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December 2009

Teachers Retirement Association Fund

Actuarial Valuation Report as of July 1, 2009



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Contents

Hi	ghlights	1
Pri	incipal Valuation Results	2
Ef	fects of Changes	3
Ce	rtification	4
Su	pplemental Information	6
Pla	an Assets	7
	Statement of Plan Net Assets for Year Ended June 30, 2009	7
	Reconciliation of Plan Assets	9
•	Actuarial Asset Value	
Me	embership Data	11
	Reconciliation of Members	
	Distribution of Active Members	
•	Distribution of Service Retirements	
	Distribution of Survivors	
	Distribution of Disability Retirements	
De	evelopment of Costs	16
	Actuarial Valuation Balance Sheet	16
	Determination of Unfunded Actuarial Accrued Liability and Supplemental Contribution Rate	
	Changes in Unfunded Actuarial Accrued Liability	
	Determination of Contribution Sufficiency/(Deficiency)	
	Statutory and Required Contributions Amounts	
Ac	tuarial Basis	
	Actuarial Cost Method	22
	Asset Valuation Method	
	Valuation and Accounting Procedures	
	Summary of Actuarial Assumptions	
	Summary of Plan Provisions	
Pla	in Accounting Under GASB 25 (as amended by GASB 50)	37
	Schedule of Funding Progress Under Entry Age Normal Method	
	Schedule of Contributions from the Employer and Other Contributing Entities	
•	Supplementary Information Required by GASB	
Glo	ossary	40

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Highlights

This report has been prepared by Mercer for the Teachers Retirement Association of Minnesota to:

- Present the results of a valuation of the Teachers Retirement Association 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 Valu	uation as of
Contributions	July 1, 2009	July 1, 2008
Statutory Contributions - Chapter 354 (% of Payroll)	11.69%	11.75%
Required Contributions - Chapter 356 (% of Payroll)	16.81%	15.08%
Sufficiency / (Deficiency)	(5.12%)	(3.33%)

The contribution deficiency increased from (3.33%) of payroll to (5.12%) of payroll. On a market value of assets basis, the plan moved from a deficiency of (3.51%) of payroll to a deficiency of (11.07%) of payroll. The primary reasons for the increased deficiency are the less than expected return on assets and the impact of insufficient contributions.

Without a change in contribution rates, benefit provisions, 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 (18.8%) for the plan year ending June 30, 2009. Only 20% of that asset loss is recognized in the actuarial value of assets as of June 30, 2009. The remainder will be recognized over the next four years. The actuarial value of assets earned 3.4% (after recognition of the asset method change) for the plan year ending June 30, 2009 as compared to the assumed rate of 8.5%.

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.

There were no changes in actuarial assumptions since July 1, 2008. Changes in plan provisions and valuation methods are reflected in this report and summarized in the Actuarial Basis and Effects of Changes 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 354		11.69%		11.75%	
Required – Chapter 356		16.81%		15.08%	
Sufficiency / (Deficiency)		(5.12%)		(3.33%)	
Funding Ratios (dollars in thousands)					
Accrued Benefit Funding Ratio					
 Current assets (AVA) 	\$	17,882,408	\$	18,226,985	
 Current benefit obligations 		22,193,284		21,318,311	
 Funding ratio 		80.58%		85.50%	
Accrued Liability Funding Ratio					
- Current assets (AVA)	\$	17,882,408	\$	18,226,985	
 Market value of assets (MVA) 		13,813,826		18,106,966	
 Actuarial accrued liability 		23,114,802		22,230,841	
 Funding ratio (AVA) 		77.36%		81.99%	
- Funding ratio (MVA)		59.76%		81.45%	
Projected Benefit Funding Ratio					
 Current and expected future assets 	\$	22,605,285	\$	22,654,296	
- Current and expected future benefit obligations		26,107,302		24,993,892	
 Funding ratio 		86.59%		90.64%	
Participant Data					
Active members					
– Number		77,162		76,515	
- Projected annual earnings for fiscal year 2010 (000s)		4,049,217		3,846,190	
- Average projected annual earnings for fiscal year 2010		52,450		50,267	
- Average age		42.9		43.4	
 Average service 		11.8		11.9	
Service retirements		46,009		43,041	
Survivors		3,575		3,299	
Disability retirements		624		641	
Deferred retirements		12,490		12,168	
Terminated other non-vested		23,073		22,115	
Total		162,933		157,779	

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)

The 2008 Legislature defined parameters for the dissolution of the 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 TRA and merged with the active member assets. 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.

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

Other than the asset method change described below, the MPRIF dissolution and COLA changes did not affect the valuation results.

Accrual Date Change

Beginning January 1, 2010, members applying for retirement may begin receiving benefits on any day of the month, rather than being restricted to either the first or 16th of the month.

As described in our February 2009 letter, the actuarial impact of this change is insignificant.

MnSCU Faculty

Beginning July 1, 2009, newly tenured faculty of the Minnesota State College and University (MnSCU) can choose TRA membership and purchase prior service credit at full actuarial value.

The liability and service purchase assets of new MnSCU members will be recognized in future valuations as service is purchased.

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 3.17% of pay.

Certification

Mercer has prepared this report exclusively for Trustees of the Teachers Retirement Association of Minnesota Fund and the Legislative Commission on Pensions and Retirement (LCPR) for the following purposes:

- Present the results of a valuation of the Teachers Retirement Association 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 Trustees, 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. Because of the limited scope of our assignment to produce an actuarial valuation, and the State's requirements for actuarial reports, the report does not include 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 Teachers Retirement Association of Minnesota as of June 30, 2009, as well as participant data supplied by the Teachers Retirement Association of Minnesota 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 Statutes and summary of plan provisions supplied by the Teachers Retirement Association of Minnesota. A summary of the plan provisions valued is presented in our report. The Trustees 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 Trustees 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 gualifications

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. Verlautz 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.

es F. Verlautz, FSA, EA Principal

Bonita J. Wurst, ASA, EA, MAA Principal

Mercer 333 South 7th Street, Suite 1600 Minneapolis, MN 55402-2427 612 642 8600

12/14/2009 Date

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 Teachers Retirement Association of Minnesota 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.

