



Milliman
Consultants and Actuaries

1550 Liberty Ridge Drive, Suite 200
Wayne, PA 19087-5572
Tel +1 610 687.5644
Fax +1 610 687.4236
www.milliman.com

October 17, 2007

Mr. John D. Megariotis
Assistant Director-Finance
State of New Jersey
Department of the Treasury
Division of Pensions & Benefits – CN295
Trenton, NJ 08625-0295

Re: 2006 Teachers' Pension and Annuity Fund of New Jersey
Experience Study

Dear John:

Enclosed you will find 30 final copies of the 2006 Teachers' Pension and Annuity Fund of New Jersey Experience Study.

If you have any questions, or need additional copies, please call me.

Sincerely,

Scott
Scott Porter

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Enclosures

Teachers' Pension and Annuity Fund
of New Jersey

Experience Study
July 1, 2003 – June 30, 2006

by

Scott F. Porter
William A. Reimert

October , 2007

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

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Executive Summary

This report presents the results of the statistical analysis of actual experience from July 1, 2003 through June 30, 2006 among active, inactive and retired employees and their spouses and beneficiaries covered by the Teachers' Pension and Annuity Fund of New Jersey (TPAF). This study is intended to comply with Title 18A, Subtitle 10, Chapter 66, Section 58. This statute requires that at least once in every 3-year period the actuary shall make an actuarial investigation into the mortality, service and compensation or salary experience of the members and beneficiaries of the retirement system.

There are effectively four sections to the report plus two appendices:

- Section I – Executive Summary and Introduction. This section provides a brief list of the key assumption changes proposed.
- Section II - Economic Assumptions. In this section, a review of the components of the salary increase assumption such as price inflation, real wage inflation and the merit component are discussed and changes proposed where appropriate. The investment return assumption and the rate of payroll growth for amortizing the unfunded actuarial accrued liability are prescribed by the State Treasurer.
- Section III – Demographic Assumptions. This section presents a review of each assumption (rate of termination, retirement, mortality and disability) providing analysis on the experience observed as compared to the current assumption and proposes changes where appropriate. Also included in the retirement section is a discussion of adopting a methodology for setting retirement rates for new tier members created by Chapter 103, P.L. 2007.
- Section IV – Effect on Annual Costs. This section illustrates the effect of the proposed assumptions as if they had been used for the June 30, 2006 Actuarial Valuation.
- Appendix I – Demographic Data Analysis summarizes the experience observed as compared to the current and proposed assumptions utilizing actual to expected ratios.

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Summaries of this information are provided throughout Section III and can be easily located using the Table Index.

- Appendix II – Proposed Assumptions displays all the assumptions proposed.

The following table provides a brief list of the key assumptions proposed.

Table 1 – Brief Summary of Proposed Assumptions	
Salary	For shorter service members, an increase in the salary growth assumption and for members with 20 or more years of service, a decrease in the salary growth assumption. This results in an increase in the average salary scale from the assumed 5.45% to 5.74%.
Termination	For members with 10 or more years of service, an increase in the overall rates of termination and a continued shift in the number assumed to elect a benefit versus a contribution refund.
Retirement and Disability	Very minor changes are proposed to the retirement assumption and no changes are proposed to the disability assumption.
Retirement – New Tier Members	Adopt a methodology that alters the assumptions utilized for current members to reflect the change in retirement conditions by Chapter 103, P.L. 2007
Pre-retirement Mortality	Significant decrease in the mortality rates for active members.
Postretirement Mortality	Reflecting rates of mortality weighted on a benefit basis. This change combined with experience during the study period resulted in a decrease in the postretirement mortality rates primarily for males. These decreased rates serve to increase life expectancies.

The combined effect of these proposed assumptions if used in the June 30, 2006 actuarial valuation would have resulted in a decrease in the accrued liability by \$81.9 million (0.2%) and the total State pension contribution by \$14.7 million (1.1%) from \$1,286.2.0 million to

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\$1,271.5 million.

Please note that the assumptions developed in this report are intended to value pension benefits for all members participating in the Teachers' Pension and Annuity Fund. Use of these assumptions may not be appropriate for other purposes or any one subset of the membership.

Milliman's work product was prepared exclusively for the use or benefit of the State of New Jersey Division of Pension and Benefits for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the Teachers' Pension and Annuity Fund's operations, and uses the Division's data, which Milliman has not audited. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

In performing this analysis, we relied on data and other information provided by the Division of Pension and Benefits for the actuarial valuations. We have not audited or verified this data and other information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

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Differences between our projections and actual amounts depend on the extent to which future experience conforms to the assumptions made for this analysis. It is certain that actual experience will not conform exactly to the assumptions used in this analysis. Actual amounts will differ from projected amounts to the extent that actual experience deviates from expected experience.

We are members of the American Academy of Actuaries and meet its qualification standards to render this actuarial opinion.

Respectfully submitted,

MILLIMAN, INC.

By: 
Scott F. Porter, FSA
Member American Academy of Actuaries

By: 
William A. Reimert, FSA
Member American Academy of Actuaries

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Introduction

This report presents the results of the statistical analysis of actual experience from July 1, 2003 through June 30, 2006 among active, inactive and retired employees and their spouses and beneficiaries covered by the Teachers' Pension and Annuity Fund of New Jersey (TPAF). This study is intended to comply with Title 18A, Subtitle 10, Chapter 66, Section 58 which requires that at least once in every 3-year period the actuary shall make an actuarial investigation into the mortality, service and compensation or salary experience of the members and beneficiaries of the retirement system.

If a retirement system is to operate on a sound actuarial basis, the funds on hand together with the value of expected future employee, district and state contributions must be adequate to cover the value of future benefit payments. The determination of the value of expected future contributions and the value of future benefit payments involves projections based on anticipated future rates of mortality, withdrawal, disability, and retirement as well as rates of investment income and salary growth. In these projections, it is assumed that a certain proportion of the members of TPAF will terminate, die, retire or become disabled each year. Moreover, benefits are determined for each of these occurrences based on assumptions regarding the rate at which salaries will increase in the future. The value of these benefits are then calculated based on an assumed life expectancy for retirees, surviving spouses and other beneficiaries and the assumed long-term yield on plan assets. At three-year intervals an analysis is made to evaluate the experience under TPAF in order to revise, where necessary, those assumptions that are no longer in line with recent experience and/or best estimates of anticipated future experience.

In many cases of statistical analysis, the greater the volume of data analyzed the more reliable the results. This is not necessarily true in evaluating the experience of the members of a retirement system if this involves extending the study over long periods of time. For example, consider mortality experience among retirees. Twenty years ago the

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mortality rates at each age were considerably higher than the corresponding rates of mortality in more recent years. Thus, to include the experience of twenty years ago in a study of mortality rates would produce rates higher than are currently being experienced and can be expected to be experienced in the future. The use of mortality rates from even 10 or more years ago could understate life expectancy and hence contributions.

The experience from July 1, 2003 through June 30, 2006 served as a basis for this study. In a system as large as TPAF, three years of experience is generally adequate for statistical purposes. We have not addressed the interest rate assumption of 8.25% or the payroll growth assumption of 4.0% used as the growth rate in the amortization payments toward the unfunded actuarial accrued liability since these are prescribed by the State Treasurer.

We also reviewed prior experience studies in order to identify long term trends in the experience. This search for a longer-term historical perspective is the final step of the process before developing assumptions that can serve as best estimates of future experience. Our objective is to avoid frequent changes in assumptions due to random fluctuations in experience while reflecting any emerging long-term trends. One method used to accomplish this is to recommend revised assumptions, which fall between the prior assumptions and the actual experience during the current study period. This avoids frequent, sharp fluctuations in assumptions and costs while recognizing any emerging trends in the underlying plan experience.

As an aid in reviewing the detailed results of the evaluation as set forth in the following sections of this report, the following paragraphs review, in general terms, the effect of the various items of actuarial assumptions on the actuarial valuation. As noted above, an actuarial valuation involves a projection of the salaries and service of present members of the system and a determination of the value of the expected benefits payable to them.

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Thus, if many members die or terminate before becoming eligible for benefits, required contributions to the fund will be smaller than if members experience lower mortality or turnover. Similarly, a high investment yield will mean greater investment income so that there is a corresponding reduction in required contributions.

The overall reasonableness and consistency of the various actuarial assumptions is therefore a consideration. However, if as time passes each element in the actuarial assumptions moves further from actual experience, it is difficult to tell whether the assumptions are reasonable on an overall basis. Thus, it may be stated that one objective of the current analysis is to bring each element of the actuarial assumptions more in line with recent experience, especially those areas regarding demographic trends - withdrawal, disability, retirement and death.

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Economic Assumptions – Price Inflation and Salary Growth Assumptions

Since (1) the interest rate of 8.25% and (2) the rate of payroll growth rate of 4.0% for amortizing the unfunded actuarial accrued liability are prescribed by the State Treasurer, these economic assumptions were not reviewed as part of this study. Salary growth rates were reviewed to determine if any age or service based trends emerged during the study period, and to determine if adjustments would be appropriate in the overall salary growth assumption of 5.45%. We also reviewed the price inflation assumption, which is currently 3.0%.

The key economic assumptions used to prepare an actuarial valuation of a pension fund such as the Teachers' Pension and Annuity Fund are:

- the Rate of Price Inflation
- the Rate of Wage Inflation
- the Rate of Investment Return

In developing the assumptions discussed below, we have used the same underlying rate of price inflation in developing each of these assumptions in order for them to be consistent with each other as required by Actuarial Standards of Practice, "ASOPs".

We will first discuss the basis for our recommended assumption regarding price inflation, then move to a discussion of the rate of wage inflation, and finally discuss the total rate of salary growth including the merit component of salary increases (productivity, training, etc.).

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Rate of Price Inflation

We developed a long-term price inflation forecast by looking at three sources of information: 1) historical price inflation, 2) current yields on inflation-indexed and conventional treasury bonds, and 3) expert forecasts.

Historical Data

The chart below shows the annualized rate of price inflation over 10-year periods starting in 1900 and the seven-year period from 2000 through 2006. (This is the longest period for which accurate and meaningful data is available.) It also shows the annualized rate of price inflation over the entire 107 years, the period 1900-1949, the most recent 57 years, the last 20 years, and the last 10 years (all periods ending in December 2006).

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Historical Price Inflation Chart		
Time Period		Annualized Increase in CPI
Start	End	
1900	1909	2.4%
1910	1919	7.3
1920	1929	-1.0
1930	1939	-2.0
1940	1949	5.4
1950	1959	2.2
1960	1969	2.5
1970	1979	7.4
1980	1989	5.1
1990	1999	2.9
2000	2006	2.6

All 107 Years	3.1%
1900 – 1949	2.4
Last 57 Years	3.8
Last 20 Years	3.1
Last 10 Years	2.4

Source: Ibbotson Associates and *Triumph of the Optimists*, by Elroy Dimson, Paul Marsh, and Mike Staunton (Princeton, NJ: Princeton University Press, 2002), and the Bureau of Labor Statistics

As the table shows, price inflation has averaged about 3.1% since 1900, which is the same as its average over the past 20 years. The most recent 10 years have been somewhat lower at 2.4%, while the past 57 years were somewhat higher at 3.8%.

Treasury Bond Yields

Since 1997, the US Treasury has been issuing inflation-indexed treasury bonds. The difference between the yield on a conventional treasury bond and an inflation-indexed bond of the same maturity is roughly the bond market's "forecast" for average price inflation over the period to maturity.

The following chart shows the current and average yields for these two types of treasury

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bonds for the 10-year and the 20-year maturities.

