2008

	MSEP	Judicial Plan	Total
Assets Cash and short-term investments	\$ 714,625,717	\$ 6,875,979	\$ 721,501,696
Receivables			
State contributions	10,157,882	1,099,259	11,257,141
Investment sales	86,875,497	835,898	87,711,395
Other	241,801	2,327	244,128
Total receivables	97,275,180	1,937,484	99,212,664
Investments at fair value			
U.S. treasury securities	886,600,144	8,530,681	895,130,825
Corporate bonds	272,913,075	2,625,913	275,538,988
Convertible bonds	2,039,632	19,625	2,059,257
Government bonds & gov't mortgage-backed securities	189,850,853	1,826,705	191,677,558
Real estate equity	727,040	6,995	734,035
Common stock	770,998,407	7,418,385	778,416,792
Preferred stock	15	0	15
Limited partnerships	3,719,761,368	35,790,766	3,755,552,134
Bank loans	180,778,992	1,739,418	182,518,410
Collateralized mortgage obligations	33,891,686	326,099	34,217,785
Foreign currency	91,775,514	883,045	92,658,559
International equities	1,099,554,539	10,579,684	1,110,134,223
U.S. dollar-denominated international corporate bonds	37,228,256	358,203	37,586,459
Total investments	7,286,119,521	70,105,519	7,356,225,040
Invested securities lending collateral	981,008,322	9,439,057	990,447,379
Capital assets			
Land	264,739	2,547	267,286
Building and building improvements	3,439,665	33,096	3,472,761
Furniture, fixtures, and equipment	1,760,515	16,939	1,777,454
Total capital assets	5,464,919	52,582	5,517,501
Accumulated depreciation	(2,168,258)	(20,863)	(2,189,121)
Net capital assets	3,296,661	31,719	3,328,380
Prepaid expenses and other	83,127	800	83,927
Total assets	9,082,408,528	88,390,558	9,170,799,086
Liabilities			
Administrative expense payables	1,307,700	12,582	1,320,282
Investment expense payable	34,760,445	334,458	35,094,903
Investment purchases payables	97,843,042	941,425	98,784,467
Securities lending collateral	997,021,170	9,593,129	1,006,614,299
Investment incentive fees payable	17,063,839	164,185	17,228,024
Employee vacation and overtime liability	382,020	3,676	385,696
Total liabilities	1,148,378,216	11,049,455	1,159,427,671
Net assets held in trust for pension benefits	\$7,934,030,312	\$77,341,103	\$8,011,371,415
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# STATEMENTS OF CHANGES IN PLAN NET ASSETS

Pension Trust Funds - Year Ended June 30, 2008

	MSEP	Judicial Plan	Total
Additions			
<u>Contributions</u> State contributions	\$ 249,770,156	\$ 26,215,309	\$ 275,985,465
Member purchases of service credit	3,085,133	\$ 20,21 <i>)</i> ,509 0	<sup>3</sup> ,085,133
Service transfer contributions	38,069	0	38,069
Total contributions	252,893,358	26,215,309	279,108,667
Investment income			
From investing activities			
Net depreciation in fair value of investments	(44,207,265)	(425,353)	(44,632,618)
Interest	205,179,934	1,974,198	207,154,132
Dividends	(17,639,109)	(169,720)	(17,808,829)
Other	35,336,108	339,997	35,676,105
Total investing activities income	178,669,668	1,719,122	180,388,790
Investing activities expenses:			
Management fees	(72,069,180)	(693,435)	(72,762,615)
Custody fees	(759,141)	(7,304)	(766,445)
Consultant fees	(809,360)	(7,787)	(817,147)
Performance measurement fees	(341,322)	(3,284)	(344,606)
Internal investment activities expenses	(2,425,479)	(23,337)	(2,448,816)
Total investing activities expenses	(76,404,482)	(735,147)	(77,139,629)
Net income from investing activities	102,265,186	983,975	103,249,161
From securities lending activities			
Securities lending income	49,767,356	478,851	50,246,207
Securities lending expenses:		. , -	- , , .
Borrower rebates	(39,784,539)	(382,799)	(40,167,338)
Management fees	(1,620,648)	(15,594)	(1,636,242)
Total securities lending activities expenses	(41,405,187)	(398,393)	(41,803,580)
Net income from securities lending activities	8,362,169	80,458	8,442,627
Total net investment income	110,627,355	1,064,433	111,691,788
Miscellaneous income	572,274	5,506	577,780
Total additions	364,092,987	27,285,248	391,378,235
Deductions			
Benefits	425,259,584	22,058,085	447,317,669
BackDROP & lump sum benefits	54,594,307	0	54,594,307
Service transfer payments	251,443	0	251,443
Administrative expenses	6,950,878	66,880	7,017,758
Total deductions	487,056,212	22,124,965	509,181,177
Net increase (decrease)	(122,963,225)	5,160,283	(117,802,942)
Net assets held in trust for pension benefits:			
Beginning of year	8,056,993,537	72,180,820	8,129,174,357
End of year	\$7,934,030,312	\$77,341,103	\$8,011,371,415

# **BALANCE SHEET**

Internal Service Fund - As of June 30, 2008

	Life & LTD	Deferred Compensation	Total
Assets			
Cash	\$ 0	\$ 38	\$ 38
Premiums receivable	1,008,772	0	1,008,772
Accounts receivable other	0	25,000	25,000
Investments at fair value	2,321,780	22,211	2,343,991
Total assets	\$ 3,330,552	\$ 47,249	\$3,377,801
Liabilities and net assets			
Liabilities			
Premiums payable	\$ 2,800,812	\$ 0	\$2,800,812
Other	177,972	73,295	251,267
Total liabilities	2,978,784	73,295	3,052,079
Unrestricted net assets	351,768	(26,046)	325,722
Total liabilities and net assets	\$ 3,330,552	\$ 47,249	\$3,377,801

See accompanying Notes to the Financial Statements.

# STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN PLAN NET ASSETS

Internal Service Fund - Year Ended June 30, 2008

	Life & LTD	Deferred Compensation	Total
Operating revenues			
Premium receipts	\$27,957,666	\$ 0	\$27,957,666
Deferred compensation receipts	0	60,393,973	60,393,973
Miscellaneous income	436,493	100,000	536,493
Total operating revenues	28,394,159	60,493,973	88,888,132
Operating expenses			
Premium disbursements	27,927,265	0	27,927,265
Deferred compensation disbursements	0	60,371,802	60,371,802
Premium refunds	30,401	0	30,401
Administrative expenses	559,189	148,911	708,100
Total operating expenses	28,516,855	60,520,713	89,037,568
Operating revenues under operating expenses	(122,696)	(26,740)	(149,436)
Nonoperating revenues			
Investment income	76,702	694	77,396
Net revenues under expenses	(45,994)	(26,046)	(72,040)
Net assets July 1, 2007	397,762	0	397,762
Net assets June 30, 2008	\$ 351,768	\$ (26,046)	\$ 325,722

# STATEMENT OF CASH FLOWS

Internal Service Fund - Year Ended June 30, 2008

	Life	e & LTD	Deferre	d Compensation		Total
Cash flows from operating activities						
Cash received from employer and members	\$ 28	3,368,397	\$6	0,468,973	\$ 8	38,837,370
Miscellaneous income		5		0		5
Payments to outside carriers	(27	,974,997)	(60	),371,802)	(8	38,346,799)
Refunds of premiums to members		(30,401)		0		(30,401)
Cash payments to employees for services		(270,291)		(59,451)		(329,742)
Cash payments to other suppliers of goods and services		(238,030)		(16,166)		(254,196)
Net cash provided (used) by operating activities		(145,317)		21,554		(123,763)
Cash flows from noncapital financing activities						
Implicit funding of checks outstanding net of deposits		2,519		0		2,519
Net cash used in noncapital financing activities		2,519		0		2,519
Cash flows from investing activities						
Purchase of investment securities	(582	,542,158)	C	7,619,212)	(59	0,161,370)
Proceeds from sale and maturities of investment securities		2,605,174		7,597,002		0,202,176
Cash received from investment income		76,702		694		77,396
Net cash provided (used) by investing activities		139,718		(21,516)		118,202
Net increase (decrease) in cash		(3,080)		38		(3,042)
Cash balances June 30, 2007		3,080		0		3,080
Cash balances June 30, 2008	\$	0	\$	38	\$	38
Reconciliation of operating revenues under operating						
expenses to net cash provided (used) by operating activities	¢	(122(00))	¢	(2(7/0))	¢	(1/0/20)
Operating revenues under operating expenses <i>Adjustments</i>	\$	(122,696)	\$	(26,740)	\$	(149,436)
Change in assets and liabilities:						
Increase in operational accounts receivable		(25,348)		(25,000)		(50,348)
Increase in operational accounts payable	2,727		73,294		76,021	
Total adjustments		(22,621)		48,294		25,673
Net cash provided (used) by operating activities	\$	(145,317)	\$	21,554	\$	(123,763)

# NOTES TO THE FINANCIAL STATEMENTS

Year Ended June 30, 2008

# (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, 2008 valuation, membership in the MSEP consisted of the following:

Total membership		101,743
Nonvested	17,604	54,542
Vested	36,938	
Active		
Terminated employees entitled to, but not yet receiving benefits		17,069
Retirees and beneficiaries currently receiving benefits		30,132

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.

#### FINANCIAL SECTION

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 (new plan) 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, justices of the peace, or commissioners or deputy commissioners of the circuit court appointed after February 29, 1972, commissioners of the juvenile division of the circuit court appointed pursuant to Section 211.023, RSMo, commissioners of the drug court pursuant to Section 478.466, RSMo, or commissioners of the family court are eligible for membership in the Judicial Plan.

#### As of the June 30, 2008 valuation, membership in the Judicial Plan consisted of the following:

Retirees and beneficiaries currently receiving benefits Terminated employees entitled to, but not yet receiving benefits		440 54
Active		
Vested	401	
Nonvested	0	401
Total membership		895

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.

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*.

	Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Percent Funded (a/b)	Annual Covered Payroll (c)	UAAL Percentage of Covered Payroll ((b-a)/c)
MSEP	6/30/2008	\$7,838,495,768	\$9,128,347,470	\$1,289,851,702	85.9%	\$1,916,527,398	67.3%
Judges	6/30/2008	73,194,379	354,796,453	281,602,074	20.6	44,542,530	632.2
				MSE	Р	Judicial	Plan
	ation date			6/30/20		6/30/20	
	arial cost meth ortization meth			Entry : Level pe	0	Entry a Level per	0
Rem	aining amortiz	zation period		30 years	open	30 years of	open
Asse	t valuation me	thod		5-yea smoothed		5-yea smoothed r	

#### Schedule of Funded Status

Actuarial assumptions: Investment rate of return

Projected salary increases

**COLAs** 

Price inflation

 $\ast$  On a compound basis, 4% for the first 12 years, 3.1% for the 13th year, and 2.56% per year thereafter.

\*\*On a compound basis, 4% for the first 12 years, 3.067% for the 13th year, and 2.56% per year thereafter.

#### 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:

8.5%

4.3-7.5%

 $4\%^{*}$ 

3.2%

8.5%

4.0-5.6%

4%\*\*

3.2%

- 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.

#### Missouri State Employees' Deferred Compensation Program

The Missouri State Employees' Deferred Compensation Program is accounted for as a internal service fund of the state of Missouri administered by MOSERS.

Effective September 1, 2007, 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. The commission was dissolved upon transfer. In order to assist in the transition, two deferred compensation commissioners (the chair of the commission and one House appointed member) will remain as ex officio members on the MOSERS board for issues related to the deferred compensation program. 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.

The third party administration of individual accounts and the investment products available are handled by outside providers paid from charges to the participants. Investment of deferred compensation funds are managed by participants who choose from available options. MOSERS' role is to provide investment options to the participants. MOSERS participates in a revenue sharing arrangement with the third party administrator to cover MOSERS administrative costs.

#### (2) Summary Of Significant Accounting Policies And Plan Asset Matters

#### Basis of Accounting

The financial statements of the MSEP, the Judicial Plan, the Missouri State Insured Defined Benefit Insurance Plan and Missouri State Deferred Compensation Program 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.

#### Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of net assets held in trust for pension benefits at June 30, 2008. Actual results could differ from those estimates.

#### 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 on the basis of fair market value.

The schedule on page 42 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, Central Trust Bank pledged the following securities to MOSERS on June 30, 2008, as collateral for overnight repurchase agreements:

- \$3,000,000 Federal Home Loan Bank Discount Note Maturity Date 11/14/2012
- \$2,961,510 Small Business Association Pool #504354 Maturity Date 11/25/2023
- \$1,946,569 Small Business Association Pool #505566 Maturity Date 2/25/2021
- \$1,000,000 Small Business Association Pool #508393 Maturity Date 2/25/2020

	Cash Balances		
	Book	Bank/Investment Custodian	
Pension Trust Funds	\$30,926,386	\$39,209,730	
Internal Service Fund - Insurance Plans	(2,519)	136	
Internal Service Fund - Deferred Compensation Plan	38	38	

#### 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, 2008, MOSERS' fixed income assets that are not government guaranteed represented 72% 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 on the following page 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. 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 40-41 of these notes.

Policies related to credit risk pertaining to MOSERS' securities lending program are found under the securities lending disclosures found on page 41 of these notes.

Fixed Income Security Type	Market Value June 30, 2008	Percent of All Fixed Income Assets	Weighted Average Credit Quality	Ratings Dispersion Requiring Further Disclosure
Mortgages	\$ 50,252,730	2%	Agency	None
Agencies	410,027,117	12	Agency	None
Asset-backed securities	315,100,354	10	ĂĂĂ	See below
Collateralized mortgage obligations	104,304,702	3	AA	See below
Corporate bonds	676,389,460	20	А	See below
Bank loans	210,569,373	6	В	See below
Commercial paper	123,608,001	4	Tier 1	None
Certificates of deposit	123,002,777	4	Tier 1	None
Pooled investments	370,081,513	11	Not rated	None
Total nongov't guaranteed securities	\$2,383,336,027	72%		
Total fixed income securities	\$3,297,316,877			

#### Average Credit Quality and Exposure Levels of Nongovernment Guaranteed Securities

### Ratings Dispersion Detail – Market Value

Credit Rating Level	Collateralized Mortgage Obligations	Asset-Backed Securities	Corporate Bonds	Bank Loans
Agency	\$ 8,996,265			
AAA	34,401,094	\$264,401,635	\$ 64,952,339	
AA	39,010,942	50,393,419	180,138,801	
A	21,896,401	305,300	193,574,890	
BBB			103,848,175	
BB			31,512,764	\$ 77,704,470
В			63,080,150	90,071,703
CCC			39,067,298	12,828,031
CC			73,854	176,032
С				
D			139,232	
Tier 1				
Tier 2				
Not rated			1,957	29,789,132
Total	\$104,304,702	\$315,100,354	\$676,389,460	\$210,569,374

### 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. Within the investment policy, 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 Security Type	Market Value June 30, 2008	Percent of All Fixed Income Assets	Weighted Average Effective Duration (Years)	Interest Rate Risk Requiring Future Disclosure
U.S. treasuries	\$ 904,250,411	27.4%	8.1	See below
Government guaranteed mortgages	9,730,439	0.3	5.0	None
Mortgages	50,252,730	1.5	5.0	None
Agencies	410,027,117	12.5	3.6	None
Collateralized mortgage obligations	104,304,702	3.2	1.3	None
Asset-backed securities	315,100,354	9.6	0.3	None
Corporate bonds	676,389,460	20.5	0.5	None
Bank loans	210,569,373	6.4	0.3	None
Commercial paper	123,608,001	3.7	0.1	None
Certificates of deposit	123,002,777	3.7	0.1	None
Pooled investments	370,081,513	11.2	0.1	None
	\$3,297,316,877	100.0%	3.0	

#### Effective Duration Analysis of U.S. Treasuries

Fixed Income Security Type	Market Value June 30, 2008	Average Effective Duration of the Security Type	Contribution to Effective Duration
1 to 10-year maturities	\$575,350,862	4.7	3.0
Long-coupon treasuries	293,517,606	13.7	4.5
Long-stripped treasuries	35,381,943 \$904,250,411	16.4	$\frac{0.6}{8.1}$

#### 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 exposures, or exchange rate risk, primarily reside within MOSERS' international equity investment holdings. MOSERS' implementation policy is to allow 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, 2008, is highlighted in the table below.

Currency	Cash & Cash Equivalents	Equities	Fixed Income	Alternatives	Total
Argentine Peso	\$ 3,019				\$ 3,019
Australian Dollar	¢ 0,019	\$ 17,612,111			17,612,111
Brazilian Real	12,543	31,532,627			31,545,170
Canadian Dollar	10,957	6,637,908			6,648,865
Colombian Peso	169	0,007,000			169
Czech Koruna	20,142	1,289,248			1,309,390
Danish Krone	20,112	4,057,529			4,057,529
Egyptian Pound	(846)	1,562,633			1,561,787
Euro	2,520,944	227,611,853	\$14,744,027	\$126,946,924	371,823,748
Hong Kong Dollar	120,207	51,870,452	¢11,711,027	φ120,9 10,921	51,990,659
Hungarian Forint	46,700	4,240,502			4,287,202
Indian Rupee	676,635	2,544,881			3,221,510
Indonesian Rupiah	1,987	1,681,625			1,683,612
Israeli Shekel	1,907	2,341,820			2,341,820
Japanese Yen	104,696,445	404,423,138			509,119,583
Malaysian Ringgit	19,004	5,817,296			5,836,300
Mexican Peso	(3,726)	13,586,105			13,582,379
Moroccan Dirham	(3,346)	310,840			307,494
Norwegian Krone	106,863	10,548,813			10,655,676
Pakistani Rupee	2,449	1,746,627			1,749,076
Peruvian Nuevo Sol	2,117	23,231			23,231
Philippine Peso		1,381,903			1,381,903
Polish Zloty		486,975			486,975
Russian Ruble		3,975,498			3,975,498
Singapore Dollar	1	60,917,039			60,917,040
South African Rand	(24,583)	8,410,901			8,386,318
South Korean Won	3,917	38,765,532	2,737,086		41,506,535
Sri Lanka Rupee	5,917	2,322	2,757,000		2,322
Swedish Krona	32	22,174,249			22,174,281
Swiss Franc	91,898	89,177,918			89,269,810
Taiwan New Dollar	93,008	31,742,889			31,835,897
Thai Baht	25,000	17,910,543			17,910,543
Turkish Lira	(10,219)	9,082,537			9,072,318
United Kingdom Pound Sterling		104,540,871	4,390,638		109,145,801
Venezuelan Bolivar	107,248	101,910,071	1,570,050		107,248
Total	\$108,705,740	\$1,178,008,416	\$21,871,751	\$126,946,924	\$1,435,532,831

#### Currency Exposures by Asset Class

#### FINANCIAL SECTION

#### 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, the 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 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 below summarize the various contracts in the portfolio as of June 30, 2008. 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 included the tables on page 38. MOSERS does not anticipate additional significant market risk from the swap arrangements.

#### **Futures Contracts**

Futures Contract	2008 Expiration Date	Long/Short	Notional/Fair Value	Exposure
U.S. Long Treasury Bond	September	Long	\$ 11,559,375	\$ (6,906)
U.S. 10-year Treasury Notes	September	Long	31,328,516	30,031
U.S. 5-year Treasury Notes	September	Long	17,799,305	17,883
U.S. 2-year Treasury Notes	September	Long	25,344,375	15,782
SPI 200 Index	September	Short	(12,209,483)	158,878
FTSE 100 Index	September	Short	(29,562,166)	(527,259)
DJ Euro Stoxx 50	September	Short	(49,472,585)	32,233
Topix Index	September	Long	108,087,019	(6,694)
S&P 500 Index	September	Long	66,681,255	45,743
Total	*	0	\$169,555,611	\$(240,309)

#### Swap Contracts

MOSERS Receives	Maturity Date	Notional Value	Exposure*	Counterparty
S&P 500 total return	10/31/08	\$ 27,204,036	\$(2,504,548)	Goldman Sachs
S&P 500 total return	07/31/08	27,204,036	(2,504,548)	Goldman Sachs
S&P 500 total return	03/31/09	48,517,756	(4,738,381)	Goldman Sachs
S&P 500 total return	10/31/08	16,100,339	(1,482,283)	Goldman Sachs
S&P 500 total return	07/31/08	16,100,339	(1,482,283)	Goldman Sachs
S&P 500 total return	04/30/09	197,650,986	(18,196,799)	JP Morgan Chase
S&P 500 total return	01/31/09	197,650,986	(18,196,799)	JP Morgan Chase
S&P 500 total return	04/30/09	22,287,614	(2,051,916)	JP Morgan Chase
S&P 500 total return	01/31/09	22,287,614	(2,051,916)	JP Morgan Chase
S&P 500 total return	04/30/09	108,055,901	(10,473,162)	JP Morgan Chase
CDX N. American HY Index	06/20/13	(138,000,000)	(1,779,500)	JP Morgan Chase
GSCI Total Return Index	03/31/09	253,220,136	20,947,721	Merrill Lynch
Lehman CMBS Aaa 8.5+ Index	09/30/08	75,000,000	(5,041,661)	Goldman Sachs
Lehman CMBS Aaa 8.5+ Index	09/30/08	75,000,000	(3,546,799)	Goldman Sachs
Lehman U.S. Treasury Index	09/30/08	153,527,145	1,196,726	Lehman
Lehman Aggregate Index	05/29/09	200,000,000	(161,616)	Merrill Lynch
Deutsche Bank Liquid Agg. Index	11/28/08	100,000,000	0	Deutsche Bank
Total		\$1,401,806,888	\$(52,067,764)	

\* Swap contracts are governed by ISDA Master Agreements between MOSERS and counterparties. These agreements require collateral to be posted by either party when the exposure exceeds the amount specified in the agreement (usually \$2.5 to \$3 million).

#### FINANCIAL SECTION

#### Foreign Currency Forward Contracts at June 30, 2008

Pending receivable	\$ 427,528,927
Pending payable	(430,707,387)
Foreign currency forward contract asset (liability)	\$ (3,178,460)

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 38.

#### 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 42. On June 30, 2008, MOSERS had no credit risk exposure to borrowers because the collateral amounts received exceeded amounts out on loan.

As of June 30, 2008, Credit Suisse, New York (CSNY), 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 CSNY to lend these securities to a diverse group of dealers on behalf of MOSERS. Indemnification against dealer default is provided by CSNY, 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 CSNY, respectively.

Daily monitoring of securities that are on loan ensures proper collateralization levels and mitigates 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 CSNY. On June 30, 2008, the cash collateral fund had a market value of \$990,447,379 and a weighted average maturity of 27 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 CSNY.

#### 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, 2008, MOSERS had contracts with 49 limited partnerships across various types of alternative investments. These partnerships collectively represent 47% of the total fund. A schedule of limited partnerships is presented on page 43.

### Investments as of June 30, 2008

	Pension '	Trust Funds	Internal Se	rvice Funds
	Investments	Investments	Investments	Investments
	at Cost Value	at Fair Value	At Cost Value	at Fair Value
Common stocks				
Out on loan	\$ 118,021,547	\$ 107,185,792		
Not on loan	737,925,972	671,231,000		
Total	855,947,519	778,416,792		
International equities				
Out on loan	60,541,775	63,332,176		
Not on loan	715,816,602	1,046,802,047		
Total	776,358,377	1,110,134,223		
International corporate bonds				
Out on loan	304,944	211,919		
Not on loan	49,039,554	37,374,540		
Total	49,344,498	37,586,459		
Preferred stocks	9	15		
Treasury bonds, notes and bills				
Out on loan	715,480,125	776,561,662		
Not on loan	113,529,820	118,569,163		
Total	829,009,945	895,130,825		
Government bonds and gov't				
mortgage-backed securities	193,390,602	191,677,558		
Corporate bonds				
Out on loan	31,420,236	29,521,038		
Not on loan	883,719,777	868,271,309		
Total	915,140,013	897,792,347		
Convertible bonds	1,801,877	2,059,257		
Repurchase agreements	1,717,198	1,717,198	\$2,343,991	\$2,343,991
Short-term investment funds	1,040,891,420	1,040,891,420		
Collateralized mortgage obligations	36,230,588	34,217,785		
Real estate equity holdings	734,035	734,035		
Foreign currencies	96,171,570	92,658,559		
Limited partnerships	2,689,411,795	3,755,552,134		
Bank loans	189,263,686	182,518,410		
Total investments				
Out on loan	925,768,627	976,812,587		
Not on loan	6,749,644,505	8,044,274,430	2,343,991	2,343,991
Total	\$7,675,413,132	\$9,021,087,017	\$2,343,991	\$2,343,991
Reconciliation to investments on Statements of N	Net Assets			
Total from above		\$9,021,087,017		
Less short-term investments				
Repurchase agreements		(1,717,198)		
Short-term investment funds		(672,697,400)		
Less invested securities lending collateral				
Short-term investment funds		(368,194,020)		
Corporate bonds		(622,253,359)		
Investments on Statements of Plan Net Assets		\$7,356,225,040		

### Limited Partnerships

Partnership Name	Style	Investments at Fair Value as of June 30, 2008
Blackstone Real Estate Partners IV	Active real estate	\$ 62,827,783
Blackstone Real Estate Partners V	Active real estate	104,202,985
Blackstone Real Estate Partners VI	Active real estate	34,912,054
OCM Real Estate Opportunites Fund III	Active real estate	42,393,632
RH Fund 7	Activist equity	58,134,694
Bridgepoint Europe III A	Corporate buyout	31,033,418
Catterton Partners V	Corporate buyout	24,389,723
Catterton Partners VI	Corporate buyout	15,078,587
JLL Partners Fund V	Corporate buyout	23,182,374
OCM/GFI Power Opportunities Fund II	Corporate buyout	15,416,908
Silver Lake Partners II	Corporate buyout	29,927,076
The Veritas Capital Fund III	Corporate buyout	12,126,221
Alinda Infrastructure Fund I	Corporate buyout	22,122,023
New Mountain Partners III	Corporate buyout	5,591,009
Parish Capital Buyout Fund I	Corporate buyout - fund-of-funds	14,556,827
Parish Capital Buyout Fund II	Corporate buyout - fund-of-funds	11,585,586
B IV Capital Partners	Distressed debt	26,000,102
Blackstone Distressed Securities Fund	Distressed debt	49,984,075
MHR Institutional Partners II	Distressed debt	59,104,597
MHR Institutional Partners III	Distressed debt	36,977,965
OCM Opportunities Fund IV B	Distressed debt	576,157
OCM Opportunities Fund VII B	Distressed debt	7,500,000
Bayview Opportunity Domestic	Distressed real estate debt	60,754,579
Fortress Mortgage Opportunities Fund Series 2	Distressed real estate debt	32,417,963
CVI Global Value Fund A	Distressed real estate debt	99,900,000
OCM European Credit	European loans	95,765,233
Actis Emerging Markets Fund 3	Emerging markets	991,528
African Development Partners Fund I	Emerging markets	148,272
Onyx Partnership	Emerging markets	256,156,957
Merit Energy Partners F-II	Energy - oil & gas	3,785,042
TCW Energy Partners (TEP)	Energy - diversified	40,425,772
TCW Energy Partners Fund XIV	Energy - mezzanine	10,692,801
Blackstone Hedged Equity Fund	Long/short	360,029,272
Freeman Fair Value Fund	Long/short	587,067
Eminence Fund	Long/short	12,500,000
AQR Absolute Return Institutional Fund	Market neutral	128,433,106
BGI Global Market Neutral Fund	Market neutral	162,631,115
Blackstone Topaz Fund	Market neutral	344,606,196
Diamond Ridge	Market neutral	132,173,916
Jade Ridge	Market neutral	502,687,256
Newport Pioneer	Market neutral	353,131,890
Parish Opportunity Fund	Private equity co-investment	18,232,611
TCW Energy Partners I	Private equity co-investment	5,817,589
67	Special situations - fund-of-funds	
Silver Creek Special Opportunities Fund I Silver Creek Special Opportunities Fund II	Special situations - fund-of-funds	52,972,937 48,668,976
The Campbell Group	Timberland	48,008,970 55,141,809
Global Timber Investors 7	Timberland	
	Timberland	74,293,939
Garnet Sky Investors Wildung of Timb order de	Timberland	76,136,010
Wildwood Timberlands Other Miscellaneous	Miscellaneous	125,352,144
Other willscenaneous	wiscenaneous	$\frac{13,494,358}{\$3,755,552,134}$
		φ <u></u> ,/,),))2,134

#### 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 also 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, 2007, and June 30, 2008, and changes to those account balances during the year ended June 30, 2008.

