December 2009

Teachers Retirement Association Fund

Actuarial Valuation Report as of July 1, 2009

MERCER

MARSH MERCER KROLL
GUY CARPENTER OLIVER WYMAN

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Contents

Highlights....................1

Principal Valuation Results....................2

Effects of Changes....................3

Certification....................4

Supplemental Information....................6

Plan Assets....................7

- Statement of Plan Net Assets for Year Ended June 30, 2009....................7
- Reconciliation of Plan Assets....................9
- Actuarial Asset Value....................10

Membership Data....................11

- Reconciliation of Members....................11
- Distribution of Active Members....................12
- Distribution of Service Retirements....................13
- Distribution of Survivors....................14
- Distribution of Disability Retirements....................15

Development of Costs....................16

- Actuarial Valuation Balance Sheet....................16
- Determination of Unfunded Actuarial Accrued Liability and Supplemental Contribution Rate....................17
- Changes in Unfunded Actuarial Accrued Liability....................18
- Determination of Contribution Sufficiency/(Deficiency)....................19
- Statutory and Required Contributions Amounts....................20

Actuarial Basis....................22

- Actuarial Cost Method....................22
- Asset Valuation Method....................23
- Valuation and Accounting Procedures....................23
- Summary of Actuarial Assumptions....................25
- Summary of Plan Provisions....................29

Plan Accounting Under GASB 25 (as amended by GASB 50)....................37

- Schedule of Funding Progress Under Entry Age Normal Method....................37
- Schedule of Contributions from the Employer and Other Contributing Entities....................38
- Supplementary Information Required by GASB....................39

Glossary....................40

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 Valuation 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 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. 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.

James F. Verlautz
James F. Verlautz, FSA, EA, MAAA
Principal

12/14/09
Date

Bonita J. Wurst
Bonita J. Wurst, ASA, EA, MAAA
Principal

12/14/2009
Date

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

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.

Plan Assets

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**

Plan Assets

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

		Market 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**

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	**$ 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**

Plan Assets

Actuarial Asset Value *(Dollars in Thousands)*

					June 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 June 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*					
		Original Amount	**% Not Recognized**		
a. Year ended June 30, 2009	$	(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.e.)*				$	**17,882,408**

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

Membership Data

Reconciliation of Members*

	Active Members	Former Members**	Benefit Recipients*** 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	Non-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

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

Membership Data

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.

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	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.

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	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.

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 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.

	June 30, 2009
A. Actuarial Value of Assets	$ 17,882,408
B. Expected future assets	
1. Present value of expected future statutory supplemental contributions*	$ 1,730,377
2. Present value of expected future normal cost contributions	2,992,500
3. Total expected future assets *(1. + 2.)*	$ 4,722,877
C. Total current and expected future assets	$ 22,605,285

	Non-Vested Benefits	Vested Benefits	Total
D. Current benefit obligations			
1. Benefit recipients			
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 Retirement Date	0	600,194	600,194
3. Former members without vested rights**	41,676	0	41,676
4. Active members	75,257	7,272,232	7,347,489
5. Total Current Benefit Obligations	$ 116,933	$ 22,076,351	$ 22,193,284
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

* *Under LCPR guidelines, this amount does not include supplemental payments which could occur after the expiration of the remaining 28 year 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.*

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	$ 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 Liability (UAAL)*	
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.*

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	$	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.*

Development of Costs

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
2. 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.*

Development of Costs

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.*

Development of Costs

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.*