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

	Market Value
Assets	
Cash and short-term investments	
 Cash 	\$ 9,889
 Building account cash 	0
 Short term investments 	352,652
Total cash and short term investments	\$ 362,541
Receivables	
 Employee contributions 	\$ 12,704
 Investment income 	319
 Bond interest 	16
Total receivables	\$ 13,039
Investments (at fair value)	
 Fixed income pool 	\$ 3,132,739
 Minneapolis pool 	152
 Alternative investments pool 	1,948,640
 Indexed equity pool 	2,362,182
 Domestic equity pool 	3,776,044
 Global equity pool 	2,247,201
Total investments	\$ 13,466,958
Securities lending collateral	\$ 2,277,084
Building	
 Land 	\$ 171
 Building and equipment 	11,266
 Reserve for building depreciation 	(2,243)
 Deferred bond charge 	146
 Reserve for deferred bond charge amortization 	(40)
Total building	\$ 9,300
Fixed assets net of accumulated depreciation	\$ 335
Total Assets	16,129,257

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

	M	larket Value
Liabilities		
Current		
 Accounts payable 	\$	8,166
 Accrued compensated absences 		60
 Accrued expenses - building 		1
 Bonds payable 		236
 Bonds interest payable 		45
 Securities lending collateral 		2,277,084
Total current liabilities	\$	2,285,592
Long term		
 Accrued compensated absences 	\$	639
 Accrued OPEB liability 		24
 Bonds payable 		9,176
Total long term liabilities	\$	9,839
Total Liabilities	\$	2,295,431
Net assets held in trust for pension benefits	\$	13,833,826
 Earnings Limitation Savings Account (ELSA) accounts payable 		(20,000)
Net assets held in trust, after adjustment for ELSA accounts	\$	13,813,826

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	\$ 7,471,619	\$ 10,635,347	\$	18,106,966
2. Contributions				
a. Member	212,043	0		212,043
b. Employer	220,270	0		220,270
c. Direct aid (state/city/county)	20,448	0		20,448
d. Earnings Limitation Savings Account (ELSA)	2,301	0		2,301
e. Total contributions	\$ 455,062	\$ 0	\$	455,062
3. Investment income				
a. Investment income/(loss)	\$ (1,457,053)	\$ (1,841,451)	\$	(3,298,504)
b. Investment expenses	(8,325)	(11,539)		(19,864)
c. Total investment income/(loss)	\$ (1,465,378)	\$ (1,852,990)	\$	(3,318,368)
4. Other	4,225	0		4,225
5. Total income (2.d. + 3.c. + 4.)	\$ (1,006,091)	\$ (1,852,990)	\$	(2,859,081)
6. Benefits Paid				
a. Annuity benefits	\$ (14,107)	\$ (1,367,259)	\$	(1,381,366)
b. Refunds	(14,430)	(2,301)		(16,731)
c. Total benefits paid	\$ (28,537)	\$ (1,369,560)	\$	(1,398,097)
7. Expenses				
a. Interest paid to MPRIF	\$ (5,354)	\$ 0	\$	(5,354)
b. Administrative	(10,608)	 0		(10,608)
c. Total expenses	\$ (15,962)	\$ 0	\$	(15,962)
8. Total disbursements (6.c. + 7.c.)	\$ (44,499)	\$ (1,369,560)	\$	(1,414,059)
9. Other changes in reserves				
a. Annuities awarded	\$ (309,527)	\$ 309,527	\$	0
b. Reserves transferred	7,668,877	(7,668,877)		0
c. Mortality gain (loss) not transferred	53,447	 (53,447)		0
d. Total other changes	\$ 7,412,797	\$ (7,412,797)	\$	0
10. Fund balance at market value at July 1, 2009	13,833,826	 0		13,833,826
11. ELSA accounts payable	(20,000)	 0	_	(20,000)
12. Fund balance at market value after adjustment for ELSA accounts	\$ 13,813,826	\$ 0	\$	13,813,826

Actuarial Asset Value (Dollars in Thousands)

	J	une 30, 2009			
1. Market value of assets available for benefits				\$	13,813,826
2. Determination of average balance					
a. Assets available at July 1, 2008					18,106,966
b. Assets available at June 30, 2009					13,833,826
c. Net investment income for fiscal year ending Ju	ine 30	, 2009			(3,314,143)
d. Average balance $[a. + b c.]/2$					17,627,467
3. Expected return [8.5% * 2.d.]					1,498,335
4. Actual return					(3,314,143)
5. Current year unrecognized asset return					(4,812,478)
6. Unrecognized asset returns*					
	Or Ar	riginal nount	% Not Recognized		
a. Year ended June 30, 2009 \$	6 (4	,812,478)	80%	\$	(3,849,982)
b. Year ended June 30, 2008	(1	,066,002)	60%		(639,601)
c. Year ended June 30, 2007		725,920	40%		290,368
d. Year ended June 30, 2006		653,165	20%	_	130,633
e. Total return not yet recognized				\$	(4,068,582)
7. Actuarial value of assets at June 30, 2009 $(1 6.$	i.e.)			\$	17,882,408

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

Reconciliation of Members*

			Be			
	Active Members	Former Members**	Service Retirements	Disability Retirements	Survivors	Total
Members on 7/1/2008	77,173	34,283	44,830	644	3,327	160,257
New hires	4,764	-	-	-	-	4,764
Return from inactive	1,603	(1,603)	-	-	-	0
Return from zero balance	870	-	-	-	-	870
Transfer to inactive	(4,216)	4,216	-	-	-	0
Transfer from non-status	-	47	-	-	-	47
Restored writeoff	-	125	-	-	-	125
Repay refunds	-	52	-		-	52
Refunded	(356)	(1,203)	-	-	-	(1,559)
Retirements	(1,774)	(387)	2,165	(45)	-	(41)
Disability began	-	-	-	55	-	55
Disability ended	-	-	-	(3)	-	(3)
Payment to beneficiary began	-	-	-	-	330	330
Deaths	(60)	(36)	(891)	(25)	(106)	(1,118)
Term completes	-		-	-	(70)	(70)
Adjustments	(218)	69	4	(2)	(5)	(152)
Net changes	613	1,280	1,278	(20)	149	3,300
Members on 6/30/2009	77,786	35,563	46,108	624	3,476	163,557

* Provided by the Teachers Retirement Association and checked for reasonableness. Active member count includes certain disabled members. Recipient counts include all pensions in force, including double counting of multiple benefit types. Service Retirements include Supplemental and Variable optional joint annuitants.

** Former members include 47 Basic members and 35,516 Coordinated members.

*** Benefit recipients include 5,581 Basic members and 44,627 Coordinated members.

Former Member Statistics	Vested	No	n-vested		Total
Number	12,490		23,073		35,563
Average Age	48.2 years	42.	5 years	44.	5 years
Average Service	7.4 years	0.	9 years	3.	2 years
Average annual benefits, with augmentation to Normal Retirement Date and 4% CSA load	\$ 11,406		N/A		N/A
Average refund value, with 4% CSA load	\$ 24,802	\$	1,807	\$	9,884

