

Joint Committee on Public Employee Retirement



Final Report on Issues
Related to the Consolidation of
Retirement Systems for State Employees

December 2004

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INTRODUCTION

Overview

The Joint Committee on Public Employee Retirement (JCPER) has requested the MoDOT and Patrol Employees' Retirement System (MPERS), and the Missouri State Employees' Retirement System (MOSERS), to provide the JCPER with a policy analysis detailing the effects of a possible consolidation of the retirement systems. The report objective is to provide factual and balanced information that will address the effect a consolidation might have on boards, contribution rates and investments, and the impact on benefit services to members. The retirement systems have been requested to jointly submit a final report to the JCPER.

It is anticipated that the MPERS board will likely to take a position to support, oppose, or remain neutral to a potential consolidation of systems upon issuance of this report. At MOSERS, any legislation stemming from this report would be evaluated in the context of the board's governance policy regarding legislation, which was adopted September 14, 1999. Based on that evaluation, decisions would be made regarding whether to support, remain neutral on, or oppose the various proposed changes in the state's policy with respect to retirement benefit administration that would necessarily be included in such legislation. In general, MOSERS' staff is required by the board to serve as technical advisors to legislative sponsors. The staff would review the legislation, determine the impact, if any, on the system, provide technical comments and fiscal information, offer alternatives, and provide unbiased analysis, when appropriate.

In order to meet the report objective, this document will specifically examine the:

- a) Existing structure and organization of MPERS and MOSERS;
- b) Effect of a consolidation on the boards responsible for administering benefits, and the impact on fiduciary duties, and governance;
- c) Effect on contribution rates and the impact of differing actuarial assumptions and methods, including the investment return rate;
- d) Effect on investments, including returns, asset allocations, investment policies, expertise, efficiencies, expenses, economies of scale, and the impact on consultants and fund managers;
- e) Impact on benefit services, information technology (IT), including the compatibility of IT systems, and the potential to transfer member information, records management, including balancing payroll, itemizing deductions for insurance, entering payroll, service and leave data, scanning information and record retention, production of financial records, interfacing with the custodian, payroll departments, Internal Revenue Service, and the production of the comprehensive annual financial report and popular report;
- f) Similarities and differences in retirement plan provisions, including the disability retirement, long-term disability and life insurance plans;
- g) Impact on membership (including active, retired, terminated-vested, survivors and disabled members), and the effect on employee and retiree associations.

STRUCTURE AND ORGANIZATION

MPERS

MPERS was established in 1955 to provide retirement and survivor benefits, disability and death benefits for employees of the Missouri Department of Transportation (MoDOT) and employees of the State Highway Patrol. Under the present structure, the executive director, assistant executive director, and chief investment officer are responsible for planning, organizing, and administering the operations of the system under the direction of the Board of Trustees. The day-to-day management of MPERS is delegated to the executive director who is appointed by the board. The assistant executive director is responsible for overseeing benefit administration and the chief investment officer oversees the management of the system's investment portfolio. The current staff is comprised of 11 system employees and five MoDOT/contract employees. The staff is divided into six administrative sections that perform specific functions for the system.

- The Director's Office provides administrative support in the major legislative, operational, and oversight functions of the retirement, benefit, and investment programs.
- Financial Services is responsible for maintaining all the financial records and reports of MPERS. The accountant, who is an employee of MoDOT, interacts with the investment custodian, the Office of Administration, MoDOT and Patrol's payroll/personnel departments, the actuary, auditors, the depository bank, Missouri's Department of Revenue, and the Internal Revenue Service. In addition, the accounting employee assists the chief investment officer in tracking and predicting target cash balances, assists MPERS in annual budget development and monthly budget-to-actual reporting, and calculates monthly premium payments to the long-term disability insurer. Accounting also processes MPERS semi-monthly office payrolls, and reconciles monthly benefit payments and contributions/payrolls posted. The retirement system reimburses MoDOT for financial services.
- Benefit Services is responsible for all contact with the membership regarding the benefit programs administered by MPERS, which include retirement, and long-term disability. The benefits staff are responsible for preparing and delivering the pre-retirement and retirement basics seminars in addition to assisting with the development of member communication material.
- The Member Payroll Section is responsible for establishing and maintaining all membership records including maintenance of the data on the mainframe "retirement master", verifying retirement calculations, balancing payroll deductions for insurance, interacting with SAM II, and entering the payroll, service and leave data into the system's computerized database.
- Legal Services are provided by the Chief Counsel's Office of the Department of Transportation (MoDOT). The legal staff is responsible for coordinating

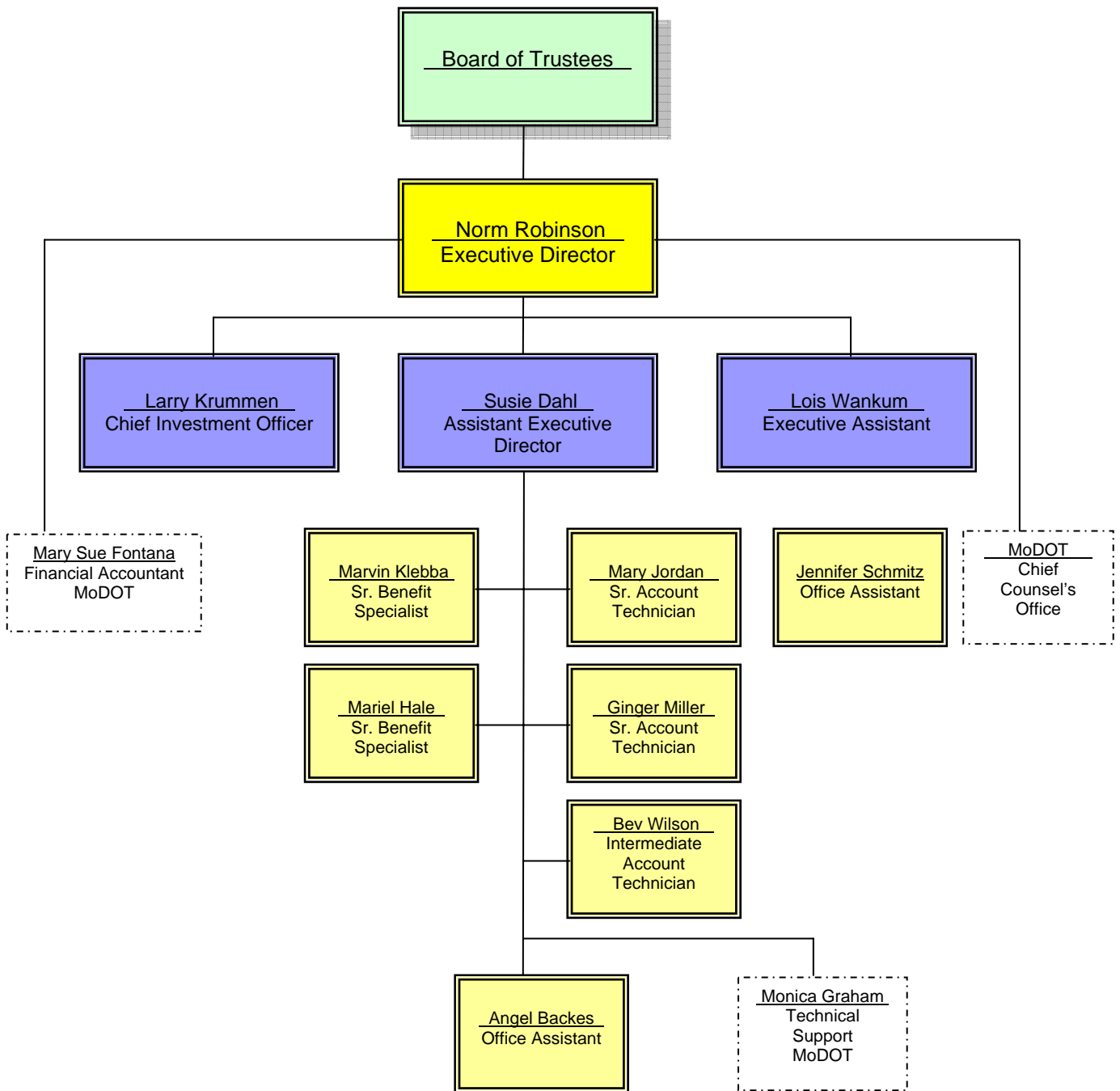
and handling the legal work and quasi-judicial work arising from the administration of the laws governing the general operation of the system. The retirement system reimburses MoDOT for legal services.

- The Investment Section works closely with the general investment consultant to oversee the investment portfolio and provide consulting services to the board and the executive director. This includes, but is not limited to: a) formulating investment policy and asset allocation recommendations, b) providing recommendations on the selection, monitoring and evaluation of external investment advisors, c) measuring and reporting on investment performance, d) conducting market research on political, financial, and economic developments that may affect the system, and e) serving as a liaison to the investment community.

The Employee Benefit Section of MoDOT is responsible for administering the health care and life insurance program for members and beneficiaries of MPERS.

An MPERS' organization chart appears on Page 4.

MPERS owns its facility – a 10,293 square foot building located on 1913 William Street, Jefferson City, MO, and leases approximately 3,400 square feet of that space to MoDOT.



MOSERS

MOSERS was created two years later, in 1957, to provide retirement and disability benefits for state employees not covered under other state retirement plans. In 1973, MOSERS also began administering basic and optional life insurance benefits for state employees not covered by other plans. The executive director, deputy executive director/chief operations officer, and the deputy executive director/chief investment officer are responsible for planning, organizing, and administering the operations of the system under the broad policy guidance and direction of the Board of Trustees. The current staff is comprised of 71 employees and is divided into eight administrative sections that perform specific functions for the system.

- Executive services provide administrative support in the major legal, legislative, operational, and oversight functions of the retirement, benefit, communications and investment programs.
- Accounting 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, the Office of Administration Division of Accounting, various payroll/personnel departments, life insurance companies, actuaries, banks and the Internal Revenue Service.
- Benefit services is responsible for all contact with the membership regarding the benefit programs administered by MOSERS, which include retirement, life insurance and long-term disability.
- Communications provides written publications and educational seminars needed to inform members about benefit programs administered by MOSERS. The Communications and the IT sections are jointly responsible for maintaining MOSERS' web site.
- IT provides all computer and technical design support for MOSERS' data processing activities utilizing an IBM AS400 minicomputer and high-end workstations. This group is responsible for establishing and updating computer programs to implement plan changes and also maintains membership records on FileNet – an optical disk image system that allows information to be stored and processed using computer displayed images of original documents. IT is also responsible for the administration of the personal computer network and the telephone system.
- Investments provide internal investment management and consulting services to the board and the executive director. Other functions include hiring and terminating external investment managers, making sub-asset class allocation decisions, and rebalancing the broad asset allocation. In addition, the investment staff is responsible for serving as a liaison to the investment community, and informs and advises the board and executive director on financial, economic, political, and other developments that may affect the system. The investment staff works closely with the external asset consultant retained by the Board of Trustees.

