December 2009

State Employees Retirement Fund

Actuarial Valuation Report as of July 1, 2009

MERCER

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Contents

Highlights

This report has been prepared by Mercer for the Minnesota State Retirement System to:

- Present the results of a valuation of the State Employees Retirement Fund as of July 1, 2009.
- Review experience under the Plan for the year ended June 30, 2009.
- Provide reporting and disclosure information for governmental agencies and other interested parties.

Contributions

The following table summarizes important contribution information as described in the "Development of Costs" section.

	Actuarial Valuation as of	
Contributions	**July 1, 2009**	**July 1, 2008**
Statutory Contributions – Chapter 352 (% of Payroll)	9.50%	9.00%
Required Contributions – Chapter 356 (% of Payroll)	14.85%	12.39%
Sufficiency / (Deficiency)	(5.35%)	(3.39%)

Despite the 0.50% of pay increase in statutory contribution rates, the contribution deficiency increased from (3.39%) of payroll to (5.35%) of payroll. On a market value of assets basis, the plan moved from a deficiency of (4.33%) of payroll to a deficiency of (15.08%) of payroll. The primary reasons for the increased deficiency are the less than expected return on assets and the impact of insufficient contributions.

Even when taking into account the scheduled increases in member and employer contribution rates, a significant funding deficiency exists. **Without additional changes in contribution rates, or favorable actuarial experience, the funded status will continue to deteriorate.**

The "Plan Assets" section provides detail on the plan assets used for the valuation including a development of the actuarial value of assets. The market value of assets earned (19.1%) for the plan year ending June 30, 2009. **Only 20% of the asset loss is recognized this year in the actuarial value of assets. The remainder will be recognized over the next four years.** The actuarial value of assets earned 2.9% for the plan year ending June 30, 2009 as compared to the assumed rate of 8.50%.

Participant reconciliation and statistics are detailed in the "Membership Data" section. The "Actuarial Basis" section includes a summary of plan provisions and actuarial methods and assumptions used for the calculations in this report. The "Plan Accounting" section details the required accounting information for the Plan under GASB Statement No. 25 (as amended by GASB 50).

There were no changes in actuarial assumptions since the July 1, 2008 valuation. Changes in plan provisions and valuation methods are reflected in this report and summarized in the Actuarial Basis section.

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in plan provisions, actuarial assumptions or valuation methods and procedures between the two valuations are described after the summary.

	Actuarial Valuation as of	
	July 1, 2009	**July 1, 2008**
Contributions *(% of Payroll)*		
Statutory – Chapter 352	9.50%	9.00%
Required – Chapter 356	14.85%	12.39%
Sufficiency / (Deficiency)	(5.35%)	(3.39%)
Funding Ratios *(dollars in thousands)*		
Accrued Benefit Funding Ratio		
– Current assets (AVA)	$ 9,030,401	$ 9,013,456
– Current benefit obligations	9,991,468	9,484,956
– Funding ratio	90.38%	95.03%
Accrued Liability Funding Ratio		
– Current assets (AVA)	$ 9,030,401	$ 9,013,456
– Current assets (MVA)	6,897,118	8,803,140
– Actuarial accrued liability	10,512,760	9,994,602
– Funding ratio (AVA)	85.90%	90.18%
– Funding ratio (MVA)	65.61%	88.08%
Projected Benefit Funding Ratio		
– Current and expected future assets	$ 10,731,186	$ 10,556,439
– Current and expected future benefit obligations	11,902,982	11,315,760
– Funding ratio	90.16%	93.29%
Participant Data		
Active members		
– Number	48,989	48,816
– Projected annual earnings *(000s)*	$ 2,493,948	$ 2,378,816
– Average projected annual earnings	$ 50,908	$ 48,730
– Average age	46.7	46.4
– Average service	13.6	13.5
Service retirements	22,457	21,735
Survivors	3,230	3,086
Disability retirements	1,656	1,620
Deferred retirements	15,210	14,951
Terminated other non-vested	6,912	6,865
Total	**98,454**	**97,073**

Effects of Changes

The following changes in plan provisions and methods were recognized as of July 1, 2009:

Dissolution of Minnesota Post Retirement Investment Fund (MPRIF)

Since the MPRIF composite funding ratio was less than 80 percent as of June 30, 2008, the MPRIF was dissolved, and assets were transferred back to MSRS and merged with the respective active member fund. The transfer of assets and liabilities occurred on June 30, 2009.

In conjunction with the dissolution, benefit recipients will receive future annual 2.5% cost-of-living adjustments (COLA).

The waiting period and proration schedule for the COLA paid in the first year of retirement were also revised.

Other than the Asset Method change described below, the MPRIF dissolution and COLA changes did not have an impact on the valuation results.

Asset Method

For the purpose of determining the actuarial value of assets, the MPRIF asset loss for the fiscal year ending June 30, 2009 is recognized incrementally over five years at 20% per year, similar to the smoothing of active fund assets. Prior to June 30, 2009, MPRIF asset gains and losses were not smoothed.

The change in the actuarial asset method for MPRIF assets reduced the required contribution by 1.03% of pay.

Department of Transportation Pilots

The Department of Transportation Pilots Plan was closed to new employees as of June 1, 2008, and the disability benefits were modified.

For valuation purposes, we recognize the effect of the unreduced early retirement benefit available to eligible pilots at age 62, but we do not value any special disability features, so these changes do not impact the actuarial valuation.

Certification

Mercer has prepared this report exclusively for The Board of Directors of the Minnesota State Retirement System and the Legislative Commission on Pensions and Retirement (LCPR) for the following purposes:

- Present the results of a valuation of the State Employees Retirement Fund as of July 1, 2009 as required by Minnesota Statutes, Section 356.215 and the Standards of Actuarial Work established by the State of Minnesota Legislative Commission on Pensions and Retirement
- Review plan experience for the year ended June 30, 2009
- Provide the annual required contribution for the period beginning July 1, 2009
- Provide reporting and disclosure information for financial statements for governmental agencies pursuant to GASB Statements Number 25 (as amended by GASB Number 50) and 27.

This valuation report may not be relied upon for any other purpose or by any party other than the Board of Directors, the LCPR, or the Plan's auditors solely for the purpose of completing an audit related to the matters herein. Mercer is not responsible for the consequences of any unauthorized use.

A valuation report is a snapshot of a plan's estimated financial condition at a particular point in time; it does not predict a plan's future financial condition or its ability to pay benefits in the future.

Over time, a plan's total cost will depend on a number of factors, including the amount of benefits the plan pays, the number of people paid benefits, plan expenses and the amount earned on any assets invested to pay the benefits. These amounts and other variables are uncertain and unknowable at the valuation date, but are predicted to fall within a reasonable range of possibilities.

To prepare this report, *Actuarial Assumptions*, as described in the Actuarial Basis section, are used to select a single scenario from a range of possibilities. The results of that single scenario are included in this report. However, the future is uncertain and the plan's actual experience will differ from those assumptions; these differences may be significant or material. In addition, different assumptions or scenarios may also be within the reasonable range and results based on those assumptions would be different. Actuarial assumptions may also be changed from one valuation to the next because of changes in mandated requirements, plan experience, changes in expectations about the future and other factors. Due to the limited scope of our assignment, we did not perform, nor do we present, an analysis of the potential range of future possibilities and scenarios.