#### Capital Asset Account

Capital Assets	Land	Building and Building Improvements	Furniture, Fixtures, and Equipment	Total Capital Assets
Balances June 30, 2007	\$267,286	\$3,420,794	\$1,762,003	\$5,450,083
Additions	0	51,967	210,065	262,032
Deletions	0	0	(194,614)	(194,614)
Balances June 30, 2008	267,286	3,472,761	1,777,454	5,517,501
Accumulated depreciation:				
Balances June 30, 2007	0	740,751	1,399,428	2,140,179
Depreciation expense	0	86,817	144,883	231,700
Deletions	0	0	(182,758)	(182,758)
Balances June 30, 2008	0	827,568	1,361,553	2,189,121
Net capital assets June 30, 2008	\$267,286	\$2,645,193	\$ 415,901	\$3,328,380

### (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, 2008, 16,729 retirees were eligible and participating in the

program. This insured defined benefit coverage is financed on a percent of payroll (.115%) and is purchased as a group policy through competitive bids. The cost for year ended June 30, 2008, was \$1,859,378. 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, 2008, 409 retirees were eligible and participating in the program. The coverage for 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 (\$48,641 for the year ended June 30, 2008). 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, 2008, 40,210 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, 2008, was \$8,280,769. Premiums are contributed by the state as provided for by Section 104.515, RSMo.

#### Post-Employment Retiree Health Care

MOSERS participates in a cost-sharing multiple-employer defined benefit post-employment healthcare plan administered by the Missouri Consolidate Health Care Plan (MCHCP). The plan provides medical benefits to retirees of participating governmental entities. Retirees who had state-sponsored medical insurance coverage for a least two years (or since first eligible) before they are eligible to retire, may continue coverage into retirement. MCHCP issues a publicly available financial report that includes financial statements and required supplementary information for the post-employment healthcare plan. The report may be obtained by writing to the MCHCP, 832 Weathered Rock Court, PO Box 104355, Jefferson City, MO 65110-4355 or by calling (800) 487-0771.

Plan funding requests are actuarially determined and approved by the MCHCP board of trustees subject to appropriation by the Missouri General Assembly. During fiscal year 2008 the Missouri General Assembly appropriated \$15,022,657 of the approximately \$40,000,000 determined by the MCHCP actuary as the annual required contribution (ARC) for post employment health care. MOSERS contributed \$191,341 in fiscal year 2008 in accordance with the State's funding policy toward the ARC for post-employment retiree health care.

#### (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 combined with the MSEP in all relevant sections of this report.

### (6) Contingencies

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

#### Internal Revenue Service Audit

The Internal Revenue Service (IRS) is auditing the qualified status of MOSERS under section 401(a) of the Internal Revenue Code (the "Code"). In a discussion draft dated August 9, 2007, the IRS raised two qualification issues which MOSERS intends to address by providing the IRS with a legal analysis outlining its compliance with the Code and IRS regulations. MOSERS expects that the audit will be concluded prior to the end of calendar year 2008 and does not anticipate material liability for any taxes or penalties.

#### Sub-Prime Market Impact

Since June 30, 2008, the financial markets have continued to falter as a result of the general lack of availability of credit. While the market value of MOSERS' investments has been negatively affected by current perceptions of global economic conditions, it is management's view that our long-term time horizon, the diversification of our holdings, and present opportunities to acquire securities at discounts to intrinsic value, position the fund to recover nicely when the economy turns around.

# Required Supplementary Information SCHEDULES OF FUNDING PROGRESS

Pension Trust Funds - Last Six Years

### MSEP

Actuarial Valuation Date Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Percent Funded (a/b)	Annual Covered Payroll (c)	UAAL Percentage of Covered Payroll ((b-a)/c)
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
6/30/2008	7,838,495,768	9,128,347,470	1,289,851,702	85.9	1,916,527,398	67.3

### ALJLAP\*

Actuarial Valuation Date Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Percent Funded (a/b)	Annual Covered Payroll (c)	UAAL Percentage of Covered Payroll ((b-a)/c)
6/30/2003	\$15,626,461	\$19,946,487	\$4,320,026	78.3%	\$4,657,896	92.7%
6/30/2004	16,238,804	20,384,213	4,145,409	79.7	4,655,340	89.0

\*Assets and liabilities of the ALJLAP were transferred to the MSEP during fiscal year 2005.

### Judicial Plan

Actuarial Valuation Date Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Percent Funded (a/b)	Annual Covered Payroll (c)	UAAL Percentage of Covered Payroll ((b-a)/c)
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
6/30/2008	73,194,379	354,796,453	281,602,074	20.6	44,542,530	632.2

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
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
2008	12.84	249,770,156	100

### ALJLAP\*

	Annual Req	uired Contribution		
Year Ended June 30	Percent	Dollar Amount	Percentage Contributed	
2003	20.02%	\$ 951,023	100%	
2004	20.12	945,950	100	
2005	22.13	1,124,924	100	
2006*	21.79	895,012	100	

\* The ALJLAP was transitioned to the MSEP Plan in FY05, 2006 is the last year for separate ALJLAP contributions, future contributions to be included in the MSEP rate.

# Judicial Plan

	Annual Required Contribution			
Year Ended June 30	Percent	Dollar Amount	Percentage Contributed	
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	
2008	58.65	26,215,309	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, 2008

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, 2008, 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 3.2% per year. Projected salary increase assumptions are based on 4% per year for wage inflation plus an additional .3% to 3.5% 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 2.56% per year thereafter or 2.56% per year, depending upon the date of hire and benefit election.

	Amount	Percent of 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 unfunded		
actuarial accrued liability	(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

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.

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.

	Amount	Percent of Payroll
<b>MSEP</b> Recognition of state pay freeze FY03 Plan experience	\$ (6,206,492) 15,782,223	(.35)% .89
<b>ALJLAP</b> Recognition of state pay freeze FY03 Plan experience	(20,074) 23,420	(.42) .49
<b>Judicial Plan</b> Recognition of state pay freeze FY03 Plan experience	(208,357) 32,055	(.52) .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		
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		
Recognition of state pay freeze for annual salaries above \$40,000	(18,632)	(.40)
Plan experience	112,255	2.41
Judicial Plan		
Recognition of 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 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	(15.051)	
Change in assumptions Experience and nonrecurring items	(15,951) 514,433	(.04) 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		
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 and liabilities from the ALJ plan	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 for FY06	(136,055)	(.34)
Change in amortization factor to reflect 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.

MOED	Amount	Percent of Payroll
MSEP	f(1, 2/4, 00/4)	(0.07)0/
Change to an open 30-year amortization period	\$(1,244,094)	(0.07)%
Experience and nonrecurring items	2,310,460	.13
Judicial Plan		
Change to an open 30-year amortization period	(265,786)	(0.66)
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 benefit assumptions or methods	\$ (369,329)	(0.02)%
Experience and nonrecurring items	(5,355,266)	(0.29)
Judicial Plan		
Change in benefit assumptions or methods	(273,672)	(0.67)
Experience and nonrecurring items	853,694	2.09

2008 The actuarial valuations as of June 30, 2008, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2010.

	Amount	Percent of Payroll
MSEP		
Change in benefit assumptions or methods	\$4,791,318	0.25%
Experience and nonrecurring items	(574,958)	(0.03)
Judicial Plan		
Change in benefit assumptions or methods	(547,873)	(1.23)
Experience and nonrecurring items	(160,353)	(0.36)

#### Actuarial Asset Value Smoothing

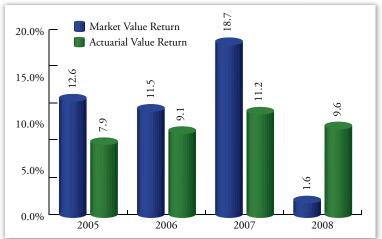
The financing objective of the vast majority of public retirement plans is to establish contribution rates and collect contributions which remain relatively level as a percent of active member payroll over decades of time. This concept is sometimes referred to as attempting to achieve intergenerational equity, meaning that future generations will not be expected to pay more or less (in inflation adjusted terms) than the present generation contributes to support the plan.

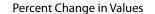
Some critics of smoothing the actuarial value of assets suggest that pension plans are not providing "transparency" in connection with operations. Actual practice suggests otherwise. The Statements of Plan Net Assets and Changes in Plan Net Assets in this section are prepared on the basis of market values. Beyond that, all of the information related to asset values and results of investment activity in the Investment Section of this report is prepared on the basis of market values. This is required by the accounting and reporting standards established by the Governmental Accounting Standards Board and by the Government Finance Officers Association's Guidelines for the Preparation of a Comprehensive Annual Financial *Report.* Both organizations have been long standing proponents of transparency in governmental accounting and reporting - public retirement plans commonly subscribe to the dictates of both.

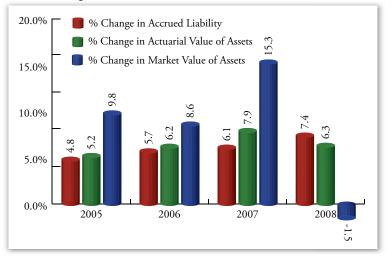
Many public retirement plans have begun to emphasize use of asset classes that, by their nature, tend to be somewhat volatile in market value. This is being done with the objective of increasing investment returns, thus providing increased benefit security for plan participants and lower contribution rates for taxpayers than would otherwise be the case. With market value accounting for contribution rate determination purposes, we could achieve more level contribution rates by employing lower volatility asset classes but the level contribution rate would be much higher than is the case with the higher return expectations we have as the result of taking on asset volatility risk.

For those of us attempting to operate with a long-term time horizon, with contribution rate stability as a key objective, asset smoothing for actuarial purposes is simply

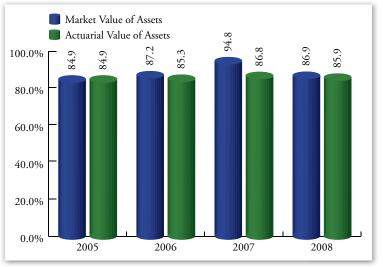
#### Market Rate of Return vs. Actuarial Value Return











a tool. Asset smoothing for actuarial purposes is a practical solution to responsibly achieving intergenerational equity, giving recognition to the fact that market cycles do not coincide with financial reporting periods. The use of the "market related" value established through smoothing simply makes more sense for determining contribution rates than using market value. The bar charts above further illustrate the impact of smoothing volatility in actuarial computations.

# SCHEDULE OF INVESTMENT EXPENSES

Pension Trust Funds - Year Ended June 30, 2008

	MSEP	Judicial Plan	Total
Investing activity			
Investment management and administration fees	<b>.</b>		
Aetos Capital Management - alpha pool	\$ 1,782,838	\$ 17,154	\$ 1,799,992
Alinda Capital Partners - private equity	392,475	3,776	396,251
Americap Advisers - domestic all-cap	13,929	134	14,063
AQR Capital Management - alpha pool	(520,922)	(5,012)	(525,934)
Barclays Global Investors - alpha pool	2,014,077	19,379	2,033,456
Bayview Capital - high yield	105,363	1,014	106,377
Bayview Capital - credit opportunities	210,726	2,028	212,754
Bayview Capital - real estate	105,363	1,014	106,377
BlackRock Financial Management - credit opportunities	98,886	951	99,837
BlackRock Financial Management L.P high yield	1,009,429	9,713	1,019,142
BlackRock Financial Management L.P MBS/ABS	205,491	1,977	207,468
Blackstone - distressed debt	82,145	790	82,935
Blackstone Alpha - private debt	127,893	1,231	129,124
Blackstone BREP V - real estate	2,819,662	27,130	2,846,792
Blackstone BREP VI - real estate	1,292,713	12,438	1,305,151
Blackstone - hedged equity	3,732,231	35,911	3,768,142
Blackstone Alternative Asset Management - alpha pool	3,315,605	31,902	3,347,507
Blackstone - real estate	1,440,262	13,858	1,454,120
Blakeney - emerging markets	15,883,549	152,828	16,036,377
Blum Capital Stinson - private equity	181,361	1,745	183,106
Bridgewater Associates, Inc alpha pool	3,218,869	30,971	3,249,840
Bridgepoint Capital - private equity	392,525	3,777	396,302
Bush O'Donnell - real estate	94,920	913	95,833
The Campbell Group, LLC - timber	460,770	4,433	465,203
Catterton Partners - private equity	974,804	9,379	984,183
CarVal Investors - real estate	3,038,850	29,239	3,068,089
DDJ Capital Management - private debt	(445,145)	(4,283)	(449,428)
Freeman Associates Investment Management - hedged equity	307,556	2,959	310,515
Fortress Investment Group - credit opportunities	73,469	707	74,176
Garnett Sky GFP Co timber	1,530,021	14,722	1,544,743
Global Forest Partners - timber	989,328	9,519	998,847
GMO - emerging markets	1,681,350	16,178	1,697,528
Harvest Fund Advisors - credit opportunities	55,217	531	55,748
JLL Partners V - private equity	2,219,381	21,354	2,240,735
Legg Mason Opportunity Trust - domestic equity	1,424,888	13,710	1,438,598
Legg Mason Value Trust - domestic equity	604,949	5,821	610,770
Leuthold Weeden Capital Management - domestic equity	539,328	5,189	544,517
Mastholm Investment Managers - int'l developed equity	3,665,414	35,268	3,700,682
Merit - private equity	289,395	2,785	292,180
MHR Fund Management - private debt	(1,756,834)	(16,904)	(1,773,738)
Morant Wright Investment Management - int'l developed equity	506,668	4,875	511,543
MOSERS Inc alpha pool	603	6	609
New Mountain III - private equity	538,035	5,177	543,212
Nippon Value Investors - int'l developed equity	662,546	6,375	668,921

Continued on page 54

# SCHEDULE OF INVESTMENT EXPENSES

Pension Trust Funds - Year Ended June 30, 2008

Continued from page 53

Continued from page 53	MSEP	Judicial Plan	Total
NISA Investment Advisors, LLC - commodities	478,714	4,606	483,320
NISA Investment Advisors, LLC - fixed income	217,543	2,093	219,636
NISA Investment Advisors, LLC - beta program domestic equity	185,468	1,785	187,253
NISA Investment Advisors, LLC - beta program hedged equity	30,064	289	30,353
NISA Investment Advisors, LLC - beta program fixed income	110,783	1,066	111,849
Oaktree Capital Management European Credit - high yield	434,094	4,177	438,271
Oaktree Capital Management - real estate	(340,288)	(3,274)	(343,562)
Oaktree Capital Management - private debt	51,892	499	52,391
Oaktree Capital Management ECO - private debt	736,842	7,090	743,932
Oaktree Capital Management GFI Power - private equity	2,570,647	24,734	2,595,381
Pacific Alternative Asset Management Co alpha pool	4,050,450	38,973	4,089,423
Parish Capital - private equity	536,271	5,160	541,431
Relational Investors, LLC - private equity	665,466	6,403	671,869
Resource Management Service - timber	699,360	6,729	706,089
Silchester International Investors - int'l developed equity	2,524,420	24,289	2,548,709
Silver Lake Partners - private equity	2,873,492	27,648	2,901,140
Trust Company of the West - real estate	644,554	6,202	650,756
Veritas Capital - private equity	239,425	2,304	241,729
Total investment management fees	72,069,180	693,435	72,762,615
Other investment fees			
Investment consultant fees			
Summit Strategies, Inc.	792,114	7,621	799,735
TimberLink Consulting	17,246	166	17,412
Investment custodial fees			
Mellon Bank	676,038	6,504	682,542
Partnership fees	83,103	800	83,903
Performance measurement fees			
Mellon Bank	341,322	3,284	344,606
Miscellaneous expense			
Internal investment activity expenses	2,425,479	23,337	2,448,816
Total investing activity expenses	76,404,482	735,147	77,139,629
Securities lending activity			
Securities lending borrower rebates	39,784,539	382,799	40,167,338
Securities lending management fees			
Mellon Bank	123,809	1,191	125,000
Credit Suisse New York	1,496,839	14,403	1,511,242
Total securities lending activity expenses	41,405,187	398,393	41,803,580
Total investment expenses	\$117,809,669	\$1,133,540	\$118,943,209

# SCHEDULE OF INTERNAL INVESTMENT ACTIVITY EXPENSES

Pension Trust Funds - Year Ended June 30, 2008

	MSEP	Judicial Plan	Total
Personnel services			
Salaries	\$1,512,947	\$14,557	\$1,527,504
Employee fringe benefits	434,942	4,185	439,127
Total personnel services	1,947,889	18,742	1,966,631
Professional services			
Attorney services	88,708	854	89,562
Total professional services	88,708	854	89,562
Communications			
Postage and mailing	92	1	93
Telephone	3,476	33	3,509
Total communications	3,568	34	3,602
Equipment			
Maintenance	119	1	120
Total equipment	119	1	120
Travel and meetings			
Staff travel and meetings	113,482	1,092	114,574
Total travel and meetings	113,482	1,092	114,574
General			
Educational materials	5,394	52	5,446
Office supplies	1,376	13	1,389
Subscriptions and dues	263,618	2,536	266,154
Advertising	1,320	13	1,333
Miscellaneous	5	0	5
Total general	271,713	2,614	274,327
Total administrative expenses	\$2,425,479	\$23,337	\$2,448,816

# SCHEDULE OF ADMINISTRATIVE EXPENSES

Pension Trust Funds - Year Ended June 30, 2008

	MSEP	Judicial Plan	Total
<b>Personnel services</b> Salaries	¢2 102 202	\$30,726	¢2 22/ 110
Employee fringe benefits	\$3,193,392 1,172,499	11,282	\$3,224,118 1,183,781
Total personnel services	4,365,891	42,008	4,407,899
Total personnel services	4,00,071	42,000	4,407,877
Professional services			
Actuarial services	242,096	2,329	244,425
Attorney services	141,401	1,361	142,762
Auditing services	42,957	413	43,370
Banking services	24,113	232	24,345
Consulting services	218,826	2,106	220,932
Total professional services	669,393	6,441	675,834
Communications			
Postage and mailing	280,194	2,696	282,890
Telephone	72,959	702	73,661
Printing	109,593	1,054	110,647
Video production	397	4	401
Total communications	463,143	4,456	467,599
Building and grounds			
Depreciation	85,990	827	86,817
Utilities	56,905	548	57,453
Maintenance	98,551	948	99,499
Total building and grounds	241,446	2,323	243,769
Equipment			
Depreciation	143,502	1,381	144,883
Maintenance	136,357	1,312	137,669
Rental	119,259	1,147	120,406
Gain on sale of equipment	(2,478)	(24)	(2,502)
Total equipment	396,640	3,816	400,456
Travel and meetings			
Board travel and meetings	29,064	280	29,344
Staff travel and meetings	224,298	2,158	226,456
Vehicle maintenance and operation	8,274	80	8,354
Total travel and meetings	261,636	2,518	264,154
General			
Educational materials	19,502	188	19,690
Office supplies	171,532	1,650	173,182
Subscriptions and dues	246,035	2,367	248,402
Insurance	105,934	1,019	106,953
Advertising	7,655	74	7,729
Miscellaneous	2,071	20	2,091
Total general	552,729	5,318	558,047
Total administrative expenses	\$6,950,878	\$66,880	\$7,017,758
Total administrative expenses	φ0,790,070 	φ00,000	Ψ/,01/,/ )0

# SCHEDULE OF ADMINISTRATIVE EXPENSES

Internal Service Fund - Year Ended June 30, 2008

Personnel services         5327,386         \$105,881         \$433,267           Employee fringe benefits         111,818         26,864         138,682           Total personnal services         439,204         132,745         571,949           Professional services         4,365         16,166         20,531           Automey services         2,988         0         2,988           Banking services         6,32         0         6,32           Total professional services         7,985         16,166         24,151           Communications         Personal astrices         6,32         0         2,988           Total professional services         7,985         16,166         24,151           Video production expense         2,87         0         2,817           Total communications         7,606         0         7,606           Building and grounds         7,606         0         7,606           Building use charge         8,682         0         8,682           Unlities         3,959         0         3,959           Total building and grounds         19,497         0         19,497           Equipment         8,682         0         8,296		Life & LTD	Deferred Compensation	Total
Employee fringe benefits       111.818       26.864       138.682         Total personnel services       439.204       132.745       571.949         Professional services       4,365       16,166       20,531         Autorney services       2,988       0       2,988         Banking services       632       0       632         Total professional services       7,985       16,166       24,151         Communications       7       0       5,317       0       2,261         Postage and mailing       2,261       0       2,261       0       2,261         Telephone       5,317       0       5,317       0       5,317         Video production expense       28       0       2,88       0       2,88         Building use charge       8,682       0       8,682       0       8,682       0       8,682       0       8,582       0       19,497       0       19,497         Dialding and grounds       19,497       0       19,497       0       19,497       0       19,497         Equipment use charge       14,835       0       14,835       0       14,835       0       14,835         Maintenance		<i><b>†</b>227.20(</i>	¢105 001	¢(22.2(7
Total personnel services $439,204$ $132,745$ $571,949$ Professional services $4,365$ $16,166$ $20,531$ Auditing services $2,988$ $0$ $2,988$ Banking services $632$ $0$ $632$ Total professional services $7,985$ $16,166$ $24,151$ Communications $7,985$ $16,166$ $24,151$ Video production expense $2.261$ $0$ $2,261$ Total communications $7,606$ $0$ $7,606$ Building and grounds $7,606$ $0$ $7,606$ Building use charge $8,682$ $0$ $8,682$ Utilities $3,959$ $0$ $3,959$ Maintenance $6,856$ $0$ $6,856$ Total ending and grounds $19,497$ $0$ $19,497$ Equipment       Equipment $8,296$ $0$ $8,296$ Total ending and grounds $14,835$ $0$ $14,835$ Total ending and grounds $12,028$ $0$ $12,028$ Total ending and grounds $2,022$				
Professional services         4,365         16,166         20,531           Auditing services         2,988         0         2,988         0         2,988           Banking services         2,383         0         2,988         0         2,988           Total professional services         7,985         16,166         24,151         0         632           Communications          7,985         16,166         24,151         0         2,261         0         2,261         0         2,261         0         2,261         0         2,261         0         2,261         0         2,261         0         2,261         0         2,261         0         2,88         0         2,88         0         2,88         0         2,88         0         2,88         0         2,88         0         2,88         0         2,88         0         2,86         0         6,856         0         6,856         0         6,856         0         6,856         0         6,856         0         6,856         0         6,856         0         8,296         0         8,296         0         8,296         0         8,296         0         8,296         0         8,296<				
Attorney services       4,365       16,166       20,531         Auditing services       2,988       0       2,988         Total professional services       7,985       16,166       24,151         Communications         Postage and mailing       2,261       0       2,261         Video production expense       2,8       0       2,8         Total communications       7,606       0       7,606         Building and grounds       7,606       0       7,606         Building use charge       8,682       0       8,682         Utilities       3,959       0       3,959         Maintenance       6,856       0       6,855         Total building and grounds       19,497       0       19,497         Equipment       2,211       0       2,311         Equipment and meetings       2,022       0       2,022         Total and meetings       2,022       0       2,022         Staff travel and meetings       2,022       0       2,022         Staff travel and meetings       2,022       0       2,022         Staff travel and meetings       2,025       0       26,095         Total trave	lotal personnel services	439,204	132,/43	5/1,949
Auditing services       2,988       0       2,988         Banking services $632$ 0 $632$ Total professional services $7,985$ $16,166$ $24,151$ Communications            Postage and mailing $2,261$ 0 $2,261$ Telephone $5,317$ 0 $5,317$ Video production expense $28$ 0 $28$ Total communications $7,606$ 0 $7,606$ Building and grounds            Building and grounds            Building and grounds            Building and grounds            Equipment $6,856$ 0 $6,856$ Total building and grounds             Equipment              Equipment                Coral equipment	Professional services			
Banking services $632$ 0 $632$ Total professional services $7,985$ $16,166$ $24,151$ Communications         2         0 $24,151$ Postage and mailing $2,261$ 0 $2,261$ Telephone $5,317$ 0 $5,317$ Video production expense $28$ 0 $228$ Total communications $7,606$ 0 $7,606$ Building use charge $8,682$ 0 $8,682$ Utilities $3,959$ 0 $3,959$ Maintenance $6,856$ 0 $6,856$ Total building and grounds         19,497         0         19,497           Equipment $8,296$ 0 $8,296$ Total equipment $32,311$ 0 $32,311$ Total and meetings $2,022$ 0 $2,022$ Total and meetings $2,022$ 0 $2,022$ Staff travel and meetings $2,022$ 0 $2,022$ Staff travel and meetings $2,025$ <td>Attorney services</td> <td></td> <td>16,166</td> <td></td>	Attorney services		16,166	
Total professional services       7,985       16,166       24,151         Communications       2,261       0       2,261         Postage and mailing       2,261       0       2,261         Telephone       5,317       0       5,317         Video production expense       28       0       28         Total communications       7,606       0       7,606         Building and grounds       8       8       8         Building and grounds       8       8       8         Utilities       3,959       0       3,959         Maintenance       6,856       0       6,856         Total building and grounds       19,497       0       19,497         Equipment       14,835       0       14,835         Equipment use charge       14,835       0       14,835         Rental       8,296       0       8,296         Total equipment       20,022       0       2,022         Staff travel and meetings       2,022       0       2,022         Staff travel and meetings       23,497       0       23,497         Office supplies       12,028       0       12,028         Subscriptiono			0	
Communications         Postage and mailing         2.261         0         2.261           Telephone         5,317         0         5,317           Video production expense         28         0         28           Total communications         7,606         0         7,606           Building use charge         8,682         0         8,682           Utilities         3,959         0         3,959           Maintenance         6,856         0         6,856           Total building and grounds         19,497         0         19,497           Equipment         2         0         3,259           Maintenance         9,180         0         9,180           Rental         8,296         0         8,296           Total equipment         32,311         0         32,311           Travel and meetings         2,022         0         2,022           Staff travel and meetings         2,0497         0         2,022           Staff travel and meetings         2,022         0         2,022           Staff travel and meetings         2,0495         0         2,0495           Cheeral         12,028         0         1,732 <t< td=""><td></td><td></td><td></td><td></td></t<>				
$\begin{array}{cccccccc} Postage and mailing \\ Telephone \\ Total communications \\ \hline 28 & 0 & 28 \\ \hline 7,606 & 0 & 7,606 \\ \hline 28 & 0 & 28 \\ \hline 7,606 & 0 & 7,606 \\ \hline 9 & 7,606 \\ \hline 0 & 8,682 \\ \hline 0 & 8,682 \\ \hline 0 & 8,682 \\ \hline 0 & 8,685 \\ \hline 0 & 6,856 \\ \hline 0 & 19,497 \\ \hline 0 & 19,497 \\ \hline \hline \\ Equipment \\ Equipment use charge \\ Equipment \\ Equipment use charge \\ 14,835 & 0 & 14,835 \\ Maintenance \\ 9,180 & 0 & 9,180 \\ Rental \\ 8,296 & 0 & 8,296 \\ \hline 0 tal equipment \\ \hline \\ Travel and meetings \\ Board travel and meetings \\ 20,022 & 0 & 2,022 \\ Staff travel and meetings \\ 20,025 & 0 & 26,095 \\ \hline \\ General \\ Educational materials \\ 1,732 & 0 & 1,732 \\ Office supplies \\ Subscriptions and dues \\ 4,593 & 0 & 4,593 \\ Out equipment \\ \hline \\ Educational materials \\ 1,736 & 0 & 1,732 \\ Office supplies \\ Subscriptions and dues \\ 4,593 & 0 & 4,593 \\ Isuurance \\ 7,369 & 0 & 7,369 \\ O &$	Total professional services	7,985	16,166	24,151
$\begin{array}{ccccccc} Telephone & 5,317 & 0 & 5,317 \\ Video production expense & 28 & 0 & 28 \\ \hline Total communications & 7,606 & 0 & 7,606 \\ \hline & & & & & & & & \\ \hline Building use charge & 8,682 & 0 & 8,682 \\ Utilities & 3,959 & 0 & 3,959 \\ Maintenance & 6,856 & 0 & 6,856 \\ \hline Total building and grounds & 19,497 & 0 & 19,497 \\ \hline & & & & & & \\ \hline Equipment & & & & & \\ Equipment & & & & & & \\ Equipment use charge & 14,835 & 0 & 14,835 \\ Maintenance & 9,180 & 0 & 9,180 \\ Rental & 8,296 & 0 & 8,296 \\ Total equipment & & & & & \\ \hline & & & & & & \\ \hline & & & & &$	Communications			
$\begin{array}{ccccccc} Telephone & 5,317 & 0 & 5,317 \\ Video production expense & 28 & 0 & 28 \\ \hline Total communications & 7,606 & 0 & 7,606 \\ \hline & & & & & & & & \\ \hline Building use charge & 8,682 & 0 & 8,682 \\ Utilities & 3,959 & 0 & 3,959 \\ Maintenance & 6,856 & 0 & 6,856 \\ \hline Total building and grounds & 19,497 & 0 & 19,497 \\ \hline & & & & & & \\ \hline Equipment & & & & & \\ Equipment & & & & & & \\ Equipment use charge & 14,835 & 0 & 14,835 \\ Maintenance & 9,180 & 0 & 9,180 \\ Rental & 8,296 & 0 & 8,296 \\ Total equipment & & & & & \\ \hline & & & & & & \\ \hline & & & & &$	Postage and mailing	2,261	0	2,261
Video production expense $28$ 0       28         Total communications       7,606       0       7,606         Building and grounds       8,682       0       8,682         Building use charge       8,682       0       8,682         Utilities       3,959       0       3,959         Maintenance       6,856       0       6,856         Total building and grounds       19,497       0       19,497         Equipment       Equipment use charge       14,835       0       14,835         Maintenance       9,180       0       9,180       0       180,2311         Rental       8,296       0       8,296       0       23,311       0       32,311         Total equipment       32,311       0       32,311       0       32,3497       0       23,497         Board travel and meetings       2,022       0       2,022       0       26,095       0       26,095         Ceneral       Educational materials       1,732       0       1,732       0       1,732         Coffice supplies       12,028       0       12,028       0       12,028         Subscriptions and dues       4,593		5,317	0	
Total communications $7,606$ 0 $7,606$ Building and grounds $8,682$ 0 $8,682$ 0 $8,682$ Building use charge $8,682$ 0 $8,682$ 0 $3,959$ 0 $3,959$ Maintenance $6,856$ 0 $6,856$ 0 $6,856$ Total building and grounds       19,497       0       19,497         Equipment $19,497$ 0       9,180       0       9,180         Rental $8,296$ 0 $8,296$ 0 $8,296$ Total equipment $32,311$ 0 $32,311$ 0 $32,311$ Taxel and meetings $2,022$ 0 $2,022$ 0 $2,022$ Staff travel and meetings $2,022$ 0 $2,022$ 0 $2,022$ Staff travel and meetings $2,022$ 0 $2,022$ 0 $2,022$ General       Educational materials $1,732$ 0 $1,732$ 0 $1,732$ General       Educational materials $1,732$ 0 $1,2028$ 0 $1,2028$ <			0	
Building use charge $8,682$ 0 $8,682$ Utilities $3,959$ 0 $3,959$ Maintenance $6,856$ 0 $6,856$ Total building and grounds       19,497       0       19,497         Equipment       Equipment use charge       14,835       0       14,835         Maintenance       9,180       0       9,180         Rental $8,296$ 0 $8,296$ Tavel and meetings $2,022$ 0 $2,022$ Staff travel and meetings $2,022$ 0 $2,022$ Staff travel and meetings $2,022$ 0 $2,022$ Vehicle maintenance and operation $576$ 0 $576$ Total travel and meetings $26,095$ 0 $26,095$ General       Educational materials $1,732$ 0 $1,732$ Office supplies $12,028$ 0 $12,028$ Subscriptions and dues $4,593$ 0 $4593$ Insurance $7,369$ 0 $7,369$ Advertising $624$ 0       624         Miscellan		7,606	0	7,606
Building use charge $8,682$ 0 $8,682$ Utilities $3,959$ 0 $3,959$ Maintenance $6,856$ 0 $6,856$ Total building and grounds       19,497       0       19,497         Equipment       Equipment use charge       14,835       0       14,835         Maintenance       9,180       0       9,180         Rental $8,296$ 0 $8,296$ Tavel and meetings $2,022$ 0 $2,022$ Staff travel and meetings $2,022$ 0 $2,022$ Staff travel and meetings $2,022$ 0 $2,022$ Vehicle maintenance and operation $576$ 0 $576$ Total travel and meetings $26,095$ 0 $26,095$ General       Educational materials $1,732$ 0 $1,732$ Office supplies $12,028$ 0 $12,028$ Subscriptions and dues $4,593$ 0 $4593$ Insurance $7,369$ 0 $7,369$ Advertising $624$ 0       624         Miscellan	Building and grounds			
Utilities $3,959$ 0 $3,959$ Maintenance $6,856$ 0 $6,856$ Total building and grounds $19,497$ 0 $19,497$ Equipment       14,835       0 $14,835$ Maintenance $9,180$ 0 $9,180$ Rental $8,296$ 0 $8,296$ Total equipment $32,311$ 0 $32,311$ Travel and meetings $2,022$ 0 $2,022$ Staff travel and meetings $23,497$ 0 $23,497$ Vehicle maintenance and operation $576$ 0 $576$ Total travel and meetings $26,095$ 0 $26,095$ General       Educational materials $1,732$ 0 $1,732$ Office supplies $12,028$ 0 $12,028$ 0 $12,028$ Subscriptions and dues $4,593$ 0 $4,593$ 0 $4,593$ Insurance $7,369$ 0 $7,369$ 0 $7,369$ Advertsing $624$ 0 $624$ 0 $624$		8,682	0	8,682
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Total travel and meetings       26,095       0       26,095         General       Image: Constraint of the system of th			0	
$\begin{array}{ccccc} \mbox{Educational materials} & 1,732 & 0 & 1,732 \\ \mbox{Office supplies} & 12,028 & 0 & 12,028 \\ \mbox{Subscriptions and dues} & 4,593 & 0 & 4,593 \\ \mbox{Insurance} & 7,369 & 0 & 7,369 \\ \mbox{Advertising} & 624 & 0 & 624 \\ \mbox{Miscellaneous} & 145 & 0 & 145 \\ \mbox{Total general} & 26,491 & 0 & 26,491 \\ \end{array}$			0	
Office supplies         12,028         0         12,028           Subscriptions and dues         4,593         0         4,593           Insurance         7,369         0         7,369           Advertising         624         0         624           Miscellaneous         145         0         145           Total general         26,491         0         26,491	General			
Office supplies         12,028         0         12,028           Subscriptions and dues         4,593         0         4,593           Insurance         7,369         0         7,369           Advertising         624         0         624           Miscellaneous         145         0         145           Total general         26,491         0         26,491	Educational materials	1,732	0	1,732
Subscriptions and dues         4,593         0         4,593           Insurance         7,369         0         7,369           Advertising         624         0         624           Miscellaneous         145         0         145           Total general         26,491         0         26,491				
Insurance     7,369     0     7,369       Advertising     624     0     624       Miscellaneous     145     0     145       Total general     26,491     0     26,491	••		0	
Advertising       624       0       624         Miscellaneous       145       0       145         Total general       26,491       0       26,491			0	
Miscellaneous         145         0         145           Total general         26,491         0         26,491				
Total general         26,491         0         26,491	6			
			0	
		\$559,189	\$148,911	\$708,100

