

Gabriel Roeder Smith & Company Consultants & Actuaries

This document is made available electronically by the Minnesota Legislative Reference Library as part of an ongoing digital archiving project. http://www.leg.state.mn.us/lrl/lrl.asp

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION ACTUARIAL VALUATION AS OF JULY 1, 2008

. International Astronomy

1000

And the second second

Second Second

SOTE COM

fürstand.

One Towne Square Suite 800 Southfield, MI 48076-3723 248.799.9000 phone 248.799.9020 fax www.gabrielroeder.com

November 12, 2008

Mr. Phillip Kapler St. Paul Teachers' Retirement Fund Association 1619 Dayton Avenue, Room 309 St. Paul, MN 55104-6206

Dear Mr. Kapler:

We are pleased to present the report of the actuarial valuation of the St. Paul Teachers' Retirement Fund Association ("Fund") as of July 1, 2008. This report provides among other things, the required annual contribution rate of the Fund for the Plan Year commencing July 1, 2008, and ending on June 30, 2009. The actuarial assumptions and actuarial cost method are those recommended based on an Experience Review for the years 2000 through 2006 and adopted by the Board for first use in this valuation.

The necessary participant and financial data was provided by the Fund's staff. Their efforts in furnishing the materials needed are gratefully acknowledged. Data was checked for internal consistency, but was not otherwise audited.

The report has been prepared in accordance with Section 356.215 of the Minnesota Statutes as well as the Standards for Actuarial Work Established by the State of Minnesota Legislative Commission on Pensions and Retirement. To the best of our knowledge, this report is complete and accurate, and has been prepared in accordance with generally accepted actuarial principles and practice.

Determinations of the liability associated with the benefits described in this report for purposes other than those described above may produce significantly different results. This report may be provided to parties other than the Fund or State oversight entities only in its entirety and only with the permission of the Fund.

The undersigned are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

We will be pleased to review this report with you at your convenience.

Respectfully submitted,

Junk

WJK/CN:mrb

W. James Koss, ASA, EA, MAAA Cathy Nagy, FSA, EA, MAAA

TABLE OF CONTENTS

Summary of Val	luation Results	1-3
Section 1	Asset Information	
	Assets of the Plan	4
Table 1	Accounting Balance Sheet	5
Table 2	Changes in Assets Available for Benefits	6
Section 2	Total Membership Data	
Table 3	Active Members	7
Table 4	Service Retirements	8
Table 5	Disability Retirements	9
Table 6	Survivors	10
Table 7	Reconciliation of Members	11
Section 3	Funding Status	
Table 8	Actuarial Balance Sheet	12
Table 9	Determination of Unfunded Actuarial Accrued Liability (UAAL) and Supplemental Contribution Rate	13
Table 10	Changes in Unfunded Actuarial Accrued Liability (UAAL)	14
Table 11	Determination of Contribution Sufficiency	15
Section 4	Actuarial Methods and Assumptions	
Table 12	Summary of Actuarial Assumptions and Methods	16-22
Section 5	Basic Plan	
Membership	Data	
Table 3A	Active Members	23
Table 4A	Service Retirements	24
Table 5A	Disability Retirements	25
Table 6A	Survivors	26

10000 A

(and the second

2011 123S

011128

-i-

Section 5 (Cont?	'd.)	
Funding Sta	tus	
Table 11A	Determination of Contribution Sufficiency	27
Plan Provisi	ons	
	Summary of Benefit Provisions for Basic Members	28-31
Section 6	Coordinated Plan	
Membership	Data	
Table 3B	Active Members	32
Table 4B	Service Retirements	33
Table 5B	Disability Retirements	34
Table 6B	Survivors	35
Funding Sta	tus	
Table 11B	Determination of Contribution Sufficiency	36
	Summary of Benefit Provisions for Coordinated Members	37-39
Section 7	GASB Disclosures	
Table 14	Schedule of Funding Progress	40
Table 15	Schedule of Employer Contributions	41
Table 16	Development of the Fund	42
Table 17	GASB Supplementary Information	43
Section 8	Appendix	

This report sets forth the results of the actuarial valuation of the St. Paul Teachers' Retirement Fund Association ("Fund") as of July 1, 2008. The purposes of this valuation are:

- 1. To develop the annual required contribution (ARC) rates under GASB requirements.
- 2. To compare the ARC rates with the current funding policy in place.
- 3. To review the funding status of the Fund.

The funding status, in basic terms, is a comparison of the fund's liabilities to assets expressed as either an unfunded liability (i.e., the difference between the assets and liabilities) or as a ratio of assets to liabilities. This comparison can be measured in various ways. Fund liabilities are dependent on the actuarial assumptions and actuarial cost method. Fund assets can be measured at market value, book value, or some variation to smooth the fluctuations that invariably occur from year to year. The Actuarial Value of Assets is determined from market value with investment gains and losses smoothed over a five-year period.

Comments on Results

Total actuarial liabilities increased from \$1,380.2 to \$1,432.0 million. This increase is due to expected growth in combination with a loss of \$12.1 million due to the adoption of new assumptions. The funding impact of the new assumptions is shown in more detail in the summary of valuation results on the following page. There was a decrease in liability due to a smaller than expected COLA benefit increase provided as a result of the COLA Pilot Program as of January 1, 2008 and 2009.

The assets of the plan showed poor investment returns in the past fiscal year. While the actuarial value of assets recognized a portion of the loss incurred in fiscal year ending June 30, 2008, the overall return on the actuarial value of assets still produced a significant gain for the Fund.

The funded ratio based on actuarial value of assets increased from 73.59% at July 1, 2007, to 75.13% at July 1, 2008. This increase was mostly due to scheduled recognition of past investment gains and expected funded ratio improvements under the current funding policy.

During 2008, a bill was passed that changed the amortization of the unfunded actuarial accrued liability. Previously, under Chapter 356 of Minnesota Statutes, the actuarial valuation report was required to contain the contribution rate required to pay the normal cost calculated as a level percent of pay using the Entry Age Normal actuarial cost method plus the amortization payment to amortize the unfunded liability by June 30, 2014. The bill changes the amortization to a 25-year rolling period, which for this valuation, extends the target amortization date to June 30, 2033. The required contribution rate decreased from 23.40% for fiscal year ending June 30, 2008, to 17.63% for fiscal year ending June 30, 2009. The statutory contributions currently in place are not sufficient to cover this contribution rate. The statutory contribution rate for the current plan year based on the Basic Plan and Coordinated Plan active population at the valuation date is 15.73%, a shortfall of 1.90%.

Chapter 356 also requires the Fund to indicate the funded ratio and contribution sufficiency or deficiency based on the Market Value of Assets. Using a Market Value of Assets of \$1,023.6 million results in a funded status of 71.48% and a contribution shortfall of 3.17% as of July 1, 2008.

SUMMARY OF VALUATION RESULTS (dollars in thousands)

			uly 1, 2007		uly 1, 2008 Prior to Assumption Changes		uly 1, 2008
			Valuation	_	Changes	<u>va</u>	luation Final
А.	CONTRIBUTIONS % OF PAYROLL (Table 11)		16 100		15 700		157207
	1. Statutory Contributions - Chapter 354A		16.19%		15.73%		15.73% 17.63%
	2. Required Contributions - Chapter 356		23.40%	.	17.53%	·	
	3. Sufficiency / (Deficiency)		(7.21%)		(1.80%)		(1.90%)
B.	FUNDING RATIOS						
	1. Accrued Benefit Funding Ratio						
	a. Current Assets (Table 1)	\$	1,015,722	\$	1,075,951	\$	1,075,951
	b. Current Benefit Obligations (Table 8)		1,337,729		1,376,025		1,384,463
	c. Funding Ratio		75.93%		78.19%		77.72%
	2. Accrued Liability Funding Ratio						
	a Current Assets (Table 1)	\$	1,015,722	\$	1,075,951	\$	1,075,951
	b. Actuarial Accrued Liability (Table 9)		1,380,151		1,419,960		1,432,040
	c. Funding Ratio	<u></u>	73.59%		75.77%		75.13%
	3. Projected Benefit Funding Ratio (Table 8)						
	a. Current and Expected Future Assets	\$	1,414,512	\$	1,574,770	\$	1,565,414
	b. Current and Expected Future Benefit Obligations		1,600,163		1,648,710		1,643,226
	c. Funding Ratio		88.40%		95.52%		95.26%
C.	PLAN PARTICIPANTS						
	1. Active Members						
	a. Number (Table 3)		3,841				4,019
	b. Projected Annual Earnings	\$	235,880			\$	247,291
	c. Average Annual Earnings (Projected dollars)	\$	59,236			\$	60,007
	d. Average Age		44.9				44.9
	e. Average Service		11.7				11.4
	f. Additional Members on Leave of Absence		141				102
	2. Others						
	a. Service Retirements (Table 4)		2,431				2,535
	b. Disability Retirements (Table 5)		24				26
	c. Survivors (Table 6)		286				290
	d. Deferred Retirements (Table 7)		1,693				1,695
	e. Terminated Other Non-Vested (Table 7)		1,533				1,403
	f. Total		5,967				5,949

ter rad

A CONTRACTOR

1000

LIST: LESSING

Participants

Active membership increased 3.5 percent during fiscal year 2008 from 3,982 to 4,121 (figures include members on leave of absence). Total participants receiving benefits under the Fund, including disabled retirees and beneficiaries, increased 4.0 percent during fiscal year 2008 from 2,741 to 2,851. Total expenditures for these benefits increased from \$84.3 million to \$89.8 million during fiscal year 2008, or 6.6 percent.

Changes in Provisions of the Fund

There were no changes in the provisions of the fund from the prior valuation report.

