MOSERS

Missouri State Employees' Retirement System

Annual Actuarial Valuation

June 30, 2005

Revised

GRS

Gabriel, Roeder, Smith & Company
Actuaries • Consultants

Missouri State Employees' Retirement System

Annual Actuarial Valuation as of June 30, 2005

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GABRIEL, ROEDER, SMITH & COMPANY
Consultants & Actuaries
One Towne Square • Suite 800 • Southfield, Michigan 48076 • 248-799-9000 • 800-521-0498 • fax 248-799-9020

September 19, 2005

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

Re: **Actuarial Valuation as of June 30, 2005**

Presented in this report are the results of the **annual actuarial valuation** of the Missouri State Employees' Retirement System. The purpose of the valuation was to measure the System's funding progress and to determine the level cost employer contribution rate for the fiscal year beginning July 1, 2006.

The date of the valuation was **June 30, 2005.**

The valuation was based upon data, furnished by the MOSERS' staff, concerning active, inactive and retired members along with pertinent financial information. The complete cooperation of the MOSERS' staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the presentation of contribution rates on page 7 and the comments on page 11.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries and who have significant experience in performing valuations for public retirement systems.

The valuation was prepared in accordance with the standards of practice prescribed by the Actuarial Standards Board. The actuarial calculations were made by qualified actuaries in accordance with generally accepted actuarial procedures and methods. The calculations are based on the provisions of the System scheduled to be in effect as of July 1, 2005, and on actuarial assumptions that are, individually and in the aggregate, internally consistent and reasonably based on the actual experience of the System.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

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

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

NLJ:BLA:dks:bd

Financial Principles

Promises Made, and Eventually Paid. As each year is completed, MOSERS in effect hands an "IOU" to each member then acquiring a year of service credit --- the "IOU" says: "The Missouri State Employees' Retirement System owes you certain retirement benefits -- payments in cash commencing when you qualify for retirement."

The related key financial question is, which generation of taxpayers contributes the money to cover the IOU?

The present taxpayers, who receive the benefit of the member's present year of service?

Or the future taxpayers, who happen to be in Missouri at the time the IOU becomes a cash demand?

The law governing MOSERS financing intends that this year's taxpayers contribute the money to cover the IOUs being handed out this year. By following this principle, ***funds will be accumulated during members' working years, which, combined with income on invested assets, will be sufficient to pay benefits throughout retirement.***

An inevitable by-product of this financing design is the accumulation of reserve assets, for decades, and the income produced when the assets are invested. Over time, ***investment income*** **becomes the largest contributor** toward benefits, and directly influences the contribution amount required from the employer.

In actuarial terminology, the minimum level percent of payroll contribution rate consists of:

Normal Cost (the cost of members' service being rendered this year)
... plus ...
Interest on Unfunded Actuarial Accrued Liabilities (unfunded actuarial accrued liabilities are the difference between: actuarial liabilities for members' service already rendered; and the actuarial value of MOSERS' accrued assets).

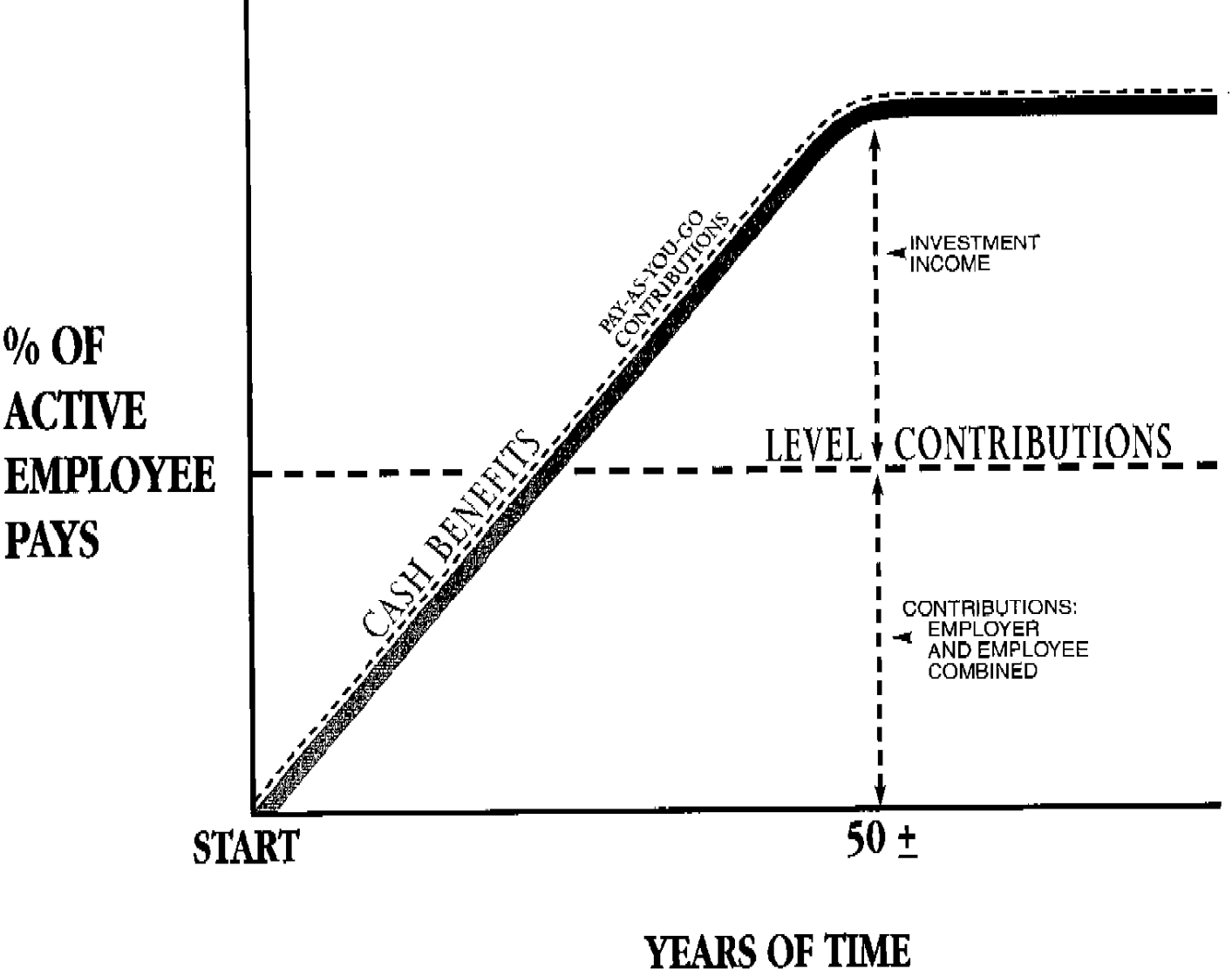
Computing Contributions To Support Funded Benefits. From a given schedule of benefits and from the member data and asset data provided, the actuary determines the contribution rates to support the benefits, by means of ***an actuarial valuation and a funding method.***

An actuarial valuation has a number of ingredients such as: the rate of investment income which plan assets will earn; the rates of withdrawal of active members who leave covered employment before qualifying for any monthly benefit; the rates of mortality; the rates of disability; the rates of salary increases; and the assumed age or ages at actual retirement.

In an actuarial valuation, assumptions are made as to what the above rates will be, for the next year and for decades in the future. Only the subsequent actual experience of the plan can indicate the degree of accuracy of the assumptions.

Reconciling Differences Between Assumed Experience and Actual Experience. Once actual experience has occurred and been observed, it will not coincide exactly with assumed experience, regardless of the wisdom of those who developed the assumptions, or the skill of the actuary and the many calculations made. The future cannot be predicted with precision.

MOSERS copes with these continually changing differences by having annual actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is ***continuing adjustments in financial position, and contribution rates.***



CASH BENEFITS LINE. This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

LEVEL CONTRIBUTION LINE. Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

Economic Risk Areas

- Rates of investment return
- Rates of pay increase
- Changes in active member group size

Non-Economic Risk Areas

- Ages at actual retirement
- Rates of mortality
- Rates of withdrawal of active members (turnover)
- Rates of disability

The Actuarial Valuation Process

An ***actuarial valuation*** is the mathematical process by which actuarial present values and contribution rates are determined. The flow of activity constituting the valuation may be summarized as follows:

A. ***Census Data***, furnished by the system administrative staff, including:

Retired lives now receiving benefits

Former members with vested benefits not yet payable

Active members

\+ B. ***Benefit Provisions*** governing future payments from the retirement system.

\+ C. ***Asset data*** (cash & investments), furnished by the system administrative staff.

\+ D. ***Assumptions concerning future experiences*** in various risk areas, which assumptions are established by the Board of Trustees after consulting with the actuary.

\+ E. ***The funding method*** for employer contributions (the long-term planned pattern for employer contributions).

\+ F. ***Mathematically combining the assumptions, the funding method, and the data.***

= G. Determination of:

Plan financial position and

The employer contribution rate.

Meaning of "Unfunded Actuarial Accrued Liabilities"

"***Actuarial accrued liabilities***" are ***the portion of the present value of plan promises to pay benefits in the future which are not covered by future normal cost contributions*** --- a liability has been established ("accrued") because the service has been rendered but the resulting monthly cash benefit may not be payable until years in the future. Actuarial accrued liabilities are the result of complex mathematical calculations, which are made annually by the plan's actuary.

If "actuarial accrued liabilities" at any time exceed the actuarial value of the plan's accrued assets, the difference is "***unfunded actuarial accrued liabilities***." This is the common condition. If the plan's assets equaled the plan's "actuarial accrued liabilities," the plan would be termed "fully funded."

Each time a plan adds a new benefit which applies to service already rendered, an "actuarial accrued liability" is created, which is also an "unfunded actuarial accrued liability" because the plan can't print instant cash to cover the value of the new benefit promises. Payment for such unfunded actuarial accrued liabilities is spread over a period of years, commonly in the 20-30 year range.

Unfunded actuarial accrued liabilities can occur in another way: if actual financial experience is less favorable than assumed financial experience, the difference is added to unfunded actuarial accrued liabilities. In plans where benefits are directly related to an employee's pay near time of retirement, unfunded actuarial accrued liabilities increase when unexpected rates of pay increase create additional actuarial accrued liabilities which are not offset by favorable experience in other areas.

The existence of unfunded actuarial accrued liabilities is not bad, but the changes from year to year in the amount of unfunded actuarial accrued liabilities are important and should be monitored.

Unfunded actuarial accrued liabilities are not a bill payable immediately but it is important that policy-makers prevent the amount from becoming unreasonably high and ***it is vital for plans to have a sound method for making payments toward them*** so that they will be controlled.

Valuation Results

Computed Employer Contribution Rate

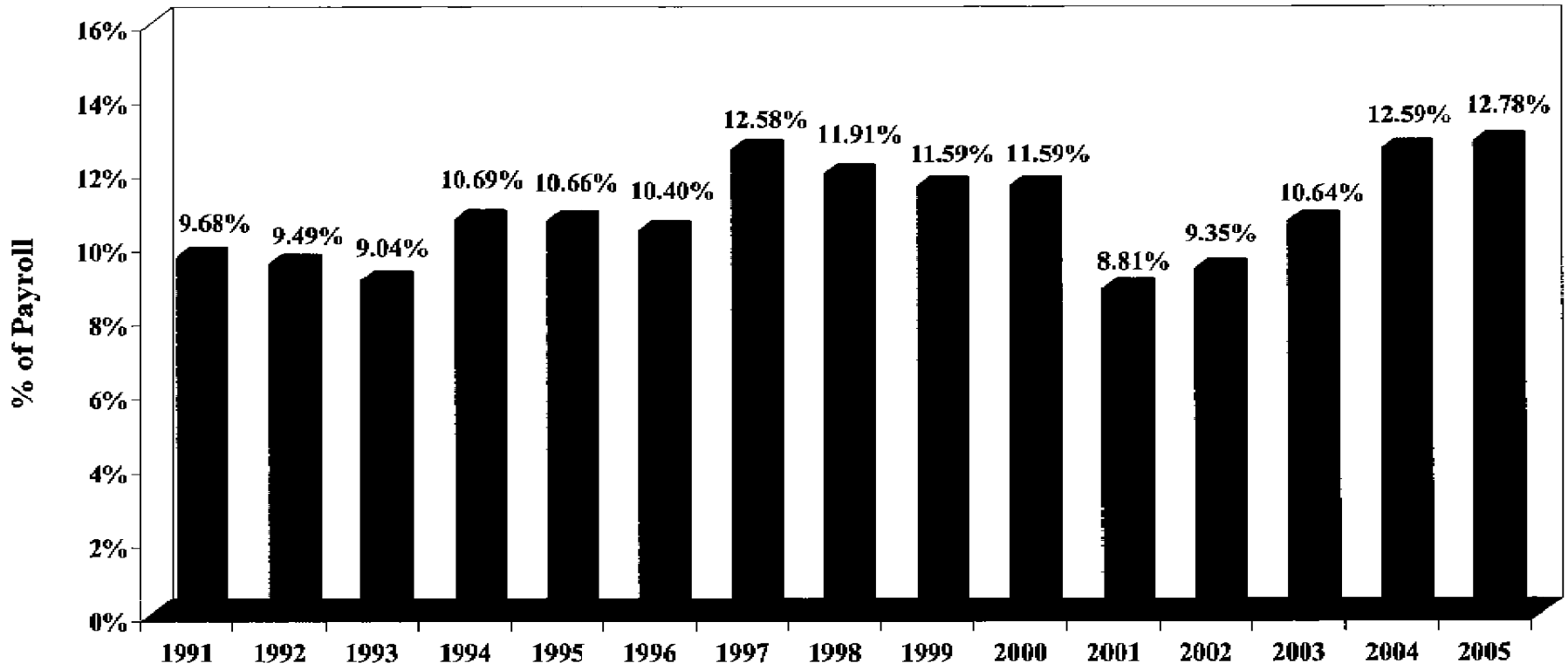
Expressed as Percents of Active Member Payroll

