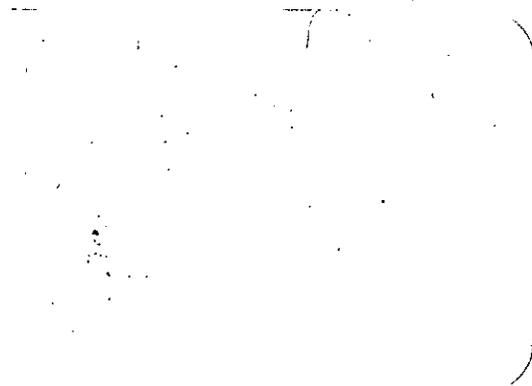




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**THE STATE TEACHERS
RETIREMENT SYSTEM OF OHIO
EXPERIENCE REVIEW FOR THE PERIOD
JULY 1, 1998 TO JUNE 30, 2003**



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Human Resources & Investor Solutions

November 12, 2003.

The Retirement Board
The State Teachers Retirement System of Ohio
275 East Broad Street
Columbus, OH 43215

Ladies and Gentlemen:

This report presents the results of the actuarial review of the demographic and economic experience of the active members, retirees, beneficiaries and survivors covered under the State Teachers Retirement System of Ohio for the five-year period July 1, 1998 to June 30, 2003.

This experience review was prepared in accordance with Section 3307.51(B) of the Retirement Code, which requires the actuary for STRS to make an actuarial investigation into the mortality, service and compensation experience of the members and beneficiaries covered under the System at least once in each five-year period.

The attached report describes the actuarial process employed and identifies the significant results of the study

Summary of Recommendations

The results of the experience review show that for many of the assumptions the actual experience of the System has deviated from expected based on the current assumption set. In particular, we have recommended and the Board has adopted the following changes to the actuarial assumptions:

- Increase interest rate assumptions from 7.75% to 8%.
- Improve rates of mortality among active members, retirees, beneficiaries and survivors.
- Modify rates of termination, disability and retirement from employment among active members to reflect experience.
- Increase the average annual salary assumption from 5% to 5.5%.

In addition, we recommended and the Board adopted changes to the option factors. The new option factors reflect 8% interest and the improved mortality.

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A detailed analysis is included in the report. The financial impact of adopting the recommended assumptions and option factors is shown in the table below.

**The State Teachers Retirement System of Ohio
 Financial Impact of Adopting Recommended Assumptions
 June 30, 2003**

Item	Unfunded Accrued Liability	Normal Rate	Funding Period
1. Current Assumptions	\$ 18,383 Mil	15.35 %	52.3 Years
2. Impact of Change in Assumptions			
a) Demographic Assumptions	(212)	(.99)	(12.9)
b) Salary Increase Assumptions	821	1.40	27.6
c) Interest Rate	<u>(1,955)</u>	<u>(.87)</u>	<u>(24.7)</u>
d) Total	(1,346)	(.46)	(10.0)
3. Revised Assumptions	\$ 17,037 Mil	14.89 %	42.3 Years

The Table of Contents, which immediately follows, outlines the material contained in the report.

We would be pleased to discuss the report in detail upon request.

Respectfully submitted,



Kim M. Nicholl
 Principal and Consulting Actuary

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**THE STATE TEACHERS
RETIREMENT SYSTEM OF OHIO**

**EXPERIENCE REVIEW FOR THE PERIOD
JULY 1, 1998 TO JUNE 30, 2003**

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**THE STATE TEACHERS
RETIREMENT SYSTEM OF OHIO**

**EXPERIENCE REVIEW FOR THE PERIOD
JULY 1, 1998 TO JUNE 30, 2003**

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**THE STATE TEACHERS
RETIREMENT SYSTEM OF OHIO**

**EXPERIENCE REVIEW FOR THE PERIOD
JULY 1, 1998 TO JUNE 30, 2003**

SECTION I - INTRODUCTION

Section 3307.51(B) of the Retirement Code provides that in every five-year period, the actuary of the System is to make an actuarial investigation of the mortality, service, and other experience of the members, retirees and beneficiaries covered under the System. This report presents the results of the experience review of the System for the five-year period July 1, 1998 through June 30, 2003.

The objectives of the investigation are to:

- Determine appropriate rates to anticipate the following events among active members:
 - termination from employment;
 - mortality during active service;
 - disability retirement;
 - service retirement; and
 - salary increases
- Determine appropriate rates to anticipate mortality among retirees, survivors, beneficiaries and disability retirees.
- Make recommendations regarding the adoption of refinements to the actuarial basis of the System, which are deemed appropriate by the actuary for adoption by the Board.

Methodology

Data is supplied annually to the actuary by the System for purposes of the actuarial valuation report. This data includes demographic characteristics of the current and past membership, including any changes in the members' status or relationship with the System. The data also includes a salary history for active members. These demographic changes and salary history are the basis for the experience review.

Tabulations were compiled which show the distribution by age of the number of members who were **exposed** during the five-year period to the events of termination from employment, retirement, death and disability. A member is considered exposed to an event if the member meets the age and service requirements for that event. The assumed rates of occurrence for each event, which are currently used in the annual actuarial valuations, were then applied to the number of members exposed to determine the number of members **expected** to separate from service for each category.

The **actual** number of members who separated from service due to termination from employment, retirement, death or disability was then compared to the expected number. The results were then expressed as a ratio of actual experience over expected experience. In some instances a high ratio is favorable for the financial experience of the System and in others, a high ratio is unfavorable. Data is generally grouped by age in five-year increments to provide statistically significant results.

The expected and actual salaries as of the end of each year were also compared to actual salaries as of the end of each previous year. The comparisons show an average annual total increase in both expected and actual salaries for the five-year period.

The results of the experience review are the basis for the actuary's recommendation of assumption changes. In recommending assumptions the actuary must also take into account special plan benefits and past economic factors.

In addition to comparing actual to expected experience and adjusting the results for special plan benefits and economic conditions, the actuary must consider future expectations of experience due to future plan changes or changes in the economy.

To summarize, the actuary's recommendation of assumptions is based on the following:

- comparison of actual to expected experience,
- adjustment for special plan benefits and past economic conditions, and
- adjustment for future plan changes and economic conditions.

Generally, actuarial assumptions are selected with a slight margin for adverse experience so that the financial strength of the System can be maintained.

Summary of Experience Review

The summaries included in Section VI show the comparisons and results of the experience investigation for:

- the actual and expected cases of separation from active service,
- the actual and expected mortality among service and disability retirees,
- the average annual increases in salaries among active members, and
- the annual rates of return on assets.