# SCHEDULE OF PROFESSIONAL/CONSULTANT FEES

Year Ended June 30, 2008

		Pen	Pension Trust Funds			Internal Service Fund		
Professional/Consultant	Nature of Service	MSEP	Judicial Plan	Total	Life & LTD	Deferred Compensation	ı Total	
Operation administrative expenses								
Central Bank	Banking	\$ 24,113	\$ 232	\$ 24,345	\$ 632		\$ 632	
Cavanaugh Macdonald Consulting, LLC	Actuarial audit	51,504	496	52,000				
Charlesworth & Associates	Risk management consulting	6,858	66	6,924				
Claire West Consulting	Governmental pension consulting	22,286	214	22,500				
Creative Support Solutions	Writing services	104	1	105				
Corporate Renaissance Group	Employee performance							
	software consulting	7,005	67	7,072				
Fishnet Security	Enterprise security assessment	88,272	849	89,121				
Gabriel, Roeder, Smith & Co.	Actuarial	242,093	2,332	244,425				
Gamble & Schlemeier, LTD	Governmental pension consulting	22,699	218	22,917				
Huber & Associates	Information technology consulting	10,400	100	10,500				
ICS Merrill	International benefit							
	payment investigations	4,668	45	4,713				
Simon Oswald Associates	Architect services	5,033	48	5,081				
Steptoe & Johnson LLP	Legal counsel	23,214	223	23,437				
Thompson Coburn LLP	Legal counsel	118,187	1,137	119,324	4,365	16,166	20,531	
Williams Keepers LLC	Financial audit	42,957	413	43,370	2,988		2,988	
Operation administrative								
expenses subtotal		669,393	6,441	675,834	7,985	16,166	24,151	
Internal investment								
administrative expenses								
Perkins Coie	Legal counsel	18,905	182	19,087				
Thompson Coburn LLP	Legal counsel	69,803	672	70,475				
Internal investment	0							
administrative expenses subtotal		88,708	854	89,562				
Total professional/consultant fees		\$758,101	\$7,295	\$765,396	\$7,985	\$16,166	\$24,151	
-								

Information on investment management and consulting fees can be found in the Schedule of Investment Expenses on pages 53-54.

# INVESTMENT SUMMARY

Pension Trust Funds - Year Ended June 30, 2008

	June 3	0, 2007			June	<b>30, 2008</b>	
Type of Investment	Cost Value	Fair Value	Purchases and Capital Addition at Cost	Sales and s Redemptions at Cost	Cost Value	Fair Value	Percent of Total Fair Value
Fixed income							
Treasury bonds, notes, and bills Government bonds and gov't	\$ 628,323,374	\$ 627,242,767	\$ 356,870,787	\$ (156,184,216)	\$ 829,009,945	\$ 895,130,825	12%
mortgage-backed securities	216,053,929	213,975,766	116,155,782	(138,819,109)	193,390,602	191,677,558	3
Corporate bonds	369,214,342	370,332,145	99,165,174	(191,659,741)	276,719,775	275,538,988	4
Convertible bonds	3,256,082	3,777,206	8,696	(1,462,901)	1,801,877	2,059,257	0
Collateralized mortgage obligatio	ns 10,332,344	10,261,695	47,159,753	(21,261,509)	36,230,588	34,217,785	0
International corporate bonds	54,677,904	57,287,424	12,740,706	(18,074,112)	49,344,498	37,586,459	1
Bank loans	85,081,653	86,286,042	121,480,795	(17,298,762)	189,263,686	182,518,410	2
Total fixed income	1,366,939,628	1,369,163,045	753,581,693	(544,760,350)	1,575,760,971	1,618,729,282	22
Common stock	828,412,903	958,091,029	397,332,833	(369,798,217)	855,947,519	778,416,792	11
Preferred stock	9,198,564	11,916,282	1,501,550	(10,700,105)	9	15	0
International investments							
International equities	948,098,169	1,505,269,805	177,368,483	(349,108,275)	776,358,377	1,110,134,223	15
Foreign currency	120,535,889	119,070,493	1,223,746,811	(1,248,111,130)	96,171,570	92,658,559	1
Total international investments	1,068,634,058	1,624,340,298	1,401,115,294	(1,597,219,405)	872,529,947	1,202,792,782	16
Real estate							
Equity holdings	734,035	734,035	0	0	734,035	734,035	0
Venture Capital							
Limited partnerships	2,591,840,876	3,627,315,843	594,327,257	(496,756,338)	2,689,411,795	3,755,552,134	51
Investments (per Statement							
of Plan Net Assets page 27)	5,865,760,064	7,591,560,532	3,147,858,627	(3,019,234,415)	5,994,384,276	7,356,225,040	100%
Short-term investments							
Short-term investment funds	521,274,355	521,274,355	1,134,712,686	(983,289,641)	672,697,400	672,697,400	
Repurchase agreements	600,979	600,979	148,888,820	(147,772,601)	1,717,198	1,717,198	
Total short-term investments	521,875,334	521,875,334	1,283,601,506	(1,131,062,242)	674,414,598	674,414,598	
Invested securities lending collateral							
Corporate bonds	697,875,089	697,486,078	195,000,000	(254,454,851)	638,420,238	622,253,359	
Short-term investment funds	201,569,000	201,569,000	71,769,205,617	(71,602,580,597)	368,194,020	368,194,020	
Total invested securities	201,707,000	201,707,000	/1,/0/,20/,01/	(/1,002,000,00/)	500,174,020	500,174,020	-
lending collateral	899,444,089	899,055,078	71,964,205,617	(71,857,035,448)	1,006,614,258	990,447,379	
Total investments			\$76,395,665,750	\$(76,007,332,105)			-
rotai myestments	ψ, ,20/ ,0/ /,τ0/	φ <i>7</i> ,012,170,744	φ, 0,577,007,790	$\varphi(70,007,332,10))$	Ψ/,0/,,113,132	ψ <b>/</b> ,021,00/,01/	:

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, 2008

	June 3	0, 2007		June 30, 2008					
Type of Investment	Cost Value	Fair Value	Purchases and Capital Additions at Cost	Sales and Redemptions at Cost	Cost Value	Fair Value	Percent of Total Fair Value		
Repurchase agreements	\$2,384,797	\$2,384,797	\$590,161,370	\$(590,202,176)	\$2,343,991	\$2,343,991	100%		

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.

THE FINANCIAL FORECAST IS HARD TO PREDICT — YOU CAN BET YOUR BOOTS WE'LL WEATHER THE STORM



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## CHIEF INVESTMENT OFFICER'S REPORT



Mailing AddressPO Box 209 • Jefferson City, MO 65102-0209

**Building Location** 907 Wildwood Drive • Jefferson City, MO

October 13, 2008

Dear Members:

On behalf of the entire MOSERS' investment team, I am honored to present the *Investment Section* of the *MOSERS Comprehensive Annual Financial Report* for the fiscal year ended June 30, 2008.

#### **Our Sole Purpose**

The MOSERS investment team's sole purpose is to generate strong risk-adjusted investment returns, over the long-term, to assure that the retirement benefits promised you by the state of Missouri are secure and that they will be paid at the lowest cost possible to the taxpayers.

#### Investment Performance

In FY08, the global financial markets faltered, as a result of a crisis in credit of historic proportions. As a result, institutional investors of all types saw their investments decline in value for the first time since the bursting of the tech bubble and the ensuing recession of 2001-2002. The average public pension fund experienced a negative investment return of 4.5% for the year ended June 30, 2008. In light of what happened in the public fund arena, I'm proud to report that the MOSERS portfolio not only preserved capital, but actually generated profits of approximately \$128 million, translating into an annual positive return of 1.6% (net of expenses). Other highlights of our investment performance compared with other public pension plans include:

- Across time periods of 1-, 3-, 5-, 10- and 15-years, our investment results were consistently in the top 5% of the public pension fund universe.
- In round numbers, our investments generated \$1.3 billion more for MOSERS' coffers than would have been the case had our performance been average over the past 10 years.

The portfolio's investment return relative to our market benchmark is another measure that is useful for evaluating the fund's performance. During FY08, MOSERS' portfolio outperformed our market benchmark by 2.8%. This out-performance resulted in an extra \$224 million this year above what would have been earned had the decision been made to invest the entire portfolio to match our market benchmark. For the eighth straight year, our portfolio has generated returns in excess of the benchmark and, over the entire time frame, has done so exhibiting less volatility than the benchmark. The resulting incremental profit over the last eight years has been \$1.7 billion, significantly enhancing the security of our members' benefits.

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 Last but certainly not least, it is critical that the portfolio produce long-term results that equal or exceed our funding objective of 8.5% per annum. While our results this year did not measure up in that regard, our intermediate and long-term results, reflected by 5 and 15 year returns of 12.1% and 9.6%, respectively, have exceeded that objective. All performance returns were calculated using a time-weighted rate of return on market values.

#### **Broadly Diversified Portfolio**

While we have certainly generated much higher returns in past years, FY08 was a particularly pleasing year to those of us responsible for managing the assets of the plan because of the way the portfolio preserved capital in a weak equity market. I believe this is largely the result of our success in building a well diversified portfolio that includes investments with fundamentally different return drivers. As an example, the positive return drivers in our portfolio in FY08 were largely found in areas expected to do well during periods of unexpected and/or rising inflation such as inflation indexed bonds (up 15%), and real assets, including commodities and timberland, (up 74% and 12%, respectively). These types of investments were largely absent from many of our counterparts' portfolios and as a result they were unable to cushion the blow from the decline in the stock market. It is our expectation that, regardless of the economic environment, a portion of our investments should perform well. That doesn't mean we will always be able to avoid losses in the portfolio. It simply means that the portfolio is positioned to get through a muddy market environment without finding ourselves stuck and in need of government support like several of our country's largest financial institutions have over the course of the last quarter. The pie chart at the right illustrates just how broadly diversified our portfolio is today.

Asset Diversification



#### Focus for the Future

A year ago, risk premiums were low and it was hard to find opportunities that really excited us. Just a short twelve months later, risk premiums in the credit markets have risen significantly and opportunities seem abundant. In many situations debt securities are priced to deliver equity like returns. We are spending a lot of time sifting through the wreckage from the credit crisis in hopes of finding a few gems to tuck away in the portfolio. Beyond opportunities in credit, we continue to explore ways to take advantage of opportunities in a world that is depleting its natural resources at an increasing rate.

#### Conclusion

Fiscal year 2008 will go down in history as the year in which the residential real estate market collapsed, led by defaults in sub-prime mortgages. To paraphrase Warren Buffet, as falling values and rising defaults occurred, the tide went out on the structured product ocean only to reveal a large number of participants swimming naked. The U.S. banking system is currently in a tailspin unlike anything encountered since the great depression. Before the final chapter is written on this malaise, losses will exceed \$1.5 trillion and the financial sector will have a completely new face. Whether the U.S. is technically in a recession is a debate left to those in the hallowed halls of academia. For those of us who live in the real world, that debate makes little difference. What we know is that our homes and our personal investments are worth less, while the costs of our food, fuel and debt service

have risen steadily. Exacerbating the problem is the absence of any increase in wages, due largely to the fact that there are hundreds of millions of people in places like China and India who are willing to work for less than the earnings levels to which most working Americans have become accustomed. While we will all hear plenty of political rhetoric this fall about why we are where we are and how we will get out of this mess, in my view, there is really only one solution to our predicament. It's a very simple solution. We must realize that it has been our frivolous debt financed spending combined with more than a decade long decline in our work ethic that has gotten us to where we are today. In order to change, we must spend more time talking to our parents and grandparents about how they achieved success through the decades following the great depression and then work vigorously to instill those guiding principles in our kids and grandkids. Ultimately, it boils down to working harder, saving more, spending less, and allowing time to work its magic.

In closing, I would like to thank the board, the ultimate fiduciaries of this pension fund, for their willingness to stand outside the pack and maintain a governance structure that facilitates the pursuit of excellence in all that we do. To you, the members, I commit that our sole purpose will continue to be working hard to ensure that the retirement benefits promised you are secure.

Sincerely,

Pih Dabe

Rick Dahl Chief Investment Officer

# INVESTMENT CONSULTANT'S REPORT



October 13, 2008

Board of Trustees Missouri State Employees Retirement System

Dear Board,

"She's a rich girl; don't try to hide it, diamonds on the soles of her shoes." - Paul Simon, from Graceland

This lyric could easily be the theme for global investors just one year ago. Unfortunately, the picture of a work boot slogging through the mud that appears at the beginning of this *Investment Section* is probably a better summary of the last year, as well as the foreseeable future. Last year, we talked about a 2007 fiscal year return of 18.7%, which was okay versus the markets and other investors. Today, we talk about a 2008 fiscal return of 1.6%, which is great versus markets and others. In fact, on a relative basis, a return of 1.6% is extraordinary given the fact that the average public pension fund had a return of negative 5% for the year. Such are the times in which we live and such is the speed with which market conditions can change currently.

"You will be judges of the facts. You are the sole and exclusive judges of what the truth is. You will bring with you here your common sense." – Judge's instruction to members of a jury

We have seen two significant financial declines this decade (thus far). The tech bubble-led market correction of 2000-2003 was about twice as painful and twice as long as where we are now. In both cases, it appears to me that the one thing missing was common sense. In the late 1990's, investors collectively allowed themselves to believe that all the rules had changed, the internet age was upon us and anything that even sounded "tech-y" was worth a billion dollars, or in the case of Cisco, \$500 billion. You risked not investing in this new world at your own peril.

Today's market peril has, at its roots, the idea that home prices go up very rapidly and never come down. If you made a few bucks on a condo, think how great it would be if you owned three! Can't afford it, don't worry, don't put anything down! House value goes up, hurry and get a home equity loan, and spend it. And it all works as long as the music doesn't stop or, God forbid, we actually have to pay for our lifestyle.

But the music did stop. And home loans with reset provisions that didn't seem worth understanding suddenly became a financial obligation rather than a financing privilege, and the new home industry and the mortgage origination industry and the mortgage securitization business that had been created to fuel this phase of the cycle all got crushed. The home price run-up defied common sense and when this "bubble" burst, the industries that the bubble created burst with it. Makes common sense to me, as things usually do in hindsight.

8182 Maryland Avenue, 6th Floor • St. Louis, Missouri 63105 • 314.727.7211, 314.727.6068 (fax)

What really has surprised me this summer and early fall is just how exposed the financial industry was to the housing bubble, and how willing the players were to expose themselves to financial ruin based on the premise that home prices never go down, even after a 50% run-up in two years. It cost Wall Street its existence! It destroyed Fannie Mae, Freddy Mac, AIG, and more to come. These once prominent companies are now divisions of commercial banks or wards of the government. I don't think it's a coincidence that the list of corporate casualties looks an awful lot like the list of highest paid CEOs of just a year or two ago.

Common sense says you can't make something out of nothing, but that's exactly what we've gotten caught at in this crisis. Why work for a living when you can flip condos in Scottsdale? At the Wall Street level, why actually produce things when you can borrow short-term funds at 2%, lever yourself 30 times, invest the proceeds in "safe" debt earning 6%, collect the "spread," and pay the CEO \$65 million for being a "genius?"

#### "A hopeful disposition is not the sole qualification to be a prophet." – Winston Churchill

I am an optimist because, at the end of the day, people will do what they have to do to survive and succeed. But I am afraid that what we Americans need to do will be long and drawn out and not nearly as much fun as it's been for the last 20 years or so. We came out of World War II as the only developed economy that hadn't been reduced to rubble. For 60 years, we've enjoyed a standard of living far beyond that of the rest of the planet. We are and will be the dominant global economy for as long as I can see. But the rest of the world is catching up. While we seemingly embrace deficit spending by the government, corporate financial engineering, and maxing out 5 credit cards, our global competitors are living within their means and producing things at a profit that people actually want to buy.

We need to get back to basics; spend less, save more, and make things the rest of the world wants to buy. I also believe we need to think about the planet. The government has chosen to print money in an attempt to get us through the current financial crisis and, while I believe they had no choice, I also believe this only makes the transition back to fiscal prudence that much harder. I think it's going to take a generation or so to get there, but I believe we will get there.

As investors, we need to focus on areas that will benefit most from these long-term trends. Economies that have the strongest balance sheets have an advantage. Companies that make tangible things that people want will survive, while companies that earn their profits by swapping paper will likely not. Speculators have had their day and now the long-term investors that buy fundamental value and think long-term will excel.

In a world where capital will be scarce, thoughtful providers of patient capital have a real opportunity to fund successful ventures, buy assets at reasonable-to-bargain prices, and earn a reasonable return financing the future. Defined benefit retirement funds like MOSERS are in fantastic positions to be such investors in what will be an uphill struggle. For the rest of my career at least, I believe the Gucci loafer will need to be replaced by the steel-toed work boot, with a little mud on it. As my dad always says, "a little hard work never killed anyone."

Sincerely,

Stephen P. Holmes, CFA President

### INVESTMENT POLICY SUMMARY

The 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.

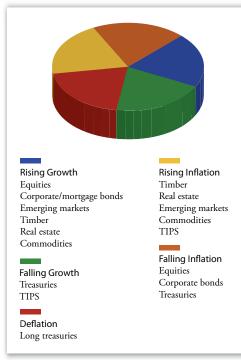
The investment policy summary serves as a reference point for management of system assets and outlines MOSERS' investment philosophy and practices.

### 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.

#### **Economic Diversification**



### **Investment Beliefs**

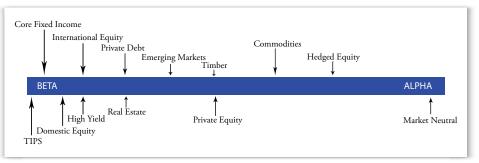
MOSERS' internal investment staff and external asset consultant have established investment beliefs, which have served as a guiding light in the implementation of the investment objectives adopted by the board. These beliefs have helped to form the basis of every decision made within MOSERS' portfolio. 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 to the left 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 =  $(1+Nominal) \div (1 + CPI)$ . As of June 30, 2008, the RRO was 5%.

• Every investment should 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

### Continuum of Beta vs. Alpha



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. MOSERS made a decision as early as 2002, after a formal asset/liability study, to place a greater emphasis on 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. That decision was confirmed in the most recent formal asset/liability study completed in July 2007. 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 sub-asset 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."<sup>2</sup> 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.

#### INVESTMENT SECTION

### **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 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 investmentrelated 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

BNY Mellon 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, 2008, and policy benchmarks are illustrated in the table below.

Asset Class	Policy Benchmark Weight	Allocation Range	Policy Benchmark
Public Equity	45.0%		MSCI ACWI
Domestic International developed equity Emerging market equity	Benchmark weight <sup>3</sup> Benchmark weight <sup>3</sup> Benchmark weight <sup>3</sup>	+/- 10% +/- 10% +/- 5%	
Public Debt	30.0%		Blended Return
Core fixed income TIPS High yield bonds Market neutral	10.0% 10.0% 5.0% 5.0%	5.0% - 15.0% 5.0% - 15.0% 0.0% - 10.0% 0.0% - 10.0%	Lehman Aggregate Lehman TIPS Lehman High Yield T-Bills + 4%
Alternatives	25%		Blended Return
Real assets Commodities Timber REITS/private RE Private investments Private equity Private debt	<b>15.0%</b> 3.0% 6.0% 6.0% <b>10.0%</b> 7.5% 2.5%	10.0% - 20.0% 5.0% - 15.0%	Blended Return <sup>4</sup> GSCI NCREIF Timber Wilshire REITs S&P 500 + 3%

While the board maintains a set policy allocation mix, they have taken steps to provide flexibility by granting authority to the CIO, with the approval of the external asset consultant and certification of the executive director, to make strategic 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.

<sup>&</sup>lt;sup>3</sup> The public equity sub-asset class target allocations are not static weights. The weights float based upon capitalization of the MSCI ACWI benchmark.

<sup>&</sup>lt;sup>4</sup> The policy benchmark is based upon the blending of GSCI, NCREIF Timber, and Wilshire REITs at their policy benchmark weights.

### 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 equaling 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. 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, 2008, the MOSERS investment portfolio had a market value of \$8.0 billion. The graph to the right illustrates the growth of MOSERS' portfolio since the system's inception.

### **Investment Performance**

MOSERS generated a return of 1.6% on investments for the fiscal year ended June 30, 2008. During the year, the public equity portfolio generated returns of -5.1%; public debt added 5.7% while the alternatives portfolio produced results of 9.1%. 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.

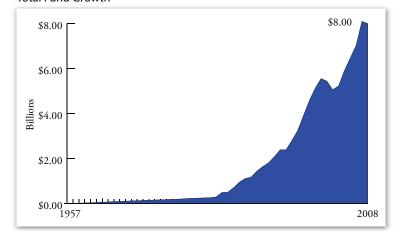
# Investment Performance vs. the Required Rate of Return

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>5</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.<sup>6</sup>

### 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.

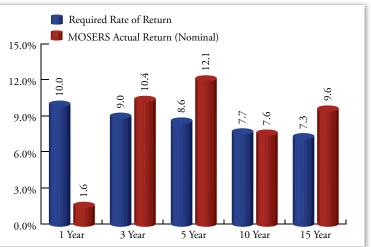
- <sup>5</sup> CPI Source: United States Department of Labor, Bureau of Labor Statistics (not seasonally adjusted).
- <sup>6</sup> Performance returns were calculated using a time-weighted rate of return on market values.



Sub-Asset Class Returns for Fiscal Year Ended June 30, 2008

Asset Class	Fiscal Year Return	Contribution to Total Return
Total public equity	(5.1)%	(2.0)%
Domestic equity International developed equity Emerging markets Credit opportunities	(7.1) (7.3) 15.1 0.0	(1.5)(1.0) $0.7(0.2)$
Total public debt	5.7%	1.7%
Core fixed income TIPS High yield Market neutral	6.8 15.5 (10.4) 3.2	0.6 1.2 (0.3) 0.2
Total alternative investments	9.1%	1.9%
Real assets Commodities REITS Timber Private investments Private equity Private debt	18.5 73.9 (4.7) 12.1 (5.9) (4.9) (8.6)	$2.4\% \\ 2.0 \\ (0.2) \\ 0.6 \\ (0.5) \\ (0.3) \\ (0.2)$
Total fund	1.6%	1.6%

#### Total Fund Actual Return vs. Required Rate of Return



# Total Fund Growth

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 sub-asset class allocation decisions made by the CIO.

By comparing the policy benchmark to the strategy benchmark, the board is able to determine the value added through strategic decisions made by the CIO. Value is created when the strategy benchmark returns exceed the policy benchmark returns. 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 added from manager selection when the total fund return exceeds the strategy benchmark return.

### Investment Performance vs. Peer Universe

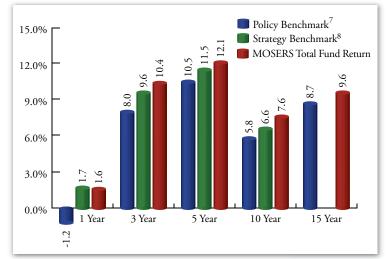
To a lesser extent, the board compares total fund performance to the returns generated by a peer group of public pension funds and compiled by the Independent Consultants Cooperative (ICC). For the past fiscal year, MOSERS' total fund return outperformed 95% of the ICC universe of public pension plans with assets in excess of \$1 billion. MOSERS' total fund performance within the ICC universe is provided in the graph to the right.