June 30, 2005

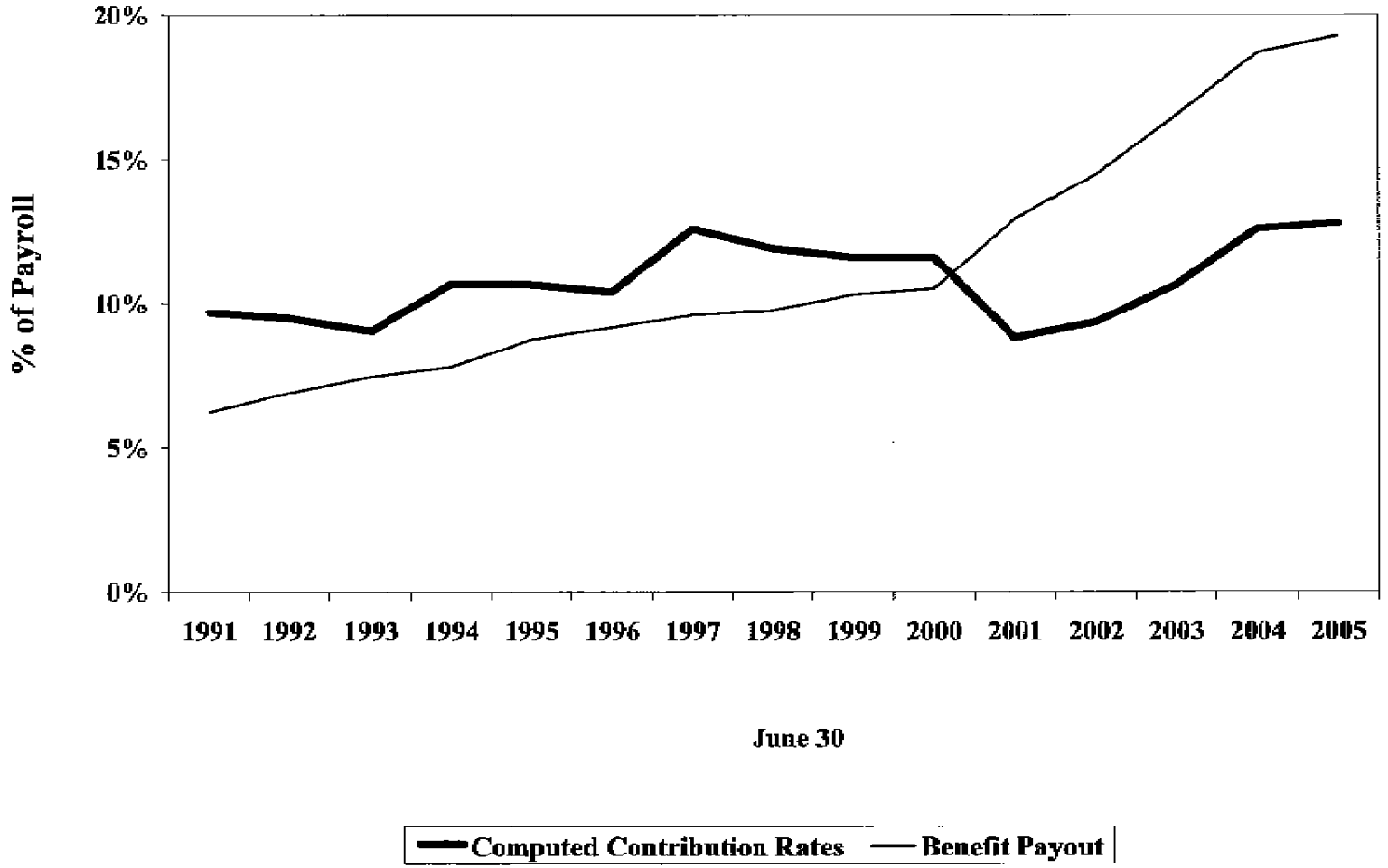
Contributions for	Contribution Expressed as Percents of Payroll
Normal Cost	
Service retirement benefits	7.75 %
Disability benefits	0.41
Survivor benefits	0.33
Administrative expenses	0.35
Total	8.84
Unfunded Actuarial Accrued Liabilities (UAAL) (30 year level percent-of-payroll amortization*)	3.94
TOTAL COMPUTED EMPLOYER CONTRIBUTION RATE	**12.78 %**

* *This corresponds to an amortization factor of 16.05286 assuming that the first year of payroll growth is 0% followed by 29 years at 4% per year. Amortization period a year ago was 31 years.*

Missouri State Employees' Retirement System
Computed Contribution Rates



Missouri State Employees' Retirement System
Contribution Rates vs. Benefit Payout



Actuarial Present Values June 30, 2005

Actuarial Present Value, June 30, for	(1) Actuarial Present Value	(2) Portion Covered By Future Normal Cost Contributions	(3) Actuarial Accrued Liabilities (1) - (2)
Active Members			
Service retirement benefits based on service rendered before and likely to be rendered after valuation date	$ 3,893,586,337	$ 793,617,282	$ 3,099,969,055
Disability benefits likely to be paid to present active members who become totally and permanently disabled	124,887,418	53,064,218	71,823,200
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	152,662,846	41,847,796	110,815,050
Separation benefits likely to be paid to present active members			
Refunds of member contributions	0	0	0
Deferred benefits	408,944,698	200,051,699	208,892,999
Total	408,944,698	200,051,699	208,892,999
Active Member Totals	$ 4,580,081,299	$ 1,088,580,995	$ 3,491,500,304
Members on Leave of Absence & LTD			
Service retirement benefits based on service rendered before the valuation date			99,571,087
Terminated Vested Members			
Service retirement benefits based on service rendered before the valuation date			357,450,612
Retired Lives			3,628,798,766
BackDROP Installment Payments Incurred, but not yet paid			707,248
TOTAL ACTUARIAL ACCRUED LIABILITY			$ 7,578,028,017
ACTUARIAL VALUE OF ASSETS			6,435,344,102
UNFUNDED ACTUARIAL ACCRUED LIABILITY			$ 1,142,683,915

Actuarial Valuation as of June 30, 2005
Comments

Computed Contribution Rate. The contribution rate for the fiscal year beginning July 1, 2006 was computed to be 12.78% of payroll, based upon an amortization period for the unfunded actuarial accrued liabilities (UAAL) of 30 years. This represents an increase of 0.19% in the rate computed for the fiscal year beginning July 1, 2005. Of this change, (.55)% was attributable to the mark to market asset valuation method adjustment, (.21)% was attributable to recognizing the State pay freeze on across-the-board increases for the fiscal year ending June 30, 2006 and 0.95% was attributable to plan experience for the year ending June 30, 2005 including the addition of the assets and liabilities from the Administrative Law Judges Retirement System.

Experience and Development of Actuarial Value of Assets. Experience was unfavorable this year – primarily due to lower than anticipated retiree mortality and a slightly higher average salary increase among active members than expected. Measured on an actuarial value basis, unexpected investment return typically is recognized over discrete five year periods (please see page 44). However, at their September 15, 2005 meeting, the MOSERS Board considered the extreme volatility in the markets during the last five years and the statutory funding objective to employ methods which establish contribution rates that are likely to remain level from one period to another. As a result, the Board elected to set the actuarial value of assets to market value as of June 30, 2005. Consequently, all remaining unrecognized investment gains or losses that would have otherwise been recognized over a period of years were fully recognized as of June 30, 2005. No change was made to the asset valuation method for future years, so it is anticipated that future investment gains or losses above or below the assumed investment return of 8.5% will continue to be recognized over discrete five year periods.

Additional information concerning 2005 experience is presented in the gain/loss section of this report beginning on page 16.

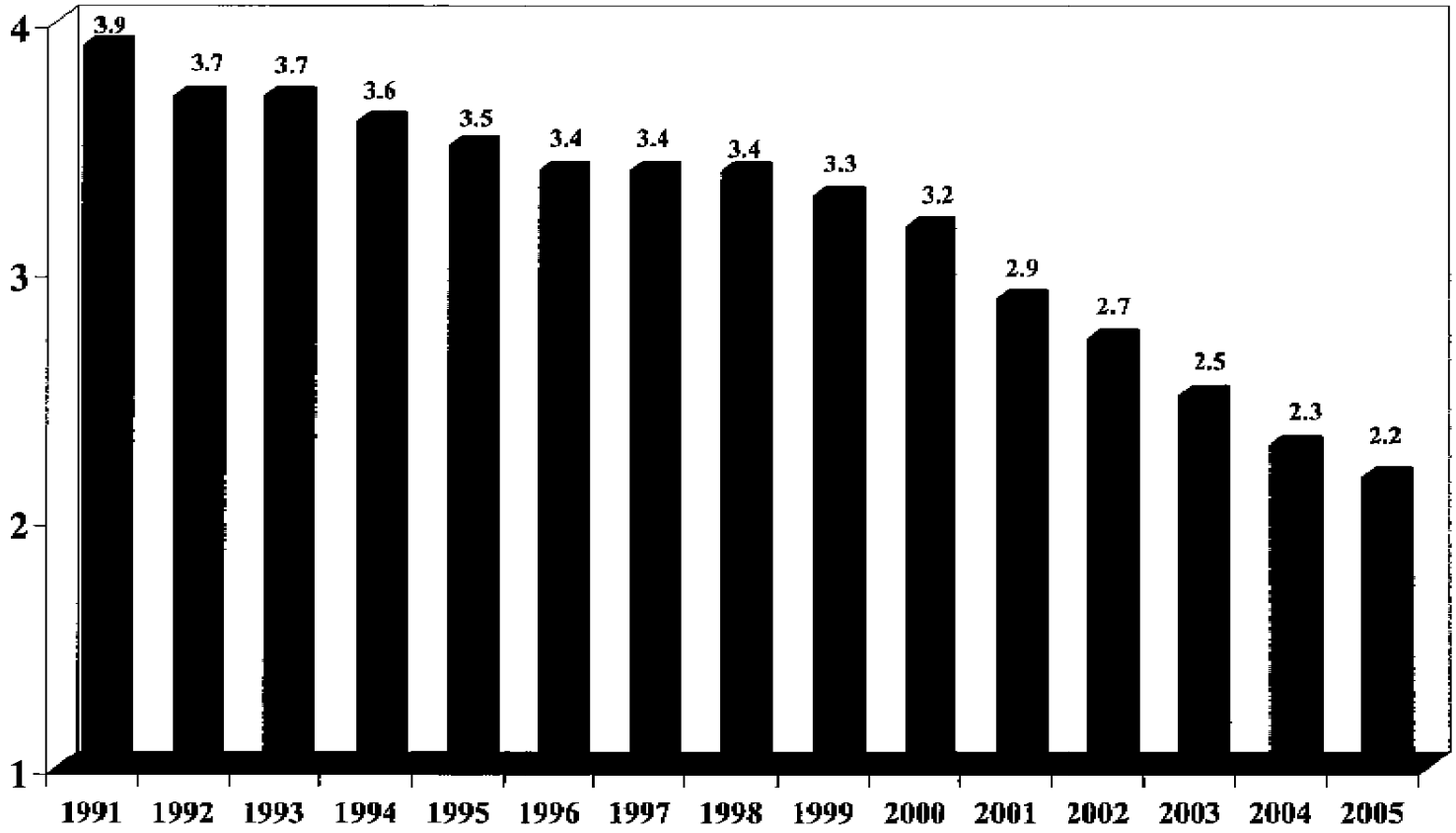
Conclusion. **Based on the results of the June 30, 2005 regular annual actuarial valuation, it is our opinion that the Missouri State Employees' Retirement System continues to be in sound financial condition in accordance with actuarial principles of level percent-of-payroll financing.**

Comparative Schedule

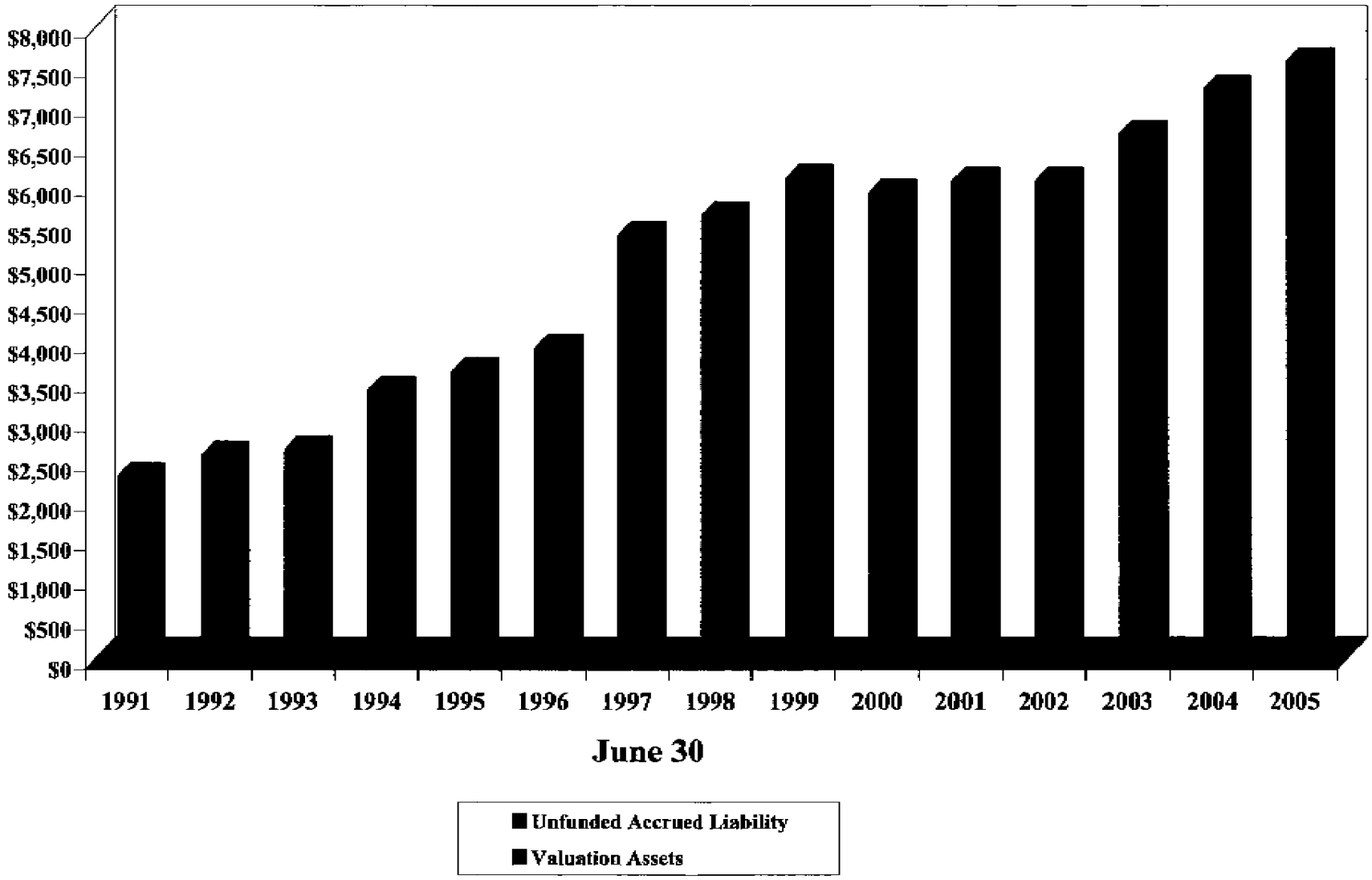
Valuation Date June 30	Active Members				Retired Lives				Accrued Liability	Valuation Assets	UAAL
		Payroll	Average Salary		Number		Annual Benefits				
	Number	$ Millions	$	% Incr.	Retired	Active/ Retired	$ Million	% of Payroll			
									——million——		
1989 (2)	43,787	$895	$20,444	4.0 %	11,090	4.0	$ 52.6	5.9 %	$1,782	$1,418	$364
1990 (1)	46,834	994	21,229	3.8	11,495	4.1	57.3	5.8	1,861	1,587	274
1991 (2)	46,725	1,028	21,995	3.6	11,995	3.9	64.0	6.2	2,053	1,793	260
1992 (1)(2)	46,616	1,030	22,101	0.5	12,552	3.7	71.0	6.9	2,291	1,991	300
1993	47,954	1,063	22,172	0.3	13,115	3.7	79.4	7.5	2,447	2,237	210
1994 (2)	49,436	1,125	22,754	2.6	13,651	3.6	96.2	8.6	2,919	2,425	494
1995	50,524	1,199	23,730	4.3	14,384	3.5	104.9	8.8	3,151	2,649	502
1996 (1)	51,425	1,268	24,650	3.9	15,004	3.4	116.2	9.2	3,440	2,928	512
1997 (1)(2)(3)	52,737	1,360	25,782	4.6	15,609	3.4	130.4	9.6	4,484	3,581	903
1998	54,544	1,460	26,762	3.8	16,251	3.4	142.4	9.8	4,919	4,211	708
1999 (2)	56,158	1,565	27,860	4.1	17,117	3.3	161.3	10.3	5,506	4,909	597
2000 (1)	57,774	1,684	29,143	4.6	18,196	3.2	177.0	10.5	5,921	5,217	704
2001 (1)	58,431	1,758	30,090	3.3	20,237	2.9	227.4	12.9	6,065	5,881	184
2002 (3)	58,616	1,773	30,253	0.5	21,502	2.7	256.6	14.5	6,294	6,033	261
2003 (2) (3)	57,558	1,740	30,229	(0.1)	22,872	2.5	287.1	16.5	6,662	6,057	605
2004 (1)	55,914	1,737	31,074	2.8	24,757	2.3	324.6	18.7	7,230	6,118	1,112
2005 (4)	**55,944**	**1,807**	**32,293**	**3.9**	**25,780**	**2.2**	**348.1**	**19.3**	**7,691**	**6,277**	**1,414**
2005 (3)	**55,944**	**1,807**	**32,293**	**3.9**	**25,780**	**2.2**	**348.1**	**19.3**	**7,578**	**6,435**	**1,143**

(1) After changes in assumptions.
(2) After changes in benefit provisions.
(3) After changes in methods.
(4) Reflects the addition of the assets, liabilities, and members of the Administrative Law Judges Retirement System.