Recommendations

Based on the results of our investigation, we recommend revisions to the rates of:

- termination,
- death in active service,
- disability,
- service retirement, and
- death after retirement.

We also recommend that the investment return be increased to 8.0%, the salary increase assumption be increased to an average of 5½%, and that the inflation assumption remain at 3½%.

Financial Impact

We have determined the financial impact on the System of adopting the recommended set of assumptions. The calculations are based on the results of the June 30, 2003 actuarial valuation and are shown in the table below.

**The State Teachers Retirement System of Ohio
Financial Impact of Adopting Recommended Assumptions
June 30, 2003 Valuation**

Item	Unfunded Accrued Liability	Normal Rate	Funding Period
1. Current Assumptions	\$ 18,383 Mil	15.35 %	52.3 Years
2. Impact of Change in Assumptions			
a) Demographic Assumptions	(212)	(.99)	(12.9)
b) Salary Increase Assumptions	821	1.40	27.6
c) Interest Rate	<u>(1,955)</u>	<u>(.87)</u>	<u>(24.7)</u>
d) Total	(1,346)	(.46)	(10.0)
3. Revised Assumptions (1) + (2)	\$ 17,037 Mil	14.89 %	42.3 Years

SECTION II - DISCUSSION OF EXPERIENCE REVIEW
DEMOGRAPHIC ASSUMPTIONS FOR ACTIVE MEMBERS

Tables 1 through 6 included in Section VI summarize the actual and expected separations from active service due to termination from employment, death, disability, and service retirement during the five-year period ended June 30, 2003. Separate summaries for males and females are presented for all of these categories. In addition, Tables 7 and 8 included in Section VI summarize mortality experience for service retirees and disability retirees. The tables also show ratio of actual to expected experience and our recommended change to each of the assumptions.

The following table summarizes the ratio of actual to expected cases of separation from active service and mortality among retirees.

**Summary of Ratio of Actual to Expected Experience
Demographic Assumptions**

Event	Males	Females	Total
• Termination from Employment			
— Non-Vested	95%	103%	100%
— Vested	159	140	145
• Death in Active Service	60	72	66
• Disability Retirement	53	70	64
• Service Retirement			
— Age 60 with 5 Years of Service	88	95	93
— Age 55 with 25 Years of Service	170	109	118
— 30 Years of Service	79	83	81
• Death after Retirement:			
— Service Retirees	87	99	95
— Disability Retirees	71	96	85

For purposes of the comparison, the ratio of the actual expected experience is expressed as a percentage for each type of event. A percentage in excess of 100% indicates that the actual experience was greater than the expected experience, whereas a percentage of less than 100% indicates that the actual experience was less than expected.

For example, in regard to termination from employment for all vested members, Table 1(b) on Page 20 shows an entry of 144.6%. This means that during the five-year experience review period, the actual number of vested members who terminated from employment was more than the expected number of vested terminations by a percentage equal to 44.6% (i.e., 144.6% minus 100%).

The comments presented below under each category discuss the results of the experience study with respect to the demographic factors, along with our recommendations for modifying the assumptions.

Rates of Termination from Employment

We examined the actual experience of terminations separately for non-vested members (i.e., those with less than five years of service) and vested members (i.e., those with five or more years of service).

Table 1(a) shows that during the five-year period, the actual rate of termination of non-vested members was very close to expected. Among males, the ratio of actual experience to expected was 95.2%. Among females, the ratio was 103.0%. Overall, the ratio of actual experience to expected experience was 100.1%. We recommend no change to termination rates for non-vested members.

Table 1(b) shows that during the five-year period, the actual rates of termination of vested members was greater than expected. Among males, the ratio of actual to expected experience was 159.3%. Among females, the ratio was 140.0%. Overall, the ratio of actual to expected experience was 144.6%. In addition, the ratio of actual to expected experience varies by age. Therefore, we recommend increasing the termination rates and adjusting the pattern of the rates to reflect the experience.

Rates of Mortality Among Active Members

Table 2 shows the actual incidence of deaths in active service was less than expected for both males and females.

For males, the ratio of actual to expected experience was 59.7%. Among females, the ratio was 72.1%. Overall, the ratio of actual to expected experience was 66.0%. The low rates of mortality reflect the increases in life expectancies for people in the United States that have occurred. We expect that future advances in medical technology will continue to improve life expectancies. Therefore, we recommend adjusting the mortality table to reflect the experience.

Disability Retirement

Table 3 shows the summary of experience for disability retirements. The five-year study shows that there were fewer disability retirements among males and females than expected.

For males, the ratio of actual to expected experience was 53.4%. For females, the ratio was 70.2%. Overall, the ratio of actual to expected experience was 64.4%. We recommend decreasing the rates and adjusting the pattern of the rates to reflect the experience.

Service Retirement and Disability Retirement

Age 60 with 5 Years of Service

Table 4 shows the summary of experience for service retirement for members age 60 with 5 years of service. Overall, the actual experience was fewer retirements than expected. For males, the ratio of actual to expected experience was 87.7%. For females, the ratio was 94.6%. Overall, the ratio of actual to expected experience was 92.5%. Therefore, we recommend lowering these rates of service retirement to reflect experience.

Age 55 with 25 Years of Service

Table 5 shows the summary of experience for service retirement for members age 55 with 25 years of service. Overall, the actual number of retirements were greater than expected. Among males, the ratio of actual to expected experience was 170.3%. Among females, the ratio was 108.6%. Overall, the ratio of actual to expected experience was 118.3%. We recommend modifying the rates to reflect experience while lowering the overall average.

30 Years of Service

Table 6 shows a summary of experience for service retirement for members with 30 years of service. Overall, the actual experience was fewer retirements than expected. For males, the ratio of actual to expected experience was 78.7%. For females, the ratio of actual to expected experience was 83.2%. Overall, the ratio of actual to expected experience was 81.1%. We believe that the decrease in retirements is due to the benefit formula change that provides a higher accrual for members with 35 years of service as well as increasing health care costs. Therefore, we recommend decreasing the rates for members retiring with 30 years of service and modifying the pattern of the rates to reflect experience.

SECTION III – DISCUSSION OF EXPERIENCE REVIEW
MORTALITY EXPERIENCE AMONG RETIREES

Tables 7 and 8 included in Section VI summarize the mortality experience among service and disability retirements during the five-year period ended June 30, 2003. The mortality experience is shown separately for males and females.