Analysis of Actuarial Assumptions

Actuarial assumptions are used to project future demographic and economic expectations for purposes of valuing the liabilities of the plan. The assumptions should reflect current patterns. However, their primary orientation is the long-term outlook for each factor affecting the valuation. Thus, while actual experience will fluctuate over the short run, actuarial assumptions are chosen in an attempt to model the future long-term experience. The actuarial assumptions were developed in accordance with the Standards for Actuarial Work established by the Minnesota Legislative Commission on Pensions and Retirement ("Standards for Actuarial Work").

An Experience Analysis for the years 2000 through 2006 was performed during 2007. Assumption changes adopted by the Board as a result of this review are reflected beginning with this actuarial valuation as of July 1, 2008. Please see the Appendix to this report for a letter summarizing the adopted assumption changes.

Asset Valuation Method

The method used to develop the Fund's Actuarial Value of Assets, as set out in the Standards for Actuarial Work, is as follows: In years when Fund assets earn above 8.5 percent (i.e., experience gain) or below 8.5 percent (i.e., experience loss) the gain (or loss) will be gradually recognized over five years. This approach both smoothes the Fund's level of contributions and ensures the Fund's assets will track the market value of assets.

Experience Analysis

Overall, the Fund experienced a gain of \$23.4 million. There were no large deviations from the expected plan demographic experience. In general, salary increases were smaller than predicted under the current valuation assumption and produced an actuarial gain of \$4.9 million. Incorporating the new experience study assumptions produced a loss of \$12.1 million. The largest component of the Fund's gain was due to recognized gains from larger than expected asset returns in prior years. Despite a poor asset return during FY 2008, scheduled recognition of gains and losses from prior years produced an overall gain of \$28.7 million on the actuarial value of assets.

The changes in unfunded actuarial accrued liabilities are shown in Table 10.

Looking Ahead

Between July 1, 2008 and the publication of this report, financial markets have declined in almost all asset classes. Although a five year smoothing of gains and losses is used in determining the Fund's Actuarial Value of Assets, a significant asset loss during the period between this valuation date and the next could result in an increase in the Fund's required contribution for the fiscal year beginning July 1, 2009.

SECTION 1 ASSET INFORMATION

100

100100

2000

10000

jan se

The cost value of the plan assets decreased from \$771.5 million as of June 30, 2007, to \$767.1 million as of June 30, 2008. The market value of the plan assets decreased from \$1,156.0 million as of June 30, 2007, to \$1,023.6 million as of June 30, 2008. The expected return on assets using the valuation interest rate assumption of 8.5 percent was \$96 million. The actual plan experience showed a (negative) return on assets of \$(79.8) million. Twenty percent of the asset return below the expected \$96 million is recognized as an actuarial loss in the development of the actuarial value of assets. The recognized loss from the current year along with the portion of prior gains and losses recognized this year results in an overall gain of \$28.7 million on the actuarial value of assets.

Table 1 shows the composition of assets as of June 30, 2008, and the development of the actuarial value of assets as of June 30, 2008. Table 2 details the development of asset values during fiscal year 2008.

TABLE 1ACCOUNTING BALANCE SHEETAS OF JUNE 30, 2008

(dollars in thousands)

			Market Value	Cost Value
 A. ASSETS 1. Cash, Equivalents, Short-Term Securities 2. Investments 		\$	3,657	\$ 3,657
 a. Fixed Income b. Equity c. Real Estate d. Alternative 3. Other Assets* 			221,462 697,541 88,720 7,412	186,136 496,539 69,019 6,860
B. TOTAL ASSETS		\$	<u>8,295</u> 1,027,087	\$ <u>8,295</u> 770,506
C. AMOUNTS CURRENTLY PAYABLE		\$	3,447	\$ 3,447
 D. ASSETS AVAILABLE FOR BENEFITS 1. Member Reserves 2. Employer Reserves 3. Total Assets Available for Benefits 		\$	135,589 888,051 1,023,640	\$ 135,589 631,470 767,059
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND				
ASSETS AVAILABLE FOR BENEFITS		\$	1,027,087	\$ 770,506
 F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS Market Value of Assets Available for Benefits (D.3) Unrecognized Asset Returns June 30, 2008 June 30, 2007 June 30, 2006 June 30, 2005 UAR Adjustment: .80 * 2(a) + .60 * 2(b) + .40 * 2(c) + .20 * 2(d) Actuarial Value of Assets (F.1 - F.3) 	\$ (175,830) 114,209 36,135 26,860	\$	1,023,640 (52,311) 1,075,951	
* DERIVATION OF OTHER ASSETS Accounts Receivable Employer Contribution Employee Contribution Interest Receivable Dividend Receivable Sale of Securities Total Accounts Receivable Fixed Assets Total Other Assets	Market Va \$ 1,053 121 890 263 5,934 \$ 8,261 34 \$ 8,295	1		

St. Paul Teachers' Retirement Fund Association Actuarial Valuation Report as of July 1, 2008

in the second se

100.00

direction and

(VALUE)

TABLE 2 CHANGE IN ASSETS AVAILABLE FOR BENEFITS AS OF JUNE 30, 2008 (dollars in thousands)

	Μ	arket Value	0	Cost Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$	1,156,017	\$	771,476
B. OPERATING REVENUES				
1. Member Contributions	\$	13,642	\$	13,642
2. Employer Contributions		20,775		20,775
3. Supplemental Contributions		3,509		3,509
4. Investment Income		17,651		17,651
5. Investment Expenses		(4,767)		(4,767)
6. Net Realized Gain / (Loss)		35,274		35,274
7. Other		-		-
8. Net Change in Unrealized Gain / (Loss)		(127,960)		
9. Total Operating Revenue	\$	(41,876)	\$	86,084
C. OPERATING EXPENSES				
1. Service retirements	\$	79,868	\$	79,868
2. Disability benefits		826		826
3. Survivor benefits		7,578		7,578
4. Refunds		1,538		1,538
5. Administrative expenses		691		691
6. Total operating expenses	\$	90,501	\$	90,501
D. OTHER CHANGES IN RESERVES	\$	-	\$	-
E. ASSETS AVAILABLE AT END OF PERIOD	\$	1,023,640	\$	767,059
F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSE	т вет	URN		
1. Average Balance		ORV		
(a) Assets available at BOY:			\$	1,156,017
(b) Assets available at EOY:			Ψ	1,023,640
(c) Average balance {[(a) + (b) - Net Investment Income] / 2}			\$	1,129,730
{Net investment income: $B.4+B.5+B.6+B.7+B.8$ }			Ψ	1,122,730
 Expected Return: .085 * F.1 				96,027
3. Actual Return				(79,803)
 4. Current year gross asset return: F.3 - F.2 			\$	(175,830)
1. Carront year gross associed/fith 1.5 - 1.2			Ψ	(175,050)

E State

1000

SECTION 2 TOTAL MEMBERSHIP DATA

Contraction of the local data

and the second se

100

TABLE 3ACTIVE MEMBERS AS OF JUNE 30, 2008

				Y	ears of Serv	ice			
Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35+	ALL
<25	101	0	0	0	0	0	0	0	101
25-29	296	65	0	0	0	0	0	0	361
30-34	221	231	55	0	0	0	0	0	507
35-39	125	178	243	25	0	0	0	0	571
40-44	98	102	185	96	22	0	0	0	503
45-49	95	98	129	106	92	5	0	0	525
50-54	86	72	111	113	94	98	24	0	598
55-59	80	77	89	92	80	90	74	18	600
60-64	49	37	34	48	51	28	25	26	298
65+	26	8	6	3	3	4	1	6	57
ALL	1,177	868	852	483	342	225	124	50	4,121

AVERAGE ANNUAL EARNINGS

					Years of Ser	vice			
Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35+	ALL
<25	18,206	0	0	0	0	0	0	0	18,206
25-29	31,991	50,393	0	0	0	0	0	0	35,304
30-34	36,574	50,467	58,994	0	0	0	0	0	45,336
35-39	39,382	55,584	64,779	70,811	0	0	0	0	56,617
40-44	40,758	57,237	65,883	72,681	73,918	0	0	0	60,883
45-49	32,432	58,970	66,575	73,112	79,420	83,755	0	0	62,712
50-54	34,529	53,332	65,286	70,934	73,622	79,302	80,922	0	64,726
55-59	26,819	54,716	68,758	69,217	72,951	75,660	80,835	80,467	64,870
60-64	27,758	47,418	67,960	74,001	73,108	76,351	82,123	87,518	64,336
65+	8,622	32,682	60,020	52,037	69,482	78,161	102,217	97,150	38,738
ALL	32,361	53,587	65,492	71,613	74,931	77,557	81,284	86,135	56,407

		Pri	or Fiscal Ye	ar Earnings	s (In THOUS	SANDS) by Y	Years of Sei	rvice	
Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	ALL
ALL	38,089	46,513	55,799	34,589	25,626	17,450	10,079	4,307	232,453

No.