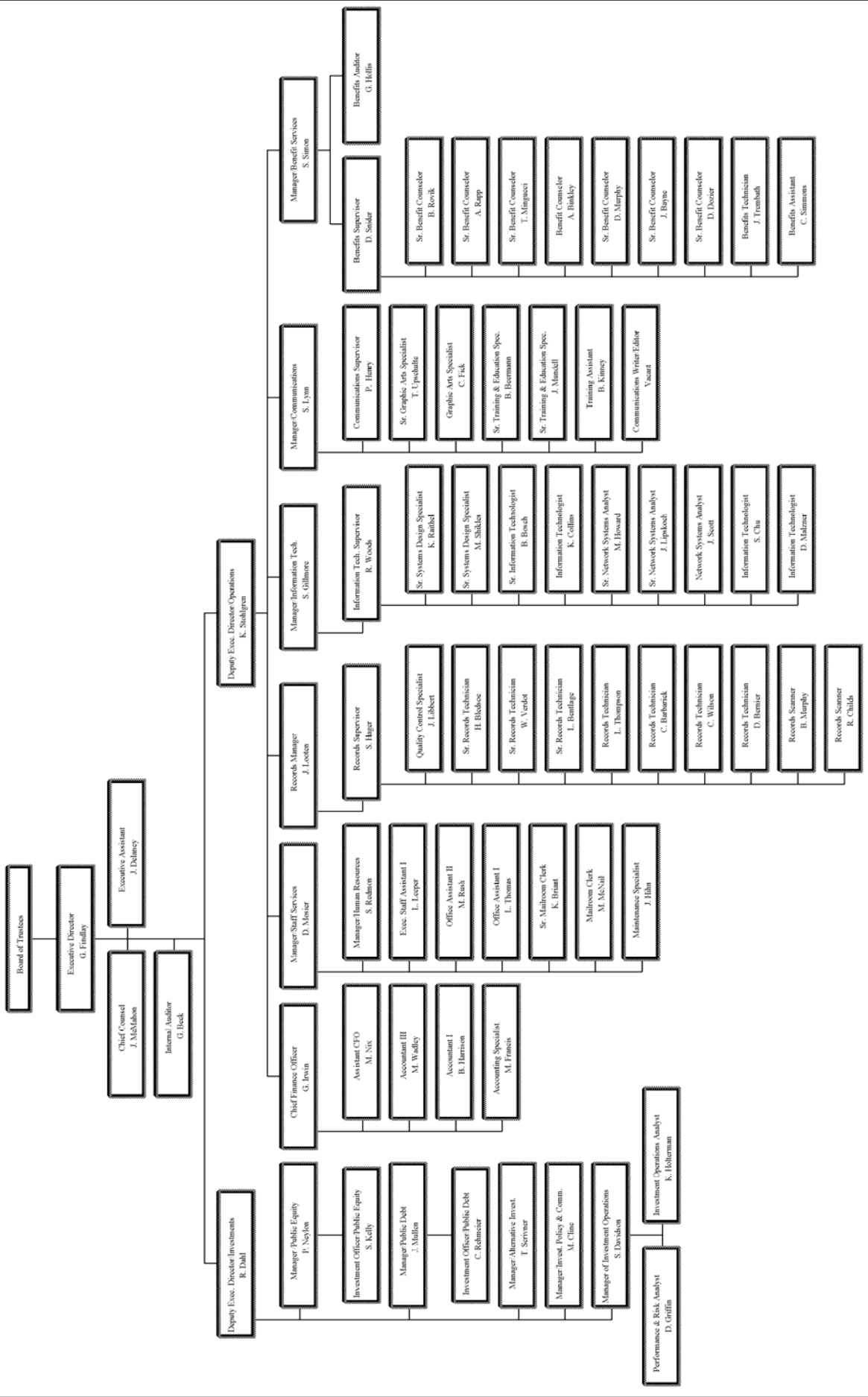
- Records management is responsible for establishing and maintaining all membership records including maintenance of the data on the electronic imaging system, balancing payroll deductions for insurance, and entering the payroll, service and leave data into the system's computerized database.
- Staff services provide clerical support, mail services, and general building maintenance for MOSERS' personnel. Human resources is also represented in this section.

MOSERS' organization chart appears on Page 7.

MOSERS also owns its facility – a 28,000 square foot building located at 907 Wildwood Drive, Jefferson City, MO.

MOSERS Organizational Chart

July 2004



CONSOLIDATION OF BOARDS, FIDUCIARY DUTY, AND GOVERNANCE

Present Board Composition

The MPERS is governed by a ten member board comprised of three members of the State Highways and Transportation Commission elected by the members of the commission, the superintendent of the Highway Patrol and the director of the Department of Transportation, who serve as members by virtue of their respective offices, one member of the Senate appointed by the President Pro Tem of the Senate, one member of the House of Representatives, appointed by the Speaker of the House, two active employee members of the system elected by the active members of the system (one member representing MoDOT and one member representing the Highway Patrol) and one retired member elected by the retired employees of the transportation department and the Highway Patrol.

MOSERS' is governed by an eleven member board 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, and three other members of the system – two elected by the active and terminated-vested members, and one retiree elected by the retired members.

Board Alternatives

In the event of a consolidation, there are several alternatives to be explored. These may include, but are not limited to:

1. A full consolidation wherein a complete transfer of authority for MPERS' benefit administration and investment management would transfer to the MOSERS Board at some future designated time.
2. Partial consolidation alternatives, such as:
 - Investment management transferred to MOSERS.
 - A combination of transferring investment management, disability programs, and life insurance to MOSERS.

For practical reasons, there would obviously be a limit to the consolidation alternatives.

Legislative action would be required in order to alter the existing board structures of MPERS and MOSERS, and any board design would be dependent upon the extent of consolidation and subsequent authority transferred. Under a partial consolidation, several board structures could effectively be employed. For example, the MPERS' board could continue to function as it relates to providing retirement, death benefit, and disability benefits to its members; however, investment related activity could be delegated to the MOSERS Board of Trustees. Assets would be transferred to MOSERS and invested in accordance with the MOSERS' board adopted investment policy statement. Under this scenario, all investment authority including

investment allocations at the broad asset class level would be transferred to the MOSERS board.

It may appear as though an additional alternative under a partial consolidation would be to structure a design that would allow the MPERS board to retain limited power regarding investment asset allocation decisions at the broad asset class level. However, this type of design could negate the benefits of merging the systems. To illustrate, if the objective of combining MPERS' investments with MOSERS is to utilize the expertise already in place within MOSERS' investment department, any decisions to deviate from MOSERS' asset allocation model could potentially negate staff's efforts to improve the risk-adjusted returns of the portfolio. In addition, by retaining broad asset allocation authority, the MPERS' board would continue to have the fiduciary responsibility for making asset allocation decisions and would bear the costs for an investment consultant to provide asset allocation advice including significant costs associated with the exercise of establishing an asset allocation policy. Furthermore, this type of structure would likely require MPERS' and MOSERS' assets to be separately maintained resulting in a situation where MOSERS' staff would be required to serve two boards with potentially competing objectives. As a result, such an approach could mitigate any economies of scale that might be derived through consolidation.

In the event a full transfer of authority for benefit administration and investment management is legislated, it is anticipated that the MOSERS' board would continue under its present structure and, at some future designated date, after the transfer of authority was completed, the MPERS' board would cease to exist. Although the present design of the MPERS' board allows for individual representation by MoDOT, the Highway Patrol, and Highway commission, if a full consolidation is legislated, these groups most likely could be afforded the same voting/election rights as members of MOSERS and eligible to be elected for a trustee position as an active employee or retiree. The existing structure of MOSERS' board design does not distinguish between individual departments – instead limiting all participating departments to two active members and one retired member to be elected by the general membership.

Any number of alternative board designs could be proposed legislatively; however, care should be taken to avoid a design that causes unequal representation. For instance, under the current structure of MPERS, it can be argued that it is appropriate for members of the Highway Patrol and employees of MoDOT to have representation on that board. However, using that same structure for the MOSERS' board would cause unequal representation because other departments would not be directly represented. Furthermore, it is impractical to try to structure the MOSERS' board so that each and every department has a direct representative serving on the board given the number of the departments covered by MOSERS.

MOSERS' current board structure has representatives from both the legislative and executive branches of government as well as from the membership at large. While it can be argued that the current structure of MOSERS' board is not optimal, at a minimum, it provides broad representation of all executive branch agencies, the legislature, and the membership.

Fiduciary Duty

A fiduciary is one who has a duty, created by an undertaking, to act solely for another's benefit in matters connected with such undertaking. It is the highest standard of duty implied by the law and requires good faith and candor. A fiduciary acts in the capacity of a trustee and is therefore accountable for whatever actions may be construed by the courts as breaching that trust. Both the MPERS' and MOSERS' boards operate under the Exclusive Purpose Rule, Best

Interest Rule and Prudent Person Standard that require plans be administered solely for the benefit of the participants.

These rules appear below:

Exclusive Purpose Rule

- a. Fiduciaries have a duty to operate a Plan for the "exclusive" benefit of employees and their beneficiaries. Specifically, fiduciaries must act for the "exclusive purpose" of providing benefits to plan participants and beneficiaries and defraying the costs of running the plan.
- b. At the heart of the fiduciary relationship is the duty of complete and undivided loyalty to the beneficiaries of the trust.

Best Interest Rule

A fiduciary must discharge his duties respecting the plan "solely in the interests" of plan participants and beneficiaries and decisions must always be evaluated against the "best interests of plan participants" standard.

Prudent Person Standard

A fiduciary must discharge his/her duties in a prudent fashion. Fiduciaries must act "with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims".

Governance

Generally speaking, governance describes how retirement systems conduct their business. Specifically, it involves working continuously to define the results the organization is aiming to produce and defining the acceptable boundaries within which the board can delegate the means for achieving the results. A formally adopted governance policy also spells out the roles and responsibilities of the board and staff and allows for the clear establishment of goals and objectives.

While the MPERS' board has no formally adopted governance policy in place, it has adopted an investment policy that identifies specific risk and return objectives and guidelines for the fund. Under the current MPERS' investment policy, the trustees have the sole decision making authority for retaining consultants, investment managers and other advisors to implement and execute policy decisions, including the hiring of the custodian, and annual review of investment managers. In essence, they retain responsibility for implementation decisions in addition to broad policy decisions. This is a common approach to system governance.

The MOSERS' board operated under a similar structure prior to 1995; but began to delegate implementation decisions to the executive director and investment staff. In 1999, the board formally adopted written governance policies to specifically define the results that MOSERS' staff is required to produce, and within that structure, the acceptable boundaries within which the board could delegate, to the executive director, the means for achieving those results as it relates to all aspects of system administration. The establishment of this policy created a clearly defined framework within which the board could organize thoughts, activities, structure,

and responsibilities. With the assistance of an outside consultant to develop this policy, MOSERS' board positioned itself to create greater accountability within a number of key areas such as benefits, legislation, rule making, the actuarial condition of the plan, and investments. Additionally, this policy defines the type of service members should receive from staff, the availability of adequate benefit education training, and access to timely benefit information including updates and delivery of benefits. The key to the success of this model lies in the decision making authority that has been delegated to the executive director subject to compliance with specific limitations on the executive director's authority which is established by the board.

These two distinctive approaches to governance produce different focuses for the respective boards. MPERS' board is focused on policy and implementation decisions that require more frequent meetings. Under this approach, limited decision-making authority is delegated to staff. In contrast, MOSERS' board is strictly focused on policy decisions and has delegated implementation decisions to the executive director to implement board policy using any means possible subject to the confines of the board adopted governance policy. This allows for less frequent meetings of the board, and essentially more efficiency in the decision-making and policy implementation process. MOSERS' board has been able to utilize this model because of the staff resources available.

The board's authority to delegate is reflected in trust law. The General Assembly recently recognized this when it enacted section 104.1069, RSMo. which provides: "Trustees of a board may delegate to employees of the system, or to an agent, functions that a prudent trustee acting in a like capacity and familiar with those matters could properly delegate." Through passage of this provision, the legislature recognized that while the members appointed to these boards are skilled policy makers, they may not possess the optimum level of expertise needed for implementation of investment policy decisions. Although MPERS board has elected to implement its policy decisions, it also has the authority to delegate implementation decisions to its staff under the same provisions.

**ACTUARIAL ASSUMPTIONS, INVESTMENT RETURNS,
AND CONTRIBUTION RATES**

Actuarial Objectives

The basic financial objective of both MPERS and MOSERS is to establish and receive contributions which, when expressed in terms of percents of active member payroll, will remain approximately level from generation to generation of Missouri citizens, and which, when combined with present assets and future investment return, will be sufficient to meet the present and future financial obligations of each plan. These financial obligations specifically translate to the payment of retirement benefits to MPERS' and MOSERS' members and beneficiaries.

In order to measure progress toward these objectives, MPERS and MOSERS have annual actuarial valuations performed which a) measure the present financial position, and b) establish contribution rates that provide for the current cost and level percent of payroll amortization of unfunded actuarial accrued liabilities over a reasonable period.

These valuations are based upon financial and participant data, assumptions regarding future rates of investment return and inflation, and assumptions regarding rates of retirement, turnover, death, and disability among MPERS' and MOSERS' members and their beneficiaries. Demographic and economic assumptions are adopted by the MPERS' and MOSERS' boards after consulting with their actuaries.