Because actual plan experience will differ from the assumptions, decisions about benefit changes, investment policy, funding amounts, benefit security and/or benefit-related issues should be made only after careful consideration of alternative future financial conditions and scenarios, and not solely on the basis of a valuation report or reports.

Data and plan provisions

To prepare this report, Mercer has used and relied on financial data submitted by the Minnesota State Retirement System as of June 30, 2009, as well as participant data supplied by the Minnesota State Retirement System as of June 30, 2009. We have reviewed the financial and participant data for internal consistency and general reasonableness, but we have not verified or audited any of the data or information provided. We have also used and relied on the plan documents, including amendments, supplied by the Minnesota State Retirement System. A summary of the plan provisions valued is presented in our report. The Board of Directors are solely responsible for the accuracy, validity and comprehensiveness of this information. If the data or plan provisions supplied are not accurate and complete, the valuation results may differ significantly from the results that would be obtained with accurate and complete information; this may require a later revision of this report.

Certification

Actuarial Calculations, Methods and Assumptions

To the best of our knowledge and belief, this report is complete and accurate and all costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures, in accordance with the requirements of Minnesota Statutes Section 356.215 and the requirements of the Standards of Actuarial Work established by the LCPR. The economic assumptions, including discount rates, are set in Minnesota Statutes, and the remaining assumptions are adopted by the Board of Directors and the LCPR. This valuation is based on assumptions, plan provisions, methods and other parameters as summarized in this report. If this information is inaccurate or incomplete or does not reflect current statutes, regulations or Board directives, the reader of this report should not rely on the valuation results and should notify Mercer promptly. In our opinion, this report fully and fairly discloses the actuarial position of the plan on an ongoing basis.

Professional qualifications

We are available to answer any questions on the material in this report or to provide explanations or further details as appropriate. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report. In addition, Mr. Dickson meets the requirements of "approved actuary" under Minnesota Statutes, Section 356.215, Subdivision 1, Paragraph (c). We are not aware of any direct or material indirect financial interest or relationship, including investments or other services that could create a conflict of interest, that would impair the objectivity of our work.

The information contained in this document (including any attachments) is not intended by Mercer to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

Gary D Dickson

Gary Dickson, FSA, EA, MAAA
Principal

12/9/2009
Date

Bonita J. Wurst

Bonita J. Wurst, ASA, EA, MAAA
Principal

12/9/2009
Date

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Supplemental Information

The remainder of the report includes information supporting the results presented in the previous sections.

- **Plan assets** presents information about the plan's assets as reported by the Minnesota State Retirement System and the Minnesota State Board of Investments. The assets represent the portion of total fund liabilities that has been funded.
- **Membership data** presents and describes the membership data used in the valuation.
- **Development of costs** shows the liabilities for plan benefits and the derivation of the contribution amount.
- **Actuarial basis** describes the plan provisions, as well as the methods and assumptions used to value the plan. The valuation is based on the premise that the plan is ongoing.
- **Plan accounting under GASB 25 (as amended by GASB 50)** shows the disclosures required by GASB Statement No. 25 as amended by GASB Statement No. 50.
- **Glossary** defines the terms used in this report.

Plan Assets

Statement of Plan Net Assets for Year Ended June 30, 2009 *(Dollars in Thousands)*

	Market Value	Cost Value
Assets in Trust		
▪ Cash, equivalents, short term securities	$ 129,901	$ 129,901
▪ Fixed income	1,498,590	1,524,305
▪ Equity	6,385,133	7,496,742
▪ Other	6,089	6,089
Total assets in trust	**$ 8,019,713**	**9,157,037**
Assets Receivable	16,350	16,350
Total Assets	**$ 8,036,063**	**$ 9,173,387**
Amounts Payable	(1,138,945)	(1,138,945)
Net assets held in trust for pension benefits	**$ 6,897,118**	**$ 8,034,442**

Plan Assets

Reconciliation of Plan Assets

The following exhibit shows the revenue, expenses and resulting assets of the Fund as reported by the Minnesota State Board of Investment, for the Plan's Fiscal Year July 1, 2008 to June 30, 2009.

Change in Assets *(dollars in thousands)*	**Non-MPRIF Assets**	**MPRIF Reserve**	**Market Value**
1. Fund balance at market value at July 1, 2008	**$ 5,353,775**	**$ 3,449,365**	**$ 8,803,140**
2. Contributions			
a. Member	108,866	0	108,866
b. Employer	107,211	0	107,211
c. Other sources	0	0	0
d. Total contributions	$ 216,077	$ 0	$ 216,077
3. Investment income*			
a. Investment income/(loss)	$ (1,664,731)	0	$ (1,664,731)
b. Investment expenses	(9,656)	0	(9,656)
c. Total investment income/(loss)	$ (1,674,387)	0	$ (1,674,387)
4. Other	14,817	0	14,817
5. Total income *(2.d. + 3.c. + 4.)*	**$ (1,443,493)**	**$ 0**	**$ (1,443,493)**
6. Benefits Paid			
a. Annuity benefits	$ 0	$ (445,792)	$ (445,792)
b. Refunds	(10,907)	0	(10,907)
c. Total benefits paid	$ (10,907)	$ (445,792)	$ (456,699)
7. Expenses			
a. Other	$ (510)	$ 0	$ (510)
b. Administrative	(5,320)	0	(5,320)
c. Total expenses	$ (5,830)	$ 0	$ (5,830)
8. Total disbursements *(6.c. + 7.c.)*	**$ (16,737)**	**$ (445,792)**	**$ (462,529)**
9. Other changes in reserves			
a. Annuities awarded	$ (166,728)	$ 166,728	$ 0
b. Transfer between reserves	3,160,738	(3,160,738)	0
c. Mortality gain/(loss) not transferred	9,563	(9,563)	0
d. Change in assumptions	0	0	0
e. Total other changes	$ 3,003,573	$ (3,003,573)	$ 0
10. Fund balance at market value at June 30, 2009 *(1. + 5. + 8. + 9.e.)*	**$ 6,897,118**	**$ 0**	**$ 6,897,118**

* *MPRIF investment income allocated to non-MPRIF assets by the Minnesota State Retirement System.*

Plan Assets

Actuarial Asset Value *(Dollars in Thousands)*

			June 30, 2009
1. Market value of assets available for benefits			$ 6,897,118
2. Determination of average balance			
a. Total assets available at July 1, 2008			8,803,140
b. Total assets available at June 30, 2009			6,897,118
c. Net investment income for fiscal year ending June 30, 2009			(1,659,570)
d. Average balance *[a. + b. – c.] / 2*			8,679,914
3. Expected return *[8.5% x 2.d.]*			737,793
4. Actual return			(1,659,570)
5. Current year asset gain/(loss) *[4. – 3.]*			(2,397,363)
6. Unrecognized asset returns*			
	Original Amount	**% Not Recognized**	
a. Year ended June 30, 2009	$ (2,397,363)	80%	$ (1,917,890)
b. Year ended June 30, 2008	(747,984)	60%	(448,791)
c. Year ended June 30, 2007	488,554	40%	195,422
d. Year ended June 30, 2006	189,878	20%	37,976
e. Total unrecognized return			$ (2,133,283)
7. Actuarial value at June 30, 2009 *(1. – 6.e.)*			**$ 9,030,401**

