

REPORT OF THE GROUP ANNUITY EXPERIENCE COMMITTEE

GROUP ANNUITY MORTALITY

1. ABSTRACT

This report presents the 1997 and 1998 calendar year experience of retired individuals in the United States and Canada who are covered under group pension contracts issued in the United States and Canada. Data for calendar years 1993 through 1996 are also included to provide a comparison with 1997 and 1998 experience and to provide information on mortality trends over time. Substantially all 1997 and 1998 data were submitted from contracts issued in the United States.

A partial list of previous Society of Actuaries (SoA) reports on Group Annuity Mortality is shown below.

1981-82 calendar years	-	TSA, 1983 Reports
1983-84 calendar years	-	TSA, 1984 Reports
1985-86 calendar years	-	TSA, 1985-86-87 Reports
1987-88 calendar years	-	TSA, 1988-89-90 Reports
1989-90 calendar years	-	TSA, 1993-94 Reports
1991-92 calendar years	-	TSA, 1995-96 Reports
1993-94 calendar years	-	to be published (available on SOA website)
1995-96 calendar years	-	to be published (available on SOA website)

The report includes the annuity experience under contracts providing insurance company guaranteed annuity benefits to ongoing pension plans and the experience of contracts covering closed groups of lives for which purchases are made by a single payment at issue (single premium close-out business). It also includes contracts that do not contain insurance company guarantees of future payments (*e.g.*, certain types of immediate participation guarantee contracts).

The total data reported in this study include all annuitants receiving life contingent payments or, in some cases, past normal retirement date but not currently receiving payments. With respect to joint and survivor annuities, only the person in payment status is counted in the exposure and death statistics.

2. CAVEATS

This study, covering 1997 and 1998 calendar year experience, includes all data for these years submitted by the contributing companies through the end of December, 2001, including any late reported deaths. Due to the extended collection period, no adjustment has been made to the study results to reflect any further lag in late reported deaths.

Results in this report for years prior to 1997 have since been updated to reflect additional submissions of late reported deaths and other data adjustments since the prior report. All references in this report to data for years prior to 1997 relate to data contained in Tables 1-27 herein, which may vary slightly from prior published reports on Group Annuity Mortality. Future reports issued by the Group Annuity Experience Committee will incorporate any data updates from contributing companies for calendar years 1997 and 1998 received subsequent to the compilation of this report.

The data submitted was in sufficient detail to allow the committee to break the total experience into subsets based on a single parameter or a combination of parameters. The committee believes that the tables in this report produce data cells generally large enough to be credible, and in a format that facilitates data analysis. However, data at very low and very high-attained ages may be too small to be credible.

3. FORMAT OF STUDY

The format of the study has been expanded from the Group Annuity Mortality Report of 1995 and 1996 calendar year experience. In addition to the tables presented in the prior 1995-96 Report, we are including tables that use the GAM-94 Basic Table, both with and without projection, as the basis for expected deaths. It should be noted that, for consistency, projected GAM-94 Basic and GAR-94 mortality rates for the year 1993 have been inversely projected, that is, divided by projection factors (see 4. Principal Observations).

The mortality table used for expected deaths for Tables 1-27 (described below) is the 1983 Group Annuity Mortality (83 GAM) Table. The 83 GAM Table is used without projection. The mortality table used for expected deaths for Tables 16A through 27A is the 1994 Group Annuity Static (GAM-94 Static) Table. Expected deaths for females are based on the female mortality tables (as opposed to the male mortality table with the standard six-year setback), except for Table 15, which is based on male mortality with no age setback. The mortality table used for expected deaths for Tables 24B through 27B is the GAR-94 Table. The mortality table used for expected deaths for Tables 24C through 27C is the GAM-94 Basic Table without projection. The mortality table used for expected deaths for Tables 24D through 27D is the GAM-94 Basic Table with projection. Attained age is defined as age nearest birthday as of January 1 of the calendar year of exposure.

The mortality tables used for expected deaths can be found in the Table Manager database on the Society of Actuaries website (<http://www.soa.org/>).

The following index describes the tables and charts.

TABLE**DESCRIPTION**

1	Summary of Results (1993-98): by Lives and Annual Income, for Males and Females.
2-4	Summary of Exposures and Deaths: by Lives and Annual Income, by attained age group, for Males and Females, in calendar years (2) 1997, (3) 1998, and (4) 1997-98.
5-6	Experience by Retirement Class: prior to normal retirement date (NRD), on or after NRD, no stated NRD, and past NRD with no payment, by Lives and Annual Income, by attained age group, in calendar years 1997-98 for (5) Males and (6) Females.
7-8	Experience by Benefit Class: life annuity, life annuity with period certain, and cash refund annuity, by Lives and Annual Income, by attained age group, in calendar years 1997-98 for (7) Males and (8) Females.
9-10	Experience by Survivor Continuance: single life and joint life annuity, by Lives and Annual Income, by attained age group, in calendar years 1997-98 for (9) Males and (10) Females.
11-12	Experience by Years Since Retirement: 0-1, 2-5, 6-10, and 11 or more years, by Lives and Annual Income, by attained age group, in calendar years 1997-98 for (11) Males and (12) Females.
13-14	Experience by Guaranteed Status: guaranteed versus non-guaranteed, by Lives and Annual Income, by attained age group, in calendar years 1997-98 for (13) Males and (14) Females.
15	Comparison of Male and Female Mortality Experience: by Lives and Annual Income, by attained age group, in calendar years 1997-98.
16-19 16A-19A	Summary of Group Annuity Mortality Experience: by classification group, in calendar years 1997 and 1998 for Males, by (16 and 16A) Lives and (17 and 17A) Annual Income; and for Females, by (18 and 18A) Lives and (19 and 19A) Annual Income.
20-23	Comparison of 1995-96 with 1997-98 Group Annuity Mortality Experience: by classification group, for 1995-96 versus 1997-98 for Males, by (20) Lives and (21) Annual Income; and for Females, by (22) Lives and (23) Annual Income.
24-27 24A-27A 24B-27B 24C-27C 24D-27D	Summary of Mortality Improvement for calendar years 1997 to 1998: by attained age group, for Males, by (24, 24A, 24B, 24C, and 24D) Lives and (25, 25A, 25B, 25C, and 25D) Annual Income; and for Females, by (26, 26A, 26B, 26C, and 26D) Lives and (27, 27A, 27B, 27C, and 27D) Annual Income.

CHART

DESCRIPTION

I-IV	Histograms of A/E ratios for 1993-98. The mortality table used for expected deaths for all years is the 83 GAM Table.
IA-IVA	Histograms of A/E ratios for 1993-98. The mortality table used for expected deaths for all years is the GAM-94 Static Table.
IB-IVB	Histograms of A/E ratios for 1993-98. The mortality table used for expected deaths for all years is the GAR-94 Table.
IC-IVC	Histograms of A/E ratios for 1993-98. The mortality table used for expected deaths for all years is the GAM-94 Basic Table without projection.
ID-IVD	Histograms of A/E ratios for 1993-98. The mortality table used for expected deaths for all years is the GAM-94 Basic Table with projection.

Each of the tables displays exposure and/or an actual to expected (A/E) ratio. The amount of exposure provides a key to the credibility of the data in each classification age cell and for the classification group in total. Caution is advised in drawing any conclusions for experience at the very low or very high ages, for which exposures are rather limited.