Treasure Bond Yield Chart			
	Conventional Bond Yield	Inflation- Indexed Bond Yield	Difference
10-Year Maturity:			
Yield on July 31, 2007	4.78%	2.44%	2.34%
Avg. Yield for July 2007	5.00	2.64	2.36
20-year Maturity:			
Yield on July 31, 2007	5.00	2.43	2.57
Avg. Yield for July 2007	5.19	2.62	2.57

Source: Federal Reserve statistical release

If we interpret the difference in the yields as a forecast of average price inflation over the holding period, the yields imply that financial markets expect price inflation to average about 2.6% over the next 20 years.

Expert Forecasts – Survey of Professional Forecasters and Social Security

The Philadelphia Federal Reserve Bank publishes The Survey of Professional Forecasters (www.phil.frb.org) each quarter. They survey professional economists and collect forecasts for several key variables including price inflation. Each forecaster is asked to forecast average price inflation over the next 10 years. The results of the most recent survey (3rd Quarter 2007) show a median result, based on the forecasts of 44 economists, of 2.4%. This is in line with the implicit forecast from treasury bond yields.

The 2007 Annual Report of the Board of Trustees of the Social Security Trust Funds indicates the price inflation forecasts for the 75-year projections of the Social Security Old-Age and Survivors Insurance, "OASI", and Disability Insurance, "DI", Trust Funds were as follows.

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Social Security Inflation Assumptions			
Alternative Assumptions	I – Low	II - Intermediate	III – High
Inflation Assumption	1.8%	2.8%	3.8%

Proposed Assumption

Based on all of the above information, the current inflation assumption of 3.0% seems to be reasonable. As a result, we recommend retaining the current long-term price inflation assumption of 3.0% per year.

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Rate of Wage Inflation

Current Assumption

The current wage inflation assumption is 4.0%, which also serves as the payroll growth assumption for amortizing the unfunded actuarial accrued liability. Thus, real wage growth is assumed to be 1.0% higher than price inflation, which is currently assumed to be 3.0%.

Analysis

In analyzing the forecast for future wage inflation, we reviewed three sources of information: 1) historical national data, 2) actual wages of TPAF members, and 3) Social Security forecasts.

The chart below summarizes the rate of increases in wages in the US based on the Social Security Wage Index. This table summarizes the historical data over 5-year periods beginning when the index was created as well as cumulative periods from inception.

Social Security Wage Index				
Start	End	Increase in CPI	Increase in Social Security Wage Index	Real Increase in Social Security Wage Index
1951	1956	0.9%	4.8%	3.9%
1956	1961	1.9	3.0	1.1
1961	1966	1.6	3.9	2.3
1966	1971	4.6	5.6	1.0
1971	1976	7.0	7.3	0.3
1976	1981	9.8	8.3	-1.5
1981	1986	3.8	4.7	0.9
1986	1991	4.4	4.7	0.3
1991	1996	2.9	3.5	0.6
1996	2001	2.5	4.9	2.4
2001	2006	2.6	2.9	0.3
1951	2006	3.8	4.9	1.1

We also reviewed actual wages experienced by TPAF members. The rate of increase in Milliman's work product was prepared solely for the New Jersey Division of Pensions and Benefits for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

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average salaries among all active members of TPAF since 1981 and average salaries among new members joining TPAF ("starting salaries") since 1996 are summarized in the chart below.

TPAF Wage Information						
		% Rate of Increase			"Real" % Rate of Increase	
Start	End	in July CPI	in Average Pay	in Starting Pay	in Average Pay	in Starting Pay
1981	1986	5.4	8.0	n/a	2.6	n/a
1986	1991	3.9	7.4	n/a	3.5	n/a
1991	1996	3.2	5.0	n/a	1.8	n/a
1996	2001	2.5	1.7	3.5	-0.8	1.0
2001	2006	2.8	2.4	3.9	-0.4	1.1
1981	2006	3.2	4.9	n/a	1.7	n/a
1996	2006	2.6	2.1	3.7	-0.5	1.1

These data show that average salaries among all active TPAF members grew at an annual rate 1.7% faster than the CPI in the 25 years since 1981 and starting salaries of TPAF members have grown at an annual rate 1.1% faster than the CPI in the 10 years since 1996. While these data sets cover much shorter time periods than the previously indicated national data, they do reflect actual experience among TPAF members. (The starting salary data should be the more accurate of these data sets to measure general wage inflation, but we only have data for the last 10 years for this information.)

Social Security Forecasts

The 2007 Annual Report of the Board of Trustees of the Social Security Trust Funds indicates the real-wage differential forecasts for the 75-year projections of the Social Security OASI and DI Trust Funds were as follows.

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Social Security Real Wage Assumptions			
Alternative Assumptions	I – Low	II - Intermediate	III – High
Real-Wage Differential	0.6%	1.1%	1.6%

Proposed Assumptions

Based on the above information, the current assumed rate of real wage inflation of 1.0% seems reasonable. Therefore we recommend continuing this assumption. Adding this figure to the 3.0% price inflation assumption developed previously produces a recommended wage inflation assumption of 4.0%. (A "merit" scale is added to the wage inflation rate to obtain the total rate of salary increases assumed to be earned each year by active members. The merit scale reflects factors such as training increases, promotions, etc. over the course of an employee's career in excess of general wage inflation.)

The 4.0% wage inflation assumption is the same as the payroll growth assumption selected by the Treasurer for purposes of determining the rate of increase in the amortization payments for the Unfunded Actuarial Accrued Liability. Since these assumptions are the same, they comply with GASB requirements regarding an acceptable rate of increase in the amortization payments.

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Merit Scale

Current Assumption

As noted above, a "merit" scale is added to the wage inflation rate to obtain the total rate of salary increases assumed to be earned each year by active members. The merit scale reflects factors such as training increases, promotions, etc. over the course of an employee's career in excess of general wage inflation.

The current assumption produces an average merit assumption of 1.45%, the overall average salary scale assumption of 5.45% less the wage inflation assumption of 4.0%. The current assumption varies based on a member's years of service. For members in their early years of employment, a higher merit scale is generally assumed versus members with longer service.

Analysis

During the 3-year study period, price inflation was 3.4% (based on the increase in the CPI-U from July 2003 to July 2006), and wage inflation was 4.0% (measured based on the increase in average salaries for new entrants to TPAF). Thus the study period experienced price and wage inflation quite close to the long-term assumptions. As a result, we believe that actual total salary growth rates during the study period should be representative of reasonable long-term expectations without the necessity of adjusting them for differences between short-term experience versus long-term expectations in the underlying rates of inflation.

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Proposed Assumption

As a result, we decided to base a recommended salary increase assumption and merit scale on the actual experience during the study period – July 2003 through July 2006. We tabulated the average rate of salary increase among members in each of the three years and have summarized the results below. This tabulation grouped members together based on their completed service.

Table 2 - Summary of Salary Increase Experience and Recommended and Current Total Salary Increase Assumptions (wage inflation + merit scale)						
Completed Years of Service	Average Salary Increase During Fiscal Year Ending			Average 3-Year Increase	Recommended Assumption	Prior Assumption
	2004	2005	2006			
less than 1	7.72%	9.09%	7.57%	8.13%	7.35%	5.70%
1	7.05%	8.02%	6.04%	7.04%	7.35%	5.70%
2	6.32%	7.74%	5.69%	6.58%	7.35%	5.70%
3	6.47%	7.76%	5.69%	6.64%	7.35%	5.70%
4	6.60%	8.10%	5.80%	6.83%	7.35%	6.60%
5	7.20%	8.33%	6.00%	7.18%	7.35%	6.60%
6	7.22%	8.40%	6.20%	7.27%	7.35%	6.60%
7	7.45%	8.54%	6.62%	7.54%	7.35%	6.60%
8	7.65%	8.29%	6.92%	7.62%	7.35%	6.60%
9	7.52%	8.62%	6.94%	7.70%	7.35%	6.60%
10	7.18%	8.69%	6.66%	7.51%	7.35%	6.60%
11	7.86%	8.78%	7.21%	7.95%	7.35%	6.60%
12	7.19%	8.55%	6.98%	7.58%	7.35%	6.60%
13	6.74%	7.73%	6.48%	6.98%	7.00%	6.60%
14	6.48%	7.42%	6.21%	6.71%	6.70%	6.60%
15	6.09%	7.13%	6.04%	6.42%	6.40%	6.60%
16	5.70%	6.67%	5.07%	5.82%	5.80%	5.70%
17	5.03%	5.98%	4.81%	5.27%	5.25%	4.80%
18	5.02%	5.56%	4.55%	5.04%	5.05%	4.80%
19	4.59%	5.40%	4.35%	4.78%	4.80%	4.80%
20	4.71%	5.30%	4.42%	4.81%	4.80%	5.50%
21	4.55%	4.78%	3.99%	4.44%	4.45%	4.80%
22	4.12%	4.84%	4.04%	4.33%	4.35%	4.80%
23	4.06%	4.69%	3.62%	4.12%	4.10%	4.80%

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Table 2 - Summary of Salary Increase Experience and Recommended and Current Total Salary Increase Assumptions (wage inflation + merit scale)						
Completed Years of Service	Average Salary Increase During Fiscal Year Ending			Average 3-Year Increase	Recommended Assumption	Prior Assumption
	2004	2005	2006			
24	3.94%	4.54%	3.75%	4.08%	4.10%	4.80%
25	3.97%	4.50%	3.72%	4.06%	4.10%	4.80%
26	3.60%	4.28%	3.42%	3.77%	3.75%	4.60%
27	3.57%	4.01%	3.29%	3.62%	3.75%	4.60%
28	3.67%	4.26%	3.46%	3.79%	3.75%	4.60%
29	3.54%	4.05%	3.61%	3.73%	3.75%	4.60%
30	3.50%	4.30%	3.50%	3.76%	3.75%	4.60%
31	3.47%	3.88%	3.25%	3.53%	3.50%	4.40%
32	3.40%	4.01%	3.21%	3.54%	3.50%	4.40%
33	3.43%	3.86%	3.37%	3.55%	3.50%	4.40%
34	3.44%	4.11%	3.18%	3.58%	3.50%	4.40%
35	3.71%	3.91%	3.27%	3.63%	3.50%	4.40%
36	3.32%	3.62%	3.48%	3.48%	3.50%	4.40%
37	3.23%	3.59%	3.31%	3.38%	3.50%	4.40%
38	3.29%	3.50%	3.21%	3.33%	3.50%	4.40%
39	3.45%	3.68%	3.21%	3.45%	3.50%	4.40%
40	2.87%	3.87%	3.44%	3.39%	3.50%	4.40%
Average	5.44%	6.39%	5.10%	5.64%	5.74%	5.44%

Effect on Plan's Liability

Overall, the proposed assumptions increase the average rate of salary growth from 5.44% to 5.74%. However, the increase in the overall average rate is due to increases in the assumption for those in the early part of their career. For members with at least 20 years of service, the proposed assumptions are lower than current assumption. Since members with significant service would have a higher liability than shorter service members, the net effect of these proposed assumptions is a decrease in the plan's liability.

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Demographic Assumptions

We determined the proposed demographic assumptions in accordance with the Actuarial Standards of Practice No. 35 (ASOP 35) adopted by the Actuarial Standards Board in December of 1999. This standard provides guidance to actuaries in selecting demographic assumptions – primarily retirement, mortality, termination of employment and disability – for measuring obligations under defined benefit pension plans. A reasonable assumption is one that is expected to approximately model the contingency being measured and is not anticipated to produce significant gains or losses.

The general procedure in a study of demographic experience is to calculate rates of decrement and compare these rates to current assumptions. Initially, we determine the number of participants who were exposed to the risk of mortality, withdrawal, disability, etc. The next step is to determine how many actually died, withdrew, became disabled, etc. Dividing the number of terminations in each age and service cell by the number exposed to the risk of termination in that cell produces the rate of decrement. These crude rates of decrement may fluctuate from cell to cell. If there is a tendency for rates to increase (or decrease) by age or service we smooth or "graduate" them in order to provide rates of decrement with a more uniform progression. For all of the decrements we reviewed, we first compared the results to the current rates to determine if a change in assumptions was necessary. If a change in the current assumption did not fit recent experience we developed proposed rates which were either based directly on the graduated rates or on an average between the current rates and the graduated rates. We believe that a long-term approach which averages recent experience and prior assumptions avoids over-reacting to short-term, random fluctuations while assuring that the assumptions will be gradually modified to the extent that the long-term underlying trend has changed.

