ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION

THE REPORT OF AN ANALYSIS OF THE NON-ECONOMIC EXPERIENCE AND A STUDY OF THE ECONOMIC ASSUMPTIONS

JULY 1, 2000 TO JUNE 30, 2006

Gabriel Roeder Smith & Company

October 1, 2007

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

Subject: Experience Review for the Period Beginning July 1, 2000, and Ending June 30, 2006

Dear Mr. Kapler:

Submitted in this report are the results of an analysis of the non-economic experience of active members of the Retirement Plan, and mortality experience of retired members.

The analysis was based upon the data furnished for annual actuarial valuations, concerning members who died, withdrew, or became disabled or retired.

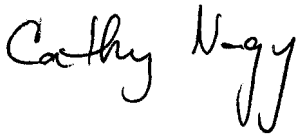
The analysis covered the 6-year period beginning July 1, 2000, and ending June 30, 2006.

This report is divided into the following sections:

Executive Summary
Section I - Analysis of Non-Economic Experience
Section II - Analysis of Economic Experience
Section III - Impact of Proposed Non-Economic Assumptions on Liabilities and Contributions

Respectfully submitted,

Jim Koss, ASA, MAAA
Consulting Actuary



Cathy Nagy, FSA, MAAA
Consulting Actuary

WJK/CN:lr

EXECUTIVE SUMMARY

BACKGROUND

The St. Paul Teachers' Retirement Fund Association ("the Fund") is a defined benefit program. The benefits are defined by statute and are based, in part, on a member's salary and years of service. These benefits are paid at some future point in time when members satisfy certain age and service requirements.

Each year as of July 1, the actuary values the liabilities and employer contribution requirements of the Fund. In the process, assumptions must be made regarding the future experience with regard to the following risk areas:

1. **Rates of retirement** of active members.
2. **Rates of withdrawal** among active members.
3. **Rates of disability** among active members.
4. **Rates of death** among active members, retirees and beneficiaries.
5. **Patterns of salary increases** to be experienced by members.
6. Effect of the **Combined Service Annuity** provision on retirement benefits.
7. Effect of **Optional Forms of Payment** at retirement.

These assumptions are discussed in Section I of this report.

Assumptions should be carefully chosen and continually monitored. A poor initial choice of assumptions or continued use of outdated assumptions can lead to:

- Understated costs resulting in either (i) sharp increases in required contributions at some point in the future, or (ii) in the extreme situation, an inability to pay benefits when due;

- Overstated costs resulting in either (i) benefit levels that are kept below the level that could be supported by the contribution income, or (ii) an unnecessarily large burden on the current generation of members, employers and taxpayers.

A single set of assumptions should not be expected to be suitable forever. Things change, and our understanding of things also change (whether or not the things themselves are changing).

The last experience study for the Fund covered the six-year period ending June 30, 2000.

In this report, the current actuarial assumptions are reviewed and compared with actual experience for the years 2000-2006. Changes in certain assumptions are suggested based upon this comparison and our general experience with public employee retirement plans.

No single 6-year experience period should be given full credibility in the setting of actuarial valuation assumptions. When we see significant differences between what is expected from our assumptions and actual experience, our attitude in recommending a change in assumptions is to select rates that would produce results somewhere between the actual and expected experience. In this way, with each experience study the actuarial assumptions become better and better representations of actual experience. Temporary conditions that might influence a particular experience study period will not unduly influence the choice of long-term assumptions.

We are recommending certain changes in assumptions. The following table lists the various assumption changes and their impact on the required contribution:

Assumption	Recommendation	Financial Impact
Retirement Rates	No change to rate structure. Small changes in rates at various ages. Slight increase in current expected retirements.	Slight Increase
Withdrawal	Change from select and ultimate to strictly service-based rates. More terminations expected under proposed rates.	Slight Decrease
Disability rates	Reduce rates to 60% of current rates.	Slight Decrease
Mortality		
Pre-retirement	No Change.	Cost neutral
Post-retirement	Increase male setback from 3 to 4 years.	Increase
Salary Increases	Further study	None
Combined Service Annuity	Further study	None
Optional Forms of Payment	No change for valuation. Consider changing factors used in calculating optional forms of payment.	None

The recommended changes are discussed in more detail in the following sections.

SECTION I

ANALYSIS OF NON-ECONOMIC EXPERIENCE

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
RETIREMENT

BASIC MEMBERS WITH
AGE AND SERVICE NOT SUFFICIENT TO MEET THE RULE OF 90

The Plan provisions establish the minimum eligibility requirements for retirement. Basic members are eligible for an unreduced service retirement benefit at age 65 or older with 5 or more years of credited service, or an unreduced Tier I service retirement benefit when age plus years of credited service totals at least 90. Retirement cost, however, is determined not by the minimum eligibility requirements but by the ages at which members actually retire. The valuation does not assume that everyone retires at earliest eligibility. The assumption about timing of retirement once eligibility has been established is a major ingredient in cost calculations. Note that higher rates of retirement with full benefits generally result in higher computed contributions, and vice versa.

Experience during the last 6 years was considered in the analysis shown on the following pages. The "Exposure" column shows the number of employees eligible to retire at various ages throughout the 6-year experience period. An individual could potentially be counted up to six times if eligible each year in the period. By tabulating employees in this fashion we are able to answer the question "For all employees eligible at condition X, how many retired?" There were only a small number of exposures for ages 63 and older. This makes the ratios of actual to expected retirements in these years very volatile. This should be taken into account when assessing the data.

There were 175 retirements of basic members with age and service not sufficient to meet the rule of 90 during the 6-year experience period. Approximately 116 retirements were expected, according to our current assumptions. The margin between actual and expected retirements is quite large and indicates that some revision to the current rates is needed. Based on our findings, we propose the following changes for the retirement rates:

- Higher retirement rates at the earlier ages in the retirement pattern; except for
- Slightly lower retirement rate at age 55 due to lower than expected observed retirements; and
- Immediate retirement at age 70 and above.

Applying the proposed rates to historical data we would have expected 144 retirements.

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
RETIREMENT

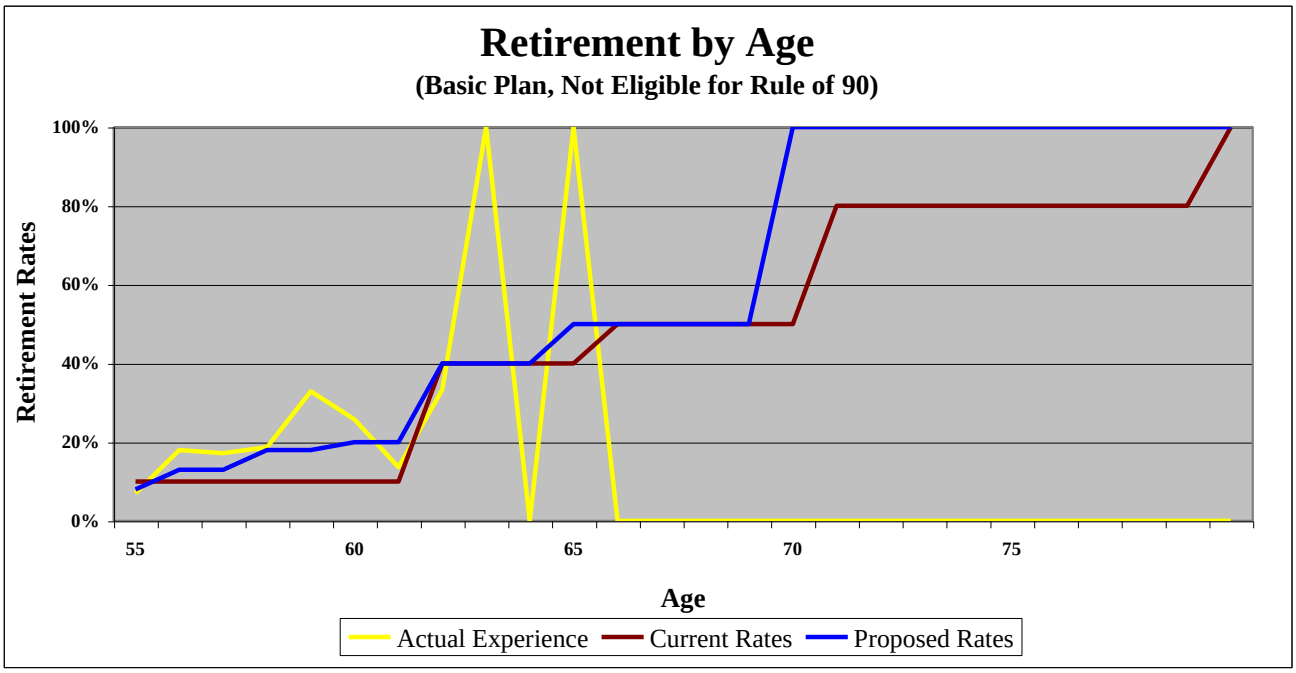
BASIC MEMBERS WITH
AGE AND SERVICE NOT SUFFICIENT TO MEET THE RULE OF 90

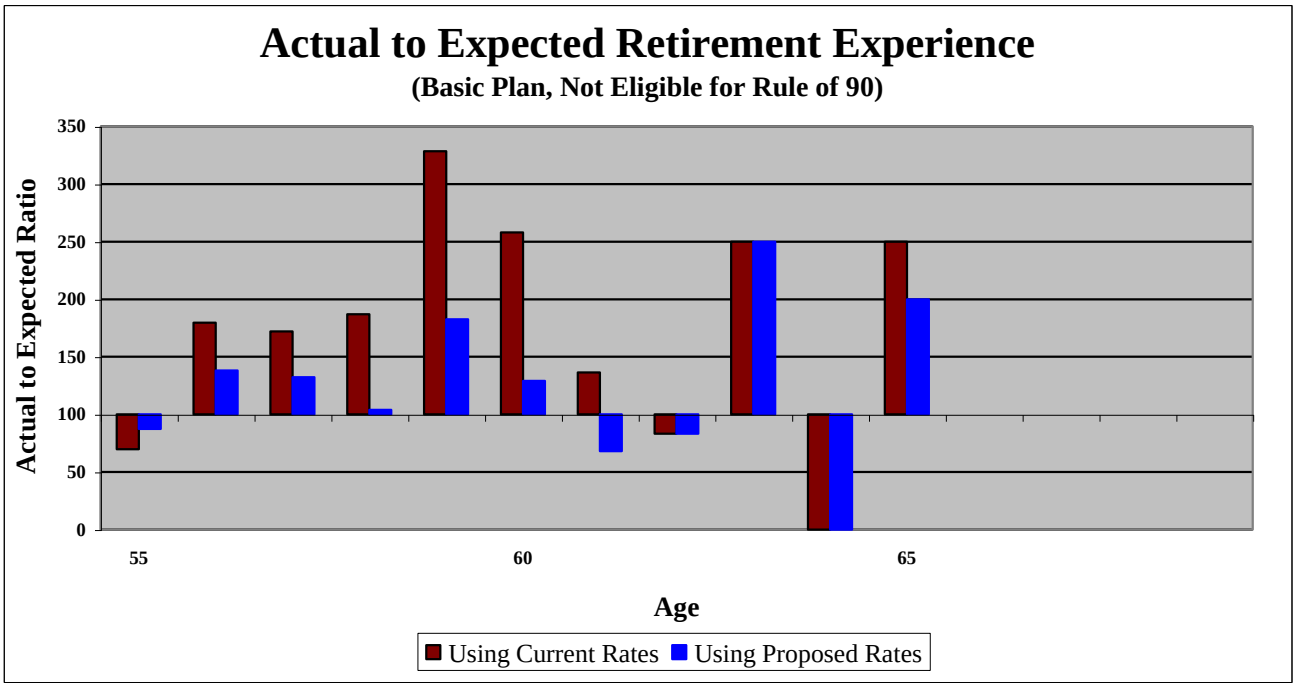
Age	Current Rate	Proposed Rate
55	0.10	0.08
56	0.10	0.13
57	0.10	0.13
58	0.10	0.18
59	0.10	0.18
60	0.10	0.20
61	0.10	0.20
62	0.40	0.40
63	0.40	0.40
64	0.40	0.40
65	0.40	0.50
66	0.50	0.50
67	0.50	0.50
68	0.50	0.50
69	0.50	0.50
70	0.50	1.00
71	0.80	1.00
72	0.80	1.00
73	0.80	1.00
74	0.80	1.00
75	0.80	1.00
76	0.80	1.00
77	0.80	1.00
78	0.80	1.00
79	0.80	1.00
80 & Over	1.00	1.00

Age	Exposures	Actual Retirements	Expected Retirements		Actual to Expected Ratio	
			Current	Proposed	Current	Proposed
55	358	25	35.8	28.6	69.8 %	87.3 %
56	306	55	30.6	39.8	179.7	138.3
57	186	32	18.6	24.2	172.0	132.3
58	123	23	12.3	22.1	187.0	103.9
59	70	23	7.0	12.6	328.6	182.5
60	31	8	3.1	6.2	258.1	129.0
61	22	3	2.2	4.4	136.4	68.2
62	12	4	4.8	4.8	83.3	83.3
63	1	1	0.4	0.4	250.0	250.0
64	1	0	0.4	0.4	0.0	0.0
65	1	1	0.4	0.5	250.0	200.0
66	0	0	0.0	0.0	N/A	N/A
67	0	0	0.0	0.0	N/A	N/A
68	0	0	0.0	0.0	N/A	N/A
69	0	0	0.0	0.0	N/A	N/A
Subtotal	1,111	175	115.6	144.0	151.4	121.5
70 and over	0	0	0.0	0.0	N/A	N/A
Total	1,111	175	115.6	144.0	151.4	121.5

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
RETIREMENT

BASIC MEMBERS WITH
AGE AND SERVICE NOT SUFFICIENT TO MEET THE RULE OF 90





ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
RETIREMENT

BASIC MEMBERS WITH
AGE AND SERVICE SUFFICIENT TO MEET THE RULE OF 90

There were 246 retirements of basic members with age and service sufficient to meet the rule of 90 during the 6-year experience period. Approximately 270 retirements were expected, according to our current assumptions. Although the margin between actual and expected retirements in total is not unreasonable, we recommend small changes to the current rates. Based on our findings, we propose the following changes for the retirement rates:

- Slightly lower retirement rates for ages 59 to 63 and 66 to 69 due to lower than expected observed retirements; and
- Slightly higher retirement rates at age 56 and 65 due to higher than expected observed retirements; and
- Immediate retirement at age 70 and above.