The differences in plan membership, economic and non-economic assumptions, contribution rates and funded status are illustrated in the tables that follow:

**PLAN MEMBERSHIP
As of June 30, 2004**

| <i>GROUP</i> | <i>MPERS Non-Uniformed</i> | <i>MPERS Uniformed Patrol</i> | <i>MOSERS</i> | <i>COMBINED TOTAL</i> |
|---------------------------|---------------------------------------|--|----------------------|----------------------------------|
| Actives | 7,961 | 1,041 | 55,914 | 64,916 |
| Leave of Absence | | | 511 | 511 |
| Retirees | 4,280 | 563 | 21,824 | 26,667 |
| Terminated-vested | 1,152 | 133 | 13,796 | 15,081 |
| Disabled | 148 | 5 | 1,080 | 1,233 |
| Survivors | 1,590 | 145 | 2,908 | 4,643 |
| Total Participants | 15,131 | 1,887 | 96,033 | 113,051 |

ECONOMIC ASSUMPTIONS
As of June 30, 2004

| <i>Assumption</i> | <i>MPERS</i> | <i>MOSERS</i> |
|---|--------------|---------------|
| Investment Return Rate (net of expenses) | 8.25% | 8.50% |
| Wage Inflation | 4.00% | 4.00% |
| Active Member Payroll | 4.00% | 4.00% |
| Price Inflation | 3.50% | 3.50% |
| Number of Active Members | Constant | Constant |
| Asset Smoothing Period | 3 years | 5 years |

The investment return rate is the primary difference between the economic assumptions for the plans. As a result of the lower return assumption being utilized by MPERS, among other things, their contribution rate is higher than MOSERS' contribution on a dollar for dollar basis. Consider the following equation:

$$\text{Contributions} = \text{Benefit Payments} + \text{Expenses} - \text{Investment Income}$$

The equation must always be in balance in the long term. In the short term, a lower **assumed** rate of investment return will translate into higher near term contributions. In the long term, **actual** investment return will ultimately be the balancing factor, with higher returns pushing contribution requirements down and vice versa.

The second significant difference in the economic assumptions lies in the asset-smoothing period adopted by each plan. In order to mitigate the effects of dramatic and unanticipated changes in the market value of assets that would result in significant yearly changes in the contribution rate, unexpected changes in asset values are recognized over extended periods of time. MPERS smoothes asset gains and losses over a three-year period as compared to five years for MOSERS.

Other Assumptions

Different occupations often have different demographic experiences. People in law enforcement, for example, tend to retire earlier than people who are in an office environment. Accordingly, better actuarial valuation results are usually obtained if these differences are recognized. This is especially true, if eventually, there are differences in the retirement benefit provisions of the groups.

Along this line, it would be appropriate to consider the following issues:

- The macroeconomic assumptions (dealing with all economic forces at work) should probably be the same for both MOSERS and MPERS.
- A consolidation should not rearrange costs among different payers for reasons that do not relate to the true nature of the costs.
- Due to the somewhat unique membership of MPERS, there probably would be additional actuarial fees associated with the performance of a separate experience study of former MPERS members. Conversely, the additional cost might be offset by having only one actuarial valuation for the combined plans.

With regard to a potential consolidation of retirement systems, the absolute value of each and every assumption is less important than the fact that there are numerous assumptions that are potentially different. What this implies is that another decision will need to be made on the assumptions and methods to use for a consolidated plan. From an actuarial valuation perspective, the following possibilities exist:

1. Use the existing separate assumptions for each group (this would likely exclude the interest and inflation assumptions along with the asset method).
2. Use MOSERS' assumptions for all members in the combined plan.
3. Use MPERS' assumptions for all members in the combined plan.
4. Use a combination of assumptions – this could come from a combined experience study, for example.

Each system also has its own tables (based on experience) for features such as mortality, annual rates of normal retirement by age and service, annual rates of withdrawals from service, and rates of disability.

CONTRIBUTION RATE COMPARISON
As of June 30, 2003 and June 30, 2004¹

| <i>Contribution Rate for</i> | <i>MPERS 2003 Non-Uniformed</i> | <i>MPERS 2003 Uniformed Patrol</i> | <i>MPERS 2004 Non-Uniformed</i> | <i>MPERS 2004 Uniformed Patrol</i> | <i>MOSERS 2003</i> | <i>MOSERS 2004</i> |
|------------------------------|---------------------------------|------------------------------------|---------------------------------|------------------------------------|--------------------|--------------------|
| Normal Cost | 11.61% | 13.30% | 11.79% | 13.55% | 7.91% | 8.07% |
| UAAL | 15.64 | 29.21 | 17.64 | 29.66 | 2.07 | 3.78 |
| Expenses | 0.46 | 0.46 | 0.50 | 0.50 | 0.34 | 0.33 |
| Disability | 0.57* | 0.57* | 0.56* | 0.56* | 0.32 | 0.41 |
| Total Rate | 28.28% | 43.54% | 30.49% | 44.27% | 10.64% | 12.59% |

*Actual charge by the insurance company is 0.60% of payroll. The difference of 0.04% of payroll is funded from a portion of the assets that were formerly held as a reserve for the Long Term Disability benefits.

FUNDED STATUS
As of June 30, 2004
(\$ amounts in millions)

| <i>Value</i> | <i>MPERS</i> | <i>MOSERS</i> |
|-----------------------------|--------------|---------------|
| Total Participants | 17,018 | 96,033 |
| Actuarial Accrued Liability | \$2,493 | \$7,230 |
| Actuarial Value of Assets | \$1,332 | \$6,118 |
| UAAL | \$1,161 | \$1,112 |
| Percent Funded | 53.4% | 84.6% |

¹ Rate for 2004 valuation has yet to be certified by MPERS Retirement Board.

Contribution Rates

In the event of a full consolidation, the contribution rates for both plans could continue to be administered separately by MOSERS, or the rates could be combined. However, consideration would have to be given to the effect of a combined rate on the normal cost and funded status of the MOSERS’ plan, and the subsequent impact on the College and University Retirement Plan (CURP). CURP is a mandatory, non-contributory defined contribution retirement plan for education employees of the regional colleges and universities who are first employed after June 30, 2002, and the colleges and universities that participate in MOSERS’ plan.

As illustrated in the tables that follow, combining rates would have the effect of increasing MOSERS’ contribution rate, and indirectly increasing the contribution rate for the CURP that is annually established to be 1% less than the normal cost contribution for the general employee population within the Missouri State Employees’ Plan 2000 (MSEP 2000). Additionally, the regional colleges and universities that participate in MOSERS would be faced with increased costs as well. Furthermore, combining contribution rates would lower MOSERS’ present funded status from 84.6% to 76.6% due to the effect of absorbing MPERS’ unfunded liability.

EFFECTS OF A COMBINED RATE

| <i>Contribution Rate for</i> | <i>MOSERS 2004 Rate</i> | <i>Combined 2004 Rate</i> |
|------------------------------|-----------------------------|-------------------------------|
| Normal Cost | 8.07% | 8.70% |
| UAAL | 3.78 | 6.25 |
| Expenses | 0.33 | 0.36 |
| Disability | 0.41 | 0.43 |
| Total Rate | 12.59% | 15.74% |

**EFFECTS OF A COMBINED RATE
ON MOSERS’ FUNDED STATUS
(\$ Amount in Millions)**

| <i>Value</i> | <i>MOSERS Before Merger</i> | <i>MOSERS After Merger</i> |
|-----------------------------|---------------------------------|--------------------------------|
| Total Participants | 96,033 | 113,051 |
| Covered Payroll | \$1,737 | \$2,065 |
| Actuarial Accrued Liability | \$7,230 | \$9,723 |
| Actuarial Value of Assets | \$6,118 | \$7,450 |
| UAAL | \$1,112 | \$2,273 |
| Percent Funded | 84.6% | 76.6% |

Benefit contributions for all state employees (including MoDOT and the Highway Patrol) are paid from the funds established for employee benefits. In the case of MoDOT and Highway

Patrol employees, the vast majority of such contributions come from the State Highways and Transportation Department Fund.

As illustrated in the tables that follow, if MPERS' and MOSERS' rates were combined, the costs associated with MoDOT and Highway Patrol employees (primarily paid by the State Highways and Transportation Department Fund) would decrease by approximately \$41.6 million in annual contributions for non-uniformed members and approximately \$13.1 million less in annual contributions for uniformed members. In contrast, the benefit contributions paid for all other state employees would increase \$54.7 million (the largest share of which would be paid by the general revenue fund).

**MPERS
DOLLAR CONTRIBUTIONS²
Effect of Unadjusted Combined Rate Structure
NON-UNIFORMED
(\$Amount in Millions)**

| <i>Valuation Payroll</i> | <i>MPERS 2004 Contribution Rate</i> | <i>MPERS 2004 Combined Contribution Rate</i> | <i>Increase/ (Decrease) in % of Payroll</i> | <i>Increase/ (Decrease) in Contribution \$</i> |
|--------------------------|---|--|---|--|
| \$282 | 30.49% | 15.74% | (14.75%) | (\$41.6) |

**MPERS
DOLLAR CONTRIBUTIONS
Effect of Unadjusted Combined Rate Structure
UNIFORMED
(\$Amount in Millions)**

| <i>Valuation Payroll</i> | <i>MPERS 2004 Contribution Rate</i> | <i>MPERS 2004 Combined Contribution Rate</i> | <i>Increase/ (Decrease) in % of Payroll</i> | <i>Increase/ (Decrease) in Contribution \$</i> |
|--------------------------|---|--|---|--|
| \$46 | 44.27% | 15.74% | (28.53%) | (\$13.1) |

**MOSERS
DOLLAR CONTRIBUTIONS
Effect of Unadjusted Combined Rate Structure
GENERAL EMPLOYEES
(\$Amount in Millions)**

| <i>Valuation Payroll</i> | <i>MOSERS 2004 Contribution Rate</i> | <i>MOSERS 2004 Combined Contribution Rate</i> | <i>Increase/ (Decrease) in % of Payroll</i> | <i>Increase/ (Decrease) in Contribution \$</i> |
|--------------------------|--|---|---|--|
| \$1,737 | 12.59% | 15.74% | 3.15% | \$54.7 |

² The unadjusted contribution dollars shown in the three tables above are not affected in the aggregate, i.e., the first year decreases of \$41.6 million and \$13.1 million from the State Highways and Transportation Department Fund would be balanced by an increase of \$54.7 million from MOSERS' funding sources.

The three previous tables are intended to demonstrate the shifting of contributions by source among the groups if the contribution rate is combined or pooled. This is not the only choice for determining the contribution rate(s). The \$54.7 million dollar contribution shift to other funding sources would have an immediate impact on the state's budget planning. This could be mitigated by applying an actuarial approach that would allow for gradual changes toward a combined contribution rate (a measured increase in contributions to general revenue and a measured decrease in contributions from the State Highways and Transportation Department Fund) that would eventually result in a true combined rate being achieved at a future specified date.

It is important to note that a single, universally accepted method of determining calculations under such a merger does not exist. Instead, there are several reasonable approaches. One approach would be to treat the combined group as a single rate group with a single contribution rate, as estimated above. Another would be to separately experience-rate the existing group and the merging group. Under this approach, the contribution rate for MPERS would not be expected to be materially different from what it is before the merger.

Given the fact that MOSERS is over 90% funded and MPERS is under 60% funded, it is possible that the MPERS employers might be charged a surcharge by MOSERS to reflect the disparity in funded status.

In the event a fund consolidation is pursued, an actuarial study would be recommended to determine the various options available.

INVESTMENTS

Overview

MPERS and MOSERS each manage an investment pool for the sole purpose of funding the liabilities of the respective systems. Of the numerous functions each system carries out, the investment function is the one that could potentially be consolidated in a shorter period of time. In keeping with the report's objective of providing factual and balanced information, every effort has been made to include the information required to address the relevant aspects of asset consolidation.

Policy Overview

Both MPERS and MOSERS maintain investment policy statements that outline system investment objectives, asset allocation policy mixes, performance evaluation criteria, and other miscellaneous guidelines pertaining to the overall management of each system's assets. While there are subtle differences between each system's policies in place governing the management of system assets, the material differences primarily exist in three main areas: 1) governance issues; 2) investment beliefs; and 3) asset allocation policies.

Governance Issues

Under MPERS' current policy, the ultimate authority for manager hiring and termination decisions rests with the board. MPERS' staff and consultant serve in a manager oversight capacity and make recommendations to the board members who ultimately make manager decisions. In contrast, MOSERS' board has chosen to delegate manager hiring and termination decisions to the chief investment officer and the external general asset consultant. This implementation authority was granted in November 1998 based on the belief that staff was dealing with the investment portfolio on a daily basis and was best positioned to make these implementation decisions, given their professional investment training and expertise. Since being granted this authority, MOSERS has been able to generate a net implementation value added³ of 2.77% on an annualized basis above the return of the board established policy asset allocation portfolio. In dollar terms, this has equated to roughly \$164 million annually since December 1998 for MOSERS' beneficiaries compared to the outcome had MOSERS simply earned the returns of the board's policy allocation mix. The information necessary to determine the value added through the MPERS board's manager hiring and termination decisions relative to the MPERS board's policy asset allocation mix is not available for comparison.