The rates of decrement are applied to the number of exposures in order to obtain the expected number who will terminate from the particular cause under study. The actual

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number of terminations is compared to the expected number of terminations under the current actuarial assumptions and, if a change is proposed, under the new assumptions in order to obtain the ratio of actual to expected (A/E ratio). This A/E ratio provides an overall comparison between the actual decrements (due to death, withdrawal, disability, etc.) with the expected number of decrements based on the actuarial assumptions from the cause of decrement in question. An A/E ratio greater than 1.0 indicates that there were more actual decrements than expected during the study period and an A/E ratio of less than 1.0 indicates that there were fewer actual decrements than expected during the study period.

In the following pages, each decrement is reviewed for its appropriateness. Our analysis will include information about the current assumption, an analysis of experience observed in the current study period and a discussion on proposed changes to the assumptions.

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Non-Contributory Members

The Division of Pensions and Benefits provides data for each annual valuation identifying non-contributory members. Many of these members are, in reality, members who have terminated employment or have applied for retirement or disability, etc., but whose paperwork was not completed in time to be included with the valuation data. Others are members who have ceased active service, but choose to let their contributions remain in the system so they could return to service at a later date or apply for a pension when they become eligible.

We reviewed the experience among the non-contributory members since the last study period to estimate the extent which these members are likely to (1) return to active service, (2) elect a refund of their contributions, or (3) wait until they become eligible to collect a pension and apply for retirement at that time. All data was reviewed to determine the status reported for these non-contributing members in subsequent years. That analysis indicated that approximately 30% of the current non-contributory members would return to active status. For those assumed to return to active status, a projected benefit will be valued.

Among the 70% of non-contributing members who are not expected to return to active status, a percentage of these members were assumed to have become disabled (1.5%), have died (.75%) or have terminated employment (97.75%). Each of these assumptions is consistent with those used in the prior study. Among those who terminated employment, if the member was eligible for a retirement benefit, they were assumed to have retired. If the member was eligible for a deferred vested benefit, it was assumed that the member would elect the deferred vested benefit. All other members were assumed to elect a refund of their contributions.

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Rate of Termination

Current Assumption

The current termination assumption consists of three components:

- Higher rates of turnover prior to attainment of 10 years of service that vary by service, gender and for females, age
- An assumption for those with 10 or more years of service electing a benefit that varies by age and gender
- An assumption for those with 10 or more years of service electing a contribution refund that varies by age and gender

Once an employee becomes eligible for reduced or unreduced retirement, the assumption is that the member will no longer leave under the withdrawal decrement. He or she will only retire as a healthy retiree, disabled retiree or die during active service.

Analysis

Similar patterns of terminations were observed in this analysis as in previous studies. Specifically, the rates of withdrawal among short service members vary significantly with service whereas withdrawal rates among longer service members vary by age. There was also the continuing trend of members with 10 or more years of service to continue to leave their contributions in the system and elect a deferred vested benefit. In fact, only approximately 7% of the female members and 20% of the male members who were eligible for a deferred benefit elected a refund during the current study period. The current assumption assumes 15% of female and 25% of male members elect a refund.

Overall, actual terminations were higher than those anticipated by the current assumptions by approximately 15% for both female and male members with 10 or more years of service.

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For male members with less than 10 years of service, actual terminations were higher than those anticipated by the current assumptions by approximately 5%. For female members with less than with less than 10 years of service, actual terminations were higher than those anticipated by the current assumptions by approximately 20% for those aged 40 and older and actual terminations were less than those anticipated by the current assumptions by approximately 6% for those less than age 40.

Proposed Assumption

We propose the following modifications to the current assumptions:

- For each age/service cell, an assumption that is between the prior assumption and the actual experience during the current and prior study period.
- For females members with at least three and less than 10 years of service, continue to reflect higher rates of termination for those under age 40 compared to those age 40 and older.
- For members with 10 or more years of service, we continue to reflect the trend of members electing a vested deferred benefit versus a contribution refund. The following chart indicates the assumed percentage of members electing a refund included in the proposed assumptions.

Age Group	Members with 10 or more years of Service	
	Males	Females
30-34	40.0%	25.0%
35-39	35.0	20.0
40-44	30.0	15.0
45-49	25.0	12.5
50-54	15.0	7.5
55-59	5.0	2.5

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The following table summarizes the actual to expected ratios (A/E ratios) for males and females by service based on the current and proposed assumptions. Refer to Appendix A for a more detailed analysis of these ratios.

Table 3 – A/E Ratios for Rates of Termination				
Completed Years of Employment	Male		Female	
	Current	Proposed	Current	Proposed
0	0.94	0.96	0.99	0.99
1	1.18	1.12	1.11	1.04
2	1.16	1.10	1.10	1.04
3	1.08	1.08	0.99	1.00
4	1.00	1.02	0.93	0.94
5	0.83	0.90	1.05	1.02
6	0.80	0.86	0.96	0.95
7	0.97	1.00	0.90	0.88
8	0.82	0.85	1.08	0.99
9	1.08	1.03	1.05	0.98
Total 0 – 9	1.05	1.04	0.98	1.00
10+ electing a refund	0.94	0.99	0.57	0.93
10+ electing a benefit	1.22	1.06	1.24	1.05

Note: The methodology for accounting for non-contributory members has the effect of overstating members who will elect a benefit versus a contribution refund for those with 10 or more years of service.

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Effect on Plan's Liability

Overall, the proposed assumptions increase the expected number of terminations, which decrease the plan's liability since fewer members would be expected to be eligible for service retirement. This decrease is partially offset by an increase in the expected number of members electing to receive a deferred vested benefit versus a contribution refund. The net effect of these proposed assumptions is a decrease in the plan's liability.

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Rate of Retirement

Current Assumption

The current retirement assumption consists of four components:

- A higher rate of retirement at first eligibility for an unreduced pension benefit and postretirement medical benefits (attainment of age 55 and 25 years of service) that varies by age and gender
- Rates of retirement that vary by age and gender subsequent to attainment of first eligibility
- Rates of retirement that vary by age and gender for an unreduced pension benefit and prior to eligibility for postretirement medical benefits (attainment of age 60 and less than 25 years of service)
- Separate rates of retirement that vary by age and gender for members eligible for a reduced pension benefit and postretirement medical benefits (attainment of 25 years of service prior to age 55)

Analysis

Similar patterns of retirements were observed in this analysis as in previous studies. Specifically, early retirement rates and rates subsequent to first eligibility were higher than expected. First eligibility rates were lower than expected and rates of retirement prior to attainment of 25 years of service were significantly lower than expected.

Proposed Assumption

Although, the most recent experience showed some deviations from the current assumptions, especially for members with less than 25 years of service, we propose

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minimum modifications to the retirement assumptions. The proposed assumptions are based on an average of the actual experience during the current and prior two study periods and the current assumption.

The following table summarizes the actual to expected ratios (A/E ratios) for males and females by retirement category for all ages combined based on the current and proposed assumptions. Refer to Appendix A for a more detailed analysis of these ratios.

Table 4 – A/E Ratios for Rates of Retirement					
Retirement Category	Eligibility	Male		Female	
		Current	Proposed	Current	Proposed
Reduced	>25 years, less than age 55	1.11	0.91	1.17	0.94
First Eligibility	First attain age 55 and 25 years	0.94	0.93	0.89	0.90
Ultimate	After attainment of age 55 and 25 years	1.03	1.03	1.03	1.03
Other	Attainment of age 60, but less than 25 years	0.72	0.78	0.65	0.72

Effect on Plan's Liability

The proposed assumptions increase the expected number of retirements for members with 25 or more years of service slightly and decrease the expected number of retirements for members with less than 25 years of service. We would expect minimal change in the plan's liability.

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Rate of Retirement – New Tier

Chapter 103, P.L. 2007 amended the retirement provisions for TPAF members hired on or after July 1, 2007. Under this law, the unreduced retirement benefits after attainment of age 55 and completion of 25 years of service but prior to age 60 have been eliminated. Instead, new tier members will be able to retire early, but their benefits will be reduced by 1% for each year by which the retiring member's age when benefits commence precedes their 60th birthday. The 3% per year reduction prior to age 55 will continue. Thus the pension benefit of a new tier member retiring on their 54th birthday would be reduced by 8% instead of the current 3% reduction.

We believe the reduction in benefits for new tier members retiring prior to age 60 will delay when new tier members retire as compared to members under the current retirement provisions. Since experience data for new tier members will not be available for 25 years, we recommend adopting a methodology for setting the retirement assumptions for new tier members based on the assumptions utilized for the current members. This methodology to adjust the retirement assumptions would continue to be applied until experience data becomes available for new tier members, which would be 25 years from now. We recommend the following methodology for new tier members:

- For ages prior to age 55, use 50% of the assumptions for current members.
- For ages 55-59, use 75% of the average between the First Eligibility and After First Eligibility rates for current members.
- At age 60, increase the First Eligibility rates to reflect the expected to delay in retirement based on the above. However, the First Eligibility rate should not be lower than the assumption utilized for the current members.

The following two tables illustrate the retirement assumptions for new tier members based on the above recommendation and compare them with the proposed new assumptions for current members.

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Table 5 – Proposal Retirement Rates for New Tier Members - Male				
Age	Proposed New Assumptions for Current Members			Proposed New Tier Rate
	Early	First Eligibility	After First Eligibility	
<47	1.1%	N/A	N/A	0.55%
48	1.4	N/A	N/A	0.70
49	1.6	N/A	N/A	0.80
50	1.9	N/A	N/A	0.95
51	2.2	N/A	N/A	1.10
52	2.5	N/A	N/A	1.25
53	3.5	N/A	N/A	1.75
54	4.5	N/A	N/A	2.25
55	N/A	15%	N/A	11.00
56	N/A	20	12%	12.00
57	N/A	20	13	12.50
58	N/A	22	14	13.50
59	N/A	22	15	14.00
60	N/A	24	21	26.00

Table 5 – Proposal Retirement Rates for New Tier Members - Female				
Age	Proposed Assumptions for Current Members			Proposed New Tier Rate
	Early	First Eligibility	After First Eligibility	
<47	1.3%	N/A	N/A	0.65%
48	1.5	N/A	N/A	0.75
49	1.7	N/A	N/A	0.85
50	2.0	N/A	N/A	1.00
51	2.5	N/A	N/A	1.25
52	3.0	N/A	N/A	1.50
53	4.0	N/A	N/A	2.00
54	5.0	N/A	N/A	2.50
55	N/A	16%	N/A	12.00
56	N/A	19	13%	12.00
57	N/A	19	14	12.50
58	N/A	22	14	13.50
59	N/A	22	15	14.00
60	N/A	30	20	30.00

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Please note that the new tier members would not be part of the actuarial valuation process until the June 30, 2008 Actuarial Valuation as the June 30, 2007 valuation only includes members hired as of the valuation date and hence will not include any new tier members.

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Rate of Mortality for Employees

Current Assumption

The current mortality assumption for active members varies by age and gender. No accidental deaths are assumed.

Analysis

There continues to be significant reductions in the number of deaths of active members.

Proposed Assumption

We propose the following modifications to the current assumptions:

- A significant decrease in the expected number of ordinary deaths. For males, we propose the Society of Actuaries RP2000 Employee Male Table with White Collar adjustments setback 5 years projected to 2003 and for females, we propose the 1994 Group Annuity Mortality Table for Females setback 9 years. These assumptions increase the A/E ratios from 0.65 to 0.96 for males and from 0.75 to 1.03 for females.
- Continuation of assuming no accidental deaths. There were no accidental deaths during the study period and only one during the last twelve years.