100 A

No. of the local distance of the local dista

TABLE 4SERVICE RETIREMENTS AS OF JUNE 30, 2008

	Years Retired											
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL		
<45	0	0	0	0	0	0	0	0	0	0		
45-49	0	0	0	0	0	0	0	0	0	0		
50-54	0	0	0	0	0	0	0	0	0	0		
55-59	194	0	0	0	0	0	0	0	0	194		
60-64	378	185	1	0	0	0	0	0	0	564		
65-69	160	288	122	1	0	0	1	0	0	572		
70-74	20	125	241	70	0	0	1	0	0	457		
75-79	4	6	129	135	71	1	0	0	0	346		
80-84	1	5	11	67	108	29	1	0	0	222		
85-89	0	1	1	5	48	53	5	0	0	113		
90+	0	0	0	1	2	19	39	4	2	67		
ALL	757	610	505	279	229	102	47	4	2	2,535		

AVERAGE ANNUAL BENEFIT

					Years	Retired				
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
<45	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0
55-59	30,412	0	0	0	0	0	0	0	0	30,412
60-64	32,324	31,778	11,488	0	0	0	0	0	0	32,108
65-69	23,365	31,433	32,618	26,604	0	0	51,873	0	0	29,456
70-74	21,923	32,025	39,425	29,474	0	0	55,388	0	0	35,146
75-79	9,437	7,866	46,612	38,808	31,407	56,799	0	0	0	39,375
80-84	451	23,684	34,703	37,443	30,223	24,092	61,174	0	0	31,681
85-89	0	54,180	57,387	31,443	28,871	30,242	25,931	0	0	29,974
90 +	0	0	0	55,910	22,567	21,523	20,787	20,326	23,631	21,630
ALL	29,503	31,401	39,494	36,024	30,240	27,130	23,591	20,326	23,631	32,510

			Total A	nnual Bene	fit (IN THO	USANDS) b	y Years RE	TIRED		
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	22,333	19,155	19,944	10,051	6,925	2,767	1,109	81	47	82,413

And the second

100000

100000

X-1-120

12-1-1-P22

-8-

TABLE 5DISABILITY RETIREMENTS AS OF JUNE 30, 2008

					Years I	Disabled				
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
<45	0	0	1	0	0	0	0	0	0	1
45-49	0	1	1	0	0	0	0	0	0	2
50-54	1	1	0	0	0	0	0	0	0	2
55-59	6	1	0	0	0	0	0	0	0	7
60-64	4	4	6	0	0	0	0	0	0	14
65-69	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0	0	0
85-89	0	0	0	0	0	0	0	0	0	0
90+	0	0	0	0	0	0	0	0	0	0
ALL	11	7	8	0	0	0	0	0	0	26

AVERAGE ANNUAL BENEFIT

<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
0	0	2,543	0	0	0	0	0	0	2,543
0	22,900	5,233	0	0	0	0	0	0	14,066
12,449	24,346	0	0	0	0	0	0	0	18,398
34,754	9,070	0	0	0	0	0	0	0	31,085
30,496	35,999	44,320	0	0	0	0	0	0	37,993
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
31,178	28,616	34,212	0	0	0	0	0	0	31,422
	0 0 12,449 34,754 30,496 0 0 0 0 0 0	$\begin{array}{ccc} 0 & 0 \\ 0 & 22,900 \\ 12,449 & 24,346 \\ 34,754 & 9,070 \\ 30,496 & 35,999 \\ 0 & 0 \\ 0 &$	$\begin{array}{cccccc} 0 & 0 & 2,543 \\ 0 & 22,900 & 5,233 \\ 12,449 & 24,346 & 0 \\ 34,754 & 9,070 & 0 \\ 30,496 & 35,999 & 44,320 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 &$	$\begin{array}{c cccccc} 0 & 0 & 2,543 & 0 \\ 0 & 22,900 & 5,233 & 0 \\ 12,449 & 24,346 & 0 & 0 \\ 34,754 & 9,070 & 0 & 0 \\ 30,496 & 35,999 & 44,320 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				

Total Annual Benefit (IN THOUSANDS) by Years DISABLED										
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	343	200	274	0	0	0	0	0	0	817

St. Paul Teachers' Retirement Fund Association Actuarial Valuation Report as of July 1, 2008

1111111

1000

TABLE 6SURVIVORS AS OF JUNE 30, 2008

					Years Si	nce Death				
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
<45	1	6	2	0	0	0	0	0	0	9
45-49	0	0	0	0	0	0	0	0	0	0
50-54	3	5	0	0	0	0	0	0	0	8
55-59	4	0	0	0	1	0	0	1	0	6
60-64	1	7	8	4	1	1	0	0	0	22
65-69	2	10	9	8	4	2	0	0	0	35
70-74	1	5	9	18	7	3	1	0	0	44
75-79	0	1	1	17	19	6	3	0	0	47
80-84	0	0	1	4	30	16	3	0	0	54
85-89	0	0	0	2	5	25	9	0	0	41
90+	0	0	0	0	1	4	19	0	0	24
ALL	12	34	30	53	68	57	35	1	0	290

AVERAGE ANNUAL BENEFIT

					Years Si	ince Death				
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
<45	498	9,653	2,116	0	0	0	0	0	0	6,961
45-49	0	0	0	0	0	0	0	0	0	0
50-54	24,013	9,907	0	0	0	0	0	0	0	15,197
55-59	22,125	0	0	0	25,637	0	0	3,350	0	19,581
60-64	49,712	20,526	25,182	25,582	11,783	18,916	0	0	0	23,994
65-69	11,868	29,399	40,411	32,316	20,154	16,951	0	0	0	30,128
70-74	59,885	37,082	35,311	35,301	29,102	21,396	13,400	0	0	33,632
75-79	0	32,041	6,422	39,605	25,334	20,256	22,385	0	0	29,400
80-84	0	0	50,315	39,734	30,338	25,003	33,435	0	0	29,995
85-89	0	0	0	57,105	25,546	22,136	22,266	0	0	24,286
90 +	0	0	0	0	24,349	23,590	19,884	0	0	20,688
ALL	24,531	22,429	31,464	36,655	27,431	22,568	21,687	3,350	0	27,095

	Total Annual Benefit (IN THOUSANDS) by Years SINCE DEATH										
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL	
ALL	294	763	944	1,943	1,865	1,286	759	3	0	7,858	
										ł	

St. Paul Teachers' Retirement Fund Association Actuarial Valuation Report as of July 1, 2008

100 L 100 L

ACLE IN

11.000

los como

TABLE 7RECONCILIATION OF MEMBERSAS OF JUNE 30, 2008

	Active Participants	Leave of Absence	Vested Terminated	Other Non-Vested	Retired Participants	Disableds	Survivors and Beneficiaries	Alternate Payees	Total
A. Number as of June 30, 2007	3,841	141	1,693	1,533	2,414	24	286	17	9,949
B. Additions	394	45	124	195	148	5	26	4	941
C. Deletions									
1. Retirements	(94)	(2)	(48)	(1)	-	-	-	-	(145)
2. Disability	-	(1)	(4)	-	-	-	-	-	(5)
3. Died With Beneficiary	-	-	-	-	(26)	(1)	(21)	-	(48)
4. Died Without Beneficiary	(3)	-	(1)	(1)	(23)	-	-	-	(28)
5. Terminated - Deferred	(95)	(15)	-	(14)	-	-	-	-	(124)
6. Terminated - Not Vested	(138)	(2)	-	-	-	-	-	-	(140)
7. Refunds	(21)	(4)	(40)	(139)	-	-	-	-	(204)
8. Rehired as Active	178	(60)	(34)	(74)	-	-	-	-	10
9. Leave of Absence	(43)	-	(1)	~	-	-	-	-	(44)
10. Expired Benefits	-	-	-	-	-	-	(1)	-	(1)
11. Disability to Retirement	-	-	-	-	-	(3)	-	-	(3)
12. Write-offs	-	-	-	(101)	_	-	-	-	(101)
D. Data Adjustments ¹		_	6	5	1	1		-	13
E. Total on June 30, 2008	4,019	102	1,695	1,403	2,514	26	290	21	10,070

¹ Includes members not valued in prior valuation who repaid refunds for prior service.

SECTION 3 FUNDING STATUS

\$1.11.11.12S

No. 1 Const

kan lai

and the

land and

kerned

لاعتناط

TABLE 8 ACTUARIAL BALANCE SHEET AS OF JULY 1, 2008 (dollars in thousands)

A. C	JRRENTS ASSETS (TABLE 1; Line F.4)				\$	1,075,951
B. E	XPECTED FUTURE ASSETS					
1.	Present Value of Expected Future Statutory Supplemental Con	ntributions			\$	278,277
2.	Present Value of Future Normal Costs					211,186
3.	Total Expected Future Assets				\$	489,463
C. TO	TAL CURRENT AND EXPECTED FUTURE ASSETS				¢	1 565 414
C. N	TAL CURRENT AND EXFECTED FUTURE ASSETS				\$	1,565,414
D. C	JRRENT BENEFIT OBLIGATIONS	Nor	-Vested	 Vested		Total
1.	Benefit Recipients			 		
	a. Retirement Annuitants			\$ 864,662	\$	864,662
	b. Disability Benefits			7,353		7,353
	c. Surviving Spouse and Child Benefits			64,282		64,282
2.	Deferred Retirements			42,590		42,590
3.	Former Members Without Vested Rights			1,737		1,737
4.	Active Members					
	a. Retirement Annuitants	\$	1,696	\$ 375,888	\$	377,584
	b. Disability Benefits		34	4,175		4,209
	c. Surviving Spouse and Child Benefits		43	5,401		5,444
	d. Withdrawals		801	15,801		16,602
5.	Total Current Benefit Obligations	\$	2,573	\$ 1,381,889		1,384,463
E. EX	PECTED FUTURE BENEFIT OBLIGATIONS				\$	258,763
F. TC	TAL CURRENT AND EXPECTED FUTURE BENEFIT OBL	IGATIONS			\$	1,643,226
G. CI	RRENT UNFUNDED ACTUARIAL LIABILITY (D.5 - A)				\$	308,511
н. сі	RRENT AND FUTURE UNFUNDED ACTUARIAL LIABILI	TY (F - C)			\$	77,812

Electron and

1000

TABLE 9 DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL) AND SUPPLEMENTAL CONTRIBUTION RATE AS OF JULY 1, 2008

(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 Benefits* b. Disability Benefits c. Surviving Spouse and Child Benefits d. Withdrawals e. Total 2. Deferred Retirements 3. Former Members Without Vested Rights 4. Annuitants 	\$ 616,607 7,447 10,053 28,495 \$ 662,602 \$ 42,590 1,737 936,297 \$ 1,642,226	\$ 176,253 3,200 4,052 27,681 \$ 211,186	\$ 440,354 4,247 6,001 814 \$ 451,416 \$ 42,590 1,737 936,297 \$ 1,422,040
5. TotalB. DETERMINATION OF UNFUNDED ACTUARIAL	\$ 1,643,226	\$ 211,186	\$ 1,432,040
 ACCRUED LIABILITY (UAAL) 1. Actuarial Accrued Liability (A.5) 2. Current Assets (Table 1; Line F.4) 3. Unfunded Actuarial Accrued Liability (B.1 - B.2) 			\$ 1,432,040 1,075,951 \$ 356,089
 C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE 1. Present Value of Future Payrolls Through the Amortization Date of June 30, 2033 (25-year rolling amortization) 2. Supplemental Contribution Rate (B.3 / C.1) 			4,104,379 <u>8.68%</u>
*Includes members on leave of absence.			