A summary of the results is shown in the table below:

**Overall Ratios of Actual to Expected Mortality Experience
Service and Disability Retirees**

Death After	Males	Females
Service Retirement	87%	99%
Disability Retirement	71%	96%

The experience study revealed the following facts concerning service and disability retirees:

- The actual cases of death among male and female service retirees were less than or close to expected on the basis of the current mortality tables (1983 Group Annuity Mortality Table; Projection 1994 – Scale H). For males and females age 85 and older, the actual mortality rates were greater than expected. Mortality has improved over the last decade and is expected to continue improving at a rate of 2% per year.
- The actual cases of death among disability retirees were fewer than expected for males and close to expected for females.

Recommendations

On the basis of actual experience among service retirees during the five-year period and in anticipation of future expected increases in life expectancy, we recommend that the mortality table for males and females be updated to the Uninsured Pensioners Year 1994 (Projection 2002 – Scale AA) with a two-year setback in age for males and a one-year setback for females. For disability retirees, we recommend the male disability mortality rates be reduced by 20% to reflect actual experience.

SECTION IV – DISCUSSION OF EXPERIENCE REVIEW
ECONOMIC FACTORS

Tables 9 and 10 in Section VI summarize the actual results for the key economic factors affecting the operation of the System during the five-year period ended June 30, 2003. Table 9 shows a summary of annual investment rate returns and average annual increase in the CPI-U (inflation). Table 10 shows a comparison of actual and expected salaries of active full-time members.

Rate of Inflation

The assumed rate of inflation is a component of both the investment return assumption and the salary increase assumption. The current actuarial assumption is that inflation will average 3.5% per annum on a long-term basis.

ASOP 27 addresses acceptable methodologies for setting the rate of inflation assumption and sets forward the following two matters for consideration:

1. Data. The actuary should review appropriate inflation data. These data may include consumer price indexes, the implicit price deflator, forecasts of inflation, and yields on government securities of various maturities.
2. The actuary may assume select and ultimate inflation rates in lieu of a single inflation rate. Select and ultimate inflation rates vary by period from the measurement date. (An example of a select and ultimate assumption is inflation of 3% for the first 5 years following the measurement date, and 4% thereafter).

Our analysis included a review of historical changes in the CPI-U, and of forecasts of inflation. History (the last 40 – 70 years) argues that long-term inflation should be in the 3% - 4% range. However, since 1990 inflation has averaged less than 3% per annum. Many economists feel that changes in national policies have led to a drop in inflation that can be expected to continue, generally, in the future. In addition, the 75-year intermediate cost projection of inflation contained in the 2003 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, prepared by the Office of the Actuary for the Social Security Administration predicts that inflation will average slightly less than 3% per annum through 2006, followed thereafter by a single long-term inflation rate of 3% per annum.

As a result, we are recommending that the long-term inflation assumption for the actuarial valuation remain at 3.5% per annum. We are recommending a single long-term inflation assumption rather than select and ultimate inflation rates, due to the simplicity of the former, and due to the minimal impact that a short select period would have on the results of the actuarial valuation.

Rates of Investment Return

Actuarial Standard of Practice No. 27 (ASOP 27) entitled "Selection of Economic Assumptions for Measuring Pension Obligations," addresses acceptable methodologies for setting the interest rate assumption. One of the acceptable methodologies described in ASOP 27 is the "Building-Block Method."

Under the Building-Block Method, (i) a best-estimate range of expected future return is developed for each asset class, (ii) an average, weighted real-return range reflecting the plan's expected asset class mix is developed, and (iii) the best-estimate real-return range is combined with the best-estimate range of expected inflation. Stochastic simulation models that take into account correlations among returns of different asset classes and inflation are frequently used to obtain the final result.

Sources of Investment Data

ASOP 27 encourages the actuary to review appropriate investment data, including

1. current yields to maturity of fixed income securities such as government securities and corporate bonds;
2. forecasts of inflation and of total returns for each asset class;
3. historical investment data, including real risk-free returns, the inflation component of the return, and the real return or risk premium for each asset class;
4. historical plan performance; and
5. historical data showing standard deviations, correlations, and other statistical measures related to historical returns of each asset class and to inflation.

Other Factors to be Considered

ASOP 27 also advises the actuary to take into account the following factors.

1. investment policy
2. reinvestment risk
3. investment volatility
4. investment manager performance
5. investment expenses
6. cash flow timing
7. benefit volatility
8. other issues unique to the plan

The current interest rate assumption is 7.75% which includes an inflation component of 3.5%. The rates of investment return during the five-year period ended June 30, 2003 are shown below. The actual returns on the actuarial value and market value of assets exceeded the expected return of 7.75% for fiscal years ended June 30, 1999 and June 30, 2000. For the last three fiscal years, the actual returns on the actuarial value and market value of assets were less than expected.

Fiscal Year Ended June 30	Return on Assets	
	Actuarial Value	Market Value
2003	1.6%	1.8%
2002	(7.8)	(8.3)
2001	6.7	(6.5)
2000	13.1	10.3
1999	<u>13.4</u>	<u>12.5</u>
Average	5.4%	2.0%

The table above shows that the historic investment rates of return, measured on an actuarial asset value basis, were less than the assumed return of 7.75% over the five years ended June 30, 2003. The arithmetic average rate of return on investments based on the actuarial value of assets during the five-year period was equal to 5.4%.

As a comparison, also shown are the rates of investment return based on the market value of assets. The actual rate of return based on the market value of assets was less than the assumed return during the five-year period. The arithmetic average rate of return on the market value of assets during the five-year experience period was equal to 2.0%.

The historical returns on the funds should not be used as the sole basis for selecting the interest rate for calculating costs in future years. The reason for this is that the interest rate is an assumption that is used to fund the present value of benefits payable many years into the future, in some instances, for as long as 80 years. Thus, while a review of past experience is useful and indicates that the actual rate of investment return over the past five years was less than the assumed rate of 7.75%, we believe that the current investment climate supports a change in the long-term earnings prospects of the System. As a result, we recommend increasing the assumed rate of investment return to 8%.

Comparison to Other Public Pension Plans

As a point of comparison, we have reviewed the actuarial interest rate assumption used by other public pension systems. The sources for our data are the 2001 Survey of State and Local Government Employee Retirement Systems, prepared by Paul Zorn for the Public Pension Coordinating Council (PPCC), as well as earlier versions of this survey prepared in 1999 and 1997. In most instances the data reflect fiscal year 2000, 1998, and 1996, values, respectively.

The individual surveys covered retirement plans representing between 68% and 81% of state and local retirement system assets. We also conducted an informal in-house survey of the actuarial interest rate assumptions of Mellon's governmental retirement plan clients.