Distribution of Active Participants*

				Yea	rs of Serv	vice 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 Avg. Earnings	2,360 20,064	42 40,624									2,402 20,423
25 – 29 Avg. Earnings	4,645 25,479	3,072 39,772	1,734 45,838	1 24,561							9,452 33,859
30 – 34 Avg. Earnings	1,907 24,236	1,502 38,995	5,151 47,906	1,485 57,785							10,045 43,540
35 – 39 Avg. Earnings	1,425 20,385	816 38,403	2,450 47,013	4,512 58,825	953 65,450						10,156 49,563
40 – 44 Avg. Earnings	1,473 17,093	607 35,746	1,644 45,739	2,448 57,876	3,275 65,629	585 68,140					10,032 51,689
45 – 49 Avg. Earnings	1,293 16,394	580 33,900	1,456 46,677	1,596 56,989	1,928 64,069	2,422 68,769	496 69,265				9,771 53,650
50 – 54 Avg. Earnings	1,028 14,816	464 31,121	1,145 45,716	1,402 57,068	1,478 63,324	1,598 68,028	2,034 69,205	964 70,415	1 50,593		10,114 56,656
55 – 59 Avg. Earnings	803 12,231	356 31,171	907 42,108	1,144 54,258	1,441 62,323	1,367 68,218	1,360 71,002	2,182 72,083	505 71,560		10,065 59,039
60 – 64 Avg. Earnings	486 7,955	180 23,240	368 35,446	483 52,104	591 60,936	663 68,368	559 72,026	359 75,779	410 75,362	68 75,047	4,167 55,452
65 – 69 Avg. Earnings	249 5,190	43 9,723	87 29,945	74 50,860	79 62,676	60 75,657	47 77,218	44 91,313	36 103,511	30 83,959	749 42,006
70+ Avg. Earnings	117 2,806	20 9,513	20 17,930	10 31,985	9 50,041	6 53,575	5 86,874	8 81,619	7 102,966	7 90,396	209 21,099
Total Avg. Earnings	15,786 20,137	7,682 37,162	14,962 46,193	13,155 57,409	9,754 64,143	6,701 68,433	4,501 70,208	3,557 72,264	959 74,592	105 78,617	77,162** 49,076

* Unlike the exhibit on page 15, the counts in this exhibit do not include disabled participants.

** Active members include 52 Basic and 77,110 Coordinated members.

In each cell, the top number is the count of active participants for the age/service combination and the bottom number is the amount of average annual earnings. Earnings shown in this exhibit are actual salaries earned during the fiscal year ending June 30, 2009 as reported by the Teachers Retirement Association of Minnesota.

Distribution of Service Retirements*

	Years Since Retirement as of June 30, 2009								
Age	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25+	Total	
50 - 54	4	4						8	
Avg. Benefit	15,454	24,433						19,943	
55 – 59	787	2,270	76					3,133	
Avg. Benefit	22,680	21,466	30,661					21,994	
60 - 64	657	4,746	4,439	457		1		10,300	
Avg. Benefit	21,432	23,147	21,587	27,785		1,960		22,569	
65 – 69	302	2,054	4,623	3,888	84	3	2	10,956	
Avg. Benefit	17,221	19,848	21,742	24,804	27,719	14,006	1,636	22,389	
70 – 74	21	291	1,585	4,075	2,097	71	5	8,145	
Avg. Benefit	8,980	15,764	19,837	29,183	30,762	26,064	6,618	27,198	
75 – 79	4	36	164	1,508	3,062	1,207	37	6,018	
Avg. Benefit	1,119	11,625	19,799	29,233	35,506	26,943	27,592	31,574	
80 – 84	2	9	27	149	1,243	1,907	653	3,990	
Avg. Benefit	126,207	19,074	13,433	29,533	32,635	32,989	31,400	32,372	
85 – 89		2	4	18	105	894	1,072	2,095	
Avg. Benefit		1,387	21,178	19,667	30,983	30,486	31,281	30,779	
90+				1	6	74	1,283	1,364	
Avg. Benefit				1,193	21,474	27,177	25,734	25,776	
Total	1,777	9,412	10,918	10,096	6,597	4,157	3,052	46,009	
Avg. Benefit	21,180	21,741	21,414	27,426	33,273	30,452	28,870	25,803	

* Unlike the exhibit on page 15, the counts in this exhibit do not include Supplemental and Variable optional joint annuitants.

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

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	8	36	39	36	2	1	3	125	
Avg. Benefit	8,843	13,403	13,482	22,799	28,779	3,091	25,472	16,295	
45 – 49	3	9	11	10	3	2	2	40	
Avg. Benefit	7,940	15,699	14,555	29,892	16,721	35,469	19,289	19,595	
50 - 54	5	40	18	10	8	5	5	91	
Avg. Benefit	11,046	14,319	15,372	20,094	16,181	11,834	18,603	15,244	
55 – 59	9	56	53	21	8	6	1	154	
Avg. Benefit	25,076	17,785	16,935	17,176	18,342	7,188	37,091	17,577	
60 - 64	9	94	126	63	. 24	4	2	322	
Avg. Benefit	16,934	19,544	18,946	20,255	19,450	11,215	6,462	19,185	
65 - 69	3	24	116	213	82	21	11	470	
Avg. Benefit	14,721	17,539	16,566	23,848	24,641	15,419	21,703	21,382	
70 – 74		19	53	176	234	77	21	580	
Avg. Benefit		13,591	20,362	24,139	30,303	26,694	25,481	26,323	
75 – 79		4	13	78	238	254	96	683	
Avg. Benefit		11,637	15,372	24,209	32,367	30,533	29,121	29,852	
80 – 84			3	21	67	271	219	581	
Avg. Benefit			9,836	24,300	29,323	29,913	29,120	29,240	
85 – 89		1		6	17	87	257	368	
Avg. Benefit		23,910		23,294	34,789	33,727	32,101	32,443	
90+		2		1	2	7	149	161	
Avg. Benefit		13,851		25,141	14,663	13,867	29,430	28,350	
Total	37	285	432	635	685	735	766	3,575	
Avg. Benefit	15,461	16,867	17,309	23,384	29,563	29,243	29,817	25,815	

* Unlike the exhibit on page 15, the counts in this exhibit include Supplemental and Variable optional joint annuitants.

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

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	1	15	7	4				27	
Avg. Benefit	4,075	8,045	5,605	5,823				6,936	
45 – 49	2	18	4	3	1			28	
Avg. Benefit	17,505	12,690	12,265	5,629	2,565			11,855	
50 – 54	3	40	19	6	5			73	
Avg. Benefit	11,242	16,035	11,722	17,005	9,120			14,321	
55 – 59	8	81	66	36	12	1		204	
Avg. Benefit	26,544	21,951	16,943	17,946	19,558	4,916		19,580	
60 – 64	5	74	105	61	22	7	2	276	
Avg. Benefit	21,576	19,273	24,202	26,942	24,534	19,310	56,765	23,577	
65 – 69	1	13	2					16	
Avg. Benefit	25,047	16,570	14,668					16,862	
Total	20	241	203	110	40	8	2	624	
Avg. Benefit	20,905	18,299	19,703	22,106	20,565	17,510	56,765	19,769	

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

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 that 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 of compensation. 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. This reserve system enables the establishment of a level rate of contribution each year.