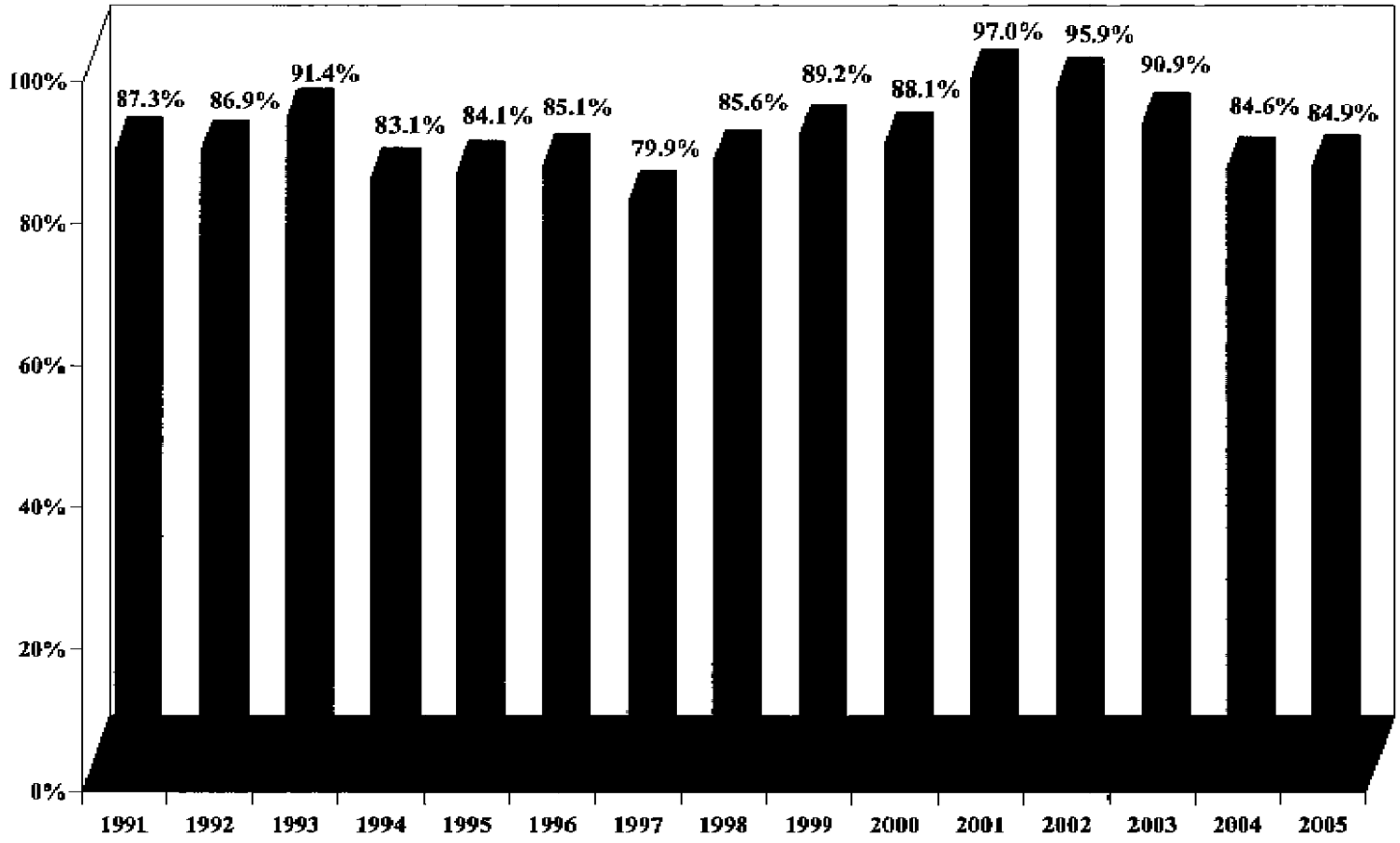
Number of Active Members Per Benefit Recipient



Missouri State Employees' Retirement System
Actuarial Value of Assets and Actuarial Accrued Liabilities
($ in millions)



Actuarial Value of Assets as Percents of Accrued Liabilities (Funded Ratio)



Gain Loss Analysis

Gain/Loss Analysis of Experience
During Last Year

COMMENTS

Purpose of Gain/Loss Analysis. Regular actuarial valuations provide valuable information about the composite change in unfunded actuarial accrued liabilities – whether or not the liabilities are increasing or decreasing, and by how much. However, valuations do not show the portion of the change attributable to each risk area within the retirement system financial mechanism: the rate of investment income on plan assets; the rates of withdrawal of active members who leave covered employment; the rates of mortality; the rates of disability; the rates of salary increases; and the assumed ages at actual retirement. In an actuarial valuation, assumptions are made as to what these rates will be for the next year and for decades in the future.

The objective of a gain and loss analysis is to determine the portion of the change in unfunded actuarial accrued liabilities attributable to each risk area.

The fact that actual experience differs from assumed experience is to be expected – the future cannot be predicted with precision. Changes in the valuation assumed experience for a risk area should be made when the differences between assumed and actual experience have been observed to be sizeable and persistent. One year's gain and loss analysis may or may not be indicative of ***long-term trends, which are the basis of financial assumptions.***

2004 and 2005 Data. For the 2004 and 2005 valuations, active and retired member data was reported as of May 31. It was brought forward to June 30 by adding one month of service for all active members, adding the June COLA for certain retirees, and otherwise making no other adjustments. It was assumed for valuation purposes that there was no turnover among members and no new entrants during the month of June. Financial information was reported as of June 30. It is believed that this procedure resulted in a slight overstatement of total liabilities as of June 30, 2004 and June 30, 2005.

The expected and actual numbers of retirements, deaths, and terminations found on pages 24 through 29 reflect experience over the 12 month period from May 31, 2004 through May 31, 2005.

Results from 2005 Plan Year. There was a net experience loss this year, with the largest single identifiable source being investment income less than assumed. The table below summarizes historical MOSERS economic experience:

Period	Inflation As Measured By		Interest Credited to MOSERS Funds	Real Rate of Return	
	CPI	Increase in Average Salary		Relative to CPI	Relative to Salaries
July 1, 2004 - June 30, 2005	2.5 %	5.2 %	12.6 *%	10.1 %	7.4 %
July 1, 2003 - June 30, 2004	3.3	4.2	17.2 *	13.9	13.0
July 1, 2002 - June 30, 2003	2.1	0.6	6.8 *	4.7	6.2
July 1, 2001 - June 30, 2002	1.1	(2.1)	(6.4) *	(7.5)	(4.3)
July 1, 2000 - June 30, 2001	3.2	5.1	(2.0) *	(5.2)	(7.1)
July 1, 1999 - June 30, 2000	3.7	5.6	7.9 *	4.2	2.3
July 1, 1998 - June 30, 1999	2.0	5.4	10.9 *	8.9	5.5
July 1, 1998 - June 30, 2003	2.4	2.9	3.2 *	0.8	0.3
January 1, 1978 - December 31, 2002 @	4.4	5.1	12.2	7.8	7.1

* *MOSERS approximate rate of return based on market value.*

@ *This information is based on national average earnings and based on market indices roughly approximating MOSERS' current investment mix. TIPS were treated as government/corporate hybrids.*

The dollar amount of unfunded actuarial accrued liabilities (UAAL) is large in absolute dollars. However, the size should be viewed in the light of MOSERS' overall financial program. ***The ratio of unfunded actuarial accrued liabilities divided by active member payroll is significant.*** UAAL represent plan debt, while active member payroll is indicative of the state's capacity to amortize the UAAL – ***the ratio thus provides an index of relative condition.*** The smaller the ratio, the stronger the financial condition.

	UAAL/Active Member Payroll
June 30, 1995	.42
June 30, 1996 after assumption changes	.40
June 30, 1997 after changes in benefits, assumptions, methods	.66
June 30, 1998	.49
June 30, 1999 after MSEP 2000	.38
June 30, 2000 after changes in assumptions	.42
June 30, 2001 after changes in assumptions	.10
June 30, 2002 after changes in methods	.15
June 30, 2003 after changes in benefits, methods	.35
June 30, 2004 after changes in assumptions	.64
June 30, 2005 after changes in assumptions	.63

Derivation of Experience Gain (Loss)

Year Ended June 30, 2005

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

	$ Millions
(1) UAAL* at start of year	$1,111.8
(2) Normal cost from last valuation	153.1
(3) Actual employer contributions	195.6
(4) Interest accrual: (1) x .085 + [(2) - (3)] x (.085 / 2)	92.7
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	1,162.0
(6) Change from any changes in benefits, assumptions, or methods	(268.0)
(7) Expected UAAL after changes: (5) + (6)	894.0
(8) Actual UAAL at end of year	1,142.7
(9) Gain(loss): (7) - (8)	(248.7)
(10) Gain (loss) as percent of actuarial accrued liabilities at start of year ($7,230)	(3.4) %

* *Unfunded actuarial accrued liabilities.*

Valuation Date June 30	Actuarial Gain (Loss) As a % of Beginning Accrued Liabilities
1996	0.4 %
1997	5.5
1998	5.5
1999	4.7
2000	2.7
2001	(4.4)
2002	(3.8)
2003	(6.4)
2004	(6.0)
2005	**(3.4)**

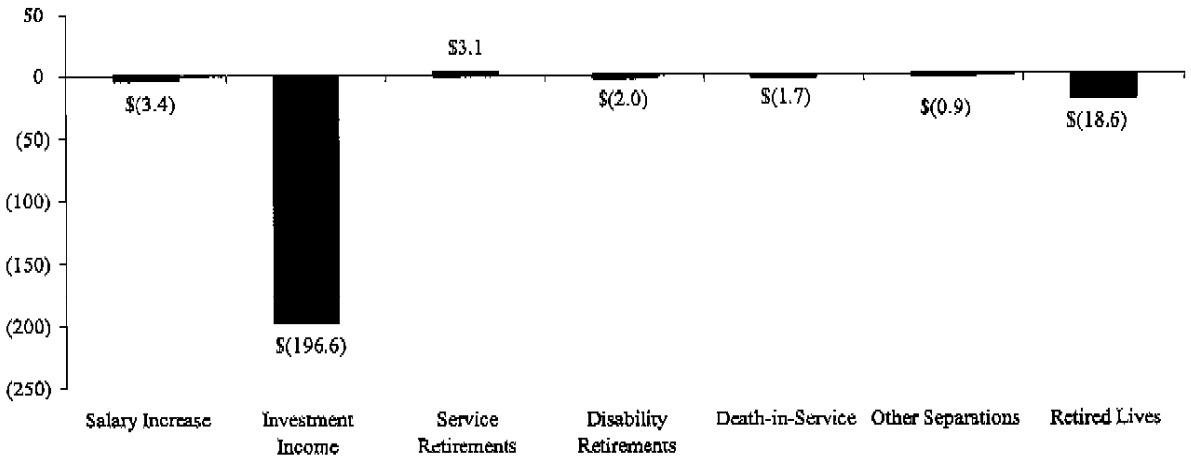
Gains & (Losses) in Actuarial Accrued Liabilities
During Plan 2004 - 2005

Type of Activity	-- Gain (Loss) for Year -- $ in Millions	% of Accr. Liabilities*
Decrement Experience:		
Service Retirements. If members retire at older ages than assumed, there is a gain. If at younger ages, a loss.	$ 3.1	0.0 %
Disability Retirements. The occurrence of a gain or loss depends upon the age at disability and the incidence of disablility.	(2.0)	0.0
Death-in-Service. If there are fewer survivor claims than assumed at younger ages, there is a gain. If there are fewer survivor claims than assumed at older ages, there can be a loss.	(1.7)	0.0
Other Separations. If more actuarial liabilities are released by other separations than assumed, there is a gain. If smaller releases, a loss.	(0.9)	0.0
Retired Lives. If more deaths than assumed, there is a gain. If fewer deaths, a loss.	(18.6)	(0.3)
Economic Experience:		
Salary Increases. If there are smaller salary increases than assumed, there is a gain. If greater increases, a loss. If long service members have greater salary increases than assumed, there can be a loss even if average salary increases are less than assumed.	(3.4)	0.0
Investment Income. If there is greater investment income than assumed, there is a gain. If less income, a loss.	(196.6)	(2.7)
COLAs.	6.9	0.1
Other:		
Service credit reinstatements, service transfers, service purchases, net of contributions.	(7.4)	(0.1)
Larger than expected average compensation for new retirees.	(3.2)	0.0
Change in group size, data adjustments, retroactive benefit payments, option elections, and miscellaneous unidentified changes in the UAAL.	(24.9)	(0.4)
Experience Gain or (Loss) During Year	**$ (248.7)**	**(3.4) %**

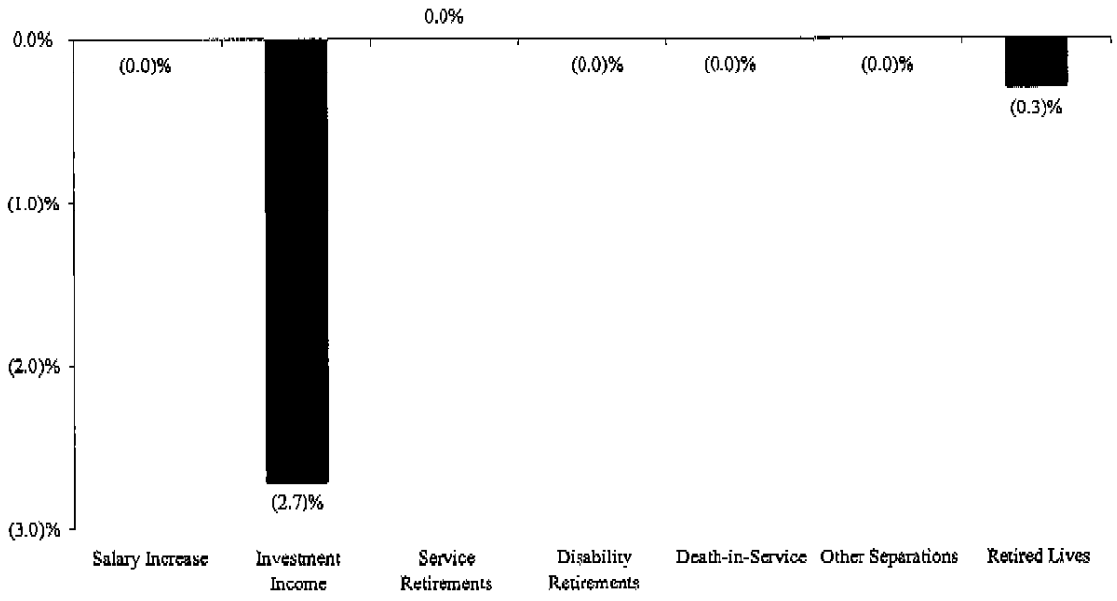
** Beginning of year accrued liabilities totaled $7,230 million.*