A/E ratios provide simple reference values for comparison of mortality experience data with established mortality tables. The exact reference values are numerically significant, however, only to the extent that underlying exposure is similar for the current experience data and the tables. U.S. and Canadian workforce, retiree, and beneficiary populations have undergone significant demographic changes since experience data was originally obtained for the 83 GAM and GAM-94 Tables. In addition, as noted in Section 1, data reported in this study derive primarily from retirees in group annuity contracts in pay status. The Table mortality rates, in contrast, were derived from blended populations of active workers and retirees. Blending was not significant at older ages. Nevertheless, the interpretation of data in terms of A/E ratios in the sections below should be adopted only with these factors taken into consideration.

4. PRINCIPAL OBSERVATIONS

1997-98 Experience

Overall, male A/E ratios based on income are lower than those based on number of lives (0.96 vs. 1.06, respectively). This is true for all five-year age groups. The results for males continue to support the notion that individuals with higher income exhibit lower mortality (Table 4). The same relationship is true for females for most five-year age groups, but it does not hold true for females in age group 80-84 or in age group 90-94. Overall, female A/E ratios based on income are actually slightly higher than those based on lives (1.21 vs. 1.20, respectively).

Individuals who retire prior to NRD generally have higher A/E ratios than those who retire later. This is true overall for males and females, based on lives and income. This may reflect a tendency for unhealthy individuals to elect early retirement (Tables 5-6).

Individuals who elect life-only annuities have higher ratios than those who elect life with period certain or cash refund annuities. There are exceptions for scattered five-year age groups (Tables 7-8). Further analysis should take into consideration the inclusion of temporary and unknown annuities with life-only and the fact that some companies reclassify annuitants surviving certain periods as life-only annuitants.

As in prior studies, A/E ratios are generally higher for single-life annuities than for joint lives. There are a few exceptions in scattered five-year age groups and in the female overall A/E ratios for the category "joint percent unknown." In this study, the "unknown" classification is split into two categories: "joint indicator unknown" and "joint percent unknown" (Tables 9-10).

It is difficult to reach any specific conclusions about mortality experience based on number of years since retirement. While the overall A/E ratios generally tend to decrease with increasing years since retirement, different age groupings exhibit varying patterns that may reflect early or late retirement and the reasons for these elections. Experience by years since retirement may be less reliable since, for single-premium closeout business, some contributors may have coded the year of retirement to be the year of purchase. Such treatment would cause an understatement in the years since retirement (Tables 11-12).

Measured by income, male and female A/E ratios are generally lower for "guaranteed" payments than for "non-guaranteed" payments. This pattern is exhibited more at younger ages than at older ages and more for males than for females. Under "guaranteed" contracts, which constitute the majority of the study data, an insurer guarantees future benefit payments. These include single-premium closeout business, which is usually non-participating. Payments which are "non-guaranteed" by the insurer include contracts with an immediate participation guarantee feature (Tables 13-14).

As prior studies have indicated, females are living longer than males. The ratio of female mortality to male mortality averages 0.67, based on lives, and 0.71, based on income. The ratio of female to male mortality tends to increase towards equity at the higher ages. The ratio of female mortality to male mortality has risen steadily in recent years, indicating that male mortality (longevity) is improving at a faster rate than female mortality (Table 15).

A/E ratios decrease for increasing attained age groups for both males and females before bottoming out around ages 75-79 and generally increase for attained age groups thereafter, except for the oldest age group (over 94), which exhibits relatively low A/E ratios. The A/E ratios by male income for attained age groups 65-69 through 80-84 and for the oldest age group (over 94) are below 1.00 (Tables 16-19).

Comparison With 1995-96 Experience

Exposures decreased moderately for males and increased significantly for females from the updated 1995-96 study to the 1997-98 study (Tables 20-23). For males, the number of lives exposed decreased by 9.8% and the amount of income exposed decreased by 4.2%. For females, the number of lives exposed increased by 14.5% and the amount of income exposed increased by 20.6%.

Compared to the updated 1995-96 calendar year data, the 1997-98 data show no material change in overall mortality for males, as measured by actual-to-expected mortality ratios (with expected mortality based on the '83 GAM Table). For females, experience by lives shows no material change and experience by income shows a slight deterioration in overall female mortality. The following table summarizes overall A/E ratios for males and females based on number of lives and amount of income. In this paragraph and the remainder of this Report, annuitant mortality improvement and deterioration denote decreasing and increasing mortality rates, respectively.

<u>Category</u>	<u>1995-96 A/E Ratio</u>	<u>1997-98 A/E Ratio</u>
Male Lives	1.06	1.06
Male Income	0.96	0.96
Female Lives	1.20	1.20
Female Income	1.16	1.21

Tables 20-23 provide further details about this comparison. Note that for experience by male lives (Table 20), experience by male income (Table 21), and experience by female lives (Table 22), about half of the subgroups show mortality improvement and about half of the subgroups show mortality deterioration. For experience by female income (Table 23), about one-fourth of the subgroups show mortality improvement.

1993-98 Experience Trends

Tables 24-27 contain summaries of the A/E ratios and annual mortality improvement factors for years 1993-98 with respect to the GAM-83 Table. Tables 24A-27D contain summaries of the A/E ratios and annual mortality improvement factors for years 1993-98 with respect to the GAM-94 Static, the GAR-94, the GAM-94 Basic, and the GAM-94 Basic with projection scale AA Tables.

As with the 1995-96 Report, the last two columns calculate the average annual improvement rates. The second-to-last column gives the "Arithmetic Average" of the annual improvement factors and the last column gives the "Loglinear Regression Slope," calculated by plotting a loglinear regression fit to the annual mortality improvement factors.

For males, with respect to the unprojected tables (GAM-83, GAM-94 Static, and GAM-94 Basic), mortality improved for the 1993-1996 time period and deteriorated slightly for the 1997-98 time period. The average annual rate of improvement over this six-year period was 0.7% measured by lives, and 0.4% measured by income (using the Loglinear Regression Slope). With respect to the projected tables (GAR-94 and GAM-94 Basic with projection scale AA), mortality deteriorated for the 1993-1998 time period. The average annual rate of improvement over this six-year period was -0.3% measured by lives, and -0.8% measured by income (using the Loglinear Regression Slope). Since the GAR-94 and GAM-94 Basic with projection scale AA Tables have improvement factors, the A/E trends indicate that male mortality is not improving as quickly as the projection scale AA would predict.

For females, with respect to the unprojected tables (GAM-83, GAM-94 Static, and GAM-94 Basic), the A/E ratios for the 1993-98 time period for both lives and income continue to show a saw-toothed pattern; i.e., the mortality improvement and deterioration is alternating from year to year. The average annual rate of improvement over this six-year period, with respect to the GAM-83 table, was 0.1% measured by lives, and -0.7% measured by income (using the Loglinear Regression Slope). The corresponding average annual rate of improvement over this six-year period, with respect to the projected tables (GAM-94 Static and GAM-94 Basic), was -0.1% measured by lives, and -1.0% measured by income (using the Log-linear Regression Slope). With respect to the projected tables (GAR-94 and GAM-94 Basic with projection scale AA), mortality deteriorated for the 1993-1998 time period. The average annual rate of improvement over this six-year period was -0.6% measured by lives, and -1.6% measured by income (using the Log-linear Regression Slope). These A/E trends indicate that female mortality is not generally improving even relative to a static mortality assumption.

Comparison with 83 GAM, GAM-94 Static Table, GAR-94 Table, GAM-94 Basic, and GAM-94 Basic with Projection Scale AA

In 1994, the Society of Actuaries Group Annuity Valuation Table Task Force recommended the GAR-94 Table as the new group annuity reserve valuation standard for adoption by the NAIC to replace 83 GAM. As can be seen from A/E ratios in the table below, the GAR-94 table includes a significant improvement in mortality for males and a slight improvement in mortality for females.