							Ju	ine 30, 2009
A.	Actuarial Value of Assets						\$	17,882,408
В.	Expected future assets							
	1. Present value of expected future statutory supplemental co	ontr	ibutions*				\$	1,730,377
	2. Present value of expected future normal cost contributions	S						2,992,500
	3. Total expected future assets $(1. + 2.)$						\$	4,722,877
C.	Total current and expected future assets						\$	22,605,285
		1	Non-Veste	d	Ve	ated Depetite		Total
D	Current hanafit abligations		Benefits		ve	ested Benefits		Total
D.	1 Dependent contractions							
	1. Benefit recipients	•		~	•	40.007.404	•	40.007.404
	a. Service retirements	\$		0	\$	13,267,164	\$	13,267,164
	b. Disability			0		172,678		172,678
	c. Survivors			0		764,083		764,083
	2. Deferred retirements with augmentation to Normal			~		600 404		600 404
	Retirement Date			0		600,194		600,194
	3. Former members without vested rights**		41,6	76		0		41,676
	4. Active members	-	75,2	57		7,272,232	-	7,347,489
	5. Total Current Benefit Obligations	\$	116,9	33	\$	22,076,351	\$	22,193,284
								14
E.	Expected Future Benefit Obligations						\$	3,914,018
F.	Total Current and Expected Future Benefit Obligations						\$	26,107,302
G.	Unfunded Current Benefit Obligations (D.5 A.)						\$	4,310,876
H.	Unfunded Current and Future Benefit Obligations $(F C.)$						\$	3,502,017
* Un	der LCPR guidelines, this amount does not include supplemental pay	mer	ts which co	ould	occ	ur after the expi	ratio	on of the
ren	naining 28 vear amortization period.							

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

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	\$	10,170,960	\$	2,315,304	\$	7,855,656
b. Disability benefits		195,467		73,955		121,512
c. Survivor benefits		81,817		32,236		49,581
d. Deferred retirements		683,694		354,796		328,898
e. Refunds		129,568		216,209		(86,641)
f. Total	\$	11,261,506	\$	2,992,500	\$	8,269,006
2. Deferred retirements with future augmentation to Normal Retirement Date		600,194		0		600,194
3. Former members without vested rights		41,676		0		41,676
4. Benefit recipients		14,203,926		0		14,203,926
5. Total	\$	26,107,302	\$	2,992,500	\$	23,114,802
B. Determination of Unfunded Actuarial Accrued Liabilit	y (UA	AAL)*				
1. Actuarial accrued liability					\$	23,114,802
2. Actuarial value of assets						17,882,408
3. Unfunded actuarial accrued liability					\$	5,232,394
C. Determination of Supplemental Contribution Rate*						
1. Present value of future payrolls through the amortization date of July 1, 2037					\$	68.394.344
2. Supplemental contribution rate (B.3. / C.1.)					•	7.65%

* On a market value of assets basis, the unfunded actuarial accrued liability is \$9,300,976 and the supplemental contribution rate is 13.60% of payroll.

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

		Year Ending June 30, 2009
A.	Unfunded actuarial accrued liability at beginning of year	\$ 4,003,856
B.	Changes due to interest requirements and current rate of funding	
	1. Normal cost and actual administrative expenses	\$ 347,889
	2. Contributions	(455,062)
	3. Interest on A., B.1. and B.2.	335,773
	4. Total $(B.1. + B.2. + B.3.)$	\$ 228,600
C.	Expected unfunded actuarial accrued liability at end of year $(A. + B.4.)$	\$ 4,232,456
D.	Increase (decrease) due to actuarial losses (gains) because of experience deviations from expected	
	1. Salary increases	\$ (16,554)
	2. Investment return before actuarial asset method change	3,078,494
	3. Mortality of benefit recipients	7,566
	4. Other items	98,169*
	5. Total	\$ 3,167,675
E.	Unfunded actuarial accrued liability at end of year before plan amendments and changes in actuarial assumptions $(C. + D.5.)$	\$ 7,400,131
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	\$ (2,167,737)
I.	Unfunded actuarial accrued liability at end of year (E. + F. + G. + H.)	\$ 5,232,394

* "Other" losses, equal to 0.4% of actuarial accrued liability, are attributable to new entrants, retirement, withdrawal, disability, and pre-retirement mortality experience.

Determination of Contribution Sufficiency/(Deficiency) – Total (Dollars in Thousands)

		Percent of Payroll		Dollar Amount
A.	Statutory contributions - Chapter 354			
	1. Employee contributions	5.50%	\$	222,860
	2. Employer contributions*	5.69%		230,325
	3. Supplemental contributions**			
	a. 1993 Legislation	0.12%		5,007
	b. 1996 Legislation	0.06%		2,487
	c. 1997 Legislation	0.32%	_	12,954
	4. Total	11.69%	\$	473,633
B.	Required contributions – Chapter 356			
	1. Normal cost			
	a. Retirement benefits	7.05%	\$	285,553
	b. Disability benefits	0.20%		8,234
	c. Survivors	0.09%		3,557
	d. Deferred retirement benefits	0.99%		39,864
	e. Refunds	0.55%		22,371
	f. Total	8.88%	\$	359,579
	 Supplemental contribution amortization by July 1, 2037 of Unfunded Actuarial Accrued Liability 	7.65%		310,170
	3. Allowance for expenses	0.28%	\$	11,338
	4. Total annual contribution for fiscal year ending June 30, 2010***	16.81%	\$	681,087
C.	Contribution Sufficiency/(Deficiency) $(A.4 B.4.)^{***}$	(5.12%)	\$	(207,454)

Note: Projected annual payroll for fiscal year beginning on the valuation date: \$4,049,217.

- * Employer contribution rate is blended to reflect rates of 13.14% of pay for 52 Basic members, 5.50% of pay for 74,105 Coordinated members not employed by Special School District #1, and 9.14% of pay for 3,005 Coordinated members who are employed by Special School District #1.
- ** Includes contributions from School District #1, the City of Minneapolis and matching state contributions.
- *** On a market value of assets basis, the total required contribution is 22.76% of payroll and the contribution deficiency is (11.07%) of payroll.

Statutory and Required Contribution Amounts – Basic (Dollars in Thousands)

	Percent of Payroll	Dollar Amount
A. Statutory contributions – Chapter 354		
1. Employee contributions	9.00%	\$ 394
2. Employer contributions*	13.14%	575
3. Supplemental contributions**		
a. 1993 Legislation	0.12%	5
b. 1996 Legislation	0.06%	3
c. 1997 Legislation	0.32%	 14
4. Total	22.64%	\$ 991
B. Required contributions - Chapter 356		
1. Normal cost		
a. Retirement benefits	11.38%	\$ 498
b. Disability benefits	0.50%	22
c. Survivors	0.39%	17
d. Deferred retirement benefits	3.15%	138
e. Refunds	0.41%	 18
f. Total	15.83%	\$ 693

Note: Projected annual payroll for fiscal year beginning on the valuation date: \$4,377 for 52 members.