St. Paul Teachers' Retirement Fund Association Actuarial Valuation Report as of July 1, 2008

TABLE 10 CHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL) AS OF JULY 1, 2008

(dollars in thousands)

A.	UAAL AT BEGINNING OF YEAR	\$	364,429
B.	CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING		
	1. Normal Cost and Expenses	\$	21,806
	2. Contributions		(37,927)
	3. Interest		31,218
	4. Total	\$	15,097
C.	EXPECTED UAAL AT END OF YEAR (A. + B.4)	\$	379,526
D.	INCREASE / (DECREASE) DUE TO ACTUARIAL LOSSES / (GAINS)		
	BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED		
	1. Age and Service Retirements	\$	(887)
	2. Disability Retirements		55
	3. Death-in-Service Benefits		(7)
	4. Withdrawals		(1,342)
	5. Salary Increases		(4,868)
	6. Investment Income		(28,702)
	7. Mortality of Annuitants		700
	8. Assumed COLA vs. Actual COLA for January 1, 2009		(1,743)
	9. Other Items	\$	1,277
	10. Total	Ф	(35,517)
E.	UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C + D.10)	\$	344,009
F.	CHANGE IN UAAL DUE TO PLAN AMENDMENTS		-
G.	CHANGE IN UAAL DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS		12,080
н	UAAL AT END OF YEAR $(E + F + G)$	\$	356,089

Sector 19

10102

TABLE 11 DETERMINATION OF CONTRIBUTION SUFFICIENCY AS OF JULY 1, 2008 (dollars in thousands)

	-	Percent of Payroll	Dol	llar Amount
A.	STATUTORY CONTRIBUTIONS - CHAPTER 354A			
	1. Employee Contributions	5.61%	\$	13,864
	2. Employer Contributions	8.48%	\$	20,972
	3. Supplemental Contribution			,
	a. 1996 Legislation	0.50%		1,230
	b. 1997 Legislation	1.14%		2,827
	4. Total	15.73%	\$	38,893
B.	 REQUIRED CONTRIBUTIONS - CHAPTER 356 1. Normal Cost a. Retirement Benefits b. Disability Benefits c. Surviving Spouse and Child Benefits d. Withdrawals e. Total 2. Supplemental Contribution Amortization 3. Allowance for Administrative Expenses 4. Total 	7.22% 0.14% 0.16% 1.14% 8.66% 8.68% 0.29% 17.63%	\$	17,843 336 400 2,817 21,396 21,465 717 43,578
C.	CONTRIBUTION SUFFICIENCY / (DEFICIENCY) (A.5 - B.4)	(1.90%)		(4,685)
Proj	ected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$	247,291

franciska (

221-1-1-12

Sectional Section

EL

100

SECTION 4 ACTUARIAL METHODS AND ASSUMPTIONS

ker med

ing along

1000000

100000

100.000

010.010

I. ACTUARIAL COST METHOD

An Actuarial Cost Method is a set of techniques used by the actuary to develop contribution levels under a retirement plan. The Actuarial Cost Method used in this valuation for all purposes is the Entry Age Actuarial Cost Method. Under this Method, a Normal Cost is developed by amortizing the actuarial value of benefits expected to be received by each active participant (as a level percentage of pay) over the total working lifetime of that participant, from hire to termination.

To the extent that current assets and future Normal Costs do not support participants' expected future benefits, an Unfunded Actuarial Accrued liability ("UAAL") develops. The UAAL is amortized over the statutory closed amortization period using level percent of payroll assuming payroll increases of 5.00% per annum. The total contribution developed under this method is the sum of the Normal Cost and the payment toward the UAAL.

II. CURRENT ACTUARIAL ASSUMPTIONS

A. Demographic Assumptions

Mortality:

1. Healthy Pre-Retirement:

a. Male: 1983 Group Annuity Mortality Table for Males set back 7 yearsb. Female: 1983 Group Annuity Mortality Table for Females set back 5 years

2. Healthy Post-Retirement

a. Male: 1983 Group Annuity Mortality Table for Males set back 4 years

- b. Female: 1983 Group Annuity Mortality Table for Females set back 1 year
- 3. Disabled Mortality
 - a. Male: 1977 Railroad Retirement Board Mortality Table for Disabled Lives
 - b. Female: 1977 Railroad Retirement Board Mortality Table for Disabled Lives

		tirement		etirement	1	isability	
		•tality		<u>rtality</u>		tality	
Age	Male	Female	Male	Female	Male	Female	
20	3	1	3	2	57	57	
21	3	1	3	2	60	60	
22	3	2	4	2	63	63	
23	3	2 2	4	2 2	66	66	
24	3	2	4	2	69	69	
25	4	2	4	2	72	72	
26	4	2 2	4	3	75	75	
27	4	2	4	3	79	79	
28	4	2	4	3	82	82	
29	4	2	5	3	87	87	
30	4	3	5	3	91	91	
31	4	3	5	3	95	95	
32	5	3	5	4	99	99	
33	5	3	6	4	103	103	
34	5	3	6	4	107	107	
35	5	3	6	4	273	273	
36	6	4	7	5	273	273	
37	6	4	7	5	273	273	
38	6	4	8	5	273	273	
39	7	4	9	6	273	273	
40	7	5	9	6	273	273	
41	8	5	10	7	273	273	
42	9	5	10	7	273	273	
43	9	6	11	8	274	274	
44	10	6	12	8	274	274	

Deaths Expressed as the Number of Occurrences per 10,000:

10110102

1000

101000

		tirement tality		etirement tality		isability tality
Age	Male	Female	Male	Female	Male	Female
45	10	7	14	9	274	274
46	11	7	15	10	275	275
47	12	8	17	11	276	276
48	14	8	19	12	279	279
49	15	9	22	14	283	283
50	17	10	25	15	289	289
51	19	11	28	16	297	297
52	22	12	31	18	310	310
53	25	14	35	19	327	327
54	28	15	39	21	348	348
55	31	16	43	23	371	371
56	35	18	48	25	395	395
57	39	19	52	28	417	417
58	43	21	57	31	437	437
59	48	23	61	34	455	455
60	52	25	66	38	473	473
61	57	28	71	42	494	494
62	61	31	77	47	516	516
63	66	34	84	52	541	541
64	71	38	92	58	569	569
65	77	42	101	64	598	598
66	84	47	111	71	628	628
67	92	52	124	78	658	658
68	101	58	139	87	687	687
69	111	64	156	97	716	716

Deaths Expressed as the Number of Occurrences per 10,000:

10000

(1) (1) (1)

100000

ELCISION -

1000

Rates of Disability:

2010

Ascentia

AN LOSSE

ALC: NO

10121

A 70	Disability	A go	Disability
Age	Disability	Age	Disability
20	1	45	4
21	1	46	4
22	1	47	4
23	1	48	4
24	1	49	4
25	1	50	7
26	1	51	7
27	1	52	7
28	1	53	7
29	1	54	7
30	2	55	14
31	2	56	14
32	2	57	14
33	2	58	14
34	2	59	14
35	2	60	29
36	2	61	29
37	2	62	29
38	2	63	29
39	2	64	29
40	2		
41	2		
42	2		
43	2		
44	2		

Disability Expressed as the Number of Occurrences per 10,000:

Rates of Termination:

	Number of Terminations								
Years of	per 1,000 Ac	tive Members							
Service	Male	Female							
0	400	400							
1	180	160							
2	110	100							
3	90	70							
4	44	62							
5	41	55							
6	38	48							
7	35	41							
8	32	30							
9	29	28							
10	26	26							
11& Over	16	10							

Rates of Retirement:

1111

1000000

NUCLEAR STR

Retirements Expressed as the Number of Occurrences per 10,000:

Age	Basic Members Eligible for Rule of 90 Provision	Basic Members Not Eligible for Rule of 90 Provision	Coordinated Members Eligible for Rule of 90 Provision	Coordinated Members Not Eligible for Rule of 90 Provision
-55	5 000	0	5 000	0
<55	5,000		5,000	0
55	5,000	800	5,000	500
56	5,000	1,300	5,000	500
57	4,000	1,300	4,000	500
58	4,000	1,800	4,000	700
59	3,500	1,800	4,000	700
60	3,500	2,000	4,000	700
61	3,500	2,000	4,500	1,000
62	3,500	4,000	4,500	2,000
63	3,500	4,000	3,000	2,000
64	4,000	4,000	3,000	2,000
65	5,000	5,000	5,000	3,500
66	3,000	5,000	3,000	3,000
67	3,000	5,000	3,000	3,000
68	3,000	5,000	3,000	3,000
69	3,000	5,000	3,000	3,000
70 & Over	10,000	10,000	10,000	10,000

B. Economic Assumptions

Investment Return Rate:	Pre-retirement - 8.50% per annum Post-retirement - 8.50% per annum
Cost of Living Increases:	2.50% at January 1, 2009 (actual); 2.00% per annum thereafter
Future Salary Increases:	In addition to the age-based rates shown below, during a ten- year select period, a service-based component of $0.30\% \times (10-T)$, where T is completed years of service, is included in the salary increase used.