The second governance issue pertains to strategic asset allocation decisions. Under MPERS' policy, there are certain allowable asset allocation ranges around the target policy mix that are allowed, but MPERS' staff has little control in establishing strategic weights around the target policy mix. In contrast, MOSERS' board delegated the authority to make

³ Net Implementation Value Added (NIVA) is the return staff has been able to generate above and beyond the return of the board established policy asset allocation portfolio (measured by the policy benchmark) net of all expenses.

strategic asset allocation decisions within pre-defined ranges to the chief investment officer and the chief general asset consultant in 2002. This flexibility has allowed staff to capitalize on investment opportunities at the margins by overweighting areas that exhibit positive risk/reward characteristics while underweighting those which are viewed as expensive relative to their historical norms. While caution should be exercised in drawing conclusions based on short-term performance, since this added flexibility was granted to staff in 2002, an additional .82% of performance has been added to the fund's total return on an annualized basis net of fees. This translates into roughly \$48.5 million to MOSERS' portfolio annually over the past two years.

Overview of MOSERS' Investment Beliefs

The second material difference between MPERS' and MOSERS' investment policies lies in the establishment of clearly defined investment beliefs that guide the overall investment program. While the MPERS board has not adopted a formal document to define their investment beliefs, the management of system assets is governed by the board's fiduciary responsibility to the plan participants. The underlying investment belief is to manage a diversified investment portfolio with sufficient liquidity that will generate a current yield and total return that is in-line with the funding objectives of the system.

In contrast, MOSERS, in 2002, adopted a formal set of investment beliefs in order to achieve system investment objectives. These beliefs serve as a foundation for every investment decision made within the portfolio. The complete set of investment beliefs is available on MOSERS' web site at www.mosers.org. A summary of these beliefs follows:

- Diversification is critical because the future is unknown.
- Every investment should be examined in the context of its two distinct return components – beta⁴ and alpha⁵.
- Asset classes will be in and out of favor at different times and they all tend to be cyclical, thus flexibility is key.
- Investing is not just about return. It is about risk-adjusted returns with a long-term focus on the liabilities.

Asset Allocation Overview

The third area in which there are differences in the investment policies relates to the asset allocation policy mix. Each board has adopted an asset mix based upon investment return expectations for the various asset classes and the required return objectives necessary to fund the liabilities of each system. In addition, consideration is given to each plan's risk tolerances in designing the policy asset mix.

⁴ Beta in the context of MOSERS' investment beliefs refers to the return that is expected from each respective asset class.

⁵ Alpha in the context of MOSERS' investment beliefs refers to the return that is generated through implementation decisions. Stated differently, it is the return that is generated above a specified benchmark and is a measure of a manager's skill in generating value added.

The following table summarizes MPERS' and MOSERS' asset allocation policies⁶:

| Asset Class | MPERS' Allocation | MOSERS' Allocation |
|--|-------------------|--------------------|
| PUBLIC EQUITY | 60.0% | 50.0% |
| Domestic Equity | 40.0% | 27.5% |
| <i>Large-Cap Growth Equity</i> | 8.0% | |
| <i>Large-Cap Value Equity</i> | 8.0% | |
| <i>S&P 500 Index</i> | 14.0% | |
| <i>Mid-Cap Growth Equity</i> | 4.0% | |
| <i>Mid-Cap Value Equity</i> | 2.0% | |
| <i>Small-Cap Value Equity</i> | 4.0% | |
| International Equity | 20% | 17.5% |
| <i>Developed International Equity</i> | | 15.0% |
| <i>Emerging Market Equity</i> | | 2.5% |
| Long/Short Equity | 0.0% | 5.0% |
| PUBLIC DEBT | 30.0% | 30.0% |
| Core Fixed Income | 30.0% | 10.0% |
| <i>Intermediate Investment Grade Bonds</i> | 12.5% | |
| <i>Active Duration Intermediate Investment Grade Bonds</i> | 12.5% | |
| <i>Stabilized Fixed Income</i> | 5.0% | |
| Treasury Inflation Protected Securities (TIPS) | 0.0% | 10.0% |
| High Yield Bonds | 0.0% | 5.0% |
| Market Neutral | 0.0% | 5.0% |
| ALTERNATIVE INVESTMENTS | 8.0% | 20.0% |
| Distressed Debt | 0.0% | 2.5% |
| Commodities | 0.0% | 2.5% |
| Real Estate | 5.0% | 5.0% |
| Timberland | 3.0% | 5.0% |
| Private Equity | 0.0% | 5.0% |
| CASH | 2.0% | |

MPERS' and MOSERS' boards have adopted policy mixes comprised of many of the same asset classes; however, as can be seen in the table above (highlighted in blue), MOSERS' portfolio includes several asset classes which would not be considered mainstream within the public pension fund universe, even though they are commonplace in the endowment and foundation universe. These unique asset classes were added to the portfolio upon the completion of MOSERS most recent asset/liability study in June 2002. The intention of including these unique asset classes in the portfolio design is to increase the diversification of the total portfolio, thus structuring the portfolio to combat a variety of potential negative economic outcomes. This additional diversification is expected to reduce the portfolio's dependence on any one particular type of investment for its future returns. The MOSERS

⁶ Gray shaded areas indicate asset classes where each respective system does not break down the allocation to the same level of detail. For example, MOSERS does not designate target allocations to specific domestic equity styles like MPERS under the domestic equity asset class. In contrast, MPERS does not distinguish between international developed equities and emerging markets within the international equity asset category. MPERS' target asset allocation, including the issue of maintaining the separate sub-asset class targets, is currently under review as part of the ongoing asset/liability study.

board and staff expect this approach to reduce total portfolio volatility while maintaining the same expected level of return.

MPERS conducted an asset allocation study in 2003. As a result of the study, recommendations were made to move into various alternative asset classes for both diversification and return-enhancement purposes. The study was also a factor in the decision to hire a chief investment officer, as the board recognized the need for additional staff to oversee the more complex investment strategies. To date, significant progress has been made in incorporating the policy allocation mix recommendations, including MPERS making its first investments in the real estate asset class. In April of 2004, MPERS hired a new external asset consultant and they are in the midst of a follow-up asset/liability study which will be presented to the MPERS Board in September of 2004.

Historical Performance Review

Several challenges exist when attempting to compare performance numbers between systems. First, deciding what time frame to utilize is difficult to determine. Given the nature of performance numbers, depending upon the period covered, the results could look strikingly different. The aim here is to provide data for the longest period of time possible. Performance figures dating back to January 1991 have been utilized for purposes of this report (MPERS' information prior to 1991 is unavailable). In addition to the longest-term return information that is available, returns are also displayed for one, three, five and ten year periods, as these seem to be the standard measurement periods used by industry professionals.

It should be noted that performance within this report is shown gross of fees, as historical performance net of fees for MPERS is not available beyond the past two years. In order to make a fair comparison, gross of fee performance numbers have been utilized; however, returns after fees are a more appropriate way to compare results. Given the historically low costs incurred by both systems in their implementation approach, the fact that net of fee performance numbers are not available should not materially impact the results illustrated. Finally, it must be recognized that strictly comparing performance figures without accounting for differences in asset allocation approaches can be problematic as this approach neglects to account for differences in policy objectives that may have been in place during the evaluation period.

Historical Annualized Returns (Gross of Fees) For Period Ended June 30, 2004

| | Since Available | 10 Year | 5 Year | 3 Year | 1 Year |
|-------------------|------------------------|-----------------|-----------------|-----------------|-----------------|
| Start Date | 1/1/91 | 7/1/1994 | 7/1/1999 | 7/1/2001 | 7/1/2003 |
| MOSERS | 10.3% | 10.4% | 4.7% | 5.8% | 17.8% |
| MPERS | 8.2% | 7.6% | 2.5% | 3.9% | 15.3% |

To put the 13.5 year period results in terms of actual dollars, an analysis was conducted assuming that instead of MPERS earning their actual return they earned MOSERS' rate of return. This analysis reveals that had MPERS generated MOSERS' historical returns, MPERS would have earned approximately \$423 million more than what was actually earned.

While this analysis may seem to suggest that a decision to merge the systems, or at least the investment programs should be the obvious choice, caution must be exercised. The old adage "past performance is not necessarily an indication of future performance" could hold true. While it may be easy to arrive at a conclusion based on historical performance, there is no

guarantee that future performance will emulate the past. *For this reason, the focus should not lie on past performance but on each organization's governance design and investment resources to arrive at conclusions concerning the ability of one program to generate superior returns relative to the other program in the future.*

Internal Staff Structure and Expertise

Each system maintains an investment staff to help oversee the investment portfolio. The history and function of the investment staffs within these two systems varies significantly.

MOSERS has employed investment professionals since the early 1990s. MOSERS named their first chief investment officer in January 1995, and this individual is still employed by MOSERS in this capacity today. MOSERS' investment staff currently consists of ten investment professionals who collectively oversee MOSERS' \$5.9 billion portfolio. Of the total asset base, approximately 20% of the assets are managed by internal investment staff. The organization chart on page 7 details MOSERS' current investment department structure. This team of investment professionals collectively has an average of 12 years of experience in the investment industry and an average of seven years with MOSERS. Members of the staff also hold several professional designations including three individuals with the Certified Financial Planner (CFP) designation, two individuals with the Chartered Financial Analyst (CFA) designation, three individuals who are working towards the attainment of the CFA designation, one Certified Public Accountant (CPA), and one individual with a Masters in Business Administration.

In contrast, MPERS does not manage any funds internally and has historically relied on the investment consultant as their "extension of staff". The board approved the hiring of their first investment professional in 2003 when they added a chief investment officer. Prior to 2003, MPERS had no designated investment staff and all investment decisions were made by the board with the assistance of their investment consultant, the executive director, and the assistant executive director. The organization chart found on page 4 illustrates MPERS' current staff structure. The chief investment officer recently added to the MPERS team has five years of investment experience and holds the Chartered Financial Analyst designation.

Expense Overview

In order to accurately assess the costs of administering the investment program for each of the systems, it is important to understand that the investment implementation style chosen will, to a large degree, dictate the fees that are paid. Therefore, relevant cost comparisons are difficult to make from plan to plan. In addition, viewing costs in isolation neglects one-half of the equation – the value added or additional dollars earned because of those services acquired. For this reason, when evaluating the costs each system incurs, one must consider not just "what was paid", but, "what was earned relative to what was paid."

As of June 30, 2004, MPERS' market value was \$1.4 billion compared to MOSERS' market value of \$5.9 billion. Examining the costs for each system in basis points⁷ (bps), the results for the past three fiscal years were as follows:

⁷ One basis point is equal to 0.01%.

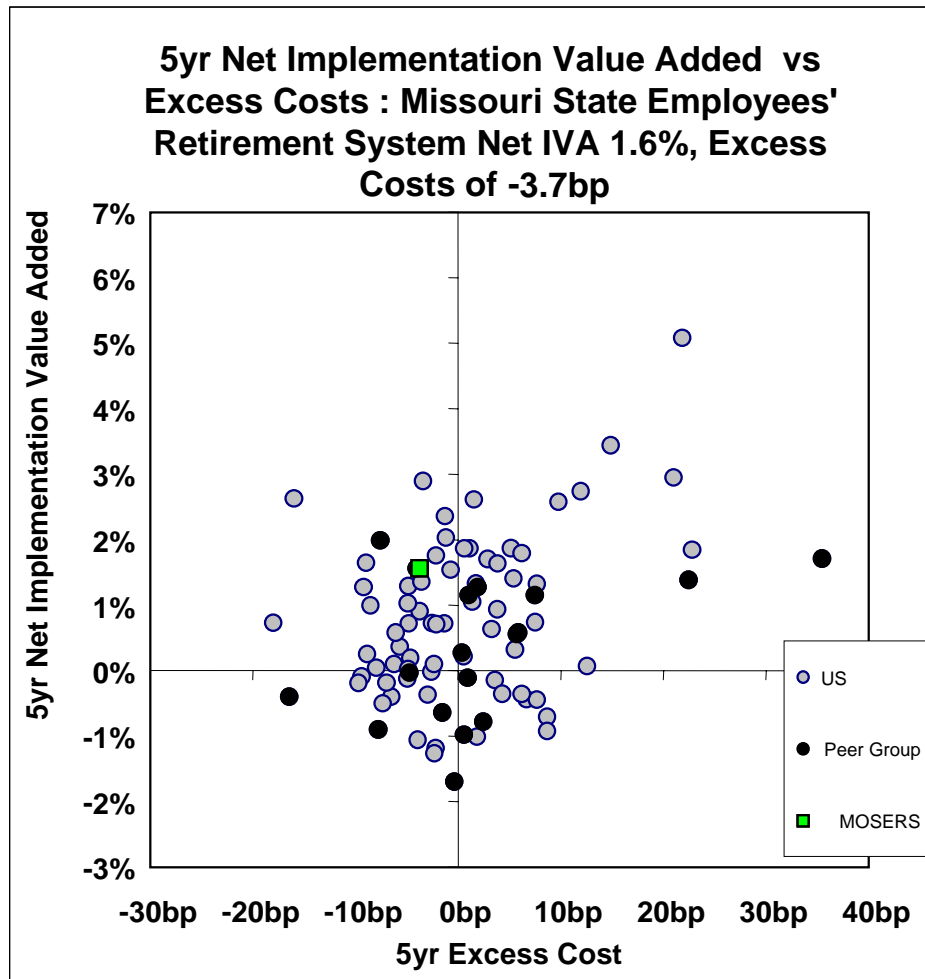
**Historical Fees
By Fiscal Year**

| | MPERS | | | MOSERS | | |
|-----------------------------------|---------|---------|---------|---------|---------|---------|
| | FY 2002 | FY 2003 | FY 2004 | FY 2002 | FY 2003 | FY 2004 |
| Manager Fees | 24 bps | 25 bps | 24 bps | 12 bps | 27 bps | 49 bps |
| Custody Fees⁸ | 1 bp | 1 bp | 1 bp | 2 bps | 2 bps | 2 bps |
| Actuary Fees | .6 bp | .3 bp | 1 bp | .4 bp | .4 bp | .4 bp |
| Investment Consulting Fees | .7 bp | .7 bp | .7 bp | .6 bp | .7 bp | .8 bp |