* All Basic active members are teachers employed by Special School District #1; employer contribution rate of 13.14% of pay applies.

** Includes contributions from School District #1, the City of Minneapolis and matching state contributions.

Statutory and Required Contribution Amounts – Coordinated (Dollars in Thousands)

	Percent of Payroll	Dollar Amount
A. Statutory contributions – Chapter 354		
1. Employee contributions	5.50%	\$ 222,466
2. Employer contributions*	5.68%	229,750
3. Supplemental contributions**		
a. 1993 Legislation	0.12%	5,002
b. 1996 Legislation	0.06%	2,484
c. 1997 Legislation	0.32%	12,940
4. Total	11.68%	\$ 472,642
B. Required contributions – Chapter 356		
1. Normal cost		
a. Retirement benefits	7.05%	\$ 285,055
b. Disability benefits	0.20%	8,212
c. Survivors	0.09%	3,540
d. Deferred retirement benefits	0.98%	39,726
e. Refunds	0.55%	 22,353
f. Total	8.87%	\$ 358,886

Note: Projected annual payroll for fiscal year beginning on the valuation date: \$4,044,840. This includes \$3,844,740 for 74,105 Coordinated members who are not employed by Special School District #1 and \$200,100 for 3,005 members who are employed by Special School District #1.

* Employer contribution rate is blended to reflect rates of 5.50% of pay for Coordinated members not employed by Special School District #1, and 9.14% of pay for Coordinated members who are employed by Special School District #1.

** Includes contributions from School District #1, the City of Minneapolis and matching state contributions.

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.

Amortization Method

The unfunded liability is amortized as a level percentage of payroll each year to the statutory amortization date of July 1, 2037 assuming payroll increases of 4.5% per year. If the unfunded Actuarial Accrued Liability is negative, the surplus amount is amortized over 30 years as a level percentage of payroll. If there is an increase in the unfunded accrued liability due to a change in the actuarial assumptions, plan provisions, or actuarial cost method, a new amortization period is determined. This new amortization period is determined by blending the period needed to amortize the prior unfunded actuarial accrued liability over the prior amortization period and the increase in unfunded actuarial accrued liability amortized over 30 years. If there is a decrease in the unfunded accrued liability amortized over 30 years. If there is a decrease in the unfunded accrued liability, no change is made to the amortization period.

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 value plus the scheduled recognition of investment gains or (losses) during the current and the preceding four fiscal years.

Changes in Asset Valuation 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.

Valuation and Accounting Procedures

Financial and census data: We used financial data submitted by the Fund and the Fund's auditor and member data submitted by the Fund without further audit. This information would customarily not be verified by a plan's actuary. We have reviewed the information for internal consistency and we have no reason to doubt its substantial accuracy.

Supplemental Contributions

The City of Minneapolis, the Minneapolis School District, and the State of Minnesota are scheduled to make the following supplemental contributions to the Fund:

1993 Legislation:	Supplemental contributions of \$5,007,302 annually are assumed to be made until the amortization date of June 30, 2037. Assumed amount is based on actual amount received in most recent fiscal year, and information provided by the Teachers Retirement Association.
1996 Legislation:	Supplemental contributions of \$2,486,726 annually are assumed to be made until the amortization date of June 30, 2037. Amount is variable as described in Minnesota Statutes, Section 422A. Assumed amount is based on actual amount received in most recent fiscal year, and information provided by the Teachers Retirement Association.
1997 Legislation:	Supplemental contributions of \$12,954,000 annually are assumed to be made until the amortization date of June 30, 2037. Amount is fixed in statute.

The 1993 Legislation amount was increased from \$5,000,000 to \$5,007,302 since the prior valuation, and the 1996 Legislation amount was reduced from \$3,716,000 to \$2,486,726 since the prior valuation.

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.

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-retirement8.5% compounded annually pre-retirement							
Benefit in retiremen	creases after t	Payment of 2.5% annual benefit increases after retirement are accounted for by using the 6.0% post-retirement assumption, as required by statute.							
Salary ind	creases	Reported salary for prior fiscal year, with new hires annualized, increased according to the ultimate table shown in the rate table to current fiscal year and annually for each future year. During a ten-year select period, $0.30 \times (10-T)$, where T is completed years of service is added to the ultimate rate. See table of sample rates.							
Future se	rvice	Members are assur	med to earn future s	ervice at a full-time r	ate.				
Mortality	Pre-retirement	1983 Group Annui 1983 Group Annui	ity Mortality for ma ity Mortality for fen	les set back 12 years nales set back 10 year	rs				
	Post-retirement	1983 Group Annui 1983 Group Annui	ity Mortality for ma ity Mortality for fen	les set back 6 years nales set back 3 years	3				
Post-Disability 1965 Railroad Retirement Board (RRB) rates through age 54. For to 64, graded rates between 1965 RRB and the Healthy Post-retire mortality table. For ages 65 and later, the Healthy Post-retirement mortality table.					54. For ages 55 st-retirement rement				
Disability		Age-related rates based on experience; see table of sample rates							
Withdraw	al	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:							
			First Year	Second Year	Third Year				
		Male	45%	12%	6%				
		Female	40%	10%	8%				
Expenses	3	Prior year administrative expenses expressed as percentage of prior year payroll.							
Retireme	nt age	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.							
Percentage married		85% of male members and 65% of female members are assumed to be married. Members are assumed to have no children.							
Age differ	ence	Females three year	s younger than male	es.					
Allowance Service A	e for Combined nnuity	Liabilities for active members are increased by 1.40% and liabilities for former members are increased by 4.00% to account for the effect of some Participants having eligibility for a Combined Service Annuity.							

Summary of Actuarial Assumptions (continued)

Refund 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.				
Interest on member contributions	Members and former members who are eligible for the money purchase annuity are assumed to receive interest credits equal to the Pre-Retirement interest rate. All other members and former members receive the interest crediting rate as specified in statutes.				
Form of payment	Married members are assumed to elect subsidized joint and survivor form of annuity as follows:				
	Males:	15% elect 50% J&	S option		
		25% elect 75% J&	Soption		
		55% elect 100% J&	&S option		
	Females:	20% elect 50% J&	S option		
		10% elect 75% J&	S option		
		30% elect 100% J&	&S option		
Unknown data for members	We used memb Customarily, th have reviewed to doubt its substandata was missing	ership data as suppli is information would the information for in ntial accuracy. In the ng or incomplete, the	ted by the plan sponsor as of July 1, 2009. d not be verified by a plan's actuary. We internal consistency and we have no reason to e small number of cases where submitted following assumptions were applied:		
	Data for active	members missing a			
	Date of birth	h	July 1, 1964		
Data for terminated members:Date of birthJuAverage salary\$Allowable service7Age at terminationA		July 1, 1964 \$28,731 7.50 years Age 40, or current age if younger than 40			
Changes in actuarial assumptions since the previous valuation	There were no changes in actuarial assumptions since the previous valuation.				