Annual Salary Increases

Age	Ultimate Rate of Annual Salary Increases	Age	Ultimate Rate of Annual Salary Increases
0		0	
<22	6.90%	45	5.75%
23	6.85	46	5.70
24	6.80	47	5.65
		48	5.60
25	6.75	49	5.55
26	6.70		
27	6.65	50	5.50
28	6.60	51	5.45
29	6.55	52	5.40
		53	5.35
30	6.50	54	5.30
31	6.45		
32	6.40	55	5.25
33	6.35	56	5.20
34	6.30	57	5.15
		58	5.10
35	6.25	59	5.05
36	6.20		
37	6.15	60 & Over	5.00
38	6.10		
39	6.05		
40	6.00		
41	5.95		
42	5.90		
43	5.85		
44	5.80		

Asset Value:

10000

The actuarial value of assets is smoothed by using a five-year average market value.

С.	Other Assumptions	
	Marital Status:	It is assumed that 85% of male members and 60% of female members have an eligible spouse. The male spouse is assumed four years older than the female spouse. Married members are assumed to have two children.
	Deferred Benefit Commencement:	Basic Plan members who terminate vested are assumed to commence benefits at age 60. Coordinated Plan members are assumed to commence benefits at age 63. If the member is already past the assumed deferral age, the member is assumed to commence benefits one year from the valuation date.
	Administrative Expenses:	Prior year administrative expenses (excluding investment expenses) expressed as a percentage of prior year payroll.
	Allowance for Combined Service Annuity:	7.00% load on liabilities for active members and 30.00% load on liabilities for former members.
	Missing Salary and Salary Minimums:	Active members with reported salaries of \$100 or less were assumed to have the average non-zero active salary. Deferred vested members without salary information were valued using accumulated contributions. For members on leave of absence at valuation date who were not on leave at the prior valuation date, the prior year's valuation pay was used. Active members with salaries less than those reported at the prior valuation date are valued using their prior salary amount.
	Accelerated Benefit Option:	Retired members who have elected the accelerated benefit option and who have not yet attained the age of 65 are assumed to receive 50 percent of their pre-65 benefit after age 65.
	Supplemental Contributions:	According to 1996 legislation, the St. Paul School District and the State of Minnesota are scheduled to make a combined annual supplemental contributions of \$1,230,000. According to 1997 legislation, annual supplemental contributions of \$2,827,000 are scheduled to be paid on October 1.

Contraction of the local distribution of the

10000

H- 1

SECTION 5 BASIC PLAN

Recorded.

and the state

TABLE 3ABASIC ACTIVE MEMBERS AS OF JUNE 30, 2008

	Years of Service										
Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35+	ALL		
<25	0	0	0	0	0	0	0	0	0		
25-29	0	0	0	0	0	0	0	0	0		
30-34	0	0	0	0	0	0	0	0	0		
35-39	0	0	0	0	0	0	0	0	0		
40-44	0	0	0	0	0	0	0	0	0		
45-49	0	0	0	0	0	0	0	0	0		
50-54	0	0	0	0	3	4	13	0	20		
55-59	0	0	0	0	2	15	35	12	64		
60-64	0	0	0	0	0	2	10	22	34		
65+	0	0	0	0	0	0	0	4	4		
ALL	0	0	0	0	5	21	58	38	122		

AVERAGE ANNUAL EARNINGS

					Years of Sei	vice			
Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35+	ALL
<25	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	71,756	77,339	81,208	0	79,016
55-59	0	0	0	0	73,730	77,878	81,869	80,172	80,361
60-64	0	0	0	0	0	86,045	79,513	87,702	85,196
65+	0	0	0	0	0	0	0	100,347	100,347
ALL	0	0	0	0	72,546	78,553	81,315	86,655	82,143

	Prior Fiscal Year Earnings (In THOUSANDS) by Years of Service										
Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	ALL		
ALL	0	0	0	0	363	1,650	4,716	3,293	10,021		

and the second

1000

TABLE 4ABASIC SERVICE RETIREMENTS AS OF JUNE 30, 2008

	Years Retired									
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
<45	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0
55-59	113	0	0	0	0	0	0	0	0	113
60-64	222	146	1	0	0	0	0	0	0	369
65-69	46	202	99	1	0	0	1	0	0	349
70-74	5	71	202	66	0	0	1	0	0	345
75-79	0	0	102	122	70	1	0	0	0	295
80-84	0	1	9	58	104	28	1	0	0	201
85-89	0	1	1	5	45	53	5	0	0	110
90 +	0	0	0	1	2	18	39	4	2	66
ALL	386	421	414	253	221	100	47	4	2	1,848

AVERAGE ANNUAL BENEFIT

					Years	Retired					
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL	_
<45	0	0	0	0	0	0	0	0	0	0	
45-49	0	0	0	0	0	0	0	0	0	0	
50-54	0	0	0	0	0	0	0	0	0	0	
55-59	40,135	0	0	0	0	0	0	0	0	40,135	
60-64	41,376	36,120	11,488	0	0	0	0	0	0	39,215	
65-69	43,170	38,323	37,743	26,604	0	0	51,873	0	0	38,803	
70-74	55,880	45,533	44,166	30,778	0	0	55,388	0	0	42,089	
75-79	0	0	54,502	41,747	31,797	56,799	0	0	0	43,847	
80-84	0	37,232	36,102	41,466	31,158	24,514	61,174	0	0	33,608	
85-89	0	54,180	57,387	31,443	30,544	30,242	25,931	0	0	30,689	
90 +	0	0	0	55,910	22,567	22,517	20,787	20,326	23,631	21,903	
ALL	41,414	38,810	44,954	38,614	31,158	27,513	23,591	20,326	23,631	38,734	

	Total Annual Benefit (IN THOUSANDS) by Years RETIRED									
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	15,986	16,339	18,611	9,769	6,886	2,751	1,109	81	47	71,580

St. Paul Teachers' Retirement Fund Association Actuarial Valuation Report as of July 1, 2008

ALC: NO

TABLE 5ABASIC DISABILITY RETIREMENTS AS OF JUNE 30, 2008

-Age	Years Disabled											
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL		
<45	0	0	0	0	0	0	0	0	0	0		
45-49	0	0	0	0	0	0	0	0	0	0		
50-54	1	0	0	0	0	0	0	0	0	1		
55-59	3	0	0	0	0	0	0	0	0	3		
60-64	3	3	4	0	0	0	0	0	0	10		
65-69	0	0	0	0	0	0	0	0	0	0		
70-74	0	0	0	0	0	0	0	0	0	0		
75-79	0	0	0	0	0	0	0	0	0	0		
80-84	0	0	0	0	0	0	0	0	0	0		
85-89	0	0	0	0	0	0	0	0	0	0		
90+	0	0	0	0	0	0	0	0	0	0		
ALL	7	3	4	0	0	0	0	0	0	14		

AVERAGE ANNUAL BENEFIT

		Years Disabled											
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL			
<45	0	0	0	0	0	0	0	0	0	0			
45-49	0	0	0	0	0	0	0	0	0	0			
50-54	12,449	0	0	0	0	0	0	0	0	12,449			
55-59	60,264	0	0	0	0	0	0	0	0	60,264			
60-64	39,039	42,492	55,735	0	0	0	0	0	0	46,753			
65-69	0	0	0	0	0	0	0	0	0	0			
70-74	0	0	0	0	0	0	0	0	0	0			
75-79	0	0	0	0	0	0	0	0	0	0			
80-84	0	0	0	0	0	0	0	0	0	0			
85-89	0	0	0	0	0	0	0	0	0	0			
90+	0	0	0	0	0	0	0	0	0	0			
ALL	44,337	42,492	55,735	0	0	0	0	0	0	47,198			

	Total Annual Benefit (IN THOUSANDS) by Years DISABLED										
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL	
ALL	310	127	223	0	0	0	0	0	0	661	

St. Paul Teachers' Retirement Fund Association Actuarial Valuation Report as of July 1, 2008

1000

201102

Sector 2

i i

TABLE 6ABASIC SURVIVORS AS OF JUNE 30, 2008

_	Years Since Death											
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL		
<45	0	1	0	0	0	0	0	0	0	1		
45-49	0	0	0	0	0	0	0	0	0	0		
50-54	0	3	0	0	0	0	0	0	0	3		
55-59	1	0	0	0	1	0	0	1	0	3		
60-64	0	5	6	4	1	1	0	0	0	17		
65-69	0	5	9	8	4	2	0	0	0	28		
70-74	1	4	8	17	7	3	1	0	0	41		
75-79	0	1	1	16	19	6	3	0	0	46		
80-84	0	0	1	2	30	16	3	0	0	52		
85-89	0	0	0	2	5	25	9	0	0	41		
90 +	0	0	0	0	1	4	19	0	0	24		
ALL	2	19	25	49	68	57	35	1	0	256		

AVERAGE ANNUAL BENEFIT

	Years Since Death											
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL		
<45	0	11,317	0	0	0	0	0	0	0	11,317		
45-49	0	0	0	0	0	0	0	0	0	0		
50-54	0	12,047	0	0	0	0	0	0	0	12,047		
55-59	46,659	0	0	0	25,637	0	0	3,350	0	25,215		
60-64	0	24,459	30,838	25,582	11,783	18,916	0	0	0	25,903		
65-69	0	39,745	40,411	32,316	20,154	16,951	0	0	0	33,410		
70-74	59,885	36,022	38,027	35,925	29,102	21,396	13,400	0	0	34,151		
75-79	0	32,041	6,422	41,588	25,334	20,256	22,385	0	0	29,868		
80-84	0	0	50,315	72,371	30,338	25,003	33,435	0	0	30,876		
85-89	0	0	0	57,105	25,546	22,136	22,266	0	0	24,286		
90+	0	0	0	0	24,349	23,590	19,884	0	0	20,688		
ALL	53,272	28,663	36,387	38,693	27,431	22,567	21,687	3,350	0	28,792		

_	Total Annual Benefit (IN THOUSANDS) by Years SINCE DEATH										
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL	
ALL	107	545	910	1,896	1,865	1,286	759	3	0	7,371	

lasse and

211111111

10002

TABLE 11A BASIC DETERMINATION OF CONTRIBUTION SUFFICIENCY AS OF JULY 1, 2008 .