The surveys reveal the following about the actuarial interest rate assumption:

Summary Statistics For Actuarial Assumption Regarding Investment Return
(Taken from 1997, 1999, and 2001 Surveys prepared for PPCC)

Total Assets	Average Interest Rate Assumption		
	1997 Survey	1999 Survey	2001 Survey
Under \$100 million	7.68%	7.78%	7.59%
\$100 - \$999 million	7.86%	7.88%	7.99%
\$1.0 - \$9.9 billion	8.01%	8.01%	8.02%
\$10+ billion	8.11%	8.09%	7.95%

While we do not recommend using the average assumptions of other public retirement systems as the basis for setting the assumption for STRS Ohio, we note that the above table indicates that

- (a) Public retirement systems of all sizes appear to be holding steady with regard to their investment return assumptions; and
- (b) The 8% recommended assumption is clearly in line with the assumptions adopted by other systems of a similar size.

Summary Statistics for Mellon's Governmental Retirement Plan Clients
(Results of informal, in-house survey)

Current Interest Rate Assumption	Number of Systems Responding
Less than 7.00%	0
7.00% - 7.24%	1
7.25% - 7.49%	2
7.50% - 7.74%	7
7.75% - 7.99%	1
8.00% - 8.24%	13
8.25% - 8.49%	2
8.50% - 8.74%	5
8.75% - 8.99%	3
9.00% or above	0
All	34

The above table indicates that the results of the PPCC surveys continue to be valid.

We believe that increasing the interest rate assumption to 8% will make STRS Ohio's interest rate in line with the other Ohio pension funds as well as public pension funds throughout the U.S.

The following table shows the current and recommended components of the interest rate assumption:

**Components of
Interest Rate Assumption**

Item	Current Assumptions	Recommended Assumptions
Inflation	3.50%	3.50%
Real Return	<u>4.25</u>	<u>4.50</u>
Total	7.75%	8.00%

Rates of Salary Increase

Salary is a factor in determining the majority of the benefits provided by the System, and an assumption for how an individual participant's salary will change over the long term is necessary for a proper valuation. Generally, the components of the salary increase assumption are inflation, productivity growth, and merit or seniority. The rates of salary increase used in the valuation are rates that vary by a participant's age.

The growth in average annual salary is presented in Table 10 in Section VI. The assumed salary increase assumption is an effective average of 5.0%. Table 10 shows that the actual average annual salary increase over the period for all age groups is 6.8%.

The salary increase assumption should be selected with an eye towards past experience and with considerable emphasis placed on judgment concerning future expectations. The salary increase assumption should be consistent with the interest rate assumption as both assumptions are based on a long-term inflation assumption. The recommended long-term inflation assumption is 3.5%.

We recommend that the current 5% salary increase assumption be increased by 0.5% to 5.5%. The increase reflects an increase in the career salary scale.

It is generally accepted in actuarial practice that a reasonable spread between the investment return assumption and the salary increase assumption falls in the range of 2% to 3%. We believe the recommended use of a salary scale averaging 5.5%, along with a gross investment return assumption of 8%, represents a proper balance between a realistic assessment of future annual pay increases and the long-term investment returns on the assets of the fund.

SECTION V – ACTUARIAL COST METHOD AND ASSET VALUATION METHOD

Actuarial Cost Method: The cost method is Entry Age Normal. This is a projected benefit method with level percentage entry age normal cost and open-end unfunded accrued liability. Gains and losses are reflected in the accrued liability. The Entry Age Normal Cost Method is required by statute.

Asset Valuation Method

The asset valuation method is used to determine the actuarial value of assets and to measure the financial status of the System.

The valuation assets are based on a four-year moving market average. The difference between actual investment income and expected income (based on the valuation interest rate) is spread over a period of four years. Valuation assets are not less than 91% of the market value and not more than 109% of the market value.

Use of an actuarial value of assets which smoothes appreciation over a four-year period has the advantage of producing relatively stable changes in the value of assets over time. Thus, provided that the actuarial value remains within a reasonable corridor range of the market value of assets, the five year smoothing period is an acceptable method of valuing assets for actuarial purposes.

A five year history of the actuarial and market value of assets is shown below:

Summary of Asset Values
(\$ in millions)
1999 - 2003

Fiscal Year	Actuarial Value of Assets	Market Value of Assets	Ratio of Actuarial Value to Market Value
2003	\$ 51,692.5	\$ 47,660.3	108.5%
2002	51,962.5	47,923.1	108.4
2001	57,443.8	53,334.4	107.7
2000	54,704.4	58,019.5	94.3
1999	49,100.8	53,361.6	92.0

We recommend no change to the asset valuation method.

SECTION VI

**COMPARISON OF ACTUAL AND EXPECTED
EXPERIENCE DURING FIVE-YEAR PERIOD
FROM JULY 1, 1998 THROUGH JUNE 30, 2003**

TABLE 1(a)**SUMMARY OF EXPERIENCE FOR TERMINATION FROM
EMPLOYMENT BEFORE RETIREMENT****NON-VESTED TERMINATIONS****MALES
1999 - 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
20	31	14.18	79	218.6%
25	2,016	2,831.24	17,657	71.2
30	1,889	2,268.71	15,023	83.3
35	1,413	1,296.26	8,948	109.0
40	1,222	990.89	7,180	123.3
45	1,075	932.10	6,934	115.3
50	887	865.77	6,461	102.5
55	671	560.26	4,181	119.8
60	334	294.52	2,198	113.4
65	156	149.28	1,114	104.5
Over 65	113	101.29	756	111.6
Total	9,807	10,304.50	70,531	95.2%

Recommendation: No change.

TABLE 1(a)
(continued)

**SUMMARY OF EXPERIENCE FOR TERMINATION FROM
EMPLOYMENT BEFORE RETIREMENT**

NON-VESTED TERMINATIONS

FEMALES
1999 – 2003

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
20	94	71.50	518	131.5%
25	5,506	6,382.74	53,097	86.3
30	3,523	3,697.60	31,469	95.3
35	2,086	1,910.62	16,708	109.2
40	2,038	1,650.53	17,723	123.5
45	1,931	1,661.04	18,456	116.3
50	1,533	1,255.77	13,953	122.1
55	781	556.82	6,286	140.3
60	305	164.18	2,177	185.8
65	88	51.64	713	170.4
Over 65	67	30.49	421	219.7
Total	17,952	17,432.93	161,521	103.0%

Recommendation: No change.

TABLE 1(a)
(continued)

**SUMMARY OF EXPERIENCE FOR TERMINATION FROM
EMPLOYMENT BEFORE RETIREMENT**

NON-VESTED TERMINATIONS

**MALES AND FEMALES
1999 – 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
20	125	85.68	597	145.9%
25	7,522	9,213.98	70,754	81.6
30	5,412	5,966.31	46,492	90.7
35	3,499	3,206.88	25,656	109.1
40	3,260	2,641.42	24,903	123.4
45	3,006	2,593.14	25,390	115.9
50	2,420	2,121.54	20,414	114.1
55	1,452	1,117.08	10,467	130.0
60	639	458.70	4,375	139.3
65	244	200.92	1,827	121.4
Over 65	180	131.78	1,177	136.6
Total	27,759	27,737.43	232,052	100.1%

Recommendation: No change.