Applying the proposed rates to historical data we would have expected 257 retirements.

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
RETIREMENT

BASIC MEMBERS WITH
AGE AND SERVICE SUFFICIENT TO MEET THE RULE OF 90

Age	Current Rate	Proposed Rate
55	0.40	0.50
56	0.40	0.50
57	0.40	0.40
58	0.40	0.40
59	0.40	0.35
60	0.40	0.35
61	0.40	0.35
62	0.40	0.35
63	0.40	0.35
64	0.40	0.40
65	0.40	0.50
66	0.50	0.30
67	0.50	0.30
68	0.50	0.30
69	0.50	0.30
70	0.50	1.00
71	0.80	1.00
72	0.80	1.00
73	0.80	1.00
74	0.80	1.00
75	0.80	1.00
76	0.80	1.00
77	0.80	1.00
78	0.80	1.00
79	0.80	1.00
80 & Over	1.00	1.00

Age	Exposures	Actual Retirements	Expected Retirements		Actual to Expected Ratio	
			Current	Proposed	Current	Proposed
55	0	0	0.0	0.0	N/A %	N/A %
56	48	27	19.2	24.0	140.6	112.5
57	99	38	39.6	39.6	96.0	96.0
58	113	45	45.2	45.2	99.6	99.6
59	102	34	40.8	35.7	83.3	95.2
60	70	21	28.0	24.5	75.0	85.7
61	50	15	20.0	17.5	75.0	85.7
62	50	19	20.0	17.5	95.0	108.6
63	42	6	16.8	14.7	35.7	40.8
64	40	19	16.0	16.0	118.8	118.8
65	22	14	8.8	11.0	159.1	127.3
66	10	2	5.0	3.0	40.0	66.7
67	6	2	3.0	1.8	66.7	111.1
68	4	0	2.0	1.2	0.0	0.0
69	4	2	2.0	1.2	100.0	166.7
Subtotal	660	244	266.4	252.9	91.6	96.5
70 and over	4	2	3.3	4.0	60.6	50.0
Total	664	246	269.7	256.9	91.2	95.8

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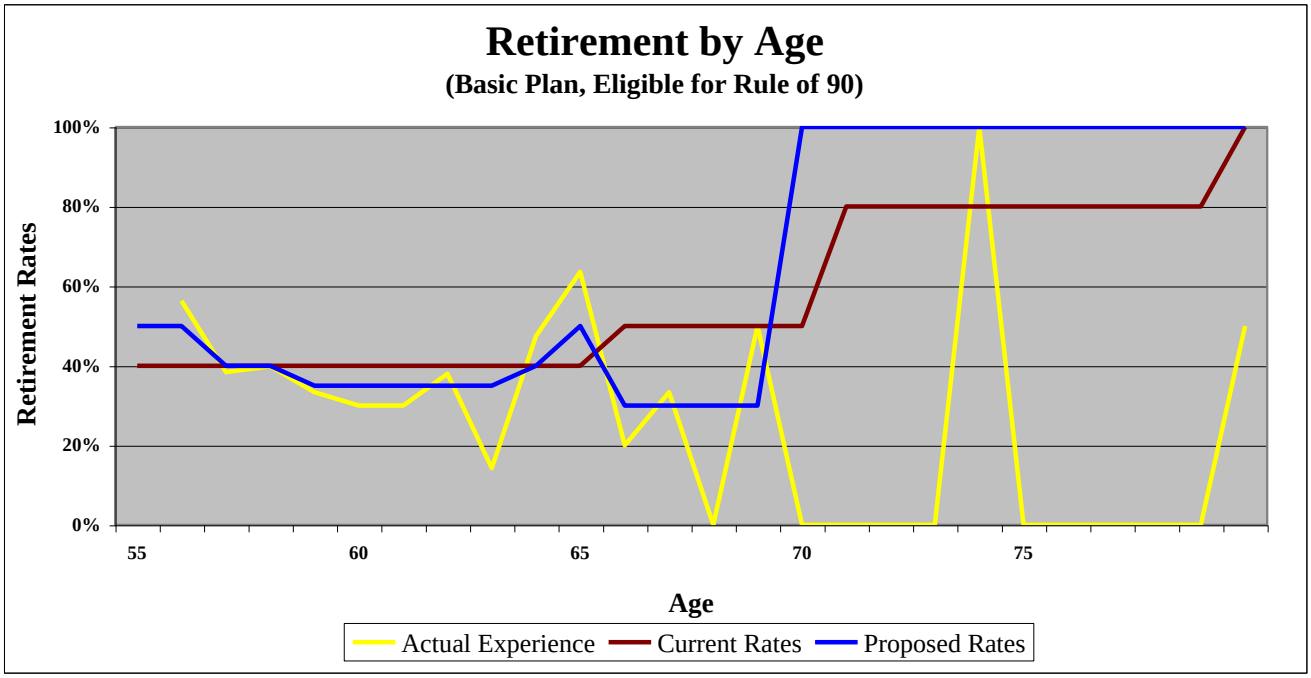
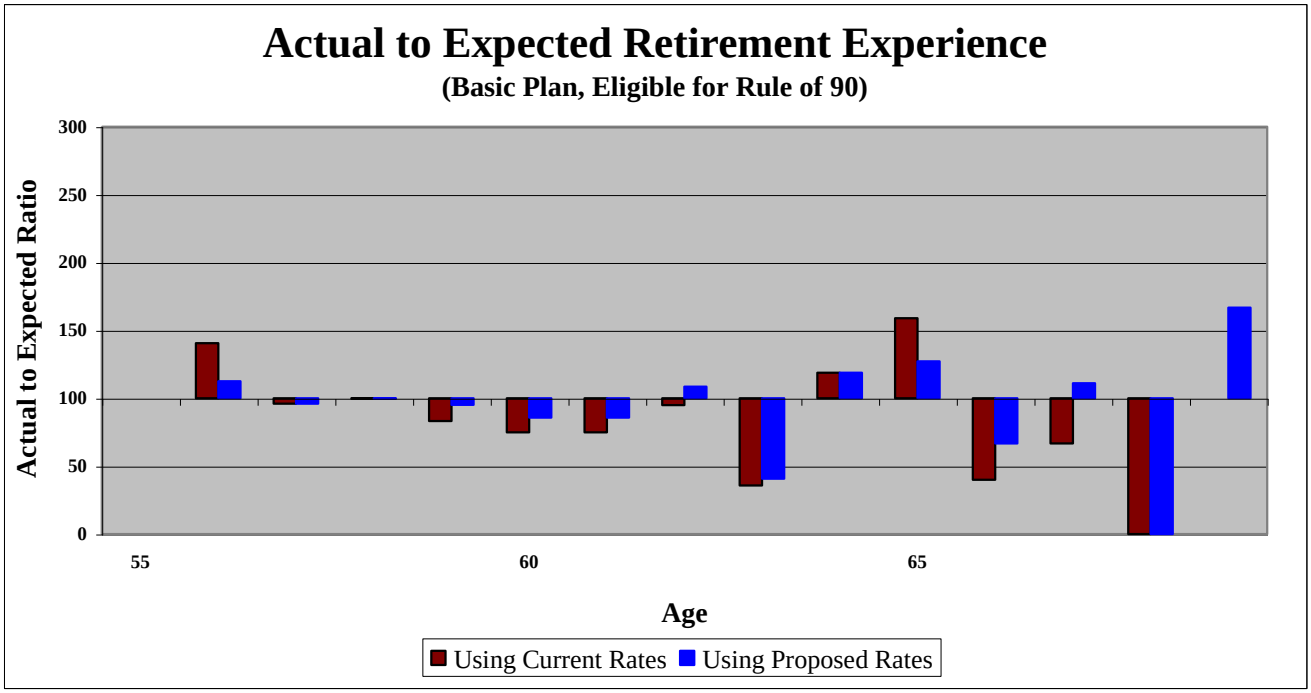
2000-2006 EXPERIENCE ANALYSIS
RETIREMENT

BASIC MEMBERS WITH
AGE AND SERVICE SUFFICIENT TO MEET THE RULE OF 90





COORDINATED MEMBERS HIRED BEFORE JULY 1, 1989 WITH AGE AND SERVICE NOT SUFFICIENT TO MEET THE RULE OF 90 AND MEMBERS HIRED AFTER JULY 1, 1989

Coordinated members hired before July 1, 1989, are eligible for an unreduced service retirement benefit at age 65 or older with 3 or more years of credited service. The normal retirement age for coordinated members hired after July 1, 1989 is the earlier of age 66 and eligibility for full Social Security retirement benefits. Coordinated members hired before July 1, 1989 are eligible for an unreduced Tier I service retirement when age plus years of credited service totals at least 90. Accordingly, retirement experience is grouped into those not eligible for an unreduced benefit due to the rule of 90 (either because they do not satisfy the age and service requirement or because they were hired after July 1, 1989) and those that are eligible for an unreduced benefit due to the rule of 90.

Experience during the last 6 years was considered in the analysis shown on the following pages. There were 312 retirements of coordinated members not eligible for the rule of 90 during the 6-year experience period. Approximately 255 retirements were expected, according to our current assumptions. The margin between actual and expected retirements indicates that some revision to the current rates is needed. Based on our findings, we propose the following changes for the retirement rates:

- Slightly higher retirement rates at ages 58 to 61 and age 65 due to higher than expected observed retirements; and
- Slightly lower retirement rates at ages 66 to 69 due to lower than expected observed retirements; and
- Immediate retirement at age 70 and above.

Applying the proposed rates to historical data we would have expected 292 retirements.

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
RETIREMENT

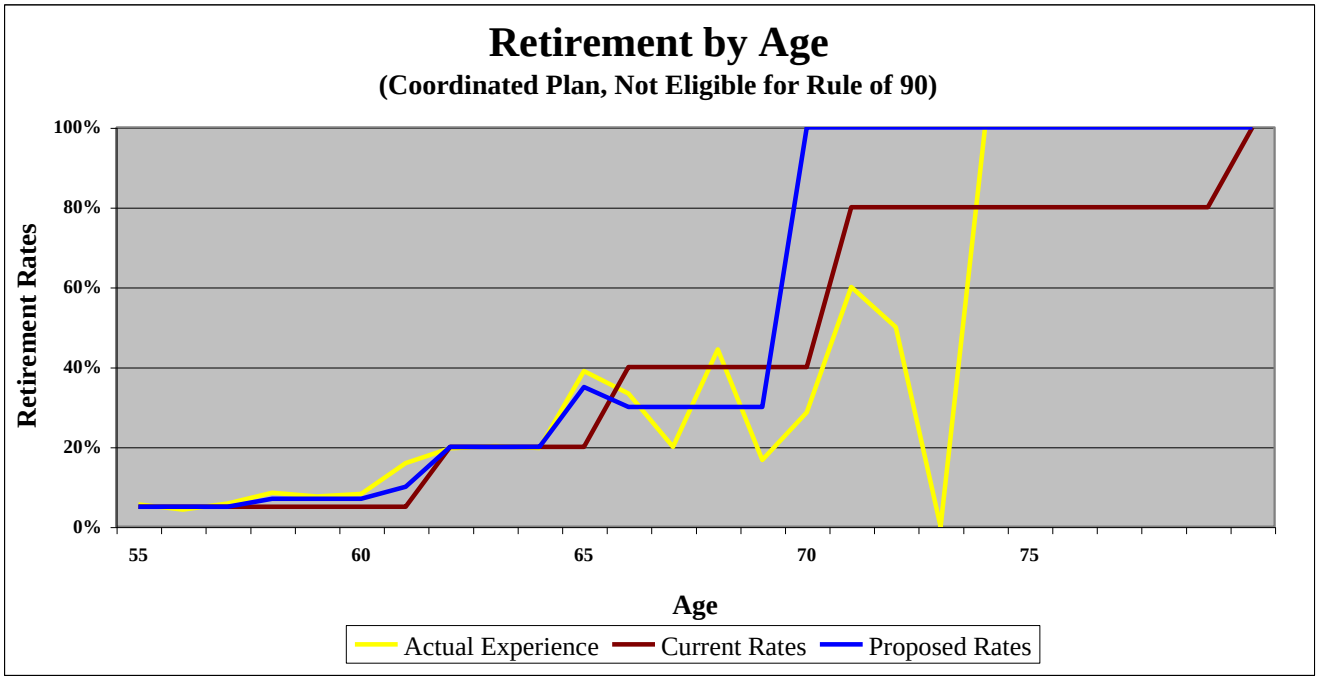
COORDINATED MEMBERS HIRED BEFORE JULY 1, 1989 WITH AGE AND SERVICE NOT SUFFICIENT TO MEET THE RULE OF 90 AND MEMBERS HIRED AFTER JULY 1, 1989