Gain (Loss) Analysis
2004-2005 Experience

Amount in $ Millions



% of Actuarial Accrued Liabilities



Experience Gains & Losses By Risk Area

Comparative Statement

-------$ in Millions-------

Year Ending June 30	Gain (Loss) By Risk Area: Salary Increases	Investments	Age & Service Retirement	Disability	Death-In-Service	Withdrawal	COLAs & Retired Lives	Other	Total Exper. Gain (Loss)	Exper. Gain (Loss) as % of AAL	Accrued Liability Beginning of Year
1992 *	$79.8	$19.9	$ (1.8)	$0.6	$1.6	$ (5.5)	#	$ (8.0)	$86.6	4.0 %	$2,165
1993	66.8	54.0	(0.9)	0.8	2.4	(3.9)	#	(27.0)	92.2	4.0	2,292
1994	42.5	(18.1)	(1.0)	0.7	2.3	(7.0)	#	52.0	71.4	2.9	2,447
1995	16.7	12.0	(3.2)	0.5	2.5	(4.0)	#	(7.5)	17.0	0.6	2,919
1996	24.2	63.7	(2.1)	0.6	2.9	(10.2)	$ 7.4	(74.3) ^	12.2	0.4	3,151
1997 *	(26.3)	260.3	(3.1)	0.5	2.6	(7.1)	14.5	(50.6)	190.8	5.5	3,440
1998	(56.9)	325.9	9.6	0.2	(0.3)	(1.7)	16.3	(48.3)	244.8	5.5	4,484
1999	(21.9)	299.8	(1.3)	(0.3)	(0.9)	1.7	10.5	(58.1)	229.5	4.7	4,919
2000 *	(6.4)	162.0	1.7	(0.5)	(0.7)	8.9	18.5	(34.7)	148.8	2.7	5,506
2001 *	(23.2)	(67.9)	(59.8)	(1.0)	(0.2)	(28.2)	(13.1)	(66.1)	(259.5)	(4.4)	5,921
2002	115.0	(284.6)	(14.4)	(0.5)	(1.3)	(21.4)	37.1	(62.6)	(232.8)	(3.8)	6,065
2003	7.7	(314.1)	(27.2)	(0.6)	(2.6)	(14.6)	9.6	(63.1)	(404.9)	(6.5)	6,294
2004 *	(40.0)	(240.1)	(51.5)	(1.4)	(1.3)	(6.7)	(4.3)	(53.8)	(399.1)	(6.0)	6,662
2005	**(3.4)**	**(196.6)**	**3.1**	**(2.0)**	**(1.7)**	**(0.9)**	**(11.7)**	**(35.5)**	**(248.7)**	**(3.4)**	**7,230**

* *Revision in assumptions.*

\# *Not identified as separate risk area. Included in "Other" category.*

^ *Includes (23.0) for legal settlement*

Development of Gain (Loss)
From Investment Income
During Plan 2004 - 2005

	Market Value	Actuarial Value
	- - - - - - $ in millions - - - - - -	
1. Assets at June 30, 2004	$5,878.1	$ 6,134.5
2. Contributions and Transfers in	199.8	$ 199.8
3. Investment Income	732.1	475.7
4. Benefit Payments	368.4	368.4
5. Administrative Expenses	6.2	6.2
6. Assets at June 30, 2005 = (1) + (2) + (3) – (4) – (5)	6,435.4	6,435.3
7. Actual Investment Increment/Mean Assets*	12.64 %	7.87 %
8. Expected Investment Increment		8.50 %
9. Investment Gain (Loss):		
a. As a % of mean assets: (7) – (8)		(0.63) %
b. $ in millions		$ (197.1)

* *Based on the approximation formula: I/[.5 x (A+B-I)], where*

I = Investment increment
A = Beginning of year asset value
B = End of year asset value

Salary Increases
To Members Active Both at Beginning & End of Year
During Plan 2004 - 2005

Age Groups	Number	Salary Increases	
		Actual*	Expected
Below 25	1,095	9.3%	6.7%
25- 29	3,681	7.5%	6.4%
30- 34	5,133	6.2%	6.1%
35- 39	5,795	5.6%	5.7%
40- 44	7,138	5.4%	5.3%
45- 49	8,328	5.0%	5.0%
50- 54	8,226	4.6%	4.7%
55- 59	6,201	4.4%	4.7%
60-64	2,688	4.4%	4.0%
65 & Over	856	3.7%	4.0%
Total	49,141		
Average		**5.2%**	**5.1%**

* *Excludes new entrants and terminations.*

Assumed Payroll Growth	Actual Payroll Growth		
	2005	2004	2003
4.0%	4.0%	-(0.1)%	(1.9)%

Active Members Who Retired With
SERVICE OR REDUCED SERVICE RETIREMENT BENEFITS
During Plan 2004 - 2005

Ages	Men		Women		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
Under 50	1	1.0	5	5.8	6	6.8
50	7	3.7	17	11.5	24	15.2
51	15	5.9	18	16.7	33	22.5
52	17	13.3	27	21.0	44	34.3
53	21	18.0	28	23.9	49	41.9
54	15	14.0	27	21.5	42	35.5
55	16	22.2	33	19.6	49	41.9
56	24	18.4	30	20.5	54	38.9
57	26	37.0	34	42.2	60	79.3
58	31	42.0	35	44.3	66	86.2
59	19	28.1	33	35.6	52	63.7
60	24	28.0	26	28.8	50	56.8
61	21	24.9	26	27.4	47	52.3
62	28	72.1	51	93.3	79	165.3
63	27	29.7	28	32.1	55	61.8
64	21	30.0	17	31.9	38	61.9
65	25	37.9	28	39.9	53	77.8
66	26	17.1	24	16.6	50	33.7
67	22	18.1	15	15.7	37	33.8
68	11	10.2	10	10.3	21	20.5
69	3	6.9	11	8.8	14	15.8
70 & Over	32	57.5	32	56.6	64	114.0
Totals	**432**	**535.9**	**555**	**623.8**	**987**	**1,159.9**

	Men	Women	Total
Average age at retirement	61.1 years	60.2 years	60.6 years
Average service at retirement	21.1 years	21.1 years	21.1 years

Active Members Who Retired With DISABILITY BENEFITS
During Plan 2004 - 2005

Ages	Men		Women		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
Under 25		0.0		0.0		0.0
25- 29	1	0.5	4	1.2	5	1.7
30- 34	4	2.0	6	3.8	10	5.8
35- 39	6	3.6	6	6.8	12	10.4
40- 44	6	6.2	19	12.3	25	18.5
45- 49	8	10.3	21	19.9	29	30.2
50- 54	14	17.1	28	25.1	42	42.2
55- 59	16	21.7	27	25.9	43	47.6
60 & Over	10	6.3	12	7.4	22	13.7
Totals	**65**	**67.5**	**123**	**102.5**	**188**	**170.0**

	Men	Women	Total
Average age at disability	50.8 years	49.8 years	50.1 years
Average service at disability	10.6 years	10.4 years	10.5 years

Active Members Who Died
During Plan 2004 - 2005

Ages	Men		Women		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
Under 30	3	0.1	1	0.3	4	0.4
30- 34	1	0.7		1.0	1	1.7
35- 39	3	1.5	3	1.7	6	3.2
40- 44	4	2.8	5	3.1	9	5.9
45- 49	13	6.3	3	5.4	16	11.7
50- 54	5	12.6	6	9.2	11	21.8
55- 59	17	16.3	12	11.8	29	28.1
60- 64	7	12.4	4	8.4	11	20.8
65 & Over	1	8.5	5	4.6	6	13.1
Totals	**54**	**61.2**	**39**	**45.5**	**93**	**106.7**

	Men	Women	Total
Average age at death	51.3 years	54.0 years	52.4 years
Average service at death	11.3 years	12.2 years	11.7 years

Of the 93 active members who died in service during 2004 - 2005, 31 members had a benefit payable to a survivor.

Active Members Who Left Active Status with a DEFERRED BENEFIT
(Retirement With Monthly Payments Beginning At Later Age)
During Plan 2004 - 2005

Ages	Men		Women		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
Under 30	39	37.9	95	93.9	134	131.7
30- 34	100	100.3	199	198.9	299	299.2
35- 39	122	97.3	207	176.4	329	273.7
40- 44	106	97.6	191	179.8	297	277.3
45- 49	106	98.2	184	188.0	290	286.2
50- 54	95	82.1	154	137.9	249	220.0
55- 59	75	49.5	80	83.3	155	132.7
60 & Over	42	11.5	56	16.4	98	28.0
Totals	**685**	**574.4**	**1,166**	**1,074.6**	**1,851**	**1,649.0**

	Men	Women	Total
Average age at termination	44.5 years	42.9 years	43.5 years
Average service at termination	10.1 years	10.1 years	10.1 years

Active Members Who Left Active Status with NO BENEFIT PAYABLE
(Other than Deaths)
During Plan 2004 - 2005

Ages	Men		Women		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
Under 20						
20- 24	129	115.4	297	220.4	426	335.8
25- 29	321	276.5	490	400.3	811	676.8
30- 34	203	200.4	291	266.3	494	466.7
35- 39	129	147.0	221	213.9	350	360.9
40- 44	130	150.9	196	222.4	326	373.3
45- 49	94	131.9	194	211.4	288	343.3
50- 54	65	112.8	145	161.4	210	274.3
55- 59	52	98.3	64	118.9	116	217.1
60- 64	34	45.1	33	44.3	67	89.4
65- 69	12	9.3	6	10.0	18	19.3
70 & Over	2	4.4	2	1.6	4	6.1
Totals	**1,171**	**1,292.1**	**1,939**	**1,870.9**	**3,110**	**3,163.0**

	Men	Women	Total
Average age at termination	36.0 years	35.6 years	35.8 years
Average service at termination	2.2 years	2.1 years	2.2 years

Service at Termination	Men		Women		Total	
	Actual	Expected	Actual	Expected	Actual	Expected
0	383	359.1	719	527.9	1,102	887.0
1	290	348.1	482	501.5	772	849.7
2	221	261.0	306	349.3	527	610.3
3	176	232.9	291	339.1	467	572.0
4	101	91.0	141	153.0	242	244.0
5 & Over	0	0.0	0	0.0	0	0.0
Totals	**1,171**	**1,292.1**	**1,939**	**1,870.9**	**3,110**	**3,163.0**

Comparison of Actual to Expected Deaths
Among Retired Lives
(Service Retirement Only)
As of June 30, 2005

	Male Deaths			Female Deaths			Total Deaths		
Age	Actual	Expected	Exposure	Actual	Expected	Exposure	Actual	Expected	Exposure
50-54		2	358		2	706		4	1,064
55-59	16	10	1,240	12	10	1,897	28	20	3,137
60-64	17	22	1,657	33	21	2,548	50	43	4,205
65-69	27	36	1,674	39	33	2,533	66	69	4,207
70-74	48	54	1,450	54	46	2,059	102	100	3,509
75-79	49	58	976	63	65	1,716	112	123	2,692
80-84	54	52	568	67	65	1,104	121	117	1,672
85-89	40	29	217	73	57	612	113	86	829
90-94	14	15	79	43	30	222	57	45	301
95-99	3	4	15	13	7	40	16	11	55
100 & Up	1		1			2	1		3
Totals	**269**	**282**	**8,235**	**397**	**336**	**13,439**	**666**	**618**	**21,674**
Average Ages	**76.5**	**75.7**	**67.8**	**78.5**	**78.1**	**68.5**	**77.7**	**77.0**	**68.2**

Data Used In Valuations

MSEP (Missouri State Employees' Plan)	MSEP 2000 (Missouri State Employees' Plan 2000)
PARTICIPATION	
Participants include: All MOSERS members, vested former members, retirees and survivors who first became members prior to July 1, 2000 and who do not elect to transfer to the MSEP 2000 plan. Election is made at the time benefits commence.	Participants include: (1) All new employees who first become members on or after July 1, 2000, except full-time teaching and senior administrative personnel of the regional colleges and universities hired on or after July 1, 2002 who will be participants in the Colleges and Universities Retirement Plan. (2) MSEP active members and vested former members who elect to transfer to the MSEP 2000 plan prior to retirement. (3) MSEP retirees who elect to transfer to the MSEP 2000 plan during the election window from July 1, 2000 through July 1, 2001, and their survivors.

MSEP	MSEP 2000
NORMAL RETIREMENT ELIGIBILITY (unreduced benefits)	
Members of the General Assembly: Age 55 with completion of at least 3 full biennial assemblies.	***Members of the General Assembly:*** The earlier of attaining: (1) Age 55 with completion of at least 2 full biennial assemblies. (2) Age 50 with completion of at least 2 full biennial assemblies and with age plus credited service equal to 80 or more.
Statewide Elected Officials: The earliest of attaining: (1) Age 65 with at least 4 years of credited service. (2) Age 60 with at least 15 years of credited service. (3) Age 50 with age plus credited service equal to 80 or more.	***Statewide Elected Officials:*** The earlier of attaining: (1) Age 55 with at least 4 years of credited service as a statewide elected official. (2) Age 50 with age plus credited service equal to 80 or more.
General Employees: The earliest of attaining: (1) Age 65 and active with at least 4 years of credited service. (2) Age 65 with at least five years of credited service. (3) Age 60 with at least 15 years of credited service. (4) Age 48 with age plus credited service equal to 80 or more.	***General Employees:*** The earlier of attaining: (1) Age 62 with at least 5 years of credited service. (2) Age 48 with age plus credited service equal to 80 or more.
Uniform Water Patrol Employees: The earliest of attaining: (1) Age 55 and active with at least 4 years of credited service. (2) Age 55 with at least 5 years of credited service. (3) Age 48 with age plus credited service equal to 80 or more.	
AVERAGE COMPENSATION USED FOR BENEFIT DETERMINATION The average annual compensation of a member for the three consecutive years of service during which pay was highest (overtime pay is included for purposes of determining Average Compensation). Lump sum payments are excluded, but unused sick leave may be converted to additional credited service (usable only for benefit computation, not eligibility).	The average annual pay of a member for the three consecutive years of service during which pay was highest (overtime pay is included for purposes of determining Average Pay). A lump sum payment is included unless it is for unused vacation or sick leave. However, unused sick leave may be converted to additional credited service (usable only for benefit computation, not eligibility).

MSEP	MSEP 2000
BENEFIT AMOUNT	
Members of the General Assembly: $150 per month per biennial assembly served.	***Members of the General Assembly:*** 1/24 of pay times first 24 years of credited service as a member of the General Assembly.
Statewide Elected Officials: (1) Less than 12 years of credited service: 1.6% of Average Compensation times years of credited service. (2) 12 or more years of credited service: 50% of pay of the highest elected position held prior to retirement.	***Statewide Elected Officials:*** 1/24 of pay (of the highest elected position held prior to retirement) times the first 12 years of credited service as a statewide elected official.
General Employees: 1.6% of Average Compensation times years of credited service. 2.1% of Average Compensation times years of credited service for any period of non-social security covered employment transferred from the Public School Retirement System.	***General Employees:*** Life Benefit: 1.7% of Average Pay times years of credited service. Temporary Benefit: If member retires between ages 50 and 62 with age plus credited service equal to 80 or more, a temporary benefit is payable until the attainment of the minimum age at which reduced social security benefits are payable, in the amount of 0.8% of Average Pay times years of credited service. Non- Social Security Covered Service: 2.5% of Average Pay times years of credited service for any period of non-social security covered employment transferred from the Public School Retirement System.
Uniformed Water Patrol Employees: 2.13% of Average Compensation times years of credited service.	

MSEP	MSEP 2000

EARLY RETIREMENT FOR GENERAL EMPLOYEES:

Eligibility:

Age 55 with at least 10 years of credited service.

Amount:

(1) Less than 15 years of service: Normal retirement amount actuarially reduced for years younger than age 65.

(2) 15 years but less than 20 years of service, and less than the number of years of service necessary for age and service to total 80: Normal retirement amount actuarially reduced for years younger than age 60.

(3) 20 or more years of service, but less than the number of years of service necessary for age and service to total 80: Normal retirement amount reduced for years younger than the 80 and out eligibility date.