					Rate (%	5)			
_		Pre-Retirement Mortality		Ultimate Withdrawal		Disa	ability		
	Age	Male	Female	Male	Female	Male	Female	Salary Increases	
_	20	0.03	0.01	3.70	4.50	0.00	0.00	5.5%	
	25	0.03	0.01	3.20	4.50	0.00	0.00	5.5%	
	30	0.04	0.02	2.70	4.50	0.00	0.00	5.5%	
	35	0.04	0.03	2.50	3.90	0.01	0.01	5.5%	
	40	0.05	0.03	2.35	2.75	0.03	0.03	5.2%	
	45	0.07	0.05	2.10	2.10	0.05	0.05	4.7%	
	50	0.10	0.07	1.85	1.85	0.11	0.10	4.5%	
	55	0.17	0.10	0.00	0.00	0.22	0.16	4.5%	
	60	0.31	0.16	0.00	0.00	0.33	0.25	4.8%	
	65	0.52	0.25	0.00	0.00	0.00	0.00	5.2%	
	70	0.77	0.42	0.00	0.00	0.00	0.00	5.2%	
	71	0.84	0.47	0.00	0.00	0.00	0.00	5.2%	

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Summary of Retirement Rates

			Rate %		
Age	Coordinated Members Eligible <u>for Rule of 90</u>	Coordinated Members Not Eligible <u>for Rule of 90</u>	Age	Basic Members Eligible for 30 and Out <u>Provision</u>	Basic Members Not Eligible for 30 and Out <u>Provision</u>
55 & Under	50	7	55 & under	40	5
56	60	7	56	40	5
57	55	7	57	40	5
58	50	8	58	40	5
59	50	10	59	40	5
60	50	12	60	25	25
61	50	18	61	25	25
62	50	20	62	25	25
63	50	20	63	25	25
64	50	20	61	25	25
65	50	45	65	40	40
66	35	35	66	40 ·	40
67	35	35	67	40	40
68	35	35	68	40	40
69	35	35	69	40	40
70	35	35	70-74	60	60
71 & Over	100	100	75-79	60	100
			80 & Over	100	100

Summary of Plan Provisions

Basic Members

This summary of provisions reflects our interpretation of applicable Statutes for purposes of preparing this valuation. This interpretation is not intended to provide a basis for administering the Plan.

Plan year	July 1 through June 30				
Eligibility	Teachers first hired prior to July 1, 1978 employed by the Board of Education of Special School District No. 1, other than a charter school, and not covered by the Social Security Act. Certain part-time licensed employees of Special School District No. 1 are also covered.				
Contributions	Member:9.00% of SalaryEmployer:13.14% of Salary				
	Employee contributions are "picked up" according to the provisions of Internal Revenue Code 414(h).				
Teaching service	A year is earned during a calendar year if the member is employed in a covered position and employee contributions are deducted. Certain part-time service and military service is also included.				
Salary	Total compensation. Excludes lump sum payments for unused vacation leave or unused sick leave at separation.				
Average salary	Average of the five highest successive years of Salary.				
Retirement					
Normal retirement					
Age/Service requirements	Age 60, or any age with 30 years of Teaching Service				
Amount	2.50% of Average Salary for each year of Teaching Service.				
Early retirement					
Age/Service requirements	Age 55 with less than 30 years of Teaching Service.				
Amount	The greater of (a) or (b):				
	(a.) 2.25% of Average Salary for each year of Teaching Service with reduction of 0.25% for each month before the Member would first be eligible for a normal retirement benefit.				
	(b.) 2.50% of Average Salary for each year of Teaching Service assuming augmentation to the age of first eligibility for a normal retirement benefit at 3.00% per year and actuarial reduction for each month before the member would be first eligible for a normal retirement benefit.				
	An alternative benefit is available to members who are at least age 50 and have seven years of Teaching Service. The benefit is based on the accumulation of the 6.50% "city deposits" to the Retirement Fund. Other benefits are also provided under this alternative depending on the member's age and Teaching Service.				

Summary of Plan Provisions (continued)

Basic Members

Retirement						
Early retirement (continued)						
Form of payment	Life annuity. Actuarially equivalent options are:					
	(a.) 10 or 15 year Certain and Life					
	(b.) 50%, 75% or 100% Joint and Survivor with free bounce back feature (option is canceled if member is predeceased by beneficiary).					
Benefit increases	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.					
Disability						
Age/Service requirement	Total and permanent disability with three years of Teaching Service					
Amount	An annuity actuarially equivalent to the continued accumulation of member and city contributions at the current rate for a period of 15 years (but not beyond age 65) plus an additional benefit equal to the smaller of 100% of the annuity provided by city contributions only or \$150 per month. A member with 20 years of Teaching Service also receives an additional \$7.50 per month.					
	Payments stop earlier if disability ceases or death occurs. Benefits may be reduced on resumption of partial employment.					
Form of payment	Same as for retirement.					
Benefit increases	Same as for retirement.					

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Summary of Plan Provisions (continued)

Basic Members

Death	Choice of Benefit A, Benefit B or Benefit C					
<u>Benefit A</u>						
Age/service requirement	Death before retirement.					
Amount	The accumulation of member and city contributions plus 6.00% interest. Paid as a life annuity, 15-year Certain and Life, or lump sum. If an annuity is chosen the beneficiary also receives additional benefits.					
<u>Benefit B</u>						
Age/service requirement	An active member with seven years of Teaching Service. A former member age 60 with seven years of Teaching Service who dies before retirement or disability benefits begin.					
Amount	The actuarial equivalent of any benefits the member could have received resignation occurred on the date of death.					
<u>Benefit C</u>						
Age/service requirement	As an active member who dies and leaves surviving children.					
Amount	A monthly benefit of \$248.30 to the surviving widow while caring for a child and an additional \$248.30 per month for each surviving dependent child. The maximum family benefit is \$579.30 per month. These benefits may be increased by the Board of Trustees.					
	Benefits to the widow cease upon death or when no longer caring for an eligible child. Benefits for dependent children cease upon marriage or age 18 (age 22 if a full time student).					
Benefit increases	Same as retirement.					
Withdrawal						
Refund of contribution						
Age/service requirement	Termination of Teaching Service.					
Amount	Member's contributions with 6.00% interest. A deferred annuity may be elected in lieu of a refund.					
Deferred annuity						
Age/service requirement	Seven years of Teaching Service					
Amount	The benefit computed under law in effect at termination and increased by following percentage compounded annually:					
	(a.) 3.00% until January 1 of the year following attainment of age 55; and					
	(b.) 5.00% thereafter until the annuity begins:					
	In addition, the interest earned on the member and city contributions between termination and age 60 can be applied to provide an additional annuity.					