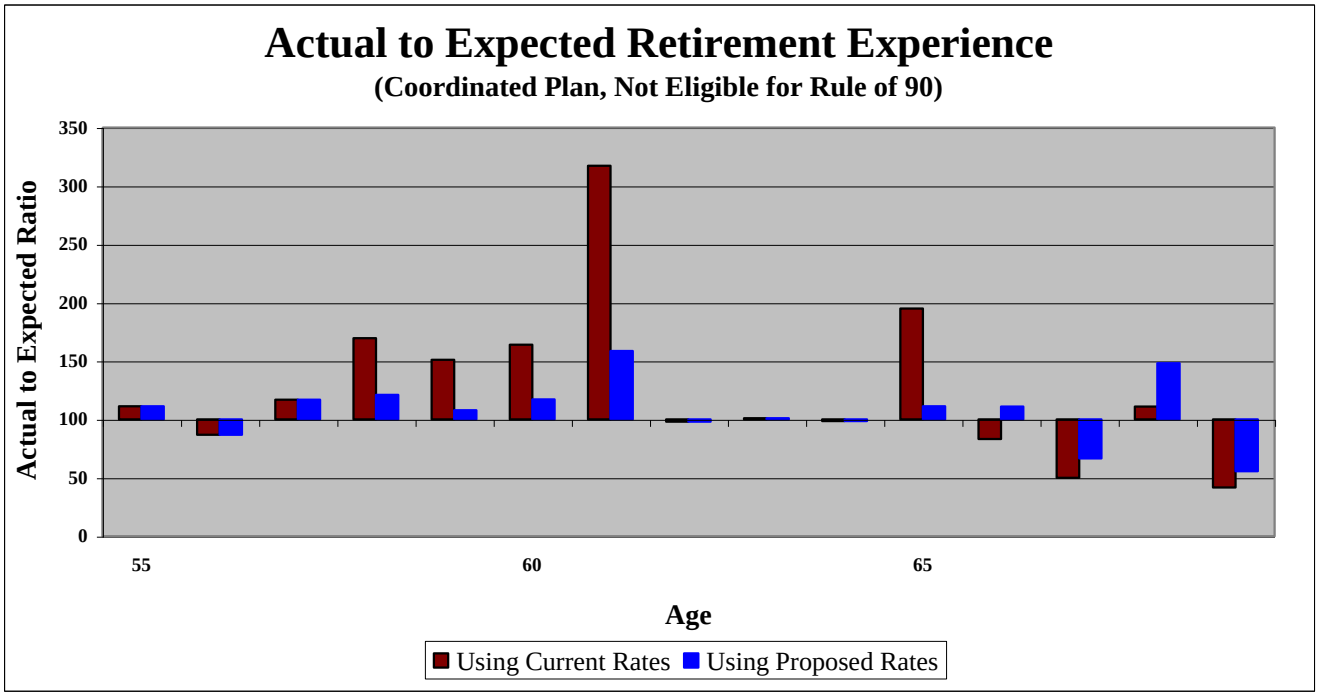
Age	Current Rate	Proposed Rate
55	0.05	0.05
56	0.05	0.05
57	0.05	0.05
58	0.05	0.07
59	0.05	0.07
60	0.05	0.07
61	0.05	0.10
62	0.20	0.20
63	0.20	0.20
64	0.20	0.20
65	0.20	0.35
66	0.40	0.30
67	0.40	0.30
68	0.40	0.30
69	0.40	0.30
70	0.40	1.00
71	0.80	1.00
72	0.80	1.00
73	0.80	1.00
74	0.80	1.00
75	0.80	1.00
76	0.80	1.00
77	0.80	1.00
78	0.80	1.00
79	0.80	1.00
80 & Over	1.00	1.00

Age	Exposures	Actual Retirements	Expected Retirements		Actual to Expected Ratio	
			Current	Proposed	Current	Proposed
55	557	31	27.9	27.9	111.3 %	111.3 %
56	483	21	24.2	24.2	87.0	87.0
57	445	26	22.3	22.3	116.9	116.9
58	401	34	20.1	28.1	169.6	121.1
59	331	25	16.6	23.2	151.1	107.9
60	256	21	12.8	17.9	164.1	117.2
61	208	33	10.4	20.8	317.3	158.7
62	158	31	31.6	31.6	98.1	98.1
63	104	21	20.8	20.8	101.0	101.0
64	76	15	15.2	15.2	98.7	98.7
65	59	23	11.8	20.7	194.9	111.4
66	30	10	12.0	9.0	83.3	111.1
67	25	5	10.0	7.5	50.0	66.7
68	18	8	7.2	5.4	111.1	148.1
69	6	1	2.4	1.8	41.7	55.6
Subtotal	3,157	305	245.1	276.2	124.5	110.4
70 and over	16	7	10.0	16.0	70.0	43.8
Total	3,173	312	255.1	292.2	122.3	106.8

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
RETIREMENT

COORDINATED MEMBERS HIRED BEFORE JULY 1, 1989 WITH AGE AND SERVICE NOT SUFFICIENT TO MEET THE RULE OF 90 AND MEMBERS HIRED AFTER JULY 1, 1989





ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
RETIREMENT

COORDINATED MEMBERS HIRED BEFORE JULY 1, 1989 WITH AGE AND SERVICE SUFFICIENT TO MEET THE RULE OF 90

There were 43 retirements of coordinated members eligible for the rule of 90 during the 6-year experience period. Approximately 52 retirements were expected, according to our current assumptions. The margin between actual and expected retirements is mostly accounted for by experience at ages 70 and older where experience is thin. For experience at ages 69 and younger there were 38 actual retirements and 39.6 expected under current assumptions. While this indicates that the difference between actual and expected retirements in total is not unreasonable, closer examination of the experience at individual ages indicates that the rates could be modified to better fit experience. Based on our findings, we propose the following minor changes for the retirement rates:

- Slightly higher retirement rates where experience indicates a peak or spike in retirements (55, 56, 61, 62, 65); and
- Slightly lower retirement rates at ages 63 to 69 (excluding 65) due to lower than expected observed retirements; and
- Immediate retirement at age 70 and above.

Applying the proposed rates to historical data we would have expected 39 retirements for ages 69 and younger and 56 retirements at all ages.

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
RETIREMENT

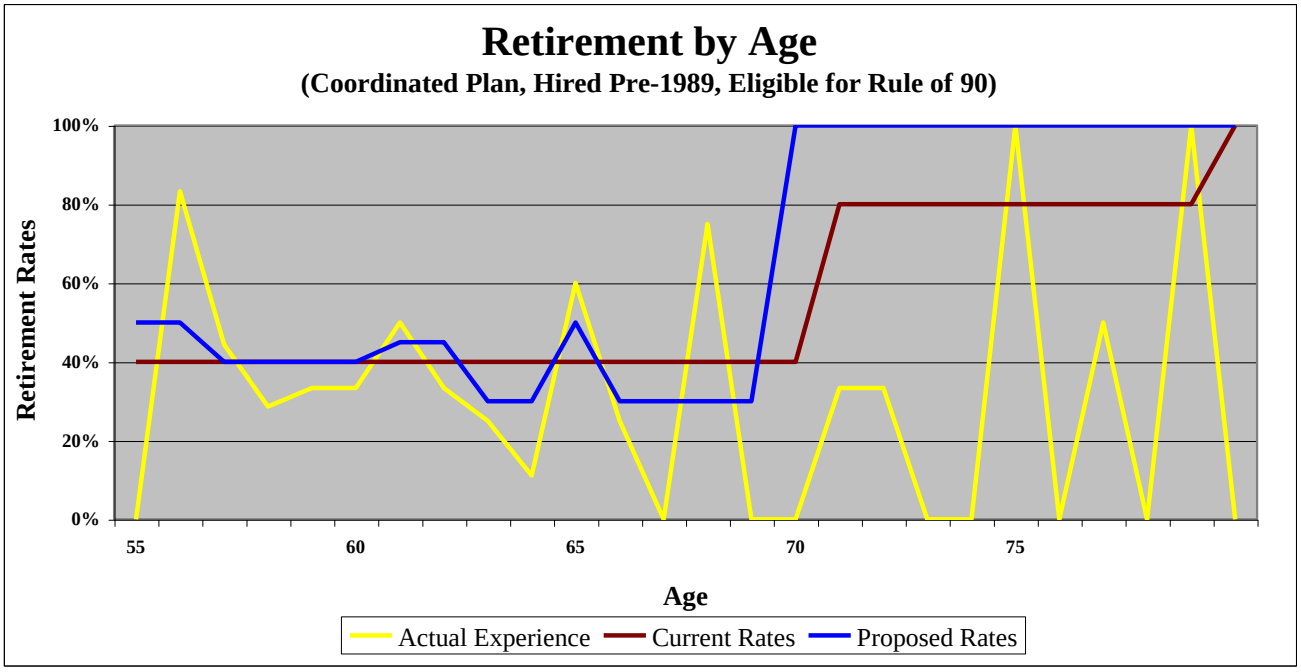
COORDINATED MEMBERS HIRED BEFORE JULY 1, 1989 WITH AGE AND SERVICE SUFFICIENT TO MEET THE RULE OF 90

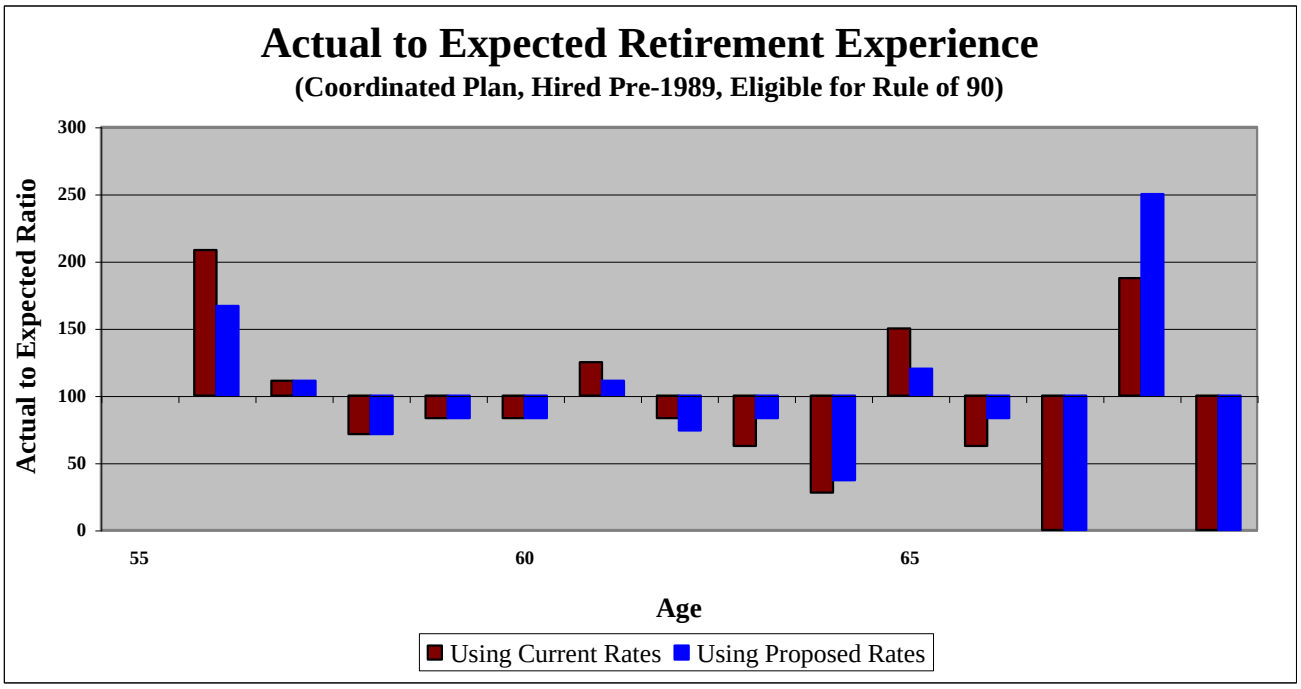
Age	Current Rate	Proposed Rate
55	0.40	0.50
56	0.40	0.50
57	0.40	0.40
58	0.40	0.40
59	0.40	0.40
60	0.40	0.40
61	0.40	0.45
62	0.40	0.45
63	0.40	0.30
64	0.40	0.30
65	0.40	0.50
66	0.40	0.30
67	0.40	0.30
68	0.40	0.30
69	0.40	0.30
70	0.40	1.00
71	0.80	1.00
72	0.80	1.00
73	0.80	1.00
74	0.80	1.00
75	0.80	1.00
76	0.80	1.00
77	0.80	1.00
78	0.80	1.00
79	0.80	1.00
80 & Over	1.00	1.00

Age	Exposures	Actual Retirements	Expected Retirements		Actual to Expected Ratio	
			Current	Proposed	Current	Proposed
55	0	0	0.0	0.0	N/A %	N/A %
56	6	5	2.4	3.0	208.3	166.7
57	9	4	3.6	3.6	111.1	111.1
58	7	2	2.8	2.8	71.4	71.4
59	9	3	3.6	3.6	83.3	83.3
60	12	4	4.8	4.8	83.3	83.3
61	10	5	4.0	4.5	125.0	111.1
62	6	2	2.4	2.7	83.3	74.1
63	8	2	3.2	2.4	62.5	83.3
64	9	1	3.6	2.7	27.8	37.0
65	10	6	4.0	5.0	150.0	120.0
66	4	1	1.6	1.2	62.5	83.3
67	3	0	1.2	0.9	0.0	0.0
68	4	3	1.6	1.2	187.5	250.0
69	2	0	0.8	0.6	0.0	0.0
Subtotal	99	38	39.6	39.0	96.0	97.4
70 and over	17	5	12.8	17.0	39.1	29.4
Total	116	43	52.4	56.0	82.1	76.8

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
RETIREMENT

COORDINATED MEMBERS HIRED BEFORE JULY 1, 1989 WITH AGE AND SERVICE SUFFICIENT TO MEET THE RULE OF 90





ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
TERMINATION

A deferred retirement benefit is based on pay and service credit at the time of withdrawal for vested members. The benefit calculated at the time of withdrawal is augmented at an annual percentage rate until the date the member begins receiving benefits. Members who withdraw receive much less from the plan compared to members who stay in employment until retirement eligibility. Higher rates of withdrawal result in lower computed contributions, and vice-versa.