The following table summarizes the actual to expected ratios (A/E ratios) for males and females for all ages combined based on the current and proposed assumptions. Refer to Appendix A for a more detailed analysis of these ratios.

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Male		Female	
Current	Proposed	Current	Proposed
0.65	0.96	0.75	1.03

Effect on Plan's Liability

The proposed assumptions decrease the expected number of deaths, which would increase the plan's liability as more members would be expected to collect a retirement benefit.

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Rate of Disability

Current Assumption

The disability termination assumption consists of two components:

- Rates of ordinary disablement that vary by age and gender (attainment of 10 years of service is required)
- Rates of accidental disablement that vary by gender

Analysis

The current ordinary disability assumption is not assumed to apply once the member is eligible for an unreduced retirement benefit and postretirement medical benefits (attainment of age 55 and 25 years of service). The experience indicated that only two members were coded as ordinary disabilities who met this criteria. In total, actual ordinary disabilities were slightly higher than expected for male and female members. The A/E ratios for both male and female members are 1.03.

Accidental disabilities were slightly lower than expected, but with very few accidental disabilities expected, no creditable weight can be placed on this experience.

Proposed Assumption

We propose no modifications to the current assumptions.

The following table summarizes the actual to expected ratios (A/E ratios) for males and females by disability category for all ages combined based on the current and proposed assumptions. Refer to Appendix A for a more detailed analysis of these ratios.

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Disability Category	Male		Female	
	Current	Proposed	Current	Proposed
Ordinary	1.03	1.03	1.03	1.03
Accidental	0.66	0.66	0.88	0.88

Effect on Plan's Liability

There would be no impact on the plan's liability since no modifications are proposed.

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Rate of Postretirement Mortality

Current Assumption

The current mortality assumption for members collecting a benefit consists of three components:

- Mortality rates for retirees collecting a service retirement benefit and all beneficiaries that vary by age and gender (for males, the Society of Actuaries RP-2000 Annuitant Mortality Table with white collar adjustments served as the basis for the assumption and for females, the 1994 Uninsured Pensioner Mortality Table served as the basis for the assumption).
- Mortality rates for retirees collecting a disability retirement that vary by age and gender (RP-2000 Disabled Annuitant Mortality Table)
- A generational approach towards future mortality improvements for healthy retirees and beneficiaries (Scale AA)

Analysis

Actuarial Standards of Practice No. 35 states "The actuary should consider factors such as "... the likelihood and extent of mortality improvement in the future ..." – section 3.5.3 (b). Gradual and continued improvements in mortality, i.e., longer life expectancies, have been evident over the past centuries. The Society of Actuaries Retirement Plans Experience Committee (RPEC) stated in their report on the RP-2000 Mortality Table "... RPEC recommends that, in view of the long history of improvement in non-disabled mortality rates in all of these sets of data, pension valuations should take trends in long term mortality improvement into account. From a theoretical standpoint, the RPEC believes that the use of generational mortality improvement, as in the GAR-94 table, is an appropriate way of reflecting this improvement. In cases where it is not material or cost effective to incorporate generational mortality improvement into a calculation, the actuary should project mortality improvement on a comparable static basis."

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In light of this recommendation, we will continue a generational approach to mortality improvements. By using a generational approach, actuarial gains and losses are not expected to occur in the actuarial valuation. Therefore, we would expect the A/E ratios on the base table to be 1.0. However, there have been actuarial losses during the study period and the A/E ratios for members 65 and over are 0.89 for males and 0.97 for females. We also reviewed the mortality experience weighted by the amount of the pension benefit rather than by number of retirees. In pension plans, if members with the larger benefits have lower mortality rates than those with smaller benefits, an actuarial loss would occur due to this bias. Weighting the rates of mortality by benefits would adjust the analysis for this bias. The A/E ratios weighted by benefits for members 65 and over are 0.82 for males and 0.95 for females.

For disabled mortality, the A/E ratios are 0.78 for males and 1.05 for females based on data from the current study period. Due to so few exposures and deaths, we also combined the data with the prior study period, which resulted in A/E ratios of 0.97 for males and 1.11 for females.

Proposed Assumption

We propose the following modifications to the current assumptions:

- Continuation of a generational approach towards mortality improvements using Scale AA; the approach recommended by the Society of Actuaries RPEC
- Adjustments to the base table to incorporate weighting by benefit and the experience during the current and prior study periods (91.2% of current rates for males and 97.7% for females)
- No modification to the disability mortality rates for males and females.

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The following table highlights the A/E ratios based on the current and proposed assumptions by gender for selected age groups. Refer to Appendix A for a more detailed analysis of these ratios.

Table 8 – A/E Ratio for Rates of Postretirement Mortality				
Weighting By	Male		Female	
	Current	Proposed	Current	Proposed
Healthy Retirees and Beneficiaries (Ages 65 and over)				
Counts	0.89	0.98	0.97	1.00
Benefits	0.82	0.90	0.95	0.98
Disabled Retirees				
Counts (6 Years)	0.97	0.97	1.11	1.11

Effect on Plan's Liability

Overall, the net effect of these proposed assumptions is an increase in the plan's liability since the proposed assumptions would increase the life expectancy.

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Effect on Annual Costs of Proposed Changes in Actuarial Assumptions

We have illustrated the effect on annual pension contributions of the proposed assumptions set forth in this report by calculating the effect of them on the June 30, 2006 Actuarial Valuation.

The use of the proposed assumptions in the June 30, 2006 actuarial valuation would have decreased the accrued liability by \$81.9 million (0.2%) decreasing the unfunded pension liability from \$10,016.5 million to \$9,934.6 million. Similarly, their use would have decreased the total State pension contribution from \$1,286.2 million to \$1,271.5 million.

The results are summarized in the following table.

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Comparison of Valuation Results (\$000,000)

	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Increase (Decrease)</u>
Development of Normal Cost payable July 1, 2006			
1. Basic Allowances – 1/60 th Formula	\$880.3	\$872.3	\$ (8.0)
2. Pension Adjustment Benefits for active members (reflects 53.62% of liability due to COLA)	78.9	79.0	0.1
3. Expected Member Contributions	<u>423.6</u>	<u>424.2</u>	<u>0.6</u>
4. Total Pension Normal Cost : (1) + (2) - (3)	\$535.6	\$527.1	\$ (8.5)
5. Additional Formula Normal Cost	\$ 90.2	\$ 89.7	\$ (0.5)
Development of Accrued Liability Contribution			
1. Actuarial Accrued Liability for Basic Allowances & Pension Adjustment Benefits	\$45,439.3	\$45,357.4	\$ (81.9)
2. Actuarial Value of Assets	35,422.8	35,422.8	0.0
3. Unfunded Pension Liability: (1) – (2)	\$ 10,016.5	\$ 9,934.6	\$ (81.9)
4. 30-Year Amortization with 4% increasing payments of Unfunded Pension Accrued Liability payable June 30, 2007	\$ 608.8	\$ 603.8	\$ (5.0)

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	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Increase (Decrease)</u>
Development of Total Pension Contribution payable June 30, 2007			
Pension Normal Cost	\$ 579.8	\$ 570.6	\$ (9.2)
Excess Assets	<u>(0.0)</u>	<u>(0.0)</u>	<u>0.0</u>
Normal Contribution	\$ 579.8	\$ 570.6	\$ (9.2)
Additional Formula Normal Cost	\$ 97.6	\$ 97.1	\$ (0.5)
Benefit Enhancement Fund Balance	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
Additional Formula Contribution	\$ 97.6	\$ 97.1	\$ (0.5)
Accrued Liability Contribution	\$ 608.8	\$ 603.8	\$ (5.0)
Total State Pension Contribution	\$1,286.2	\$1,271.5	\$ (14.7)

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Rates of Termination - Male First Year of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	76	6	6.22	6.3	0.965	0.952
25-29	113	5	9.25	9.37	0.541	0.534
30-34	86	7	7.04	7.13	0.994	0.982
35-39	44	3	3.6	3.65	0.833	0.822
40-44	43	4	3.52	3.56	1.136	1.124
45-49	39	4	3.19	3.23	1.254	1.238
50-54	34	4	2.78	2.82	1.439	1.418
55-59	38	4	3.11	3.15	1.286	1.270
60+	0	0	0	0	n/a	n/a
All Ages	473	37	38.71	39.21	0.956	0.944

Rates of Termination - Male Second Year of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	961	46	64.58	61.12	0.712	0.753
25-29	2,163	124	145.35	137.57	0.853	0.901
30-34	997	78	67	63.41	1.164	1.230
35-39	653	55	44	41.53	1.253	1.324
40-44	512	49	34.41	32.56	1.424	1.505
45-49	455	41	30.58	28.94	1.341	1.417
50-54	407	47	27.35	25.89	1.718	1.815
55-59	363	49	24.39	23.09	2.009	2.122
60+	0	0	0	0	n/a	n/a
All Ages	6,511	489	437.54	414.11	1.118	1.181

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Rates of Termination - Male Third Year of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	326	21	19.23	18.29	1.092	1.148
25-29	2,514	120	148.33	141.04	0.809	0.851
30-34	1,139	82	67	63.9	1.220	1.283
35-39	658	45	39	36.91	1.159	1.219
40-44	542	43	31.98	30.41	1.345	1.414
45-49	455	34	26.85	25.53	1.266	1.332
50-54	420	35	24.78	23.56	1.412	1.486
55-59	367	37	21.65	20.59	1.709	1.797
60+	0	0	0	0	n/a	n/a
All Ages	6,421	417	378.84	360.23	1.101	1.158

Rates of Termination - Male Fourth Year of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	8	0	0.33	0.33	n/a	n/a
25-29	2,469	94	102.96	103.2	0.913	0.911
30-34	1,286	57	54	53.75	1.063	1.060
35-39	697	23	29	29.13	0.791	0.790
40-44	533	37	22.23	22.28	1.664	1.661
45-49	432	20	18.01	18.06	1.110	1.107
50-54	415	29	17.31	17.35	1.675	1.671
55-59	359	19	14.97	15.01	1.269	1.266
60+	0	0	0	0	n/a	n/a
All Ages	6,199	279	258.50	259.11	1.079	1.077

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Rates of Termination - Male Fifth Year of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	1	0	0.03	0.03	n/a	n/a
25-29	1,913	58	64.85	65.81	0.894	0.881
30-34	1,505	48	51	51.77	0.941	0.927
35-39	775	28	26	26.66	1.066	1.050
40-44	515	22	17.46	17.72	1.260	1.242
45-49	453	16	15.36	15.58	1.042	1.027
50-54	371	14	12.58	12.76	1.113	1.097
55-59	291	15	9.86	10.01	1.521	1.499
60+	0	0	0	0	n/a	n/a
All Ages	5,824	201	197.43	200.34	1.018	1.003

Rates of Termination - Male Sixth Year of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	0	0	0	0	n/a	n/a
25-29	1,214	21	32.54	35.21	0.645	0.596
30-34	1,692	36	45.35	49.07	0.794	0.734
35-39	814	23	22	23.61	1.054	0.974
40-44	471	12	12.62	13.66	0.951	0.878
45-49	420	11	11.26	12.18	0.977	0.903
50-54	335	10	8.98	9.71	1.114	1.030
55-59	242	12	6.49	7.02	1.849	1.709
60+	0	0	0	0	n/a	n/a
All Ages	5,188	125	139.06	150.46	0.899	0.831

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Rates of Termination - Male Seventh Year of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	0	0	0	0	n/a	n/a
25-29	567	10	13.38	14.35	0.747	0.697
30-34	1,746	36	41.21	44.17	0.874	0.815
35-39	872	21	21	22.06	1.020	0.952
40-44	433	6	10.22	10.95	0.587	0.548
45-49	385	6	9.09	9.74	0.660	0.616
50-54	299	6	7.06	7.56	0.850	0.794
55-59	187	6	4.41	4.73	1.361	1.268
60+	0	0	0	0	n/a	n/a
All Ages	4,489	91	105.95	113.56	0.859	0.801