The GAM-94 Static Table is the static table underlying the GAR-94 Table and represents the mortality rates for the 1994 calendar year. The GAM-94 Static Table generally includes a flat 7% loading. The GAM-94 Static Table is used to calculate expected deaths for Tables 16A through 19A and Tables 24A through 27A.

The GAR-94 Table incorporates the use of generational mortality into statutory reserving requirements. The underlying GAM-94 Static Table is projected from 1994 to future years using Scale AA. Tables 24B through 27B summarize the experience for calendar years 1993-98 relative to the GAR-94 Table.

The GAM-94 Basic Table is the GAM-94 Static Table without the loading. The GAM-94 Basic Table does not contain any projection for future mortality improvements. Tables 24C through 27C summarize the experience for calendar years 1993-98 relative to the GAM-94 Basic Table. Tables 24D through 27D summarize the experience for calendar years 1993-98 relative to the GAM-94 Basic Table with projection scale AA.

For purposes of demonstrating trends over time, Scale AA was not only used to project improvements for years after 1994, but was also used to project the table backwards to years prior to 1994. This allows for consistency in comparisons between the assumed improvement rates in Scale AA and the actual experience during 1993-98. This approach results in no projection for the expected mortality for calendar year 1994. Therefore, the A/E ratios for 1994 are identical in Tables 24A and 24B, as well as 24C and 24D. The A/E ratios for years after 1994 are slightly higher using the GAR-94 and GAM-94 Basic with Projection Scale AA Tables versus the GAM-94 Static and GAM-94 Basic Tables, while the A/E ratios for years prior to 1994 are slightly lower. The "TOTAL" lines from Tables 25A, 25B, 25C, and 25D, which are summarized below, provide a good illustration of the impact of projection. The A/E ratios based on male income show a decline from 1.12 in 1993 to 1.10 in 1998 using the GAM-94 Static Table. But with the GAR-94 Table as the expected mortality, the pattern of A/E ratios increases during the period, with a value of 1.11 in 1993 and 1.15 1998.

Tables 24B through 27B and 24D through 27D may provide an indication of how closely Scale AA reflects the actual annual improvement in mortality. If the A/E ratios remain unchanged during the period, this indicates actual changes in experience mortality are consistent with the improvement rates in Scale AA. Another indication would come from the "A/E Improvement Factors." Unlike the "Annual Improvement Factors" shown in Tables 24-27 and 24A-27A, these "A/E Improvement Factors" do not represent rates of improvement of the underlying mortality experience. These factors simply show rates of improvement in actual mortality relative to improvement in the expected mortality basis. If these factors are positive, this indicates the actual mortality is improving faster than assumed by Scale AA. If these factors are negative, actual mortality is improving at a slower rate than assumed by Scale AA. Tables 25B, 27B, 25D, and 27D, which show results for male and female income, all show that the overall average of the A/E Improvement Factors are less than zero. Although year to year results vary, overall experience appears to improve at rates less than Scale AA during the period from 1993-98.

The results of the experience for calendar years 1993-98 compared to the 83 GAM Table, GAM-94 Static Table, GAR-94 Table, GAM-94 Basic Table, and GAM-94 Basic Table with Projection Scale AA are summarized in the following table.

A/E Ratios by Expected Mortality Table

<u>Category</u>	<u>83 GAM</u>	<u>GAM-94 Static</u>	<u>GAR-94</u>	<u>GAM-94 Basic</u>	<u>GAM-94 Basic With Projection Scale AA</u>
Male Lives:					
1993	1.09	1.26	1.25	1.17	1.16
1994	1.08	1.26	1.26	1.17	1.17
1995	1.07	1.24	1.26	1.16	1.17
1996	1.05	1.21	1.24	1.13	1.15
1997	1.06	1.22	1.26	1.14	1.17
1998	1.06	1.23	1.28	1.14	1.19
Male Income:					
1993	0.97	1.12	1.11	1.05	1.03
1994	0.98	1.14	1.14	1.06	1.06
1995	0.96	1.11	1.13	1.03	1.05
1996	0.96	1.11	1.14	1.03	1.06
1997	0.97	1.13	1.17	1.05	1.09
1998	0.95	1.10	1.15	1.02	1.07
Female Lives:					
1993	1.22	1.22	1.22	1.14	1.13
1994	1.19	1.20	1.20	1.12	1.12
1995	1.19	1.21	1.21	1.12	1.13
1996	1.21	1.22	1.23	1.14	1.15
1997	1.20	1.21	1.23	1.13	1.15
1998	1.21	1.22	1.25	1.14	1.16
Female Income:					
1993	1.18	1.17	1.16	1.09	1.08
1994	1.15	1.15	1.15	1.07	1.07
1995	1.17	1.17	1.17	1.08	1.09
1996	1.15	1.16	1.17	1.08	1.09
1997	1.21	1.22	1.24	1.13	1.15
1998	1.20	1.21	1.24	1.13	1.15

5. CONTRIBUTING COMPANIES

The following twelve companies have contributed experience for one or more years during the six-year period 1993 through 1998 inclusive:

Aetna Life Insurance Company
Equitable Life Assurance Society
John Hancock Life Insurance Company
Lincoln National Life Insurance Company
Metropolitan Life Insurance Company
Mutual/United of Omaha Insurance Company
Nationwide Life Insurance Company
New York Life Insurance Company
Pacific Life Insurance Company
Principal Life Insurance Company
Prudential Insurance Company of America
Sun Life Assurance Company of Canada

6. ACKNOWLEDGMENTS

The Group Annuity Experience Committee recognizes and appreciates the significant time and effort expended by each of the contributing companies to collect, compile and validate data submitted for publication in this report. In addition, we wish to express our thanks to Stacy Gill, Keith Hoffman and William McDonald of the Knowledge Services Group at MIB, Inc. for the tabulation, refinement and production of the data for the group annuity tables and charts.

CHART I

SUMMARY OF ACTUAL/EXPECTED RATIOS FOR MALE LIVES FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS – 1983 GROUP ANNUITY MORTALITY TABLE