The current assumptions include a service-based withdrawal table for members with fewer than 3 years of service, and an age-based withdrawal table for members with 3 or more years of service. The comparison of the actual experience with what was expected by the current assumptions is shown on pages I-14 and I-15. Looking at the graphs on page I-15 the current service-based table follows the pattern of actual experience somewhat, but the age-based assumptions do not appear to be a good model of actual experience.

We also performed an analysis of withdrawals strictly by years of service. This analysis was further divided by gender. We found that a service-based table, based on gender, was a better fit to actual experience than the current model. Therefore, we are proposing the service-based tables shown on page I-16. Based on conversations with Association staff and a review of the termination experience from the Experience Study covering 1994-2000, it appears that the current level of turnover is a trend rather than a temporary fluctuation. Therefore, we have given more weight to the termination experience revealed during the most recent study period, and the proposed assumptions lie about two-thirds of the way between the current assumptions and actual experience.

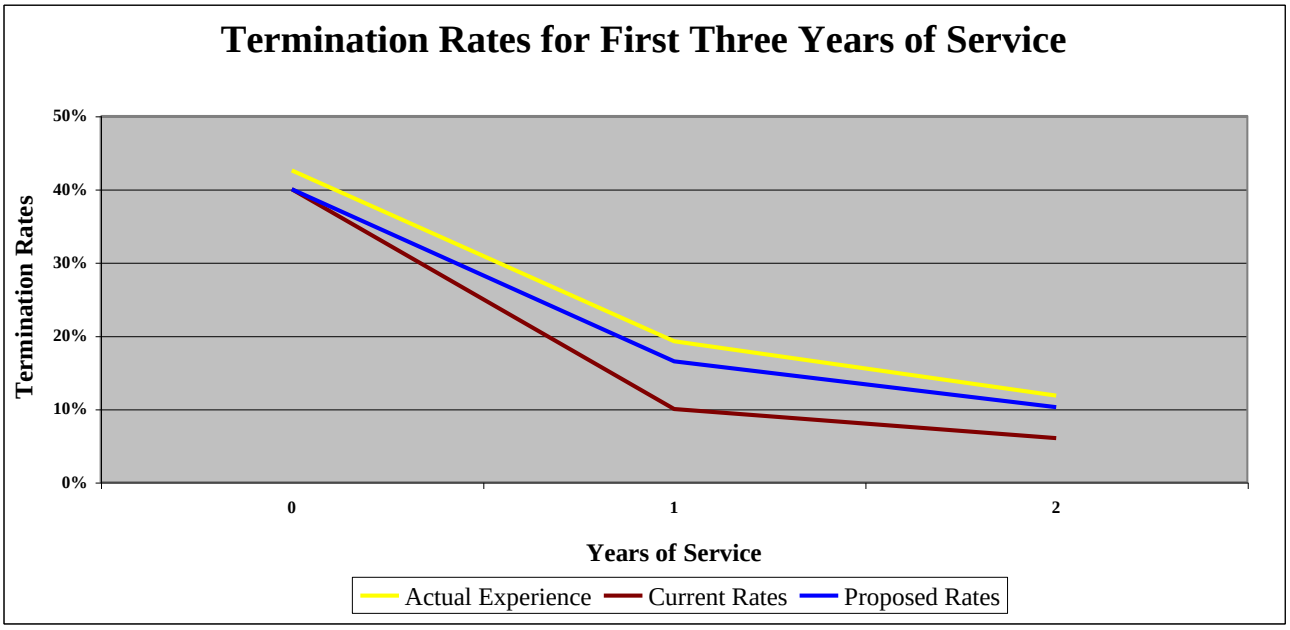
ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
TERMINATION

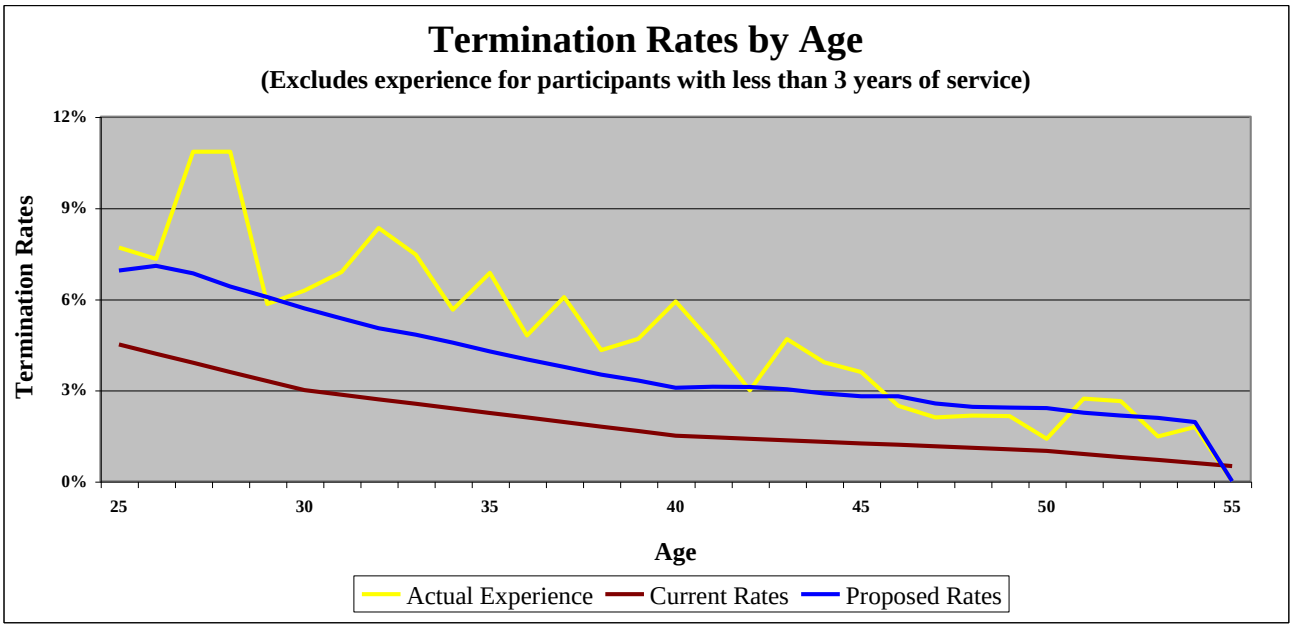
Age	Current Termination Rates			
	First Year	Second Year	Third Year	Ultimate Rates
20	0.4000	0.1000	0.0600	0.0800
25	0.4000	0.1000	0.0600	0.0800
30	0.4000	0.1000	0.0600	0.0800
35	0.4000	0.1000	0.0600	0.0600
40	0.4000	0.1000	0.0600	0.0450
45	0.4000	0.1000	0.0600	0.0300
50	0.4000	0.1000	0.0600	0.0150
55	0.4000	0.1000	0.0600	0.0000
60	0.4000	0.1000	0.0600	0.0000
65	0.4000	0.1000	0.0600	0.0000

Years of Service	Exposures	Decrements			Actual to Expected Ratios	
		Actual	Current Expected	Proposed Expected	Current	Proposed
0	2,880	1,226	1,152.0	1,152.0	106.4%	106.4%
1	2,255	434	225.5	372.4	192.5	116.5
2	1,786	211	107.2	182.8	196.8	115.4
Total	6,921	1,871	1,484.7	1,707.2	126.0	109.6

Age	Exposures*	Decrements			Actual to Expected Ratios	
		Actual*	Current Expected	Proposed Expected	Current	Proposed
24	1	0	0.0	0.1	0.0%	0.0%
25	13	1	0.6	0.9	170.9	110.9
26	82	6	3.4	5.8	174.2	103.1
27	212	23	8.3	14.5	278.2	158.6
28	295	32	10.6	18.9	301.3	169.1
29	377	22	12.4	22.9	176.8	96.2
30	462	29	13.9	26.3	209.2	110.3
31	494	34	14.1	26.5	241.5	128.4
32	504	42	13.6	25.4	308.6	165.5
33	536	40	13.7	25.9	292.7	154.6
34	531	30	12.7	24.2	235.4	123.9
35	539	37	12.1	23.1	305.1	160.5
36	542	26	11.4	21.8	228.4	119.5
37	511	31	10.0	19.3	311.1	161.0
38	510	22	9.2	17.9	239.7	123.0
39	512	24	8.4	17.0	284.1	141.2
40	507	30	7.6	15.6	394.5	192.0
41	507	23	7.4	15.8	312.9	145.9
42	501	15	7.0	15.6	213.9	96.4
43	513	24	6.9	15.5	346.5	154.5
44	511	20	6.6	14.8	301.1	135.4
45	501	18	6.3	14.0	287.4	128.2
46	523	13	6.3	14.6	207.1	88.8
47	571	12	6.6	14.6	182.7	82.1
48	600	13	6.6	14.7	197.0	88.5
49	652	14	6.8	15.8	204.5	88.6
50	716	10	7.2	17.3	139.7	57.9
51	772	21	6.9	17.4	302.2	120.8
52	795	21	6.4	17.2	330.2	122.1
53	815	12	5.7	17.0	210.3	70.7
54	894	16	5.4	17.4	298.3	91.8
55 and Over	0	0	0.0	0.0	N/A	N/A
Total	15,499	661	254.1	527.5	260.1	125.3

** Excludes experience for participants with less than three years of service.*


Termination Rates for First Three Years of Service
50%
40%
30%
20%
10%
0%
Termination Rates
0
1
2
Years of Service
Actual Experience
Current Rates
Proposed Rates


Termination Rates by Age
(Excludes experience for participants with less than 3 years of service)
12%
9%
6%
3%
0%
Termination Rates
25
30
35
40
45
50
55
Age
Actual Experience
Current Rates
Proposed Rates

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
TERMINATION

Years of Service	Current Rate[1]	Proposed Rate	
	M/F	Male	Female
0	40.0%	40.0%	40.0%
1	10.0	18.0	16.0
2	6.0	11.0	10.0
3	2.4	9.0	7.0
4	2.3	4.4	6.2
5	2.1	4.1	5.5
6	2.0	3.8	4.8
7	1.8	3.5	4.1
8	1.7	3.2	3.0
9	1.6	2.9	2.8
10	1.5	2.6	2.6
11 and Over	1.0	1.6	1.0

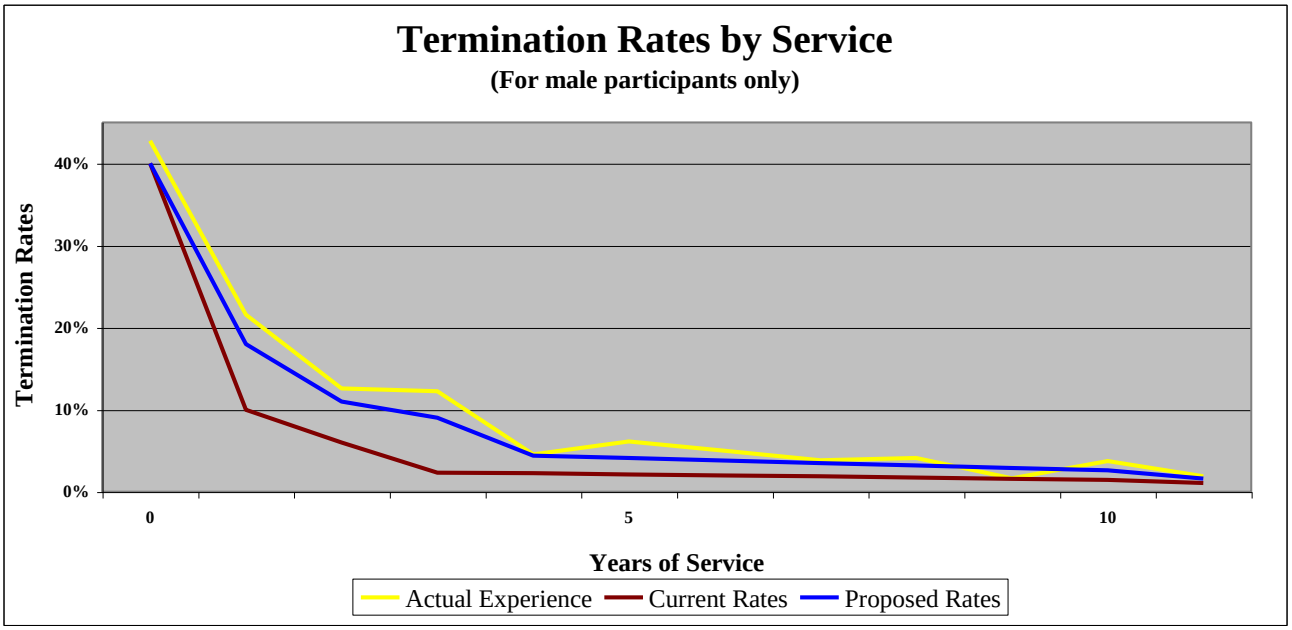
[1]Based on current age and service-based rates weighted by exposures.