### Total Fund Asset Allocation Overview

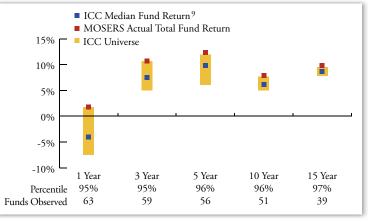
As of June 30, 2008, the board's broad policy allocation mix was 45% public equity, 30% public debt, and 25% alternative investments. The policy target as of June 30, 2008, for each sub-asset class, along with the actual strategic allocation to each type of investment is shown in the bar graph to the right.

<sup>7</sup> As of 6/30/08, the policy benchmark was comprised of the following components: 45% total public equity policy benchmark, 30% total public debt policy benchmark, and 25% total alternative investments policy benchmark.

#### Total Fund Actual Return vs. Benchmarks

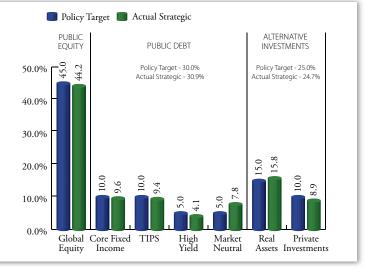






Total Fund Policy vs. Actual Allocation

(As a Percentage of the Total Fund)



<sup>8</sup> As of 6/30/08, the strategy benchmark was comprised of the following components: 44.5% total public equity strategy benchmark, 31.4% total public debt strategy benchmark, and 24.1% total alternative investments strategy benchmark. A strategy benchmark for the 15-year period is not available.
 <sup>9</sup> The ICC is a cooperative of 17 independent consultants from across the U.S. and one major custodial bank that collectively provide performance

The ICC is a cooperative of 1/ 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.

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#### INVESTMENT SECTION

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 July 2007, concluded that the MOSERS' portfolio could be further diversified by thinking more globally and could entertain more illiquid assets in an effort to enhance risk-adjusted performance, ultimately leading to an acceptable contribution level and reduced contribution volatility. To that end, the board approved a public equity benchmark change to more global benchmark, MSCI ACWI, and a 5% public equity allocation reduction with a corresponding 5% increase to alternative investments.

The asset allocation is built upon the belief that diversification is critical. The table below reflects the asset classes and their correlation to each other.

	Global Equity	Core Fixed Income	TIPS	High Yield	Market Neutral	Real Assets	Private Investments
Global equity	1.0						
Core fixed income	(0.1)	1.0					
TIPS	(0.2)	0.8	1.0				
High yield	0.5	0.2	0.0	1.0			
Market neutral	0.6	0.1	(0.1)	0.4	1.0		
Real assets	0.2	0.5	0.5	0.3	0.3	1.0	
Private investments	0.8	(0.1)	(0.1)	0.5	0.5	0.1	1.0

### Total Fund Correlation Table - 5 Years

The board maintained the flexibility granted to the CIO to make strategic decisions related to the allocation subject to predefined sub-asset class 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 .86% of return annually, or approximately \$398 million in 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, 2008.

Portfolio Characteristics	1 Year	3 Year	5 Year	10 Year	15 Year
Annualized return	1.7%	10.4%	12.2%	7.7%	9.6%
Annualized standard deviation	6.3%	5.5%	5.5%	9.4%	8.7%
Sharpe ratio	(0.4)	1.1	1.5	0.4	0.7
Excess return*	2.9%	2.5%	1.7%	1.9%	1.0%
Beta*	0.6	0.7	0.8	0.9	0.9
Annualized alpha*	2.4%	4.2%	3.4%	2.2%	1.5%
Correlation*	0.9	0.9	0.9	1.0	1.0

\* As compared to total fund policy benchmark.

# SCHEDULE OF INVESTMENT RESULTS

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

	1 Year	3 Year	5 Year	10 Year	15 Year
<b>Total Fund</b> <sup>*</sup> MOSERS	1.6%	10.4%	12.1%	7.6%	9.6%
Custom benchmark	(1.2)	8.0	10.5	5.8	8.7
Public Equity					
MOSERS	(5.2)%	11.4%	14.5%	7.1%	10.4%
Public equity composite benchmark	(10.1)	8.7	12.2	5.0	9.0
Public Debt					
MOSERS	5.7%	5.9%	10.0%	7.6%	7.4%
Public debt composite benchmark	8.2	5.4	5.9	7.6	7.3
Alternatives					
MOSERS	9.1%	12.3%	13.8%	N/A	N/A
Alternatives composite benchmark	4.2	8.1	11.9	N/A	N/A

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

As of June 30, 2008, the total fund policy benchmark was comprised of the following components: 45% total public equity policy benchmark, 30% total public debt policy benchmark, and 25% total alternative investments policy benchmark. The individual asset class benchmarks as listed below are used to generate the total fund policy benchmark.

- The public equity policy benchmark was based on the capitalization of the MSCI ACWI benchmark were 46.9% MSCI World Ex U.S. Net, 41.6% MSCI U.S. Net, and 11.5% MSCI Emerging Markets Net.
- 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%.
- The alternative investments policy benchmark was comprised of 40% S&P 500 + 3%, 24% Wilshire REIT, 24% NCREIF Timber, and 12% Goldman Sachs Commodity Index.

# INVESTMENT MANAGER FEES

For the Year Ended June 30, 2008

	Total Fees Paid	Change in Incentive Fee Accrual	
Public equity managers			
AmeriCap Advisers, LLC	\$ 14,063	\$ 0	
Legg Mason Value Trust	610,770		
Legg Mason Opportunity Trust	1,438,598		
Leuthold Weeden Capital Management	544,517		
Mastholm Asset Management, LLC	3,700,682		
Morant Wright Investment Management	511,543		
Nippon Value Investors	668,921		
Silchester International Investors	2,548,709		
Blakeney Management	16,036,377		
Grantham, Mayo, and Van Otterloo & Co., LLC	1,697,528		
Freeman Associates Investment Management, LLC	310,515		
Blackstone Group - hedged equity	3,768,142		
Fortress Investment Group - credit opportunities	74,176		
BlackRock Financial Management - credit opportunities	99,837		
Harvest Fund Advisors - credit opportunities	55,748		
Bayview Asset Management - credit opportunities	212,754		
Total public equity managers	32,292,880	0	
Total public equity managers	52,272,000	0	
Public debt managers			
BlackRock Financial Management - MBS/ABS	207,468		
NISA Investment Advisors - fixed income	219,636		
Bayview Asset Management - high yield	106,377		
BlackRock Financial Management - high yield	1,019,142		
Oaktree Capital Management - European credit	438,271		
Total public debt managers	1,990,894	0	
Alternative investment managers			
Blackstone Group - real estate	5,606,063		
Oaktree Capital Management - real estate	309,449	(653,011)	
Trust Company of the West	650,756	(0)0,011)	
Bush O'Donnell	95,833		
Merit Energy Partners	292,180		
Bayview Asset Management - real estate	106,377		
NISA Investment Advisors, LLC - commodities	483,320		
DDJ Capital Management, LLC	750,000	(1,199,428)	
Oaktree Capital Management - distressed debt	32,507	19,884	
Oaktree Capital Management - European credit	743,932	17,001	
MHR Fund Management, LLC	2,416,344	(4,190,082)	
Blackstone Group - distressed debt	82,935	(4,1)0,002)	
CarVal Investors	3,068,089		
Relational Investors, LLC	671,869		
Blum Capital Partners, LP	183,106		
Alinda Capital Partners	396,251		
Catterton Partners	984,183		
Silver Lake Partners	2,901,140		

	Total Fees Paid	Change in Incentive Fee Accrual
		Incentive Fee Acciual
Parish Capital Advisors, LLC	541,431	
New Mountain Capital, LLC	543,212	
OCM GFI Power Opportunity	2,595,381	
Bridgepoint Capital Limited	396,302	
JLL Partners	2,240,735	
Veritas Capital	241,729	
Resource Management Service, LLC	706,089	
Global Forest Partners	998,847	
Garnet Sky GFP Co-investment	1,544,743	
The Campbell Group	465,203	
Total alternative investment managers	30,048,006	(6,022,637)
Alpha pool managers	1 700 000	
Aetos Capital, LLC	1,799,992	
AQR Capital Management	(525,934)	
Barclays Global Investors	2,033,456	
Bridgewater Associates, Inc	3,249,840	
Pacific Alternative Asset Management Company	4,089,423	
Blackstone Group	3,347,507	
Blackstone Distressed	129,124	
Total alpha pool managers	14,123,408	0
Other managers		
NISA Investment Advisors, LLC - beta program	329,455	
MOSERS Inc.	609	
Total other managers	330,064	0
Grand totals	\$78,785,252	\$(6,022,637)

# SCHEDULE OF INVESTMENT PORTFOLIOS BY ASSET CLASS

As of June 30, 2008

	Fair Value	Percentage of Investments at Fair Value
Public global equity		
Total public global equity	\$3,542,944,617	44.2%
Public debt		
Core fixed income	769,588,484	9.6
High yield bonds	332,163,673	4.1
TIPS	754,410,830	9.4
Market neutral	623,491,974	7.8
Total public debt	2,479,654,961	30.9
Alternative investments		
Real assets	1,269,784,314	15.8
Private investments	712,778,307	8.9
Total alternative investment	1,982,562,621	24.7
Other portfolios		
Other investments	1,199,747	0.0
Cash reserve*	13,657,784	0.2
Total other	14,857,531	0.2
Grand total	\$8,020,019,730	100.0%
Reconciliation to <i>Statement of Plan Net Assets</i>	¢9,020,010,720	
Total portfolio value STIF	\$8,020,019,730	
Uninvested cash	(672,697,400) (39,195,561)	
Cash collateral for futures	(16,160,713)	
Interest and dividend receivable	35,028,652	
	441,613	
Variation margin Foreign currency fluctuation	491,158	
Accounts receivable securities sold	(88,103,113)	
Accounts payable securities purchased	99,172,650	
Incentive fees payable	17,228,024	
Investments per <i>Statement of Plan Assets</i>	\$7,356,225,040	

\* 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.

### PUBLIC EQUITY ASSET CLASS SUMMARY

As of June 30, 2008, the public equity portfolio had a market value of \$3.5 billion, representing 44.2% of the total fund. Performance for the fiscal year was -5.1% net of fees and expenses.

### Highlights

The public equity portfolio underwent some changes during the year.

- The policy benchmark for the equity portfolio was changed to the MSCI All Country World Net Index. This capitalization weighted index includes domestic and the developed and emerging markets countries.
- MOSERS' board approved the addition of credit opportunities in the equity portfolio. As much as 10% of the total fund may, for a one-year period, be invested in various credit strategies in place of equities. Investments in credit opportunities will be judged against the equity policy benchmark and are expected to take advantage of opportunities in the dislocated credit markets.

### Portfolio Structure

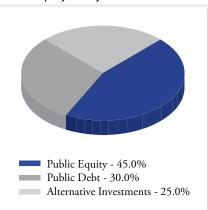
The public equity portfolio has a target allocation of 45% of the total fund. This portfolio is benchmarked against the global index. As of June 30, 2008, the portfolio includes domestic equity, hedged equity, international developed equity, emerging markets equity, and credit opportunities. The bar chart to the right illustrates the actual allocation relative to the board's policy benchmark for public global equity. Differences reflect the CIO's strategic decisions to overweight or underweight as of June 30, 2008. This year's addition of credit opportunities does not change the total policy allocation to public equity and, although these strategies may be debt instruments, the investments will be judged against the global equity benchmark. This allocation is looked at as a strategic move out of equity and into an area that is believed to be attractive at this time. As of June 30, 2008, such credit exposure represented approximately 2.5% of the total fund with the primary exposures being nearly equally divided between bank loans, residential mortgages, and AAA commercial mortgages.

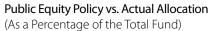
### Market Overview

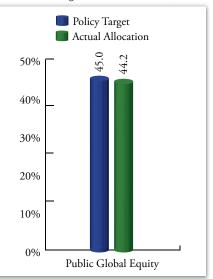
The MSCI All Country World Net Index returned -10.1% for the fiscal year. The poor performance was due to negative returns in both domestic and developed international markets. The markets were impacted by high energy and commodities prices, the problems of financial institutions starting in the mortgage areas and a slowing economy in many parts of the world. The price of oil was a major concern during FY08. Oil started the year just above \$70 per barrel. The price reached \$140 per barrel at the end of the year, after a nearly straight line upward movement. Over the year, the Goldman Sachs Commodity Index nearly doubled as most commodities experienced growth.

The U.S. markets were down 13.0% for the year. Problems with financial companies led the markets down. The financial sector of the S&P 500 Index saw its value fall by 50% over the year with many individual names fairing much worse. Bear Sterns was purchased by JP Morgan Chase for \$10 per share in May. The shares had traded above \$130 during the previous twelve months. It is believed that had JP Morgan Chase not stepped up, one of the largest financial institutions in the U.S. would have been forced to declare bankruptcy. The problems of many financial firms can be traced to the mortgage markets and structured mortgage products in particular. Housing stocks also fell a great deal when new construction came to a halt as financing dried up when it became apparent that buyers were extended beyond their ability to repay loans. Non-U.S. markets were also hurt by financial problems and slowing economies.

Public Equity Policy Allocation







#### INVESTMENT SECTION

The only positive area in the equity arena was the emerging markets. The MSCI Emerging Markets Index returned 4.6% for the year. While this is considerably higher than the developed markets, it is well below the 30% annual return for the past five years. It should also be noted that the gains were recorded in the first half of the fiscal year; the second half was negative in nearly all emerging markets. Inflation and slowing economies in the developed world have spread fear to the emerging markets.

The international markets returned -8.9% for the year as measured by the MSCI EAFE Index. The major developed markets were weak 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 1.4% in local currency but the weakening dollar versus this index provided 3% of additional return producing an unhedged dollar return of 4.6%.

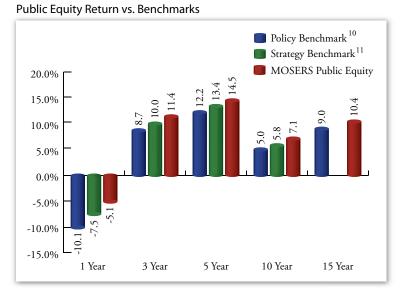
The loss of liquidity from the fixed income market created a favorable environment for the credit opportunity allocation. Debt instruments in some segments of the market are trading at levels not seen before. This condition is a result of both fundamental and technical issues. Staff believes that deploying assets in a timely manner in these areas will lead to returns superior to equities and with lower risk due to debt instrument's finite life and quantifiable cash flows including a par payment at maturity. If conditions in the general economy degrade to the point that these payments are not being made, it is expected that stocks will be going through a period of more severe losses.

Expected returns from equities are a concern even with the negative performance in the last year. The problems with the financial institutions are an ongoing concern. These firms have taken hundreds of billions of dollars in losses but there are expectations that more will be announced over the coming months. As banks are forced to reduce their balance sheets, they are no longer able to provide the liquidity that is needed for growth at the levels we have seen in the recent past. The U.S. housing crisis is still a concern as many fear we have yet to see the bottom. Until the markets can get comfortable that the worst has passed, it will be difficult to expect strong returns from equities. The U.S. consumer, long the driver of the global economy, appears to be unable to continue spending at the levels of the recent past. Internationally, the banks and housing markets have been hit to a lesser degree than in the U.S. However, high energy and commodity prices have led to inflation concerns and lower growth from decreased export demand from the U.S. Higher energy and food prices have hit emerging countries extremely hard as a higher percentage of their income is spent on these items. The

geopolitical situation has not changed much from a year ago with concerns in Iran, Iraq, North Korea, the former Soviet states, and the Middle East all presenting potential problems for world markets.

### Performance

The public equity portfolio returned -5.1% for the fiscal year, exceeding the policy benchmark return of -10.1%, and the strategy benchmark return of -7.5%, as illustrated in the bar chart to the right. The defensive nature of the equity portfolio paid dividends during the down year in the markets. 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.



<sup>10</sup> As of 6/30/08, the public equity policy benchmark was comprised of 100% MSCI All Country World Index.

<sup>11</sup> As of 6/30/08, the public equity strategy benchmark was comprised of the following components: 48.3% domestic equity strategy benchmark (comprised of the S&P 500, S&P 100, and MSCI U.S. Net), 32.8% MSCI World Ex U.S. Net, 12.9% MSCI EMF Net and 6% MSCI All Country Index. A strategy benchmark for the 15-year period is not available.

The strategy benchmark is compared to the policy benchmark to capture the value added by strategic allocation decisions. In FY08, strategic decisions added to performance primarily as a result of a decision to include hedged equity and the overweight to domestic equity at the expense of international developed. The credit opportunities portfolio returned -4.0% for the few months assets were invested.

Within public equity, emerging markets were the bright spot with a return of 15.1% as reflected in the table on page 72.

### **Top 10 Holdings**

The top ten holdings within the public equity portfolio as of June 30, 2008, are illustrated below. A detailed listing of holdings is available upon request.

Ten Largest Holdings as of June 30, 2008	Market Value	Percent of Total MOSERS Public Equity Portfolio 0.75%	
Petroleo Brasileiro SA	\$26,014,533		
Hong Kong Electric Holdings, Ltd	17,267,737	0.50	
Actelion	17,098,449	0.49	
Royal Dutch Shell PLC	16,137,592	0.47	
United States Steel	14,283,877	0.41	
Temonos Group	14,227,896	0.41	
United Overseas Bank Ltd	13,358,253	0.39	
Freeport McMoran	13,233,564	0.38	
Nestle SA	13,167,550	0.38	
GlaxoSmithKline	13,065,041	0.38	

### Market Value

The equity allocation was \$3.5 billion, or 44.2% of the total fund as of June 30, 2008.

### Summary of Portfolio

MOSERS maintains a significant allocation to publicly traded shares of corporations around the world. Equity exposure is achieved through broadly diversified portfolios representing a variety of styles, sectors, market capitalizations, and an allocation to the beta/alpha program (see page 99 for further details). These investments are made in the U.S. international developed and emerging markets. The 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. Included in the portfolio are hedged equity managers. These 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. The credit opportunities portfolio should provide equity like returns based on the levels at which the assets are being purchased. In the event of a very difficult economy with high levels of defaults, staff believes that the equity markets would be harmed to a greater degree than the debt markets.

### Statistics

The table below displays the statistical performance data (net of fees) of the public equity portfolio as of June 30, 2008.

Portfolio Characteristics	1 Year	3 Year	5 Year	10 Year
Annualized return	(5.1)%	11.4%	14.5%	7.1%
Annualized standard deviation	11.8%	9.7%	9.4%	14.5%
Sharpe ratio	(0.8)	0.7	1.2	0.3
Excess return*	5.0%	2.7%	2.3%	2.1%
Beta*	0.7	0.8	0.9	0.8
Annualized alpha*	2.2%	3.9%	3.5%	3.3%
Correlation*	1.0	1.0	1.0	0.8

\* As compared to the total equity policy

### **Investment Advisors**

As of June 30, 2008, MOSERS had contracts with 14 external investment advisors who manage 15 portfolios that comprise 74.9% of the equity portfolio. The remaining 25.1% of the portfolio is in the beta/alpha program.

In FY08, there were six managers hired and two terminated in the equity portfolio. Management expenses for these managers can be found on pages 76-77 under the total fund overview section of this report.

Investment Advisors	Style	Portfolio Market Value
Legg Mason Opportunity Trust	Active all-cap	\$ 102,469,623
Legg Mason Value Trust	Active all-cap	56,550,737
Leuthold Weeden	Active all-cap	162,923,820
DG Capital	Active all-cap	216,169,185
Beta/alpha program U.S. equity	Active	749,285,760
NISA S&P 100	Index	1,233,522
Blackstone Alternative Asset Management	Long/short equity	360,029,272
Cash	Cash	12,500,000
Freeman Fair Value	Long/short equity	587,067
Beta/alpha program international equity	Active	22,387,298
Mastholm Asset Management	Active growth	421,132,060
Silchester International Investors	Active value	484,844,572
NISA EAFE Short	Index	14,826,475
NISA Topix Index Futures	Index	102,537,482
Morant Wright Management Ltd	Active	95,818,472
Nippon Value Investors	Active	87,325,852
GMO, LLC	Active growth	194,489,692
Blakeney Management	Active value	256,156,957
NISA Currency Forwards	Index	(2,293,210)
Miscellaneous emerging markets	Index	134,978
Bayview Investment Advisors	Active mortgage	30,377,290
BlackRock Financial Management	Bank loans	104,499,448
Harvest Investment Advisors	Active MLP	36,540,301
Fortress Investment Group	Active mortgage	32,417,963
Total		\$3,542,944,616

### **Brokerage Activity**

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

			Comn	nissions
Brokerage Firm	Shares Traded	Dollar Volume of Trades	Dollar Amount	Value Per Share
JP Morgan Chase	3,843,067	\$ 119,718,946	\$ 216,896	\$0.06
Merrill Lynch Pierce Fenner	37,024,410	110,824,020	205,023	0.01
Credit Suisse (NY)	8,481,578	117,614,399	193,216	0.02
Credit Suisse (London)	3,937,400	91,730,939	172,734	0.04
Union Bank Switzerland	8,332,500	219,336,119	172,277	0.02
Neonet Securities	10,664,005	319,650,990	172,154	0.02
Weeden & Co.	7,667,045	300,673,228	153,523	0.02
Nomura Securities International	13,240,179	69,243,578	143,932	0.01
Morgan Stanley & Co.	2,604,022	76,630,069	136,970	0.05
Merrill Lynch International	3,226,900	62,667,650	119,686	0.04
G-Trade Services	8,912,363	143,419,531	118,804	0.01
SG Securities (London) Ltd.	1,044,869	53,412,432	105,313	0.10
Sanford C. Bernstein	1,886,200	56,264,982	105,202	0.06
UBS Warburg	3,578,984	87,962,704	88,406	0.02
Mainfirst Bank	674,730	43,806,940	87,667	0.13
Goldman Sachs	2,702,687	154,593,510	85,489	0.03
Credit Agricole	813,611	40,659,661	80,458	0.10
Credit Lyonnais	2,617,933	37,117,615	66,176	0.03
Citigroup	11,962,200	21,575,004	62,839	0.01
Instinet Corp.	6,200,100	201,908,260	61,967	0.01
Dresdner Kleinwort	609,376	29,001,944	56,718	0.09
Credit Lyonnais Securities (Asia)	23,752,000	21,320,035	53,258	0.00
UBS Equities	2,062,800	50,389,674	53,153	0.03
ABG Securities	908,400	24,551,673	49,086	0.05
Jefferies & Co.	304,200	21,387,059	42,757	0.14
D. Carnegie AB	1,201,100	20,587,045	41,200	0.03
Carnegie ASA	481,300	19,136,190	38,283	0.08
ABG Securities	2,238,000	19,133,105	38,277	0.02
SIS Segaintersettle	216,372	18,858,291	37,681	0.17
Others (includes 111, each contributing less than 1%)	39,054,987	1,096,321,629	814,498	0.02
Total	210,243,318	\$3,649,497,222	\$3,773,643	\$0.02

### Soft Dollar Expenditures

In the fiscal year ended June 30, 2008, MOSERS' domestic equity managers declared \$7,371 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 Securities Exchange Commission (SEC) guidelines and represent less than 1% of MOSERS' agency commissions.

Types of Services Acquired	Commissions Used	Percentage of Total	
Consulting/benchmarks	\$ 715	9.7%	
Research services	5,365	72.8	
Transaction cost analysis	165	2.2	
Market research	1,126	15.3	
Total	\$7,371	100.0%	

# PUBLIC DEBT ASSET CLASS SUMMARY

As of June 30, 2008, the public debt allocation had a market value of \$2.5 billion, representing 30.9% of the total fund. Performance for the fiscal year was 5.7% net of fees and expenses.

### Highlights

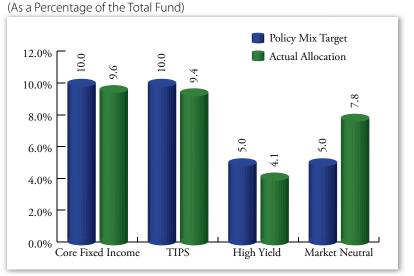
There were some modest tactical changes made to the public debt portfolio during the fiscal year. Here are a few of the highlights:

- Credit risk became a growing concern during the course of the fiscal year. Accordingly, a very substantial overweight to treasuries was established within core fixed income in the 3rd quarter of 2007, with the offsetting underweight coming primarily from investment grade corporates. Within high yield, hedges were put into place on a significant portion of the portfolio to protect against credit deterioration.
- Given the extraordinarily stressful conditions in the housing sector and a belief that the pricing on certain mortgage securities has already discounted a depression-like scenario of defaults and loss severities, a small investment was made in high yield mortgages (less than 5% of total high yield exposure). Mortgage credit deterioration led the deterioration in corporate credit by a full six to nine months. There is a view in favor of mortgage risk over corporate risk in the belief that the first to decline is likely to be the first to recover. Additionally, mortgages are backed by hard assets as opposed to the largely unsecured nature of high yield corporates.

### 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 bar chart to the right illustrates the actual sub-asset allocations relative to the board's policy 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, 2008. These decisions are confined to pre-established ranges that have been set by the board.

Public Debt Policy vs. Actual Allocation



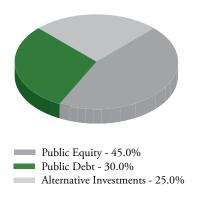
### Market Overview

August 17, 2007, marked the Federal Reserve Board's (Fed) first action of "aggressive" easing, as it cut the discount rate by 50 basis points in an unscheduled meeting and changed the economic assessment from downside risks from growth. The Fed's next action at its September meeting lowered the federal funds rate and discount rate by 50 basis points to 4.75% and 5.25%, respectively. Throughout FY08, the Fed engaged in seven rate cuts resulting in a federal funds rate of 2.00% by June 30, 2008. Throughout the year, the Fed struggled with policy as slowing growth, inflation concerns, and financial market turmoil dominated discussion at their meetings. As of June 30, 2008, the Fed's primary concerns were upside risk to inflation as downside risk to growth remained.

Long-term rates exhibited a greater amount of volatility throughout the fiscal year, starting at 5.13% and ending the fiscal year at 4.53%, while experiencing several significant directional changes during the period. Short-term rates declined by



**Public Debt Policy Allocation** 



over 3% as the Fed lowered the federal funds rate and market participants demanded liquidity and safety. This led to a significantly steeper yield curve as contrasted to the relatively flat curve seen at the end of the previous fiscal year.

On the economic front, the declines in all areas of the housing market that began in FY07 continued in FY08 with further significant declines occurring. GDP growth was below normal while CPI nearly doubled from that of FY07. A significant factor affecting CPI was the dramatic rise in commodities throughout FY08. One example was crude oil, which began the fiscal year around \$70 per barrel and doubled to \$140 per barrel by June 30, 2008.

The broad debt market, as represented by the Lehman Aggregate Index, experienced a return of 7.12% for FY08. The investment grade corporate market gained 2.95% during the fiscal year while the high yield market had a return of -2.26%. Investment-grade and high yield spreads widened considerably in FY08 with significant volatility. Investment-grade spreads widened 177 basis points and high yield spreads widened 438 basis points.

Overall, the general theme for FY08 was financial market turmoil that forced the Fed to lower interest rates even in the face of increasing inflation fears. The Fed is positioned to keep interest rates at current levels in the short-term, however, the need for future rate increases to curb inflation may eventually develop.

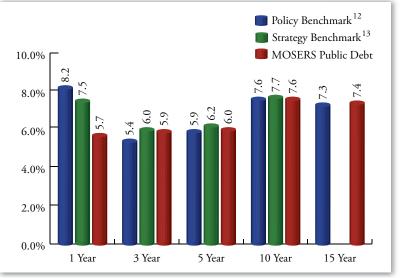
### Performance

The public debt portfolio returned 5.7% for the fiscal year, falling short of the policy benchmark return of 8.2% and the strategy benchmark return of 7.5%. During the fiscal year, the underperformance to the policy benchmark was attributable primarily to the implementation of our high yield strategy and secondarily to the implementation within market neutral. Longer-term portfolio returns compare well to the policy benchmark. 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, 2008, are illustrated in the table below. A complete list of holdings within the public debt portfolio is available upon request.