Eligibility:

Age 57 with at least 5 years of credited service.

Amount:

Normal retirement amount reduced by ½% for each month that retirement precedes eligibility for normal retirement.

VESTED DEFERRED BENEFITS

Benefits for employees who terminate prior to eligibility for an immediate benefit are considered to be vested in accordance with the following schedule (benefits commence at the age the individual would have been eligible for early or normal retirement, considering years of credited service). Unused sick leave is not converted.

Years of Service	General Assembly	Statewide Elected Officials	General Employees
4		100%	
5			100%
6 (3 assemblies)	100%		

Benefits for employees who terminate prior to eligibility for an immediate benefit are considered to be vested in accordance with the following schedule (benefits commence at age 57). Unused sick leave is converted to additional credited service.

Years of Service	General Assembly	Statewide Elected Officials	General Employees
4 (2 assemblies)	100%	100%	
5			100%
6 (3 Assemblies) HB1455 prospectively	100%		

MSEP	MSEP 2000
DEATH PRIOR TO RETIREMENT	
(1) The surviving spouse benefit is computed as if the member had been normal retirement age on the date of death and elected the joint and 100% survivor optional form of payment, provided the member had at least 5 years of credited service and was married for at least two consecutive years immediately prior to the date of death. If no eligible spouse survives, 80% of the member's life income annuity is paid to eligible children until age 21. If the death is duty related, the service requirement is waived, and the minimum spouse benefit is 50% of current pay.	The surviving spouse benefit is computed as if the member had been normal retirement age on the date of death and elected the joint and 100% survivor option form of payment, provided the member had at least 5 years of credited service (2 full assemblies for a member of the General Assembly, 4 years of credited service for a statewide elected official). If no eligible spouse survives, 80% of the member's life income annuity is paid to eligible children until age 21. If the death is duty related, the service requirement is waived, and the minimum spouse benefit is 50% of current pay.
(2) For members of the General Assembly, the surviving spouse receives 50% of the benefit the member would have received if the member had been normal retirement age on the date of death, provided the member had served in at least 3 biennial assemblies, and was married for at least two consecutive years immediately prior to the date of death. If the death is duty related, the service requirement is waived, and the minimum spouse benefit is 50% of current pay.	

MSEP	MSEP 2000
DEATH AFTER RETIREMENT	
50% of the benefit the retired member was receiving on the date of death (the normal form of payment), or the benefit payable under the joint and survivor or period certain form of payment, if the member elected an optional form of payment at time of retirement and provided the member was married for at least two consecutive years prior to the date of retirement. Effective July 1, 2000, a member who is not married at retirement but marries thereafter may designate a spouse as beneficiary upon completion of one year of marriage. Additionally, a member may designate a new spouse as beneficiary upon completion of one year of marriage in the event of the death of the spouse the member was married to at the date of retirement (this provision does not apply to period certain annuities).	The benefit payable under the joint and survivor or period certain form of payment, if the member elected an optional form of payment at time of retirement. A member who is not married at retirement but marries thereafter may designate a spouse as beneficiary upon completion of one year of marriage. Additionally, a member may designate a new spouse as beneficiary upon completion of one year of marriage in the event of the death of the spouse the member was married to at the date of retirement (this provision does not apply to period certain annuities).
DISABILITY (RECIPIENTS OF LTD BENEFITS)	
Normal retirement benefits become payable at the time the member is eligible for normal retirement, and are computed based on: i) the service that would have accrued to the member if active employment had continued; and ii) the member's rate of pay at the time of disability (If the member retires on or after August 28, 1999, the member's rate of pay is based on the rate of pay at the time of disability indexed to the time of benefit commencement). An exception is Uniformed Water Patrol employees who are eligible for an immediate occupational disability benefit equal to 50% of pay at time of disability.	Normal retirement benefits become payable at the time the member is eligible for normal retirement, and are computed based on: i) the service that would have accrued to the member if active employment had continued; and ii) the member's rate of pay at the time of disability indexed to the time of benefit commencement. The annual percentage increase in the pay used to compute benefits is the lesser of: i) 80% of the CPI increase and ii) 5%.

MSEP	MSEP 2000

POST-RETIREMENT BENEFIT ADJUSTMENTS

Benefits are increased to retired members (including survivors) annually in accordance with the following formulas:

Increase in CPI	Formula 1 Benefit Increase	Formula 2 Benefit Increase
5.00% or less	4%	80% of CPI increase
5.01% - 6.24%	80% of CPI increase	80% of CPI increase
6.25% or more	5%	5%

Members first hired prior to August 28, 1997 receive COLAs based on Formula 1 until an aggregate increase of 65% is reached. At that point subsequent COLAs based on Formula 2 are granted.

Members first hired on or after August 28, 1997 receive COLAs based solely on Formula 2.

Statewide Elected Officials with 12 or more years of service have their benefit adjusted annually based on the increase in the pay for an active statewide elected official in the member's highest elected position.

Members who are fully vested and work beyond age 65 will have their monthly benefit increased upon retirement. The percentage increase in benefit is equal to all COLAs for the years between age 65 and date of retirement, not to exceed 65% and counts toward the Formula 1 65% maximum.

Benefits are increased to retired members (including survivors) annually in accordance with the following:

Members of the General Assembly: Benefit is adjusted annually based on the increase in the pay for an active member of the General Assembly.

Statewide Elected Officials: Benefit is adjusted annually based on the increase in the pay for an active statewide elected official in the retired member's highest elected position.

General Employees: Annual benefit percentage increase equal to the lesser of: i) 80% of the CPI increase, and
ii) 5%.

MSEP	MSEP 2000
POP-UP PROVISION Benefits to members who choose a survivor form of payment and whose spouse precedes the member in death, will "pop-up" or revert to the amount the member would have received had he/she not elected a survivor option.	Same.
PORTABILITY Purchase/Transfer Provisions (in addition to military). Effective August 28, 1999, a member may purchase up to four years of non-federal full-time Missouri public service, provided the member is not vested in another retirement system for that same service.	Purchase/Transfer Provisions (in addition to military). A member may purchase up to four years of non-federal full-time Missouri public service, provided the member is not vested in another retirement system for that same service. Local vested service credit granted after 10 years of state service if the other retirement plan agrees to transfer assets equal to the accrued liability to MOSERS.
MEMBER CONTRIBUTIONS. None.	Same.
BACK DROP. See following page.	Same.

MSEP	MSEP 2000
BACK DROP	
To be eligible to participate in the back DROP, a member must have been eligible to retire under normal age and/or service conditions for at least two years. A retroactive starting date is established for back DROP purposes which is the later of: 1) the member's normal retirement date or 2) five years prior to the annuity starting date under the retirement plan selected by the member.	Same.
A member may elect the back DROP period for the accumulation of the back DROP account in 12 month increments prior to their actual retirement date or back to the earliest possible date. This results in a back DROP period of two to five years depending upon the individual situation.	
A theoretical back DROP account is accumulated that includes 90% of the value of the benefit payments that would have been paid during the back DROP period had the member retired at the retroactive starting date with their respective option election. These payments include applicable post-retirement benefit increases.	
The member is paid the resulting lump sum value of the back DROP account as of the annuity starting date or as three equal annual installments beginning at the annuity starting date.	
The annuity benefit payable from the actual retirement date is computed with years of service and average pay as of the retroactive starting date for the back DROP. Post-retirement benefit increases that occurred during the back DROP period are applied in the calculation of the monthly annuity.	

Retirants & Beneficiaries as of June 30, 2005
Tabulated by Plan Year of Retirement

Plan Year Ended 6/30	No.	Total Annual Benefits	Average Monthly Benefit
2005 *	830	$ 12,138,126	$1,219
2004	1,600	20,336,916	1,059
2003	2,903	45,945,012	1,319
2002	2,171	32,169,348	1,235
2001	1,870	28,974,684	1,291
2000	2,412	38,852,928	1,342
1999	1,364	19,168,116	1,171
1998	1,318	18,727,728	1,184
1997	1,169	16,205,532	1,155
1996	1,034	13,414,920	1,081
1995	1,157	15,766,560	1,136
1994	821	9,752,796	990
1993	894	11,715,252	1,092
1992	749	9,425,784	1,049
1991	747	10,035,600	1,120
1990	577	7,414,776	1,071
1989	575	6,699,528	971
1988	582	6,938,388	993
1987	443	4,342,020	817
1986	414	3,490,524	703
1985	354	3,010,752	709
1984	268	2,187,252	680
1983	278	2,328,072	698
1982	262	2,158,968	687
1981	205	1,630,956	663
1980	150	1,118,520	621
1979	109	732,876	560
1978	107	755,544	588
1977	107	675,516	526
1976	97	595,260	511
1975	64	490,296	638
1974	54	251,640	388
1973	50	326,040	543
1972	15	115,224	640
1971	10	65,484	546
1970	8	61,896	645
1969	4	30,240	630
1968	3	9,336	259
1966	2	16,776	699
1964 & PRIOR	3	16,164	449
Totals	**25,780**	**$348,091,350**	**$1,125**

**** Eleven months ended May 31, 2005.***

Benefits Payable June 30, 2005

Tabulated by Option and Type of Benefit

MSEP Benefits*

Type of Benefit	No.	Annual Funded Benefits
Service Retirement		
Life Annuity	4,628	$ 45,404,686
50% Joint and Survivor	5,070	69,349,275
75% Joint and Survivor	7	64,937
100% Joint and Survivor	2,276	36,819,059
5 Year Certain and Life	122	1,048,352
10 Year Certain and Life	104	778,908
Survivor Beneficiary	1,676	14,090,527
Total	13,883	167,555,744
Disability Retirement	21	69,943
Death-in-Service	1,236	9,598,762
Total	**15,140**	**$ 177,224,449**

** Includes 10 Lincoln University members and 29 members of the ALJ.*

MSEP 2000 Benefits

Type of Benefit	No.	Annual Funded Benefits
Service Retirement		
Life Annuity	7,131	$ 105,412,956
50% Joint and Survivor	1,543	33,762,798
100% Joint and Survivor	1,305	24,574,908
5 Year Certain and Life	56	742,344
10 Year Certain and Life	280	3,235,476
15 Year Certain and Life	173	1,650,341
Survivor Beneficiary	149	1,482,154
Total	10,637	170,860,977
Disability Retirement	0	0
Death-in-Service	3	5,924
Total	**10,640**	**$ 170,866,901**

Total Benefits Payable June 30, 2005

Tabulated by Attained Ages of Benefit Recipients#

Attained Ages	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Totals	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20					75	$ 227,246	75	$ 227,246
20-24					25	105,380	25	105,380
25-29					10	90,612	10	90,612
30-34					12	59,001	12	59,001
35-39					31	177,311	31	177,311
40-44					55	322,150	55	322,150
45-49	6	$ 167,628	1	$ 1,812	95	781,763	102	951,203
50-54	826	22,255,959	4	12,228	197	1,579,633	1,027	23,847,820
55-59	3,191	67,711,998	8	25,476	264	2,289,164	3,463	70,026,638
60-64	4,310	62,037,037	8	30,427	312	3,256,755	4,630	65,324,219
65-69	4,492	55,306,003			386	3,698,914	4,878	59,004,917
70-74	3,716	48,173,820			488	4,344,460	4,204	52,518,280
75-79	2,840	34,665,216			504	3,686,278	3,344	38,351,494
80-84	1,872	20,072,286			356	2,694,043	2,228	22,766,329
85-89	976	9,051,359			185	1,388,504	1,161	10,439,863
90-94	369	2,731,151			52	374,556	421	3,105,707
95	35	267,072			6	62,532	41	329,604
96	28	165,399			2	5,496	30	170,895
97	16	113,052			4	20,561	20	133,613
98	4	21,204			3	10,620	7	31,824
99	3	22,200					3	22,200
100	5	35,916					5	35,916
101	5	40,848			1	756	6	41,604
103	1	5,892					1	5,892
105					1	1,632	1	1,632
Totals	**22,695**	**$ 322,844,040**	**21**	**$ 69,943**	**3,064**	**$ 25,177,367**	**25,780**	**$ 348,091,350**

Average age at Retirement: 60.6 years.

Average age now: 69.0 years.

 # Count includes 29 members of the ALJ.

Summary of Member Data Included in Valuation

June 30, 2005

Active Members

Valuation Group	Number	Payroll	Group Averages		
			Salary	Age(yrs.)	Service(yrs.)
Regular State Employees	51,615	$ 1,597,600,643	$ 30,952	43.9	9.9
Elected Officials	6	576,564	96,094	46.4	5.8
Legislative Clerks	67	1,898,036	28,329	55.3	15.7
Legislators	194	6,055,458	31,214	48.7	2.2
Uniformed Water Patrol	93	3,663,384	39,391	38.2	12.7
Conservation Department	1,532	58,866,972	38,425	42.7	12.7
Contract Employees	2,378	133,081,935	55,964	52.2	16.2
Administrative Law Judges	59	4,857,568	82,332	48.8	10.2
Total in Funding Program	**55,944**	**$ 1,806,600,560**	**$ 32,293**	**44.2**	**10.2**
Other Judges	392	40,016,098	102,082	54.1	11.8

Retired Lives

Type of Benefit Payment	No.	Annual Benefit	Group Averages	
			Benefit	Age(yrs.)
Retirement	22,695	$ 322,844,040	$ 14,225	69.2
Disability	21	69,943	3,331	58.1
Survivor of Active Member	1,239	9,604,686	7,752	59.2
Survivor of Retired Member	1,825	15,572,681	8,533	73.7
Total in Funding Program	**25,780**	**$ 348,091,350**	**$ 13,502**	**69.0**
Other Judges	397	18,832,103	47,436	75.9

This valuation also includes 14,718 terminated vested members, 534 members on leave and 1,082 members on long-term disability.

Active Members in Funding Program as of June 30, 2005

By Age and Years of Service*#

Near Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 plus	No.	Valuation Payroll
15-19	40							40	$ 758,052
20-24	1,793	24						1,817	40,315,636
25-29	3,970	815	8					4,793	127,197,977
30-34	2,926	2,429	482	10				5,847	170,117,942
35-39	2,302	2,204	1,573	514	28			6,621	205,307,672
40-44	2,264	1,992	1,392	1,405	626	58		7,737	250,092,918
45-49	2,106	1,987	1,283	1,478	1,091	880	72	8,897	296,745,395
50-54	1,758	1,801	1,297	1,507	982	1,183	464	8,992	316,833,448
55-59	1,471	1,368	1,197	1,219	828	589	379	7,051	246,414,972
60	173	170	143	147	89	54	46	822	29,816,002
61	147	145	126	153	62	42	43	718	25,530,687
62	121	160	123	131	60	48	44	687	25,221,803
63	102	118	98	89	43	20	43	513	19,330,107
64	49	109	57	71	29	16	43	374	13,682,895
65	45	64	45	55	24	13	21	267	9,922,951
66	34	41	23	27	7	12	32	176	7,124,550
67	27	26	33	26	16	5	23	156	6,313,914
68	10	20	21	19	4	11	20	105	3,971,161
69	13	13	14	19	7	2	10	78	2,960,452
70 & Over	46	46	47	50	19	16	29	253	8,942,026
Totals	**19,397**	**13,532**	**7,962**	**6,920**	**3,915**	**2,949**	**1,269**	**55,944**	**$ 1,806,600,560**

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

Age: 44.2 years.

Service: 10.2 years.