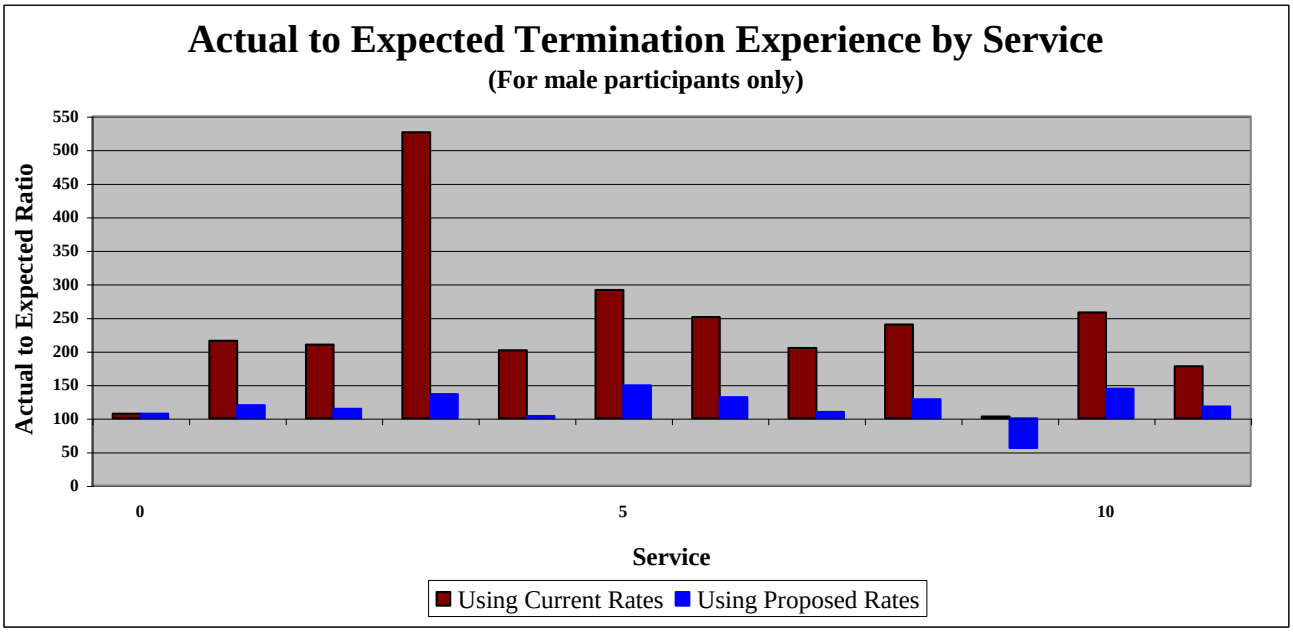
Male Experience

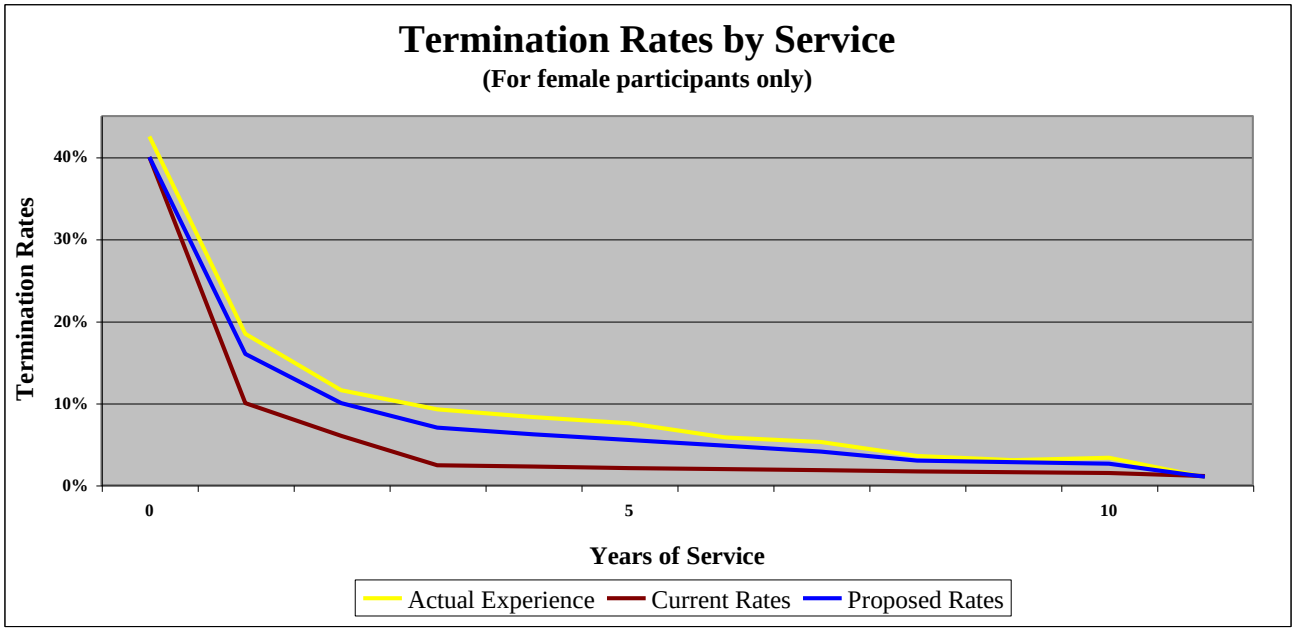
Years of Service	Exposures	Decrements			Actual to Expected Ratios	
		Actual	Current Expected	Proposed Expected	Current	Proposed
0	685	293	274.0	274.0	106.9%	106.9%
1	579	125	57.9	104.2	215.9	119.9
2	421	53	25.3	46.3	209.8	114.4
3	416	51	9.7	37.4	526.2	136.2
4	373	17	8.4	16.4	201.4	103.6
5	343	21	7.2	14.1	291.1	149.3
6	320	16	6.4	12.2	251.0	131.6
7	286	11	5.4	10.0	204.9	109.9
8	243	10	4.2	7.8	240.1	128.6
9	185	3	2.9	5.4	102.8	55.9
10	160	6	2.3	4.2	257.8	144.2
11+	1,380	26	14.6	22.1	177.9	117.8
Total	5,391	632	418.3	554.0	151.1	114.1

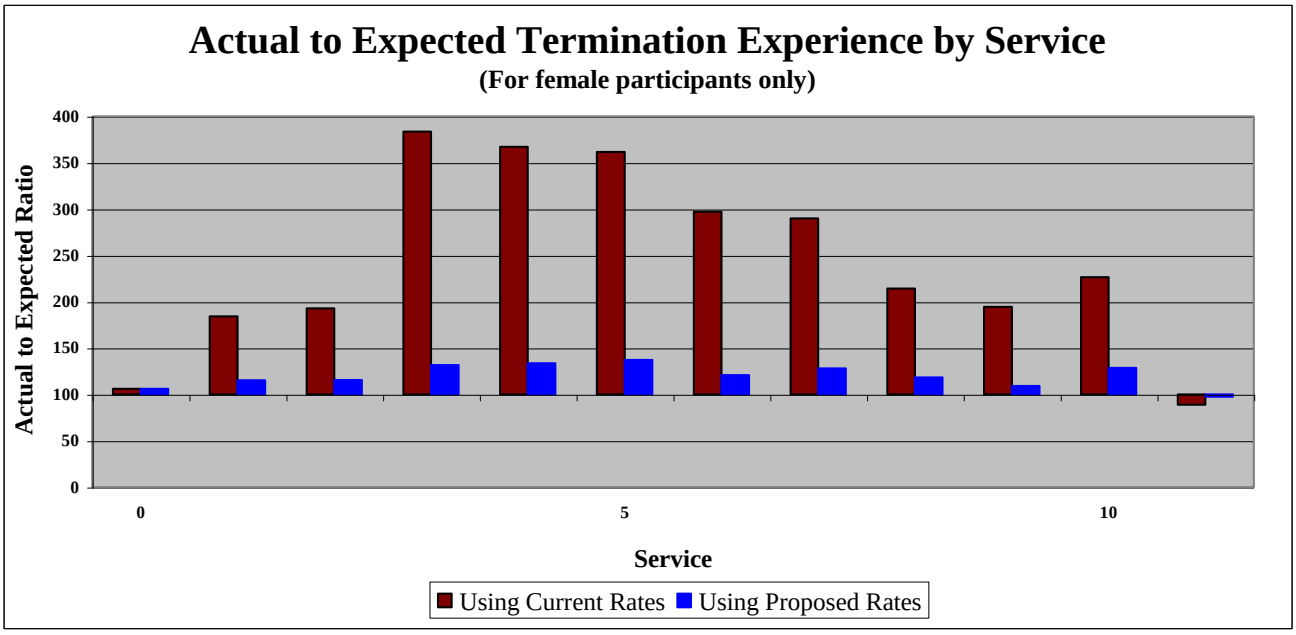
Female Experience

Years of Service	Exposures	Decrements			Actual to Expected Ratios	
		Actual	Current Expected	Proposed Expected	Current	Proposed
0	2,195	933	878.0	878.0	106.3%	106.3%
1	1,676	309	167.6	268.2	184.4	115.2
2	1,365	158	81.9	136.5	192.9	115.8
3	1,301	120	31.3	91.1	383.6	131.8
4	1,194	99	27.0	74.0	367.1	133.7
5	1,019	77	21.3	56.0	361.7	137.4
6	930	54	18.2	44.6	297.3	121.0
7	857	45	15.5	35.1	289.9	128.1
8	675	24	11.2	20.3	214.3	118.5
9	588	18	9.2	16.5	194.6	109.3
10	508	17	7.5	13.2	226.5	128.7
11+	4,721	46	51.8	47.2	88.8	97.4
Total	17,029	1,900	1,320.5	1,680.7	143.9	113.0


Termination Rates by Service
(For male participants only)
Termination Rates
40%
30%
20%
10%
0%
0
5
10
Years of Service
Actual Experience
Current Rates
Proposed Rates


Actual to Expected Termination Experience by Service
(For male participants only)
Actual to Expected Ratio
550
500
450
400
350
300
250
200
150
100
50
0
0
5
10
Service
Using Current Rates
Using Proposed Rates


Termination Rates by Service
(For female participants only)
Termination Rates
40%
30%
20%
10%
0%
0
5
10
Years of Service
Actual Experience
Current Rates
Proposed Rates


Actual to Expected Termination Experience by Service
(For female participants only)
Actual to Expected Ratio
400
350
300
250
200
150
100
50
0
0
5
10
Service
Using Current Rates
Using Proposed Rates

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
DISABILITY

The assumed rates of disability (leaving active service due to injury while not entitled to age and service retirement benefits) are a minor ingredient in cost calculations because the incidence of disability is low. Higher rates of disability generally result in somewhat higher computed contributions, and vice versa.

There were 14 incidences of disability during the 6 year experience period, half of the approximately 28 expected incidences of disability. Because the frequency of disability is low, assumptions based on actual experience can only be produced for very large retirement systems. It can be concluded from the data, however, that the disability assumption is too high. Based on discussions with Association staff, we believe the current level of disability retirements reflects a trend that is expected to continue in the future. We recommend using 60% of the rates currently in place. Applying the proposed rates to the historical data would have produced 17 expected disability retirements.

Age	Current Rate	Proposed Rate
20	0.0200%	0.0120%
25	0.0200	0.0120
30	0.0300	0.0180
35	0.0300	0.0180
40	0.0400	0.0240
45	0.0600	0.0360
50	0.1200	0.0720
55	0.2400	0.1440
60	0.4800	0.2880
65 and Over	0.0000	0.0000

Age	Exposures	Decrements			Actual to Expected Ratios	
		Actual	Current Expected	Proposed Expected	Current	Proposed
20-49	17,227	2	6	4	32.1%	53.5%
50-54	4,660	3	6	3	53.6	89.4
55-59	3,961	6	10	6	63.1	105.2
60-64	1,344	3	6	4	46.5	77.5
65 and Over	354	0	0	0	N/A	N/A
Total	27,546	14	28	17	50.4	84.0

Post-retirement mortality is an important, but relatively stable, ingredient in cost calculations. This assumption should be updated from time to time to reflect longevity improvements in general.

Pre-retirement mortality is a relatively minor ingredient in cost calculations. The frequency of pre-retirement deaths is so low that mortality assumptions based on actual experience can only be produced for very large retirement systems. We can, however, review pre-retirement mortality experience in total to gauge whether changes in assumptions are warranted.

Healthy Participants

We reviewed the mortality experience of healthy retirees during the 6 year study period. The results are shown on the following pages. The number of deaths of post-retirement females (205) was very close to what was expected under current assumptions (207). The number of deaths of post-retirement males (137) was lower than what was expected under current assumptions (161).

We recommend no change to the healthy female post-retirement mortality assumption. We recommend changing the health male post-retirement assumption from a 3 year to a 4 year setback of the 1983 Group Annuity Mortality table (83GAM) for males. Applying the proposed rates to the historical data, we would have expected 146 deaths of healthy male members in pay status during the experience period.

There were 12 pre-retirement healthy male deaths during the experience period. Approximately 13 were expected. There were 16 pre-retirement healthy female deaths during the experience period. Approximately 20 were expected. Given the small amount of data for the pre-retirement group we do not recommend changing pre-retirement assumptions at this time.

Disabled Participants

There was not enough data to perform a meaningful analysis of the mortality experience of disabled retirees. We recommend no change to disabled mortality assumptions at this time.