As can be seen, MOSERS' manager fees were considerably lower in FY 2002, but by the end of FY 2004 they were considerably higher. This upward shift in MOSERS' management fees is the result of the allocation shift out of traditional asset classes into higher cost strategies. MOSERS utilizes several implementation styles within the portfolio that have higher costs on average than more traditional implementation styles. While there is a higher "cost of doing business" associated with this type of approach, the MOSERS board expects that the move into these new asset classes will pay for themselves through higher net returns over the long run with reduced volatility within the total portfolio, thus improving the risk-adjusted returns. If this goal is achieved, it will result in a more stable contribution rate from generation to generation which is a stipulated objective in the state's retirement laws.

In order to ensure MOSERS is "getting what they pay for" in terms of investment performance relative to the expenses paid for that performance, MOSERS has utilized the services of Cost Effectiveness Measurement (CEM) on an annual basis to provide the Board with information related to investment expenditures. Costs are evaluated relative to a group of similarly situated peers to determine if costs are reasonable. More importantly, the costs incurred are evaluated relative to the returns generated through staff implementation decisions, (i.e. the return above MOSERS board's policy asset mix). The chart on the following page was extracted from the most recent CEM report, covering the five year period ended June 30, 2004.

⁸A direct comparison of custody fees cannot be made. MPERS and MOSERS have very different arrangements with their respective custodian banks. The custody business is a low margin business that is generally subsidized by ancillary services like securities lending and cash management. MPERS uses their custodian for these ancillary services while MOSERS has elected to hire third party securities lenders and manage their cash internally. Because MOSERS does not provide these additional revenue sources to its custodian, the fees MOSERS pays its custodian will more closely reflect the "true" cost of custody.



Source: Cost Effectiveness Measurement

This chart illustrates the value MOSERS' staff and consultant have added in return above the policy allocation mix compared to the costs incurred relative to the peer universe. The conclusion is that MOSERS has added 1.6% annually net of fees relative to the policy allocation mix for the past five years while doing so at a cost that is 3.7 basis points (approximately \$2 million) below the median cost for their respective peer group.

Similar information on costs relative to investment returns is not available from MPERS as they do not engage the services of Cost Effectiveness Measurement or a similar consultant.

Economies of Scale

In examining the economies of scale issues surrounding a potential merger of the systems, it is highly likely that MPERS' management fees, in basis points, would actually increase due to the higher cost implementation being utilized by MOSERS. However, given that MOSERS is four times the size of MPERS, certain economies of scale can be expected in the more traditional asset classes because of the increased negotiating power and lower cost structures that come

with a larger asset base. In the investment management industry, fees are based on assets under management and as assets grow, incremental dollars are managed at lower rates.

Transition Issue Highlights

From an investment perspective, the potential merger of MPERS into MOSERS must not only be considered from a longer-term perspective, but, must also be evaluated with shorter-term ramifications in mind. In the shorter-term, there are political and economic issues that are certain to present challenges that must be considered. These issues relate to (i) internal staffing and system oversight; (ii) political ramifications associated with potential changes in external service providers; and (iii) portfolio transition issues related to transaction and commission costs associated with the selling of MPERS' assets and the subsequent buying of MOSERS' assets; and (iv) the potential negative impact to both MPERS' and MOSERS' portfolio that will result from the need to liquidate illiquid positions from the MPERS portfolio and invest dollars in illiquid and capacity-constrained positions in MOSERS' portfolio.

Internal Staffing and System Oversight

As mentioned previously, little could be expected in terms of cost savings in the area of investment manager expenses; however, there would be expected cost savings from the consolidation of staffing and oversight services. In the area of staffing, it is likely that MOSERS would desire to retain the current investment staff member from MPERS should a consolidation occur, thus there would be no expense elimination in this area. There would, however, be considerable savings in other oversight expenses incurred by each system. For starters, given each system retains the same consultant and actuary, it is estimated that approximately \$250,000 in cost savings could be realized through consolidation of the plans for these two services alone. An additional amount of savings could be realized through having all assets with one custody bank, although those savings are harder to estimate given that a portion of custody fees are dependent upon transaction activity. It is anticipated that transaction activity would be significant in the first year or two after a consolidation. In addition, certain other oversight expenses related to portfolio management tools, research services, travel expenditures, and other miscellaneous oversight expenses could be consolidated and thus reduced, however, these expenses are minimal when compared to external management fees.

Political Ramification Associated with External Service Providers

Beyond economics, the political ramifications must also be considered. Certainly, a potential merger is likely to face political resistance from existing managers who may lose their investment assignments within MPERS' portfolio as a result of a consolidation. The strength and impact of this potential lobbying effort is unknown, but could potentially create significant roadblocks to the successful merger of the systems.

Portfolio Transaction Costs

In the event of a consolidation of the investment portfolios of the two systems, certain transaction costs would be incurred. It is extremely difficult to predict the actual costs of the transition, but they are estimated to be in the neighborhood of \$5.0 million. While this amount seems large, it should be pointed out that on a combined asset base of \$7.2 billion it amounts to about 7 basis points in performance.

Transition Impact Costs

In addition to the trading costs associated with such a consolidation, it is certainly a possibility that there would be some reduction in the overall return achieved by the combined MPERS' and MOSERS' portfolio in the short term. This reduction in performance is impossible to estimate, but would likely result from the need to invest MPERS' \$1.35 billion in some of MOSERS' most illiquid and capacity-constrained investments. These capacity constraints could force dollars (at least in the short-term) into other investment areas thus altering the investment allocation and return expectations for the total portfolio. The dollar costs in terms of performance loss associated with such a transition are unknowable.

Finally, there are certain investment mandates within MPERS' portfolio that could not be liquidated immediately. For example, MPERS' allocation to timber and real estate funds would need to be evaluated to determine if those investments could be liquidated at all if it was determined that they should be.

BENEFIT SERVICES, INFORMATION TECHNOLOGY, AND ACCOUNTING

MPERS⁹

Telecommunications

The telephone system is the most used customer service tool at MPERS to explain member and survivor benefits, prepare members for retirement and discuss service purchase options available. The number and type of questions fielded by MPERS staff covers a wide range of topics requiring a varying degree of skill to assist the caller. MPERS does not utilize an interactive voice response system, but instead greets callers with a “live” person that is often perceived to be preferable to an automated system.

Office Visits

Two senior benefit specialists at MPERS conduct office visits with members and survivors in the Jefferson City office on a regular basis. Office visits are recommended for all pending retirees and offered to anyone who desires to meet with an MPERS’ representative in person.

For pending retirees, MPERS’ staff completes all necessary forms for the retiring member prior to coming into the MPERS office for a face-to-face counseling session. MPERS’ staff does this to make more counseling time available to discuss benefits with the member.

Pre-Retirement Seminars

MPERS annually conducts approximately 30 pre-retirement seminars throughout the State of Missouri for those members who are eligible to retire within three years of the scheduled seminars. This communication with the MPERS membership provides the education needed for the member to make important decisions regarding retirement benefits and options. An average of 1,600 active members and terminated-vested members are invited each year to the pre-retirement seminars and records show that approximately 85% of those invited attend. The seminars are presented by the benefit specialists who remain on site during the seminar and are available during that time to discuss the member’s own personal situation as requested.

MPERS also coordinates with insurance providers, Social Security, and the State of Missouri Deferred Compensation Plan to provide speakers for the seminars. MPERS’ staff expends a large amount of time and resources preparing for the seminars. For each seminar, MPERS sends invitations, tracks the receipt of the response to the invitation, prepares retirement packets including retirement estimates for each member attending the seminar, copies relevant benefit information for each packet, and makes all the site arrangements for the seminar. Personal follow-up consultations are also done by the benefit specialists after the seminars.

⁹ Some information in this section is derived from a draft report issued by MAXIMUS that describes MPERS’ operation. MAXIMUS is a consultant engaged by MPERS to review and make recommendations regarding improving MPERS’ business practices.

In addition, MPERS' has recently developed a Benefit Basics Seminar for members of the system. This seminar is 1-2 hours in length and was designed to give employees a basic understanding of their retirement benefits. This program presents basic retirement information and terms and gives employees a base for understanding the specifics of their plan. In addition, it is designed to give members an appreciation of the value of the benefit they can accrue if they remain with the state long term. MPERS initially launched the Benefit Basics Seminar at MoDOT and Patrol employee meetings in the Southeast corner of the State. In one week of meetings MPERS reached over 800 members.

Member Communications

Without dedicated communications staff hired for the system, the benefit and payroll staff have taken on the task of ensuring members have up-to-date retirement and disability information. The latest handbooks are currently at the printer, which include legislative changes effective August 28, 2004. In addition to the handbook, MPERS provides an annual benefit statement to its members that includes specific member data and a personalized benefit estimate. In addition, MPERS produces other brochure type benefit information that is mailed to members upon request.

Paper Files

MPERS receives and internally distributes significant volumes of paper documents on a regular basis. To facilitate file management, MPERS organizes their member files by member type, for example "retired" or "term/vested" and then by last name. Office assistants process incoming mail, pull corresponding member files, and forward the complete file to the appropriate MPERS' staff person. Depending upon the process, the file and the documents along with related system data move from person to person within MPERS until the process is completed. MPERS is reliant upon these paper documents and files to process retirement and related benefits for their members.

Paper files are currently stored on-site at MPERS and at the MoDOT archives location in Jefferson City. There are 41,849 member files containing approximately 1.5 million documents. About half of these documents are located at the MPERS' office and the remainder are stored with the MoDOT archives.

As in all pension funds or retirement systems, these paper files span the entire career of the members and are the only records of their employment with the State of Missouri for use by MPERS. All of these documents could be required at some point during the member's career whether it is to verify service credit for an employee considering retirement or to track address and other personal data changes. The reliance on paper documents is addressed in the MAXIMUS report, which is discussed under the technology section of this report. The technology improvement project outlined in the MAXIMUS report includes plans to image MPERS' paper files in the next three to four years.

Calculation of Benefits

MPERS' payroll staff uses the "retirement master" to calculate retirement and backdrop payments. Before any payment is made, the computer generated benefit calculation is verified by an Account Technician.

Technology

Since the inception of the retirement system, MoDOT has provided technology systems and support for MPERS. The equipment and services currently provided include:

- IBM OS/390 and AS400 Mainframe system and applications;
- Mainframe programmer;
- Data entry support for the retirement payroll system;
- Network file servers;
- Personal computer (PC) workstations; and
- Telecommunications.

MPERS reimburses MoDOT for PC workstations but pays for other services such as mainframe programming and network maintenance in the form of administrative overhead.

The network infrastructure provided by MoDOT is adequate. MPERS is connected to MoDOT's network via a microwave link between their offices. PC workstations consist of Dell OptiPlex GX240 with Pentium4 processors and 256KB RAM, 10/100 Ethernet network interface cards, and run Windows 2000 Professional with the latest service packs. MPERS uses the Microsoft Office Product Suite, Lotus Notes for e-mail and several other applications and tools to assist with productivity.

Member Database

MPERS member data files are maintained on an IBM OS/390 and AS400 Mainframe system. This member database called the "retirement master" contains detailed member information (i.e. name, social security number, sex, agency identifier, location identifier, date of birth), salary history, service record dates, benefit amounts, deduction information, retirement date, payee information (i.e. name, social security number, address) member date of death, 65% COLA cap, COLA raises to date, vested benefit amount, survivor option information, military/service buyback amounts, disability social security offset amount, "add-on" service, divorce amount and ex-spouse data, marriage date, divorce date and death date. One of the primary functions of this database is to store the information necessary to produce benefit estimates used to help members elect their retirement options.