(dollars in thousands)

-	Percent of Payroll		ar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A			
1. Employee Contributions	8.00%	\$	843
2. Employer Contributions	11.64%	·	1,226
3. Supplemental Contribution			,
a. 1996 Legislation	0.50%		52
b. 1997 Legislation	1.14%		120
4. Total	21.28%	\$	2,242
B. REQUIRED CONTRIBUTIONS - CHAPTER 356			
1. Normal Cost			
a. Retirement Benefits	11.16%	\$	1,176
b. Disability Benefits	0.34%		36
c. Surviving Spouse and Child Benefits	0.14%		15
d. Deferred Retirements	1.92%		203
e. Total	13.57%	\$	1,430
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:	\$	10,537	

1000

laccust

1000 - 1000

01178

SUMMARY OF BENEFIT PROVISIONS FOR BASIC MEMBERS AS OF JULY 1, 2008

STATUTORY CONTRIBUTIONS

The statutory contributions for members and the employer are 8.00% and 11.64% of salary respectively.

PARTICIPANTS

Professional Educators first employed prior to July 1, 1978 by schools in the City of St. Paul or St. Paul Technical College (including charter schools) whose position requires a license from the Minnesota Department of Education, who are not covered under the Social Security Act and full-time salaried employees of the Retirement Fund Association are covered under the Basic Plan.

ACCREDITED SERVICE

Service which has been verified and accredited by the Association for the purpose of determining dues and benefits. May include service earned while working outside of St. Paul Public Schools, previous St. Paul service, military service and governmental service.

ACCREDITED ST. PAUL SERVICE

Service earned as a licensed educator in the St. Paul Public Schools, in the St. Paul Technical College, or in certain charter schools, or as an employee of the Association. Also includes accredited service earned as a licensed teacher on leave.

SALARY

Total compensation earned during a school year (July 1 to June 30) excluding lump sum payments for unused leave at termination and employer-paid insurance coverage.

AVERAGE SALARY

Average of the highest five years of Salary during the last 10 years of St. Paul service while making contributions or while disabled.

NORMAL RETIREMENT BENEFIT

Eligibility

Attainment of age 65 and 5 years of Accredited Service.

Benefit

2.50 percent of Average Salary for each year of Accredited Service.

EARLY RETIREMENT BENEFIT

Eligibility

Attainment of age 55 and 5 years of Accredited Service.

Benefit

The greater of the following benefits:

- 2.00 percent of Average Salary per year of Accredited Service, subject to a maximum of 40 years with a 0.25% reduction for each month the member is under age 65. If the member has 25 years of Accredited Service, the reduction is taken from age 60, and no reduction is required if the member is age 60 or older. No reduction is taken if age plus years of Accredited Service totals at least 90.
- 2.50 percent of Average Salary per year of Accredited Service, subject to a maximum of 40 years, augmented at 3.00 percent compounded annually from the age at retirement until age 65 and then actuarially reduced for each month the member is under age 65, unless the member has at least 25 years of service, then the actuarial reduction is from age 60.

DISABILITY RETIREMENT BENEFIT

Eligibility

Total and permanent disablement before attaining age 65 and 5 years of Accredited Service.

Benefit

If the member is under age 65, 75 percent of the member's annual contract salary less any Social Security and Workers' Compensation benefits payable until age 65. At age 65, a normal retirement benefit is calculated using the projected service and average salary as if the member had continued to teach in their position held at the time of disability. Members age 65 or older at time of disability receive a normal retirement benefit.

DEFERRED RETIREMENT BENEFIT

Eligibility

5 years of Accredited Service.

Benefit

2.50 percent of Average Salary per year of Accredited Service augmented at 3.00 percent compounded annually from the age at termination until 55 and then augmented at 5.00 percent compounded annually from age 55 to the age at which benefits commence. The benefit is actuarially reduced for each month the member is under age 65 at benefit commencement.

SUMMARY OF BENEFIT PROVISIONS FOR BASIC MEMBERS AS OF JULY 1, 2008

ACTIVE SURVIVOR BENEFIT (Family Benefit)

Eligibility

Active member with three years of Accredited Service.

Benefit

- Children's Benefit: 25 percent of the maximum B.A. salary for the year in which the member died for each eligible child up to a maximum of two. Benefits are paid until the child attains age 18, or 22 for full-time students.
- Spousal Benefit: 15 percent of the maximum B.A. salary for an eligible spouse who has legal custody of an eligible child. Spousal benefits cease when the spouse remarries, dies, or elects the regular survivor benefit. Electing the regular survivor benefit does not disqualify the child from receiving the family benefit.

SURVIVOR BENEFIT (Active or Retired Member)

Eligibility

Active member or retired member with five years of Accredited Service. A surviving spouse must have been married to the member for three years at the earlier of his death or retirement.

Benefit

Retirement benefit earned at the time of death or retirement, whichever is earlier, reduced for 100 percent joint survivorship. The benefit is subject to early retirement reductions.

REFUND OF CONTRIBUTIONS

Eligibility

Termination or death where no annuity is payable or a refund of contributions is chosen in lieu of an annuity.

Benefit

Member contributions with 6.00 percent interest (5.00 percent if terminated before May 16, 1989).

NORMAL FORM OF RETIREMENT BENEFITS

100 percent Joint & Survivor with unreduced annuity payments made until the death of the member.

SUMMARY OF BENEFIT PROVISIONS FOR BASIC MEMBERS AS OF JULY 1, 2008

BENEFIT INCREASES

2.00 percent compounded annually. Additional ad hoc increases are given in years when the five year time-weighted rate of return exceeds 8.50 percent. Increases occur on January 1st of each year. To be eligible, the member must have been receiving benefits for at least 12 months at the prior fiscal year end. Beneficiaries are entitled to the same benefit increases the member would have received.

For calendar years 2008 and 2009, the post-retirement adjustment is to be determined differently under a pilot project authorized by the Legislature (Laws of Minnesota 2007, Chapter 134, Article 7). Increases will be equal to the Consumer Price Index urban wage earners and clerical workers all items index as reported by the Bureau of Labor Statistics within the United States Department of Labor each year as part of the determination of annual cost of living adjustments to recipients of federal old age, survivors, and disability insurance.

The cost-of-living adjustment is determined by dividing the most recent average of third quarter monthly index values by the same average third quarter index value from the previous year, subtracting the quantity one from the resulting quotient, and expressing the result as a percentage amount, which must be rounded to the nearest one-tenth of one percent. The final amount may not be a negative number and may not exceed 2.5 percent if the rate of investment return of the retirement fund either for the most recent fiscal year or for the most recent five-year period is less than 8.5 percent. In any case, the increase is limited to a maximum of 5.0 percent in any year. Partial increases are granted for new retirees in the calendar year immediately preceding the increase on the basis of whole calendar quarters that the benefit recipient has been in pay status, calculated to the third decimal place.

SECTION 6 COORDINATED PLAN

Sec. 14

1000

TABLE 3BCOORDINATED ACTIVE MEMBERS AS OF JUNE 30, 2008

				Y	ears of Serv	ice			
Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35+	ALL
<25	101	0	0	0	0	0	0	0	101
25-29	296	65	0	0	0	0	0	0	361
30-34	221	231	55	0	0	0	0	0	507
35-39	125	178	243	25	0	0	0	0	571
40-44	98	102	185	96	22	0	0	0	503
45-49	95	98	129	106	92	5	0	0	525
50-54	86	72	111	113	91	94	11	0	578
55-59	80	77	89	92	78	75	39	6	536
60-64	49	37	34	48	51	26	15	4	264
65+	26	8	6	3	3	4	1	2	53
ALL	1,177	868	852	483	337	204	66	12	3,999

AVERAGE ANNUAL EARNINGS

					Years of Ser	vice			
Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35+	ALL
<25	18,206	0	0	0	0	0	0	0	18,206
25-29	31,991	50,393	0	0	0	0	0	0	35,304
30-34	36,574	50,467	58,994	0	0	0	0	0	45,336
35-39	39,382	55,584	64,779	70,811	0	0	0	0	56,617
40-44	40,758	57,237	65,883	72,681	73,918	0	0	0	60,883
45-49	32,432	58,970	66,575	73,112	79,420	83,755	0	0	62,712
50-54	34,529	53,332	65,286	70,934	73,683	79,386	80,584	0	64,231
55-59	26,819	54,716	68,758	69,217	72,931	75,216	79,908	81,057	63,020
60-64	27,758	47,418	67,960	74,001	73,108	75,605	83,862	86,502	61,650
65+	8,622	32,682	60,020	52,037	69,482	78,161	102,217	90,756	34,088
ALL	32,361	53,587	65,492	71,613	74,966	77,454	81,257	84,489	55,622

	Prior Fiscal Year Earnings (In THOUSANDS) by Years of Service												
Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	ALL				
ALL	38,089	46,513	55,799	34,589	25,264	15,801	5,363	1,014	222,432				

ACCENTERS OF

1000

TABLE 4BCOORDINATED SERVICE RETIREMENTS AS OF JUNE 30, 2008

	Years Retired												
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL			
<45	0	0	0	0	0	0	0	0	0	0			
45-49	0	0	0	0	0	0	0	0	0	0			
50-54	0	0	0	0	0	0	0	0	0	0			
55-59	81	0	0	0	0	0	0	0	0	81			
60-64	156	39	0	0	0	0	0	0	0	195			
65-69	114	86	23	0	0	0	0	0	0	223			
70-74	15	54	39	4	0	0	0	0	0	112			
75-79	4	6	27	13	1	0	0	0	0	51			
80-84	1	4	2	9	4	1	0	0	0	21			
85-89	0	0	0	0	3	0	0	0	0	3			
90+	0	0	0	0	0	1	0	0	0	1			
ALL	371	189	91	26	8	2	0	0	0	687			