A Note about Mortality Rates

The current healthy mortality assumptions are based on the 83GAM tables, set back various years to reflect improvements in mortality. For example, the current 5 year setback of healthy pre-retirement

female rates means that the probability of a 65 year old female dying in the next year is found by referencing the 83GAM female mortality table at age 60. 83GAM is considered to be a static table, in the sense that the probability of a 60 year old female dying in the upcoming year is 0.4241%, whether the 60 year old was born in 1947 or 2007.

The use of generational mortality tables is an emerging trend in the actuarial industry, and is based on the assumption that life expectancy increases from generation to generation. Simply put, this means that the life expectancy of someone born in 2007 is greater than that of someone born in 1947. Adopting a generational mortality table tends to increase liabilities, as future increases in life expectancy imply longer payment of retirement benefits. Should the assumption of increased life expectancy prove true, actuarial valuations that continue to use static mortality tables will be required to update their tables to reflect the improved life expectancy, resulting in liability increases in the future. To the extent that future mortality improvements can be reflected in a current valuation, retirement systems can begin to fund the increased liabilities, thereby reducing (or eliminating) future contribution rate increases that would eventually occur with the use of static tables.

Opponents of generational mortality tables point to recent trends in declining health in the United States, such as increases in the incidence of childhood obesity and diabetes, as evidence against the premise of continued mortality improvements in the future.

We believe that the proposed mortality tables contain a sufficient level of conservatism to cover any increases in life expectancy in the near future. We will continue to monitor the use and acceptance of generational mortality tables by public retirement systems and keep the Fund apprise of emerging trends.

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
PRE AND POST-RETIREMENT HEALTHY MORTALITY

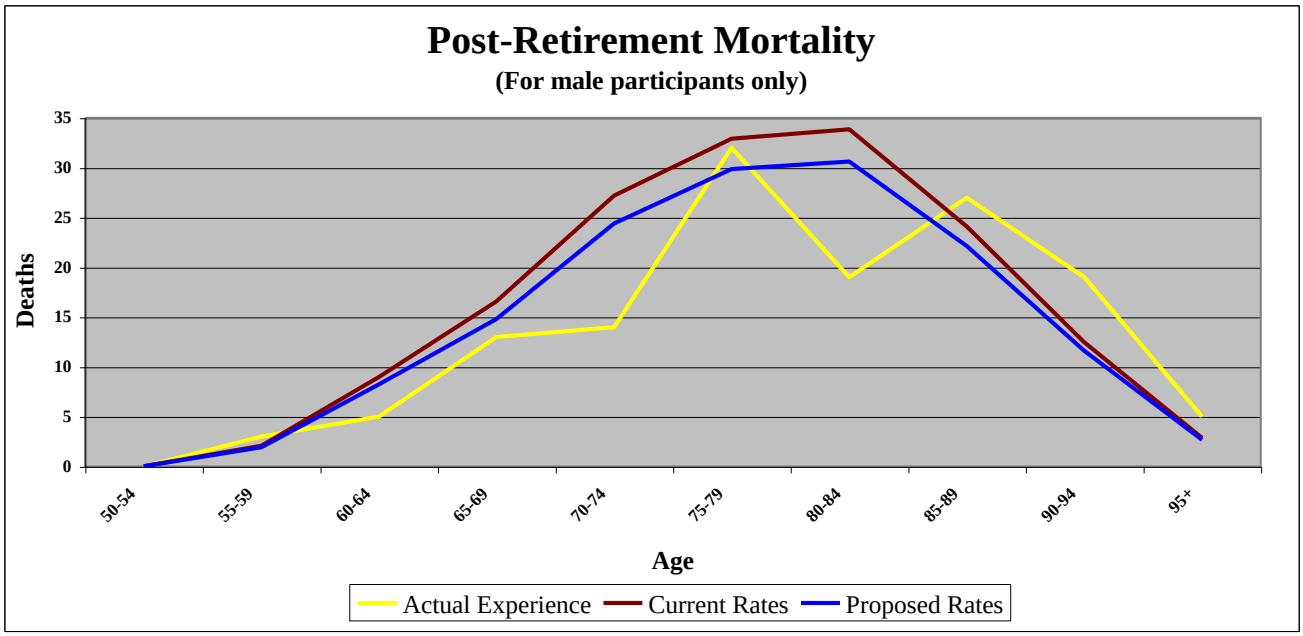
Male Post-retirement Experience

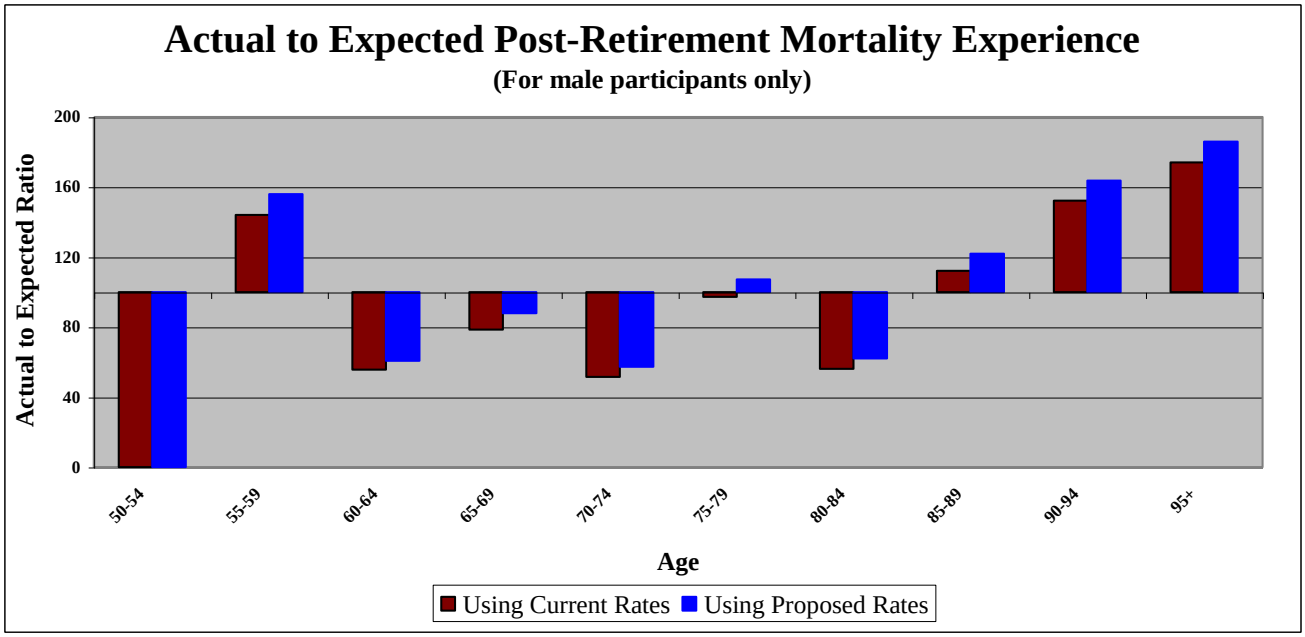
Age	Exposures	Decrements			Actual to Expected Ratios	
		Actual	Current Expected	Proposed Expected	Current	Proposed
50-54	9	0	0.0	0.0	0.0%	0.0%
55-59	337	3	2.1	1.9	144.0	155.9
60-64	1,047	5	9.0	8.2	55.7	60.7
65-69	1,176	13	16.6	14.8	78.5	87.8
70-74	1,093	14	27.2	24.4	51.5	57.4
75-79	820	32	32.9	29.8	97.3	107.2
80-84	516	19	33.8	30.6	56.1	62.1
85-89	233	27	24.1	22.1	112.0	122.0
90-94	84	19	12.5	11.6	152.2	163.7
95 and Older	14	5	2.9	2.7	174.0	185.9
Total	5,329	137	161.1	146.3	85.1	93.6

Female Post-retirement Experience

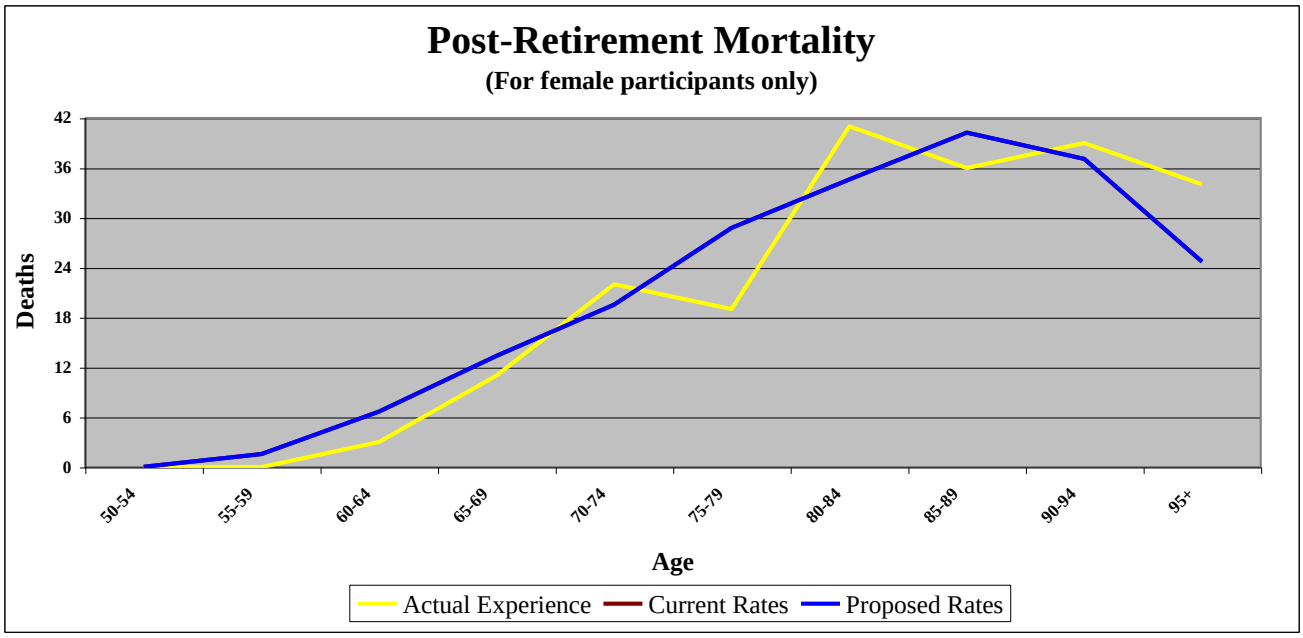
Age	Exposures	Decrements			Actual to Expected Ratios	
		Actual	Current Expected	Proposed Expected	Current	Proposed
50-54	16	0	0.0	0.0	0.0%	0.0%
55-59	496	0	1.6	1.6	0.0	0.0
60-64	1,382	3	6.7	6.7	45.0	45.0
65-69	1,681	11	13.4	13.4	82.3	82.3
70-74	1,376	22	19.6	19.6	112.5	112.5
75-79	1,059	19	28.8	28.8	66.0	66.0
80-84	736	41	34.6	34.6	118.4	118.4
85-89	527	36	40.3	40.3	89.4	89.4
90-94	312	39	37.1	37.1	105.1	105.1
95 and Older	128	34	24.7	24.7	137.7	137.7
Total	7,713	205	206.6	206.6	99.2	99.2

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
PRE AND POST-RETIREMENT HEALTHY MORTALITY

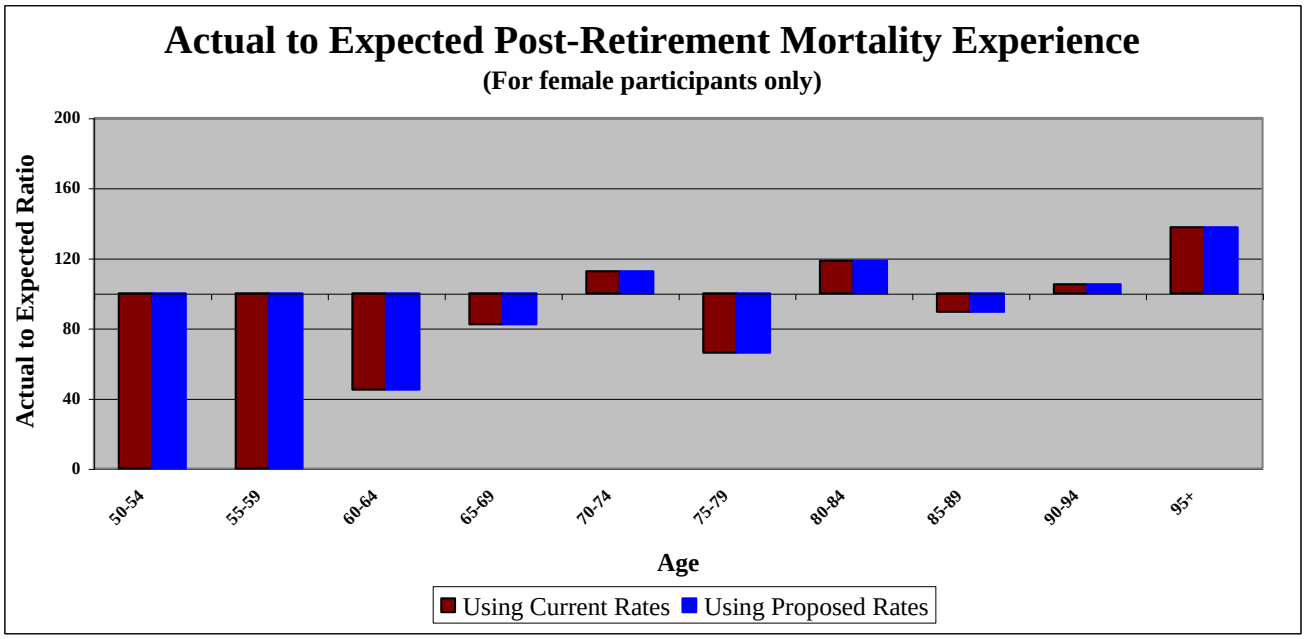




ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
PRE AND POST-RETIREMENT HEALTHY MORTALITY



Note: proposed rates equal current rates



ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
SALARY INCREASES

Pay increases granted to individual active members can be thought of as consisting of two parts. The first part would typically be an across-the-board, economic type of increase granted to most members of the group. This part relates to the effects of inflation, productivity, and other macroeconomic forces. The current base (economic) pay increase assumption is 5.0%. The second part, merit and seniority increases, would be related to the performance of individual active members during the year. This part may reflect such items as promotions and increases based on years of experience. The current merit and seniority increases reflect rates that decrease with both age and service until age 60 and 10 years of service. After this point, the salary increase is equal to the base pay increase or the "ultimate" rate of 5.0%.