Currently, MPERS utilizes a MoDOT technology contract to purchase programming services for the "retirement master". MPERS contracts for one full-time programmer to provide full-time mainframe application support.

In an effort to move forward with updating MPERS current technology, in May 2004 MPERS contracted with MAXIMUS to evaluate key business process effectiveness. The goal of this project was to prepare MPERS for customer service, benefits delivery and technology improvements needed to bring the system closer to the level of services provided and methods employed by other public retirement systems nationwide. In the MAXIMUS assessment report the consultant recommended purchasing a new "retirement master" and ultimately establishing

an in-house network infrastructure to reduce reliance upon MoDOT. This would include the hardware, software, and services necessary to conduct business internally and would also include Internet access, e-mail, web services, and other functionality. The initiative would require a significant financial commitment as well as ongoing costs for staff, systems maintenance, and upgrades. MAXIMUS has estimated the expense of the technology phase of the project to be approximately \$2.3 million. The MPERS board approved \$165,000 for this fiscal year to begin: 1) strategic planning; 2) process streamlining initiatives; and 3) development of an RFP for purchasing a new “retirement master”. These are the beginning steps of the implementation of the MAXIMUS assessment report.

Accounting/Auditing Functions

Currently, an employee of MoDOT serves as the accountant for the retirement system. The retirement system reimburses MoDOT for the time the accountant spends on retirement system business. The accountant reports to the executive director and is responsible for maintaining all the financial records and reports of MPERS. Accounting interacts with the investment custodian, the Office of Administration, MoDOT and Patrol’s payroll/personnel departments, the actuary, auditors, the depository bank, Missouri’s Department of Revenue, and the Internal Revenue Service. In addition, the accountant assists the chief investment officer in tracking and predicting target cash balances, assists MPERS’ in annual budget development and monthly budget-to-actual reporting, and calculates monthly premium payments due the long-term disability insurer. Accounting also processes MPERS’ semi-monthly office payrolls, and reconciles monthly benefit payments and contributions/payrolls posted.

MOSERS

Telecommunications

MOSERS’ telephone system is a windows server based system that has automatic call distribution, interactive voice response, voice messaging, auto attendant, fax server and interfaces with our data systems to provide a screen pop-up of the members data for a benefits counselor when a member calls. The system has the capability of routing faxes and voice mail messages to MOSERS’ e-mail. The automatic call distribution routes calls based on knowledge of the benefits counselor. The auto attendant feature allows a member to directly access a department or be routed to an operator at any time during a call. The system provides online real time reports of call volume, length of calls, and the length of time in queue. These reports can be issued for inbound and outbound calls, or by an individual benefits counselor, for any period of time. Reports can be issued by the hour, day, week or year. The interactive voice response also enables MOSERS’ members to enroll in seminars and the life insurance plans, as well as requesting estimates.

To illustrate the technology, when a member calls MOSERS they have the option to go directly to the benefits department or talk to an operator. When they choose to go to the benefits department, the call is placed in a benefit queue with an average wait time of 37 seconds. After the call is answered by the benefits counselor, the member’s data is automatically displayed on the benefits counselor’s PC. From that window, the benefits counselor can link to all of the member’s information. The benefits counselor can provide the member with an estimate of all of their benefit options, and view all of the forms and correspondence in the member’s file. In addition, the benefits counselor can also view who has worked the forms in the file, as well as display the last ten calls placed to MOSERS, who talked to them and what they discussed. The

benefits counselor also has electronic access to all of MOSERS' procedures and explanations of benefits including state statutes, SARB (attorney opinions), procedure manuals, and call standards. Under this system, a benefits counselor typically is able to answer all questions without having to leave the member on hold or transfer the member to different staff. Lastly, benefits counselors are able to personalize forms and letters that can be printed and sent to the member. MOSERS' personalizes most communications to members with data from their files using high-speed printers that print correspondence, member statements, and books, on demand.

A member can also enroll in a seminar or, during open enrollment, make changes to their life insurance coverage, via the phone system.

Office Visits

MOSERS has seven benefit counselors, whose primary responsibilities are serving their members by providing information, answering questions, and calculating benefits; one benefit assistant who maintains most administrative duties including data entry for all retirement applications; and one benefit technician who handles purchase service calculations, death tracking, and survivor benefits. The structure is designed to minimize administrative duties for benefit counselors so as to increase the time available to serve the membership and enhance their knowledge to improve their ability to serve members. A benefits supervisor oversees the contact center to maintain support for staff and our members at all times. In addition, a benefit auditor verifies all payments before distribution and assists with statutory interpretation of plan provisions. MOSERS' average phone contacts require less than four minutes while walk-ins average less than twenty minutes. Under normal conditions, MOSERS will handle between 65,000 and 85,000 telephone calls and 1,500 to 2,500 walk-ins each year.

Pre-Retirement and Educational Seminars

MOSERS conducts a series of workshops/seminars for educating members on their benefits and financial planning issues.

- **Benefit Basics** – A two-hour workshop designed for members with less than 10 years of state service. It covers the basics of retirement, life insurance and long-term disability benefits for active state employees.
- **Money Matters** – A half-day workshop for members of all ages on basic financial issues such as credit and debt management, developing a spending plan, and saving for future goals.
- **Pre-Retirement Planning** – A full-day seminar aimed at members within three to five years of retirement. In addition to a discussion of MOSERS' benefits, representatives from PEBSCO, Social Security and MCHCP also present segments.

The MOSERS training assistant tracks enrollment and sends confirmation letters, prepares individualized material for each participant, makes all site arrangements for each presentation, and enters participant evaluations. Benefit estimates are provided to attendees at pre-retirement seminars and Money Matters workshops. All active and retired members receive an annual benefit statement from MOSERS, and all terminated-vested members receive a benefit statement every five years.

In addition to member workshops and seminars, the communication staff coordinates development of an annual payroll/personnel conference. This event brings the various benefit

providers (MOSERS, MCHCP, PEBSO, cafeteria plan, SAM II, Standard Insurance, etc.) together with state agency human resource personnel for a day of education.

MOSERS has two trainers who make approximately 100 presentations each year.

Communications Department

MOSERS' communication department is comprised of eight staff members including a manager, a supervisor, a writer/editor, two graphic artists, two trainers, and a training assistant. This group is responsible for all printed publications as well as training programs for members. In addition, they work closely with IT to update and maintain MOSERS' web sites and with human resources to develop and deliver internal training programs for MOSERS' staff.

MOSERS' communication department publishes two newsletters for members (PensionsPlus for actives and RetireeNews for retirees) on a quarterly basis. Other newsletters produced include Operations Outlook and Value Added, newsletters for the MOSERS Board of Trustees; MOSERS Morsels, which is an internal staff e-newsletter generated bi-monthly; and HR Update, an e-newsletter for state agency human resource personnel. Many of these publications may be viewed by visiting MOSERS' web site at www.mosers.org.

Handbooks for retirement, life insurance and long-term disability are maintained for each group of MOSERS' members (general employee, legislators, elected officials, judges and administrative law judges). In addition, there are a number of special topic brochures available for members. The communication department also develops any forms needed for the administration of benefits.

In addition to the annual benefit statements mentioned earlier, the communication department produces a Comprehensive Annual Financial Report and a Summary Annual Financial Report (which is mailed to active, terminated-vested, disabled and retired members). Each October an open enrollment is held for optional life insurance for members wishing to increase coverage which requires additional forms and communications to MOSERS' members.

MOSERS constantly seeks feedback on their communication efforts and customer service delivery through the use of targeted surveys and focus groups. On a regular basis, MOSERS surveys walk-ins, phone calls, new retirees, members approved for long-term disability, and attendees at all of our workshops and seminars.

Image System

All of MOSERS' member files are maintained on an optical image system (FileNet). After mail is opened, it is sorted and batched for scanning. Each document is scanned within a 24-hour period of receipt. Documents are assigned bar codes, indexed and then automatically routed to the department that will process the document. All outgoing correspondence is also bar-coded with a form type and member number so the document will be indexed automatically when a response is received, and is electronically placed into the member's imaged file. In addition, retirement checks are scanned into the members file after they clear the bank. All member documents are retained for six months and then destroyed.

MOSERS has a central file on the image system for legal records, board minutes, and accounting records. For example, invoice processing allows an invoice to be scanned and routed to the person that will need to approve the payment. After it is approved, it is routed electronically to the accounting department for payment. After payment, it is automatically

indexed in the image system using payment information retrieved from the accounting software, PeopleSoft.

Authorized staff is able to access data stored on FileNet through PCs located at their desks.

Member Database

MOSERS' member data files are maintained on an IBM I series mainframe. These files contain detailed records of members' demographic information, service periods, payroll, beneficiaries, life insurance and premium amounts, and benefit payment information. This data is collected from forms in the image system, files from the departments, the telecommunications system, and the web site. After information is entered by employees in the records management department, it is audited by a quality control specialist for completeness and accuracy. The system generates reports and letters for our departments on a daily basis. Authorized staff members are able to access MOSERS' Integrated Benefit Information (MIBS) data through PCs at their desks.

Accounting/Auditing Functions

A staff of five is responsible for maintaining all the 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, the Office of Administration Division of Accounting, various payroll/personnel departments, life insurance companies, actuaries, banks and the Internal Revenue Service. In addition, MOSERS' accounting department maintains bank daily target cash balances through use of wire transfers to and from the investment custodian, maintains annual budget development and a monthly budget to actual reporting, maintains service purchase payments and balances due, and processes monthly premium payments to the life and long-term disability insurer. Accounting also processes MOSERS' monthly office payrolls, state payroll adjustments, and reconciles monthly benefit payments and contributions/payrolls posted through MIBS.

MOSERS also employs an internal auditor whose job objectives are to provide independent assurance to the board and management that the system's assets are safeguarded, that operating efficiencies are being pursued, and that compliance with prescribed laws and board and management policies is being maintained. The objectives of auditing services include independent assessment of the organization's risk awareness and management, the reliability and integrity of the organization's data, and whether or not the organization's goals and objectives are being achieved. The internal auditor also serves in an oversight capacity over the investment department to ensure the investment program is being run in compliance with the board's established limitations.

MPERS' Conversion

MOSERS' member database contains all information, such as demographic, detailed service, and pay data that is needed to calculate benefits. The service data contains all periods of service and is coded to identify, in detail, how that service was earned and how it is to be used in calculating benefits. In the event of a full consolidation, all information in MPERS' paper files (approximately 1.5 million documents) would need to be entered into MOSERS' system. All MPERS' files would require preparation (sorting by document type, assigning of bar codes, placement in date order, and removal of staples and paperclips) for scanning. After the data was scanned, MOSERS' staff would need to verify the number of documents scanned compared to the number of documents in MPERS' master files. MOSERS can convert the data from SAMII demographics to the MOSERS' demographics files for active members. The MPERS' benefit files appear to contain the information necessary to build new benefit recipient files. MOSERS' staff would copy the MPERS' data to its database and run edits to insure integrity. It is estimated that six temporary workers could prepare approximately 1.5 million documents during a six-month period. An additional three-month period would likely be required to actually scan and verify member records. Lastly, more time would be required if MOSERS is unable to electronically transfer all of the data needed to populate the database maintained on MOSERS IBM I series mainframe.

As illustrated in the Similarities and Differences in Plan Provisions that appear in the following section, the basic plan design is very similar. MOSERS' programs could be modified to accommodate any differences and, with time and testing, be altered to provide benefit estimates as soon as data is entered and verified. This would enable MPERS' members to access MOSERS' web site for benefit estimates and individualized information, and also allow estimates to immediately be provided from MOSERS' benefits department. MOSERS would also be able to process MPERS' new retirees automatically giving them estimates of all options on their election forms. If a full consolidation occurred, it is estimated that MOSERS would require the permanent staffing assistance of one to two MPERS' benefit specialists in order to ensure an appropriate level of service to MPERS' members. In addition, MOSERS could administer the life insurance program if MoDOT wished to participate in MOSERS' life insurance plans. Assuming that the effective date of legislation would occur no later than August, 2005, it is anticipated that a full transition could easily occur by 2008.