TABLE 1(b)**SUMMARY OF EXPERIENCE FOR TERMINATION FROM
EMPLOYMENT BEFORE RETIREMENT****VESTED TERMINATIONS****MALES
1999 - 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
25	66	31.07	442	212.4%
30	512	544.75	13,095	94.0
35	590	472.18	18,318	125.0
40	576	388.34	22,461	148.3
45	685	359.82	34,638	190.4
50	627	403.42	46,575	155.4
55	407	124.35	14,625	327.3
60	163	12.57	1,479	1,296.7
65	52	-	-	-
Over 65	44	-	-	-
Total	3,722	2,336.50	151,633	159.3%

Recommendation: Increase and adjust pattern of rates to reflect experience.

TABLE 1(b)
(continued)

**SUMMARY OF EXPERIENCE FOR TERMINATION FROM
EMPLOYMENT BEFORE RETIREMENT**

VESTED TERMINATIONS

**FEMALES
1999 - 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
25	454	249.05	2,267	182.3%
30	2,704	2,146.54	39,094	126.0
35	1,878	1,305.63	42,076	143.8
40	1,161	866.98	49,623	133.9
45	1,257	1,051.58	81,543	119.5
50	1,489	1,309.02	104,721	113.7
55	1,080	540.95	43,274	199.6
60	405	57.27	4,581	707.2
65	67	-	-	-
Over 65	41	-	-	-
Total	10,536	7,527.02	367,179	140.0%

Recommendation: Increase and adjust pattern of rates to reflect experience.

TABLE 1(b)
(continued)

**SUMMARY OF EXPERIENCE FOR TERMINATION FROM
EMPLOYMENT BEFORE RETIREMENT**

VESTED TERMINATIONS

**MALES AND FEMALES
1999 - 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
25	520	280.12	2,709	185.6%
30	3,216	2,691.29	52,189	119.5
35	2,468	1,777.81	60,394	138.8
40	1,737	1,255.32	72,084	138.4
45	1,942	1,411.40	116,181	137.6
50	2,116	1,712.44	151,296	123.6
55	1,487	665.30	57,899	223.5
60	568	69.84	6,060	813.3
65	119	-	-	-
Over 65	85	-	-	-
Total	14,258	9,863.52	518,812	144.6%

Recommendation: Increase and adjust pattern of rates to reflect experience.

TABLE 2
SUMMARY OF EXPERIENCE FOR
DEATH IN ACTIVE SERVICE
MALES
1999 – 2003

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
20	1	0.03	79	3,333.3%
25	3	7.47	18,099	40.2
30	4	14.23	28,118	28.1
35	12	17.18	27,266	69.8
40	23	23.74	29,641	96.9
45	37	53.04	41,574	69.8
50	77	140.83	60,270	54.7
55	87	147.98	38,803	58.8
60	48	88.24	15,026	54.4
65	36	47.04	5,149	76.5
Over 65	19	41.17	2,209	46.2
Total	347	580.95	266,234	59.7%

Recommendation: Adjust mortality table (Uninsured Pensioners Year 1994 - Projection 2002 - Scale AA) to reflect experience.

TABLE 2
(continued)

**SUMMARY OF EXPERIENCE FOR
DEATH IN ACTIVE SERVICE**

FEMALES
1999 - 2003

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
20	-	0.10	518	0.0%
25	9	12.62	55,364	71.3
30	11	20.42	70,563	53.9
35	14	21.69	58,784	64.5
40	29	32.85	67,346	88.3
45	59	74.75	100,002	78.9
50	117	156.57	129,676	74.7
55	98	141.63	77,006	69.2
60	68	88.90	29,464	76.5
65	18	34.96	7,037	51.5
Over 65	13	20.20	2,039	64.4
Total	436	604.69	597,799	72.1%

Recommendation: Adjust mortality table (Uninsured Pensioners Year 1994 - Projection 2002 - Scale AA) to reflect experience.

TABLE 2
(continued)

**SUMMARY OF EXPERIENCE FOR
DEATH IN ACTIVE SERVICE**

**MALES AND FEMALES
1999 – 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
20	1	0.13	597	769.2%
25	12	20.09	73,463	59.7
30	15	34.65	98,681	43.3
35	26	38.87	86,050	66.9
40	52	56.59	96,987	91.9
45	96	127.79	141,576	75.1
50	194	297.40	189,946	65.2
55	185	289.61	115,809	63.9
60	116	177.14	44,490	65.5
65	54	82.00	12,186	65.9
Over 65	32	61.37	4,248	52.1
Total	783	1,185.64	864,033	66.0%

Recommendation: Adjust mortality table (Uninsured Pensioners Year 1994 - Projection 2002 - Scale AA) to reflect experience.

TABLE 3**SUMMARY OF EXPERIENCE FOR
DISABILITY RETIREMENT****MALES
1999 - 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
20	-	0.02	79	0.0%
25	-	5.72	18,099	0.0
30	2	12.96	28,118	15.4
35	12	27.90	27,266	43.0
40	28	54.54	29,641	51.3
45	75	124.12	41,574	60.4
50	187	291.29	60,270	64.2
55	124	234.74	38,803	52.8
60	36	101.17	15,026	35.6
65	1	19.77	2,794	5.1
Over 65	1	-	-	-
Total	466	872.23	261,670	53.4%

Recommendation: Decrease rates and adjust pattern of rates to reflect experience.

TABLE 3
(continued)

**SUMMARY OF EXPERIENCE FOR
DISABILITY RETIREMENT**

FEMALES
1999 – 2003

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
20	-	0.10	518	0.0%
25	-	13.51	55,364	0.0
30	25	36.76	70,563	68.0
35	45	60.72	58,784	74.1
40	90	124.30	67,346	72.4
45	172	280.73	100,002	61.3
50	392	487.62	129,676	80.4
55	296	424.42	77,006	69.7
60	116	187.21	29,464	62.0
65	15	29.65	4,266	50.6
Over 65	3	-	-	-
Total	1,154	1,645.02	592,989	70.2%

Recommendation: Decrease rates and adjust pattern of rates to reflect experience.