Rates of Termination - Male Eighth Year of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	0	0	0	0	n/a	n/a
25-29	118	2	2.5	2.58	0.800	0.775
30-34	1,568	32	33.24	34.34	0.963	0.932
35-39	807	13	17	17.67	0.760	0.736
40-44	398	8	8.44	8.72	0.948	0.917
45-49	349	9	7.4	7.64	1.216	1.178
50-54	261	13	5.53	5.72	2.351	2.273
55-59	162	1	3.43	3.55	0.292	0.282
60+	0	0	0	0	n/a	n/a
All Ages	3,663	78	77.65	80.22	1.005	0.972

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Rates of Termination - Male Ninth Year of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	0	0	0	0	n/a	n/a
25-29	8	1	0.13	0.13	7.692	7.692
30-34	1,220	16	19.4	20.13	0.825	0.795
35-39	792	13	12.59	13.07	1.033	0.995
40-44	393	7	6.25	6.48	1.120	1.080
45-49	293	2	4.66	4.83	0.429	0.414
50-54	244	2	3.88	4.03	0.515	0.496
55-59	173	1	2.75	2.85	0.364	0.351
60+	0	0	0	0	n/a	n/a
All Ages	3,123	42	49.66	51.52	0.846	0.815

Rates of Termination - Male Tenth Year of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	0	0	0	0	n/a	n/a
25-29	7	1	0.11	0.1	9.091	10.000
30-34	828	11	12.59	12.01	0.874	0.916
35-39	794	16	12.07	11.51	1.326	1.390
40-44	405	5	6	5.87	0.812	0.852
45-49	284	2	4	4.12	0.463	0.485
50-54	255	3	4	3.7	0.773	0.811
55-59	176	5	3	2.55	1.866	1.961
60+	0	0	0	0	n/a	n/a
All Ages	2,749	43	41.81	39.86	1.028	1.079

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Rates of Termination - Male - Return of Contributions More 10 than Years of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	0	0	0.00	0.00	n/a	n/a
25-29	3	0	0.01	0.02	n/a	n/a
30-34	897	1	3.81	4.54	0.262	0.220
35-39	4,165	17	15.36	16.23	1.107	1.047
40-44	4,953	11	10.53	12.10	1.045	0.909
45-49	6,069	10	9.11	8.86	1.098	1.129
50-54	4,967	5	5.29	5.19	0.945	0.963
55-59	3,306	2	2.39	2.22	0.837	0.901
60+	0	0	0.00	0.00	n/a	n/a
All Ages	24,360	46	46.50	49.16	0.989	0.936

Rates of Termination - Male - With Benefit More 10 than Years of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	0	0	0.00	0.00	n/a	n/a
25-29	3	0	0.02	0.02	n/a	n/a
30-34	897	8	5.96	6.78	1.342	1.180
35-39	4,165	32	28.09	24.16	1.139	1.325
40-44	4,953	23	24.69	19.65	0.932	1.170
45-49	6,069	27	29.19	26.43	0.925	1.022
50-54	4,967	33	34.85	31.45	0.947	1.049
55-59	3,306	53	42.69	35.21	1.242	1.505
60+	0	0	0.00	0.00	n/a	n/a
All Ages	24,360	176	165.49	143.70	1.064	1.225

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Rates of Termination - Female First Year of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	352	22	26.79	26.79	0.821	0.821
25-29	398	24	30.29	30.29	0.792	0.792
30-34	191	15	14.54	14.54	1.032	1.032
35-39	175	15	13.32	13.32	1.126	1.126
40-44	158	18	12.02	12.02	1.498	1.498
45-49	113	5	8.60	8.60	0.581	0.581
50-54	71	9	5.40	5.40	1.667	1.667
55-59	43	5	3.27	3.27	1.529	1.529
60+	0	0	0.00	0.00	n/a	n/a
All Ages	1,501	113	114.23	114.23	0.989	0.989

Rates of Termination - Female Second Year of Employment

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	4,625	189	323.75	304.33	0.584	0.621
25-29	6,146	436	430.22	404.41	1.013	1.078
30-34	2,610	276	182.70	171.74	1.511	1.607
35-39	1,720	145	120.40	113.18	1.204	1.281
40-44	1,796	125	125.72	118.18	0.994	1.058
45-49	1,654	138	115.78	108.83	1.192	1.268
50-54	1,047	108	73.29	68.89	1.474	1.568
55-59	526	51	36.82	34.61	1.385	1.474
60+	0	0	0.00	0.00	n/a	n/a
All Ages	20,124	1,468	1,408.68	1,324.17	1.042	1.109

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Rates of Termination - Female Third Year of Employment

	<u>Exposures</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>		
		<u>Actual</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	2,045	101	124.54	118.00	0.811	0.856
25-29	8,238	457	501.69	475.33	0.911	0.961
30-34	3,037	280	184.95	175.23	1.514	1.598
35-39	1,782	127	108.52	102.82	1.170	1.235
40-44	1,872	108	114.00	108.01	0.947	1.000
45-49	1,917	94	116.75	110.61	0.805	0.850
50-54	1,274	82	77.59	73.51	1.057	1.115
55-59	570	67	34.71	32.89	1.930	2.037
60+	0	0	0.00	0.00	n/a	n/a
All Ages	20,735	1,316	1,262.75	1,196.40	1.042	1.100

Rates of Termination - Female Fourth Year of Employment

	<u>Exposures</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>		
		<u>Actual</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	74	5	4.85	4.94	1.031	1.012
25-29	8,916	499	584.00	595.59	0.854	0.838
30-34	3,625	294	237.44	242.15	1.238	1.214
35-39	1,931	126	126.48	128.99	0.996	0.977
40-44	1,979	67	75.20	71.24	0.891	0.940
45-49	2,140	91	81.32	77.04	1.119	1.181
50-54	1,514	61	57.53	54.50	1.060	1.119
55-59	572	43	21.74	20.59	1.978	2.088
60+	0	0	0.00	0.00	n/a	n/a
All Ages	20,751	1,186	1,188.56	1,195.04	0.998	0.992

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Rates of Termination - Female Fifth Year of Employment

	<u>Exposures</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>		
		<u>Actual</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	13	0	0.82	0.85	n/a	n/a
25-29	7,053	356	442.93	460.56	0.804	0.773
30-34	4,098	297	257.35	267.60	1.154	1.110
35-39	1,980	93	124.34	129.29	0.748	0.719
40-44	1,928	58	49.94	45.89	1.161	1.264
45-49	2,240	57	58.02	53.31	0.982	1.069
50-54	1,648	50	42.68	39.22	1.172	1.275
55-59	661	26	17.12	15.73	1.519	1.653
60+	0	0	0.00	0.00	n/a	n/a
All Ages	19,621	937	993.20	1,012.45	0.943	0.925

Rates of Termination - Female Sixth Year of Employment

	<u>Exposures</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>		
		<u>Actual</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	5	0	0.31	0.31	n/a	n/a
25-29	4,706	282	289.89	289.42	0.973	0.974
30-34	4,303	285	265.06	264.63	1.075	1.077
35-39	1,891	87	116.49	116.30	0.747	0.748
40-44	1,724	51	37.76	31.72	1.351	1.608
45-49	2,063	46	45.18	37.96	1.018	1.212
50-54	1,569	38	34.36	28.87	1.106	1.316
55-59	642	29	14.06	11.81	2.063	2.456
60+	0	0	0.00	0.00	n/a	n/a
All Ages	16,903	818	803.11	781.02	1.019	1.047

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Rates of Termination - Female Seventh Year of Employment

	<u>Exposures</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>		
		<u>Actual</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	0	0	0.00	0.00	n/a	n/a
25-29	2,400	126	147.84	147.60	0.852	0.854
30-34	4,588	289	282.62	282.16	1.023	1.024
35-39	1,747	81	107.62	107.44	0.753	0.754
40-44	1,443	34	25.97	23.81	1.309	1.428
45-49	1,931	27	34.76	31.86	0.777	0.847
50-54	1,507	31	27.13	24.87	1.143	1.246
55-59	629	17	11.32	10.38	1.502	1.638
60+	0	0	0.00	0.00	n/a	n/a
All Ages	14,245	605	637.26	628.12	0.949	0.963

Rates of Termination - Female Eighth Year of Employment

	<u>Exposures</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>		
		<u>Actual</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	1	0	0.06	0.06	n/a	n/a
25-29	746	50	44.39	43.72	1.126	1.144
30-34	4,306	226	256.21	252.33	0.882	0.896
35-39	1,522	62	90.56	89.19	0.685	0.695
40-44	1,239	22	20.82	20.44	1.057	1.076
45-49	1,698	18	28.53	28.02	0.631	0.642
50-54	1,337	27	22.46	22.06	1.202	1.224
55-59	610	12	10.25	10.07	1.171	1.192
60+	0	0	0.00	0.00	n/a	n/a
All Ages	11,459	417	473.28	465.89	0.881	0.895

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Rates of Termination - Female Ninth Year of Employment

	<u>Exposures</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>		
		<u>Actual</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	0	0	0.00	0.00	n/a	n/a
25-29	34	2	2.01	1.86	0.995	1.075
30-34	3,636	232	214.89	198.89	1.080	1.166
35-39	1,483	65	87.65	81.12	0.742	0.801
40-44	953	25	13.63	12.10	1.834	2.066
45-49	1,534	14	21.94	19.48	0.638	0.719
50-54	1,358	15	19.42	17.25	0.772	0.870
55-59	614	10	8.78	7.80	1.139	1.282
60+	0	0	0.00	0.00	n/a	n/a
All Ages	9,612	363	368.32	338.50	0.986	1.072

Rates of Termination - Female Tenth Year of Employment

	<u>Exposures</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>		
		<u>Actual</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	0	0	0.00	0.00	n/a	n/a
25-29	10	0	0.45	0.43	n/a	n/a
30-34	2,579	125	116.57	112.19	1.072	1.114
35-39	1,504	44	67.98	65.42	0.647	0.673
40-44	846	15	10.83	9.14	1.385	1.641
45-49	1,349	18	17.27	14.57	1.042	1.235
50-54	1,324	18	16.95	14.30	1.062	1.259
55-59	619	14	7.92	6.69	1.768	2.093
60+	0	0	0.00	0.00	n/a	n/a
All Ages	8,231	234	237.97	222.74	0.983	1.051

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
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Rates of Termination - Female - Return of Contributions More 10 than Years of Employment

	<u>Exposures</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>		
		<u>Actual</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	1	0	0.00	0.01	n/a	n/a
25-29	8	0	0.03	0.06	n/a	n/a
30-34	3,221	15	12.08	22.26	1.242	0.674
35-39	11,431	28	28.12	55.74	0.996	0.502
40-44	15,405	16	15.84	28.78	1.010	0.556
45-49	21,120	11	12.26	21.76	0.897	0.506
50-54	25,146	16	18.21	21.07	0.879	0.759
55-59	20,215	8	14.07	16.17	0.569	0.495
60+	0	0	0.00	0.00	n/a	n/a
All Ages	96,547	94	100.61	165.85	0.934	0.567

Rates of Termination - Female - With Benefit More 10 than Years of Employment

	<u>Exposures</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>		
		<u>Actual</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	1	0	0.04	0.02	n/a	n/a
25-29	8	0	0.31	0.18	n/a	n/a
30-34	3,221	150	111.31	66.35	1.348	2.261
35-39	11,431	291	257.90	167.89	1.128	1.733
40-44	15,405	115	138.40	111.36	0.831	1.033
45-49	21,120	112	124.45	117.91	0.900	0.950
50-54	25,146	173	199.76	200.26	0.866	0.864
55-59	20,215	334	290.51	282.83	1.150	1.181
60+	0	0	0.00	0.00	n/a	n/a
All Ages	96,547	1,175	1,122.68	946.80	1.047	1.241