Descent of Total MOSEDS

85

Ten Largest Holdings as of June 30, 2008	Market Value	Percent of Total MOSERS Public Debt Portfolio
U.S. Treasury Inflation Index Bond - 2.000%, 2014	\$136,392,748	5.5%
U.S. Treasury Inflation Index Bond - 2.375%, 2025	120,814,972	4.9
U.S. Treasury Inflation Index Bond - 3.000%, 2012	90,096,749	3.6
U.S. Treasury Inflation Index Bond - 2.625%, 2017	87,327,940	3.5
U.S. Treasury Inflation Index Bond - 2.000%, 2012	83,083,496	3.4
U.S. Treasury Inflation Index Bond - 4.250%, 2010	60,732,579	2.4
U.S. Treasury Inflation Index Bond - 3.375%, 2017	47,965,788	1.9
U.S. Treasury Inflation Index Bond - 2.375%, 2027	47,605,764	1.9
U.S. Treasury Inflation Index Bond - 2.000%, 2026	42,719,505	1.7
U.S. Treasury Bond - 5.000%, 2037	27,441,618	1.1
-		

<sup>&</sup>lt;sup>12</sup> As of 6/30/08, the public debt policy benchmark was comprised of the following components: 33.3% Lehman Aggregate, 33.3% Lehman U.S. TIPS, 16.7% Lehman High Yield, and 16.7% T-Bills + 4%.

<sup>&</sup>lt;sup>13</sup> As of 6/30/08, the public debt strategy benchmark was comprised of the following components: 34.6% Lehman Aggregate, 28.7% Lehman U.S. TIPS, 12.8% High Yield Strategy Benchmark comprised of Leman HY Index and CSFB Leverage Loan Index, and 23.9% 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 \$769.6 million as of June 30, 2008, or 9.6% 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, 2008.

Portfolio Characteristics	1 Year	3 Year	5 Year	10 Year
Annualized return	6.8%	5.5%	4.5%	5.9%
Annualized standard deviation	3.5%	2.8%	3.5%	3.7%
Sharpe ratio	0.8	0.3	0.3	0.6
Excess return*	-0.3%	1.5%	0.6%	0.1%
Beta*	0.8	0.8	0.9	1.0
Annualized alpha*	1.0%	2.2%	1.0%	0.2%
Correlation*	0.6	0.8	0.9	0.9

\* As compared to the Lehman Aggregate Bond Index

### **Investment Advisors**

As of June 30, 2008, 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 FY08 for management of core fixed income portfolios. Information regarding management fees paid to these managers may be found on pages 76-77 of this report.

Investment Advisor	Style	Portfolio Market Value	
BlackRock Financial Management, Inc.	Enhanced mortgage-backed and asset-backed securities index	\$158,957,109	
NISA Investment Advisors, LLC	Enhanced gov't/corp index	60,906,533	
Beta/alpha program	Active	549,724,842	
Total		\$769,588,484	

### **Brokerage Activity**

In FY08, MOSERS generated the following core fixed income brokerage activity ranked by percentage of total market value, through the purchase and sale of core fixed income assets.

Broker/Dealer Firm	Par Amount Traded	Market Value Traded	Percent of Total Trading Volume by Market Value
Lehman Brothers	\$1,045,254,072	\$1,039,908,913	23.6%
Credit Suisse	848,188,880	835,107,318	18.9
Deutsche Bank	598,360,795	590,566,625	13.4
J.P. Morgan	398,066,285	397,149,605	9.0
Bank of America	335,613,308	336,496,459	7.6
Morgan Stanley	274,023,564	272,760,299	6.2
Goldman Sachs	263,012,523	261,195,409	5.9
Bear Stearns	199,297,599	199,601,130	4.5
Citigroup	117,613,744	118,783,867	2.7
Barclays Capital	90,553,160	91,349,932	2.1
RBC Greenwich Capital	85,965,453	85,172,425	1.9
UBS Securities	62,122,451	60,688,253	1.4
Other (Includes 18, each contributing less than 1%)	119,313,806	122,116,163	2.8
Total	\$4,437,385,640	\$4,410,896,398	100.0%

### **High Yield Bonds**

### Market Value

The high yield bond allocation was \$332.2 million as of June 30, 2008, or 4.1% 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, 2008, MOSERS is slightly under the 5.0% policy target allocation to high yield bonds.

### Statistics

The table below displays the statistical performance data (net of fees) for the high yield bond portfolio as of June 30, 2008.

Portfolio Characteristics	1 Year	3 Year	5 Year	Since Inception*
Annualized return	(10.4)%	2.6%	5.8%	8.1%
Annualized standard deviation	7.8%	5.6%	5.3%	5.8%
Sharpe ratio	(1.9)	(0.4)	0.4	0.9
Excess return**	(7.8)%	(1.9)%	(1.1)%	(0.3)%
Beta**	0.4	0.6	0.7	0.7
Annualized alpha**	(9.7)%	0.1%	0.8%	2.6%
Correlation**	0.4	0.6	0.7	0.8

\* Inception date October 2001

\*\* As compared to the Lehman High Yield Bond Index

### **Investment Advisors**

As of June 30, 2008, MOSERS had contracts with four 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 pages 76-77 of this report.

Investment Advisor	Style	Portfolio Market Value
BlackRock Financial Management, Inc.	Active high yield bond	\$273,443,253
NISA Investment Advisors, LLC	Credit hedge	6,404,486
OCM European Credit Opportunities Fund	Opportunistic European	37,127,289
Bayview Asset Management, LLC	Opportunistic mortgages	15,188,645
Total		\$332,163,673

### **Brokerage Activity**

In FY08, MOSERS generated the following high yield bond brokerage activity ranked by percentage of total market value, through the purchase and sale of high yield assets.

Broker/Dealer Firm	Par Amount Traded	Market Value Traded	Percent of Total Trading Volume by Market Value
Citigroup	\$145,541,752	\$195,847,913	48.6%
BNP Paribas	29,942,000	43,859,722	10.9
Credit Suisse	31,970,066	30,878,386	7.7
J.P. Morgan	21,743,576	20,889,328	5.2
Barclays Capital	10,261,000	19,900,040	4.9
Goldman Sachs	17,728,125	16,866,894	4.2
UBS Securities	12,266,000	16,524,291	4.1
Lehman Brothers	11,720,000	10,981,319	2.7
Royal Bank of Scotland	10,916,768	10,252,659	2.5
Deutsche Bank	9,860,691	9,603,705	2.4
Morgan Stanley	8,653,616	8,303,528	2.1
Bank of America	7,399,000	7,009,141	1.7
Other (Includes 14, each contributing less than 1%)	13,292,637	12,289,080	3.0
Total	\$331,295,231	\$403,206,006	100.0%

### Treasury Inflation Protected Securities (TIPS)

### Market Value

The TIPS allocation was \$754.4 million, or 9.4% of the total fund as of June 30, 2008.

### 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, 2008, MOSERS is 0.6% under the 10.0% policy target allocation to TIPS, a factor that can be attributed in part 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, 2008.

Portfolio Characteristics	1 Year	3 Year	5 Year	Since Inception*
Annualized return	15.5%	5.7%	6.7%	9.2%
Annualized standard deviation	6.0%	5.2%	7.0%	7.7%
Sharpe ratio	1.9	0.2	0.5	0.7
Excess return**	0.4%	0.1%	0.1%	0.2%
Beta**	1.0	1.0	1.0	1.0
Annualized alpha**	0.3%	0.1%	0.1%	0.1%
Correlation**	1.0	1.0	1.0	1.0

\* Inception date November 1998

\*\* As compared to the Lehman U.S. TIPS Bond Index

### **Investment Advisors**

As of June 30, 2008, the TIPS portfolio was 100% internally managed. The following table summarizes the details.

Investment Advisor	Style	Portfolio Market Value
Internal staff Total	Passive	\$754,410,830 \$754,410,830

### Brokerage Activity

In FY08, MOSERS generated the following TIPS brokerage activity ranked by percentage of total market value, through the purchase and sale of TIPS.

Broker/Dealer Firm	Par Amount Traded	Market Value Traded	Percent of Total Trading Volume by Market Value
Barclay's Capital	\$172,500,000	\$174,950,393	63.9%
Citigroup	73,500,000	91,643,332	33.5
Deutsche Bank	7,100,000	7,146,240	2.6
Total	\$253,100,000	\$273,739,965	100.0%

### Market Neutral

### Market Value

As of June 30, 2008, the market neutral allocation was \$623.5 million, or 7.8% 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, 2008, MOSERS is 2.8% 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, 2008.

Portfolio Characteristics	1 Year	3 Year	5 Year	Since Inception*
Annualized return	3.2%	7.4%	6.1%	6.6%
Annualized standard deviation	4.0%	2.9%	2.6%	2.6%
Sharpe ratio	(0.2)	1.0	1.1	1.3
Excess return**	(4.1)%	(0.7)%	(1.0)%	(0.3)%
Beta to S&P 500	0.1	0.3	0.1	0.1
Beta to Lehman Aggregate	(0.9)	(0.5)	(0.1)	(0.1)

\* Inception date December 2002

\*\* As compared to T-bills + 4%

### **Investment Advisors**

MOSERS' market neutral exposure is captured through the seven 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, 2008. Information on manager fees paid can be found on pages 76-77 of this report.

Investment Advisor	Style	Portfolio Market Value
Beta/alpha program Total	Market neutral	\$623,491,974 \$623,491,974

### ALTERNATIVE INVESTMENTS ASSET CLASS SUMMARY

As of June 30, 2008, the alternative investments portfolio had a market value of almost \$2 billion, representing 24.7% of the total fund. For the fiscal year the asset class returned 9.1% net of fees and expenses.

### Highlights

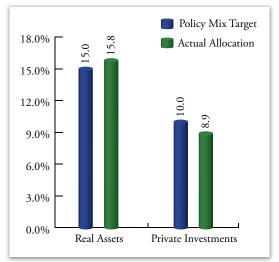
During the course of FY08, several changes took place that impacted the alternative investments portfolio, both at the strategic allocation level as well as within each sub-asset class. The highlights are as follows:

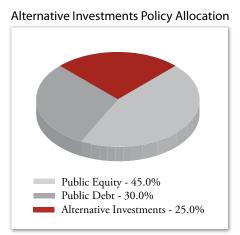
- Every five years the board of trustees conducts an asset/liability study to review the mix of assets that supports the system's benefit payments. As a result of this study, the board of trustees increased the alternative investments allocation to 25% of the total fund, up from 20%. In addition, the broad category of alternative investments was divided into two sub-asset classes, real assets and private investments.
- MOSERS committed additional assets to existing managers in both the real assets and private investments sub-asset class portfolios. Within real assets, Global Forest Partners and TCW received additional funds. Bridgepoint Capital and Oaktree Capital Management received commitments within private investments during the fiscal year.
- New managers were added to the components of each sub-asset class portfolio. Within real assets, two managers
  were hired for mandates in the real estate component. Bayview Capital was given a mandate to manage a residential
  mortgage portfolio and Harvest Fund Advisors was given a mandate to actively manage a Master Limited Partnership
  (MLP) portfolio. The Bayview commitment was split between the real estate, high yield debt, and credit opportunities
  portfolios. Harvest's portfolio was divided evenly between real estate and credit opportunities. The private equity
  component of the private investments sub-asset class added three managers. Commitments were made to New
  Mountain Capital, a U.S. middle market buyout manager, Actis Capital, and Development Partners International,
  firms that invest in private companies in the emerging markets.
- In FY08, MOSERS invested in or committed to nine new alternative investments totaling \$448 million. This is consistent with MOSERS' desire to move towards the target asset allocation over a reasonable period of time.

### Portfolio Structure

The alternative investments allocation is targeted to be 25% of the total fund. The alternatives portfolio is further divided into two sub-asset classes, real assets and private investments. The real assets portfolio is targeted to make up 15% of the total fund and currently consists of three components, commodities, timber and real estate. The private investments sub-asset class has a 10% target allocation to the overall fund and consists of two components, private equity and private debt. As previously mentioned, the allocation to alternative investments was increased by 5% to 25%, in early FY08. This increase was split between real assets and private investments, each receiving an increase of 2.5%. Over the past year, additional investments were made in timber, real estate, private equity and private debt. The component furthest from its target allocation is private equity. At the end of the fiscal year the private equity allocation stood at 5.7% compared to a policy target of 7.5%. A plan has been implemented to reach the target over the next few years. This timeline is necessary due to the nature of these investments. The bar chart to the right illustrates the actual allocation of real assets and private investments relative to the board's policy allocation as of June 30, 2008.







The allocation of the components of each sub-asset class is built on the belief that diversification is critical. The table below reflects the investment components and their correlation to each other.

Sub-Asset Class	Real Estate	Commodities	Timber	Private Equity	Private Debt
Real estate	1.0				
Commodities	(0.2)	1.0			
Timber	0.1	(0.1)	1.0		
Private equity	0.5	(0.2)	(0.1)	1.0	
Private debt	0.3	0.1	(0.0)	0.5	1.0

Alternative Investments Correlations - 5 year period

The table below summarizes the allocation ranges established by the board.

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

Sub-Asset Class	Minimum	Maximum	Policy Target
Real assets	10.0%	20.0%	15.0%
Private investments	5.0	15.0	10.0

### Market Overview

An allocation to alternative investments was first made by the board of trustees in June 2002. Alternative investments bring a variety of benefits to the overall fund, which include protection against inflation, enhanced returns, diversification and current income. Each component of the real assets and private investments portfolios provide at least one of these characteristics. Real assets, for example, are expected to provide a hedge against inflation and diversify the total fund, while private investments are held to produce returns in excess of those returns provided by publicly traded equity and fixed income markets.

Over the last six years, a great deal of progress has been made in implementing the alternative investment strategy. Over this period, a tremendous amount of work has taken place to arrive at the current portfolio of over 40 distinct investments. This group of assets is managed by nearly 20 external managers, some of whom manage multiple investments within and across portfolio components. As previously mentioned, the alternative investment allocation was recently increased for each sub-asset class and component. After the new asset allocation policy was adopted some of the components were brought in line with their new targets relatively quickly. Two components, timber and private equity, will move towards their target over a more measured time frame.

The overall return of the alternative investment portfolio was strong during FY08, returning 9.1%. However, at the sub-asset class level returns were considerably different. The real assets portfolio did very well as it returned an impressive 18.5%, led by the return of the commodities portfolio. On the other hand, the private investments portfolio returned -5.9%, with both private equity and private debt components returning single digit negative numbers. Despite the negative performance of some of the portfolio components, each continues to provide diversification benefits to the overall fund.

The largest contributor to performance in the alternative investment allocation was the commodities portfolio. During FY08, MOSERS' investments in commodities generated an outstanding 73.9% return. The price of most commodities increased significantly during the year ended June 30, 2008. The S&P GSCI Index (Standard & Poor's, Goldman Sachs Commodity Index) tracks a broad basket of commodities, but is heavily weighted towards energy. For the year, the energy segment of the index was up over 100%, while the precious metal and agriculture segments were up 40.4% and 49.7%, respectively. There was much debate concerning the reasons behind such sharp increases, including strong demand from the world's emerging markets and speculators who were active in the market.

The return of the real assets portfolio was also supported by the strong returns of the timber component which returned 12.1%. The NCREIF (National Council of Real Estate Investment Fiduciaries) Timberland Index, which measures the value of properties located in the U.S., returned 19.3% for the year. The strong performance can be attributed to an increase in demand from institutional investors, such as MOSERS, who are looking to diversify their portfolios. Due to the highly competitive market, it has become extremely difficult to buy U.S. timberland at an attractive price. Given that MOSERS holds a sizeable position in U.S. Treasuries waiting to be invested in timber, staff continues to search for appropriate opportunities and made one acquisition. In the fall of 2007, MOSERS acquired timber assets located in New Zealand. It is interesting to note that the strength in U.S. timberland prices comes at a time when the lumber markets are soft due to a lack of new housing starts. This condition illustrates the varying strategies and time horizons of the participants in these markets.

The remaining real assets component, real estate, returned -4.7% for FY08. The Dow Jones Wilshire REIT Index, which measures the value of publicly traded real estate investment trusts, returned -15.3%, reflecting the economic slowdown taking place in the U.S. real estate market. Five of the six REIT sectors were down for the year with the single exception being self-storage REITs. Of the five remaining segments, four were down in the 13% to 17% range, while the hotel sector was down the most at 40%. Private real estate benchmarks continue to show positive returns, but should adjust downward as the latest appraisals are reflected in the valuations. During FY08, MOSERS committed assets to three new strategies, including a residential mortgage fund, an oil and gas mezzanine debt fund, and an active MLP manager.

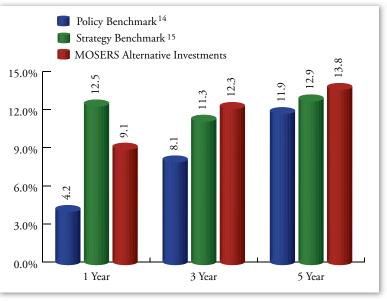
The private investments portfolio had a tough year as problems in the credit markets surfaced in the second half of 2007 and continued throughout the remainder of the fiscal year. As a result, the capital raised in private equity, especially buyout, slowed significantly compared to the previous year when a tremendous amount of capital flowed into the space. Overall, the private investments portfolio returned -5.9%. The portfolio components experienced returns in a similar range as private debt returned -8.6% and private equity returned -4.9%. Several commitments were made to new and existing managers. Within private equity, MOSERS made a second commitment to a European middle market buyout fund; the original investment was made a few years ago. Three new firms received commitments, including a domestic middle market buyout fund and two emerging market private equity managers. The emerging market commitments were made to take advantage of the themes highlighted during the asset/liability study, which include participating in the economic growth around the world and capturing the illiquidity risk premium associated with this type of investment. During FY08, additional capital was committed to a European distressed debt opportunity. Also, a sizeable commitment from the previous fiscal year began to draw capital. Both of the investments were made with an existing manager that has a track record of successful distressed debt investing.

Within private equity, MOSERS continues to commit new money in a disciplined manner to achieve vintage year diversification. Over the years, this helps mitigate the negative returns in the early years of a partnership as fees are being paid to managers while they are identifying assets for investment. Due to venture capital market fundamentals and the inability of new investors to access the best funds, venture capital funds are not enticing to MOSERS at this time. No commitments to venture capital funds were made in FY08.

### Performance

The overall return of MOSERS' alternative investments portfolio was 9.1% for the fiscal year, outperforming the policy benchmark which returned 4.2%. The portfolio underperformed the 12.5% return for the strategy benchmark as illustrated in the bar chart to the right. The overall portfolio outperformed the policy benchmark by 4.9%, which can be attributed to three of the five components performing better than their respective policy benchmarks. The policy benchmark is a weighted average of the allocation mix and the asset class policy benchmarks. It is designed to give an indication of the return achieved by the policy asset allocation invested on a passive basis. Real estate was the largest contributor, beating the Wilshire REIT policy benchmark by 10.6%. Private equity and private debt outperformed by 2.3% and 4.0%, respectively. Timber underperformed its policy benchmark by 7.2%, and commodities were 2.1% below its policy benchmark.

#### Alternative Investments Return vs. Benchmarks



The overall portfolio underperformed the strategy benchmark by 3.4%. As mentioned in a previous section, the strategy benchmark seeks to attribute performance to decisions made by staff to either deviate from the policy asset allocation or to utilize strategies that differ from the policy. The underperformance this year can be attributed to the real estate component. For policy benchmark purposes, the real estate component is benchmarked against an investable publicly traded REIT Index. Given MOSERS' view on REIT valuations, the real estate portfolio is invested in a variety of strategies that include private real estate, MLPs (as a REIT substitute), residential mortgages, private real estate debt, and oil and gas assets. Instead of using the Dow Jones Wilshire REIT Index, the strategy benchmark uses a set of benchmarks that more closely match the characteristics of the underlying investments, including the NCREIF Property Index and the Atlantic Asset MLP Natural Resources Index. For the year ended June 30, 2008, the Dow Jones Wilshire REIT Index returned -15.3%, while the NCREIF Property Index was up 9.2%, a difference of 24.5%. This differential explains why the policy and strategy benchmarks were so far apart. In summary, value was added relative to the policy benchmark due to the decision to invest in assets that outperformed REITs, but the underlying investments underperformed their respective benchmarks.

### Statistics

The table below displays the statistical performance data (net of fees) of the alternative investments portfolio as of June 30, 2008.

Portfolio Characteristics	1 Year	3 Year	5 Year	Since Inception*
Annualized return	9.8%	12.1%	13.7%	15.0%
Annualized standard deviation	5.3%	5.0%	5.4%	7.1%
Sharpe ratio	1.1	1.5	1.9	1.7
Excess return**	5.6%	3.9%	1.8%	2.0%
Beta**	0.3	0.4	0.5	0.7
Annualized alpha**	8.1%	8.3%	6.9%	5.4%
Correlation**	0.6	0.6	0.7	0.8

\* Inception date July 2002

\*\* As compared to the alternative investments policy

<sup>14</sup> As of 6/30/08, the alternative investments policy benchmark was comprised of the following components: 24% Wilshire REIT, 24% NCREIF Timber Index, 40% S&P 500 +3%, and 12% GSCI.

<sup>15</sup> As of 6/30/08, the alternative investments strategy benchmark was comprised of the following components: 24.3% real estate strategy (composed of the NCREIF, Mellon STIF Return, and Atlantic Asset Management MLP Natural Resources Index), 26% NCREIF Timber Index, 34.5% S&P 500 +3%, and 15.2% GSCI.

# **Real Assets**

### Market Value

The real assets allocation was \$1,269.8 million as of June 30, 2008, representing 15.8% of the total fund. The portfolio is made up of three components with the following market values and percent of the total fund: commodities, \$253.2 million, 3.2%; timber, \$520.4 million, 6.4%; and real estate, \$496.2 million, 6.2%.

### Summary of Portfolio

The target allocation for real assets is set at 15% of the total fund and can move within an allocation range of 10% to 20%.

MOSERS gains exposure to commodities through an account managed by NISA Investment Advisors. NISA manages the portfolio with an index plus strategy, meaning that they mimic the benchmark while, from time to time, attempting to add incremental value by taking advantage of the structural inefficiencies associated with its benchmark, the S&P GSCI. In FY08, the commodities portfolio provided exceptional returns as well as a great deal of diversification to the overall portfolio. This year was an excellent example of how the low to negative correlation of commodities relative to traditional asset classes provided protection when financial assets experience poor performance.

The timber component of the real assets portfolio is comprised of four separate portfolios managed by three firms. Additional assets are held within the timber component to fund future investments. The portfolio is geographically diverse with the majority of the timberlands being in the southeast and northwest regions of the U.S., complemented by investments outside the country in South America, Australia, and New Zealand. The timber allocation is also diversified by age and tree species which are carefully considered to lower portfolio risk. The timber component is approximately 69% invested with the remaining dollars invested in a placeholder that can be drawn down as timber investments are made. The majority of these assets are invested in long-dated U.S. Treasury securities which performed very well this year. Timber returns over a full market cycle are expected to be similar to those achieved from the public equity markets but with less risk.

As previously mentioned, the real estate component is invested in a variety of strategies that exhibit risk/return characteristics that are similar to those of real estate. The portfolio includes private real estate, MLPs, residential mortgages, private real estate debt, and oil and gas assets. Opportunistic real estate funds should provide returns in excess of those expected from the publicly-traded REIT market due to the illiquidity premium associated with owning private assets and the inefficiencies in this market. An investment in MLPs was made a few years ago as a REIT substitute. MLPs continue to be relatively attractive due to their higher yield and valuation characteristics. The investment in residential mortgages was recently made to take advantage of the dislocation in the credit markets. The real estate debt and oil and gas assets reside in the portfolio because their characteristics are similar to those of real estate and to take advantage of the specific opportunities that exist within those markets.

### Statistics

**Portfolio Characteristics** 1 Year 3 Year 5 Year Since Inception\* Annualized return 18.5% 14.8% 16.1% 15.3% Annualized standard deviation 5.6% 6.6% 7.3% 8.0% Sharpe ratio 2.6 1.6 1.7 1.5 Excess return\*\* 4.9% 4.9% 2.0% 2.0% Beta\*\* 0.2 0.4 0.6 0.6 Annualized alpha\*\* 14.2% 14.2% 7.8% 6.3% Correlation\*\* 0.4 0.7 0.8 0.5

The table below displays the statistical performance data (net of fees) of the real assets portfolio as of June 30, 2008.

\* Inception date July 2002

\*\* As compared to the real assets policy

### **Investment Advisors**

MOSERS implements its real assets strategy through 16 distinct portfolios managed by 12 external investment firms. MOSERS continues to commit assets within the real assets allocation. During FY08, one timber commitment was made to complement the existing portfolio and to take advantage of opportunities outside the U.S. Three commitments were made to the real estate component. MOSERS continues to find opportunities outside of the REIT market. In FY08, additional funds were placed with TCW to invest in mezzanine debt of companies in the oil and gas industry. Bayview Capital was funded to capitalize on opportunities in the residential mortgage sector, an area that has been impacted significantly. Finally, Harvest Fund Advisors was hired to manage an active MLP portfolio. MOSERS has been invested in MLPs for several years using a passive strategy. Over time, the MLP market has developed and the universe of managers has grown to make the use of active management a viable strategy. The table below shows the investment advisors in place at the end of FY08 that manage MOSERS' real assets portfolio.

Investment Advisor	Style	Portfolio Market Value	
Bayview Asset Management	Residential mortgages	\$ 15,188,645	
Blackstone Real Estate Advisors	Active real estate	201,942,821	
Bush O'Donnell Investment Advisors	Passive MLP	73,927,622	
The Campbell Group	Northwestern U.S. timber	55,141,809	
CarVal Investors	Distressed real estate & debt	49,950,000	
Global Forest Partners	International timber	150,429,949	
Harvest Fund Advisors	Active MLP	36,540,301	
Internal Staff*	Alpha pool	89,041,568	
Internal Staff*	Active duration U.S. Treasuries	98,660,759	
Internal Staff*	Cash	30,632,183	
Merit Energy	Oil & gas	3,785,042	
NISA Investment Advisors	Enhanced commodity index	253,186,432	
Oaktree Capital Management	Active real estate	34,886,466	
Resource Management Service	Southeastern U.S. timber	125,352,144	
TCW	Mezzanine debt, diversified energy	51,118,573	
Total	0,	\$1,269,784,314	

\* Temporary place holders for future capital drawdowns to fund managers.

# **Private Investments**

### Market Value

The private investments sub-asset class had a value of \$712.8 million as of June 30, 2008, representing 8.9% of the total fund. The private equity component had a value of \$459.6 million, while the value of the private debt component was \$253.2 million; 5.7% and 3.2%, of the total fund, respectively.

### Summary of Portfolio

The private investments portfolio consists of several strategies each with a different risk/return profile. The portfolio is expected to provide enhanced returns and diversification to the overall fund. In a portfolio context, the private investments sub-asset class is expected to produce returns in excess of the public equity market over a full-market cycle. The portfolio's policy benchmark is the S&P 500 Index plus 3%.

In FY08, MOSERS made commitments to four private equity managers. One of the commitments was made to an existing manager, Bridgepoint Capital, who invests in the European middle market corporate buyout space. Money was committed to three new private equity funds. New Mountain Capital raised a buyout fund to invest in the U.S. middle market. Actis Capital and Development Partners International represent MOSERS' initial commitments to emerging market private equity. The private equity portfolio is expected to approach its target allocation of 7.5% over the next few years. In addition to the buyout strategies already mentioned, MOSERS has allocated a portion of the portfolio to small market U.S. corporate buyouts, special situations/opportunistic, and activist equity strategies.

MOSERS was an active investor in the debt markets in FY08. Within the private debt component, two developments deserve to be highlighted. The first was an additional commitment to Oaktree Capital Management to invest additional assets in the European distressed debt market. The original European distressed investment was placed in the high yield debt portfolio. Another Oaktree commitment that was made in late FY07 began drawing capital near the end of FY08. The capital was drawn to fund compelling investment opportunities that the manager had identified. Private debt is expected to provide capital appreciation as the capital is used to exploit a variety of strategies. In several cases, the capital is used to purchase debt securities in an effort to gain controlling interest in a company at a significant discount to fair value. The opportunity to add value comes from the inefficiency of the market, lack of participants in this sector, and the return premium associated with the illiquidity of the securities. The manager's ability to identify, purchase, and actively manage the undervalued securities is critical to the success of MOSERS' portfolio.

### Statistics

The table below displays the statistical performance data (net of fees) of the private investments portfolio as of June 30, 2008.

Portfolio Characteristics	1 Year	3 Year	5 Year	Since Inception*
Annualized return	(5.9)%	7.9%	9.9%	18.1%
Annualized standard deviation	6.3%	5.6%	6.2%	11.2%
Sharpe ratio	(1.6)	0.6	1.1	1.3
Excess return**	3.1%	2.3%	1.4%	2.2%
Beta**	0.4	0.5	0.6	0.9
Annualized alpha**	(2.6)%	4.7%	4.3%	4.2%
Correlation**	0.8	0.8	0.8	0.8

\* Inception date September 2002

\*\* As compared to the total private investments policy

### **Investment Advisors**

The private investment component consists of 26 separate fund investments managed by 18 external investment managers. During FY08, MOSERS made four private equity commitments and one private debt commitment. The commitments continue to build on the investments in MOSERS' corporate buyout strategy in both the U.S. and international developed markets, add to the private debt portfolio at a time when the opportunity is compelling, and begin the process of investing in the world's emerging private equity markets. Over the next few years, MOSERS will continue to invest in this sub-asset class in an effort to reach and maintain the target allocation of 10%. The advisors in this sub-asset class as of June 30, 2008, are listed in the table below.