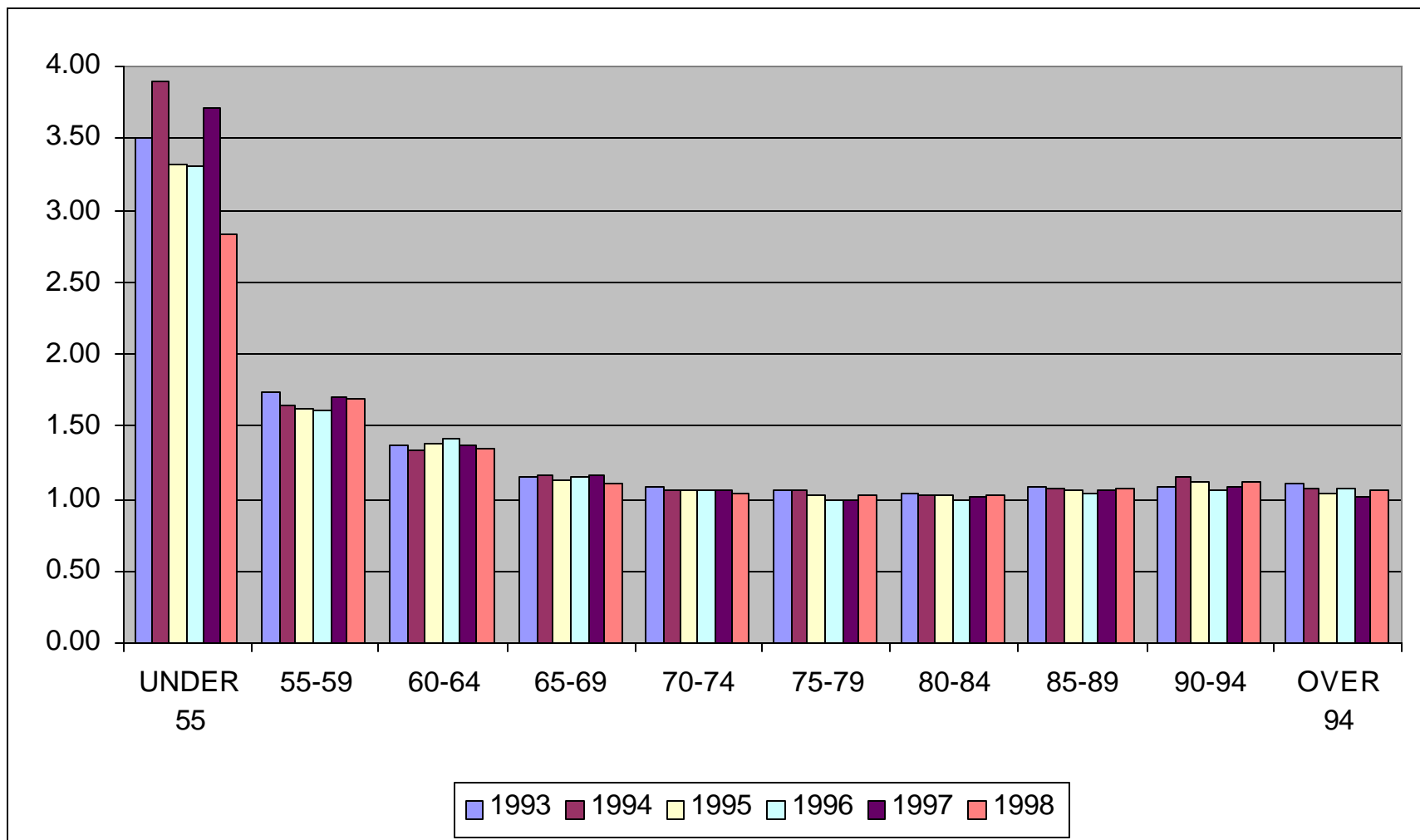


CHART II

SUMMARY OF ACTUAL/EXPECTED RATIOS FOR MALE INCOME FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS – 1983 GROUP ANNUITY MORTALITY TABLE

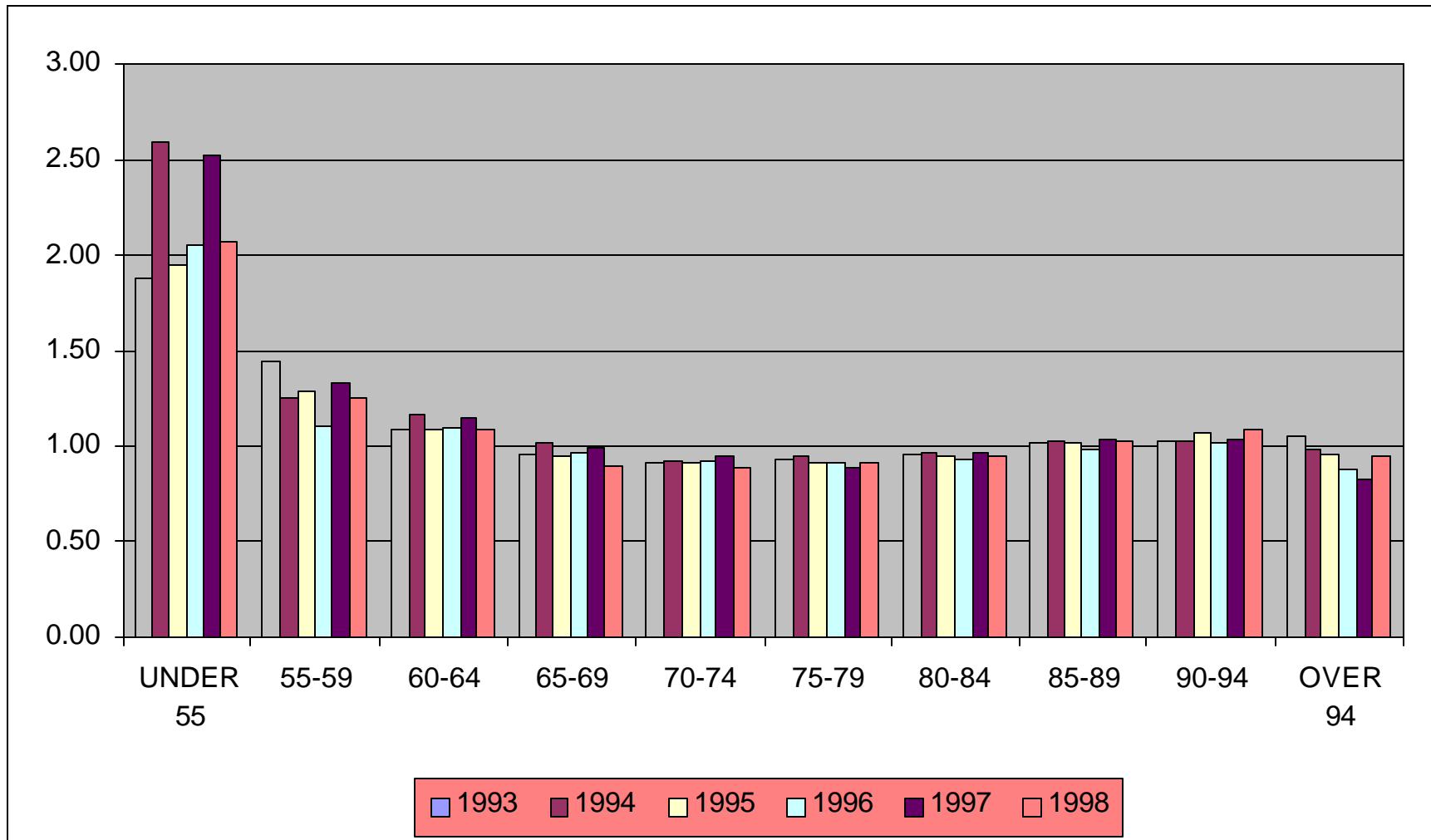


CHART III

SUMMARY OF ACTUAL/EXPECTED RATIOS FOR FEMALE LIVES FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS – 1983 GROUP ANNUITY MORTALITY TABLE