Annual Pay: $32,293

 # Includes 59 ALJ members.

**** A breakdown by gender is included on pages 63 and 64.***

Development of Actuarial Value of Assets

Valuation Date:	2004	2005*	2006	2007	2008	2009
A. Actuarial Value Beginning of Year	$6,057,329,072	$6,134,453,300				
B. Market Value End of Year	5,862,670,429	6,435,344,102				
C. Market Value Beginning of Year	5,191,733,236	5,878,102,328				
D. Cash Flow						
D1. Contributions	168,284,713	199,800,381				
D2. Benefit Payments	(367,785,861)	(368,379,695)				
D3. Administrative Expenses	(5,694,082)	(6,246,227)				
D4. Net	(205,195,230)	(174,825,541)				
E. Investment Income						
E1. Market Total: B - C - D4	876,132,423	732,067,315				
E2. Assumed Rate	8.5%	8.5%				
E3. Amount for Immediate Recognition: E2*(A+D4*.5)	506,152,174	513,998,445				
E4. Amount for Phased-In Recognition: E1 - E3	369,980,249	218,068,870				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.2 * E4	73,996,050	43,613,774				
F2. First Prior Year	(34,294,012)	74,155,966				
F3. Second Prior Year	(168,872,674)	(34,410,696)				
F4. Third Prior Year	(110,900,885)	(169,285,818)				
F5. Fourth Prior Year		(111,171,109)				
F6. Total Recognized Investment Gain: Sum(F1:F5)	(240,071,521)	(197,097,883)				
G. Adjustment (Mark to Market)		158,815,781				
H. Actuarial Value End of Year: A + D4 + E3 + F6 + G Minimum 80% of B, Maximum 120% of B	6,118,214,495	$6,435,344,102				
I. Difference Between Market & Actuarial Values: B-H	(255,544,066)	-				
J. Recognized Rate of Return	4.47%	7.87%				
K. Market Value Rate of Return	17.22%	12.64%				
L. Actuarial Value as a % of Market Value: H / B	104%	100%				

The actuarial value of assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5-year period. During periods when investment performance exceeds the assumed rate, the actuarial value of assets will tend to be less than market value. During periods when investment performance is less than assumed, the actuarial value will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, the actuarial value will become equal to market value.

* Reflects the additional of asserts from the Administrative Law Judges Retirement System.

Asset Summary

June 30, 2005

	Market Value	Actuarial Value
1. Assets at June 30, 2004	$5,878,102,328	$6,134,453,300
2. Contributions and Transfers in	199,800,381	199,800,381
3. Investment Increment*	732,067,315	475,716,343
4. Benefit Payments and Transfers out	368,379,695	368,379,695
5. Administrative and Misc. Expenses	6,246,227	6,246,227
6. Assets at June 30, 2005 (1) + (2) + (3) - (4) - (5)	$6,435,344,102	$6,435,344,102
7. Investment Increment/Mean Assets**	12.64%	7.87%

* *Net of investment expenses.*

** *Based on the approximation formula: I /[.5 x (A+B-I)], where*

I = Investment Increment
A = Beginning of year asset value
B = End of year asset value

Cash Flow Projection

[redacted]

Missouri State Employees' Retirement System

The Nature of Actuarial Projections

Regular actuarial valuations measure the Retirement System's present financial position and contributions adequacy by calculating and financing the liabilities created by the present benefit program. This process involves discounting to present values the future benefit payments on behalf of present active and retired members and their survivors. However, valuations do not produce information regarding future changes in the makeup of the covered group or the amounts of benefits to be paid or investment income to be received--actuarial projections do.

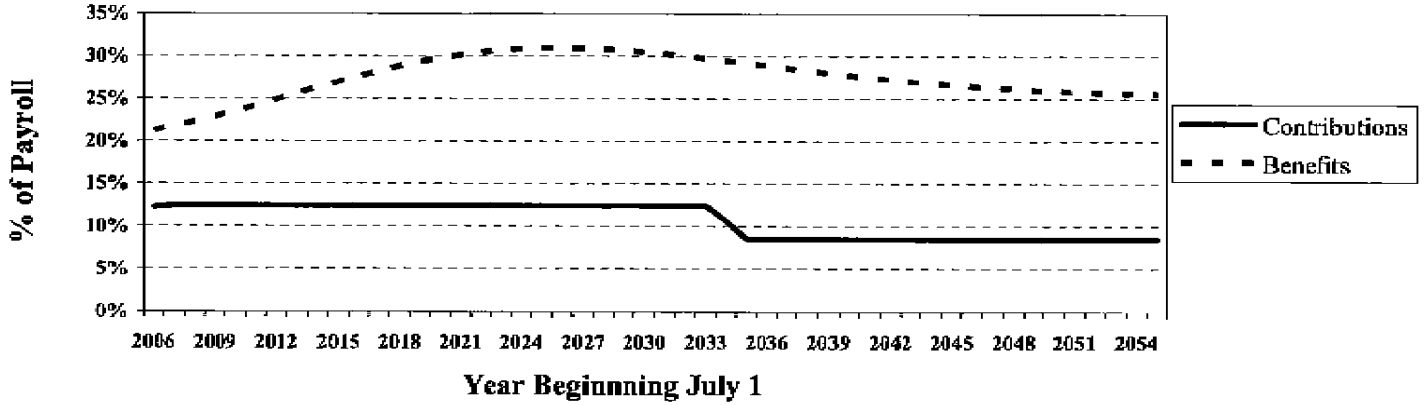
Whereas valuations provide a snapshot of the retirement system as of a given date, projections provide a moving picture. Projected active and retired groups are developed from year to year by the application of assumptions regarding pre-retirement withdrawal from service, retirements, deaths, disabilities, and the addition of new members. Projected information regarding the retired life group leads to assumed future benefit payout. Combining future benefit payments with assumed contributions and expected investment earnings produces the net cash flow of the System each year, and thus end of year asset levels.

Projections are used for many purposes. Among them are (i) developing cash flow patterns for investment policy and asset mix consideration, (ii) exploring the effect of alternative assumptions about future experience, (iii) analyzing the impact on system funding progress of changes in the workforce, and (iv) examining the potential effect of changes in benefits on system financial activity.

Projection results are useful in demonstrating changing relationships among key elements affecting system financial activity. For example: how benefits payable and system assets will grow in future decades. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. For instance, cash flow projected to occur 10 years in the future will not be exact (except by coincidence), but understanding the changed relationships between future benefit payout and future investment income can be very useful.

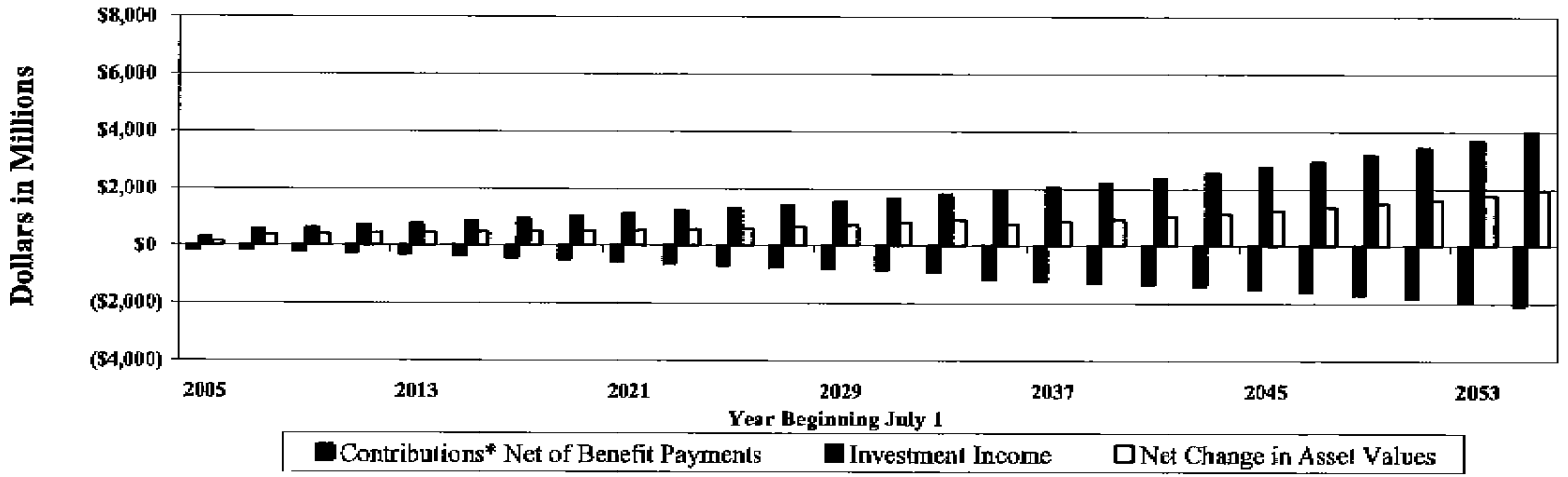
Missouri State Employees' Retirement System
50-Year Cash Flow Projection Based on Valuation Assumptions

Projected Contributions* and Benefits
Expressed as Percents of Active Member Payroll



** Does not include contributions for administrative expenses.*

Net Change in Asset Values



Missouri State Employees' Retirement System

Fifty-Year Cash Flow Projection (in Thousands)

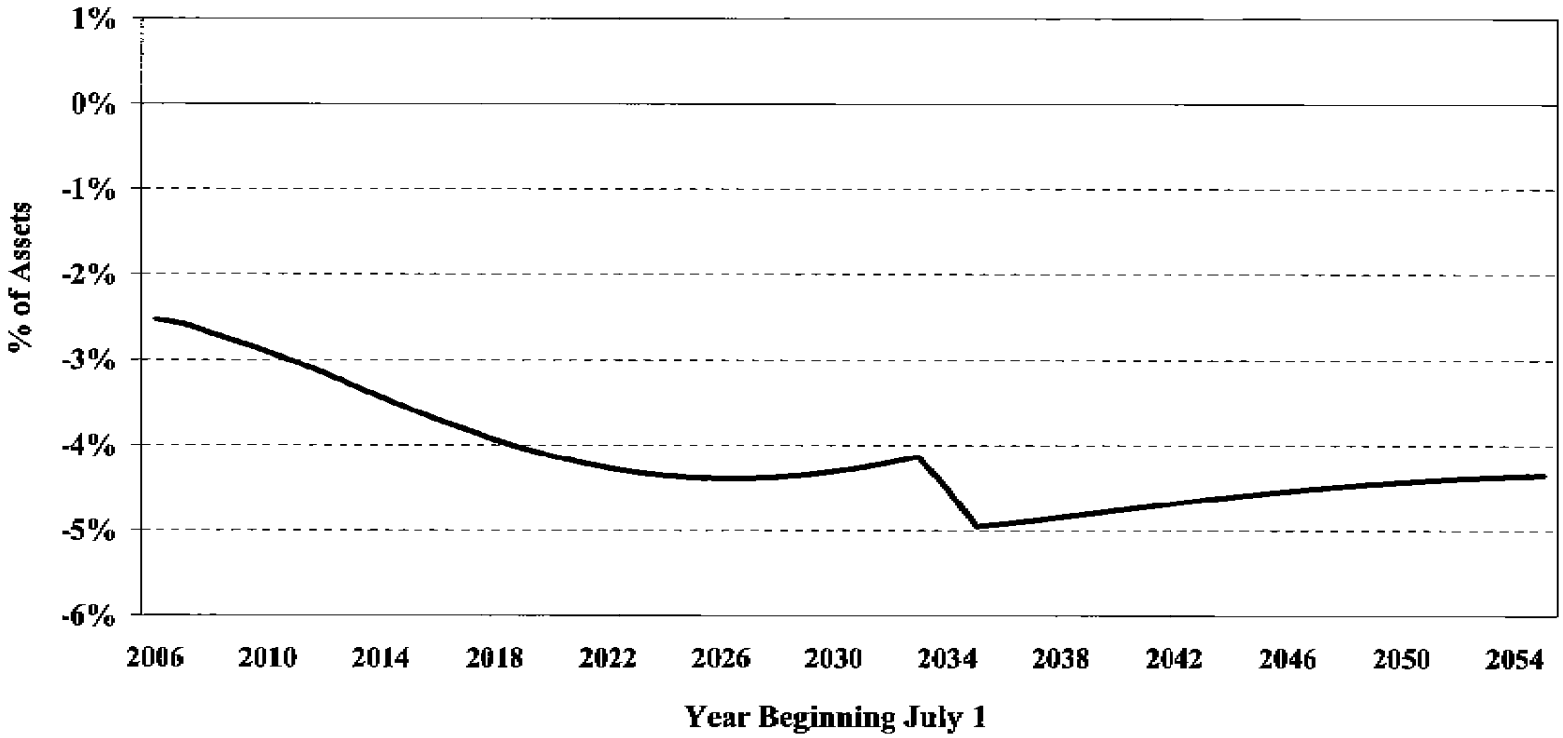
Year Ended June 30	Assets BOY	Contributions*			Benefits	Investment Income	Assets EOY	
		Normal	UAAL	Total			Inflated	2006 $
2006	$6,435,344	$153,609	$68,391	$222,000	$384,724	$540,088	$6,812,708	$6,812,708
2007	6,812,708	159,914	74,212	234,126	410,418	571,588	7,208,004	6,930,773
2008	7,208,004	166,120	77,092	243,212	437,335	604,430	7,618,311	7,043,557
2009	7,618,311	172,496	80,051	252,547	465,760	638,495	8,043,593	7,150,725
2010	8,043,593	179,055	83,095	262,150	496,038	673,765	8,483,470	7,251,705
2011	8,483,470	185,832	86,240	272,072	529,333	710,160	8,936,369	7,345,044
2012	8,936,369	192,855	89,499	282,354	565,342	747,564	9,400,945	7,429,703
2013	9,400,945	200,151	92,885	293,036	603,831	785,871	9,876,021	7,504,964
2014	9,876,021	207,750	96,412	304,162	643,923	825,021	10,361,281	7,570,887
2015	10,361,281	215,680	100,092	315,772	686,346	864,959	10,855,666	7,627,047
2016	10,855,666	223,979	103,943	327,922	730,085	905,640	11,359,143	7,673,830
2017	11,359,143	232,659	107,971	340,630	775,118	947,062	11,871,717	7,711,641
2018	11,871,717	241,745	112,188	353,933	821,637	989,218	12,393,231	7,740,776
2019	12,393,231	251,267	116,607	367,874	868,712	1,032,140	12,924,533	7,762,139
2020	12,924,533	261,224	121,228	382,452	916,174	1,075,902	13,466,713	7,776,691
2021	13,466,713	271,625	126,054	397,679	964,239	1,120,592	14,020,745	7,785,222
2022	14,020,745	282,495	131,099	413,594	1,012,450	1,166,312	14,588,201	7,788,760
2023	14,588,201	293,849	136,368	430,217	1,060,624	1,213,205	15,170,999	7,788,385
2024	15,170,999	305,702	141,869	447,571	1,108,879	1,261,430	15,771,121	7,785,069
2025	15,771,121	318,075	147,611	465,686	1,156,947	1,311,166	16,391,026	7,779,876
2026	16,391,026	330,979	153,599	484,578	1,204,689	1,362,634	17,033,549	7,773,889
2027	17,033,549	344,432	159,842	504,274	1,252,105	1,416,068	17,701,786	7,768,138
2028	17,701,786	358,456	166,350	524,806	1,299,587	1,471,723	18,398,728	7,763,442
2029	18,398,728	373,075	173,135	546,210	1,346,690	1,529,872	19,128,120	7,760,782
2030	19,128,120	388,303	180,202	568,505	1,393,294	1,590,837	19,894,168	7,761,142
2031	19,894,168	404,147	187,555	591,702	1,439,757	1,654,962	20,701,075	7,765,321
2032	20,701,075	420,621	195,200	615,821	1,486,247	1,722,598	21,553,247	7,774,024
2033	21,553,247	437,743	203,146	640,889	1,533,222	1,794,103	22,455,017	7,787,772
2034	22,455,017	455,538	112,953	568,491	1,580,523	1,865,665	23,308,650	7,772,910
2035	23,308,650	474,029	0	474,029	1,628,708	1,932,162	24,086,133	7,723,253
2036	24,086,133	493,236	0	493,236	1,678,138	1,996,963	24,898,194	7,676,578
2037	24,898,194	513,184	0	513,184	1,728,817	2,064,682	25,747,243	7,633,034
2038	25,747,243	533,904	0	533,904	1,780,878	2,135,520	26,635,789	7,592,743
2039	26,635,789	555,429	0	555,429	1,834,720	2,209,671	27,566,169	7,555,726
2040	27,566,169	577,789	0	577,789	1,890,459	2,287,336	28,540,835	7,521,997
2041	28,540,835	601,017	0	601,017	1,948,400	2,368,708	29,562,160	7,491,509
2042	29,562,160	625,150	0	625,150	2,008,901	2,453,975	30,632,384	7,464,154
2043	30,632,384	650,222	0	650,222	2,072,176	2,543,319	31,753,749	7,439,803
2044	31,753,749	676,274	0	676,274	2,138,471	2,636,926	32,928,478	7,418,306
2045	32,928,478	703,349	0	703,349	2,208,134	2,734,968	34,158,661	7,399,470
2046	34,158,661	731,488	0	731,488	2,281,430	2,837,614	35,446,333	7,383,083
2047	35,446,333	760,737	0	760,737	2,358,513	2,945,033	36,793,590	7,368,944
2048	36,793,590	791,144	0	791,144	2,439,485	3,057,400	38,202,649	7,356,872
2049	38,202,649	822,756	0	822,756	2,524,591	3,174,898	39,675,712	7,346,680
2050	39,675,712	855,625	0	855,625	2,614,095	3,297,700	41,214,942	7,338,170
2051	41,214,942	889,803	0	889,803	2,708,217	3,425,988	42,822,516	7,331,147
2052	42,822,516	925,347	0	925,347	2,807,076	3,559,940	44,500,727	7,325,436
2053	44,500,727	962,313	0	962,313	2,910,866	3,699,748	46,251,922	7,320,872
2054	46,251,922	1,000,759	0	1,000,759	3,019,776	3,845,606	48,078,511	7,317,298
2055	48,078,511	1,040,748	0	1,040,748	3,133,987	3,997,710	49,982,982	7,314,566