Investment Advisor Style		Portfolio Market Value
Actis Capital	Emerging markets, global	\$ 991,528
Alinda Ĉapital Partners	Corporate buyout; infrastructure	22,122,023
Development Partners International	Emerging markets, Africa	148,272
Bridgepoint Capital Limited	Corporate buyout; foreign	31,033,816
Catterton Partners	Corporate buyout	39,468,310
JLL Partners	Corporate buyout	23,182,374
New Mountain Capital	Corporate buyout	5,591,009
NISA Investment Ådvisors*	Equity futures	69,575,538
OCM/GFI Power Opportunities	Corporate buyout	15,416,908
Parish Capital Advisors	Corp. buyout; fund-of-funds	44,375,024
Relational Investors	Activist equity	58,134,694
Silver Creek Capital	Special situations	101,641,913
Silver Lake Partners	Corporate buyout	29,927,076
TCW Co-Investment	Equity, oil/gas	5,817,589
Veritas Capital	Corporate buyout	12,126,221
Total		\$459,552,295

\* Temporary place holder for future capital drawdowns to private equity managers.

### **Brokerage Activity**

The following brokerage activity occurred within the alternative investments portfolio during the fiscal year:

			Commissions		
Broker Firm	Shares Traded	Dollar Volume of Trades	Dollar Amount	Value Per Share	
AG Edwards & Sons	682,900	\$ 25,461,553	\$ 27,316	0.04	
Citigroup	647,607	22,995,598	7,226	\$0.01	
Credit Suisse	30,000	904,795	1,200	0.04	
Goldman Sachs	3,855	211,268	867	0.22	
Instinet Corp	976,041	20,366,688	9,760	0.01	
Jones & Associates	20,000	793,800	800	0.04	
Jones Trading	430,882	10,012,390	17,235	0.04	
Lehman Brothers	851,555	32,661,961	31,742	0.04	
Merlin Securities	306,145	9,883,515	3,639	0.01	
Morgan Stanley	270,299	10,087,543	11,246	0.04	
RBC Capital Markets	295,600	7,976,232	11,824	0.04	
UBS Securities	458,500	8,212,006	18,391	0.04	
Total	4,973,384	\$149,567,349	\$141,246		

### Soft Dollar Expenditures

There were no soft dollars utilized within the alternative investment portfolio during the fiscal year ended June 30, 2008.

### **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 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 \$1.1 billion as of June 30, 2008. The beta component contained total return swaps and futures as of June 30, 2008. 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 40.

### **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, 2008. Management fee information may be found on pages 76-77 of this report.

Investment Advisor	Style	Portfolio Market Value
NISA Investment Advisors	Synthetic beta exposure	\$1,116,408,200

# Alpha Program

### Market Value

The alpha program allocation was \$2 billion or 25.1% of the total fund as of June 30, 2008.

### 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 of the alpha program portfolio (net of fees related to the beta program) as of June 30, 2008.

Portfolio Characteristics	1 Year	Since Inception*
Annualized return	1.2%	4.4%
Annualized standard deviation	3.8%	2.7%
Sharpe ratio**	0.1	1.2
Beta as compared to the S&P 500	0.1	0.1
Beta as compared to the Lehman Aggregate	(1.2)	(0.5)

\* Inception date October 2004

\*\* Sharpe ratio equals the annualized alpha program returns less the risk-free rate divided by the annualized standard deviation. Fees related to the beta program also reflect the risk-free rate and are therefore not considered in this calculation.

### **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 in FY05: Aetos Capital, AQR Capital Management, Barclays Global Investors, Bridgewater Associates, and Pacific Alternative Asset Management Company (PAAMCO). Blackstone Distressed Securities Advisors was added to the alpha program in FY08. The table below summarizes our investments with the managers as of June 30, 2008. Management fee information may be found on pages 76-77 of this report.

Investment Advisor	Style	Portfolio Market Value
Aetos Capital	Fund-of-funds	\$ 502,689,505
AQR Capital Management	Multi-strategy hedge fund	128,433,106
Barclays Global Investors	Multi-strategy hedge fund	162,631,115
Blackstone Alternative Asset Management	Fund-of-funds	344,606,196
Blackstone Distressed Securities Advisors	Single strategy hedge fund	49,984,075
Bridgewater Associates	Multi-strategy hedge fund	132,175,561
РААМСО	Fund-of-funds	353,133,238
Alpha program cash	Short-term cash	336,314,882
Total		\$2,009,967,678

# SECURITIES LENDING SUMMARY

In FY08, MOSERS earned net income of \$8,442,627 through its securities lending programs. This incremental income contributed 10.5 basis points to MOSERS' total fund and 42.4 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 net income from the domestic equity agent-lending program of \$1,611,536 in FY08. The income from this program was \$617,120 more than FY07, stemming from a significant increase in the margin basis points. The margin expansion more than offset the drop in average lendable assets and average loan balance. Credit Suisse, New York (CSNY) is the agent lender of MOSERS' securities for this program.

Year	Average Lendable	Average on Loan	Average Utilization	Return Added to Lendable Domestic Equities (basis points)	Net Income
FY08	\$ 440,025,347	\$ 195,971,154	44.5%	36.6	\$ 1,611,536
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

The table below contains the domestic equity securities lending program statistics from FY02 through FY08.

### International Equity

MOSERS generated total net income from the international equity securities lending program of \$726,565 in FY08. The income earned increased by \$331,548 due to a rise in the margin basis points and utilization rate. The higher utilization rate resulted in an increase in the average loan balance even though the average lendable balance was lower than FY07. CSNY manages this program in an agent capacity.

The table below contains the international equity securities lending program statistics from FY02 through FY08.

Year	Average Lendable	Average on Loan	Average Utilization	Return Added to Lendable International Equities (basis points)	Net Income
FY08	\$467,893,205	\$56,944,925	12.2%	15.5	\$ 726,565
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

#### INVESTMENT SECTION

#### **Domestic Fixed Income**

MOSERS generated total net income from the domestic fixed income securities lending program of \$6,104,526 during FY08. The income from this program increased by \$4,634,667 from FY07, primarily due to a significant increase in the margin basis points. There was also an increase in the average lendable assets and utilization rate, which resulted in a higher average loan balance compared to FY07. CSNY manages this program in an agent capacity.

The table below presents the statistics for the domestic fixed income securities lending program for FY02 through FY08.

Year	Average Lendable	Average on Loan	Average Utilization	Return Added to Lendable Fixed Income (basis points)	Net Income
FY08	\$1,082,813,165	\$ 894,372,380	82.6%	56.4	\$6,104,526
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

# TO MEET YOUR NEEDS IN THE LONG RUN — WE'LL GO THE DISTANCE

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### **ACTUARIAL SECTION**

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## ACTUARY'S CERTIFICATION LETTER



Gabriel Roeder Smith & Company Consultants & Actuaries One Towne Square Suite 800 Southfield, MI 48076-3723 248.799.9000 phone 248.799.9020 fax www.gabrielroeder.com

October 13, 2008

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

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, 2008. These valuations indicate that the contribution rates for the fiscal year ending June 30, 2010, adopted by the board of trustees for the benefits scheduled to be in effect on July 1, 2008, meet the basic financial objective. These contribution rates are 12.75% of payroll for 54,542 General State Employees, and 58.48% of payroll for 401 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 March, 2008 based upon recommendations made in an experience study covering the period from 2003 to 2007. The economic assumptions were adopted by the board of trustees in September, 2001 and amended and reaffirmed in March, 2008. 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* of our report. 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.

Norman L. Jones, F.S.A. Senior Consultant & Actuary

Brad Cart

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

David To Fausch

David T. Kausch, F.S.A. Consultant & Actuary

#### **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 2.56% 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, 2008. 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 105. 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-in-service, 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 female 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).

Separations From Active Employment Before Service Retirement and Individual Pay Increase Assumptions - June 30, 2008

### MSEP

					tive Memb nin the Nex	Pay Increase Assumptions for an Individual Employee				
Sample	Years of	-	ndrawal		eath*	-	bility	Merit and	Base	Increase
Ages	Service	Men	Women	Men	Women	Men	Women	Seniority**	(Economy)	Next Year
	0	23.8%	26.9%							
	1	18.9	20.5							
	2	15.3	15.4							
	3	12.8	12.5							
	4	11.8	10.9							
20	+5	11.8	10.9	.04%	.03%	.16%	.30%	3.5%	4.0%	7.5%
25		11.8	10.9	.05	.04	.16	.30	2.9	4.0	6.9
30		10.0	10.0	.06	.04	.16	.30	2.2	4.0	6.2
35		7.5	7.6	.08	.05	.21	.30	1.6	4.0	5.6
40		5.6	5.6	.11	.07	.26	.32	1.2	4.0	5.2
45		4.2	4.4	.17	.09	.34	.38	0.9	4.0	4.9
50		3.4	3.9	.31	.14	.49	.57	0.7	4.0	4.7
55		3.0	3.3	.54	.24	1.07	.89	0.5	4.0	4.5
60		2.6	3.0	.83	.44	1.50	1.50	0.4	4.0	4.4
65		2.5	3.0	1.31	.71	1.60	1.70	0.3	4.0	4.3

\* 2% of the deaths in active service are assumed to be duty-related

\*\* Does not apply to members of the General Assembly

### Judicial Plan

Percent of Active Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Employee			
Sample	With	drawal	D	eath	Dis	ability	Merit and	Base	Increase
Ages	Men	Women	Men	Women	Men	Women	Seniority	(Economy)	Next Year
25	4.5%	4.5%	.05%	.04%	.01%	.01%	1.6%	4.0%	5.6%
30	4.0	3.7	.06	.04	.02	.01	1.2	4.0	5.2
35	2.8	2.6	.08	.05	.03	.02	0.9	4.0	4.9
40	2.0	2.1	.11	.07	.04	.03	0.4	4.0	4.4
45	1.5	1.9	.17	.09	.05	.04	0.3	4.0	4.3
50	1.5	1.7	.31	.14	.08	.07	0.2	4.0	4.2
55	1.5	1.2	.54	.24	.13	.12	0.2	4.0	4.2
60	1.2	0.6	.83	.44	.20	.19	0.0	4.0	4.0
65	0.9	0.4	1.31	.71	.20	.19	0.0	4.0	4.0

Single Life Retirement Values - June 30, 2008

### All Plans

	Pres	sent Value of \$1/2 Increasing 4%	Month the First /2.56% Yearly	Year	Future Life Expectancy (Years)				
Sample	Se	rvice	Disa	ability	Se	ervice	Disability		
Attained Ages	Men	Women	Men	Women	Men	Women	Men	Women	
40	\$203.02	\$209.33	\$181.62	\$191.13	39.41	43.25	30.06	33.73	
45	193.32	201.25	168.02	179.05	34.67	38.46	25.67	29.17	
50	181.62	191.13	152.30	165.06	30.06	33.73	21.50	24.82	
55	168.02	179.05	134.31	148.86	25.67	29.17	17.57	20.70	
60	152.30	165.06	114.80	130.48	21.50	24.82	13.99	16.82	
65	134.31	148.86	95.56	110.86	17.57	20.70	10.91	13.32	
70	114.80	130.48	76.93	91.81	13.99	16.82	8.29	10.36	
75	95.56	110.86	60.70	73.41	10.91	13.32	6.23	7.83	
80	76.93	91.81	47.70	57.87	8.29	10.36	4.70	5.89	
85	60.70	73.41	36.91	45.39	6.23	7.83	3.51	4.44	

## SUMMARY OF ACTUARIAL ASSUMPTIONS

Percent of Eligible Active Members Retiring Next Year - June 30, 2008

MSEP

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

Early retirement rates were assumed to be 5.0% from ages 55-65.

Judicial Plan

Retirement Ages	Percent Men	Percent Women
55	10.0%	8.0%
56	10.0	8.0
57	10.0	8.0
58	10.0	8.0
59	10.0	8.0
60	10.0	15.0
61	5.0	10.0
62	10.0	15.0
63	5.0	10.0
64	5.0	10.0
65	20.0	40.0
66	25.0	25.0
67	20.0	25.0
68	20.0	25.0
69	30.0	50.0
70	100.0	100.0

Miscellaneous and Technical Assumptions - June 30, 2008

### 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 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 straightlife form with 50% continuing to an eligible surviving spouse.

### Other Liability Adjustments

MSEP 2000 Benefits for Active Employees

- Normal retirement form of payment adjustment: 0.994
- Early retirement form of payment adjustment: 0.993

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

Age	Male	Female
<30	3.20	2.32
30-39	1.89	1.52
40-49	1.32	1.18
>50	1.07	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, 2008. It was brought forward to June 30, 2008, 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, 2008. 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, 2008

### Active Members

Active Members				Group Average	s
Valuation Group	Number	Annual Payroll	Salary	Age (Yrs.)	Service (Yrs.)
MSEP					
Regular state employees	50,645	\$1,710,675,180	\$ 33,778	44.7	10.3
Elected officials	6	638,346	106,391	48.4	7.3
Legislative clerks	49	1,537,942	31,387	58.3	18.7
Legislators	195	6,124,197	31,406	50.8	5.6
Uniformed water patrol	95	5,395,032	56,790	39.3	14.3
Conservation department	1,532	62,826,394	41,009	44.2	13.8
School-term salaried employees	1,980	125,538,549	63,403	54.3	18.5
Administrative law judges	40	3,791,758	94,794	53.2	14.6
Total MSEP group	54,542	\$1,916,527,398	35,139	45.1	10.7
Judicial Plan	401	\$ 44,542,530	\$111,079	55.0	11.6

### **Retired Members**

			Group	Averages
Type of Benefit Payment	Number	Annual Benefits	Benefit	Age (Yrs.)
MSEP				
Retirement	26,590	\$401,680,420	\$15,106	69.1
Disability	11	36,408	3,310	57.9
Survivor of active member	1,358	11,755,931	8,657	59.6
Survivor of retired member	2,173	21,168,934	9,742	74.1
Total MSEP group	30,132	\$434,641,693	14,425	69.0
Judicial Plan	440	\$ 22,514,693	\$51,170	75.2

### Others

Group	Terminated-	Leave of	Long-Term
	Vested	Absence	Disability
MSEP	17,069	328	992
Judicial Plan	54	0	0

# ACTIVE MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE

June 30, 2008

### MSEP

	Years of Service to Valuation Date								Totals
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
15-19	60							60	\$ 1,152,730
20-24	1,670	22						1,692	40,774,198
25-29	3,921	798	12					4,731	135,346,918
30-34	2,616	2,078	531	6				5,231	165,191,508
35-39	2,092	1,976	1,755	369	26			6,218	207,891,342
40-44	1,788	1,679	1,501	1,211	538	34		6,751	237,057,693
45-49	1,835	1,794	1,508	1,195	1,274	679	67	8,352	303,311,720
50-54	1,586	1,620	1,455	1,214	1,256	955	525	8,611	324,193,759
55-59	1,215	1,463	1,271	1,200	1,062	605	579	7,395	284,327,971
60	203	258	171	202	148	82	74	1,138	42,574,523
61	177	245	217	185	140	54	70	1,088	41,586,317
62	136	189	175	139	120	61	69	889	35,095,096
63	78	129	115	93	70	37	30	552	22,465,512
64	54	111	82	71	59	29	33	439	17,583,678
65	42	92	87	62	52	23	41	399	16,632,168
66	36	76	43	38	24	14	32	263	11,141,693
67	16	35	52	30	17	8	21	179	6,751,179
68	12	32	29	18	13	7	16	127	5,370,595
69	14	21	19	18	9	3	18	102	4,546,812
70 & Over	53	59	64	47	39	17	46	325	13,531,986
Totals	17,604	12,677	9,087	6,098	4,847	2,608	1,621	54,542	\$1,916,527,398

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

#### **Group Averages:**

Age	45.1 years
Service	10.7 years
Annual pay	\$35,139

# ACTIVE MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE

June 30, 2008

### Judicial Plan

	Years of Service to Valuation Date						Totals		
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payrol
30-34	3							3	\$ 315,996
35-39	8	2						10	1,064,964
40-44	10	18	1					29	3,127,597
45-49	12	19	12	3	1			47	5,168,837
50-54	23	18	23	8	4	3		79	8,777,220
55-59	19	31	24	16	8	11	1	110	12,300,383
60	3	6	3	6	2	1	1	22	2,448,865
61	2	5	8	2	1	3	1	22	2,464,011
62	2	6	6	3	1	2	1	21	2,325,776
63	1	2	1	4	3	3	1	15	1,749,267
64	1	1	2	5	2			11	1,180,440
65		2	2			1	1	6	664,674
66	2	3	2		1	2		10	1,123,547
67		2		1	1	1		5	570,236
68			2	1		1	1	5	577,692
69		1		1		1	1	4	450,573
70				1	1			2	232,452
Totals	86	116	86	51	25	29	8	401	\$44,542,530

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

#### **Group Averages:**

Age	55.0 years
Service	11.6 years
Annual pay	\$111,079

# SCHEDULES OF ACTIVE MEMBER VALUATION DATA

Six Years Ended June 30, 2008

### MSEP

	Schedule of Active Member Valuation Data					
Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay		
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		
June 30, 2008	54,542	1,916,527,398	35,139	3.44		

### ALJLAP\*

		Schedule of Active Member Valuation Data				
Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay		
June 30, 2003 June 30, 2004	57 57	\$4,657,896 4,655,340	\$81,717 81,673	(0.83)% (0.05)		

\* Transferred to the MSEP during the year ended 6/30/2005.

### Judicial Plan

	Schedule of Active Member Valuation Data					
Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay		
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)		
June 30, 2008	401	44,542,530	111,079	8.78		

# RETIREES AND BENEFICIARIES ADDED AND REMOVED

Six Years Ended June 30, 2008

### MSEP

Added to Rolls

Fiscal Year Ended	Classification	Benefit Type	Number	Annual Allowances
June 30, 2003	General employees	Retirement Survivor of active Survivor of retired Disability	1,819 76 206 0	\$33,654,082 808,507 1,944,744 2,109
	Lincoln University - vested	Occupational disability Retirement Survivor of active	0 0 0	0 0 0
	Legislators	Retirement Survivor of active Survivor of retired	45 1 4	880,632 27,031 65,987
	Elected officials	Retirement Survivor of active Survivor of retired	4 0 0 0	(13,546) 2,369 1,007
	ALJs	Retirement Survivor of active Survivor of retired	3 0 0	1,007 166,161 0 5,601
June 30, 2004	General employees	Retirement Survivor of active Survivor of retired Disability Occupational disability	2,454 91 171 1 0	42,366,392 926,617 1,965,930 6,657 0
	Lincoln University - vested Legislators	Retirement Survivor of active Retirement Survivor of active	0 0 10 1	0 0 182,124 16,311
	Elected officials	Survivor of retired Retirement Survivor of active	3 0 0	73,196 0 2,464
	ALJs	Survivor of retired Retirement Survivor of active Survivor of retired	0 1 0 2	1,045 62,331 0 58,362
June 30, 2005	General employees	Retirement Survivor of active Survivor of retired Disability Occupational disability	1,719 78 206 0	27,796,807 891,051 2,036,085 1,409 0
	Lincoln University - vested	Retirement Survivor of active	1 0	3,086 0
	Legislators	Retirement Survivor of active Survivor of retired	31 2 3	606,743 15,361 47,695
	Elected officials	Retirement Survivor of active Survivor of retired	2 0 0	92,916 2,562 1,089
	ALJs	Retirement Survivor of active Survivor of retired	4 0 0	203,829 0 4,987

Removed	d from Rolls	Rolls at	End of Year	Percentage		Percentage Increase (Decrease)
Number	Annual Allowances	Number	Annual Allowances	Increase (Decrease) in Annual Allowances	Average Annual Allowances	in Average Annual Allowances
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	4.36
38	197,250	1,195	8,702,526	9.15	7,282	4.31
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	0	0	0	0.00	0	0.00
2	48,306	8	173,348	6.16	21,669	6.16
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	4.90
92	632,735	1,780	14,867,117	10.42	8,352	3.35
3	12,123	21	69,348	(13.38)	3,302	(1.01)
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 21	28,308	4.00	28,308	4.00
0	0		940,884	27.65	44,804	3.34 0.00
0 0	0 0	0 8	0 178,335	0.00 2.88	0 22,292	2.88
U	U	0	1/0,333	2.00	22,292	2.00

Source of Data: MOSERS benefit payment database as of June 30, 2008.

Other Actuarial Section information reported based on MOSERS data as of May 31, 2008.

MSEP continued on pages 114-115

# RETIREES AND BENEFICIARIES ADDED AND REMOVED

Six Years Ended June 30, 2008

# MSEP Continued from pages 112-113

Added to Rolls

Fiscal Year Ended	Classification	Benefit Type	Number	Annual Allowances
June 30, 2006	General employees	Retirement Survivor of active Survivor of retired Disability	1,853 76 214 0	\$30,323,860 997,296 2,460,805 1,356
	Lincoln University - vested	Occupational disability Retirement Survivor of active	0 1 0	0 3,535 0
	Legislators	Retirement Survivor of active	6 0	141,548 4,398
		Survivor of retired	5	53,788
	Elected officials	Retirement Survivor of active	1 0	24,113 2,664
	ALJs	Survivor of retired Retirement	0 6	1,132 219,793
	2	Survivor of active Survivor of retired	0 1	0 30,686
June 30, 2007	General employees	Retirement	2,211	37,839,159
		Survivor of active Survivor of retired	89 213	897,874 2,630,107
		Disability	0	2,050,107
		Occupational disability	0	0
	Lincoln University - vested	Retirement	0	0
	Legislators	Survivor of active Retirement	0 19	0 303,741
	Legislators	Survivor of active	1	8,157
		Survivor of retired	5	95,976
	Elected officials	Retirement	0	0
		Survivor of active	0	2,771
	ALJs	Survivor of retired Retirement	0 0	1,178 35,846
	1113	Survivor of active	0	0
		Survivor of retired	0	6,071
June 30, 2008	General employees	Retirement	2,159	36,365,696
		Survivor of active	91	971,449
		Survivor of retired	234 0	2,715,274 900
		Disability Occupational disability	0	900
	Lincoln University - vested	Retirement Survivor of active	2 0	5,478 0
	Legislators	Retirement	9	147,136
	0	Survivor of active	0	4,489
		Survivor of retired	5	114,053
	Elected officials	Retirement Survivor of active	0	37,804
		Survivor of active Survivor of retired	0 0	2,882 1,225
	ALJs	Retirement	2	102,631
	-	Survivor of active	0	0
		Survivor of retired	1	30,876

Removed	d from Rolls	Rolls at	End of Year	Percentage		Percentage Increase (Decrease)
Number	Annual Allowances	Number	Annual Allowances	Increase (Decrease) in Annual Allowances	Average Annual Allowances	in Average Annual Allowances
749 48 80 5	\$7,656,047 201,958 658,501 13,560	23,822 1,254 1,914 16	\$341,697,518 10,161,535 16,669,421 57,144	7.11% 8.49 12.12 (17.60)	\$14,344 8,103 8,709 3,572	2.14% 6.06 4.27 8.18
0 0 6 0 2 0 0	$ \begin{array}{c} 0\\ 0\\ 0\\ 124,079\\ 0\\ 39,490\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0$	0 11 238 13 47 12 1	$\begin{array}{c} 0\\ 50,475\\ 2,624\\ 4,609,580\\ 142,555\\ 522,953\\ 477,190\\ 69,274\\ 92,274\end{array}$	$\begin{array}{c} 0.00 \\ 7.53 \\ 0.00 \\ 0.38 \\ 3.18 \\ 2.81 \\ 5.32 \\ 4.00 \end{array}$	$\begin{array}{c} 0\\ 4,589\\ 2,624\\ 19,368\\ 10,966\\ 11,127\\ 39,766\\ 69,274\\ 20,74\end{array}$	$\begin{array}{c} 0.00\\ (2.24)\\ 0.00\\ 0.38\\ 3.19\\ (3.75)\\ (3.45)\\ 4.00\\ (10)\end{array}$
	0 105,777 0 0	1 25 0 9	29,440 1,054,900 0 209,021	4.00 12.12 0.00 17.21	29,440 42,196 0 23,225	4.00 (5.82) 0.00 4.19
$740 \\ 39 \\ 106 \\ 4 \\ 0 \\ 0 \\ 0 \\ 7 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0$	$\begin{array}{c} 8,391,528\\ 281,916\\ 810,074\\ 18,658\\ 0\\ 0\\ 0\\ 178,306\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$	$25,293 \\ 1,304 \\ 2,021 \\ 12 \\ 0 \\ 11 \\ 1 \\ 250 \\ 14 \\ 52 \\ 12 \\ 1 \\ 1 \\ 25 \\ 0 \\ 9$	$\begin{array}{c} 371,145,149\\ 10,777,493\\ 18,489,454\\ 39,590\\ 0\\ 50,475\\ 2,624\\ 4,735,015\\ 150,712\\ 618,929\\ 477,190\\ 72,045\\ 30,618\\ 1,090,746\\ 0\\ 215,092\\ \end{array}$	$\begin{array}{c} 8.62 \\ 6.06 \\ 10.92 \\ (30.72) \\ 0.00 \\ 0.00 \\ 2.72 \\ 5.72 \\ 18.35 \\ 0.00 \\ 4.00 \\ 4.00 \\ 3.40 \\ 0.00 \\ 2.90 \end{array}$	$14,674 \\ 8,265 \\ 9,149 \\ 3,299 \\ 0 \\ 4,589 \\ 2,624 \\ 18,940 \\ 10,765 \\ 11,902 \\ 39,766 \\ 72,045 \\ 30,618 \\ 43,630 \\ 0 \\ 23,899 \\ 2,624 \\ 10,765 \\$	$\begin{array}{c} 2.30\\ 2.00\\ 5.05\\ (7.64)\\ 0.00\\ 0.00\\ (2.21)\\ (1.83)\\ 6.97\\ 0.00\\ 4.00\\ 4.00\\ 3.40\\ 0.00\\ 2.90\end{array}$
$ \begin{array}{c} 853 \\ 59 \\ 137 \\ 1 \\ 0 \\ 0 \\ 10 \\ 0 \\ 3 \\ 0 \\ 0 \\ 0 \\ 2 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0$	$9,745,552 \\ 259,787 \\ 916,500 \\ 4,074 \\ 0 \\ 0 \\ 300,216 \\ 0 \\ 24,638 \\ 0 \\ 0 \\ 94,035 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $	$26,599 \\ 1,336 \\ 2,118 \\ 11 \\ 0 \\ 13 \\ 1 \\ 249 \\ 14 \\ 54 \\ 12 \\ 1 \\ 1 \\ 25 \\ 0 \\ 10 \\ 10 \\ 10 \\ 13 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10$	$\begin{array}{c} 397,765,293\\11,489,155\\20,288,228\\36,416\\0\\55,953\\2,624\\4,581,935\\155,201\\708,344\\514,994\\74,927\\31,843\\1,099,342\\0\\245,968\end{array}$	7.17 $6.60$ $9.73$ $(8.02)$ $0.00$ $10.85$ $0.00$ $(3.23)$ $2.98$ $14.45$ $7.92$ $4.00$ $4.00$ $0.79$ $0.00$ $14.35$	$14,954 \\ 8,600 \\ 9,579 \\ 3,311 \\ 0 \\ 4,304 \\ 2,624 \\ 18,401 \\ 11,086 \\ 13,117 \\ 42,916 \\ 74,927 \\ 31,843 \\ 43,974 \\ 0 \\ 24,597 \\ 0$	$ \begin{array}{r} 1.91 \\ 4.05 \\ 4.70 \\ 0.35 \\ 0.00 \\ (6.21) \\ 0.00 \\ (2.84) \\ 2.98 \\ 10.21 \\ 7.92 \\ 4.00 \\ 4.00 \\ 0.79 \\ 0.00 \\ 2.92 \\ \end{array} $

Source of Data: MOSERS benefit payment database as of June 30, 2008. Other *Actuarial Section* information reported based on MOSERS data as of May 31, 2008.

## RETIREES AND BENEFICIARIES ADDED AND REMOVED

Six Years Ended June 30, 2008

Judicial Plan	Added to Rolls	Removed from Rolls		

Fiscal Year Ended	Benefit Type	Number	Allowances	Number	Allowances
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 Survivor of active Survivor of retired Disability	12 0 7 0	$1,076,421 \\ 36,471 \\ 269,344 \\ 0$	$\begin{array}{c}11\\2\\4\\0\end{array}$	652,803 56,802 86,633 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 Survivor of active Survivor of retired Disability	47 1 13 0	$2,802,873 \\ 64,452 \\ 526,008 \\ 0$	15 2 4 1	967,969 40,742 91,948 54,000
June 30, 2008	Retirement	21	1,554,013	17	946,602
	Survivor of active	0	31,650	4	53,658
	Survivor of retired	11	387,194	8	181,387
	Disability	0	0	0	0

Rolls at End of Year				
Number	Annual Allowances	Percentage Increase (Decrease) in Annual Allowances	Average Annual Allowances	Percentage Increase (Decrease) in Average Annual Allowances
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	100.00	54,000	100.00
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)
311	18,659,873	3.36	60,000	2.00
36	996,941	(2.16)	27,693	8.01
96	2,782,907	7.99	28,989	4.41
0	0	0.00	0	0.00

Source of Data: MOSERS benefit payment database as of June 30, 2008. Other *Actuarial Section* information reported based on MOSERS data as of May 31, 2008.