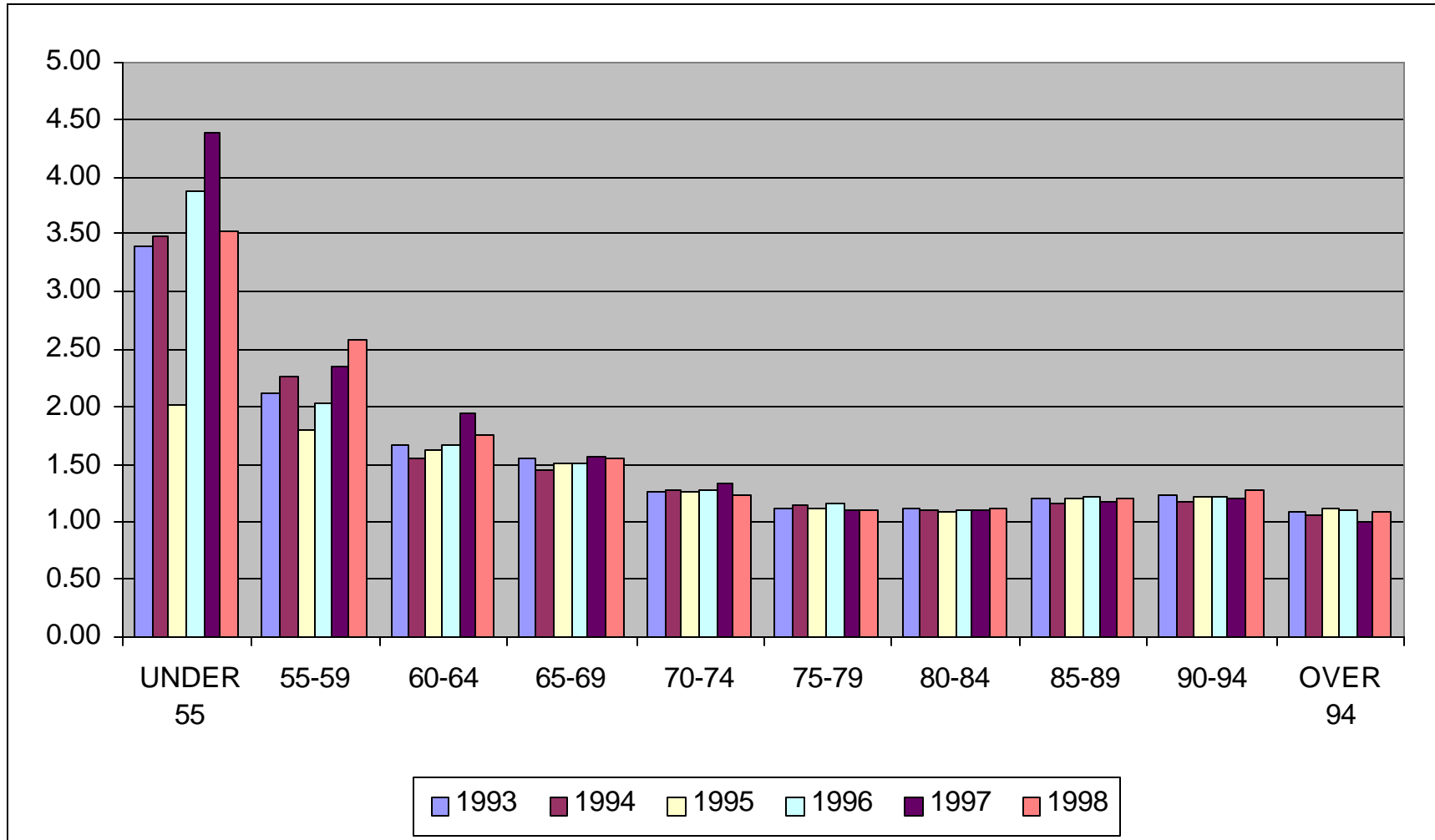


CHART IV

**SUMMARY OF ACTUAL/EXPECTED RATIOS FOR FEMALE INCOME FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS – 1983 GROUP ANNUITY MORTALITY TABLE**

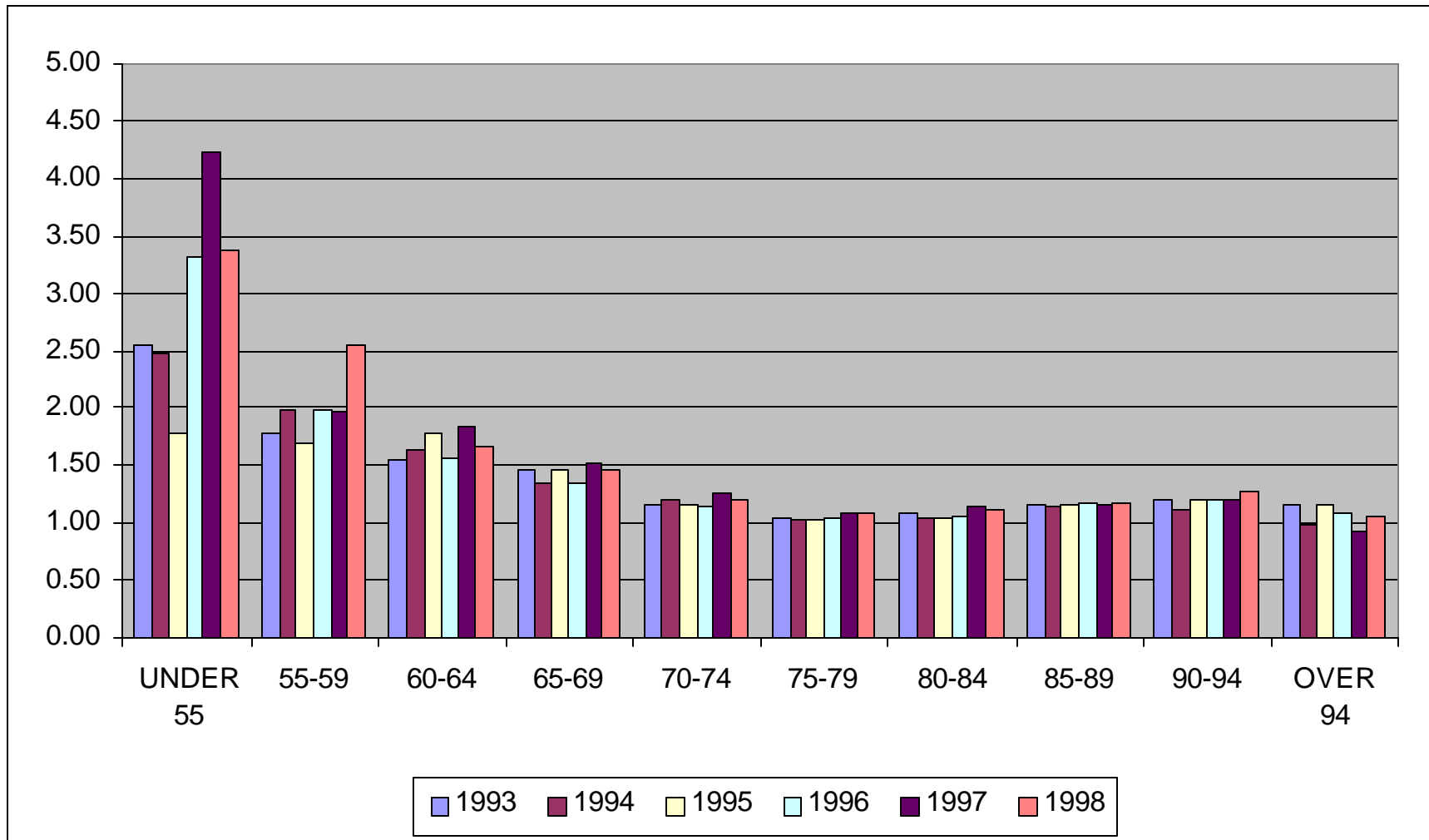


CHART I-A

SUMMARY OF ACTUAL/EXPECTED RATIOS FOR MALE LIVES FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY MORTALITY STATIC