AVERAGE ANNUAL BENEFIT

					Years	Retired				
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
<45	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0
55-59	16,848	0	0	0	0	0	0	0	0	16,848
60-64	19,443	15,521	0	0	0	0	0	0	0	18,659
65-69	15,373	15,250	10,558	0	0	0	0	0	0	14,829
70-74	10,604	14,265	14,868	7,942	0	0	0	0	0	13,759
75-79	9,437	7,866	16,804	11,224	4,090	0	0	0	0	13,503
80-84	451	20,297	28,406	11,516	5,906	12,270	0	0	0	13,238
85-89	0	0	0	0	3,772	0	0	0	0	3,772
90+	0	0	0	0	0	3,626	0	0	0	3,626
ALL	17,109	14,897	14,651	10,820	4,879	7,948	0	0	0	15,768

	Total Annual Benefit (IN THOUSANDS) by Years RETIRED											
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL		
ALL	6,348	2,816	1,333	281	39	16	0	0	0	10,833		

221121121

to and

100 million (1997)

TABLE 5BCOORDINATED DISABILITY RETIREMENTS AS OF JUNE 30, 2008

	Years Disabled												
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL			
<45	0	0	1	0	0	0	0	0	0	1			
45-49	0	1	1	0	0	0	0	0	0	2			
50-54	0	1	0	0	0	0	0	0	0	1			
55-59	3	1	0	0	0	0	0	0	0	4			
60-64	1	1	2	0	0	0	0	0	0	4			
65-69	0	0	0	0	0	0	0	0	0	0			
70-74	0	0	0	0	0	0	0	0	0	0			
75-79	0	0	0	0	0	0	0	0	0	0			
80-84	0	0	0	0	0	0	0	0	0	0			
85-89	0	0	0	0	0	0	0	0	0	0			
90 +	0	0	0	0	0	0	0	0	0	0			
ALL	4	4	4	0	0	0	0	0	0	12			

AVERAGE ANNUAL BENEFIT

	Years Disabled													
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL				
<45	0	0	2,543	0	0	0	0	0	0	2,543				
45-49	0	22,900	5,233	0	0	0	0	0	0	14,066				
50-54	0	24,346	0	0	0	0	0	0	0	24,346				
55-59	9,244	9,070	0	0	0	0	0	0	0	9,201				
60-64	4,867	16,522	21,490	0	0	0	0	0	0	16,093				
65-69	0	0	0	0	0	0	0	0	0	0				
70-74	0	0	0	0	0	0	0	0	0	0				
75-79	0	0	0	0	0	0	0	0	0	0				
80-84	0	0	0	0	0	0	0	0	0	0				
85-89	0	0	0	0	0	0	0	0	0	0				
90 +	0	0	0	0	0	0	0	0	0	0				
ALL	8,150	18,210	12,689	0	0	0	0	0	0	13,016				

	Total Annual Benefit (IN THOUSANDS) by Years DISABLED											
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL		
ALL	33	73	51	0	0	0	0	0	0	156		

C. C. C.

in the second

ALC: NOT STREET

TABLE 6BCOORDINATED SURVIVORS AS OF JUNE 30, 2008

_	Years Since Death												
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL			
<45	1	5	2	0	0	0	0	0	0	8			
45-49	0	0	0	0	0	0	0	0	0	0			
50-54	3	2	0	0	0	0	0	0	0	5			
55-59	3	0	0	0	0	0	0	0	0	3			
60-64	1	2	2	0	0	0	0	0	0	5			
65-69	2	5	0	0	0	0	0	0	0	7			
70-74	0	1	1	1	0	0	0	0	0	3			
75-79	0	0	0	1	0	0	0	0	0	1			
80-84	0	0	0	2	0	0	0	0	0	2			
85-89	0	0	0	0	0	0	0	0	0	0			
90+	0	0	0	0	0	0	0	0	0	0			
ALL	10	15	5	4	0	0	0	0	0	34			

AVERAGE ANNUAL BENEFIT

	Years Since Death												
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL			
<45	498	9,320	2,116	0	0	0	0	0	0	6,416			
45-49	0	0	0	0	0	0	0	0	0	0			
50-54	24,013	6,697	0	0	0	0	0	0	0	17,087			
55-59	13,948	0	0	0	0	0	0	0	0	13,948			
60-64	49,712	10,694	8,215	0	0	0	0	0	0	17,506			
65-69	11,868	19,053	0	0	0	0	0	0	0	17,001			
70-74	0	41,323	13,586	24,701	0	0	0	0	0	26,537			
75-79	0	0	0	7,865	0	0	0	0	0	7,865			
80-84	0	0	0	7,097	0	0	0	0	0	7,097			
85-89	0	0	0	0	0	0	0	0	0	0			
90+	0	0	0	0	0	0	0	0	0	0			
ALL	18,783	14,532	6,849	11,690	0	0	0	0	0	14,318			

	Total Annual Benefit (IN THOUSANDS) by Years SINCE DEATH												
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL			
ALL	188	218	34	47	0	0	0	0	0	487			

20 J. 197

TABLE 11BCOORDINATED DETERMINATION OF CONTRIBUTION SUFFICIENCYAS OF JULY 1, 2008

(dollars in thousands)

	Percent of Payroll	Dol	lar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A			
1. Employee Contributions	5.50%	\$	13,021
2. Employer Contributions	8.34%	\$	19,745
3. Supplemental Contribution			
a. 1996 Legislation	0.50%		1,178
b. 1997 Legislation	1.14%		2,707
4. Total	15.48%	\$	36,651
 B. REQUIRED CONTRIBUTIONS - CHAPTER 356 1. Normal Cost 			
a. Retirement Benefits	7.04%	\$	16,667
b. Disability Benefits	0.13%		300
c. Surviving Spouse and Child Benefits	0.16%		385
d. Deferred Retirements	1.10%		2,614
e. Total	8.43%	\$	19,966
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date	:	\$	236,754

SUMMARY OF BENEFIT PROVISIONS FOR COORDINATED MEMBERS AS OF JULY 1, 2008

STATUTORY CONTRIBUTIONS

The statutory contributions for members and the employer are 5.50% and 8.34% respectively.

PARTICIPANTS

Professional Educators in the public schools of the City of St. Paul, excluding charter schools, whose position requires a license from the Minnesota Department of Education, and who are covered under the Social Security Act and make contributions to the Teachers' Retirement Fund Association are covered under the Coordinated Plan.

ALLOWABLE SERVICE

Service rendered while making employee contributions. Service is granted on a proportional basis for part-time teachers.

SALARY

Total compensation excluding lump sum payments for unused leave at termination and employer-paid insurance coverage.

AVERAGE SALARY

Average of the highest five successive years of Salary while making contributions. In cases where the Allowable Service is less than five years, Average Salary is based on the years available.

NORMAL RETIREMENT BENEFIT

Eligibility

Three years of Allowable Service. The eligibility age is 65 for those hired before July 1, 1989, and the earlier of eligibility for full Social Security retirement benefits and age 66 for those hired on or after July 1, 1989. A Proportionate Retirement Annuity is available at Normal Retirement Age and one year of Allowable Service.

Benefit

1.70 percent of Average Salary for each year of Allowable Service.

-37-

SUMMARY OF BENEFIT PROVISIONS FOR COORDINATED MEMBERS AS OF JULY 1, 2008

EARLY RETIREMENT BENEFIT

Eligibility

Attainment of age 55 and 3 years of Allowable Service.

Benefit

Members hired before July 1, 1989, are eligible for the greater of the following benefits. Members hired after July 1, 1989, are eligible for the benefits shown in item (b):

- a) 1.20 percent of Average Salary for each of the first ten years of Allowable Service plus 1.70 percent of Average Salary for each subsequent year of Allowable Service. There is a reduction of 0.25 percent for each month the member is under age 65, or under age 62 with 30 years of Allowable Service. No reduction applies if the age plus years of service totals at least 90.
- b) 1.70 percent of Average Salary per year of Allowable Service augmented at 3.00 percent compounded annually from the age at retirement until age 65 and then actuarially reduced for each month the member is under age 65.

DISABILITY RETIREMENT BENEFIT

Eligibility

Total and permanent disablement and three years of Allowable Service with at least two years of Allowable Service since the last interruption in service

Benefit

Normal retirement benefit payable for life without reduction for early commencement. The benefit is reduced by any Workers' Compensation benefits payable.

DEFERRED RETIREMENT BENEFIT

Eligibility

Three years of Allowable Service.

Benefit

Benefit computed under law in effect at termination and payable as a normal or early retirement benefit. For members hired on or before June 30, 2006, the benefit is augmented at 3.00 percent compounded annually from the age at termination until 55 and then augmented at 5.00 percent compounded annually from age 55 to the age at which benefits commence. For members hired after June 30, 2006, the benefit is augmented at 2.5% compounded annually from the age at termination to the age at which benefits commence.

SURVIVOR BENEFIT (Active Members)

Eligibility

Active member with three years of Allowable service. A surviving spouse is defined as the person legally married to the member at the time of death. If none, a dependent child who is the legal child of the member, who is less than 20 years of age and unmarried.

SUMMARY OF BENEFIT PROVISIONS FOR COORDINATED MEMBERS AS OF JULY 1, 2008

Benefit

Retirement benefit earned at the time of death reduced for 100 percent joint survivorship and payable at the time the member would have attained age 55 or immediately if the former member had attained age 55 at time of death. The benefit is subject to 50 percent of the applicable actuarial reduction for early commencement from normal retirement age.

REFUND OF CONTRIBUTIONS

Eligibility

Termination or death where no annuity is payable or a refund of contributions is chosen in lieu of an annuity.

Benefit

Member contributions with 6.00 percent interest (5.00 percent if terminated before May 16, 1989).

NORMAL FORM OF RETIREMENT BENEFITS

Straight life annuity. Actuarially equivalent options are available to provide post-retirement survivor benefits.

BENEFIT INCREASES

2.00 percent compounded annually. Additional ad hoc increases are given in years when the five year time-weighted rate of return exceeds 8.50 percent. Increases occur on January 1st of each year. To be eligible, the member must have been receiving benefits for at least 12 months at the prior fiscal year end. Beneficiaries are entitled to the same benefit increases the member would have received.