** Prior to the year ending June 30, 2009, unrecognized asset returns do not include MPRIF gains or losses.*

Membership Data

Distribution of Active Participants

	Years of Service as of June 30, 2009										
Age	**<3**	**3 - 4**	**5 - 9**	**10 - 14**	**15 - 19**	**20 - 24**	**25 - 29**	**30 - 34**	**35 - 39**	**40+**	**Total**
< 25	1,389	103	13								**1,505**
Avg. Earnings	20,257	30,957	37,026								**21,134**
25 – 29	2,545	926	513	14							**3,998**
Avg. Earnings	29,890	38,459	41,507	42,189							**33,408**
30 – 34	1,693	878	1,258	333	7						**4,169**
Avg. Earnings	33,047	40,921	45,973	48,931	47,256						**39,898**
35 – 39	1,407	623	1,272	859	187	10					**4,358**
Avg. Earnings	34,288	44,787	47,499	54,477	53,621	44,066					**44,477**
40 – 44	1,299	614	1,209	1,123	743	344	36				**5,368**
Avg. Earnings	33,407	44,453	49,350	55,477	57,528	55,993	51,539				**47,786**
45 – 49	1,309	653	1,320	1,099	1,070	1,129	711	86			**7,377**
Avg. Earnings	33,968	43,699	49,208	54,284	56,809	58,795	54,907	50,510			**49,907**
50 – 54	1,029	595	1,271	1,126	1,051	1,301	1,236	928	111		**8,648**
Avg. Earnings	33,642	45,547	49,700	54,296	57,052	59,309	57,445	55,967	53,311		**52,267**
55 – 59	733	412	1,068	911	940	1,117	1,051	1,306	571	64	**8,173**
Avg. Earnings	33,683	43,965	50,274	53,515	56,815	58,394	58,973	61,305	57,750	54,235	**54,126**
60 – 64	310	202	545	525	531	616	469	521	426	186	**4,331**
Avg. Earnings	29,003	42,581	49,420	53,250	55,809	56,246	56,880	61,340	64,985	60,244	**54,096**
65 – 69	84	39	147	110	107	111	61	61	44	70	**834**
Avg. Earnings	18,539	28,890	45,504	52,355	58,606	56,532	58,080	60,946	62,507	63,838	**50,548**
70+	33	18	49	29	24	16	16	16	9	18	**228**
Avg. Earnings	10,070	16,530	32,320	44,879	51,730	44,709	45,758	44,560	58,232	56,934	**37,131**
Total	**11,831**	**5,063**	**8,665**	**6,129**	**4,660**	**4,644**	**3,580**	**2,918**	**1,161**	**338**	**48,989**
Avg. Earnings	**30,973**	**42,209**	**48,092**	**53,931**	**56,739**	**58,163**	**57,215**	**59,196**	**60,164**	**59,674**	**47,551**

In each cell, the top number is the count of active participants for the age/service combination and the bottom number is average annual earnings.

Membership Data

Distribution of Service Retirements

	Years Retired as of June 30, 2009							
Age	**<1**	**1 - 4**	**5 - 9**	**10 - 14**	**15 - 19**	**20 - 24**	**25+**	**Total**
<50								
Avg. Benefit								
50 – 54	9	21	1					**31**
Avg. Benefit	15,416	11,330	14,061					**12,604**
55 – 59	367	1,034	29					**1,430**
Avg. Benefit	16,144	14,086	16,162					**14,657**
60 – 64	614	2,213	1,281	27				**4,135**
Avg. Benefit	17,620	17,893	14,641	19,102				**16,853**
65 – 69	355	1,928	2,166	777	4			**5,230**
Avg. Benefit	16,297	15,838	17,128	14,838	28,839			**16,265**
70 – 74	30	355	1,745	1,414	551	5		**4,100**
Avg. Benefit	10,075	13,257	14,979	16,886	21,562	20,845		**16,344**
75 – 79	5	58	235	1,304	1,268	153		**3,023**
Avg. Benefit	15,087	10,662	13,397	16,216	22,093	20,261		**18,558**
80 – 84	2	23	64	207	1,280	748	60	**2,384**
Avg. Benefit	10,491	8,317	11,219	14,586	19,227	21,600	24,071	**19,363**
85 – 89		3	13	28	196	757	389	**1,386**
Avg. Benefit		49,018	13,806	12,093	17,659	17,148	19,394	**17,787**
90+			2	4	13	55	664	**738**
Avg. Benefit			10,985	14,605	21,191	12,017	15,567	**15,384**
Total	**1,382**	**5,635**	**5,536**	**3,761**	**3,312**	**1,718**	**1,113**	**22,457**
Avg. Benefit	**16,691**	**16,078**	**15,633**	**16,082**	**20,639**	**19,210**	**17,363**	**16,983**

In each cell, the top number is the count of retired participants for the age/service combination and the bottom number is the average annual benefit amount.

Membership Data

Distribution of Survivors

	Years Since Death as of June 30, 2009							
Age	**<1**	**1 - 4**	**5 - 9**	**10 - 14**	**15 - 19**	**20 - 24**	**25+**	**Total**
<45	11	30	26	3	1	1		**72**
Avg. Benefit	4,046	11,461	7,427	6,071	17,917	10,590		**8,724**
45 – 49	8	18	16	8	3	1		**54**
Avg. Benefit	8,816	12,053	6,682	5,061	3,182	8,492		**8,387**
50 – 54	14	45	37	15	2	1	1	**115**
Avg. Benefit	10,795	13,656	10,727	5,530	9,475	4,550	6,969	**11,096**
55 – 59	33	101	76	34	5	2	1	**252**
Avg. Benefit	10,716	12,281	10,324	9,336	7,994	7,268	1,038	**10,919**
60 – 64	37	138	98	41	8	5	1	**328**
Avg. Benefit	15,237	14,066	12,714	14,475	13,914	9,861	7,879	**13,759**
65 – 69	38	116	105	63	33	5	3	**363**
Avg. Benefit	13,507	11,482	12,935	13,936	12,686	10,335	17,346	**12,682**
70 – 74	34	124	125	75	41	11	3	**413**
Avg. Benefit	17,282	17,077	14,766	16,926	14,529	10,348	8,024	**15,869**
75 – 79	28	103	139	78	66	32	12	**458**
Avg. Benefit	16,524	16,063	19,541	16,997	17,915	13,113	12,167	**17,265**
80 – 84	39	129	140	106	74	41	31	**560**
Avg. Benefit	23,194	18,744	17,698	20,441	19,365	15,265	15,542	**18,764**
85 – 89	21	99	88	82	51	21	57	**419**
Avg. Benefit	12,240	16,179	14,805	17,842	15,102	11,703	16,386	**15,691**
90+	4	32	33	41	38	8	40	**196**
Avg. Benefit	11,622	13,747	15,889	17,820	16,433	14,385	14,436	**15,604**
Total	**267**	**935**	**883**	**546**	**322**	**128**	**149**	**3,230**
Avg. Benefit	**14,813**	**14,888**	**14,669**	**16,275**	**16,218**	**12,963**	**14,975**	**15,117**

In each cell, the top number is the count of survivors for the age/years since death combination and the bottom number is the average annual benefit amount.