SIMILARITIES AND DIFFERENCES IN PLAN PROVISIONS

Evolution of Changes

Prior to 1999, frequent amendments to both retirement plans resulted in a patchwork benefit structure that provided different benefits to various classifications of state employees. As a result, the state and MOSERS were named as defendants in a number of lawsuits that claimed that certain retirement statutes had created inequities that resulted in violations of the equal protection provisions of the state and federal constitutions. These lawsuits, ultimately, resulted in the state and MOSERS incurring significant liabilities. In 1998, the Public Safety Retirement Advisory Commission issued a report that recommended a new benefit structure that would resolve the equal protection issues and other shortcomings of the existing plans. In 1999, legislation was enacted that created a new retirement plan (commonly referred to as the Year 2000 Plan or MSEP 2000) for all state employees which resolved many of the internal benefit equity issues among various employee groups. The Year 2000 Plan became effective July 1, 2000.

The tables that appear on the following pages illustrate the similarities and differences between the retirement plans administered by MPERS and MOSERS. While the basic benefit plan designs are very similar, there remain a number of differences. Assuming the MPERS benefit structure would not change as a result of a consolidation, the legal risks associated with equal protection should be the same as whatever those risks are now under current law. However, in the event of a full consolidation, there are potentially several options that would need to be explored to identify the ideal plan for dealing with the current benefit differences.

- Design the consolidation so that current members of MPERS remain members of MPERS and receive benefits under MPERS' statutory provisions even if MOSERS becomes responsible for all or part of the administration of MPERS. By maintaining the current structure under MPERS as a separate tier from MOSERS, it should make it more difficult for any group under MPERS or MOSERS to claim benefits should be the same between the two systems.
- Require those hired for the first time under the Highway Patrol and the Department of Transportation after a date certain to become members of MOSERS. The creation of this new tier would provide the same legal protection as described in the previous paragraph and ultimately allow for the winding down of MPERS over a period of years.
- Make an effort to change the benefit provisions in the future between MPERS and MOSERS so that they match and are consistent with the Year 2000 Plan. This would make the administration easier from a customer service/administrative viewpoint. Potential costs associated with equalizing the closed plan benefits between the two systems would need to be valued by the system actuaries.

RETIREMENT PROVISIONS
As of August 28, 2004

| Benefit | MPERS Non-Uniformed | MPERS Uniformed | MOSERS General Employees |
|-------------------------------|---|---|---|
| Normal Retirement Eligibility | <p><u>Closed Plan:</u> Age 65/4 yrs. service (active) Age 65/5 yrs. service (vested) Age 60/15 yrs. service Rule of 80/min. age 48</p> <p><u>Year 2000 Plan:</u> Age 62/5 yrs. service Rule of 80/min. age 48</p> | <p><u>Closed Plan:</u> Age 55/4 yrs. service (active) Age 55/5 yrs. service (vested) Rule of 80/min. age 48</p> <p><u>Year 2000 Plan:</u> Age 60/5 yrs. service Rule of 80/min. age 48</p> | <p><u>MSEP:</u> Age 65/4 yrs. service (active) Age 65/5 yrs. service (vested) Age 60/15 yrs. service Rule of 80/min. age 48</p> <p><u>MSEP 2000:</u> Age 62/5 yrs. service Rule of 80/min. age 48</p> |
| Multiplier | <p><u>Closed Plan:</u> 1.6%</p> <p><u>Year 2000 Plan:</u> Life annuity 1.7% Temporary annuity 0.8% (until age 62)</p> | <p><u>Closed Plan:</u> 2.13%</p> <p><u>Year 2000 Plan:</u> Life annuity 1.7% Temporary annuity 0.8% (until age 62 even if not retiring under Rule of 80)</p> | <p><u>MSEP:</u> 1.6%</p> <p><u>MSEP 2000:</u> Life annuity 1.7% Temporary annuity 0.8% (until age 62)</p> |
| Special Benefit | <p><u>Closed Plan:</u> Not Available.</p> <p><u>Year 2000 Plan:</u> Not Available.</p> | <p><u>Closed Plan:</u> Supplemental benefit of \$90 per month (plus annual COLAs) paid until age 65 unless gainfully employed. NOT applicable for members hired on or after January 1, 1995.</p> <p><u>Year 2000 Plan:</u> Not Available.</p> | <p><u>MSEP:</u> Not Available.</p> <p><u>MSEP 2000:</u> Not Available.</p> |
| Mandatory Retirement | None | 60 Years of Age for Closed Plan and Year 2000 Plan. | None |
| COLA | <p><u>Closed Plan:</u> 80% of CPI with maximum of 5% (4% minimum until 65% cumulative cap is reached). MPERS pays COLAs on October 1 of each year.</p> <p><u>Year 2000 Plan:</u> 80% of CPI with annual maximum of 5%. No COLA cap. COLA paid on retirement anniversary date.</p> | <p><u>Closed Plan:</u> 80% of CPI with maximum of 5% (4% minimum until 65% cumulative cap is reached). MPERS pays COLAs on October 1 of each year.</p> <p><u>Year 2000 Plan:</u> 80% of CPI with annual maximum of 5%. No COLA cap. COLA paid on retirement anniversary date.</p> | <p><u>MSEP:</u> 80% of CPI with maximum of 5% (4% minimum until 65% cumulative cap is reached). MOSERS pays COLAs on retirement anniversary date.</p> <p><u>MSEP 2000:</u> 80% of CPI with annual maximum of 5%. No COLA cap. COLA paid on retirement anniversary date.</p> |

RETIREMENT PROVISIONS
As of August 28, 2004

| Benefit | MPERS Non-Uniformed | MPERS Uniformed | MOSERS General Employees |
|------------------------|--|--|--|
| In Service COLA | None. | None. | <u>MSEP:</u> 4% per year for service beyond age 65. <u>MSEP 2000:</u> None |
| Death After Retirement | <p><u>Closed Plan:</u> Survivor benefits are paid based on the option selected by the member at the time of retirement. There is no reduction for the joint and 50% survivor benefit. For members who retire prior to September 28, 2004, the survivor benefit is paid to the spouse at time of the member's death.</p> <p>For members who retire after September 28, 2004, the survivor benefit is paid to spouse named on the retirement application.</p> <p><u>Year 2000 Plan:</u> The member must take a reduced annuity to provide a survivor benefit. Survivor benefits are paid based on the option selected by the member at the time of retirement and paid to the spouse named on the application. The unreduced joint and 50% survivor option is no longer available.</p> | <p><u>Closed Plan:</u> Survivor benefits are paid based on the option selected by the member at the time of retirement. There is no reduction for the joint and 50% survivor benefit. For members who retire prior to September 28, 2004, the survivor benefit is paid to the spouse at time of the member's death.</p> <p>For members who retire after September 28, 2004, the survivor benefit is paid to spouse named on the retirement application.</p> <p><u>Year 2000 Plan:</u> The member must take a reduced annuity to provide a survivor benefit. Survivor benefits are paid based on the option selected by the member at the time of retirement and paid to the spouse named on the application. The unreduced joint and 50% survivor option is no longer available.</p> | <p><u>MSEP:</u> Survivor benefits are paid based on the option selected by the member at the time of retirement and paid to the spouse named on the application. There is no reduction for the joint and 50% survivor benefit.</p> <p><u>MSEP 2000:</u> The member must take a reduced annuity to provide a survivor benefit. Survivor benefits are paid based on the option selected by the member at the time of retirement and paid to the spouse named on the application. The unreduced joint and 50% survivor option is no longer available.</p> |

RETIREMENT PROVISIONS
As of August 28, 2004

| Benefit | MPERS Non-Uniformed | MPERS Uniformed | MOSERS General Employees |
|-------------------------|---|---|--|
| <p>Death in Service</p> | <p><u>Closed Plan:</u> After 3 yrs. of service, surviving spouse or minor children of active employee is entitled to monthly annuity equal to 25% of deceased member's accrued monthly benefit calculated as if member was of normal retirement age as of date of death.</p> <p>After 5 yrs. of service, surviving spouse of active employee is entitled to monthly annuity based on joint & 100% survivor option as if employee had retired on date of death.</p> <p>If no eligible spouse survives or upon death of spouse, 80% of member's life income annuity will be paid to eligible children until age 21.</p> <p><u>Year 2000 Plan:</u> After 5 yrs. of service, surviving spouse of active employee is entitled to monthly annuity based on joint & 100% survivor option as if employee had retired on date of death.</p> <p>If no eligible spouse survives or upon death of spouse, 80% of member's life income annuity will be paid to eligible children until age 21.</p> | <p><u>Closed Plan:</u> After 3 yrs. of service, surviving spouse or minor children of active employee is entitled to monthly annuity equal to 25% of deceased member's accrued monthly benefit calculated as if member was of normal retirement age as of date of death.</p> <p>After 5 yrs. of service, surviving spouse of active employee is entitled to monthly annuity based on joint & 100% survivor option as if employee had retired on date of death.</p> <p>If no eligible spouse survives or upon death of spouse, 80% of member's life income annuity will be paid to eligible children until age 21.</p> <p><u>Year 2000 Plan:</u> After 5 yrs. of service, surviving spouse of active employee is entitled to monthly annuity based on joint & 100% survivor option as if employee had retired on date of death.</p> <p>If no eligible spouse survives or upon death of spouse, 80% of member's life income annuity will be paid to eligible children until age 21.</p> | <p><u>MSEP:</u> After 5 yrs. of service, surviving spouse of active employee is entitled to monthly annuity based on joint & 100% survivor option as if employee had retired on date of death.</p> <p>If no eligible spouse survives or upon death of the spouse, 80% of member's life income annuity will be paid to eligible children until age 21.</p> <p><u>MSEP 2000:</u> After 5 yrs. of service, surviving spouse of active employee is entitled to monthly annuity based on joint & 100% survivor option as if employee had retired on date of death.</p> <p>If no eligible spouse survives or upon death of spouse, 80% of member's life income annuity will be paid to eligible children until age 21.</p> |

RETIREMENT PROVISIONS
As of August 28, 2004

| Benefit | MPERS Non-Uniformed | MPERS Uniformed | MOSERS General Employees |
|---|--|--|---|
| Joint & 100% Survivor Option Reduction Factor | <p><u>Closed Plan:</u> Reduction factor starts at .94 and considers the age difference (between retiree and spouse) calculated as .005 times the number of years of age difference.</p> <p><u>Year 2000 Plan:</u> Based on actuarial charts considering age of retiree and spouse at time of retirement.</p> | <p><u>Closed Plan:</u> Reduction factor starts at .94 and considers the age difference (between retiree and spouse) calculated as .005 times the number of years of age difference.</p> <p><u>Year 2000 Plan:</u> Based on actuarial charts considering age of retiree and spouse at time of retirement.</p> | <p><u>MSEP:</u> Reduction factor starts at .93 and considers the age difference (between retiree and spouse) calculated as .005 times the number of years of age difference.</p> <p><u>MSEP 2000:</u> Based on actuarial charts considering age of retiree and spouse at time of retirement.</p> |
| Reemployment After Retirement | <p><u>Closed Plan:</u> Retired re-employed member will continue to receive retirement benefits from MPERS if employed in a full-time benefit eligible position in MOSERS.</p> <p><u>Year 2000 Plan:</u> If retiree is re-employed in a benefit eligible position, MPERS benefit will be suspended until the individual ceases working.</p> | <p><u>Closed Plan:</u> Retired re-employed member will continue to receive retirement benefits from MPERS if employed in a full-time benefit eligible position in MOSERS.</p> <p><u>Year 2000 Plan:</u> If retiree is re-employed in a benefit eligible position, MPERS benefit will be suspended until the individual ceases working.</p> | <p><u>MSEP:</u> If member is re-employed in a benefit eligible position, MOSERS benefit will be suspended until individual ceases working.</p> <p><u>MSEP 2000:</u> If retiree is re-employed in a benefit eligible position, MOSERS benefit will be suspended until the individual ceases working.</p> |
| Creditable Service for Non-Benefit Eligible Service in MoDOT & Patrol | <p><u>Closed Plan:</u> Service granted at time of retirement provided individual works continuously until retirement. Service cannot be used for eligibility.</p> <p><u>Year 2000 Plan:</u> Same as Closed Plan.</p> | <p><u>Closed Plan:</u> Service granted at time of retirement provided individual works continuously until retirement. Service cannot be used for eligibility.</p> <p><u>Year 2000 Plan:</u> Same as Closed Plan.</p> | <p><u>MSEP:</u> Not Available.</p> <p><u>MSEP 2000:</u> Not Available.</p> |
| Creditable Service for Non-Benefit Eligible Service with Another State Agency | <p><u>Closed Plan:</u> Prior non-benefit eligible MoDOT & Patrol service is granted upon verification. Can be used for vesting and eligibility.</p> <p><u>Year 2000 Plan:</u> Not Available.</p> | <p><u>Closed Plan:</u> Service granted upon verification. Can be used for vesting and eligibility.</p> <p><u>Year 2000 Plan:</u> Not Available.</p> | <p><u>MSEP:</u> Not Available.</p> <p><u>MSEP 2000:</u> Not Available.</p> |