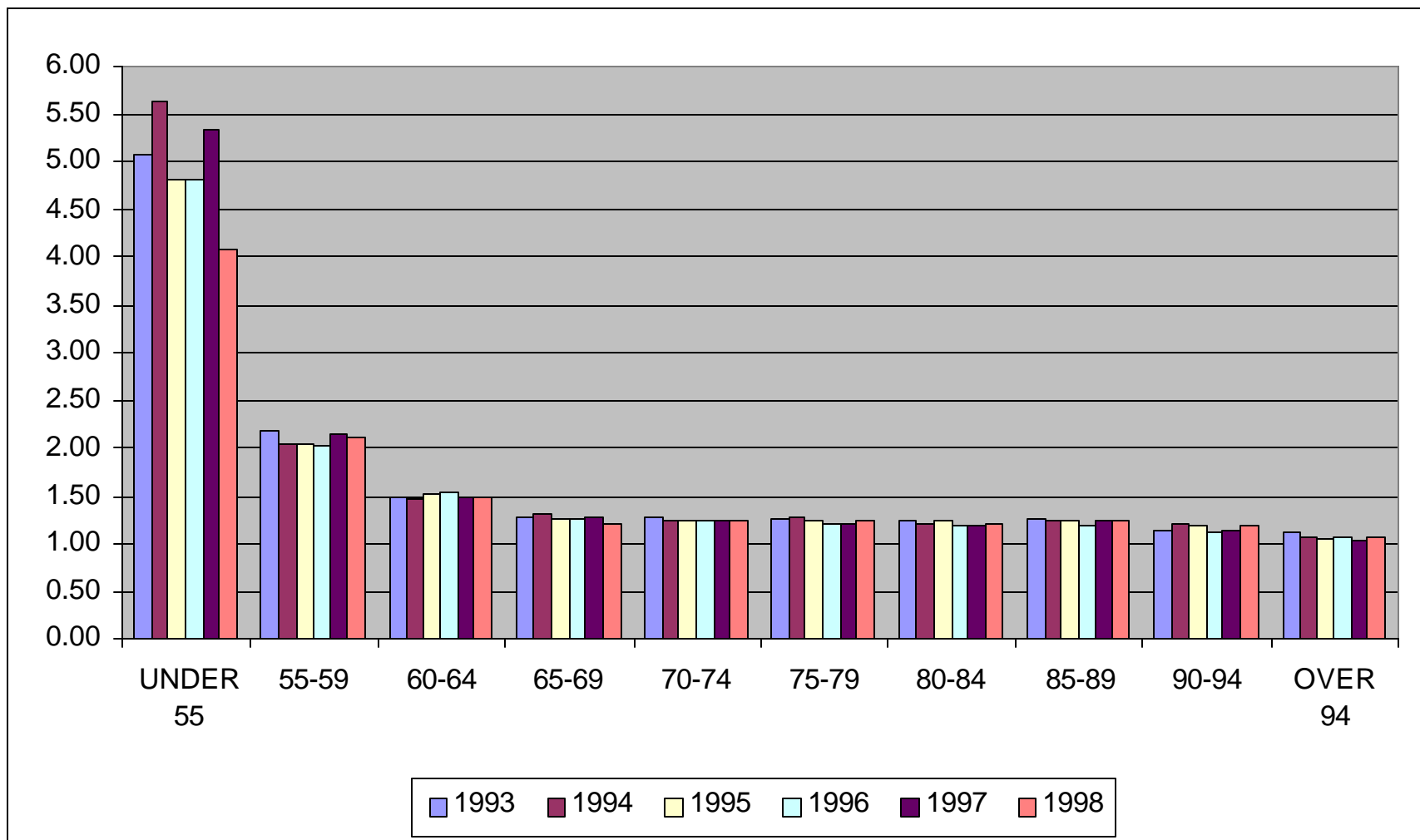


CHART II-A

**SUMMARY OF ACTUAL/EXPECTED RATIOS FOR MALE INCOME FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY MORTALITY STATIC**

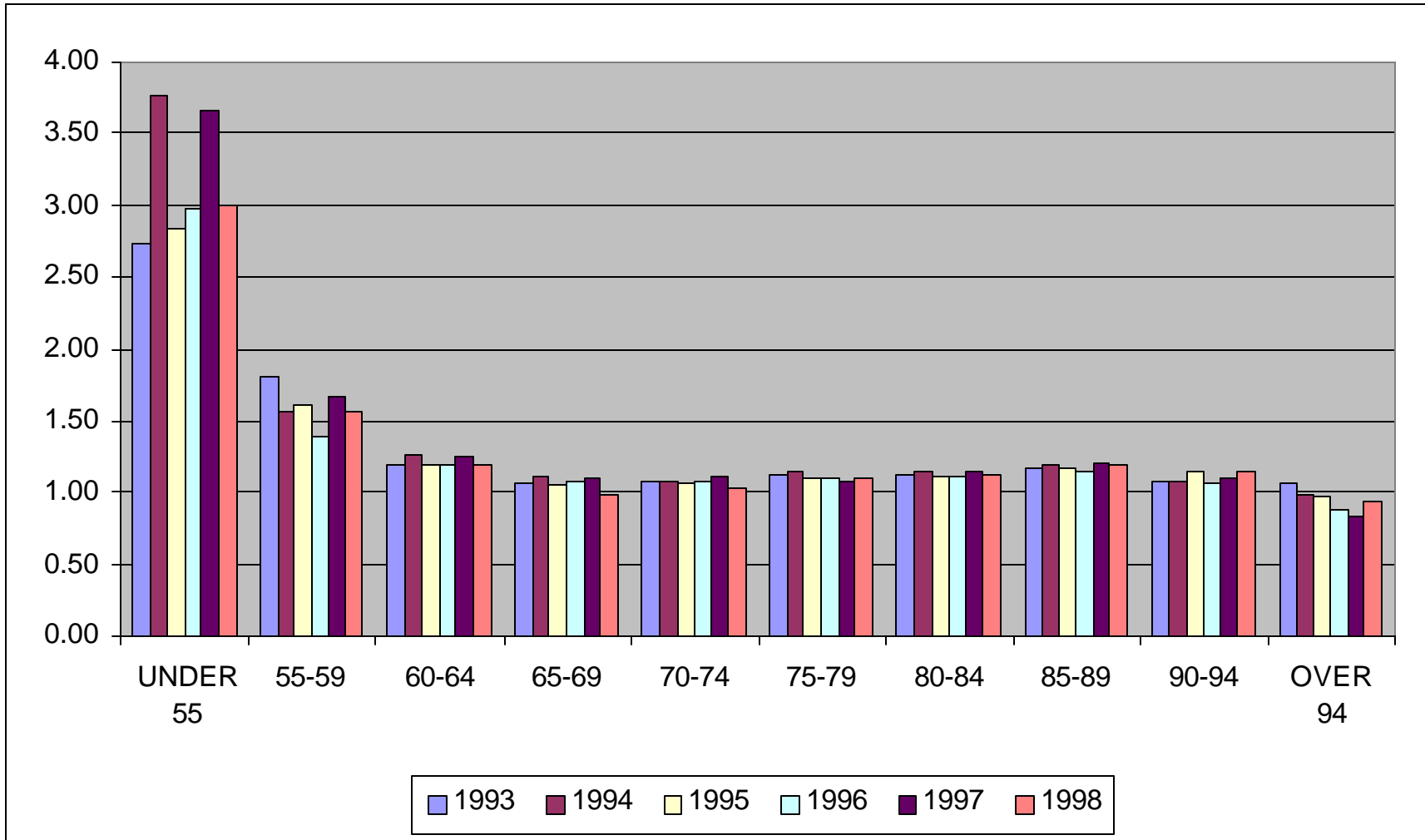


CHART III-A

SUMMARY OF ACTUAL/EXPECTED RATIOS FOR FEMALE LIVES FOR CALENDAR YEARS 1993 TO 1998
 EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY MORTALITY STATIC