In examining rates that have both an age and service component, it is sometimes illustrative to convert the age and service based rates to rates on an age basis only and rates on a service basis only. For example, if we wanted to examine the salary increase rate for members with 10 years of service, we would weight the salary increase rates for each age by the number of exposures that are at that particular age and have 10 years of service. The graphs of the actual experience and current rates converted to an age-basis and a service-basis follow.

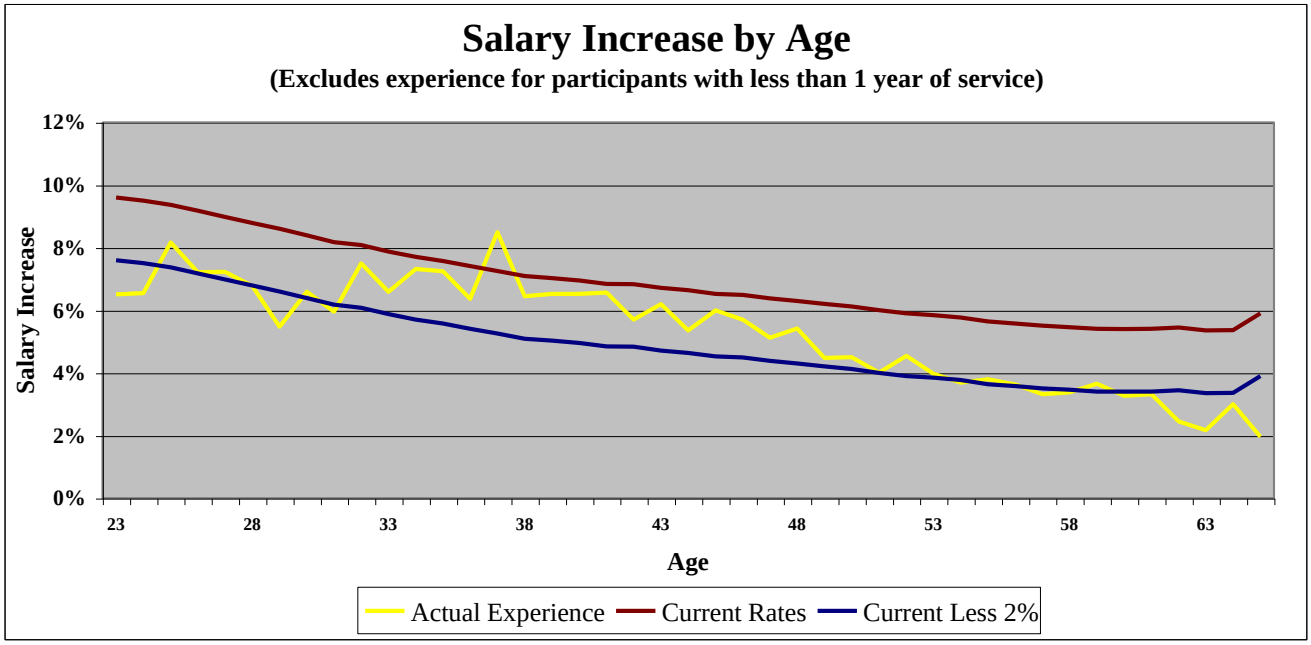
The current (long-term) base pay increase assumption of 5.0% is higher than the base pay increase assumption over the experience study period, which appeared to be about 3.0%. In order to more effectively compare the assumed merit and seniority portion of the total pay increase assumption with actual experience, we have plotted the total current assumed pay increases less 2.0%, which is effectively the current rates using an ultimate base pay increase rate of 3.0%. The intent is to normalize the current salary assumption by recalibrating the assumed base pay increase to match the base pay increase observed during the study period.

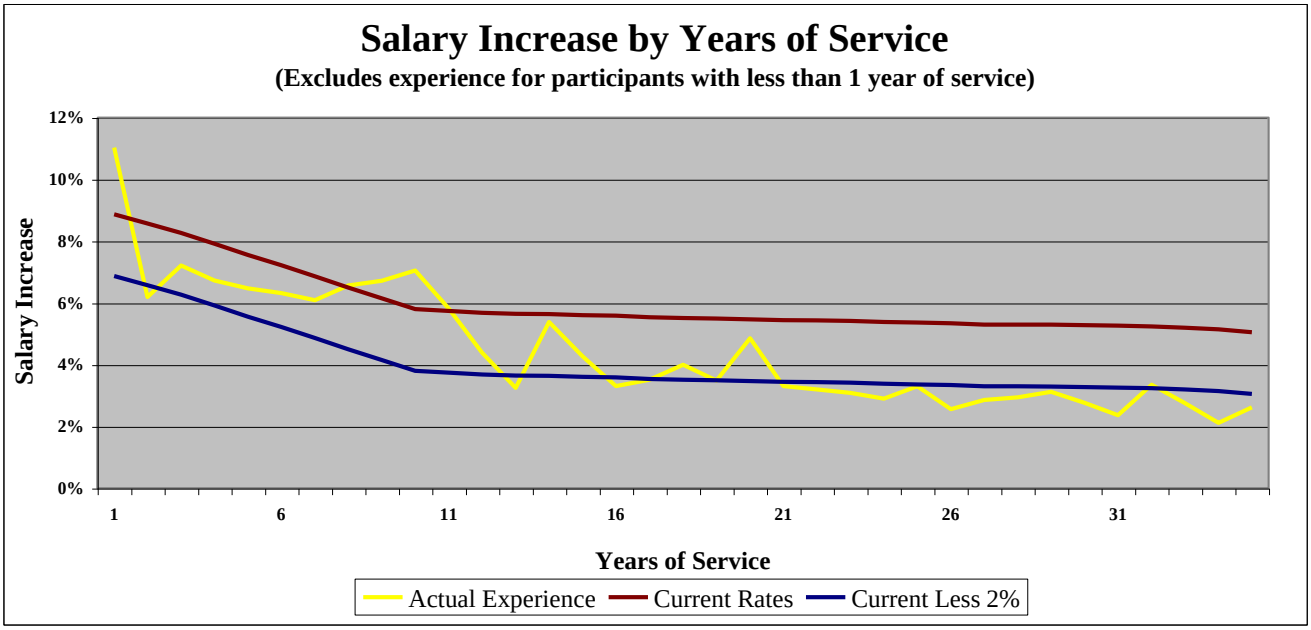
Looking at the actual experience and the current rates reduced by 2.0%, it can be seen that at most age and service increments, the merit and seniority component of the current rates is not unreasonable. However, at low service amounts and especially at around 10 years of service, the merit and seniority component of the salary increase seems low compared to actual experience. This may represent some sort of longevity bonus at completion of 10 years of service. The graph of the age-based rates shows that merit and seniority components of the actual salary increases were somewhat higher than the current rates using the 3.0% ultimate rate during the mid 30's to mid 40's. This likely corresponds to the spike in the service-based rates at 10 years of service (young participants under 30 and older participants over age 50 are

unlikely to have 10 years of service).

We recommend that further study be done to recommend an appropriate change to the statutory salary increases with particular attention paid to the ultimate wage inflation rate and the service-based component of the salary increase at 10 years of service. A service-based assumption may be appropriate.

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
SALARY INCREASES





ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
COMBINED SERVICE ANNUITY

The Combined Service Annuity provision passed in 1975 allows members with service at more than one Minnesota Public Retirement Fund to determine eligibility for retirement benefits and exclusion from early retirement reductions using service and salary considered jointly from the multiple retirement funds. The possibility for increased benefits with St. Paul Teachers' Retirement Fund Association creates additional liability. We have identified the following ways in which liabilities may be increased for the Association due to the Combined Service Provisions:

1. Higher than expected benefits at retirement due to having the member's final average salary based on earnings from another Minnesota public retirement fund. We believe this is most significant for current and future deferred vested members. However, this may also impact current active members who retire from SPTRFA.

2. Higher than expected benefits at retirement due to satisfying vesting requirements when combining service from all Minnesota public retirement funds. This is most significant for current and future members who do not meet vesting requirements with only SPTFRA service, but may meet vesting requirements by combining service from other funds.

3. Members currently not accounted for in the data that will repay their withdrawn contributions and be eligible for a retirement benefit. During the experience study period, we observed 33 retirements from members that were previously not valued. We believe they may not have been in the data because they had previously withdrawn their contributions.

Currently, these additional liabilities are accounted for using a seven percent load on active liabilities and normal costs as well as a 30 percent load on liabilities of former members. We attempted to measure the effectiveness of these loads however there were multiple confounding factors that prevented us from accurately doing so. The major difficulties encountered with studying the loads were:

1. The combined service data provided in the valuation data is not comprehensive or accurate. Combined service data is collected from some, but not all, of the Minnesota public retirement funds. This data is not always accurate and is meant to serve as an indicator at retirement that combined service is present at another fund. It is not meant to be used for benefit calculations.

2. The current valuation data does not contain any salary information for about 35 percent of the deferred vested members, and they are subsequently valued using only accumulated contributions.

We believe that the liability for these participants is severely understated and that their true liability is likely as much as four times the value of their accumulated contributions. We recommend reviewing the quality and availability of this data and the valuation methodology used for these members for future valuations.

3. In reviewing recent retirements, we observed several instances where a member's retirement benefit was larger than what was anticipated from the previous year's active valuation data. Benefits observed at retirement that are higher than expected could be due to higher than expected final average salary or changes in retirement benefit eligibility due to combined service or they could be due to the election of an accelerated benefit option. Currently, those retired members who have selected an accelerated benefit are not identified as such in the valuation data. Identifying the retirees that have elected this form of payment and their post-65 benefit would improve the accuracy of the actuarial valuation and allow us to better track the gains and losses due to the Combined Service Annuity provision.

The combined service loads have a significant impact on the liabilities and calculated costs of the Fund. Because they play such a large role in determining costs, further study using more comprehensive combined service data is warranted. The last study done to determine these loads was completed in 2001 by Milliman USA.

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
OPTIONAL FORMS OF PAYMENT

Under the St. Paul Teachers' Retirement Fund Association the normal form of benefit provided is an annuity payable for the lifetime of the members. A member can elect an optional form of payment at retirement, such as: 50% or 100% Joint and Survivor with Bounce-Back, or a benefit with 15 years certain or a guaranteed refund.

The table below reflects the election experience over the 6 year experience period as well the current and proposed election percentages.

Male			
Optional Form	**Experience**	**Current Election Assumption**	**Proposed Election Assumption**
Straight life	46.8%	45.0%	45.0%
15 Yr Cert	5.1	0.0	5.0
100% J&S	36.7	45.0	40.0
50% J&S	11.4	10.0	10.0

Female			
Optional Form	**Experience**	**Current Election Assumption**	**Proposed Election Assumption**
Straight life	63.2%	80.0%	70.0%
15 Yr Cert	6.6	0.0	5.0
100% J&S	19.8	10.0	15.0
50% J&S	10.4	10.0	10.0

Currently, when a member elects one of these optional forms of payment, the benefit is reduced to reflect the probability that benefits will be paid over a longer period due to the joint life expectancy of the retiree and the spouse or the inclusion of a certain period. The current factors used to determine the optional forms of payment at retirement are not exactly actuarially equivalent to the assumptions proposed for use in the actuarial valuation. A review of the retiree data shows that approximately 30% of members electing Joint and Survivor benefits are male. Using a 30/70 blend of males and females, the proposed election assumptions, and average retirement ages determined from the experience data, we determined that benefits calculated using the current optional form reductions were 0.28 percent lower than if the benefits had been calculated using the true actuarial equivalence factors. We do not believe this amount is significant enough to warrant altering the liabilities to account for it. The St. Paul Teachers' Retirement Fund Association may wish to adopt new equivalence factors for the optional forms based on the proposed valuation assumptions. Adopting this assumption basis for use in option factors would result in factors that are truly actuarially equivalent.

SECTION II

ANALYSIS OF ECONOMIC EXPERIENCE

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
NOMINAL RATE OF INVESTMENT RETURN

In retirement plans such as the St. Paul Teachers' Retirement Fund Association that follow the discipline of level percent of payroll financing for benefits, there are three major sources of funds:

- employer contributions
- member contributions
- investment income

As part of the actuarial valuation process the actuary makes assumptions regarding the timing, amounts, and duration of benefits that will be paid by the plan. These assumptions were discussed in Section I of this report. Once this has been done, the liability for those benefits is distributed over the three sources. The member contributions are fixed percentages of payroll. Thus, any benefits in excess of those that cannot be financed solely out of member contributions must come either from employer contributions or from investment income. The larger the share of benefits that is provided by investment return, the smaller the share will be that must be provided by employer contributions. The assumed investment return rate determines the portion of benefits that is assumed to be provided by investment return and hence has a major impact on the computed employer contribution rate.