* *Does not include contributions for administrative expenses.*

Missouri State Employees' Retirement System

50-Year Cash Flow Projection

Projected Net External Cash Flow Expressed as a Percent of Assets



Net External Cash Flow equals: i) Contributions to the plan, less ii) Benefits paid by the plan. A negative Net External Cash Flow means that benefits are being partly funded by investment income --- a natural consequence of advance funding.

Missouri State Employees' Retirement System
Fifty-Year Cash Flow Projection
Analysis of Projected Net Cash Flow

Year Ended	External Cash Flow		Net External Cash Flow		Year Ended	External Cash Flow		Net External Cash Flow	
June 30	Inflow*	Outflow	$	% of Assets	June 30	Inflow*	Outflow	$	% of Assets
2006	$222,000	$384,724	$ (162,724)	(2.53)%	2031	$591,702	$1,439,757	$ (848,055)	(4.26)%
2007	234,126	410,418	(176,292)	(2.59)%	2032	615,821	1,486,247	(870,426)	(4.20)%
2008	243,212	437,335	(194,123)	(2.69)%	2033	640,889	1,533,222	(892,333)	(4.14)%
2009	252,547	465,760	(213,213)	(2.80)%	2034	568,491	1,580,523	(1,012,032)	(4.51)%
2010	262,150	496,038	(233,888)	(2.91)%	2035	474,029	1,628,708	(1,154,679)	(4.95)%
2011	272,072	529,333	(257,261)	(3.03)%	2036	493,236	1,678,138	(1,184,902)	(4.92)%
2012	282,354	565,342	(282,988)	(3.17)%	2037	513,184	1,728,817	(1,215,633)	(4.88)%
2013	293,036	603,831	(310,795)	(3.31)%	2038	533,904	1,780,878	(1,246,974)	(4.84)%
2014	304,162	643,923	(339,761)	(3.44)%	2039	555,429	1,834,720	(1,279,291)	(4.80)%
2015	315,772	686,346	(370,574)	(3.58)%	2040	577,789	1,890,459	(1,312,670)	(4.76)%
2016	327,922	730,085	(402,163)	(3.70)%	2041	601,017	1,948,400	(1,347,383)	(4.72)%
2017	340,630	775,118	(434,488)	(3.83)%	2042	625,150	2,008,901	(1,383,751)	(4.68)%
2018	353,933	821,637	(467,704)	(3.94)%	2043	650,222	2,072,176	(1,421,954)	(4.64)%
2019	367,874	868,712	(500,838)	(4.04)%	2044	676,274	2,138,471	(1,462,197)	(4.60)%
2020	382,452	916,174	(533,722)	(4.13)%	2045	703,349	2,208,134	(1,504,785)	(4.57)%
2021	397,679	964,239	(566,560)	(4.21)%	2046	731,488	2,281,430	(1,549,942)	(4.54)%
2022	413,594	1,012,450	(598,856)	(4.27)%	2047	760,737	2,358,513	(1,597,776)	(4.51)%
2023	430,217	1,060,624	(630,407)	(4.32)%	2048	791,144	2,439,485	(1,648,341)	(4.48)%
2024	447,571	1,108,879	(661,308)	(4.36)%	2049	822,756	2,524,591	(1,701,835)	(4.45)%
2025	465,686	1,156,947	(691,261)	(4.38)%	2050	855,625	2,614,095	(1,758,470)	(4.43)%
2026	484,578	1,204,689	(720,111)	(4.39)%	2051	889,803	2,708,217	(1,818,414)	(4.41)%
2027	504,274	1,252,105	(747,831)	(4.39)%	2052	925,347	2,807,076	(1,881,729)	(4.39)%
2028	524,806	1,299,587	(774,781)	(4.38)%	2053	962,313	2,910,866	(1,948,553)	(4.38)%
2029	546,210	1,346,690	(800,480)	(4.35)%	2054	1,000,759	3,019,776	(2,019,017)	(4.37)%
2030	568,505	1,393,294	(824,789)	(4.31)%	2055	1,040,748	3,133,987	(2,093,239)	(4.35)%

* *Does not include contributions for administrative expenses.*

The portion of investment income needed to pay benefits (the negative external cash flow) increases gradually and begins to level off at the end of the amortization of the unfunded accrued liabilities. After this period, it then approaches the assumed rate of 4.33% (1.085/1.040, minus 1). The remainder of the expected investment income is needed to preserve the purchasing power of the trust fund.

Appendix

Appendix

Summary of Assumptions Used

for the June 30, 2005 Actuarial Valuation

----------*Economic Assumptions*----------

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

Pay increase assumptions for individual active members are shown for sample ages on page 53. Part of the assumption for each age is for merit and/or seniority increase, and the other 4.0% recognizes wage inflation. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

The active member payroll is assumed to increase 4.0% annually, which is the portion of the individual pay increase assumptions attributable to wage inflation.

The annual cost-of-living adjustment (COLA) is assumed to be 4.00%, on a compounded basis, when a minimum COLA of 4% is in effect. When no minimum COLA is in effect, price inflation is assumed to be 3.5% and the annual COLA is assumed to be 2.8% (80% of 3.5%), on a compounded basis.

The number of active members is assumed to remain constant although certain new hires on or after July 1, 2002 will participate in the Colleges and Universities Retirement Plan. Active and retired member data is reported as of May 31. It is assumed for valuation purposes that there is no turnover among members and no new entrants during the month of June.

----------*Non-Economic Assumptions*----------

The mortality table, for post-retirement mortality, used in evaluating allowances to be paid was the 1971 Group Annuity Mortality Table, projected to the year 2000, with a 1 year setback for men and a 7 year age setback for women. Related values are shown on page 54. This assumption is used to measure the probabilities of each benefit payment being made after retirement.

Appendix

Summary of Assumptions Used

for the June 30, 2005 Actuarial Valuation (continued)

The probabilities of age and service retirement are shown on page 54. It was assumed that each member will be granted one half year of service credit for unused leave upon retirement and military service purchases.

The probabilities of withdrawal from service, disability and death-in-service are shown for sample ages on page 53. For disability retirement, impaired longevity was recognized by use of special mortality tables.

The entry age normal actuarial cost method of valuation was used in determining liabilities and normal cost. The normal cost was based on the benefit provisions affecting new employees (MSEP 2000). Differences in the past between assumed experience and actuarial experience ("actuarial gains and losses") become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments, (principal & interest) which are level percents of payroll contributions.

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

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

The data about persons now covered and about present assets were furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

It is assumed that among active members 80% are married at retirement, 70% of those dying in active service are married, and men are 3 years older than their spouses.

The liabilities for active members hired on or after July 1, 2000 were based on MSEP 2000 benefits. The liabilities for active members hired before July 1, 2000 for male General Employees with an age at hire of 35 years or less, for female General Employees, for Contract Employees, for Elected and for General Assembly were based on MSEP 2000 benefits. All others were based on MSEP benefits. The backDROP was only explicitly valued for those assumed to receive MSEP 2000 benefits.

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

Separations From Active Employment Before Service Retirement

& Individual Pay Increase Assumptions

June 30, 2005

Sample Ages	Years of Service	Percent of Active Members - - - - - - Separating within the Next Year - - - - - Withdrawal Men	Withdrawal Women	Death* Men	Death* Women	Disability Men	Disability Women	Pay Increase Assumptions - - For An Individual Employee - - Merit & Seniority**	Base (Economy)	Increase Next Year
	0	23.8 %	24.7 %							
	1	16.5	17.2							
	2	13.4	13.5							
	3	11.9	10.7							
	4	12.0	10.7							
20	5+	12.0	11.0	0.04 %	0.03 %	0.16 %	0.18 %	2.7 %	4.0 %	6.7 %
25		12.0	11.0	0.05	0.04	0.16	0.18	2.6	4.0	6.6
30		8.8	9.9	0.06	0.04	0.16	0.18	2.2	4.0	6.2
35		6.2	6.8	0.08	0.06	0.21	0.19	1.9	4.0	5.9
40		4.6	4.9	0.12	0.08	0.26	0.32	1.4	4.0	5.4
45		3.5	4.3	0.19	0.11	0.34	0.37	1.2	4.0	5.2
50		2.8	3.6	0.35	0.17	0.49	0.57	0.7	4.0	4.7
55		2.4	2.9	0.59	0.31	1.07	0.89	0.7	4.0	4.7
60		2.4	2.9	0.90	0.54	1.50	1.50	0.0	4.0	4.0
65		2.4	2.9	1.44	0.83	1.60	1.70	0.0	4.0	4.0

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

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

Single Life Retirement Values
June 30, 2005

Sample Attained Ages	Present Value of $1/Month the First Year Increasing 4.0% / 2.8% Yearly				Future Life Expectancy (Years)			
	Service		Disability		Service		Disability	
	Men	Women	Men	Women	Men	Women	Men	Women
40	$203.29	$213.24	$135.93	$157.34	38.46	44.22	19.70	26.02
45	192.77	205.14	126.72	150.77	33.73	39.41	17.50	23.70
50	180.29	195.04	116.43	143.29	29.17	34.67	15.35	21.39
55	165.93	182.93	106.32	135.58	24.82	30.06	13.43	19.18
60	149.43	168.96	97.83	127.14	20.70	25.67	11.87	17.01
65	130.80	152.92	90.83	117.40	16.82	21.50	10.56	14.82
70	111.02	134.67	82.22	105.26	13.32	17.57	9.13	12.50
75	91.88	114.99	70.84	89.45	10.36	13.99	7.49	10.00
80	73.43	95.64	56.19	71.98	7.83	10.91	5.66	7.62
85	57.86	76.96	42.26	56.19	5.89	8.29	4.08	5.66

Percent of Eligible Active Members Retiring Next Year

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

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

Summary of Assumptions Used
June 30, 2005
Miscellaneous and Technical Assumptions

Pay Increase Timing:	Middle of (Fiscal) year.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Benefit Service:	Exact fractional service is used to determine the amount of the benefit payable.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and mortality decrements do not operate during the first 5 years of service. Disability and withdrawal do not operate during normal retirement eligibility.
Normal Form of Benefit:	The assumed normal form of benefit is the straight life form for MSEP 2000 with 50% continuing to an eligible surviving spouse for MSEP. No adjustment has been made for post-retirement option election changes.
Loads:	No loads were used.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

Active and retired member data was reported as of May 31, 2005. It was brought forward to June 30, 2005 by adding one month of service for all active members and the June COLA for certain retired members. It is expected that this procedure resulted in a slight overstatement of total liabilities as of June 30, 2005. Financial information continues to be reported as of June 30. This procedure was instituted to provide sufficient time for the Board of Trustees to certify the appropriate contribution rate prior to the October 1 statutory deadline.

Supplemental Disclosure Information
June 30, 2005

Actuarial Accrued Liability

The actuarial accrued liability is a measure intended to (i) help users assess the plan's funding status on a going-concern basis, and (ii) assess progress being made in accumulating sufficient assets to pay benefits when due. The actuarial value of assets is based on a method that fully recognizes expected investment return and averages unanticipated market return over a five-year period. Allocation of the actuarial present value of projected benefits between past and future service was based on service using the entry age actuarial cost method. Assumptions, including projected pay increases, were the same as used to determine the System's annual required contribution between entry age and assumed exit age. Entry age was established by subtracting credited service from current age on the valuation date.

The entry age actuarial accrued liability was determined as part of an actuarial valuation of the System as of June 30, 2005. Significant actuarial assumptions used in determining the entry age actuarial accrued liability include (a) a rate of return on the investment of present and future assets of 8.5% per year compounded annually, (b) projected salary increases of 4.0% per year compounded annually, attributable to inflation, (c) additional projected salary increases ranging from 0.0% to 2.7% per year, depending on age, attributable to seniority/merit, and (d) the assumption that benefits will increase after retirement (i) at 4.00% per year for approximately the first 12 years, 3.1% for the 13th year and 2.8% per year thereafter, or (ii) at 2.8% per year, depending upon date of hire and benefit election.

At June 30, 2005, the unfunded actuarial accrued liability of the System was determined as follows:

Actuarial Accrued Liability of System:	$ in Thousands
Active members (36,822 vested, 19,122 non-vested)	$ 3,491,500
Retirees and beneficiaries currently receiving benefits (25,751 vested)	3,628,799
Terminated members not yet receiving benefits (14,683 vested)	457,022
Future BackDROP Payments	707
Total Actuarial Accrued Liability	7,578,028
Actuarial Value of Assets	6,435,344
Unfunded Actuarial Accrued Liability	$ 1,142,684

During the year ended June 30, 2005, the System experienced a net change of $348,017,089 in the actuarial accrued liability, of which ($272,142,931) was attributable to changes in methods and $22,887,123 was due to the addition of the ALJ members into the System. There were no changes in benefit provisions or assumptions.

Supplemental Disclosure Information
June 30, 2005

(continued)

Contributions Required and Contributions Made

The System's funding policy provides for periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are designed to accumulate sufficient assets to pay benefits when due. In developing the annual required contribution shown below, the normal cost and actuarial accrued liability are determined using the entry age actuarial cost method. The unfunded actuarial accrued liability is being amortized on a closed basis as a level percent of payroll over a period of 30 years. The corresponding amortization factor is 16.05286.

During the year ended June 30, 2005 contributions totaling $195,648,983 were made by the employer.