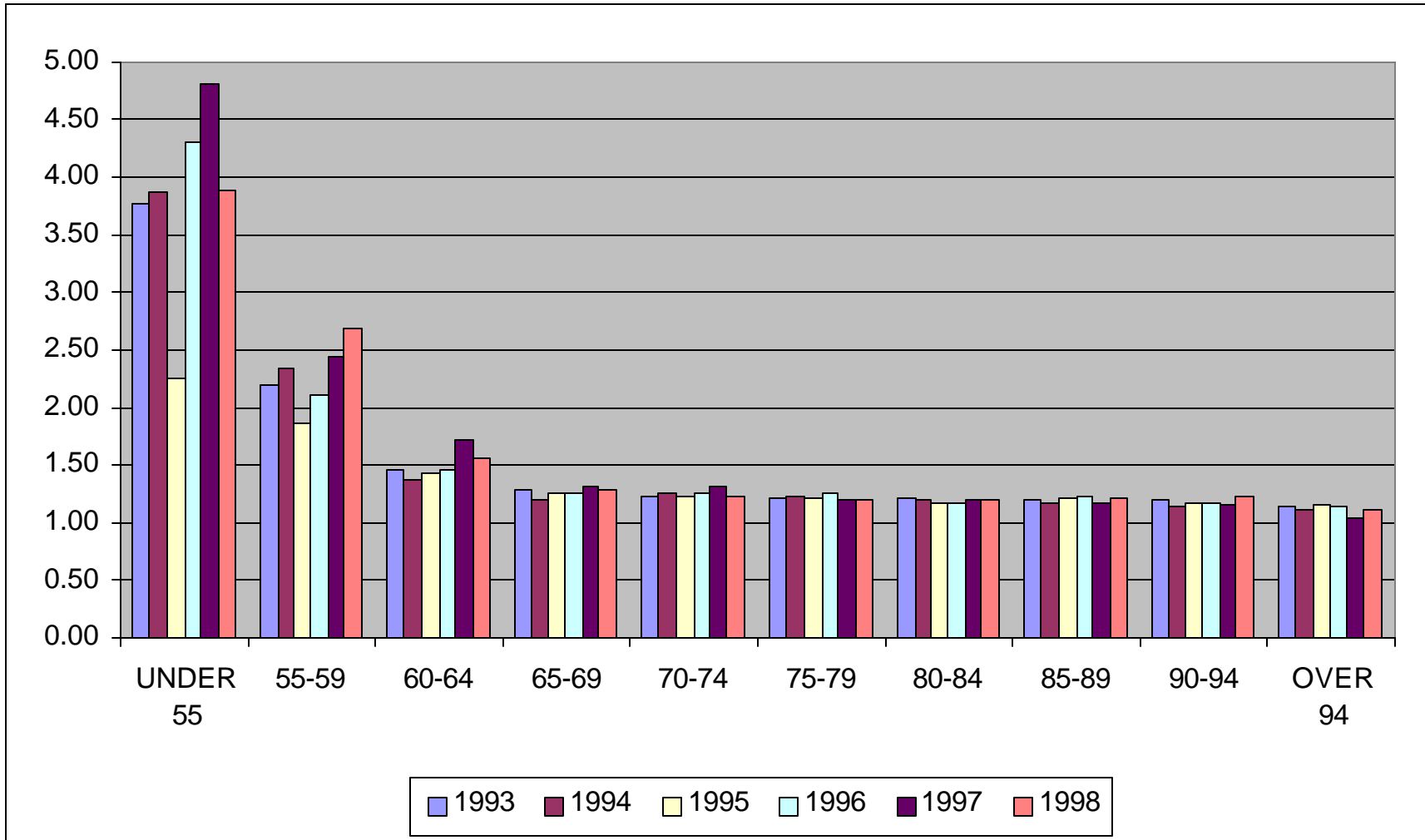


CHART IV-A

SUMMARY OF ACTUAL/EXPECTED RATIOS FOR FEMALE INCOME FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY MORTALITY STATIC

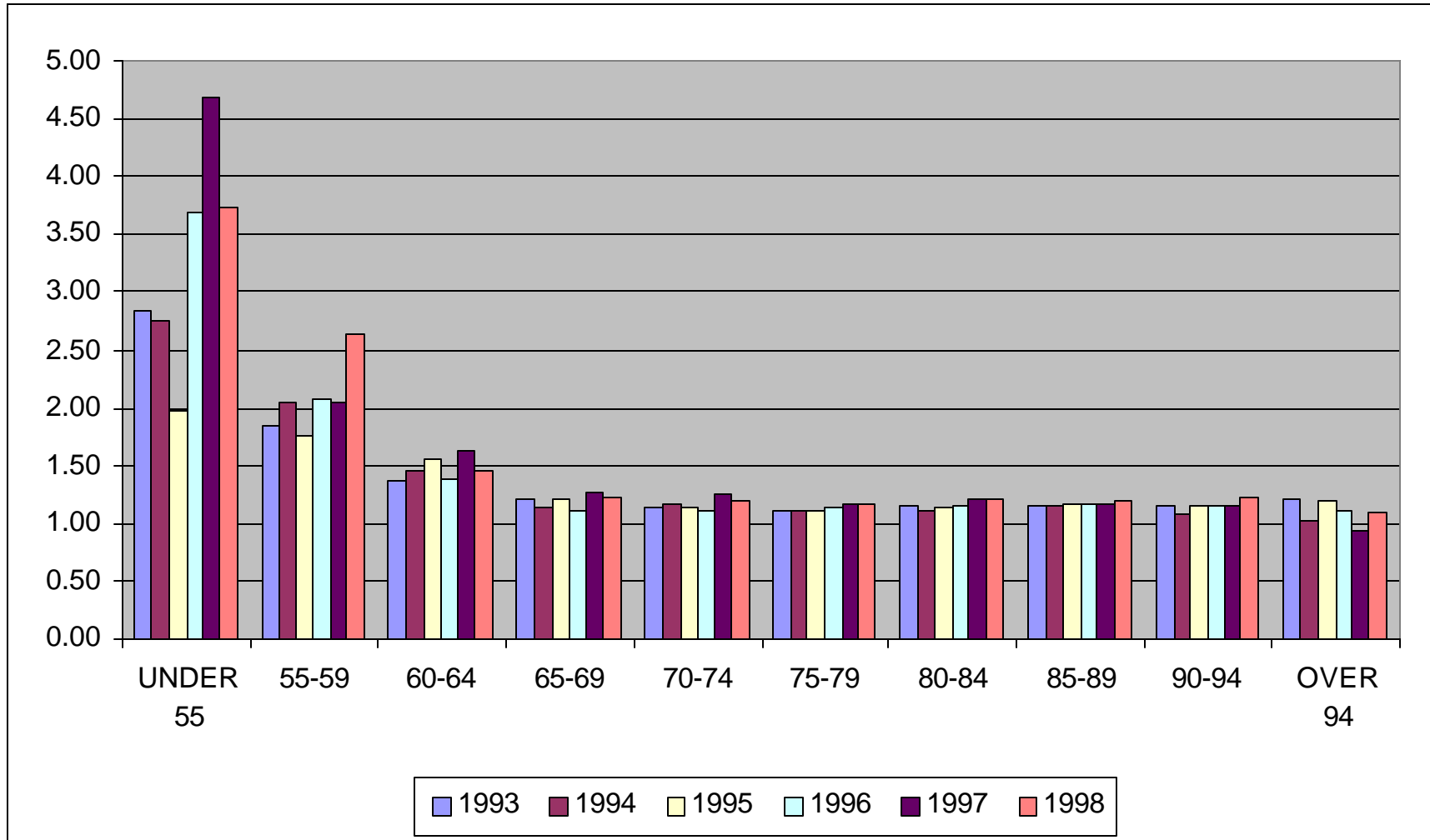


CHART I-B

SUMMARY OF ACTUAL/EXPECTED RATIOS FOR MALE LIVES FOR CALENDAR YEARS 1991 TO 1996
 EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY RESERVING TABLE