TABLE 3
(continued)

**SUMMARY OF EXPERIENCE FOR
DISABILITY RETIREMENT**

**MALES AND FEMALES
1999 - 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
20	-	0.12	597	0.0%
25	-	19.23	73,463	0.0
30	27	49.72	98,681	54.3
35	57	88.62	86,050	64.3
40	118	178.84	96,987	66.0
45	247	404.85	141,576	61.0
50	579	778.91	189,946	74.3
55	420	659.16	115,809	63.7
60	152	288.38	44,490	52.7
65	16	49.42	7,060	32.4
Over 65	4	-	-	-
Total	1,620	2,517.25	854,659	64.4%

Recommendation: Decrease rates and adjust pattern of rates to reflect experience.

TABLE 4

**SUMMARY OF EXPERIENCE FOR
SERVICE RETIREMENT FOR A
MEMBER AGE 60 WITH 5 YEARS OF SERVICE**

**MALES
1999 - 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
60	167	140.14	1,078	119.2%
61	77	106.92	891	72.0
62	69	74.40	744	92.7
63	47	58.90	589	79.8
64	80	65.52	504	122.1
65	66	84.70	385	77.9
66	39	58.60	293	66.6
67	27	24.75	225	109.1
Over 67	118	172.60	863	68.4
Total	690	786.53	5,572	87.7%

Recommendation: Decrease rates and adjust pattern of rates to reflect experience.

TABLE 4
(continued)

**SUMMARY OF EXPERIENCE FOR
SERVICE RETIREMENT FOR A
MEMBER AGE 60 WITH 5 YEARS OF SERVICE**

**FEMALES
1999 – 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
60	778	644.38	2,929	120.7%
61	207	319.04	1,994	64.9
62	168	189.93	1,461	88.5
63	112	118.47	1,077	94.5
64	132	121.05	807	109.0
65	132	116.76	556	113.1
66	51	76.65	365	66.5
67	35	53.80	269	65.1
Over 67	89	161.60	808	55.1
Total	1,704	1,801.68	10,266	94.6%

Recommendation: Decrease rates and adjust pattern of rates to reflect experience.

TABLE 4
(continued)

**SUMMARY OF EXPERIENCE FOR
SERVICE RETIREMENT FOR A
MEMBER AGE 60 WITH 5 YEARS OF SERVICE**

**MALES AND FEMALES
1999 - 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
60	945	784.52	4,007	120.5%
61	284	425.96	2,885	66.7
62	237	264.33	2,205	89.7
63	159	177.37	1,666	89.6
64	212	186.57	1,311	113.6
65	198	201.46	941	98.3
66	90	135.25	658	66.5
67	62	78.55	494	78.9
Over 67	207	334.20	1,671	61.9
Total	2,394	2,588.21	15,838	92.5%

Recommendation: Decrease rates and adjust pattern of rates to reflect experience.

TABLE 5
SUMMARY OF EXPERIENCE FOR
SERVICE RETIREMENT FOR A
MEMBER AGE 55 WITH 25 YEARS OF SERVICE

MALES
1999 - 2003

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
55	310	75.36	1,256	411.4%
56	53	50.45	961	105.1
57	52	40.73	776	127.7
58	36	33.34	635	108.0
59	28	26.62	507	105.2
60	33	22.68	378	145.5
61	26	14.01	267	185.6
62	16	10.23	195	156.4
63	12	19.32	161	62.1
64	20	17.36	124	115.2
65	19	17.46	97	108.8
66	17	13.14	73	129.4
67	6	8.46	47	70.9
Over 67	21	32.00	128	65.6
Total	649	381.16	5,605	170.3%

Recommendation: Increase rates and adjust pattern of rates to reflect experience.

TABLE 5
(continued)

**SUMMARY OF EXPERIENCE FOR
SERVICE RETIREMENT FOR A
MEMBER AGE 55 WITH 25 YEARS OF SERVICE**

**FEMALES
1999 - 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
55	605	279.10	2,791	216.8%
56	197	210.06	2,334	93.8
57	210	187.11	2,079	112.2
58	174	201.85	1,835	86.2
59	205	210.73	1,621	97.3
60	167	206.08	1,288	81.0
61	140	154.08	963	90.9
62	105	118.56	741	88.6
63	76	95.20	560	79.8
64	127	95.92	436	132.4
65	79	89.59	289	88.2
66	42	52.70	170	79.7
67	21	35.65	115	58.9
Over 67	63	99.05	283	63.6
Total	2,211	2,035.68	15,505	108.6%

Recommendation: Increase rates and adjust pattern of rates to reflect experience.

TABLE 5
(continued)

**SUMMARY OF EXPERIENCE FOR
SERVICE RETIREMENT FOR A MEMBER
AGE 55 WITH 25 YEARS OF SERVICE**

**MALES AND FEMALES
1999 - 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
55	915	354.46	4,047	258.1%
56	250	260.51	3,295	96.0
57	262	227.84	2,855	115.0
58	210	235.19	2,470	89.3
59	233	237.35	2,128	98.2
60	200	228.76	1,666	87.4
61	166	168.09	1,230	98.8
62	121	128.79	936	94.0
63	88	114.52	721	76.8
64	147	113.28	560	129.8
65	98	107.05	386	91.5
66	59	65.84	243	89.6
67	27	44.11	162	61.2
Over 67	84	131.05	411	64.1
Total	2,860	2,416.84	21,110	118.3%

Recommendation: Increase rates and adjust pattern of rates to reflect experience.

TABLE 6

**SUMMARY OF EXPERIENCE FOR
SERVICE RETIREMENT FOR A
MEMBER WITH 30 YEARS OF SERVICE**

**MALES
1999 - 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
Under 53	2,314	2,026.08	7,236	114.2%
53	851	1,150.14	3,966	74.0
54	657	1,033.56	3,564	63.6
55	495	975.57	3,147	50.7
56	637	825.53	2,663	77.2
57	582	653.17	2,107	89.1
58	491	603.36	1,676	81.4
59	390	479.88	1,333	81.3
60	271	380.16	1,056	71.3
61	223	323.70	830	68.9
62	163	243.75	625	66.9
63	130	202.80	507	64.1
64	97	181.89	423	53.3
65	85	166.40	320	51.1
66	50	100.80	240	49.6
67	55	86.52	206	63.6
Over 67	120	239.40	570	50.1
Total	7,611	9,672.71	30,469	78.7%

Recommendation: Decrease rates and adjust pattern of rates to reflect experience.