RETIREMENT PROVISIONS
As of August 28, 2004

| Benefit | MPERS Non-Uniformed | MPERS Uniformed | MOSERS General Employees |
|---|---|--|---|
| Subsidized Purchase of Public Sector and Certified Police Officer Service | <u>Closed Plan:</u> Not Available. <u>Year 2000 Plan:</u> Not Available. | <u>Closed Plan:</u> Uniformed member may purchase up to four (4) years of non-federal public sector service rendered in Missouri and (4) years of Certified Police Officer service rendered prior to becoming a Uniformed Highway Patrol Officer. Purchase price is calculated the same as a military purchase. <u>Year 2000 Plan:</u> Not Available. | <u>MSEP:</u> Member may purchase up to (4) years of full-time non-federal public sector service rendered in Missouri or full time service rendered for the State of Missouri under an employment contract. Purchase price is calculated the same as a military purchase. <u>MSEP 2000:</u> Same as MSEP. |
| Refund of Cost Basis for Purchased Service | <u>Closed Plan:</u> Not Available. <u>Year 2000 Plan:</u> Not Available. | <u>Closed Plan:</u> Not Available. <u>Year 2000 Plan:</u> Not Available. | <u>MSEP:</u> The beneficiary of a member who purchases service, retires with a normal annuity, and then dies receives a refund of the member's "cost basis" of the purchased service. <u>MSEP 2000:</u> Same as MSEP. |
| Refund of Purchase Cost of Military Service for Death Prior to Retirement | <u>Closed Plan:</u> Not Available. <u>Year 2000 Plan:</u> Not Available. | <u>Closed Plan:</u> Not Available. <u>Year 2000 Plan:</u> Not Available. | <u>MSEP:</u> If employee who has purchased military service dies prior to retirement, a surviving spouse who is not eligible for a survivor benefit may receive a refund of the purchase cost. <u>MSEP 2000:</u> Same as the MSEP. |
| Calculation of Creditable Service for Part-time Employees | <u>Closed Plan:</u> Total hours divided by 160 equals number of months of service. <u>Year 2000 Plan:</u> Same as Closed Plan. | <u>Closed Plan:</u> Total hours divided by 160 equals number of months of service. <u>Year 2000 Plan:</u> Same as Closed Plan. | <u>MSEP:</u> One month of service is granted if individual works at least half time during the month. <u>MSEP 2000:</u> Same as MSEP |

RETIREMENT PROVISIONS
As of August 28, 2004

| Benefit | MPERS Non-Uniformed | MPERS Uniformed | MOSERS General Employees |
|--|---|---|---|
| Unreduced Joint & 50% Survivor Benefit for Survivors of Retirees who Did Not Elect a Spouse Option at Retirement | <u>Closed Plan:</u> Granted unreduced joint & 50% survivor benefit to survivors of deceased members who, at the time of their retirement, did not select a survivor option. Retroactive to 1989. <u>Year 2000 Plan:</u> Not Available. | <u>Closed Plan:</u> Granted unreduced joint & 50% survivor benefit to survivors of deceased members who, at the time of their retirement, did not select a survivor option. Retroactive to 1989. <u>Year 2000 Plan:</u> Not Available. | <u>MSEP:</u> Granted unreduced joint & 50% survivor benefit only to members alive on the effective date of legislation. <u>MSEP 2000:</u> Not Available. |
| Payroll Deduction for Highway Credit Union | <u>Closed Plan:</u> Allow deduction from retirement benefit for one MoDOT/Patrol credit union. <u>Year 2000 Plan:</u> Same as Closed Plan. | <u>Closed Plan:</u> Allow deduction from retirement benefit for one MoDOT/Patrol credit union. <u>Year 2000 Plan:</u> Same as Closed Plan. | <u>MSEP:</u> No deduction allowed for credit union. <u>MSEP 2000:</u> Same as MSEP. |

**COMPARISON OF LIFE INSURANCE PLANS
As of August 28, 2004**

| Type | MPERS Active Members (Life Insurance Benefits Not Administered by MPERS) | MPERS Retired Members (Life Insurance Benefits Not Administered by MPERS) | MOSERS Active Members | MOSERS Retired Members |
|----------------------------|---|--|--|---|
| Basic Life | One-times annual salary (with \$15,000 minimum) rounded to the next higher \$1,000 while actively employed. | \$5,000 death benefit paid by the retirement system if member retires within 60 days of termination from active employment. The MPERS benefit is paid by the retirement system as a death benefit. | One-times annual salary (with \$15,000 minimum) while actively employed. | \$5,000 provided member retires within 60 days of termination from active employment. The MOSERS benefit is paid as life insurance by Standard Insurance Company. |
| Duty-Related Death Benefit | Two-times annual salary at time of death in addition to basic life amount of one-times annual salary. | None. | Two-times annual salary at time of death in addition to basic life amount of one-time annual salary. | None. |

COMPARISON OF LIFE INSURANCE PLANS
As of August 28, 2004

| Type | MPERS Active Members (Life Insurance Benefits Not Administered by MPERS) | MPERS Retired Members (Life Insurance Benefits Not Administered by MPERS) | MOSERS Active Members | MOSERS Retired Members |
|---------------|---|--|--|--|
| Optional Life | <p>May be purchased in multiples of annual salary up to six-times annual salary (maximum of \$800,000) rounded to the next higher \$1,000 or in flat amounts in multiples of \$1,000.</p> <p>Spouse coverage may be purchased in multiples of \$1,000 up to a maximum of \$100,000; however, amount cannot exceed the amount held by the member.</p> <p>Child coverage is available in a flat amount of \$10,000 per child.</p> | <p><u>Closed Plan</u> Members may retain up to \$60,000 or the amount of optional life insurance coverage held at time of retirement at the group rate and may convert any remaining basic and optional life at individual rates.</p> <p><u>Year 2000 Plan</u> Members may, if retired under Rule of 80, 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 at individual rates.</p> <p>Spouse and children coverage ends at retirement and may be converted at individual rates.</p> | <p>May be purchased in multiples of annual salary up to six-times annual salary (maximum of \$800,000) or in flat amounts in multiples of \$1,000.</p> <p>Spouse coverage may be purchased in multiples of \$1,000 up to a maximum of \$100,000; however, amount cannot exceed the amount held by the member.</p> <p>Child coverage is available in a flat amount of \$10,000 per child.</p> | <p><u>MSEP</u> Members may retain up to the lesser of \$60,000 or the amount of optional life insurance coverage held at time of retirement at the group rate and may convert any remaining basic and optional life at individual rates.</p> <p><u>MSEP 2000</u> Members may, if retired under Rule of 80, 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 at individual rates.</p> <p>Spouse and children coverage ends at retirement and may be converted at individual rates.</p> |

**COMPARISON OF DISABILITY PLANS
As of August 28, 2004**

| Type | MPERS | MOSERS |
|----------------------|---|--|
| Long-Term Disability | <p>LTD - 60% of monthly pre-disability earnings offset by deductible income such as primary social security and workers' compensation. Benefits commence 180 days after onset of disability or the expiration of sick leave, whichever occurs later. Benefits cease upon the earliest of these dates: 1) member is no longer disabled; 2) member is eligible for normal retirement; 3) member dies; 4) member fails to provide proof of continued disability; 5) benefits become payable from any other long-term group disability plan.</p> <p>Work-Related - Work-Related disability benefits provide the lesser of : 1) 70% of your monthly pre-disability earnings (not offset by deductible income); or 2) 90% of your monthly pre-disability earnings offset by deductible income. Benefits commence when sick leave expires or the date member is determined to have reached maximum medical improvement under Missouri Workers' Compensation Law, whichever occurs later.</p> <p>Current Premium for LTD and Work-Related is \$0.60 per \$100 of payroll.</p> | <p>For <i>general employees</i>, 60% of compensation minus social security, workers' compensation, and employer provided income. Benefits commence 90 days after disability or after sick leave expires, whichever occurs last. Benefits cease upon the earliest of 1) disability ending; 2) member is eligible for retirement benefits; 3) when member returns to work; or 4) upon member's death.</p> <p>Current Premium for LTD is \$0.57 per \$100 of payroll.</p> <p>For <i>uniformed members of the Water Patrol</i> who are eligible for statutory occupational disability receive benefits equal to 50% of compensation with no offset for social security at time of disability. For <i>non-occupational disabilities</i>, members receive the same benefit as general employees.</p> |

COMPARISON OF DISABILITY PLANS
As of August 28, 2004

| Type | MPERS | MOSERS |
|--------------------|--|---|
| Partial Disability | Not referred to as Partial in the MPERS plan, but very similar benefits. | For <i>general employees</i> , member may be partially disabled during benefit waiting period, and 24 months following that period if the member is working in an occupation but as a result of physical disease, injury, pregnancy, or mental disorder, is unable to earn more than 80% of pre-disability earnings. After 24 months, member may be considered partially disabled if working in an occupation, but unable to earn more than 60% of the member's disability earnings. In both instances, work earnings are used to reduce the LTD benefit. |

IMPACT ON MEMBERSHIP, EMPLOYEE AND RETIREE ASSOCIATIONS

In the event of a full consolidation, the transition of the benefit administration aspects would be a substantial but feasible undertaking for MOSERS' staff, the impact of which could ultimately affect the membership of both organizations. MPERS' members are likely to oppose a full consolidation if they have the perception that it will cause a loss of service or control over future benefit design. Consolidation may cause MPERS' members to feel as if they are losing their unique ability to impact their benefits since it would cause them to be on par with all other state employees currently covered by MOSERS. History has proven that it is often easier for the legislature to fiscally address the benefit and personnel needs of a smaller group, such as MPERS, than for the masses due to the significantly higher costs associated with providing the same level of benefits to the full state membership (although recent equal protection litigation has caused the state and the legislature to be more cautious in this area). In addition the creation of the Total Compensation Commission has made strides in assuring that future benefit changes are equalized for employees of both retirement systems.

MPERS' members are also served by several employee associations (the Missouri State Troopers Association and the State Highway and Transportation Employees' Association of Missouri) that collect fees from their membership and lobby various political entities (boards, commissions, and the legislature) in an effort to promote benefit enhancements for their members. Similar employee associations also exist for MOSERS' active members. A consolidation could be viewed as diminishing the ability of MPERS' members to impact benefits through the political process currently in place. In addition, MPERS' and MOSERS' retirees are both eligible to elect to participate in the Association of Retired Missouri State Employees (ARMSE) which is an organization that collects dues and lobbies various entities to promote benefit changes to enhance the economic welfare of retired state employees. It is possible that ARMSE may oppose a partial or full consolidation if the MPERS' and MOSERS' boards, and the Highway Commission, were not in favor of a merger.

As it affects both systems, it is anticipated that allocating resources to a consolidation transition would result in short-term declines in service levels to current members. Customer satisfaction has always been the top priority at MOSERS and MPERS, and significant efforts are put forth to ensure that MOSERS and MPERS are delivering that service in a cost-effective manner.

To illustrate, MOSERS participates in the Cost Effectiveness Measurement (CEM) Benefit Administration Benchmarking Analysis to assess the organization's overall performance and cost-effectiveness each year. CEM has identified 15 other pension plans as our most relevant peer group, based upon membership size and assets. MOSERS' total plan administration cost is \$66 per member and annuitant relative to the median peer average of \$87. The survey also revealed that MOSERS' spends the largest proportion of their budget on communications to members (\$21 per active member versus the peer median of \$8), but the high level of technology and streamlined processes employed by MOSERS resulted in lower costs in other areas which translates to an overall lower administrative cost and higher service level. MOSERS believes the communications effort is critical to quality customer service delivery and is also a contributor to lower costs in other areas.

The impact of a full consolidation could affect MOSERS' short-term ability to continue to achieve such a high level of service. However, it is anticipated that MOSERS would closely monitor this by surveying the membership (which would include MPERS' members) to track, assess, and improve the service level as quickly as possible. A full consolidation would likely result in a short-term service deficiency and could raise the costs associated with plan administration. MOSERS is unable to assess

this cost at present but anticipates the cost effect would be captured in a future CEM Benefit Administration Benchmarking Analysis completed after the consolidation was concluded.

Furthermore, MOSERS would incur some cost in converting MPERS' files to the database and file imaging system presently in place at MOSERS. The likely conversion cost to MOSERS is unknown. If the systems continue to function independently, it is anticipated that MPERS will incur costs to update their information technology system and to implement document imaging.

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