Schedule of Employer Contributions

Fiscal Year 7-1/6-30	Valuation Date 6/30	Annual Required Contribution		
		Percent	Dollar Amount	Percentage Contributed
1991-92	1990	9.65 %	$ 100,672,145	100 %
1992-93	1991	9.68	102,988,219	100
1993-94	1992	9.49	106,681,308	100
1994-95	1993	9.04	108,902,372	100
1995-96	1994	10.69	137,007,112	100
1996-97	1995	10.66	146,383,371	100
1997-98	1996	10.40	152,090,687	100
1998-99	1997	12.58	197,909,834	100
1999-00	1998	11.91	202,330,547	100
2000-01	1999	11.59	209,515,026	100
2001-02	2000	11.59	215,450,128	100
2002-03	2001	8.81	156,576,150	100
2003-04	2002	9.35	164,691,836	100
2004-05	2003	10.64	195,648,983	100
2005-06	2004	12.59		
2006-07	**2005**	**12.78**		

Supplemental Disclosure Information
June 30, 2005

(concluded)

Schedule of Funding Progress

Plan Year Ended	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Percent Funded (1) / (2)	(4) Unfunded AAL (2) - (1)	(5) Annual Covered Payroll	(6) Unfunded AAL as a Percentage of Covered Payroll (4) / (5)
6/30/1997 #*@	$3,580,974,502	$4,484,047,801	79.9 %	$903,073,299	$1,359,656,666	66.4 %
6/30/1998	4,210,635,094	4,918,887,183	85.6	708,252,089	1,459,712,203	48.5
6/30/1999 #	4,908,820,033	5,505,968,629	89.2	597,148,596	1,564,551,532	38.2
6/30/2000 *	5,216,897,196	5,920,684,192	88.1	703,786,996	1,683,697,080	41.8
6/30/2001 *@	5,881,232,850	6,065,166,716	97.0	183,933,866	1,758,190,269	10.5
6/30/2002 &	6,033,133,598	6,294,272,275	95.9	261,138,677	1,773,283,484	14.7
6/30/2003 # &	6,057,329,072	6,662,291,406	90.9	604,962,334	1,739,895,364	34.8
6/30/2004 *	6,118,214,495	7,230,010,928	84.6	1,111,796,433	1,737,454,454	64.0
6/30/2005 &@	**6,435,344,102**	**7,578,028,017**	**84.9**	**1,142,683,915**	**1,806,600,560**	**63.3**

 # After changes in benefit provisions.

** After a change in assumptions.*

@ After a change in asset method.

& After changes in methods other than the asset method.

Analysis of the dollar amounts of the actuarial value of assets, actuarial accrued liability, or unfunded actuarial accrued liability in isolation can be misleading. Expressing the actuarial value of assets as a percentage of the actuarial accrued liability provides one indication of the plan's funded status on a going-concern basis. Analysis of this percentage over time indicates whether the plan is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the plan. The unfunded actuarial accrued liability and annual covered payroll are both affected by inflation. Usually expressing the unfunded actuarial accrued liability as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of the progress being made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the plan.

Glossary

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent. A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Actuarial value of assets. Also referred to as funding value of assets, smoothed market value of assets, or valuation assets.

Valuation assets recognize assumed investment return fully each year. Differences between actual and assumed investment return are phased in over a closed 5-year period. This treatment helps remove the timing of investment activities from the valuation process. During periods when investment performance exceeds the assumed rate, valuation assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, valuation assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, valuation assets will become equal to market value.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

(continued on following page)

Glossary

(concluded)

Plan Termination Liability. The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a "going concern" basis and is not normally determined in a routine actuarial valuation.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and actuarial value of assets. Sometimes referred to as "unfunded accrued liability."

The existence of unfunded actuarial accrued liabilities is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liabilities do not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liabilities and the trend in their amount (after due allowance for devaluation of the dollar).

Valuation Payroll. Active member payroll that is intended to reflect the annual salary considered as covered compensation for Retirement System benefits.

Financing Unfunded Actuarial Accrued Liabilities Which Were Calculated Using an Inflation Assumption of 4.00% and an Investment Return Assumption of 8.50% Compounded Annually

Level % of Payroll Amortization:
Closed Amortization Completed in 30 Years

Year	Active Member Payroll	Unfunded Actuarial Accrued Liability	UAAL Adjusted for Inflation	Annual Contributions		UAAL as % of Payroll
				Dollars	% of Payroll	
	----------$ in millions----------					
1	$1,807	$1,143	$1,143	$71	3.94 %	63.25 %
2	1,807	1,166	1,121	71	3.94	64.52
3	1,879	1,191	1,101	74	3.94	63.37
4	1,954	1,215	1,080	77	3.94	62.16
5	2,032	1,238	1,058	80	3.94	60.90
6	2,113	1,259	1,035	83	3.94	59.59
7	2,198	1,280	1,011	87	3.94	58.22
8	2,286	1,298	987	90	3.94	56.79
9	2,377	1,315	961	94	3.94	55.30
10	2,472	1,329	934	97	3.94	53.75
11	2,571	1,340	906	101	3.94	52.13
12	2,674	1,349	876	105	3.94	50.43
13	2,781	1,354	845	110	3.94	48.67
14	2,892	1,354	813	114	3.94	46.83
15	3,008	1,351	780	119	3.94	44.91
16	3,128	1,342	745	123	3.94	42.90
17	3,254	1,328	709	128	3.94	40.81
18	3,384	1,307	671	133	3.94	38.63
19	3,519	1,279	632	139	3.94	36.35
20	3,660	1,244	590	144	3.94	33.98

Financing Unfunded Actuarial Accrued Liabilities Which Were Calculated Using an Inflation Assumption of 4.00% and an Investment Return Assumption of 8.50% Compounded Annually

Level % of Payroll Amortization:
Closed Amortization Completed in 30 Years
(concluded)

Year	Active Member Payroll	Unfunded Actuarial Accrued Liability	UAAL Adjusted for Inflation	Annual Contributions		UAAL as % of Payroll
				Dollars	% of Payroll	
	----------$ in millions----------					
21	$3,806	$1,199	$547	$150	3.94 %	31.50 %
22	3,958	1,145	502	156	3.94	28.92
23	4,117	1,080	456	162	3.94	26.22
24	4,281	1,002	407	169	3.94	23.41
25	4,453	912	356	175	3.94	20.47
26	4,631	806	302	182	3.94	17.41
27	4,816	685	247	190	3.94	14.22
28	5,009	545	189	197	3.94	10.89
29	5,209	386	129	205	3.94	7.41
30	5,417	205	66	213	3.94	3.78
31	5,634	0	0	0	0.00	0.00

Active Members in Funding Program as of June 30, 2005

By Age and Years of Service

Male

Near Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 plus	No.	Valuation Payroll
Under 20	10							10	$ 196,788
20-24	656	2						658	15,329,470
25-29	1,563	235	2					1,800	49,467,103
30-34	1,231	863	143	2				2,239	68,445,521
35-39	922	834	574	137	4			2,471	82,408,343
40-44	878	747	547	577	165	7		2,921	104,102,387
45-49	784	796	482	654	400	189	5	3,310	122,637,358
50-54	700	695	494	698	404	505	115	3,611	142,405,571
55-59	646	531	494	503	366	282	190	3,012	119,551,085
60	87	60	59	71	43	23	31	374	15,814,257
61	73	65	53	71	34	22	26	344	13,810,499
62	62	72	56	55	23	21	31	320	13,428,801
63	50	60	51	39	19	10	32	261	11,222,957
64	16	51	19	29	16	7	32	170	7,549,355
65	22	31	18	22	8	6	13	120	5,295,100
66	15	22	12	14	4	6	23	96	4,704,675
67	13	11	14	9	7	2	15	71	3,682,338
68	5	11	9	10	2	3	11	51	2,218,246
69	4	7	7	9	3		4	34	1,676,378
70 & Over	27	28	26	28	9	2	17	137	5,762,423
Totals	**7,764**	**5,121**	**3,060**	**2,928**	**1,507**	**1,085**	**545**	**22,010**	**$ 789,708,655**

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

Age: 44.9 years.

Service: 10.3 years.

Annual Pay: $35,880

Active Members in Funding Program as of June 30, 2005

By Age and Years of Service

Female

Near Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 plus	No.	Valuation Payroll
Under 20	30							30	$ 561,264
20-24	1,137	22						1,159	24,986,166
25-29	2,407	580	6					2,993	77,730,874
30-34	1,695	1,566	339	8				3,608	101,672,421
35-39	1,380	1,370	999	377	24			4,150	122,899,329
40-44	1,386	1,245	845	828	461	51		4,816	145,990,531
45-49	1,322	1,191	801	824	691	691	67	5,587	174,108,037
50-54	1,058	1,106	803	809	578	678	349	5,381	174,427,877
55-59	825	837	703	716	462	307	189	4,039	126,863,887
60	86	110	84	76	46	31	15	448	14,001,745
61	74	80	73	82	28	20	17	374	11,720,188
62	59	88	67	76	37	27	13	367	11,793,002
63	52	58	47	50	24	10	11	252	8,107,150
64	33	58	38	42	13	9	11	204	6,133,540
65	23	33	27	33	16	7	8	147	4,627,851
66	19	19	11	13	3	6	9	80	2,419,875
67	14	15	19	17	9	3	8	85	2,631,576
68	5	9	12	9	2	8	9	54	1,752,915
69	9	6	7	10	4	2	6	44	1,284,074
70 & Over	19	18	21	22	10	14	12	116	3,179,603
0									0
Totals	**11,633**	**8,411**	**4,902**	**3,992**	**2,408**	**1,864**	**724**	**33,934**	**$ 1,016,891,905**

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

Age: 43.8 years.

Service: 10.2 years.

Annual Pay: $29,967

Basic Series

Year-by-Year Total Returns (1926-2004)

For a type of investment, Red means a REAL Return less than 3% [(Total - Inflation) < 3%]

For Inflation, RED means a purchasing power loss

Year	Large Company Stocks	Small Company Stocks	Long-Term Corporate Bonds	Long-Term Government Bonds	Intermediate Term Government Bonds	U.S. Treasury Bills	Inflation
1926	11.62	0.28	7.37	7.77	5.38	3.27	-1.49
1927	37.49	22.10	7.44	8.93	4.52	3.12	-2.08
1928	43.61	39.69	2.84	0.10	0.92	3.56	-0.97
1929	-8.42	-51.36	3.27	1.17	6.01	4.75	0.20
1930	-24.90	-38.15	7.98	4.66	6.72	2.41	-6.03
1931	-43.34	-49.75	-1.85	-5.31	-2.32	1.07	-9.52
1932	-8.19	-5.39	10.32	16.84	8.81	0.96	-10.30
1933	53.99	142.87	10.38	-0.07	1.83	0.30	0.51
1934	-1.44	24.22	13.84	10.03	9.00	0.16	2.03
1935	47.67	40.19	9.61	4.98	7.01	0.17	2.99
1936	33.92	64.80	6.74	7.52	3.06	0.18	1.21
1937	-35.03	-58.01	2.75	0.23	1.56	0.31	3.10
1938	31.12	32.80	6.13	5.53	6.23	-0.02	-2.78
1939	-0.41	0.35	3.97	5.94	4.52	0.02	-0.48
1940	-9.78	-5.16	3.39	6.09	2.96	0.00	0.96
1941	-11.59	-9.00	2.73	0.93	0.50	0.06	9.72
1942	20.34	44.51	2.60	3.22	1.94	0.27	9.29
1943	25.90	88.37	2.83	2.08	2.81	0.35	3.16
1944	19.75	53.72	4.73	2.81	1.80	0.33	2.11
1945	36.44	73.61	4.08	10.73	2.22	0.33	2.25
1946	-8.07	-11.63	1.72	-0.10	1.00	0.35	18.16
1947	5.71	0.92	-2.34	-2.62	0.91	0.50	9.01
1948	5.50	-2.11	4.14	3.40	1.85	0.81	2.71
1949	18.79	19.75	3.31	6.45	2.32	1.10	-1.80
1950	31.71	38.75	2.12	0.06	0.70	1.20	5.79
1951	24.02	7.80	-2.69	-3.93	0.36	1.49	5.87
1952	18.37	3.09	3.52	1.16	1.63	1.66	0.88
1953	-0.99	-6.49	3.41	3.64	3.23	1.82	0.62
1954	52.62	60.58	5.39	7.19	2.68	0.86	-0.50
1955	31.56	20.44	0.48	-1.29	-0.65	1.57	0.37
1956	6.56	4.28	-6.81	-5.59	-0.42	2.46	2.86
1957	-10.78	-14.57	8.71	7.46	7.84	3.14	3.02
1958	43.36	64.89	-2.22	-6.09	-1.29	1.54	1.76
1959	11.96	16.40	-0.97	-2.26	-0.39	2.95	1.50
1960	0.47	-3.29	9.07	13.78	11.76	2.66	1.48
1961	26.89	32.09	4.82	0.97	1.85	2.13	0.67
1962	-8.73	-11.90	7.95	6.89	5.56	2.73	1.22
1963	22.80	23.57	2.19	1.21	1.64	3.12	1.65
1964	16.48	23.52	4.77	3.51	4.04	3.54	1.19
1965	12.45	41.75	-0.46	0.71	1.02	3.93	1.92
1966	-10.06	-7.01	0.20	3.65	4.69	4.76	3.35
1967	23.98	83.57	-4.95	-9.18	1.01	4.21	3.04
1968	11.06	35.97	2.57	-0.26	4.54	5.21	4.72
1969	-8.50	-25.05	-8.09	-5.07	-0.74	6.58	6.11
1970	4.01	-17.43	16.37	12.11	16.86	6.52	5.49
1971	14.31	16.50	11.01	13.23	8.72	4.39	3.36
1972	18.98	4.43	7.26	5.69	5.16	3.84	3.41
1973	-14.66	-30.90	1.14	-1.11	4.61	6.93	8.80
1974	-26.47	-19.95	-3.06	4.35	5.69	8.00	12.20
1975	37.20	52.82	14.64	9.20	7.83	5.80	7.01
1976	23.84	57.38	18.65	16.75	12.87	5.08	4.81
1977	-7.18	25.38	1.71	-0.69	1.41	5.12	6.77
1978	6.56	23.46	-0.07	-1.18	3.49	7.18	9.03
1979	18.44	43.46	-4.18	-1.23	4.09	10.38	13.31
1980	32.42	39.88	-2.62	-3.95	3.91	11.24	12.40
1981	-4.91	13.88	-0.96	1.86	9.45	14.71	8.94
1982	21.41	28.01	43.79	40.36	29.10	10.54	3.87
1983	22.51	39.67	4.70	0.65	7.41	8.80	3.80
1984	6.27	-6.67	16.39	15.48	14.02	9.85	3.95
1985	32.16	24.66	30.09	30.97	20.33	7.72	3.77
1986	18.47	6.85	19.85	24.53	15.14	6.16	1.13
1987	5.23	-9.30	-0.27	-2.71	2.90	5.47	4.41
1988	16.81	22.87	10.70	9.67	6.10	6.35	4.42
1989	31.49	10.18	16.23	18.11	13.29	8.37	4.65
1990	-3.17	-21.56	6.78	6.18	9.73	7.81	6.11
1991	30.55	44.63	19.89	19.30	15.46	5.60	3.06
1992	7.67	23.35	9.39	8.05	7.19	3.51	2.90
1993	9.99	20.96	13.19	18.24	11.24	2.90	2.75
1994	1.31	3.11	-5.76	-7.77	-5.14	3.90	2.67
1995	37.43	34.45	27.20	31.67	16.80	5.60	2.54
1996	23.07	17.62	1.40	-0.93	2.10	5.21	3.32
1997	33.36	22.78	12.95	15.85	8.38	5.26	1.70
1998	28.58	-7.31	10.76	13.06	10.21	4.86	1.61
1999	21.04	29.79	-7.45	-8.96	-1.77	4.68	2.68
2000	-9.11	-3.59	12.87	21.48	12.59	5.89	3.39
2001	-11.88	22.77	10.65	3.70	7.62	3.83	1.55
2002	-22.10	-13.28	16.33	17.84	12.93	1.65	2.38
2003	28.70	60.70	5.27	1.45	2.40	1.02	1.88
2004	10.67	18.39	8.72	8.51	2.25	1.20	3.26