Membership Data

Distribution of Disability Retirements

	Years Disabled as of June 30, 2009							
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25+	Total
<45	4	20	10	3				**37**
Avg. Benefit	4,224	5,372	4,890	6,221				**5,186**
45 – 49	19	35	29	8	2	2		**95**
Avg. Benefit	9,797	9,671	8,463	7,000	4,122	2,799		**8,841**
50 – 54	22	78	64	35	7	1		**207**
Avg. Benefit	11,044	12,134	8,626	9,991	10,809	6,511		**10,499**
55 – 59	37	150	122	42	14		1	**366**
Avg. Benefit	13,725	14,831	11,939	12,344	7,068		4,011	**13,143**
60 – 64	21	142	150	49	32	4	3	**401**
Avg. Benefit	15,176	14,121	14,243	12,710	12,846	9,048	12,598	**13,886**
65 – 69		28	114	76	25	3	2	**248**
Avg. Benefit		9,134	13,005	14,412	12,666	10,090	12,068	**12,882**
70 – 74			32	69	37	6	1	**145**
Avg. Benefit			13,509	14,935	12,823	13,101	4,093	**13,931**
75 – 79				16	43	12	9	**80**
Avg. Benefit				13,634	12,833	17,320	10,785	**13,436**
80 – 84					12	10	10	**32**
Avg. Benefit					12,128	14,550	12,284	**12,934**
85 – 89						4	31	**35**
Avg. Benefit						10,378	12,993	**12,694**
90+							10	**10**
Avg. Benefit							12,895	**12,895**
Total	**103**	**453**	**521**	**298**	**172**	**42**	**67**	**1,656**
Avg. Benefit	**12,355**	**12,976**	**12,196**	**13,119**	**12,049**	**13,144**	**12,264**	**12,597**

In each cell, the top number is the count of disabled participants for the age/years since disability combination and the bottom number is the average annual benefit amount.

Membership Data

Reconciliation of Members*

		Terminated**		Recipients***			
	Actives**	Deferred Retirement	Other Non-vested	Service Retirements	Disability Retirements	Survivors	Total
Members on 7/1/2008	**48,823**	**14,951**	**6,865**	**21,736**	**1,620**	**3,090**	**97,085**
New entrants	3,214	0	0	0	0	0	**3,214**
Return to active	323	(184)	(139)	0	0	0	**0**
Terminated non-vested	(1,559)	(1)	1,574	0	0	0	**14**
Service retirements	(903)	(406)	(8)	1,393	(1)	0	**75**
Terminated deferred	(1,003)	1,082	(6)	0	0	0	**73**
Terminated refund	(850)	(194)	(335)	0	0	0	**(1,379)**
Deaths	(76)	(38)	(4)	(783)	(68)	(125)	**(1,094)**
New beneficiary	0	0	0	0	0	271	**271**
Disabled	(102)	(8)	0	0	107	0	**(3)**
Transferred to Fund	0	(2)	(1,037)	0	0	0	**(1,039)**
Data correction	1,122	10	2	111	(2)	(6)	**1,237**
Net change	166	259	47	721	36	140	**1,369**
Members on 6/30/2009	**48,989**	**15,210**	**6,912**	**22,457**	**1,656**	**3,230**	**98,454**

* *Provided by Minnesota State Retirement System and checked for reasonableness.*
** *Includes members in the General or Military Affairs Plans.*
*** *Includes members in the General, Military Affairs, or Unclassified Plans.*

Terminated deferred retirement statistics

- Average age — 49.7 years
- Average service — 8.7 years
- Average monthly benefit, with augmentation — $1,108
  (includes estimated benefits for 913 participants who were reported with $0 benefit)

Development of Costs

Actuarial Valuation Balance Sheet *(Dollars in Thousands)*

The actuarial balance sheet is based on the fundamental equation that at any given time the present value of benefits to be paid in the future must be equal to the assets on hand plus the present value of future contributions to be received. The total rate of contribution is determined as the amount which will make the total present and potential assets balance with the total present value of future benefits. The members' rate of contribution is fixed at the current schedule. The employer's rate of contribution is the balance required to cover the total rate of contribution.

The contributions made in excess of amounts required for current benefit payments are accumulated as a reserve to help meet benefit payments in later years. It is this reserve system which permits the establishment of a level rate of contribution each year.

		June 30, 2009
A. Actuarial Value of Assets		$ 9,030,401
B. Expected future assets		
1. Present value of expected future statutory supplemental contributions		$ 310,563
2. Present value of future normal cost contributions		1,390,222
3. Total expected future assets *(1. + 2.)*		$ 1,700,785
C. Total current and expected future assets		$ 10,731,186

	Non-Vested	Vested	Total
D. Current benefit obligations			
1. Benefit recipients			
a. Service retirements	$ 0	$ 3,858,833	$ 3,858,833
b. Disability	0	234,819	234,819
c. Survivors	0	402,595	402,595
2. Deferred retirements with augmentation	0	1,200,907	1,200,907
3. Former members without vested rights*	10,407	0	10,407
4. Active members	45,370	4,238,537	4,283,907
5. Total Current Benefit Obligations	$ 55,777	$ 9,935,691	$ 9,991,468
E. Expected Future Benefit Obligations			$ 1,911,514
F. Total Current and Expected Future Benefit Obligations			$ 11,902,982
G. Unfunded Current Benefit Obligations *(D.5. – A.)*			$ 961,067
H. Unfunded Current and Future Benefit Obligations *(F. – C.)*			$ 1,171,796

* *Former members with less than three years of service that have not collected a refund of member contributions as of the valuation date.*

Development of Costs

Determination of Unfunded Actuarial Accrued Liability and Supplemental Contribution Rate *(Dollars in Thousands)*

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
A. Determination of Actuarial Accrued Liability (AAL)			
1. Active Members			
a. Retirement annuities	$ 5,335,344	$ 953,619	$ 4,381,725
b. Disability benefits	268,746	83,973	184,773
c. Survivor's benefits	158,736	46,630	112,106
d. Deferred retirements	345,014	173,100	171,914
e. Refunds	48,899	132,900	(84,001)
f. Total	$ 6,156,739	$ 1,390,222	$ 4,766,517
2. Deferred retirements with future augmentation	1,200,907	0	1,200,907
3. Former members without vested rights	10,407	0	10,407
4. Benefit recipients	4,496,247	0	4,496,247
5. Contingent actuarial accrued liability – UNCL Plan	38,682	0	38,682
6. Total	$ 11,902,982	$ 1,390,222	$ 10,512,760
B. Determination of Unfunded Actuarial Accrued Liability (UAAL)			
1. Actuarial accrued liability			$ 10,512,760
2. Current assets (AVA)			9,030,401
3. Unfunded actuarial accrued liability			$ 1,482,359
C. Determination of Supplemental Contribution Rate			
1. Present value of future payrolls through the amortization date of July 1, 2020			$ 21,912,114
2. Supplemental contribution rate *(B.3. / C.1.)*			6.77%