## SHORT-TERM SOLVENCY TEST

Pension Trust Funds - Ten Years Ended June 30, 2008

### MSEP

	Ac	tuarial Accrued Liabi	lities for				
Fiscal Year	Current Member Contributions (1)	Active and Inactive Retirees and Beneficiaries (2)	Members, Employer Financed Portion (3)	Actuarial Value of Assets Available for Benefits	Actu Covered	Percentage of 1arial Liabilit 1 by Actuaria sets Available (2)	l Value
Ical	(1)	(2)	(3)	Ior Delicits	(1)	(2)	()
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
2008	0	4,408,682,437	4,719,665,033	7,838,495,768	100.0	100.0	72.7

### ALJLAP\*

	Ac	tuarial Accrued Liabi	lities for				
Fiscal Year	Current Member Contributions (1)	Active and Inactive Retirees and Beneficiaries (2)	Members, Employer Financed Portion (3)	Actuarial Value of Assets Available for Benefits	Actu Covered	Percentage of larial Liabilit l by Actuaria sets Available (2)	l Value
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

\*Assets and liabilities transferred to the MSEP during FY05

### Judicial Plan

Actuarial	Accrued	Liabilities	for

	110	tuariar Accided Liabi			D	c	
Fiscal Year	Current Member Contributions (1)	Active and Inactive Retirees and Beneficiaries (2)	Members, Employer Financed Portion (3)	Actuarial Value of Assets Available for Benefits	Actu Covered	ercentage of arial Liabiliti by Actuarial sets Available (2)	Value
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
2008	0	216,369,879	138,426,574	73,194,379	100.0	33.8	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.

		\$ Millions	% of Beginning A	in (Loss) As a Accrued Liabilities ate as of June 30)
(1)	Unfunded actuarial accrued liability (UAAL) at beginning of year	1,123.1	1999	4.7%
(2)	Normal cost from last valuation	164.0	2000	2.7
(3)	Actual employer contributions	252.9	2001	(4.4)
(4)	Interest accrual: (1) x $.085 + [(2) - (3)] x (.085 \div 2)$	91.7	2002	(3.8)
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	1,125.9	2003	(6.4)
(6)	Change from any changes in benefits, assumptions, or methods	168.9	2004	(6.0)
(7)	Expected UAAL after changes: (5) + (6)	1,294.8	2005	(3.4)
(8)	Actual UAAL at end of year	1,289.9	2006	(0.1)
(9)	Gain (loss) (7) - (8)	4.9	2007	1.0
(10)	Gain (loss) as a percent of actuarial accrued liabilities at beginning of year	0.1%	2008	0.1

### Judicial Plan

The actuarial gains or losses realized in the operation of the retirement system provide an experience test. Gains and losses often cancel each other out 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	% of Beginning	uin (Loss) As a Accrued Liabilities te as of June 30)
(1)	Unfunded actuarial accrued liability (UAAL) at beginning of year	264.8	2000	(1.7)%
(1) (2)	Employer normal cost middle of year	8.6	2000	(3.2)
(2) (3)	Employer contributions	26.2	2002	(0.2)
(4)	Interest	20.2	2002	(1.6)
(4)	a. on (1)	22.5	2003	(1.0)
	b. on (2)	0.4	2005	(0.1)
	c. on (3)	1.1	2006	(1.1)
	d. total [a + b - c]	21.8	2007	(0.6)
(5)	Expected UAAL end of year before changes	269.0	2008	(3.0)
(6)	Change in UAAL end of year			
	a. amendments	0.0		
	b. assumptions and technical corrections	2.9		
	c. methods	0.0		
	d. total	2.9		
(7)	Expected UAAL after changes: (5) + (6d)	271.9		
(8)	Actual UAAL at end of year	281.6		
(9)	Gain (loss) (7) - (8)	(9.7)		
(10)	Gain (loss) as a percent of actuarial accrued liabilities at beginning of year	(3.0)%		

MSEP and MSEP 2000\* - Comparison of Plans for General State Employees - June 30, 2008

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 returned 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, Age 65 with 5 years of service, Age 60 with 15 years of service, 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.
<b>Benefit</b> Life benefit Temporary benefit	1.6% x final average pay (FAP) x service. Not available.	<ul><li>1.7% x FAP x service.</li><li>0.8% x FAP x service (until age 62 - only if retiring under "Rule of 80").</li></ul>
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 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	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)	<ul> <li>Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:</li> <li>Life Income Annuity</li> <li>Unreduced Joint &amp; 50% Survivor</li> <li>Joint &amp; 100% Survivor</li> <li>60 or 120 Guaranteed Payments</li> <li>BackDROP</li> </ul>	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.

MSEP and MSEP 2000 - Comparison of Plans for Uniformed Members of the Water Patrol - June 30, 2008

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 returned 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, Age 55 with 5 years of service, 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	1.6% x FAP x service increased by 33.3%.	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 COLA	COLA given for service beyond age 65. COLA provisions are determined by employment date.	Not available.
COLA	<ul> <li>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%.</li> <li>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%.</li> </ul>	Annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.
<b>Survivor benefit</b> ( <b>Death before retirement</b> ) 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 member's 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)	<ul> <li>Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:</li> <li>Life Income Annuity</li> <li>Unreduced Joint &amp; 50% Survivor</li> <li>Joint &amp; 100% Survivor</li> <li>60 or 120 Guaranteed Payments</li> <li>BackDROP</li> </ul>	<ul> <li>Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:</li> <li>Life Income Annuity</li> <li>Joint &amp; 50% Survivor</li> <li>Joint &amp; 100% Survivor</li> <li>120 or 180 Guaranteed Payments</li> <li>BackDROP</li> </ul>

MSEP and MSEP 2000 - Comparison of Plans for Legislators - June 30, 2008

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.
<b>Benefit</b> 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.
<b>Survivor benefit</b> ( <b>Death before retirement</b> ) 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 or children	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
Duty-related death	no less than 50% of current pay (no service requirement).	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

MSEP and MSEP 2000 - Comparison of Plans for Elected Officials - June 30, 2008

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, Age 60 with 15 years of service, or "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.
<b>Benefit</b> Life benefit	<u>12 or more years of service</u> 50% or current pay for highest position held. <u>Less than 12 years of service</u> 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	<ul> <li><u>12 or more years of service</u> COLA is equal to the percentage increase in the current pay of an active elected state official in the highest position held.</li> <li><u>Less than 12 years of service</u> 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%.</li> <li>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%.</li> </ul>	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

Administrative Law Judges and Legal Advisors\* - June 30, 2008

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 years 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 (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 (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.

Judicial Plan - June 30, 2008

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 years 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 (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 (Death after retirement)	Survivor benefit to eligible spouse equal to 50% of the member's annuity at the time of death.

Life Insurance Plans - June 30, 2008

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

Active Members*	Requirement
<b>Basic life insurance</b> 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.
<b>Duty-related death benefit</b> 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.
<b>Optional life insurance</b> 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
Basic life insurance at retirement \$5,000 basic life insurance during retirement.	Must retire directly from active employment.
<b>Optional life insurance at retirement (MSEP)</b> 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.
<b>Optional life insurance at retirement (MSEP 2000)</b> 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.

Long-Term Disability (LTD) Plans - June 30, 2008

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.	<b>Long-term disability</b> - 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

There were no plan provision changes during FY08.

# ACTUARIAL PRESENT VALUES

As of June 30, 2008

MSEP

Actuarial Present Value June 30, 2008 for	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities
Active members			
Service retirement benefits based on services rendered before and likely to be rendered after valuation date	\$4,491,415,808	\$ 735,340,448	\$3,756,075,360
Disability benefits likely to be paid to present active members who become totally and permanently disabled	142,748,726	65,439,120	77,309,606
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	110,605,527	29,557,661	81,047,866
Separation benefits likely to be paid to present active members	486,000,062	234,333,756	251,666,306
Active member totals	\$5,230,770,123	\$1,064,670,985	4,166,099,138
Members on leave of absence & LTD Service retirement benefits based on service rendered before the va	luation date		117,108,672
<b>Terminated-vested members</b> Service retirement benefits based on service rendered before the va	duation date		436,101,009
Retired lives			4,408,682,437
BackDROP installment payments incurred, but not yet paid			356,214
Total actuarial accrued liability			9,128,347,470
Actuarial value of assets			7,838,495,768
Unfunded actuarial accrued liability			\$1,289,851,702

### Judicial Plan

Actuarial Present Value June 30, 2008 for	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities
Active members Service retirement benefits based on services rendered			
before and likely to be rendered after valuation date	\$179,766,511	\$57,041,490	\$122,725,021
Disability benefits likely to be paid to present active members who become totally and permanently disabled	901,538	848,541	52,997
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	5,716,974	3,316,483	2,400,491
Active member totals	\$186,385,023	\$61,206,514	125,178,509
Retired lives			216,369,879
Terminated-vested members			13,248,065
Total actuarial accrued liability			354,796,453
Actuarial value of assets			73,194,379
Unfunded actuarial accrued liability			\$281,602,074

YOUR SUCCESSFUL RETIREMENT IS OUR BUSINESS WE'LL PUT OUR BEST FOOT FORWARD



### STATISTICAL SECTION

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### SUMMARY

#### Plan Membership

Membership in the pension trusts administered by MOSERS increased by 2,168. Active members increased by 180, retired members and their beneficiaries increased by 1,443, and terminated-vested members increased by 545. Membership data for the last ten years ended June 30, 2008, can be found on page 139. Page 142 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 pages 134-137 graphically represent the funding progress of the pension plans for the ten years ended June 30, 2008. 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 illustrate the funded ratio of the plans for the ten years ended June 30, 2008.

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 134-139, 143, and 152-153). Member data may differ between some schedules since the valuations are performed using data as of May 31 each year.

# CHANGES IN NET ASSETS

Last Ten Fiscal Years

	FY99	FY00	<b>FY01</b>	FY02
MSEP				
Additions				
Employer contributions	\$197,909,834	\$202,330,547	\$ 215,750,128	\$ 209,515,026
Member service purchases	1,151,328	1,991,206	1,918,572	3,913,426
Service transfers in	147,315	3,468,697	167,640	48,840
Investment income (net of expenses)	504,026,290	402,878,683	(112,164,123)	(348,106,057)
Other Total additions to plan not exects	<u>659,215</u> 703,893,982	<u>629,924</u> 611,299,057	<u>418,663</u> 106,090,880	<u>447,462</u> (134,181,303)
Total additions to plan net assets <b>Deductions</b>	/03,895,982	011,299,037	100,090,880	(134,181,303)
Benefits Refunds	155,299,924 0	179,690,822 889	217,862,853 0	268,480,982 0
Service transfers out	0	18,609	31,482	27,970
Administrative expenses	5,763,229	5,487,531	5,749,965	5,753,812
Total deductions from plan net assets	161,063,153	185,197,851	223,644,300	274,262,764
Transfer from ALJLAP	0	0	0	
Change in net assets	\$542,830,829	\$426,101,206	\$(117,553,420)	\$(408,444,067)
ALJLAP				
Additions				
Employer contributions	\$ 639,285	\$ 807,022	\$ 1,074,946	\$ 1,072,562
Investment income (net of expenses)	1,205,813	961,336	(273,380)	(874,249)
Other	1,577	1,503	1,020	1,124
Total additions to plan net assets	1,846,675	1,769,861	802,586	199,437
Deductions Benefits	747,663	755,574	776,422	836,615
Administrative expenses	13,788	13,094	14,015	14,450
Total deductions from plan net assets	761,451	768,668	790,437	851,065
Transfer to MSEP	0	0	0	0
Change in net assets	\$ 1,085,224	\$ 1,001,193	\$ 12,149	\$ (651,628)
-				
Judicial Plan				
Additions				
Employer contributions	\$ 17,862,353	\$ 19,988,676	\$ 22,473,913	\$ 22,088,485
Investment income (net of expenses)	452,499	869,566	(391,124)	(1,680,566)
Other To be little and be a set of the set o	592	1,360	1,460	2,160
Total additions to plan net assets <b>Deductions</b>	18,315,444	20,859,602	22,084,249	20,410,079
Benefits	12,229,325	13,292,188	15,010,098	15,943,642
Administrative expenses	5,174	11,844	20,051	27,778
Total deductions from plan net assets	12,234,499	13,304,032	15,030,149	15,971,420
Change in net assets	\$ 6,080,945	\$ 7,555,570	\$ 7,054,100	\$ 4,438,659
Internal Service Fund				
<b>Operating revenues</b> Premium receipts	\$ 18,942,592	\$ 20,119,784	\$ 23,185,529	\$ 24,753,708
Deferred compensation receipts	(3, 10, 742, 772)	\$ 20,117,784 0	$\phi 23,103,323$	φ 24,7 JJ,708 0
Miscellaneous income	444,617	436,488	464,351	436,489
Total operating revenues	19,387,209	20,556,272	23,649,880	25,190,197
Operating expenses				
Premium disbursements	18,877,414	20,049,507	22,480,704	24,675,520
Deferred compensation disbursements	0	0	0	0
Premium refunds	65,177	70,277	704,825	78,188
Administrative expenses	622,545	519,271	410,906	439,232
Other Total operating expenses	<u>5,000</u> 19,570,136	0 20,639,055	23,596,435	25,192,940
Nonoperating revenues	19,9/0,130	20,039,033	23,370,433	27,172,740
Investment income	55,323	68,349	81,717	47,767
Change in net assets	\$ (127,604)	\$ (14,434)	\$ 135,162	\$ 45,024
5		/	•	·

FY03	703 FY04 FY05		FY06	<b>FY0</b> 7	FY08			
\$156,576,150	\$ 164,691,836	\$194,524,059	\$227,233,195	\$ 239,488,751	\$ 249,770,156			
3,690,820	3,426,367	4,122,001	3,072,315	3,460,923	3,085,133			
53,119	166,510	29,397	161,613	172,936	38,069			
332,901,027	873,793,645	727,341,314	728,526,971	1,283,573,438	108,497,467			
437,574	469,959	1,231,658	501,512	542,266	572,274			
493,658,690	1,042,548,317	927,248,429	959,495,606	1,527,238,314	361,963,099			
210 (07 447	2(7.2/2.000	267 421 207	400 1 (0 5 ( 2	667 260 771	470 052 001			
319,607,447 4,019	367,248,099	367,431,297 0	400,169,563 1,341	447,240,771 0	479,853,891 0			
2,191,487	8,585 529,177	199,201	133,866	51,980	251,443			
5,954,365	5,694,082	6,228,609	6,486,597	6,689,710	6,950,878			
327,757,318	373,479,943	373,859,107	406,791,367	453,982,461	487,056,212			
0	0	18,157,148	0	0				
\$165,901,372	\$ 669,068,374	\$571,546,470	\$552,704,239	\$1,073,255,853	\$(125,093,113)			
<i>\\</i>	¢ 007,000,07,1	<i>\$77,177,10,17,0</i>	¢>>2,7 0 1,207	¢1;0;0; <b>2</b> ));0)0	¢(12),0)0,110)			
\$ 951,023	\$ 945,950	\$ 1,124,924	\$ 0	\$ 0	\$ 0			
862,381	2,344,262	2,057,375	, 0	, 0	0			
1,134	1,261	3,484	0	0	0			
1,814,538	3,291,473	3,185,783	0	0	0			
969,918	1,003,355	749,197	0	0	0			
15,425	15,276	17,618	0	0	0			
985,343	1,018,631	766,815	0	0	0			
0	<u> </u>	(18,157,148)	<u> </u>	<u> </u>	<u> </u>			
\$ 829,195	\$ 2,272,842	\$ (15,738,180)	\$ 0	\$ 0	\$ 0			
\$ 20,802,140	\$ 20,636,314	\$ 21,852,985	\$ 22,401,569	\$ 23,745,467	\$ 26,215,309			
\$ 20,802,140 1,932,815	5,800,076	5,409,107	5,933,531	11,356,312	1,043,940			
2,541	3,119	9,160	4,085	4,798	5,506			
22,737,496	26,439,509	27,271,252	28,339,185	35,106,577	27,264,755			
22,737,470	20,437,707	2/,2/1,2)2	20,557,107	55,100,577	2/,204,/))			
16,870,011	17,658,269	18,396,397	19,091,587	20,595,504	22,058,085			
34,571	37,796	46,321	52,830	59,187	66,880			
16,904,582	17,696,065	18,442,718	19,144,417	20,654,691	22,124,965			
\$ 5,832,914	\$ 8,743,444	\$ 8,828,534	\$ 9,194,768	\$ 14,451,886	\$ 5,139,790			
\$ 25,223,043	\$ 25,771,703	\$ 27,305,305	\$ 26,415,236	\$ 27,101,931	\$ 27,957,666			
0	0	0	0	0	60,393,973			
436,494	436,489	436,489	436,501	436,502	536,493			
25,659,537	26,208,192	27,741,794	26,851,737	27,538,433	88,888,132			
25,169,883	25,736,083	27,271,948	26,379,919	27,063,815	27,927,265			
0	0	0	0	0	60,371,802			
53,160	35,620	33,357	35,317	38,116	30,401			
421,507	474,040	466,531	487,699	527,040	708,100			
0	0	0	0	0	0			
25,644,550	26,245,743	27,771,836	26,902,935	27,628,971	89,037,568			
21 170	74 252	40.200	05 10%	117 720	77 207			
<u>31,179</u> \$ 46,166	<u>24,353</u> \$ (13,198)	<u>49,326</u> \$ 19,284	<u> </u>	<u> </u>	<u>77,396</u> \$ (72,040)			
φ 10,100	ψ (13,170)	ψ 17,204	φ 55,720	ψ 2/,1/1	φ (72,040)			

# DEDUCTIONS FROM NET ASSETS FOR BENEFITS AND REFUNDS BY TYPE

Last Ten Fiscal Years

		FY99		FY00		FY01		FY02		FY03
MSEP										
Type of benefit	¢ 1	42 220 107	¢14	7 10/ 011	¢10	0 470 092	¢aa	0 222 100	¢~	57 002 204
Retirement Survivors	\$1·	43,330,197 9,812,877		57,184,011 12,602,200		9,479,082 5,184,214		29,333,190 17,482,292	φz	257,883,204 19,689,766
Disability		245,284		219,550	1	178,337	1	145,856		118,279
Lump sum		1,871,798		1,522,312		1,886,958		1,893,194		1,384,599
Benefit Adjustments & BackDROPs		39,768		8,162,749		1,134,262	1	1,626,450		40,531,599
Total benefits	\$1	55,299,924	\$17	79,690,822		7,862,853		58,480,982	\$3	<u>10,991,999</u> 319,607,447
Refunds	\$	0	\$	889	\$	0	\$	0	\$	4,019
ALJLAP*										
Type of benefit										
Retirement	\$	630,161	\$	627,865	\$	629,094	\$	680,391	\$	808,124
Survivors		117,502		127,709		147,328		156,224		161,794
Total benefits	\$	747,663	\$	755,574	\$	776,422	\$	836,615	\$	969,918
Judicial Plan										
Type of benefit										
Retirement	\$	10,202,222	\$	11,054,218	\$ 1	2,621,473	\$ 1	13,525,249	\$	14,256,361
Survivors		1,969,206		2,192,748		2,340,625		2,379,860		2,613,650
Disability		57,897		45,222		48,000		38,533		0
Total benefits	\$	12,229,325	\$	13,292,188	\$ 1	5,010,098	\$ 1	5,943,642	\$	16,870,011
		FY04		FY05		FY06		<b>FY07</b>		FY08
MSEP										
<b>Type of benefit</b> Retirement	¢a	95,200,937	¢2.	14,623,851	¢22	9 440 207	\$21	( 195 000	¢a	02 220 057
Survivors		21,930,438		24,251,854		8,449,307 6,944,984		56,185,990 29,340,464	Φ3	93,328,057 31,894,702
Disability		102,696	4	82,246	2	62,324	2	42,273		36,825
Lump sum		320,267		342,720		459,398		556,568		454,643
Benefit Adjustments & BackDROPs		49,693,761		28,130,626	2	34,253,550	5	51,115,476		54,139,664
Total benefits		67,248,099		67,431,297	\$40	0,169,563		47,240,771	\$4	479,853,891
Refunds	\$	8,585	\$	0	\$	1,341	\$	0	\$	0
ALJLAP*										
Type of benefit										
Retirement	\$	840,963	\$	616,370	\$	0	\$	0	\$	0
Survivors	Ψ	162,392	Ψ	132,827	Ψ	0	Ψ	0	Ψ	0
Total benefits	\$	1,003,355	\$	749,197	\$	0	\$	0	\$	0
Judicial Plan										

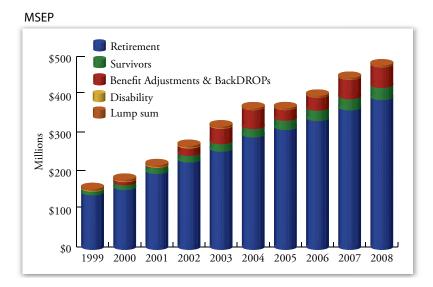
Type of benefit Retirement \$ 14,913,678 \$ 15,513,182 \$ 15,989,341 \$ 17,135,426 \$ 18,342,676 2,744,591 2,883,215 3,433,078 3,715,409 Survivors 3,070,746 Disability 31,500 27,000 0 0 Total benefits \$ 17,658,269 \$ 18,396,397 \$ 19,091,587 \$ 20,595,504 \$ 22,058,085

0

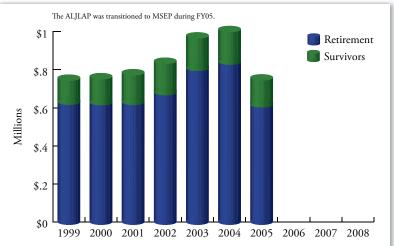
\*ALJLAP transitioned to the MSEP in FY05

# DEDUCTIONS FROM NET ASSETS FOR BENEFITS AND REFUNDS BY TYPE

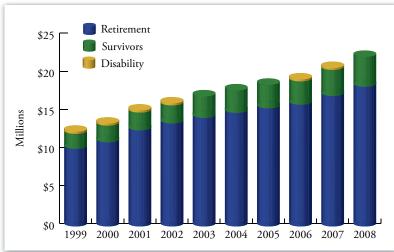
Last Ten Fiscal Years









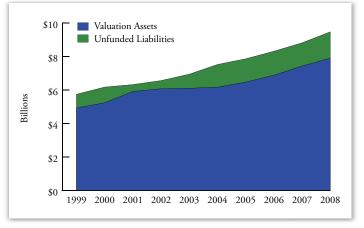


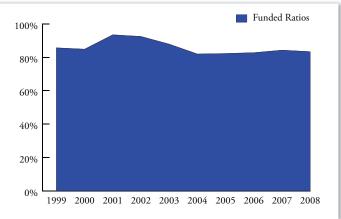
### Pension Trust Funds - All Plans Combined VALUATION ASSETS VS. PENSION LIABILITIES Last Ten Fiscal Years

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

Fiscal Year	Valuation Assets	Unfunded Liabilities	Accrued Liabilities	Funded Ratios
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
2008	7.9117	1.5714	9.4831	83.4

Actuarial Accrued Liabilities - All Plans Combined





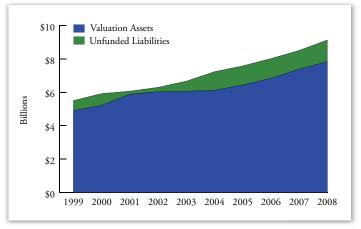
#### Valuation Assets as Percents of Pension Liabilities - All Plans Combined

### Pension Trust Funds - MSEP VALUATION ASSETS VS. PENSION LIABILITIES Last Ten Fiscal Years

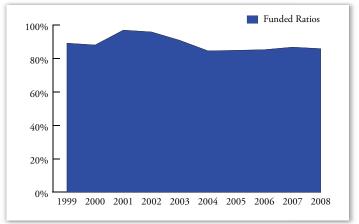
#### Valuation Assets (at market) vs. Pension Liabilities

Fiscal Year	Valuation Assets	Unfunded Liabilities	Accrued Liabilities	Funded Ratios
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
2008	7.8385	1.2898	9.1283	85.9

#### Actuarial Accrued Liabilities - MSEP



Valuation Assets as Percents of Pension Liabilities - MSEP



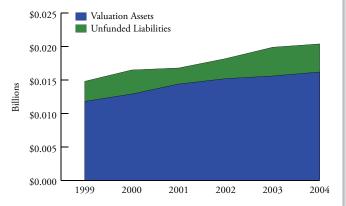
### Pension Trust Funds - ALJLAP\* VALUATION ASSETS VS. PENSION LIABILITIES Last Ten Fiscal Years

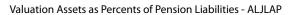
#### Valuation Assets (at market) vs. Pension Liabilities

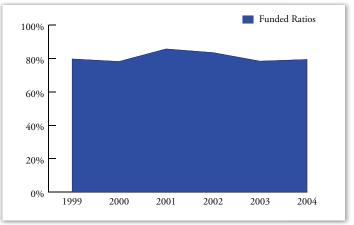
Fiscal Year	Valuation Assets	Unfunded Liabilities	Accrued Liabilities	Funded Ratios
1999	\$0.0118	\$0.0030	\$0.0148	79.7%
2000	0.0129	0.0036	0.0165	78.2
2001	0.0144	0.0024	0.0168	85.7
2002	0.0152	0.0030	0.0182	83.5
2003	0.0156	0.0043	0.0199	78.4
2004	0.0162	0.0042	0.0204	79.4

\*Assets and liabilities transferred to MSEP during FY05.