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Rates of Retirement with Reduced Benefit, 25 or more Years of Service Male

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Retirements</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=45	1	0	0.01	0.01	n/a	n/a
46-49	1,402	17	20.56	20.56	0.827	0.827
50-54	9,311	276	300.16	244.12	0.920	1.131
55+	0	0	0.00	0.00	n/a	n/a
All Ages	10,714	293	320.73	264.68	0.914	1.107

Rates of Retirement with Unreduced Benefit Male - Age 60 and Less Than 25 Years of Service

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Retirements</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=59	0	0	0.00	0.00	n/a	n/a
60	628	43	69.08	75.36	0.622	0.571
61	534	44	58.74	64.08	0.749	0.687
62	427	33	46.97	51.24	0.703	0.644
63-64	602	54	66.22	72.24	0.815	0.748
65	190	24	32.30	32.30	0.743	0.743
66-70	426	70	72.42	76.68	0.967	0.913
71+	102	16	20.40	20.40	0.784	0.784
All Ages	2,909	284	366.13	392.30	0.776	0.724

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Rates of Retirement with Unreduced Benefit

Male - First Year Attainment of Age 55 and 25 Years of Service

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Retirements</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=54	0	0	0.00	0.00	n/a	n/a
55	3,093	412	463.95	463.95	0.888	0.888
56-57	167	36	33.40	30.06	1.078	1.198
58-59	92	21	20.24	18.40	1.038	1.141
60	45	12	10.80	9.90	1.111	1.212
61	30	14	7.80	6.90	1.795	2.029
62	25	7	9.50	10.00	0.737	0.700
63-64	29	11	11.60	12.47	0.948	0.882
65	11	8	5.50	4.73	1.455	1.691
66-70	24	13	12.00	12.00	1.083	1.083
71+	6	3	3.00	3.00	1.000	1.000
All Ages	3,522	537	577.79	571.41	0.929	0.940

Rates of Retirement with Unreduced Benefit

Male - After First Year Attainment of Age 55 and 25 Years of Service

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Retirements</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=54	0	0	0.00	0.00	n/a	n/a
55	0	0	0.00	0.00	n/a	n/a
56-57	6,004	846	750.50	749.77	1.127	1.128
58-59	4,362	691	632.49	629.54	1.093	1.098
60	1,487	292	312.27	312.27	0.935	0.935
61	1,253	303	288.19	288.19	1.051	1.051
62	935	341	336.60	336.60	1.013	1.013
63-64	917	248	275.10	275.10	0.901	0.901
65	278	100	105.64	105.64	0.947	0.947
66-70	486	115	145.80	145.80	0.789	0.789
71+	189	39	53.70	53.70	0.726	0.726
All Ages	15,911	2,975	2,900.29	2,896.61	1.026	1.027

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
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Rates of Retirement with Reduced Benefit, 25 or more Years of Service Female

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Retirements</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=45	5	0	0.07	0.07	n/a	n/a
46-49	3,612	41	56.93	56.93	0.720	0.720
50-54	20,223	685	718.56	564.10	0.953	1.214
55+	0	0	0.00	0.00	n/a	n/a
All Ages	23,840	726	775.56	621.10	0.936	1.169

Rates of Retirement with Unreduced Benefit Female - Age 60 and Less Than 25 Years of Service

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Retirements</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=59	0	0	0.00	0.00	n/a	n/a
60	2,687	132	214.96	268.70	0.614	0.491
61	2,197	122	175.76	219.70	0.694	0.555
62	1,723	123	172.30	172.30	0.714	0.714
63-64	1,988	174	198.80	198.80	0.875	0.875
65	538	65	96.84	107.60	0.671	0.604
66-70	1,048	123	157.20	167.68	0.782	0.734
71+	210	26	42.00	42.00	0.619	0.619
All Ages	10,391	765	1,057.86	1,176.78	0.723	0.650

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
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Rates of Retirement with Unreduced Benefit
Female - First Year Attainment of Age 55 and 25 Years of Service

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Retirements</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=54	0	0	0.00	0.00	n/a	n/a
55	5,386	768	861.76	861.76	0.891	0.891
56-57	796	131	151.24	151.24	0.866	0.866
58-59	689	154	151.58	137.80	1.016	1.118
60	279	72	83.70	89.28	0.860	0.806
61	267	72	85.44	90.78	0.843	0.793
62	254	107	116.84	121.92	0.916	0.878
63-64	307	127	135.08	138.15	0.940	0.919
65	91	35	45.50	51.87	0.769	0.675
66-70	189	86	94.50	94.50	0.910	0.910
71+	31	12	15.00	15.00	0.800	0.800
All Ages	8,289	1,564	1,740.64	1,752.30	0.899	0.893

Rates of Retirement with Unreduced Benefit
Female - After First Year Attainment of Age 55 and 25 Years of Service

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Retirements</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=54	0	0	0.00	0.00	n/a	n/a
55	0	0	0.00	0.00	n/a	n/a
56-57	9,126	1,234	1,232.01	1,208.04	1.002	1.021
58-59	6,400	1,047	928.00	909.93	1.128	1.151
60	2,333	511	466.60	466.60	1.095	1.095
61	2,069	444	455.18	455.18	0.975	0.975
62	1,728	526	552.96	552.96	0.951	0.951
63-64	2,025	584	536.63	536.62	1.088	1.088
65	616	187	215.60	221.76	0.867	0.843
66-70	1,410	402	423.00	423.00	0.950	0.950
71+	454	128	126.90	126.90	1.009	1.009
All Ages	26,161	5,063	4,936.88	4,901.00	1.026	1.033

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
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Ordinary Mortality - Male

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	1,372	1	0.42	0.50	2.381	2.000
25-29	11,089	2	3.85	4.25	0.519	0.471
30-34	12,964	6	4.95	5.63	1.212	1.066
35-39	11,071	3	4.70	7.60	0.638	0.395
40-44	9,199	6	6.39	9.29	0.939	0.646
45-49	11,036	17	11.34	16.89	1.499	1.007
50-54	17,319	22	26.68	37.37	0.825	0.589
55-59	19,382	38	40.70	59.25	0.934	0.641
60-64	6,912	15	20.43	32.44	0.734	0.462
65-69	1,314	7	6.12	9.50	1.144	0.737
70+	398	7	3.22	7.32	2.174	0.956
All Ages	102,056	124	128.80	190.04	0.963	0.652

Ordinary Mortality - Female

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	7,116	2	1.48	1.98	1.351	1.010
25-29	38,655	19	10.40	11.16	1.827	1.703
30-34	36,194	16	10.49	11.07	1.525	1.445
35-39	27,166	12	8.61	10.74	1.394	1.117
40-44	29,344	13	12.52	16.52	1.038	0.787
45-49	41,375	29	25.37	34.33	1.143	0.845
50-54	58,018	51	50.94	65.81	1.001	0.775
55-59	48,098	59	57.19	81.60	1.032	0.723
60-64	17,857	13	32.60	49.97	0.399	0.260
65-69	3,641	17	11.46	19.87	1.483	0.856
70+	946	5	7.42	10.32	0.674	0.484
All Ages	308,410	236	228.48	313.37	1.033	0.753

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
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Ordinary Disability - Male Eligibility - 10 or more Years of Service

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	0	0	0.00	0.00	n/a	n/a
25-29	3	0	0.00	0.00	n/a	n/a
30-34	897	0	0.53	0.53	n/a	n/a
35-39	4,165	5	2.68	2.68	1.866	1.866
40-44	4,954	1	3.92	3.92	0.255	0.255
45-49	7,471	9	9.09	9.09	0.990	0.990
50-54	14,278	20	29.44	29.44	0.679	0.679
55-59	3,306	17	15.73	15.73	1.081	1.081
60-64	1,221	14	8.16	8.16	1.716	1.716
65-69	346	5	3.96	3.96	1.263	1.263
70+	98	6	1.20	1.20	5.000	5.000
All Ages	36,739	77	74.71	74.71	1.031	1.031

Ordinary Disability - Female Eligibility - 10 or more Years of Service

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	1	0	0.00	0.00	n/a	n/a
25-29	8	0	0.00	0.00	n/a	n/a
30-34	3,221	3	2.09	2.09	1.435	1.435
35-39	11,431	9	8.41	8.41	1.070	1.070
40-44	15,406	14	16.21	16.21	0.864	0.864
45-49	24,736	36	37.79	37.79	0.953	0.953
50-54	45,369	83	101.78	101.78	0.815	0.815
55-59	20,215	104	90.79	90.79	1.146	1.146
60-64	7,232	75	56.36	56.36	1.331	1.331
65-69	1,284	18	16.99	16.99	1.059	1.059
70+	245	3	5.05	5.05	0.594	0.594
All Ages	129,148	345	335.47	335.47	1.028	1.028

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Accidental Disability - Male

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	1,372	0	0.12	0.12	n/a	n/a
25-29	11,089	0	1.00	1.00	n/a	n/a
30-34	12,964	0	1.17	1.17	n/a	n/a
35-39	11,071	0	1.00	1.00	n/a	n/a
40-44	9,199	0	0.83	0.83	n/a	n/a
45-49	11,036	1	0.99	0.99	1.010	1.010
50-54	17,319	3	1.56	1.56	1.923	1.923
55-59	19,382	1	1.74	1.74	0.575	0.575
60-64	6,912	1	0.62	0.62	1.613	1.613
65-69	1,314	0	0.00	0.00	n/a	n/a
70+	398	0	0.00	0.00	n/a	n/a
All Ages	102,056	6	9.03	9.03	0.664	0.664

Accidental Disability - Female

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=24	7,116	0	0.43	0.43	n/a	n/a
25-29	38,655	0	2.32	2.32	n/a	n/a
30-34	36,194	0	2.17	2.17	n/a	n/a
35-39	27,166	0	1.63	1.63	n/a	n/a
40-44	29,344	2	1.76	1.76	1.136	1.136
45-49	41,375	5	2.48	2.48	2.016	2.016
50-54	58,018	1	3.48	3.48	0.287	0.287
55-59	48,098	5	2.89	2.89	1.730	1.730
60-64	17,857	3	1.07	1.07	2.804	2.804
65-69	3,641	0	0.00	0.00	n/a	n/a
70+	946	0	0.00	0.00	n/a	n/a
All Ages	308,410	16	18.23	18.23	0.878	0.878

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
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Healthy Retiree and Beneficiary Mortality - Male Counts

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=54	583	11	3.40	3.73	3.235	2.949
55-59	7,323	52	56.96	62.46	0.913	0.833
60-64	13,404	106	138.70	152.11	0.764	0.697
65-69	11,819	142	158.74	174.09	0.895	0.816
70-74	11,680	245	262.82	288.23	0.932	0.850
75-79	8,860	346	347.26	380.83	0.996	0.909
80-84	4,955	316	342.18	375.25	0.923	0.842
85-89	2,340	292	279.38	306.38	1.045	0.953
90+	1,156	247	235.27	258.01	1.050	0.957
All Ages	62,120	1,757	1,824.71	2,001.09	0.963	0.878
Age 65+	40,810	1,588	1,625.65	1,782.79	0.977	0.891

Healthy Retiree and Beneficiary Mortality - Male Benefits (Amounts in Thousands)

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=54	1,855,527	33,158	10,859	11,909	3.053	2.784
55-59	29,342,338	191,361	228,863	250,988	0.836	0.762
60-64	54,351,550	393,177	562,386	616,752	0.699	0.637
65-69	46,632,008	494,170	624,363	684,721	0.791	0.722
70-74	42,534,692	833,224	952,376	1,044,444	0.875	0.798
75-79	27,946,767	1,018,114	1,086,154	1,191,154	0.937	0.855
80-84	12,459,847	728,620	849,651	931,788	0.858	0.782
85-89	4,846,486	578,520	575,972	631,653	1.004	0.916
90+	2,357,955	477,249	483,572	530,320	0.987	0.900
All Ages	222,327,169	4,747,593	5,374,198	5,893,730	0.883	0.806
Age 65+	136,777,754	4,129,897	4,572,090	5,014,081	0.903	0.824