Development of Costs

Changes in Unfunded Actuarial Accrued Liability (UAAL) *(Dollars in Thousands)*

		Year Ending June 30, 2009
A. Unfunded actuarial accrued liability at beginning of year	$	981,146
B. Changes due to interest requirements and current rate of funding		
1. Normal cost and actual administrative expenses	$	190,460
2. Contributions		(216,077)
3. Interest on A., B.1. and B.2.		82,309
4. Total *(B.1. + B.2. + B.3.)*	$	56,692
C. Expected unfunded actuarial accrued liability at end of year *(A. + B.4.)*	$	1,037,838
D. Increase (decrease) due to actuarial losses (gains) because of experience deviations from expected		
1. Salary increases	$	(22,704)
2. Investment return		723,093
3. Mortality of benefit recipients		4,163
4. Other items		(35,288)
5. Total	$	669,264
E. Unfunded actuarial accrued liability at end of year before plan amendments and changes in actuarial assumptions *(C. + D.5.)*	$	1,707,102
F. Change in unfunded actuarial accrued liability due to changes in plan provisions	$	0
G. Change in unfunded actuarial accrued liability due to changes in actuarial assumptions	$	0
H. Change in unfunded actuarial accrued liability due to changes in actuarial asset method	$	(224,743)
I. Unfunded actuarial accrued liability at end of year *(E. + F. + G. + H.)*	$	1,482,359

Development of Costs

Determination of Contribution Sufficiency/(Deficiency) *(Dollars in Thousands)*

	July 1, 2009		
	Percent of Payroll	Dollar Amount	
A. Statutory contributions – Chapter 352			
1. Employee contributions	4.75%	$	118,462
2. Employer contributions	4.75%		118,462
3. Total	9.50%	$	236,924
B. Required contributions – Chapter 356			
1. Normal cost			
a. Retirement benefits	5.56%	$	138,712
b. Disability benefits	0.45%		11,268
c. Survivors	0.26%		6,351
d. Deferred retirement benefits	0.90%		22,530
e. Refunds	0.69%		17,230
f. Total	7.86%	$	196,091
2. Supplemental contribution amortization by July 1, 2020 of Unfunded Actuarial Accrued Liability	6.77%		168,840
3. Allowance for expenses	0.22%		5,419
4. Total	14.85%	$	370,350
C. Contribution Sufficiency/(Deficiency) *(A.3. – B.4.)*	(5.35%)	$	(133,426)

Note: Projected annual payroll for fiscal year beginning on the valuation date: $2,493,948.

Development of Costs

Special Groups - Military Affairs Calculation

Section 352.85 of Chapter 352 of Minnesota Statutes provides that certain military affairs personnel may retire, with an unreduced benefit, at age 60. In addition, they may receive disability benefits upon being found disqualified for retention in active military duty. To fund these special benefits, employees and employer contribute an extra 1.60% of payroll.

To recognize the effect of the unreduced early retirement benefit available at age 60, we have assumed that all military affairs personnel will retire at age 60, or if over age 60, one year from the valuation date.

		Year Ending June 30, 2009
A. Number of active members		3
B. Projected annual earnings	$	123,447
C. Total normal cost		
1. Dollar amount	$	12,617
2. Percent of payroll		10.22%
D. Normal cost of State Employees Retirement Fund (percent of payroll)		7.66%
E. Difference in normal cost *(C. – D.)*		2.36%

Development of Costs

Special Groups - Pilots Calculation

Section 352.86 of Chapter 352 of Minnesota Statutes provides that certain transportation department pilots may retire, with an unreduced benefit, at age 62. In addition, they may receive disability benefits upon being found disqualified for retention as pilots. To fund these special benefits, employees and employer contribute an extra 1.60% of payroll.

To recognize the effect of the unreduced early retirement benefit available at age 62, we have assumed that all pilots will retire at age 62, or if over age 62, one year from the valuation date.

		Year Ending June 30, 2009
A.	Number of active members	4
B.	Projected annual earnings	$ 340,153
C.	Total normal cost	
	1. Dollar amount	$ 35,103
	2. Percent of payroll	10.32%
D.	Normal cost of State Employees Retirement Fund (percent of payroll)	7.86%
E.	Difference in normal cost (C. – D.)	2.46%

Development of Costs

Special Groups - Fire Marshals Calculation

Section 352.87 of Chapter 352 of Minnesota Statutes provides that deputy state fire marshals may retire, with an unreduced benefit (with respect to service after July 1, 1999), at age 55. Credited Service after July 1, 1999 accrues retirement benefits at a rate of 2.00% per year, and disability benefits are based on a minimum of 15 years of service (20 years if duty related.) To fund these special benefits, members contribute an extra 2.78% of payroll and employers contribute an extra 4.20% of payroll.

To recognize the effect of the unreduced early retirement benefit available at age 55, we have assumed that all fire marshals will retire in accordance with the retirement assumptions which apply to the members of the Correctional Employees Retirement Fund.

		Year Ending June 30, 2009
A. Number of active members		12
B. Projected annual earnings	$	761,050
C. Total normal cost		
1. Dollar amount	$	96,254
2. Percent of payroll		12.65%
D. Normal cost of State Employees Retirement Fund (percent of payroll)		7.86%
E. Difference in normal cost (C. – D.)		4.79%

Development of Costs

Special Groups - Unclassified Plan Contingent Liability Calculation *(Dollars in Thousands)*

Section 352D.02 of Chapter 352D of Minnesota Statutes provides that members credited with employee shares in the Unclassified Plan may elect to terminate participation in the Unclassified Plan and be covered by the State Employees Retirement Fund (general plan) prior to termination of covered employment assuming that the member has acquired at least 10 years of allowable state service.

To recognize the effect of the option to elect coverage under the general plan, we have assumed that all eligible Unclassified Plan members will elect coverage under the general plan if such election provides the member with a greater economic present value than the accumulated contribution balance under the Unclassified Plan. The liabilities were measured using the actuarial assumptions that are applied to the State Employees Retirement Fund.

		Year Ending June 30, 2009
A. Number of active members		1,549
B. Account balances for active members	$	146,286
C. Accrued liability for active members	$	187,374
D. Number of inactive members		1,712
E. Account balances for inactive members	$	85,279
F. Net assets held in trust for Unclassified Plan members	$	233,971
G. Contingent liability *(C. + E. – F.)*	$	38,682
H. Projected annual earnings for active members	$	111,037
I. Normal cost		
1. Dollar amount	$	12,855
2. Percent of payroll		11.57%

Actuarial Basis

Actuarial Cost Method

Liabilities and contributions in this report are computed using the Individual Entry Age Normal Cost Method. This method is prescribed by Minnesota Statutes.

The objective under this method is to fund each member's benefits under the Plan as payments which are level as a percentage of salary, starting at original participation date (or employment date), and continuing until the assumed date of retirement termination, disability or death.

At any given date, a liability is calculated equal to the contributions which would have been accumulated if this method of funding had always been used, the current plan provisions had always been in place, and all assumptions had been precisely accurate. The difference between this liability and the assets (if any) which are held in the fund is the unfunded liability. The unfunded liability is typically funded over a chosen period in accordance with the amortization schedule.

A detailed description of the calculation follows:

The normal cost for each active member under the assumed retirement age is determined by applying to earnings the level percentage of salary which, if contributed each year from date of entry into the Plan until the assumed retirement (termination, disability or death) date, is sufficient to provide the full value of the benefits expected to be payable.