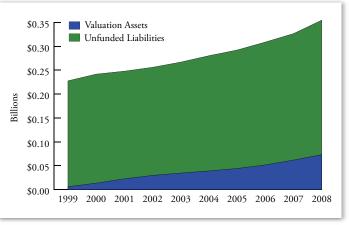
### Pension Trust Funds - Judicial Plan VALUATION ASSETS VS. PENSION LIABILITIES Last Ten Fiscal Years

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

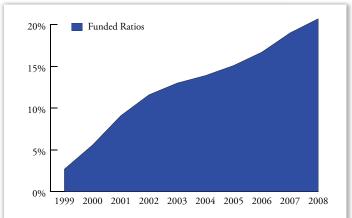
Fiscal Year	Valuation Assets	Unfunded Liabilities	Accrued Liabilities	Funded Ratios
1999	\$0.0061	\$0.2217	\$0.2278	2.7%
2000	0.0135	0.2283	0.2418	5.6
2001	0.0226	0.2254	0.2480	9.1
2002	0.0297	0.2264	0.2561	11.6
2003	0.0346	0.2324	0.2670	13.0
2004	0.0391	0.2413	0.2804	13.9
2005	0.0442	0.2481	0.2923	15.1
2006	0.0517	0.2573	0.3090	16.7
2007	0.0619	0.2648	0.3267	19.0
2008	0.0732	0.2816	0.3548	20.7

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







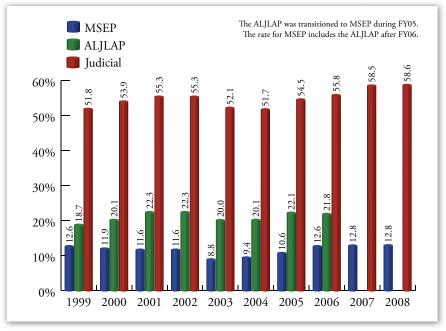


# CONTRIBUTION RATES

Last Ten Fiscal Years

		Percent of Payroll	
Fiscal Year	MSEP	ALJLAP	Judicial Plan
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	0.00	58.48
2008	12.84	0.00	58.65

**Contribution Rates** 

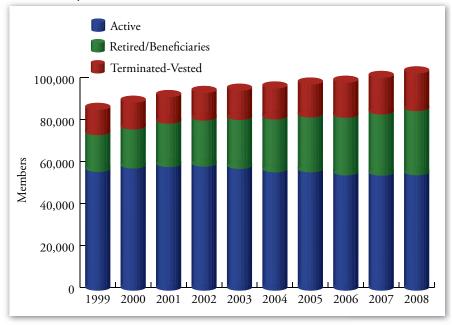


# MEMBERSHIP IN RETIREMENT PLANS

Last Ten Fiscal Years

Fiscal Year	Active	Retired/ Beneficiaries	Terminated- Vested	Totals
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
2008	54,943	30,572	17,123	102,638

Membership in Retirement Plans



## BENEFIT RECIPIENTS BY TYPE OF RETIREMENT AND OPTION SELECTED June 30, 2008

#### MSEP

			Type of Retirement					
Amount of Monthly Benefit	Number of Benefit Recipients	Α	В	С	D	E	F	G
1-250	3,792	1,474	1,547	301	429	5	0	36
251-500	5,372	2,680	1,712	375	560	6	0	39
501-750	4,296	2,842	766	266	397	0	0	25
751-1000	3,310	2,659	304	121	218	0	0	8
1001-1250	2,606	2,220	125	89	166	0	0	6
1251-1500	2,051	1,819	64	59	108	0	0	1
1501-1750	1,790	1,642	33	40	72	0	0	3
1751-2000	1,521	1,431	17	27	46	0	0	0
Over 2000	5,706	5,414	30	74	187	0	0	1
Total	30,444	22,181	4,598	1,352	2,183	11	0	119

#### Judicial Plan

				Туре о	f Retirement	:		
Amount of Monthly Benefit	Number of Benefit Recipients	Α	В	С	D	Ε	F	G
1-250	2	0	1	0	1	0	0	0
251-500	10	0	7	0	2	0	0	1
501-750	5	0	0	1	3	0	0	1
751-1000	12	0	3	1	7	0	0	1
1001-1250	3	0	1	1	1	0	0	0
1251-1500	3	0	3	0	0	0	0	0
1501-1750	12	1	5	3	3	0	0	0
1751-2000	13	0	6	2	5	0	0	0
Over 2000	383	251	29	28	74	0	0	1
Total	443	252	55	36	96	0	0	4

#### Type of Retirement

- А Normal retirement
- В Early retirement
- С Survivor of active
- D Survivor of retired
- Е Disability
- F Occupational disability (Water Patrol)
- G Ex-spouse

	Option Selected										
1	2	3	4	5	6	7	8	9	10		
0	24	127	89	190	1	739	629	46	1,947		
10	39	120	57	179	6	1,071	1,099	20	2,771		
7	30	86	39	148	4	898	1,069	11	2,004		
8	25	45	19	190	3	650	843	2	1,525		
11	16	44	15	198	1	486	596	1	1,238		
16	10	29	16	202	1	416	409	0	952		
10	7	23	12	244	0	305	306	1	882		
10	5	20	11	232	0	316	186	1	740		
59	18	62	22	831	3	1,509	840	1	2,361		
131	174	556	280	2,414	19	6,390	5,977	83	14,420		

Ontion Selected

**Option Selected** 

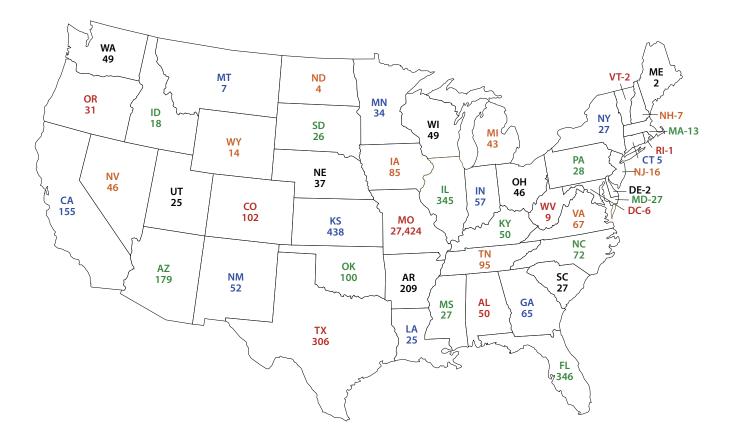
1	2	3	4	5	6	7	8	9	10
2	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	2
1	0	0	0	2	0	0	0	0	2
4	0	0	0	4	0	0	0	0	4
1	0	0	0	0	0	0	0	0	2
3	0	0	0	0	0	0	0	0	0
6	0	0	0	1	0	0	0	0	5
6	0	0	0	3	0	0	0	0	4
344	0	0	0	30	0	0	0	0	9
375	0	0	0	40	0	0	0	0	28

#### **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, 2008



Benefit Recipients Outside the Continental United States

- 9 Alaska
- 5 Hawaii
- 1 APO
- 1 Argentina
- 1 Australia
- 5 Canada
- 1 Colombia, South America
- 1 Germany
- 1 Guam
- 1 Ireland

- 1 Israel
- 2 Italy
- 1 Mexico
- 1 Panama
- 1 Philippines
- 1 Sweden
- 1 The Netherlands
- 1 United Arab Emirates
- 1 United Kingdom
- 1 Wales UK

# BENEFITS PAYABLE JUNE 30, 2008

Tabulated by Option and Type of Benefit

#### MSEP

Type of Benefit	Number	Annual Funded Benefits	Average Annual Benefits
Service retirement			
Life annuity	4,830	\$ 52,824,646	\$10,937
50% joint and survivor	5,113	75,684,127	14,802
75% joint and survivor	3	48,068	16,023
100% joint and survivor	2,410	41,758,075	17,327
5-year certain and life	123	1,200,723	9,762
10-year certain and life	118	976,630	8,277
Survivor beneficiary	1,892	18,494,710	9,775
Total	14,489	190,986,979	13,182
Disability retirement	11	36,408	3,310
Death-in-service	1,331	11,680,836	8,776
Grand totals	15,831	\$202,704,223	12,804

#### MSEP 2000

Type of Benefit	Number	Annual Funded Benefits	Average Annual Benefits
Service retirement			
Life annuity	9,148	\$137,260,520	\$15,004
50% joint and survivor	2,174	47,362,831	21,786
100% joint and survivor	2,016	37,325,991	18,515
5-year certain and life	45	637,238	14,161
10-year certain and life	362	4,337,079	11,981
15-year certain and life	248	2,264,492	9,131
Survivor beneficiary	281	2,674,224	9,517
Total	14,274	231,862,375	16,244
Death-in-service	27	75,095	2,781
Grand totals	14,301	\$231,937,470	16,218

#### Judicial Plan

Type of Benefit	Number	Annual Funded Benefits	Average Annual Benefits
Service retirement			
Life annuity	6	\$ 326,448	\$54,408
50% joint and survivor	303	18,419,935	60,792
Survivor beneficiary	95	2,767,748	29,134
Total	404	21,514,131	53,253
Death-in-service	36	1,000,562	27,793
Grand totals	440	\$22,514,693	51,170

Ten Years Ended June 30, 2008

#### MSEP

		Years Credited Service by Category							
Members	Retiring During Fiscal Year	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
1999	Average monthly benefit	\$ 126	\$234	\$ 375	\$ 614	\$ 861	\$1,244	\$1,875	\$ 1,002
	Average final average salary	\$1,870	\$1,999	\$2,084	\$2,272	\$2,361	\$2,640	\$3,299	\$ 2,545
	Number of retirees	4	103	159	172	171	219	252	1,080
2000	Average monthly benefit	\$ 175	\$ 240	\$ 363	\$ 649	\$ 843	\$1,363	\$1,892	\$ 1,040
	Average final average salary	\$2,700	\$1,973	\$2,042	\$2,351	\$2,319	\$2,904	\$3,290	\$ 2,605
	Number of retirees	7	115	173	162	183	242	278	1,160
2001	Average monthly benefit	\$232	\$ 256	\$ 432	\$ 682	\$ 970	\$1,388	\$1,753	\$ 1,087
	Average final average salary	\$2,386	\$2,085	\$2,128	\$2,457	\$2,522	\$2,911	\$3,076	\$ 2,645
	Number of retirees	12	357	322	204	254	465	735	2,349
2002	Average monthly benefit	\$ 97	\$ 259	\$ 427	\$ 653	\$ 999	\$1,448	\$1,889	\$ 975
	Average final average salary	\$1,373	\$2,239	\$2,178	\$2,431	\$2,611	\$3,049	\$3,331	\$ 2,659
	Number of retirees	6	238	285	236	253	364	251	1,633
2003	Average monthly benefit	\$ 113	\$ 284	\$508	\$ 769	\$1,051	\$1,450	\$1,808	\$ 1,052
	Average final average salary	\$1,574	\$2,169	\$2,422	\$2,618	\$2,709	\$3,051	\$3,266	\$ 2,757
	Number of retirees	6	213	249	240	297	448	257	1,710
2004	Average monthly benefit	\$ 125	\$281	\$ 423	\$ 688	\$1,035	\$1,445	\$1,650	\$ 1,002
	Average final average salary	\$1,837	\$2,384	\$2,263	\$2,555	\$2,698	\$3,044	\$3,033	\$ 2,717
	Number of retirees	6	307	310	323	398	602	350	2,296
2005	Average monthly benefit	\$281	\$284	\$ 467	\$  678	\$1,179	\$1,568	\$1,960	\$ 939
	Average final average salary	\$3,990	\$2,364	\$2,259	\$2,558	\$3,055	\$3,352	\$3,500	\$ 2,800
	Number of retirees	4	316	274	284	272	340	132	1,622
2006	Average monthly benefit	\$ 426	\$ 282	\$ 437	\$  700	\$1,037	\$1,571	\$1,856	\$ 907
	Average final average salary	\$3,520	\$2,403	\$2,328	\$2,689	\$2,750	\$3,326	\$3,447	\$ 2,778
	Number of retirees	3	355	310	292	295	356	163	1,774
2007	Average monthly benefit	\$ 150	\$  275	\$ 479	\$ 693	\$1,112	\$1,568	\$1,865	\$ 945
	Average final average salary	\$2,613	\$2,344	\$2,487	\$2,645	\$2,941	\$3,326	\$3,418	\$ 2,829
	Number of retirees	1	442	324	343	354	451	211	2,126
2008	Average monthly benefit	\$ 0	\$ 267	\$ 458	\$ 725	\$1,090	\$1,586	\$2,025	\$ 919
	Average final average salary	\$ 0	\$2,373	\$2,422	\$2,775	\$2,904	\$3,363	\$3,658	\$ 2,835
	Number of retirees	0	425	412	344	369	382	195	2,127
Ten Years	s Ended June 30, 2008 Average monthly benefit Average final average salary Number of retirees	\$ 185 \$2,303 49	\$ 270 \$2,281 2,871	\$ 443 \$2,285 2,818	\$ 690 \$2,567 2,600	\$1,036 \$2,728 2,846	\$1,473 \$3,115 3,869	\$1,825 \$3,258 2,824	\$986 \$2,729 17,877

Ten Years Ended June 30, 2008

General Employees in the MSEP

		Years Credited Service by Category							
Members	Retiring During Fiscal Year	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
1999	Average monthly benefit	\$126	\$225	\$ 344	\$ 601	\$ 861	\$1,238	\$1,872	\$ 995
	Average final average salary	\$1,870	\$1,989	\$2,038	\$2,268	\$2,361	\$2,640	\$3,297	\$2,538
	Number of retirees	4	101	157	170	171	218	251	1,072
2000	Average monthly benefit	\$ 175	\$ 221	\$ 356	\$ 642	\$ 843	\$1,363	\$1,887	\$1,038
	Average final average salary	\$2,700	\$1,950	\$2,039	\$2,349	\$2,319	\$2,904	\$3,287	\$2,604
	Number of retirees	7	111	172	161	183	242	277	1,153
2001	Average monthly benefit	\$ 101	\$ 240	\$ 395	\$ 642	\$ 962	\$1,381	\$1,751	\$1,076
	Average final average salary	\$1,619	\$2,060	\$2,058	\$2,413	\$2,508	\$2,912	\$3,074	\$2,625
	Number of retirees	11	352	317	200	253	462	734	2,329
2002	Average monthly benefit	\$97	\$ 256	\$ 416	\$ 641	\$ 988	\$1,444	\$1,883	\$ 968
	Average final average salary	\$1,373	\$2,237	\$2,174	\$2,429	\$2,592	\$3,050	\$3,333	\$2,656
	Number of retirees	6	237	282	234	252	363	249	1,623
2003	Average monthly benefit	\$ 113	\$ 244	\$ 471	\$ 675	\$1,027	\$1,446	\$1,805	\$1,033
	Average final average salary	\$1,574	\$2,145	\$2,414	\$2,557	\$2,711	\$3,052	\$3,269	\$2,752
	Number of retirees	6	202	239	225	292	447	256	1,667
2004	Average monthly benefit	\$ 125	\$ 271	\$ 423	\$ 676	\$1,035	\$1,445	\$1,650	\$1,001
	Average final average salary	\$1,837	\$2,379	\$2,263	\$2,554	\$2,698	\$3,043	\$3,033	\$2,717
	Number of retirees	6	301	310	320	398	601	350	2,286
2005	Average monthly benefit	\$229	\$ 262	\$ 413	\$ 668	\$1,133	\$1,568	\$1,915	\$917
	Average final average salary	\$4,449	\$2,355	\$2,178	\$2,555	\$3,015	\$3,352	\$3,528	\$2,782
	Number of retirees	3	305	267	281	265	340	128	1,589
2006	Average monthly benefit	\$ 95	\$ 267	\$ 426	\$  700	\$1,037	\$1,557	\$1,839	\$898
	Average final average salary	\$1,362	\$2,373	\$2,325	\$2,689	\$2,750	\$3,303	\$3,419	\$2,761
	Number of retirees	2	350	307	292	295	353	161	1,760
2007	Average monthly benefit	\$ 0	\$ 259	\$ 474	\$ 686	\$1,112	\$1,568	\$1,857	\$ 943
	Average final average salary	\$ 0	\$2,337	\$2,486	\$2,645	\$2,941	\$3,326	\$3,422	\$2,831
	Number of retirees	0	430	322	341	354	451	210	2,108
2008	Average monthly benefit	\$ 0	\$ 262	\$ 451	\$ 713	\$1,090	\$1,586	\$2,025	\$ 917
	Average final average salary	\$ 0	\$2,371	\$2,418	\$2,760	\$2,904	\$3,363	\$3,658	\$2,833
	Number of retirees	0	421	408	342	369	382	195	2,117
Ten Year	s Ended June 30, 2008 Average monthly benefit Average final average salary Number of retirees	\$ 127 \$1,977 45	\$ 256 \$2,268 2,810	\$ 424 \$2,264 2,781	\$ 671 \$2,555 2,566	\$1,027 \$2,720 2,832	\$1,470 \$3,113 3,859	\$1,819 \$3,257 2,811	\$ 978 \$2,722 17,704

Ten Years Ended June 30, 2008

#### Uniformed Members of the Water Patrol in the MSEP

		Years Credited Service by Category							
Members	Retiring During Fiscal Year	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
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	\$1,743	\$ 0	\$1,743
	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	\$1,267	\$ 0	\$ 0	\$ 0	\$1,267
	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	\$2,848	\$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
2008	Average monthly benefit	\$ 0	\$ 0	\$750	\$ 0	\$ 0	\$ 0	\$ 0	\$ 750
	Average final average salary	\$ 0	\$ 0	\$2,541	\$ 0	\$ 0	\$ 0	\$ 0	\$2,541
	Number of retirees	0	0	1	0	0	0	0	1
Ten Years	s Ended June 30, 2008 Average monthly benefit Average final average salary Number of retirees	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$1,207 \$4,187 2	\$1,267 \$3,254 1	\$ 0 \$ 0 0	\$2,171 \$3,819 3	\$2,807 \$4,039 5	\$2,203 \$3,935 11

Ten Years Ended June 30, 2008

# Legislators in the MSEP

		Years Credited Service by Category							
Members	Retiring During Fiscal Year	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
1999	Average monthly benefit	\$ 0	\$ 700	\$1,302	\$1,736	\$ 0	\$2,604	\$ 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	\$1,883	\$ 0	\$2,649	\$ 0	\$1,568
	Average final average salary	\$ 0	\$2,613	\$2,613	\$2,613	\$ 0	\$2,604	\$ 0	\$2,611
	Number of retirees	0	4	2	3	0	2	0	11
2002	Average monthly benefit	\$ 0	\$ 871	\$1,451	\$2,068	\$ 0	\$2,830	\$3,365	\$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	\$1,009	\$1,393	\$1,816	\$2,482	\$3,048	\$2,700	\$1,624
	Average final average salary	\$ 0	\$2,613	\$2,613	\$2,613	\$2,613	\$2,613	\$2,613	\$2,613
	Number of retirees	0	11	10	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	\$ 891	\$1,361	\$1,742	\$2,409	\$ 0	\$3,411	\$1,632
	Average final average salary	\$2,613	\$2,613	\$2,613	\$2,613	\$2,613	\$ 0	\$2,613	\$2,613
	Number of retirees	1	11	4	2	4	0	4	26
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	\$ 150	\$ 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
2008	Average monthly benefit	\$ 0	\$ 816	\$1,156	\$1,742	\$ 0	\$ 0	\$ 0	\$1,045
	Average final average salary	\$ 0	\$2,613	\$2,613	\$2,613	\$ 0	\$ 0	\$ 0	\$2,613
	Number of retirees	0	4	2	1	0	0	0	7
Ten Years	s Ended June 30, 2008 Average monthly benefit Average final average salary Number of retirees	\$   293 \$2,613 2	\$ 879 \$2,610 58	\$1,380 \$2,606 28	\$1,843 \$2,613 28	\$2,450 \$2,613 9	\$2,756 \$2,609 5	\$3,313 \$2,613 7	\$1,466 \$2,610 137

Ten Years Ended June 30, 2008

#### Elected Officials in the MSEP

		Years Credited Service by Category										
Members	Retiring During Fiscal Year	<	:5	5-	-10	10-1	5	15-20	20-25	25-30	30+	All Members
1999	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$ 4,35 \$ 8,71		\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 4,359 \$ 8,717 1
2000	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$	0 0 0	\$ 0 \$ 0 0		\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0
2001	Average monthly benefit Average final average salary Number of retirees	\$1, \$10,		\$3,1 \$8,7		\$ 4,78 \$10,82		\$ 5,004 \$10,827 1	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 3,881 \$10,405 5
2002	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$	0 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0
2003	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$	0 0 0	\$ 0 \$ 0 0		\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0
2004	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$	0 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0
2005	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$ 4,21 \$ 9,77		\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 4,218 \$ 9,772 2
2006	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$2,0 \$8,7		\$	0 0 0	\$ 0 \$ 0 0	\$ 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 2,009 \$ 8,717 1
2007	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$	0 0 0	\$ 0 \$ 0 0		\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0
2008	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$	0 0 0	\$ 0 \$ 0 0	, -	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0
Ten Years	s Ended June 30, 2008 Average monthly benefit Average final average salary Number of retirees	\$1, \$10,		\$2,5 \$8,7		\$ 4,47 \$ 9,98		\$ 5,004 \$10,827 1	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 3,801 \$ 9,889 9

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

Ten Years Ended June 30, 2008

# Administrative Law Judges and Legal Advisors in the MSEP

			Years Credited Service by Category														
Members	Retiring During Fiscal Year	<	5	5-	10	10-	-15	15-2	20	20-	25	25	-30	3	0+		All nbers
1999	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0
2000	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0
2001	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$2,9 \$5,9		\$ \$	0 0 0	\$ \$	0 0 0		982 965 1
2002	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$3,7 \$7,4		\$ \$	0 0 0	\$ \$	0 0 0		739 478 1
2003	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$3,6 \$7,2		\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0		615 231 3
2004	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0
2005	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$3,1 \$7,1		\$ \$	0 0 0	\$3,5 \$7,1		\$ \$	0 0 0	\$ \$	0 0 0		626 252 4
2006	Average monthly benefit Average final average salary Number of retirees	\$1,0 \$7,8		\$1,0 \$5,9		\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0		333 667 2		333 667 1		551 754 5
2007	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0
2008	Average monthly benefit Average final average salary Number of retirees	\$ \$	0 0 0	\$ \$	0 0 0	\$1,0 \$3,3		\$3,9 \$7,9		\$ \$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0		824 648 2
Ten Years	s Ended June 30, 2008 Average monthly benefit Average final average salary Number of retirees	\$1,0 \$7,8		\$1,( \$5,9		\$2,7 \$5,4		\$3,7 \$7,4		\$3,4 \$6,9			333 667 2		333 667 1		154 826 16

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

Ten Years Ended June 30, 2008

#### Judicial Plan

		Years Credited Service by Category							
Members	Retiring During Fiscal Year	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
1999	Average monthly benefit	\$ 702	\$2,676	\$3,732	\$3,898	\$ 0	\$4,450	\$ 4,123	\$3,375
	Average final average salary	\$6,598	\$7,758	\$7,465	\$7,796	\$ 0	\$8,900	\$ 8,246	\$7,645
	Number of retirees	2	2	5	6	0	1	1	17
2000	Average monthly benefit	\$ 0	\$1,282	\$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	\$2,378	\$4,216	\$3,849	\$ 4,500	\$4,573	\$ 4,250	\$4,228
	Average final average salary	\$ 0	\$8,000	\$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	\$1,337	\$3,606	\$4,093	\$ 4,000	\$4,576	\$ 0	\$3,877
	Average final average salary	\$ 0	\$6,095	\$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	\$1,946	\$4,042	\$3,849	\$ 4,000	\$4,500	\$ 4,250	\$3,379
	Average final average salary	\$8,000	\$6,317	\$8,333	\$7,697	\$ 8,000	\$9,000	\$ 8,500	\$7,807
	Number of retirees	2	3	3	6	3	1	2	20
2004	Average monthly benefit	\$ 855	\$3,028	\$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	\$1,946	\$4,500	\$4,000	\$ 0	\$4,396	\$ 0	\$2,930
	Average final average salary	\$5,875	\$6,564	\$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	\$2,121	\$3,995	\$4,260	\$ 4,357	\$4,071	\$ 4,250	\$3,798
	Average final average salary	\$5,875	\$7,889	\$7,990	\$8,521	\$ 8,714	\$8,143	\$ 8,500	\$8,244
	Number of retirees	2	5	5	15	7	7	4	45
2008	Average monthly benefit	\$ 592	\$2,045	\$4,120	\$4,828	\$ 5,132	\$4,593	\$ 5,186	\$3,908
	Average final average salary	\$5,821	\$6,203	\$8,276	\$9,656	\$10,264	\$9,186	\$10,373	\$8,537
	Number of retirees	2	2	6	3	3	2	1	19
Ten Years	s Ended June 30, 2008 Average monthly benefit Average final average salary Number of retirees	\$ 596 \$6,315 11	\$2,100 \$7,037 18	\$3,960 \$8,015 36	\$4,120 \$8,239 47	\$ 4,369 \$ 8,738 30	\$4,334 \$8,669 28	\$ 4,355 \$ 8,711 14	\$3,772 \$8,146 184

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

# **RETIREES AND BENEFICIARIES**

Tabulated by Fiscal Year of Retirement

#### MSEP

| Judicial Plan

Fiscal Year of Retirement	Number	Total Annual Benefit	Average Monthly Benefit	Fiscal Year of Retirement	Number	Total Annual Benefit	Average Monthly Benefit
1971 & prior	3	\$ 20,151	\$ 560	1976 & prior	2	\$ 16,587	\$ 691
1972	4	18,204	379	1978	1	13,964	1,164
1973	11	66,262	502	1979	1	36,012	3,001
1974	18	115,455	535	1980	1	19,042	1,587
1975	27	189,629	585	1981	2	117,857	4,911
1976	49	340,719	579	1982	1	11,002	917
1977	60	406,925	565	1983	6	253,481	3,521
1978	74	467,852	527	1984	1	19,879	1,657
1979	62	476,206	640	1985	3	147,038	4,084
1980	69	539,472	652	1986	6	202,228	2,809
1981	111	944,059	709	1987	18	759,686	3,517
1982	160	1,459,672	760	1988	9	466,829	4,322
1983	183	1,768,713	805	1989	10	537,563	4,480
1984	215	1,788,867	693	1990	6	299,553	4,160
1985	234	2,383,276	849	1991	21	1,133,477	4,498
1986	296	2,453,234	691	1992	10	518,115	4,318
1987	343	3,375,480	820	1993	13	617,130	3,956
1988	407	4,886,280	1,000	1994	10	445,538	3,713
1989	478	6,221,368	1,085	1995	20	1,236,367	5,152
1990	481	5,977,493	1,036	1996	12	593,729	4,123
1991	597	8,818,745	1,231	1997	6	304,879	4,234
1992	649	9,077,455	1,166	1998	25	1,446,287	4,821
1993	741	10,008,181	1,126	1999	24	1,267,372	4,401
1994	735	10,095,362	1,145	2000	27	1,462,582	4,514
1995	967	14,062,402	1,212	2001	22	1,587,069	6,012
1996	965	14,250,473	1,231	2002	15	831,393	4,619
1997	986	15,029,803	1,270	2003	26	1,322,546	4,239
1998	1,155	17,207,960	1,242	2004	18	980,169	4,538
1999	1,270	19,406,554	1,273	2005	20	1,056,781	4,403
2000	1,341	21,421,833	1,331	2006	18	638,521	2,956
2001	2,568	42,825,745	1,390	2007	61	2,823,509	3,857
2002	1,878	27,646,368	1,227	2008	28	1,273,539	3,790
2003	1,952	30,890,018	1,319		443	\$22,439,724	4,221
2004	2,534	40,237,912	1,323				
2005	1,898	26,430,159	1,160				
2006	2,052	28,298,765	1,149				
2007	2,432	34,599,420	1,186				
2008	2,439	32,843,751	1,122				
	30,444	\$437,050,223	1,196				

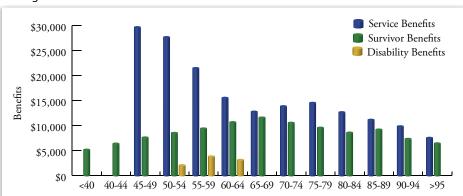
# TOTAL BENEFIT PAYABLE

Tabulated by Attained Ages of Benefit Recipients As of June 30, 2008

#### MSEP

Attained	F	Service <u>Retirement</u> Annual		isability <u>tirement</u> Annual		rvivors and meficiaries Annual		
Ages	No.	Benefits	No.	Benefits	No.	Benefits	No.	Benefits
Under 20					73	\$ 304,499	73	\$ 304,499
20-24					29	150,532	29	150,532
25-29					4	28,752	4	28,752
30-34					24	166,445	24	166,445
35-39					40	210,284	40	210,284
40-44					67	420,004	67	420,004
45-49	13	\$ 384,336			106	795,922	119	1,180,258
50-54	715	19,714,837	1	\$ 1,956	193	1,625,005	909	21,341,798
55-59	3,642	77,873,441	6	22,320	321	2,988,613	3,969	80,884,374
60-64	5,837	90,112,188	4	12,132	350	3,697,590	6,191	93,821,910
65-69	5,517	69,901,298			421	4,837,183	5,938	74,738,481
70-74	4,075	56,040,227			521	5,441,709	4,596	61,481,936
75-79	3,023	43,626,852			544	5,146,892	3,567	48,773,744
80-84	2,164	27,170,572			488	4,135,090	2,652	31,305,662
85-89	1,113	12,295,075			249	2,263,521	1,362	14,558,596
90-94	395	3,847,868			82	592,525	477	4,440,393
95	33	280,494			5	74,676	38	355,170
96	28	182,676			4	14,423	32	197,099
97	13	107,179			2	11,736	15	118,915
98	5	40,272			2	6,444	7	46,716
99	12	70,621					12	70,621
100	3	17,940			1	2,484	4	20,424
101	1	8,544					1	8,544
104	1	6,000					1	6,000
106					2	3,936	2	3,936
107					1	948	1	948
108					2	5,652	2	5,652
Totals	26,590	\$401,680,420	11	\$36,408	3,531	\$32,924,865	30,132	\$434,641,693

Average age at retirement Average age now 60.3 years 69.0 years



#### Average Annual Benefits - MSEP

# TOTAL BENEFIT PAYABLE

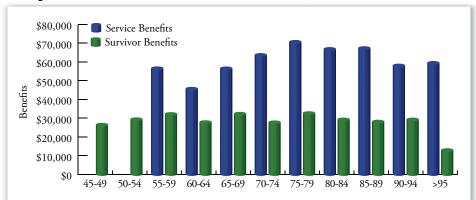
Tabulated by Attained Ages of Benefit Recipients As of June 30, 2008

#### Judicial Plan

		Service etirement		rvivors and eneficiaries	Totals		
Attained Ages	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	
45-49			1	\$ 25,956	1	\$ 25,956	
50-54			2	57,763	2	57,763	
55-59	15	\$ 841,171	6	190,008	21	1,031,179	
60-64	45	2,031,948	14	382,711	59	2,414,659	
65-69	58	3,249,156	7	222,768	65	3,471,924	
70-74	56	3,536,571	8	217,872	64	3,754,443	
75-79	58	4,069,563	25	803,711	83	4,873,274	
80-84	38	2,521,860	29	834,449	67	3,356,309	
85-89	27	1,804,266	20	552,322	47	2,356,588	
90-94	11	632,916	15	431,022	26	1,063,938	
95 and over	1	58,932	4	49,728	5	108,660	
Totals	309	\$18,746,383	131	\$3,768,310	440	\$22,514,693	

Average age at retirement Average age now

64.6 years 72.7 years



#### Average Annual Benefits - Judicial Plan

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