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Teachers' Pension and Annuity Fund of New Jersey

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Healthy Retiree and Beneficiary Mortality - Female Counts

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=54	1,515	7	4.24	4.35	1.651	1.609
55-59	11,042	48	47.79	48.93	1.004	0.981
60-64	20,044	108	133.78	136.98	0.807	0.788
65-69	18,997	122	171.18	175.28	0.713	0.696
70-74	17,309	246	244.95	250.82	1.004	0.981
75-79	14,866	343	354.80	363.31	0.967	0.944
80-84	10,237	445	422.59	432.72	1.053	1.028
85-89	6,662	537	578.81	592.68	0.928	0.906
90+	5,386	992	924.61	946.77	1.073	1.048
All Ages	106,058	2,848	2,882.75	2,951.84	0.988	0.965
Age 65+	73,457	2,685	2,696.94	2,761.58	0.996	0.972

Healthy Retiree and Beneficiary Mortality - Female Benefits (Amounts in Thousands)

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=54	4,558,398	23,261	12,869	13,178	1.807	1.765
55-59	41,172,108	171,970	178,753	183,036	0.962	0.940
60-64	66,928,857	373,734	445,204	455,871	0.839	0.820
65-69	59,500,992	374,364	534,615	547,424	0.700	0.684
70-74	49,122,240	699,758	690,961	707,517	1.013	0.989
75-79	34,969,141	774,274	825,294	845,069	0.938	0.916
80-84	19,504,689	826,558	798,833	817,973	1.035	1.010
85-89	10,916,215	885,023	945,802	968,464	0.936	0.914
90+	8,905,508	1,645,306	1,537,738	1,574,584	1.070	1.045
All Ages	295,578,149	5,774,247	5,970,068	6,113,115	0.967	0.945
Age 65+	182,918,786	5,205,282	5,333,243	5,461,031	0.976	0.953

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Teachers' Pension and Annuity Fund of New Jersey

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Disabled Retiree and Beneficiary Mortality - Male

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=54	273	7	8.23	8.23	0.851	0.851
55-59	440	11	16.80	16.80	0.655	0.655
60-64	328	10	14.62	14.62	0.684	0.684
65-69	255	8	13.93	13.93	0.574	0.574
70-74	173	10	12.00	12.00	0.833	0.833
75-79	115	11	10.59	10.59	1.039	1.039
80-84	69	8	8.19	8.19	0.977	0.977
85-89	25	3	3.76	3.76	0.798	0.798
90+	1	1	0.18	0.18	5.556	5.556
All Ages	1,679	69	88.30	88.30	0.781	0.781

Disabled Retiree and Beneficiary Mortality - Female

	<u>Exposures</u>	<u>Actual</u>	<u>Expected Terminations</u>		<u>Ratio of Actual/Expected</u>	
			<u>Proposed Assumptions</u>	<u>Current Assumptions</u>	<u>Proposed Assumptions</u>	<u>Current Assumptions</u>
<=54	1,027	29	12.45	12.45	2.329	2.329
55-59	1,075	39	20.17	20.17	1.934	1.934
60-64	1,085	19	26.11	26.11	0.728	0.728
65-69	791	18	24.67	24.67	0.730	0.730
70-74	541	12	23.02	23.02	0.521	0.521
75-79	343	9	20.43	20.43	0.441	0.441
80-84	179	21	14.22	14.22	1.477	1.477
85-89	57	7	6.43	6.43	1.089	1.089
90+	42	9	7.40	7.40	1.216	1.216
All Ages	5,140	163	154.90	154.90	1.052	1.052

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Teachers' Pension and Annuity Fund of New Jersey

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Proposed Assumptions Rates of Termination - Male

<u>Less than 10 Years of Employment</u>		<u>10 or more Years of Employment</u>		
<u>Years of Employment</u>	<u>Proposed Rate</u>	<u>Age</u>	<u>Proposed Rates With Benefit</u>	<u>Contribution Refund</u>
0	0.0819	25	0.0065	0.0044
1	0.0672	26	0.0065	0.0044
2	0.0590	27	0.0065	0.0044
3	0.0417	28	0.0065	0.0044
4	0.0339	29	0.0065	0.0044
5	0.0268			
6	0.0236	30	0.0065	0.0044
7	0.0212	31	0.0065	0.0044
8	0.0159	32	0.0065	0.0044
9	0.0152	33	0.0066	0.0043
		34	0.0067	0.0042
		35	0.0068	0.0041
		36	0.0069	0.0040
		37	0.0072	0.0039
		38	0.0067	0.0035
		39	0.0062	0.0031
		40	0.0057	0.0027
		41	0.0052	0.0023
		42	0.0047	0.0020
		43	0.0047	0.0019
		44	0.0047	0.0018
		45	0.0047	0.0017
		46	0.0047	0.0016
		47	0.0045	0.0015
		48	0.0049	0.0014
		49	0.0053	0.0013
		50	0.0057	0.0012
		51	0.0061	0.0011
		52	0.0064	0.0011
		53	0.0079	0.0010
		54	0.0094	0.0009
		55	0.0109	0.0008
		56	0.0124	0.0007
		57	0.0141	0.0007
		58	0.0141	0.0007
		59	0.0141	0.0007

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Experience Study for the Period
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Proposed Assumptions Rates of Termination - Female

<u>Less than 10 Years of Employment</u>			<u>10 or more Years of Employment</u>		
<u>Years of Employment</u>	Proposed Rates		<u>Age</u>	Proposed Rates	
	<u>Less than Age 40</u>	<u>At Least Age 40</u>		<u>With Benefit</u>	<u>Contribution Refund</u>
0	0.0761	0.0761	25	0.0391	0.0043
1	0.0700	0.0700	26	0.0391	0.0043
2	0.0609	0.0609	27	0.0391	0.0043
3	0.0655	0.0380	28	0.0391	0.0043
4	0.0628	0.0259	29	0.0391	0.0043
5	0.0616	0.0219			
6	0.0616	0.0180	30	0.0391	0.0043
7	0.0595	0.0168	31	0.0391	0.0043
8	0.0591	0.0143	32	0.0391	0.0043
9	0.0452	0.0128	33	0.0358	0.0039
			34	0.0325	0.0035
			35	0.0292	0.0031
			36	0.0259	0.0027
			37	0.0226	0.0025
			38	0.0196	0.0022
			39	0.0166	0.0019
			40	0.0136	0.0016
			41	0.0106	0.0013
			42	0.0078	0.0009
			43	0.0073	0.0008
			44	0.0068	0.0007
			45	0.0063	0.0006
			46	0.0058	0.0005
			47	0.0055	0.0006
			48	0.0058	0.0006
			49	0.0061	0.0006
			50	0.0064	0.0006
			51	0.0067	0.0006
			52	0.0071	0.0008
			53	0.0088	0.0008
			54	0.0105	0.0008
			55	0.0122	0.0008
			56	0.0139	0.0008
			57	0.0156	0.0006
			58	0.0156	0.0006
			59	0.0156	0.0006

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
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Proposed Assumptions Rates of Retirement - Male

<u>Age</u>	Reduced Retirement or Less than 25 Years of Service	Proposed Rates	
		More than 25 Years of Service First Eligibility	After First Eligibility
Less than 47	0.0110	N/A	N/A
48	0.0140	N/A	N/A
49	0.0160	N/A	N/A
50	0.0190	N/A	N/A
51	0.0220	N/A	N/A
52	0.0250	N/A	N/A
53	0.0350	N/A	N/A
54	0.0450	N/A	N/A
55	N/A	0.1500	N/A
56	N/A	0.2000	0.1200
57	N/A	0.2000	0.1300
58	N/A	0.2200	0.1400
59	N/A	0.2200	0.1500
60	0.1100	0.2400	0.2100
61	0.1100	0.2600	0.2300
62	0.1100	0.3800	0.3600
63-64	0.1100	0.4000	0.3000
65	0.1700	0.5000	0.3800
66-69	0.1700	0.5000	0.3000
70	0.1700	0.5000	0.3000
71 and older	0.2000	0.5000	0.3000

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
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Proposed Assumptions Rates of Retirement - Female

Age	Reduced Retirement or Less than 25 Years of Service	Proposed Rates	
		More than 25 Years of Service First Eligibility	After First Eligibility
Less than 47	0.0130	N/A	N/A
48	0.0150	N/A	N/A
49	0.0170	N/A	N/A
50	0.0200	N/A	N/A
51	0.0250	N/A	N/A
52	0.0300	N/A	N/A
53	0.0400	N/A	N/A
54	0.0500	N/A	N/A
55	N/A	0.1600	N/A
56	N/A	0.1900	0.1300
57	N/A	0.1900	0.1400
58	N/A	0.2200	0.1400
59	N/A	0.2200	0.1500
60	0.0800	0.3000	0.2000
61	0.0800	0.3200	0.2200
62	0.1000	0.4600	0.3200
63-64	0.1000	0.4400	0.2650
65	0.1800	0.5000	0.3500
66-69	0.1500	0.5000	0.3000
70	0.1500	0.5000	0.3000
71 and older	0.2000	0.5000	0.3000

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Proposed Assumptions Rates of Retirement - New Tier Male

Age	Reduced Retirement or Less than 25 Years of Service	Proposed Rates	
		More than 25 Years of Service First Eligibility	After First Eligibility
Less than 47	0.0055	N/A	N/A
48	0.0070	N/A	N/A
49	0.0080	N/A	N/A
50	0.0095	N/A	N/A
51	0.0110	N/A	N/A
52	0.0125	N/A	N/A
53	0.0175	N/A	N/A
54	0.0225	N/A	N/A
55	0.1100	N/A	N/A
56	0.1200	N/A	N/A
57	0.1250	N/A	N/A
58	0.1350	N/A	N/A
59	0.1400	N/A	N/A
60	0.1100	0.2600	N/A
61	0.1100	0.2600	0.2300
62	0.1100	0.3800	0.3600
63-64	0.1100	0.4000	0.3000
65	0.1700	0.5000	0.3800
66-69	0.1700	0.5000	0.3000
70	0.1700	0.5000	0.3000
71 and older	0.2000	0.5000	0.3000

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
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Proposed Assumptions Rates of Retirement - New Tier Female

<u>Age</u>	Reduced Retirement or Less than 25 Years of Service	Proposed Rates	
		More than 25 Years of Service First <u>Eligibility</u>	After First <u>Eligibility</u>
Less than 47	0.0065	N/A	N/A
48	0.0075	N/A	N/A
49	0.0085	N/A	N/A
50	0.0100	N/A	N/A
51	0.0125	N/A	N/A
52	0.0150	N/A	N/A
53	0.0200	N/A	N/A
54	0.0250	N/A	N/A
55	0.1200	N/A	N/A
56	0.1200	N/A	N/A
57	0.1250	N/A	N/A
58	0.1350	N/A	N/A
59	0.1400	N/A	N/A
60	0.0800	0.3000	N/A
61	0.0800	0.3200	0.2200
62	0.1000	0.4600	0.3200
63-64	0.1000	0.4400	0.2650
65	0.1800	0.5000	0.3500
66-69	0.1500	0.5000	0.3000
70	0.1500	0.5000	0.3000
71 and older	0.2000	0.5000	0.3000

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Proposed Assumptions Rates of Disability