- The present value of present value of future normal costs is the total of the discounted values of all active members' normal cost, assuming these to be paid in each case from the valuation date until retirement (termination, disability or death) date.

- The present value of projected benefits is calculated as the value of all benefit payments expected to be paid to the Plan's current members, including active and retired members, beneficiaries, and terminated members with vested rights.

- The accrued liability is the excess of the present value of projected benefits over the present value of future normal costs.

- The unfunded liability is the excess of the accrued liability over the assets of the fund, and represents that part of the accrued liability which has not been funded by accumulated past contributions.

Actuarial Basis

Asset Valuation Method

The assets are valued based on a five-year moving average of expected and market values (five-year average actuarial value) determined as follows:

- At the end of each plan year, an average asset value is calculated as the average of the market asset value at the beginning and end of the fiscal year net of investment income for the fiscal year;
- The investment gain or (loss) is taken as the excess of actual investment income over the expected investment income based on the average asset value as calculated above;
- The investment gain or (loss) so determined is recognized over five years at 20% per year;
- The asset value is the sum of the market asset value plus the scheduled recognition of investment gains or (losses) during the current and the preceding four fiscal years.

For the purpose of determining the actuarial value of assets, the MPRIF asset loss for the fiscal year ending June 30, 2009 is recognized incrementally over five years at 20% per year, similar to the smoothing of active fund assets. Prior to June 30, 2009, MPRIF asset gains and losses were not smoothed.

Payment on the Unfunded Actuarial Accrued Liability

A level percentage of payroll each year to the statutory amortization date of July 1, 2020 assuming payroll increases of 4.50% per annum. If there is a negative Unfunded Actuarial Accrued Liability, the surplus amount shall be amortized over 30 years as a level percentage of payroll.

Funding Objective

The fundamental financing objective of the fund is to establish contribution rates which, when expressed as a percentage of active member payroll, will remain approximately level from generation to generation and meet the required deadline for full funding.

Benefits included or excluded

To the best of our knowledge, all material benefits have been included in the liability.

IRC Section 415(b): The limitations of Internal Revenue Code Section 415(b) have been incorporated into our calculations. Annual benefits may not exceed the limits in IRC Section 415. This limit is indexed annually. For 2009, the limit is $195,000.

IRC Section 401(a)17: The limitations of Internal Revenue Code Section 401(a)(17) have been incorporated into our calculations. Compensation for any 12-month period used to determine accrued benefits may not exceed the limits in IRC Section 401(a)(17) for the calendar year in which the 12-month period begins. This limit is indexed annually. For 2009, the limit is $245,000.

Actuarial Basis

Summary of Actuarial Assumptions

The following assumptions were used in valuing the liabilities and benefits under the plan.

Investment return:	6.0% compounded annually post-retirement. 8.5% compounded annually pre-retirement.
Benefit increases after retirement	Payment of benefit increases after retirement accounted for by using a 6.00% post-retirement assumption, as required by statute.
Salary increases	Reported salary for prior fiscal year, with new hires annualized, increased to current fiscal year and annually for each future year according to the ultimate rates in the rate table. During a 5-year select period, 0.60% x (5-T) where T is completed years of service is added to the ultimate rate.
Mortality	
Healthy Pre-retirement	1983 Group Annuity Mortality for males set back five years 1983 Group Annuity Mortality for females set back two years
Healthy Post-retirement	1983 Group Annuity Mortality for males set back two years 1983 Group Annuity Mortality for females set back one year
Disabled	1965 RRB rates through age 54. For ages 55 to 64, graded rates between 1965 RRB rates and the Healthy Post-Retirement Mortality Table. For ages 65 and later, the Healthy Post-Retirement Mortality Table
Retirement	Graded rates beginning at age 55 as shown in rate table. Members who have attained the highest assumed retirement age will retire in one year.
Withdrawal	Select and ultimate rates based on actual plan experience. Ultimate rates after the third year are shown in the rate table. Select rates are as follows: Male — First Year 0.45, Second Year 0.14, Third Year 0.09 Female — First Year 0.48, Second Year 0.15, Third Year 0.10
Disability	Age-related rates based on actual experience; see table of sample rates.
Allowance for Combined Service Annuity	Liabilities for active members are increased by 1.20% and liabilities for former members are increased by 40.00% to account for the effect of some members having eligibility for a Combined Service Annuity.
Administrative expenses	Prior year administrative expenses expressed as percentage of prior year payroll.
Return of contributions	All employees withdrawing after becoming eligible for a deferred benefit are assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.
Percentage married	85% of active members are assumed to be married. Actual marital status is provided for members in payment status.
Age of spouse	Female members are assumed to be three years younger than males.

Withdrawal select rates:

	First Year	Second Year	Third Year
Male	0.45	0.14	0.09
Female	0.48	0.15	0.10

Actuarial Basis

Summary of Actuarial Assumptions *(continued)*

Form of payment	Married members assumed to elect subsidized joint and survivor form of annuity as follows: Males: 20% elect 50% J&S option 0% elect 75% J&S option 50% elect 100% J&S option Females: 10% elect 50% J&S option 0% elect 75% J&S option 15% elect 100% J&S option
Changes in actuarial assumptions	No assumption changes were recognized as of July 1, 2009.

Actuarial Basis

Summary of Actuarial Assumptions *(continued)*

Summary of Rates

	Rate (%)					
	Healthy Pre-Retirement Mortality		Healthy Post-Retirement Mortality		Disabled Mortality	
Age	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
20	0.03%	0.02%	0.04%	0.02%	4.39%	4.39%
25	0.04	0.02	0.04	0.02	4.40	4.40
30	0.05	0.03	0.05	0.03	4.40	4.40
35	0.06	0.04	0.07	0.04	4.41	4.41
40	0.09	0.06	0.10	0.06	4.41	4.41
45	0.12	0.08	0.17	0.09	4.48	4.48
50	0.22	0.14	0.31	0.15	4.86	4.86
55	0.39	0.21	0.52	0.23	5.43	5.41
60	0.61	0.34	0.77	0.38	3.72	3.51
65	0.92	0.58	1.24	0.64	1.24	0.64
70	1.56	0.97	2.22	1.09	2.22	1.09

Actuarial Basis

Summary of Actuarial Assumptions *(continued)*

Summary of Rates

	Ultimate Withdrawal		Disability		
Age	**Male**	**Female**	**Male**	**Female**	**Salary Increases**
20	6.90%	8.55%	0.010%	0.010%	5.75%
25	5.90	7.80	0.010	0.010	5.75%
30	4.90	7.05	0.010	0.010	5.75%
35	3.90	5.10	0.030	0.030	5.75%
40	3.20	4.38	0.080	0.080	5.75%
45	2.70	3.75	0.130	0.130	5.45%
50	2.20	3.05	0.288	0.288	4.95%
55	0.00	0.00	0.504	0.432	4.45%
60	0.00	0.00	0.780	0.624	4.25%
65	0.00	0.00	0.000	0.000	4.25%
70	0.00	0.00	0.000	0.000	4.25%