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Summary of Plan Provisions (continued)

Coordinated Members

This summary of provisions reflects our interpretation of applicable Statutes for purposes of preparing this valuation. This interpretation is not intended to provide a basis for administering the Plan.

Plan year	July 1 through June 30						
Eligibility	A public school or MNSCU teacher who is not covered by the Social Security Act, except for teachers employed by St. Paul or Duluth public schools or by the University of Minnesota. Effective July 1, 2002, charter school teachers employed by St. Paul or Duluth public schools are covered by this fund.						
	No MNSCU teacher will become a new Member unless that person elects coverage as defined by Minnesota Statutes under Chapter 354B.						
Contributions	Member:5.50% of SalaryEmployer:5.50% of Salary plusSupplemental of 3.64% of Salary (members employed by Special School District #1 only).						
	Employee contributions are "picked up" according to the provisions of Internal Revenue Code 414(h).						
Teaching service	A day of credit is earned if five hours are taught that day. A year is earned if 170 days of service are credited. Credit may also be provided for certain leaves of absence if employee contributions are paid into the fund.						
Salary	Compensation used for contribution purposes excluding lump sum annual or sick leave payments, severance payments, any payments made in lieu of employer paid fringe benefits or expenses, and employer contributions to a Section 457 deferred compensation plan.						
Average salary	Average of the five highest successive years of Salary. Average Salary is based on all Allowable Service if less than five years.						
Retirement							
Normal retirement							
Age/Service requirements	First hired before July 1, 1989:						
	(a.) Age 65 or three years of Allowable Service.						
	(b.) Age 62 and 30 years of Allowable Service.						
	Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.						
	First hired after June 30, 1989:						
	The greater of (a.) or (b.):						
	(a.) Age 65.						
	(b.) The age when first eligible for full Social Security retirement benefits (but not to exceed age 66) and three years of Allowable Service.						
	Proportionate Retirement Annuity is available at normal retirement age and one year of Allowable Service.						

Summary of Plan Provisions (continued)

Coordinated

F	Retirement						
	Early retirement						
	Age/Service requirements	Age 55 and three years of Allowable Service.					
		First	t hired before July 1, 1989:				
		(a.)	Age 55 and three years of Allowable Service.				
		(b.)	Any age and 30 years of Allowable Service.				
		(c.)	Rule of 90: Age plus Allowable Service totals 90.				
		First	t hired after June 30, 1989:				
		(a.)	Age 55 with three years of Allowable Service.				
	<u>Amount</u>	First	thired before July 1, 1989:				
		The	greater of (a.), (b.) or (c.):				
		(a.)	1.20% of Average Salary for each of the first ten years of Allowable Service.				
			1.70% of Average Salary for each year of Allowable Service in excess of 10 prior to July 1, 2006, and				
			1.90% of Average Salary for years of Allowable Service after July 1, 2006.				
			No actuarial reduction if age plus years of service totals 90. Otherwise reduction of 0.25% for each month the member is under age 65 (or 62 if 30 years of Allowable Service) at time of retirement.				
		(b.)	1.70% of Average Salary for each year of Allowable Service prior to July 1, 2006 and 1.90% for each year of Allowable Service beginning July 1, 2006, assuming augmentation to age 65 at 3.00% per year and actuarial reduction for each month the member is under age 65.				
		(c.)	For eligible former members: the monthly benefit that is actuarially equivalent to 2.2 times the former members' accumulated deductions plus interest thereon.				
		First	hired after June 30, 1989:				
		1.70 2006 assur for e	% of Average Salary for each year of Allowable Service prior to July 1, 5 and 1.90% for each year of Allowable Service beginning July 1, 2006, ming augmentation to age 65 at 3.00% per year and actuarial reduction each month the member is under the full Social Security benefit				
	•	retire	ement age (not to exceed age 66).				
	Form of payment	Life	annuity. Actuarially equivalent options are:				
		(a.)	50%, 75% or 100% Joint and Survivor with free bounce back feature (option is canceled if member is predeceased by beneficiary).				
		(b.)	15 year Certain and Life				
		(c.)	Guaranteed Refund.				

Summary of Plan Provisions (continued)

Coordinated

Retirement	
<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.
Disability	
Age/service requirement	Total and permanent disability before Normal Retirement Age with three year of Allowable Service.
Amount	Normal Retirement Benefit based on Allowable Service and Average Salary at disability without reduction for commencement before Normal Retirement Age unless an optional annuity plan is selected.
	Payments stop at Normal Retirement Age or the five year anniversary of the effective date of the disability benefit, whichever is later. Payments stop earlier if disability ceases or death occurs. Benefits may be reduced on resumption of partial employment.
Form of payment	Same as for retirement.
Benefit increases	Same as for retirement.
Retirement after disability	
Age/service requirement	Normal Retirement Age or the five year anniversary of the effective date of the disability benefit, whichever is later.
Amount	Any optional annuity continues. Otherwise, the larger of the disability benefit paid before Normal Retirement Age or the normal retirement benefit available at Normal Retirement Age, or an actuarially equivalent optional annuity.
Benefit increases	Same as for retirement.

Summary of Plan Provisions (continued)

Coordinated

Death				
Surviving spouse optional annu	<u>iity</u>			
Age/service requirement	Member or former member with three years of Allowable Service who dies before retirement or disability benefits commence.			
Amount	Survivor's payment of the 100% Joint and Survivor benefit or an actuarial equivalent term certain annuity. If commencement is prior to age 65 (age 62 if 30 years of service), the benefit is reduced for early retirement with half the applicable reduction factor used from age 55 to actual commencement age. If no surviving spouse, then an actuarial equivalent dependent child benefit is paid to age 20 or for five years if longer.			
Benefit increases	Same as normal retirement.			
Withdrawal				
Refund of contributions				
Age/service requirement	Thirty days following termination of teaching service.			
Amount	Member's contributions with 6.00% interest compounded annually if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund.			
Deferred annuity				
Age/service requirement	Vested at date of termination. Current requirement is three years of Allowable Service.			
Amount	For members first hired prior to July 1, 2006, the benefit is computed under law in effect at termination and increased by the following percentage compounded annually:			
	 (a.) 3.00% therefore until January 1 of the year following attainment of age 55; and 			
	(b.) 5.00% thereafter until the annuity begins:			
	Amount is payable as a normal or early retirement.			
	A member who terminated service before July 1, 1997 whose benefit does not commence until after June 30, 1997 shall receive an actuarially equivalent increase to reflect the change from 5.00% to 6.00% in the post-retirement interest assumption; or			
	For eligible former members; the monthly benefit that is actuarially equivalent to 2.2 times the formers members' accumulated deductions plus interest thereon.			
	For members first hired July 1, 2006 and after, the benefit computed under law in effect at termination is increased by 2.50% compounded annually until the annuity begins.			