<u>Ordinary Disability*</u>			<u>Accidental Disability</u>	
Proposed Rates				
<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Gender</u>	<u>Proposed Rate</u>
25	0.000301	0.000379	Male	0.00009
26	0.000313	0.000408	Female	0.00006
27	0.000326	0.000439		
28	0.000375	0.000476		
29	0.000424	0.000513		
30	0.000473	0.000550		
31	0.000522	0.000587		
32	0.000573	0.000626		
33	0.000585	0.000642		
34	0.000597	0.000658		
35	0.000609	0.000674		
36	0.000621	0.000690		
37	0.000635	0.000704		
38	0.000657	0.000767		
39	0.000679	0.000830		
40	0.000701	0.000893		
41	0.000723	0.000956		
42	0.000744	0.001020		
43	0.000837	0.001119		
44	0.000930	0.001218		
45	0.001023	0.001317		
46	0.001116	0.001416		
47	0.001211	0.001513		
48	0.001281	0.001595		
49	0.001351	0.001677		
50	0.001421	0.001759		
51	0.001491	0.001841		
52	0.001560	0.001925		
53	0.002284	0.002452		
54	0.003008	0.002979		

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Experience Study for the Period
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Proposed Assumptions Rates of Disability

	<u>Ordinary Disability*</u>		<u>Accidental Disability</u>	
<u>Age</u>	<u>Proposed Rates</u>		<u>Gender</u>	<u>Proposed Rate</u>
	<u>Male</u>	<u>Female</u>		
55	0.003732	0.003506		
56	0.004456	0.004033		
57	0.005178	0.004558		
58	0.005421	0.005254		
59	0.005664	0.005950		
60	0.005907	0.006646		
61	0.006150	0.007342		
62	0.006392	0.008039		
63	0.007618	0.009177		
64	0.008844	0.010315		
65	0.010070	0.011453		
66	0.011296	0.012591		
67	0.012522	0.013730		
68	0.012522	0.015590		
69	0.012522	0.017450		
70	0.012522	0.019310		
71	0.012522	0.021170		
72	0.012522	0.023030		
73	0.012522	0.022140		
74	0.012522	0.021250		
75	0.012522	0.020360		
76	0.012522	0.019470		
77	0.012522	0.018580		
78	0.012522	0.017690		
79	0.012522	0.016800		

* Assumption does not apply if have less than 10 years of service or have attained age 55 and 25 years of service

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Teachers' Pension and Annuity Fund of New Jersey

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Proposed Assumptions Rates of Mortality - Male

<u>Age</u>	Proposed Rates		
	Active	Postretirement	
	<u>Ordinary</u>	<u>Healthy</u>	<u>Disabled</u>
15	0.000212	0.000569	0.022571
16	0.000206	0.000601	0.022571
17	0.000215	0.000636	0.022571
18	0.000226	0.000668	0.022571
19	0.000240	0.000700	0.022571
20	0.000254	0.000729	0.022571
21	0.000268	0.000755	0.022571
22	0.000284	0.000774	0.022571
23	0.000298	0.000789	0.022571
24	0.000312	0.000795	0.022571
25	0.000326	0.000795	0.022571
26	0.000338	0.000800	0.022571
27	0.000348	0.000808	0.022571
28	0.000356	0.000831	0.022571
29	0.000362	0.000871	0.022571
30	0.000365	0.001536	0.022571
31	0.000371	0.001691	0.022571
32	0.000376	0.001850	0.022571
33	0.000387	0.002007	0.022571
34	0.000406	0.002156	0.022571
35	0.000348	0.002299	0.022571
36	0.000382	0.002431	0.022571
37	0.000425	0.002550	0.022571
38	0.000474	0.002668	0.022571
39	0.000526	0.002781	0.022571
40	0.000582	0.002900	0.022571
41	0.000640	0.003033	0.022571
42	0.000696	0.003189	0.022571
43	0.000753	0.003365	0.022571
44	0.000810	0.003565	0.022571

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Proposed Assumptions Rates of Mortality - Male

<u>Age</u>	<u>Proposed Rates</u>		
	<u>Active</u>	<u>Postretirement</u>	
	<u>Ordinary</u>	<u>Healthy</u>	<u>Disabled</u>
45	0.000869	0.003791	0.022571
46	0.000933	0.004005	0.023847
47	0.001004	0.004243	0.025124
48	0.001087	0.004500	0.026404
49	0.001182	0.004788	0.027687
50	0.001290	0.005100	0.028975
51	0.001397	0.005424	0.030268
52	0.001513	0.005717	0.031563
53	0.001630	0.005990	0.032859
54	0.001751	0.006263	0.034152
55	0.001873	0.006574	0.035442
56	0.001994	0.006991	0.036732
57	0.002117	0.007498	0.038026
58	0.002257	0.008111	0.039334
59	0.002411	0.008819	0.040668
60	0.002594	0.009625	0.042042
61	0.002821	0.010505	0.043474
62	0.003084	0.010626	0.044981
63	0.003378	0.010745	0.046584
64	0.003701	0.010866	0.048307
65	0.004062	0.010985	0.050174
66	0.004475	0.012242	0.052213
67	0.004915	0.013553	0.054450
68	0.005404	0.014951	0.056909
69	0.005908	0.016459	0.059613
70	0.006446	0.018200	0.062583
71	0.007024	0.020207	0.065841
72	0.007597	0.022539	0.069405
73	0.008172	0.025220	0.073292
74	0.008788	0.028296	0.077512

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Proposed Assumptions Rates of Mortality - Male

<u>Age</u>	Proposed Rates		
	Active	Postretirement	
	<u>Ordinary</u>	<u>Healthy</u>	<u>Disabled</u>
75	0.009387	0.031758	0.082067
76	0.009956	0.035676	0.086951
77	0.010742	0.039994	0.092149
78	0.011790	0.044836	0.097640
79	0.013056	0.050211	0.103392
80	0.014507	0.056098	0.109372
81	N/A	0.063057	0.115544
82	N/A	0.070753	0.121877
83	N/A	0.079292	0.128343
84	N/A	0.088561	0.134923
85	N/A	0.098827	0.141603
86	N/A	0.110266	0.148374
87	N/A	0.122931	0.155235
88	N/A	0.136787	0.162186
89	N/A	0.152108	0.169233
90	N/A	0.167241	0.183408
91	N/A	0.182159	0.199769
92	N/A	0.197511	0.216605
93	N/A	0.213065	0.233662
94	N/A	0.228594	0.250693
95	N/A	0.243912	0.267491
96	N/A	0.258879	0.283905
97	N/A	0.273420	0.299852
98	N/A	0.287503	0.315296
99	N/A	0.301099	0.330207
100	N/A	0.314183	0.344556

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Proposed Assumptions Rates of Mortality - Male

<u>Age</u>	Active	Proposed Rates	
	<u>Ordinary</u>	<u>Healthy</u>	<u>Disabled</u>
101	N/A	0.327015	0.358628
102	N/A	0.338921	0.371685
103	N/A	0.349275	0.383040
104	N/A	0.357448	0.392003
105	N/A	0.362812	0.397886
106	N/A	0.364740	0.400000
107	N/A	0.364740	0.400000
108	N/A	0.364740	0.400000
109	N/A	0.364740	0.400000

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Proposed Assumptions Rates of Mortality - Female

<u>Age</u>	Proposed Rates		
	Active	Postretirement	
	<u>Ordinary</u>	<u>Healthy</u>	<u>Disabled</u>
15	0.000163	0.000256	0.007450
16	0.000153	0.000267	0.007450
17	0.000137	0.000276	0.007450
18	0.000130	0.000283	0.007450
19	0.000131	0.000286	0.007450
20	0.000138	0.000287	0.007450
21	0.000148	0.000289	0.007450
22	0.000164	0.000292	0.007450
23	0.000189	0.000296	0.007450
24	0.000216	0.000303	0.007450
25	0.000242	0.000312	0.007450
26	0.000262	0.000322	0.007450
27	0.000273	0.000335	0.007450
28	0.000280	0.000354	0.007450
29	0.000284	0.000373	0.007450
30	0.000286	0.000427	0.007450
31	0.000289	0.000488	0.007450
32	0.000292	0.000547	0.007450
33	0.000291	0.000604	0.007450
34	0.000291	0.000653	0.007450
35	0.000294	0.000701	0.007450
36	0.000302	0.000748	0.007450
37	0.000314	0.000793	0.007450
38	0.000331	0.000845	0.007450
39	0.000351	0.000901	0.007450
40	0.000373	0.000970	0.007450
41	0.000397	0.001051	0.007450
42	0.000422	0.001147	0.007450
43	0.000449	0.001259	0.007450
44	0.000478	0.001387	0.007450

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Proposed Assumptions Rates of Mortality - Female

<u>Age</u>	Proposed Rates		
	Active	Postretirement	
	<u>Ordinary</u>	<u>Healthy</u>	<u>Disabled</u>
45	0.000512	0.001528	0.007450
46	0.000551	0.001684	0.008184
47	0.000598	0.001849	0.008959
48	0.000652	0.002021	0.009775
49	0.000709	0.002201	0.010634
50	0.000768	0.002390	0.011535
51	0.000825	0.002471	0.012477
52	0.000877	0.002618	0.013456
53	0.000923	0.002830	0.014465
54	0.000973	0.003094	0.015497
55	0.001033	0.003407	0.016544
56	0.001112	0.003760	0.017598
57	0.001206	0.004153	0.018654
58	0.001310	0.004575	0.019710
59	0.001428	0.005018	0.020768
60	0.001568	0.005486	0.021839
61	0.001734	0.006000	0.022936
62	0.001907	0.006578	0.024080
63	0.002084	0.007246	0.025293
64	0.002294	0.008019	0.026600
65	0.002563	0.007335	0.028026
66	0.002919	0.008234	0.029594
67	0.003359	0.009143	0.031325
68	0.003863	0.009992	0.033234
69	0.004439	0.010795	0.035335
70	0.005093	0.011663	0.037635
71	0.005832	0.012702	0.040140
72	0.006677	0.014020	0.042851
73	0.007621	0.015582	0.045769
74	0.008636	0.017312	0.048895

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Teachers' Pension and Annuity Fund of New Jersey

Experience Study for the Period
July 1, 2003 through June 30, 2006

Proposed Assumptions Rates of Mortality - Female

Age	Proposed Rates		
	Active	Postretirement	
	<u>Ordinary</u>	<u>Healthy</u>	<u>Disabled</u>
75	0.009694	0.019269	0.052230
76	0.010764	0.021512	0.055777
77	0.011763	0.024095	0.059545
78	0.012709	0.026950	0.063545
79	0.013730	0.030038	0.067793
80	0.014953	0.033464	0.072312
81	N/A	0.037334	0.077135
82	N/A	0.041753	0.082298
83	N/A	0.046597	0.087838
84	N/A	0.051798	0.093794
85	N/A	0.071132	0.100203
86	N/A	0.079122	0.107099
87	N/A	0.088234	0.114512
88	N/A	0.098521	0.122464
89	N/A	0.109835	0.130972
90	N/A	0.136772	0.140049
91	N/A	0.146195	0.149698
92	N/A	0.156182	0.159924
93	N/A	0.166445	0.170433
94	N/A	0.178521	0.182799
95	N/A	0.189957	0.194509
96	N/A	0.200573	0.205379
97	N/A	0.210203	0.215240
98	N/A	0.218707	0.223947
99	N/A	0.225973	0.231387

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Experience Study for the Period
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Proposed Assumptions Rates of Mortality - Female

<u>Age</u>	Active	Proposed Rates	
	<u>Ordinary</u>	<u>Healthy</u>	<u>Disabled</u>
100	N/A	0.231910	0.237467
101	N/A	0.239105	0.244834
102	N/A	0.248543	0.254498
103	N/A	0.259819	0.266044
104	N/A	0.272525	0.279055
105	N/A	0.286257	0.293116
106	N/A	0.300608	0.307811
107	N/A	0.315173	0.322725
108	N/A	0.329545	0.337441
109	N/A	0.343318	0.351544