	Retirement	
Age	**Rule of 90 Eligible**	**All Others**
55	25%	5%
56	20	5
57	20	5
58	20	5
59	20	5
60	20	10
61	25	10
62	50	25
63	40	20
64	40	20
65	45	45
66	30	30
67	30	30
68	30	30
69	30	30
70	30	30

Actuarial Basis

Summary of Plan Provisions

This summary of provisions reflects the interpretation of applicable Statutes for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

Plan year	July 1 through June 30		
Eligibility	State employees, non-academic staff of the University of Minnesota and employees of certain Metro level government units, unless excluded by law.		
Contributions	Shown as a percent of salary:		
	Date of Increase	Employee	Employer
	July 1, 2009	4.75%	4.75%
	July 1, 2010	5.00%	5.00%
	Employee contributions are "picked up" according to the provisions of Internal Revenue Code 414(h).		
Allowable service	Service during which member contributions were made. May also include certain leaves of absence, military service and periods while temporary Worker's Compensation is paid. Excludes lump sum vacation pay at termination.		
Salary	Includes wages, allowances and fees. Excludes lump sum payments at separation, employer contributions to deferred compensation and tax-sheltered annuity plans and benevolent vacation and sick leave donation programs.		
Retirement			
Normal retirement benefit			
Age/Service requirements	First hired before July 1, 1989: (a.) Age 65 and three years of Allowable Service. (b.) Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service. First hired after June 30, 1989: (a.) The greater of age 65 or the age eligible for full Social Security retirement benefits (but not higher than age 66) and three years of Allowable Service. (b.) Proportionate Retirement Annuity is available at normal retirement age and one year of Allowable Service.		
Amount	1.70% of Average Salary for each year of Allowable Service		

Actuarial Basis

Summary of Plan Provisions *(continued)*

***Retirement** (continued)*

<u>*Early retirement*</u>

Age/Service requirements

First hired before July 1, 1989:

(a.) Age 55 and three years of Allowable Service.

(b.) Any age with 30 years of Allowable Service.

(c.) Rule of 90: Age plus Allowable Service totals 90.

First hired after June 30, 1989:

Age 55 with three years of Allowable Service

Amount

First hired before July 1, 1989:

The greater of (a) or (b):

(a.) 1.20% of Average Salary for each of the first ten years of Allowable Service and 1.70% of Average Salary for each subsequent year with reduction of 0.25% for each month the member is under age 65 at time of retirement or under age 62 if 30 years of Allowable Service. No reduction if age plus years of Allowable Service totals 90.

(b.) 1.70% of Average Salary for each year of Allowable Service assuming augmentation to age 65 at 3.00% per year and actuarial reduction for each month the member is under age 65.

First hired after June 30, 1989:

1.70% of Average Salary for each year of Allowable Service assuming augmentation to the age eligible for full Social Security retirement benefit (but not higher than age 66) at 3.00% per year and actuarial reduction for each month the member is under the normal retirement age.

<u>*Form of payment*</u>

Life annuity with return on death of any balance of contributions over aggregate monthly payments. Actuarially equivalent options are:

50%, 75%, or 100% Joint and Survivor with bounce back feature without additional reduction

15-year Certain and Life thereafter

<u>*Benefit increases*</u>

Benefit recipients will receive future annual 2.5% cost-of-living adjustments. A benefit recipient who has been receiving a benefit for at least 12 full months as of December 31 will receive a full increase. Members receiving benefits for at least one full month but less than 12 full months will receive a pro rata increase.

Prior to 2002, members who retired under the laws in effect before July 1, 1973 received an additional lump sum payment each year. In 1989, this lump sum payment was the greater of $25 times each full year of Allowable Service or $400 per full year of service less any Social Security benefits received or annuity from a Minnesota public employee pension plan. In each following year, the lump sum payment was increased by the same percentage increase that was applied to regular annuities paid from the MPRIF. Effective January 1, 2002, the annual lump sum payment was divided by 12 and paid as a monthly life annuity in the annuity form elected.

Actuarial Basis

Summary of Plan Provisions *(continued)*

Disability	
Disability Benefit	
Age/Service requirement	Total and permanent disability before normal retirement age with three years of Allowable Service.
Amount	Normal Retirement benefit based on Allowable Service and Average Salary at disability without reduction for commencement before normal retirement age. Payments stop if disability ceases or death occurs. Payments revert to a retirement annuity at normal retirement age. Benefits may be reduced on resumption of partial employment.
Retirement after Disability	
Age/Service requirement	Normal retirement age with continued disability.
Amount	Any optional annuity continues. Otherwise, a normal retirement benefit equal to the disability benefit paid before normal retirement age, or an actuarially equivalent optional annuity.
Form of Payment	Same as for retirement.
Benefit Increases	Same as for retirement.

Actuarial Basis

Summary of Plan Provisions *(continued)*

Death

<u>*Surviving spouse optional benefit*</u>

Age/service requirement	Member or former member who dies before retirement or disability benefits commence with three years of Allowable Service. If a formers member dies before age 55 and has less than 30 years of Allowable Service, benefits commence when the former member would have been age 55. If an active member dies, benefits may commence immediately, regardless of age.
Amount	Surviving spouse receives the 100% joint and survivor benefits using the Normal Retirement formula above. If commencement is prior to age 55, the appropriate early retirement formula described above applies except that one-half the monthly reduction factor is used from age 55 to the commencement age and the Rule of 90 does not apply. In lieu of this benefit, the surviving spouse may elect a refund of contributions with interest or an actuarially equivalent term certain annuity. If a member dies prior to July 1, 1997 and the beneficiary was not eligible to commence a survivor benefit as of July 1, 1997, an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%.
Benefit increases	Same as for retirement.

<u>*Surviving dependent children's benefit*</u>

Age/service requirement	If no surviving spouse, all dependent children (biological or adopted) below age 20 who are dependent for more than half of their support on deceased member.
Amount	Actuarially equivalent to surviving spouse 100% joint and survivor annuity payable to the later of age 20 or five years. The amount is proportionally divided among surviving children.
Benefit increases	Same as for retirement.

<u>*Refund of contributions*</u>

Age/service requirement	Active member dies and survivor benefits are not payable or a former member dies before annuity begins or former member who is not entitled to an annuity dies.
Amount	The member's contributions with 5.00% interest if death occurred before May 16, 1989 and 6.00% interest if death occurred on or after May 16, 1989.
Age/service requirement	Retired or disabled annuitant who did not select an optional annuity dies, or the remaining recipient of an option dies.
Amount	The excess of the member's contributions over all benefits paid.

Actuarial Basis

Summary of Plan Provisions *(continued)*

Termination	
<u>*Refund of contributions*</u>	
Age/service requirement	Termination of state service.
Amount	Member's contributions with 5.00% interest compounded annually if termination occurred before May 16, 1989 and 6.00% interest if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund.
<u>*Deferred benefit*</u>	
Age/service requirement	Three years of Allowable Service.
Amount	Benefit computed under law in effect at termination and increased by the following percentage: (a.) 0.00% before July 1, 1971; (b.) 5.00% from July 1, 1971 to January 1, 1981; (c.) 3.00% thereafter until January 1 of the year following attainment of age 55; and (d.) 5.00% hereafter until the annuity begins (2.50% if hired after June 30, 2006). Amount is payable as a normal or early retirement. If a member terminated employment prior to July 1, 1997 but was not eligible to commence their pension before July 1, 1997, an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%.
Changes in Plan Provisions	The following changes in plan provisions are reflected in this valuation: <u>Dissolution of Minnesota Post Retirement Investment Fund (MPRIF)</u> Since the MPRIF composite funding ratio was less than 80 percent as of June 30, 2008, the MPRIF was dissolved, and assets were transferred back to MSRS and merged with the respective active member fund. The transfer of assets and liabilities occurred on June 30, 2009. In conjunction with the dissolution, benefit recipients will receive future annual 2.5% cost-of-living adjustments (COLA). The waiting period and proration schedule for the COLA paid in the first year of retirement were also revised. <u>Department of Transportation Pilots</u> The Department of Transportation Pilots Plan was closed to new employees as of June 1, 2008, and the disability benefits were modified.