Summary of Plan Provisions (continued)

Changes in Plan Provisions	The following changes in plan provisions are reflected in this valuation:
	Dissolution of Minnesota Post Retirement Investment Fund (MPRIF) The 2008 Legislature defined parameters for the dissolution of the 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 TRA and merged with the active member assets. 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.
	The waiting period and proration schedule for the COLA paid in the first year of retirement was also revised.
	<u>Accrual Date Change</u> Beginning January 1, 2010, members applying for retirement may begin receiving benefits on any day of the month, rather than being restricted to either the first or 16th of the month.
	<u>MnSCU Faculty</u> Beginning July 1, 2009, newly tenured faculty of the Minnesota State College and University (MnSCU) can choose TRA membership and purchase prior service credit at full actuarial value.
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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 Progress¹ (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	\$ 5,614,924	\$ 7,213,720	\$ 1,598,796	77.84%	\$ 1,943,375	82.27%
07/01/1992	6,324,733	7,662,522	1,337,789	82.54%	1,989,624	67.24%
07/01/1993	7,045,037	8,266,059	1,220,122	85.24%	2,065,881	59.06%
07/01/1994	7,611,936	9,115,266	1,503,330	83.51%	2,150,300	69.91%
07/01/1995	8,348,124	9,717,623	1,369,499	85.91%	2,204,693	62.12%
07/01/1996	9,541,221	10,366,168	824,947	92.04%	2,268,390	36.37%
07/01/1997	11,103,759	10,963,637	(140,122)	101.28%	2,359,011	(5.94%)
07/01/1998	12,727,546	12,046,312	(681,234)	105.66%	2,422,957	(28.12%)
07/01/1999	14,011,247	13,259,569	(751,678)	105.67%	2,625,254	(28.63%)
07/01/2000	15,573,151	14,802,441	(770,710)	105.21%	2,704,575	(28.50%)
07/01/2001	16,834,024	15,903,984	(930,040)	105.85%	2,812,000	(33.07%)
07/01/2002	17,378,994	16,503,099	(875,895)	105.31%	2,873,771	(30.48%)
07/01/2003	17,384,179	16,856,379	(527,800)	103.13%	2,952,887	(17.87%)
07/01/2004	17,519,909	17,518,784	(1,126)	100.01%	3,032,483	(0.04%)
07/01/2005	17,752,917	18,021,410	268,493	98.51%	3,121,571	8.60%
07/01/2006	19,035,612	20,679,111	1,643,499	92.05%	3,430,645	47.91%
07/01/2007	18,794,389	21,470,314	2,675,925	87.54%	3,532,159	75.76%
07/01/2008	18,226,985	22,230,841	4,003,856	81.99%	3,645,230	109.84%
07/01/2009	17,882,408	23,114,802	5,232,394	77.36%	3,761,484	139.10%

¹ Information prior to 2004 provided by Milliman USA; 2004 to 2008 information provided by The Segal Company.

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

Schedule of Contributions from the Employer and Other Contributing Entities¹ (Dollars in Thousands)

The GASB Statement No. 25 (as amended by GASB 50) required and actual contributions are as follows:

	Actuarially										
Plan Year Ended June 30	Required Contribution Rate (a)	ہ Cover	Actual red Payroll (b)	Ad C	ctual Member ontributions (c)	An C [nual Required ontributions (a)x(b)] – (c)	Co	Actual Employer ontributions ²	Perce Contri	ntage ibuted
1991	13.11%	\$	1,943,375	\$	89,313	\$	165,463	\$	159,439	96.	36%
1992	13.04%		1,989,624		91,506		167,941		162,370	96.	68%
1993	13.13%		2,065,881		94,709		176,541		168,071	95.	20%
1994	12.75%		2,150,300		100,803		173,360		171,855	99.	13%
1995	14.73%		2,204,693		143,536		181,215		179,672	99.	15%
1996	14.30%		2,268,390		148,051		176,329		184,495	104.	63%
1997	12.78%		2,359,011		154,161		147,321		191,670	130.	10%
1998 ³	9.55%		2,422,957		124,096		107,296		151,323	141.	03%
1999 ²	8.39%		2,625,254		132,040		88,219		130,526	147.	96%
2000 ²	8.36%		2,704,575		138,696		87,406		134,419	153.	79%
2001 ^{2,4}	7.92%		2,812,000		145,075		77,635		139,799	180.	07%
2002 ²	7.85%		2,873,771		152,331		73,260		142,222	194.	13%
2003 ^{2,5}	7.57%		2,952,887		155,577		67,957		149,481	219.	96%
2004 ²	8.37%		3,032,483		159,140		94,679		151,029	159.	52%
2005 ²	8.46%		3,121,571		160,982		103,103		157,693	152.	95%
2006 ⁶	9.05%		3,430,645		177,085		133,389		200,286	150.	15%
2007 ⁷	12.16%		3,532,159		199,869		229,642		209,219	91.	11%
2008 ⁸	13.44%		3,645,230		209,592		280,327		231,562	82.	60%
2009 ⁹	15.08%		3,761,484		212,043		355,189		240,718	67.	72%
2010 ¹⁰	16.81%			×							

¹ Information prior to 2004 provided by Milliman USA; 2004 to 2008 information provided by The Segal Company.

² Includes contributions from other sources (if applicable)

³ Actuarially Required Contributions calculated according to parameters of GASB 25 using a 30-year amortization of the negative unfunded actuarial accrued liability.

⁴ Actuarially Required Contributions Rate prior to change in Actuarial Assumptions and Asset Valuation Method is 7.31%.

⁵ Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 8.11%.

⁶ Actuarially Required Contribution Rate shown is the contribution rate stated in the TRA July 1, 2005 actuarial valuation.

⁷ Actuarially Required Contributions calculated according to parameters of GASB 25) 30-year amortization period), and post-merger of the Minneapolis Teachers' Retirement Fund Association.

⁸ Actuarially Required Contribution Rate prior to change in Asset Valuation Method is 11.58%.

⁹ Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 15.36%.

¹⁰ Actuarially Required Contribution Rate prior to change in Actuarial Asset Method is 19.98%.

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

Supplementary Information Required by GASB

Valuation date	July 1, 2009
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll, assuming payroll increases of 4.50% per annum
Remaining amortization period	28 years remaining as of July 1, 2009
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 value plus the scheduled recognition of investment gains or (losses) during the current and the preceding four plan years.
Actuarial assumptions:	
Investment rate of return:	
Pre-retirement	8.50% per annum
Post-retirement	6.00% per annum
Projected salary increases	Select and ultimate rates by age, with ultimate rates of 4.50% - 5.50%
Plan membership:	
Active members	
 Vested 	61,376
 Non-vested 	<u>15,786</u>
 Sub total 	77,162
Pensioners and beneficiaries	50,208
Terminated vested members entitled to, but not yet receiving benefits	12,490
Other terminated non-vested members	23,073
Total	162,933

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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