For calendar years 2008 and 2009, the post-retirement adjustment is to be determined differently under a pilot project authorized by the Legislature (Laws of Minnesota 2007, Chapter 134, Article 7). Increases will be equal to the Consumer Price Index urban wage earners and clerical workers all items index as reported by the Bureau of Labor Statistics within the United States Department of Labor each year as part of the determination of annual cost of living adjustments to recipients of federal old age, survivors, and disability insurance.

The cost-of-living adjustment is determined by dividing the most recent average of third quarter monthly index values by the same average third quarter index value from the previous year, subtracting the quantity one from the resulting quotient, and expressing the result as a percentage amount, which must be rounded to the nearest one-tenth of one percent. The final amount may not be a negative number and may not exceed 2.5 percent if the rate of investment return of the retirement fund either for the most recent fiscal year or for the most recent five-year period is less than 8.5 percent. In any case, the increase is limited to a maximum of 5.0 percent in any year. Partial increases are granted for new retirees in the calendar year immediately preceding the increase on the basis of whole calendar quarters that the benefit recipient has been in pay status, calculated to the third decimal place.

SECTION 7 GASB DISCLOSURES

1 U

terrerest

ker lai

TABLE 14 SCHEDULE OF FUNDING PROGRESS (dollars in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (A)	Actuarial Accrued Liability (B)	Unfunded AAL (UAAL) (B)-(A)	Funded Ratio (A)/(B)	Actual Covered Payroll (Previous FY) (C)	UAAL as % of Covered Payroll ((B)-(A))/(C)	
07/01/91	\$ 326,357	\$ 495,740	\$ 169,383	65.83%	\$ 110,131	153.80%	
07/01/92	355,998	533,865	177,867	66.68%	115,274	154.30%	
07/01/93	393,168	571,059	177,891	68.85%	122,930	144.71%	
07/01/94	407,275	596,441	189,166	68.28%	129,308	146.29%	
07/01/95	445,733	633,070	187,337	70.41%	139,175	134.61%	
07/01/96	494,931	664,072	169,141	74.53%	145,677	116.11%	
07/01/97	556,406	805,066	248,660	69.11%	151,363	164.28%	
07/01/98	625,053	861,584	236,531	72.55%	168,564	140.32%	
07/01/99	704,233	938,847	234,614	75.01%	178,254	131.62%	
07/01/00	801,823	998,253	196,430	80.32%	187,950	104.51%	
07/01/01	869,045	1,060,931	191,886	81.91%	202,915	94.56%	
07/01/02	899,572	1,141,300	241,728	78.82%	201,456	119.99%	
07/01/03	898,760	1,189,361	290,601	75.57%	205,655	141.31%	
07/01/04	898,860	1,251,460	352,600	71.82%	221,685	159.05%	
07/01/05	905,292	1,299,832	394,540	69.65%	223,762	174.30%	
07/01/06	938,919	1,346,072	407,153	69.75%	226,351	177.66%	
07/01/07	1,015,722	1,380,151	364,429	73.59%	229,172	159.02%	
07/01/08	1,075,951	1,432,040	356,089	75.13%	235,993	150.89%	

TABLE 15 SCHEDULE OF EMPLOYER CONTRIBUTIONS (dollars in thousands)

Year Ended June 30	Actuarially Required Contribution Rate (A)	Actual Covered Payroll (B)	Actual Member Contributions (C)		Annual Required Contributions [(A)*(B)]-(C)		al Employer atributions ⁽¹⁾	Percentage Contributed		
1991	18.86%	\$ 110,131	\$	7,518	\$	13,253	\$ 10,255	77.38%		
1992	18.87%	115,274		7,821		13,931	10,489	75.29		
1993	19.74%	122,930		8,202		16,064	10,839	67.47		
1994	18.68%	129,308		9,100		15,055	11,736	77.95		
1995	18.63%	139,175		8,788		17,140	13,084	76.34		
1996	17.96%	145,677		9,093		17,071	15,101	88.46		
1997	16.97%	151,363		9,484		16,202	16,043	99.02		
1998	20.35%	168,564		11,057		23,246	21,702	93.36		
1999	18.82%	178,254		11,649		21,898	21,066	96.20		
2000	18.09%	187,950		13,184		20,816	22,622	108.68		
2001	16.57%	202,915		13,170		20,453	23,569	115.23		
2002	15.81%	201,456		14,468		17,382	24,216	139.32		
2003	18.56% $^{(2)}$	205,655		14,222		23,948	23,370	97.59		
2004	20.36%	221,685		14,308		30,827	23,771	77.11		
2005	21.59%	223,762		13,587		34,723	23,833	68.64		
2006	23.78%	226,351		13,453		40,373	24,015	59.48		
2007	24.55%	229,172		13,438		42,823	24,117	56.32		
2008	23.40%	235,993		13,642		41,580	24,285	58.40		

⁽¹⁾ Includes contributions from other sources (if applicable)

⁽²⁾ Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 16.19%

TABLE 16 DEVELOPMENT OF THE FUND (dollars in thousands)

Year Ended June 30	mployer tributions	mployee tributions	Supplemental Contributions		Net Investment Return		Administrative Expenses		Benefit Payments		Actuarial Value of Assets EOY	
2002	-	-		-		-		-		-	\$	899,572
2003	\$ 19,186	\$ 14,222	\$	4,184	\$	26,429	\$	499	\$	64,334		898,760
2004	20,378	14,308		3,393		31,417		516		68,880		898,860
2005	20,435	13,587		3,398		43,082		559		73,510		905,293
2006	19,815	13,453		4,200		76,317		591		79,567		938,919
2007	19,666	13,438		4,451		124,214		696		84,271		1,015,722
2008	20,775	13,642		3,509		112,804		691		89,810		1,075,951

TABLE 17GASB SUPPLEMENTARY INFORMATION

July 1, 2008							
Entry Age Normal							
Level Percent of Pay, Open, Assuming Five Percent Payroll							
Growth							
25 year open period							
5-Year Smoothed Market							
8.50% Pre-retirement and Post-retirement							
5.00% - 9.90%; age and service based							
2.00% *							
4,121							
2,851							
1,695							
_1,403							
10,070							

*Cost-of-living adjustments at January 1, 2009 will be 2.50% due to the COLA Pilot Program.

SECTION 8 Appendix

fance and

been cound

St. Paul Teachers' Retirement Jund Association

Carol J. Adams W. Matthew Bogenschultz Feryle W. Borgeson Mike McCollor

TRUSTEES & OFFICERS Karen Odegard John R hultz Chong Thao Erma E John Brodrick Eugene

John R. Kunz......President Erma E. McGuire.....Vice President Eugene R. Waschbusch...Secretary-Treasurer Phillip Kapler......Executive Director 1619 Dayton Avenue, Room 309 Saint Paul. MN 55104-6206 Phone (651) 642-2550 Fax (651) 642-2553

July 18, 2008

Honorable Mary Murphy343 State Office Building100 Rev. Dr. Martin Luther King Jr. Blvd.Saint Paul, Minnesota 55155

RE: Proposed Actuarial Assumption Changes for the SPTRFA

Dear Rep. Murphy:

The Board of Trustees requested a study from our actuary, Gabriel, Roeder, Smith and Company, to compare plan experience with the forecasted outcomes for the period from July 1, 2000 through June 30, 2006. The purpose of this Experience Study was to assess current assumptions, comparing actual experience to expected or projected experience, recommending any changes that might enhance the accuracy of future valuations, and thereby, measures they contain regarding the adequacy of annual contributions to the fund.

This Experience Study provides a review of the economic and demographic assumptions used to value the fund. The economic assumptions reviewed include :

- the long-term rate of return on investments
- general wage or payroll increases
- inflation

Demographic assumptions reviewed include :

- mortality
- disability rates
- termination rates
- salary increases
- retirement rates

A summary of the key findings and recommendations are noted on page 2 of the Experience Study dated October 1, 2007, and are also listed on the following page.

Rep. Mary Murphy 2000-06 Experience Study

- a) Continue use of the current retirement rate structure. Adjust rates slightly to account for slightly higher expected retirements.
- b) Change withdrawal rates to service-based rates with slightly higher expected withdrawals.
- c) Reduce disability rates to 60% of the former rates.
- d) Change the male post-retirement mortality setback from 3 to 4 years. No change in mortality otherwise.
- e) Further study of the salary increase and combined service annuity assumptions is recommended.

An estimation of the fiscal impact of these proposed changes was derived using results of the July 1, 2006 actuarial valuation report, updated to reflect a change in the service used for benefit projections in the valuation; service under the Combined Service Annuity was used only for eligibility purposes and not for benefits assumed to be provided by the Fund. A summary of the fiscal impact is included in Section III of the GRS study.

The net result from applying the preceding recommended changes were to increase the unfunded liability by approximately \$11.0 million. The accrued liability funded ratio decreased from 70.77% to 70.18%. Required contributions increased from 23.60% to 23.80% of payroll. This was measured using an amortization period ending June 30, 2021, the target date then in effect. That amortization period has subsequently been extended. The actual effect of adopting the proposed changes will differ from these results somewhat, as the funding status and demographics of the fund will also be different. GRS recommends an effective date of July 1, 2008 for the proposed changes.

The Board has reviewed and recommends that the Commission approve each of the changes recommended by GRS. We will also pursue further analysis on the salary increase assumption, and bring any findings to the Commission at a later date. Further study of the distribution of combined service law liabilities among the plans may be warranted. Enclosed is an Appendix with tables provided by GRS specifying how our valuation assumptions would be modified. If the LCPR approves the Experience Study recommendations, the Board will direct GRS to implement the new assumptions when developing the July 1, 2008 actuarial valuation

Best Regards,

Phillip Kapler Executive Director

Courtesy: John Kunz, Pres......SPTRFA Larry Martin, Exec Dir.....LCPR James Koss, Actuary.....GRS