TABLE 6
(continued)

**SUMMARY OF EXPERIENCE FOR
SERVICE RETIREMENT FOR A
MEMBER WITH 30 YEARS OF SERVICE**

**FEMALES
1999 - 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
Under 53	3,108	2,971.35	11,005	104.6%
53	846	1,273.32	4,716	66.4
54	705	1,092.15	4,045	64.6
55	637	996.44	3,436	63.9
56	769	947.58	2,787	81.2
57	619	739.90	2,114	83.7
58	581	648.00	1,800	89.7
59	527	590.00	1,475	89.3
60	384	477.60	1,194	80.4
61	374	391.60	979	95.5
62	281	340.20	756	82.6
63	226	271.35	603	83.3
64	176	225.60	470	78.0
65	109	152.88	312	71.3
66	100	116.50	233	85.8
67	53	95.00	190	55.8
Over 67	177	299.50	599	59.1
Total	9,672	11,628.97	36,714	83.2%

Recommendation: Decrease rates and adjust pattern of rates to reflect experience.

TABLE 6
(continued)

**SUMMARY OF EXPERIENCE FOR
SERVICE RETIREMENT FOR A
MEMBER WITH 30 YEARS OF SERVICE**

**MALES AND FEMALES
1999 - 2003**

Average Age	Number of Separations		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
Under 53	5,422	4,997.43	18,241	108.5%
53	1,697	2,423.46	8,682	70.0
54	1,362	2,125.71	7,609	64.1
55	1,132	1,972.01	6,583	57.4
56	1,406	1,773.11	5,450	79.3
57	1,201	1,393.07	4,221	86.2
58	1,072	1,251.36	3,476	85.7
59	917	1,069.88	2,808	85.7
60	655	857.76	2,250	76.4
61	597	715.30	1,809	83.5
62	444	583.95	1,381	76.0
63	356	474.15	1,110	75.1
64	273	407.49	893	67.0
65	194	319.28	632	60.8
66	150	217.30	473	69.0
67	108	181.52	396	59.5
Over 67	297	538.90	1,169	55.1
Total	17,283	21,301.68	67,183	81.1%

Recommendation: Decrease rates and adjust pattern of rates to reflect experience.

TABLE 7
SUMMARY OF MORTALITY EXPERIENCE
AMONG RETIREES

SERVICE RETIREMENT

MALES
1999 - 2003

Average Age	Number of Deaths		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
55	51	92.67	19,193	55.0%
60	149	202.68	28,043	73.5
65	239	360.12	30,115	66.4
70	451	622.42	29,240	72.5
75	665	826.56	23,516	80.5
80	702	788.83	13,798	89.0
85	607	619.91	6,706	97.9
90	483	432.33	3,066	111.7
Over 90	274	230.98	1,075	118.6
Total	3,621	4,176.49	154,752	86.7%

Recommendation: Adopt Uninsured Pensioners Year 1994 Mortality Table (Projection 2002 - Scale AA) with a two-year setback in age in anticipation of future mortality improvements.

TABLE 7
(continued)

**SUMMARY OF MORTALITY EXPERIENCE
AMONG RETIREES**

SERVICE RETIREMENTS

FEMALES

1999 – 2003

Average Age	Number of Deaths		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
55	48	46.49	19,711	103.3%
60	126	129.52	32,337	97.3
65	252	276.47	42,383	91.1
70	410	488.20	41,145	84.0
75	610	788.91	34,588	77.3
80	960	1,131.42	27,926	84.8
85	1,495	1,540.68	22,744	97.0
90	1,992	1,785.26	15,673	111.6
Over 90	2,004	1,816.31	8,680	110.3
Total	7,897	8,003.26	245,187	98.7%

Recommendation: Adopt Uninsured Pensioners Year 1994 Mortality Table (Projection 2002 – Scale AA) with a one-year setback in age in anticipation of future mortality improvements.

TABLE 7
(continued)

**SUMMARY OF MORTALITY EXPERIENCE
AMONG RETIREES**

SERVICE RETIREMENT

**MALES AND FEMALES
1999 – 2003**

Average Age	Number of Deaths		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
55	99	139.15	38,904	71.1%
60	275	332.19	60,380	82.8
65	491	636.59	72,498	77.1
70	861	1,110.61	70,385	77.5
75	1,275	1,615.47	58,104	78.9
80	1,662	1,920.25	41,724	86.6
85	2,102	2,160.59	29,450	97.3
90	2,475	2,217.58	18,739	111.6
Over 90	2,278	2,047.29	9,755	111.3
Total	11,518	12,179.75	399,939	94.6%

Recommendation: Adopt Uninsured Pensioners Year 1994 Mortality Table (Projection 2002 – Scale AA) with a two-year setback in age for males and a one-year setback in age for females in anticipation of future mortality improvements.

TABLE 8
SUMMARY OF MORTALITY EXPERIENCE
AMONG RETIREES
DISABILITY RETIREMENT
MALES
1999 - 2003

Average Age	Number of Deaths		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
35	-	1.12	29	0.0%
40	3	4.54	118	66.1
45	6	12.90	335	46.5
50	18	52.40	1,361	34.4
55	34	95.52	2,481	35.6
60	39	83.08	2,158	46.9
65	53	69.84	1,814	75.9
70	48	58.67	1,524	81.8
75	71	44.78	1,053	158.6
80	42	29.21	463	143.8
85	14	10.46	112	133.8
90	2	2.19	16	91.3
Over 90	1	0.18	1	555.6
Total	331	464.89	11,465	71.2%

Recommendation: Decrease rates 20%.

TABLE 8
(continued)

**SUMMARY OF MORTALITY EXPERIENCE
AMONG RETIREES**

DISABILITY RETIREMENT

**FEMALES
1999 - 2003**

Average Age	Number of Deaths		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
35	7	4.66	158	150.2%
40	7	10.74	364	65.2
45	19	30.65	1,039	62.0
50	62	80.30	2,722	77.2
55	62	105.64	3,581	58.7
60	78	100.54	3,408	77.6
65	61	77.94	2,642	78.3
70	51	58.00	1,966	87.9
75	72	50.97	1,699	141.3
80	75	49.88	1,193	150.4
85	54	32.58	519	165.7
90	28	12.10	128	231.4
Over 90	16	5.86	41	273.0
Total	592	619.86	19,460	95.5%

Recommendation: No change.

TABLE 8
(continued)

**SUMMARY OF MORTALITY EXPERIENCE
AMONG RETIREES**

DISABILITY RETIREMENT

**MALES AND FEMALES
1999 - 2003**

Average Age	Number of Deaths		Exposed	Ratio of Actual to Expected Experience
	Actual	Expected		
35	7	5.78	187	121.1%
40	10	15.28	482	65.4
45	25	43.55	1,374	57.4
50	80	132.70	4,083	60.3
55	96	201.16	6,062	47.7
60	117	183.62	5,566	63.7
65	114	147.78	4,456	77.1
70	99	116.67	3,490	84.9
75	143	95.75	2,752	149.3
80	117	79.09	1,656	147.9
85	68	43.04	631	158.0
90	30	14.29	144	209.9
Over 90	17	6.04	42	281.5
Total	923	1,084.75	30,925	85.1%

Recommendation: Decrease male disability mortality table rates by 20%.