At present, the economic assumptions are that long-term pay inflation will average 5.0% per year and that the Retirement Plan will be able to achieve a return of 3.5% in excess of pay inflation, for a nominal rate of return of 8.5% per year.

During the experience period, investment return for the Fund assets was as follows:

Year Ending 6/30	Actuarial Value of Assets End of Year	Market Value of Assets End of Year	Expected Return	Actual Return		Estimated Rate of Return	
				AVA	MVA	AVA	MVA
2001	$ 869,045,000	$ 824,225,000	$ 73,467,000	$ 85,047,000	$ (31,178,000)	10.73%	-3.61%
2002	899,572,000	776,086,000	69,157,000	51,751,000	(26,915,000)	6.03	-3.31
2003	898,760,000	757,640,000	64,810,000	26,429,000	8,795,000	2.98	1.15
2004	898,860,000	871,903,000	63,068,000	31,417,000	145,580,000	3.56	19.62
2005	905,293,000	934,667,000	72,554,000	43,083,000	99,414,000	4.89	11.65
2006	938,919,000	1,005,745,000	77,632,000	76,316,000	113,768,000	8.63	12.46

The expected returns reported above are based on an average balance determined from market value of assets. The estimated rates of return are calculated using the formula $2i/(A+B-i)$, where A and B are the asset values at the beginning and end of the period and i is the actual investment return. A different formula may produce a different rate of return.

The present assumed rate of investment return is 8.5%.

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
HISTORICAL PATTERNS OF INVESTMENT RETURN, PAY INCREASES & INFLATION

The present assumption is that net investment return on Fund assets will be 8.5% per year and that the ultimate pay increases will be 5.0% a year - a *pay* inflation adjusted real rate of return, or spread, of 3.5%. Although price inflation is not explicitly assumed for valuation purposes (it is not needed as benefits are not based on price inflation), the 5.0% annual pay inflation rate would correspond to a price inflation rate of between 3.5% and 4.5%. Considering a 4.0% annual price inflation rate, the 8.5% annual investment return implies a 4.5% *price* inflation adjusted real rate of return.

The National Association of State Retirement Administrators and the National Council on Teacher Retirement publish an annual survey of large public employee retirement plans. We reviewed a subset of the results from the most recent survey, limiting the data to Systems with less than $5 billion in assets, which provided the following results:

Real Rate of Return	% of Plans
Under 3.5%	8%
3.5% to 3.99%	42%
4.0% to 4.49%	17%
4.5% and higher	33%

The median assumed real rate of return for this group was 4.0%. The survey does not distinguish between price inflation and pay inflation. However, the SPTRFA 3.5% pay-adjusted and 4.5% price-adjusted real rates of return are certainly in line with national trends.

The charts on page II-4 show the historical investment return for a sample portfolio (constructed with an asset allocation similar to SPTRFA) over various time periods, beginning with 1950. The total return of the sample fund does not take investment expenses into account, nor does it consider risk limiting investment policies or asset classes. Consideration of these factors will lower the returns found on this page.

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
HISTORICAL PATTERNS OF INVESTMENT RETURN, PAY INCREASES & INFLATION

Since the dramatic market downturn of 2000, 2001, and 2002, the industry press has been full of discussions concerning whether the long term past is a reasonable indicator as to what the future holds. Has something changed, something that will persist, and make the next 50 years look materially different from the past 50 years?

Numerous writers and speakers suggest that balanced pension portfolios will not be able to sustain long range returns as high as 8.5% annually, without taking on undue risk. Many financial economists have argued that pension plans should only invest in bonds, because the liability (of future benefit payments) is like a bond.

We are of the opinion that it is too soon to tell if the environment has changed. The current 8.5% investment return assumption is in line with other large public retirement systems and appears reasonable. That said, the economic assumptions are so important to the actuarial valuation that we suggest the Board commission a comprehensive study of the economic assumptions to determine whether any future changes are warranted.

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
HISTORICAL PATTERNS OF INVESTMENT RETURN, PAY INCREASES & INFLATION

Calendar Year Period	Gross Market Returns: Bonds (Long) U.S. Treasury	Gross Market Returns: Bonds (Long) Corp. (S&P AA)	Gross Market Returns: Cash Equiv. (T Bills)	Stocks (S&P 500)	Price Inflation (CPI)	National Average Earnings (NAE)	Sample Balanced Fund*: Total Return (I)	Sample Balanced Fund*: Spread: I - NAE
1950-59	(0.1)%	1.0 %	1.9 %	19.4 %	2.2 %	4.5 %	15.8 %	11.3 %
1960-69	1.4 %	1.7 %	3.9 %	7.8 %	2.5 %	4.3 %	6.8 %	2.5 %
1970-79	5.5 %	6.2 %	6.3 %	5.9 %	7.4 %	6.9 %	6.1 %	(0.8)%
1980-89	12.6 %	13.0 %	8.9 %	17.5 %	5.1 %	5.8 %	16.7 %	10.9 %
1990-99	8.8 %	8.4 %	4.9 %	18.2 %	2.9 %	4.2 %	16.3 %	12.1 %
2000-05	9.9 %	9.9 %	2.7 %	(1.1)%	2.6 %	3.3 %	1.4 %	(1.9)%
2006	1.2 %	3.2 %	4.8 %	15.8 %	2.5 %	2.8 %	13.1 %	10.3 %
Last 57 Years	**5.9 %**	**6.3 %**	**4.9 %**	**12.0 %**	**3.8 %**	**4.9 %**	**11.1 %**	**6.2 %**

* Sample Balanced Fund	
Equities	80%
Bonds - Government	9%
- Corporate	10%
Cash Equivalents	1%
	100%
Fund expenses	0.00%

Historical Spread

Observed spread is very sensitive to the observation period, even over long periods, as illustrated below:

Observation Period	Spread
57 years	6.2%
47 years	5.1%
37 years	5.8%
27 years	8.3%
17 years	6.8%

Note: Market index returns do not reflect investment expense (commissions and management fees). Those expenses generally range from 0.25% to 1.0% of assets. The net real rate of return for a plan that pays its own investment expenses would be correspondingly lower.

SECTION III

IMPACT OF PROPOSED NON-ECONOMIC ASSUMPTIONS ON LIABILITIES AND CONTRIBUTIONS

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
EFFECT OF PROPOSED ASSUMPTION CHANGES

The effect of the proposed assumption changes on Fund liabilities and contributions can be measured by comparing the results of the June 30, 2006 actuarial valuation against what the 2006 valuation would have shown had the proposed assumptions been in effect at that time.

During the experience study review it was discovered that the years of service provided in the active valuation data included service credited under the Combined Service Annuity provisions of Section 356.30 of the Minnesota Statutes. Participation in certain retirement systems other than the St. Paul Teachers' Retirement Fund should be included in determining benefit eligibility, but should be excluded when determining the service used to calculate a member's monthly benefit.

The June 30, 2006 valuation results have been summarized on the following pages under the column heading "Baseline". We have recalculated what the June 30, 2006 valuation would have shown had Combined Service been excluded from benefit service in the valuation. These results are shown on the following pages under the heading "Updated Baseline".

The effect of the proposed changes in the non-economic assumptions on Plan costs has been measured by preparing the June 30, 2006 actuarial valuation using (i) the proposed non-economic assumptions described in Section I and (ii) the economic assumptions used in the June 30, 2006 valuation. These results are shown on the following pages under the heading "New Assumptions". The difference between the amounts in the "New Assumptions" and "Updated Baseline" columns are found in the "Impact of New Assumptions" column.

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
EFFECT OF PROPOSED ASSUMPTION CHANGES

	Baseline	Updated Baseline	New Assumptions	Impact of New Assumptions
A. Determination of Actuarial Accrued Liability				
1. Active members:				
(a) Retirement benefits	$ 446,243,570	$ 428,833,609	$ 437,960,755	$ 9,127,146
(b) Disability benefits	7,179,428	6,900,295	4,188,358	(2,711,937)
(c) Death benefits	5,946,357	5,676,393	5,685,564	9,171
(d) Termination	1,941,154	2,594,894	704,364	(1,890,530)
(e) Total	$ 461,310,509	$ 444,005,191	$ 448,539,041	$ 4,533,850
2. Vested terminated members	$ 35,849,895	$ 33,856,830	$ 34,027,488	$ 170,658
3. Other non-vested terminated members	$ 2,177,543	$ 2,177,543	$ 2,177,543	$ -
4. Annuitants	$ 846,734,034	$ 846,734,034	$ 853,048,285	$ 6,314,251
5. Total	$1,346,071,981	$1,326,773,598	$1,337,792,357	$ 11,018,759
B. Determination of Unfunded Actuarial Accrued Liability				
1. Actuarial Accrued Liability	$1,346,071,981	$1,326,773,598	$1,337,792,357	$ 11,018,759
2. Actuarial Value of Assets	938,919,005	938,919,005	938,919,005	-
3. Unfunded Actuarial Liability	$ 407,152,976	$ 387,854,593	$ 398,873,352	$ 11,018,759
C. Determination of Supplemental Contribution Rate (Statutory Amortization Date)				
1. Present value of future payrolls through the amortization date of June 30, 2021	$2,719,438,007	$2,719,438,007	$2,719,438,007	$ -
2. Supplemental contribution rate [B.3 / C.1]	14.97%	14.26%	14.67%	0.41%
D. Determination of Supplemental Contribution Rate (Amortization Period of 30 Years)				
1. Present value of future payrolls through the amortization date of June 30, 2036	$4,382,362,676	$4,382,362,676	$4,382,362,676	$ -
2. Supplemental contribution rate [B.3 / D.1]	9.29%	8.85%	9.10%	0.25%

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
EFFECT OF PROPOSED ASSUMPTION CHANGES

	Baseline	Updated Baseline	New Assumptions	Impact of New Assumptions
	Dollar Amount	Dollar Amount	Dollar Amount	Dollar Amount
A. Statutory Contributions - Chapter 354A				
1. Employee contributions	$ 13,414,749	$ 13,414,749	$ 13,414,749	$ -
2. Employer contributions	20,255,668	20,255,668	20,255,668	-
3. Supplemental contributions				-
(a) 1996 Legislation	1,850,000	1,850,000	1,850,000	-
(b) 1997 Legislation	2,953,000	2,953,000	2,953,000	-
4. Administrative expense assessment	-			
5. Total	$ 38,473,417	$ 38,473,417	$ 38,473,417	$ -
B. Required Contributions - Chapter 356				
1. Normal Cost:				
(a) Retirement	$ 18,772,302	$ 18,384,237	$ 17,438,957	$ (945,280)
(b) Disability	615,907	599,962	335,329	(264,633)
(c) Death	440,576	429,683	383,743	(45,940)
(d) Termination	2,145,058	2,040,558	2,773,700	733,142
(e) Total	$ 21,973,843	$ 21,454,440	$ 20,931,729	$ (522,711)
2. Supplemental contribution amortization	$ 35,320,880	$ 33,645,674	$ 34,613,046	$ 967,372
3. Allowance for administrative expenses	$ 613,455	$ 613,455	$ 613,455	$ -
4. Total	$ 57,908,178	$ 55,713,569	$ 56,158,230	$ 444,661
C. Contribution Excess / (Deficiency): (A.5) - (B.4)	$ (19,434,761)	$ (17,240,152)	$ (17,684,813)	$ (444,661)
D. Funded Ratios				
1. Accrued Liability Funded Ratio:	69.75%	70.77%	70.18%	-0.58%

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
2000-2006 EXPERIENCE ANALYSIS
EFFECT OF PROPOSED ASSUMPTION CHANGES

	Baseline	Updated Baseline	New Assumptions	Impact of New Assumptions
	% of Pay	% of Pay	% of Pay	% of Pay
A. Statutory Contributions - Chapter 354A				
1. Employee contributions	5.69%	5.69%	5.69%	0.00%
2. Employer contributions	8.58%	8.58%	8.58%	0.00%
3. Supplemental contributions				
(a) 1996 Legislation	0.78%	0.78%	0.78%	0.00%
(b) 1997 Legislation	1.25%	1.25%	1.25%	0.00%
4. Administrative expense assessment				
5. Total	16.30%	16.30%	16.30%	0.00%
B. Required Contributions - Chapter 356				
1. Normal Cost:				
(a) Retirement	7.96%	7.79%	7.39%	-0.40%
(b) Disability	0.26	0.25	0.14	-0.11
(c) Death	0.19	0.18	0.16	-0.02
(d) Termination	0.91	0.86	1.18	0.32
(e) Total	9.32%	9.08%	8.87%	-0.21%
2. Supplemental contribution amortization	14.97%	14.26%	14.67%	0.41%
3. Allowance for administrative expenses	0.26%	0.26%	0.26%	0.00%
4. Total	24.55%	23.60%	23.80%	0.20%
C. Contribution Excess / (Deficiency): (A.5) - (B.4)	-8.25%	-7.30%	-7.50%	-0.20%

October 1, 2007

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

Dear Phil:

Enclosed are 23 copies of the Experience Review for the Period Beginning July 1, 2000 and Ending June 30, 2006. I look forward to presenting the results of the study to the Board of Trustees.

By copy of this letter, I am sending 2 copies of the Experience Review to Mr. Larry Martin, Executive Director, Legislative Commission on Pensions and Retirement.

Sincerely,

W. James Koss

WKJ:lr
Enclosures

cc: Mr. Lawrence A. Martin, Executive Director of LCPR