Plan Accounting Under GASB 25 (as amended by GASB 50)

Provided below is information required under GASB Statement No. 25 as amended by GASB Statement No. 50 – Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans as amended by GASB Statement No. 50.

Schedule of Funding Progress[1] *(Dollars in Thousands)*

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded (Overfunded) AAL (UAAL) (b) – (a)	Funded Ratio (a)/(b)	Actual Covered Payroll (Previous FY) (c)	UAAL as a Percentage of Covered Payroll (b) – (a) / (c)
07/01/1991	$ 2,304,311	$ 2,883,603	$ 579,292	79.91%	$ 1,370,964	42.25%
07/01/1992	2,613,472	3,125,299	511,827	83.62%	1,409,108	36.32%
07/01/1993	2,905,578	3,563,492	657,914	81.54%	1,482,005	44.39%
07/01/1994	3,158,068	3,876,584	718,516	81.47%	1,536,978	46.75%
07/01/1995	3,462,098	3,795,926	333,828	91.21%	1,514,177	22.05%
07/01/1996	3,975,832	4,087,273	111,441	97.27%	1,560,369	7.14%
07/01/1997	4,664,519	4,519,542	(144,977)	103.21%	1,568,747	(9.24%)
07/01/1998	5,390,526	5,005,165	(385,361)	107.70%	1,557,880	(24.74%)
07/01/1999	5,968,692	5,464,207	(504,485)	109.23%	1,649,469	(30.58%)
07/01/2000	6,744,165	6,105,703	(638,462)	110.46%	1,733,054	(36.84%)
07/01/2001	7,366,673	6,573,193	(793,480)	112.07%	1,834,042	(43.26%)
07/01/2002	7,673,028	7,340,397	(332,631)	104.53%	1,915,350	(17.37%)
07/01/2003	7,757,292	7,830,671	73,379	99.06%	2,009,975	3.65%
07/01/2004	7,884,984	7,878,363	(6,621)	100.08%	1,965,546	(0.34%)
07/01/2005	8,081,736	8,455,336	373,600	95.58%	1,952,320	19.14%
07/01/2006	8,486,756	8,819,161	332,405	96.23%	2,016,588	16.48%
07/01/2007	8,904,517	9,627,305	722,788	92.49%	2,095,310	34.50%
07/01/2008	9,013,456	9,994,602	981,146	90.18%	2,256,528	43.48%
07/01/2009	9,030,401	10,512,760	1,482,359	85.90%	2,329,499	63.63%

[1] *Information prior to 2008 provided by The Segal Company.*

Plan Accounting Under GASB 25 (as amended by GASB 50)

Schedule of Contributions from the Employer and Other Contributing Entities[1]

(Dollars in Thousands)

The GASB Statement No. 25 required and actual contributions are as follows:

Plan Year Ended June 30	Actuarially Required Contribution Rate (a)	Actual Covered Payroll (b)	Actual Member Contributions (c)	Annual Required Contributions [(a)x(b)] – (c) = (d)	Actual Employer Contributions[2] (e)	Percentage Contributed (e) / (d)
1991	8.17%	$ 1,370,964	$ 56,895	$ 55,113	$ 57,986	105.21%
1992	7.86%	1,409,108	58,478	52,278	59,244	113.33%
1993	8.27%	1,482,005	59,132	63,430	58,982	92.99%
1994	8.93%	1,536,978	62,555	74,697	60,741	81.32%
1995	9.15%	1,514,177	61,627	76,920	63,161	82.11%
1996	8.05%	1,560,369	63,507	62,103	65,557	105.56%
1997	7.21%	1,568,747	63,848	49,259	66,568	135.14%
1998	7.13%	1,557,880	62,901	48,176	62,315	129.35%
1999	6.48%	1,649,469	66,823	40,063	65,979	164.69%
2000	6.12%	1,733,054	70,378	35,685	69,322	194.26%
2001[3]	7.12%	1,834,042	74,364	56,220	73,362	130.49%
2002	6.79%	1,915,350	79,487	50,565	76,614	151.52%
2003[4]	8.34%	2,009,975	83,850	83,782	80,399	95.96%
2004	9.43%	1,965,546	82,103	103,248	78,622	76.15%
2005	9.33%	1,952,323	83,101	99,051	80,312	81.08%
2006	10.55%	2,016,588	85,379	127,371	82,645	64.88%
2007[5]	10.11%	2,095,310	89,447	122,389	86,492	70.67%
2008[6]	11.76%[7]	2,256,528	99,280	166,088	96,746	58.25%
2009[8]	12.39%	2,329,499	108,866	179,759	107,211	59.64%
2010[9]	14.85%					

[1] *Information prior to 2008 provided by The Segal Company.*
[2] *Includes contributions from other sources (if applicable).*
[3] *Actuarially Required Contribution Rate prior to change in Actuarial Assumptions and Asset Valuation Method is 5.72%.*
[4] *Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 7.22%.*
[5] *Actuarially Required Contribution Rate prior to change in employee contribution rates is approximately 10.06%.*
[6] *Actuarially Required Contribution Rate prior to change in Asset Valuation Method is 10.61%.*
[7] *Actuarially Required Contribution Rate provided by The Segal Company.*
[8] *Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 13.77%.*
[9] *Actuarially Required Contribution Rate prior to change in Asset Valuation Method is 15.88%.*

Glossary

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method. The goal of an asset valuation method is to produce a relatively stable asset value thereby reducing year-to-year volatility in contribution requirements.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Annual Pension Cost. A measure of the periodic cost of an employer's participation in a defined benefit pension plan.

Annual Required Contributions (ARC). The employer's periodic required contributions to a defined benefit pension plan, calculated in accordance with the parameters of GASB 25 (as amended by GASB 50) or GASB 27.

ASA. Associate of the Society of Actuaries.

Current Benefit Obligations. The present value of benefits earned to the valuation date, based on current service and including future salary increases to retirement.

EA. Enrolled Actuary.

FSA. Fellow of the Society of Actuaries.

MAAA. Member of the American Academy of Actuaries.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Statement No. 25 of the Governmental Accounting Standards Board (GASB 25). The accounting standard governing the financial reporting for defined benefit pension plans and note disclosures for defined contribution plans.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 50 of the Governmental Accounting Standards Board (GASB 50). The accounting standard amending both GASB 25 and GASB 27 to require a schedule of funding progress under the Entry Age Normal method for plans that use the aggregate funding method to determine the Annual Required Contribution.

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