TABLE 9**SUMMARY OF INFLATION AND INVESTMENT RETURNS**

Fiscal Year Ended June 30	Average Annual Increase in CPI-U	Return on Assets	
		Market Value	Actuarial Value
2003	2.1%	1.8%	1.6%
2002	1.1	(8.3)	(7.8)
2001	3.2	(6.5)	6.7
2000	3.7	10.3	13.1
1999	2.0	12.5	13.4
Average	2.4%	2.0%	5.4%

TABLE 10
SALARY INCREASE RATES OF ACTIVE MEMBERS
MALES AND FEMALES
1999 - 2003

Average Age	Actual Increase					Total	Expected Increase
	1998/1999	1999/2000	2000/2001	2001/2002	2002/2003		
25	20.4%	18.7%	16.8%	15.6%	14.6%	17.0%	8.25%
30	10.2	10.2	9.4	9.5	9.3	9.7	7.25
35	8.2	8.7	8.3	8.5	8.6	8.5	6.25
40	6.9	7.4	7.3	7.5	7.7	7.4	5.25
45	5.9	6.4	6.2	6.1	6.5	6.2	4.55
50	5.2	5.5	5.4	5.4	5.6	5.4	4.05
55	4.7	5.0	4.8	4.9	5.2	5.0	3.75
60	4.3	4.6	4.9	4.4	4.9	4.6	3.50
65	3.7	4.3	4.4	3.7	3.9	4.0	3.25
Over 65	3.6	3.1	2.9	2.4	3.4	3.1	3.25
Total	6.7%	7.0%	6.8%	6.7%	6.9%	6.8%	5.00%

APPENDIX A**SUMMARY OF CURRENT AND PROPOSED
DEMOGRAPHIC RATES****MALE**

Age	Termination Before 5 Years of Service		Termination After 5 Years of Service	
	Current	Proposed*	Current	Proposed
20	19.000%	19.000%	9.000%	15.000%
25	16.000	16.000	9.000	15.000
30	15.000	15.000	4.000	4.000
35	14.500	14.500	2.500	2.900
40	13.750	13.750	1.750	2.400
45	13.400	13.400	0.980	1.900
50	13.400	13.400	0.850	1.500
55	13.400	13.400	0.850	1.500
60	13.400	13.400	0.850	1.500
65	13.400	13.400	0.850	0.000
over 65	13.400	13.400	0.850	0.000

Age	30 and Out Retirement		55/25 Retirement		60/5 Retirement	
	Current	Proposed	Current	Proposed	Current	Proposed
40	28.000%	25.000%				
45	28.000	25.000				
50	28.000	25.000				
55	31.000	15.000	6.000%	20.000%		
60	36.000	20.000	6.000	9.000	13.000%	15.000%
65	52.000	40.000	18.000	25.000	22.000	18.000
70	42.000	25.000	25.000	15.000	20.000	14.000
75	42.000	100.000	25.000	15.000	20.000	14.000

* Unchanged.

APPENDIX A**SUMMARY OF CURRENT AND PROPOSED
DEMOGRAPHIC RATES****MALE**

Age	Disability		Salary Scale	
	Current	Proposed	Current	Proposed
20	0.030%	0.010%	9.250%	10.450%
25	0.030	0.010	8.250	9.350
30	0.040	0.018	7.250	8.250
35	0.100	0.040	6.250	7.150
40	0.180	0.095	5.250	6.050
45	0.280	0.175	4.550	5.280
50	0.490	0.240	4.050	4.730
55	0.620	0.300	3.750	4.400
60	0.680	0.350	3.500	4.125
65	0.720	0.400	3.250	3.850
over 65	0.720	0.400	3.250	3.850

Age	Active Death	
	Current	Proposed
20	0.034%	0.023%
25	0.040	0.042
30	0.051	0.056
35	0.063	0.078
40	0.077	0.088
45	0.122	0.096
50	0.230	0.133
55	0.392	0.199
60	0.605	0.328
65	0.943	0.595
70	1.677	1.102

APPENDIX A**SUMMARY OF CURRENT AND PROPOSED
DEMOGRAPHIC RATES****FEMALE**

Age	Termination Before 5 Years of Service		Termination After 5 Years of Service	
	Current	Proposed*	Current	Proposed
20	15.000%	15.000%	4.500%	20.000%
25	11.750	11.750	15.000	19.000
30	11.750	11.750	4.800	8.000
35	11.750	11.750	3.060	4.000
40	9.000	9.000	1.650	2.500
45	9.000	9.000	1.250	2.000
50	9.000	9.000	1.250	2.000
55	9.000	9.000	1.250	2.000
60	7.250	7.250	1.250	2.000
65	7.250	7.250	1.250	0.000
over 65	7.250	7.250	1.250	0.000

Age	30 and Out Retirement		55/25 Retirement		60/5 Retirement	
	Current	Proposed	Current	Proposed	Current	Proposed
40	27.000%	22.000%				
45	27.000	22.000				
50	27.000	22.000				
55	29.000	15.000	10.000%	20.000%		
60	40.000	30.000	16.000	13.000	22.000%	25.000%
65	49.000	35.000	31.000	35.000	21.000	23.000
70	50.000	35.000	35.000	20.000	20.000	13.000
75	100.000	100.000	35.000	20.000	20.000	13.000

* Unchanged.

APPENDIX A**SUMMARY OF CURRENT AND PROPOSED
DEMOGRAPHIC RATES****FEMALE**

Age	Disability		Salary Scale	
	Current	Proposed	Current	Proposed
20	0.020%	0.020%	9.250%	10.450%
25	0.020	0.020	8.250	9.350
30	0.050	0.021	7.250	8.250
35	0.100	0.066	6.250	7.150
40	0.180	0.120	5.250	6.050
45	0.280	0.165	4.550	5.280
50	0.360	0.240	4.050	4.730
55	0.580	0.300	3.750	4.400
60	0.640	0.350	3.500	4.125
65	0.720	0.400	3.250	3.850
over 65	0.720	0.400	3.250	3.850

Age	Active Death	
	Current	Proposed
20	0.017%	0.018%
25	0.022	0.027
30	0.029	0.028
35	0.037	0.032
40	0.048	0.045
45	0.072	0.062
50	0.121	0.088
55	0.187	0.122
60	0.315	0.207
65	0.526	0.399
70	0.899	0.787