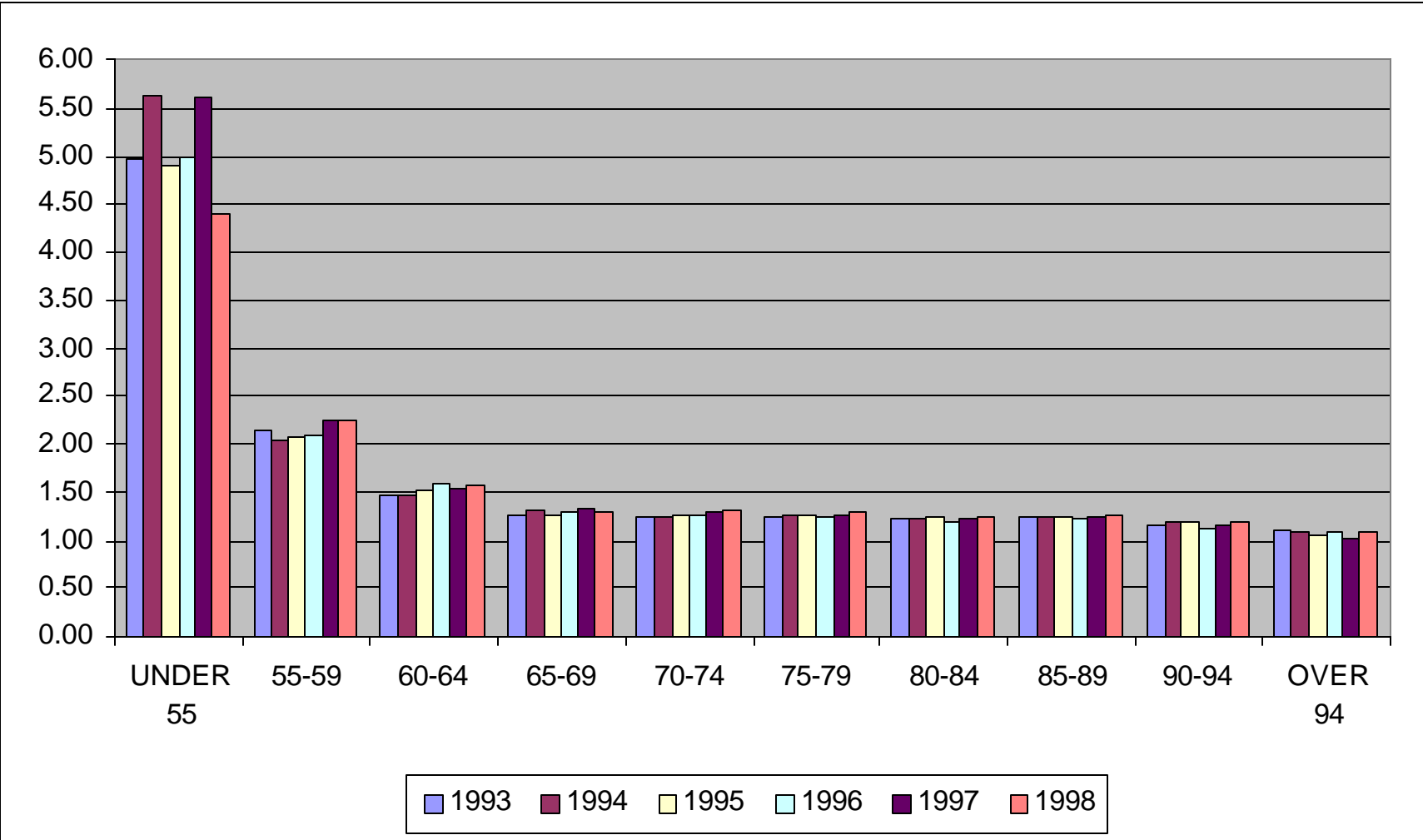


CHART II-B

**SUMMARY OF ACTUAL/EXPECTED RATIOS FOR MALE INCOME FOR CALENDAR YEARS 1991 TO 1996
EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY RESERVING TABLE**

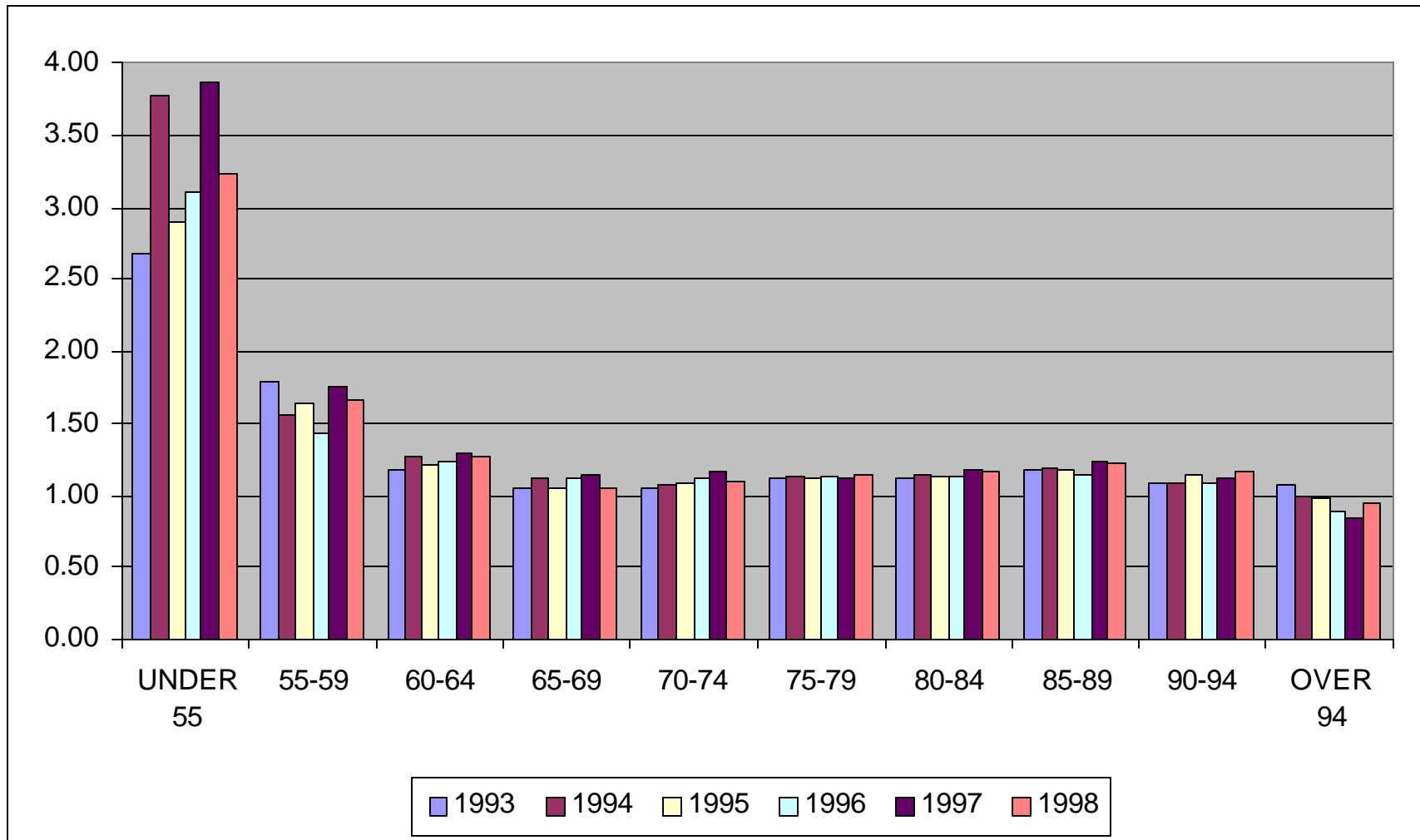


CHART III-B

SUMMARY OF ACTUAL/EXPECTED RATIOS FOR FEMALE LIVES FOR CALENDAR YEARS 1991 TO 1996
 EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY RESERVING TABLE

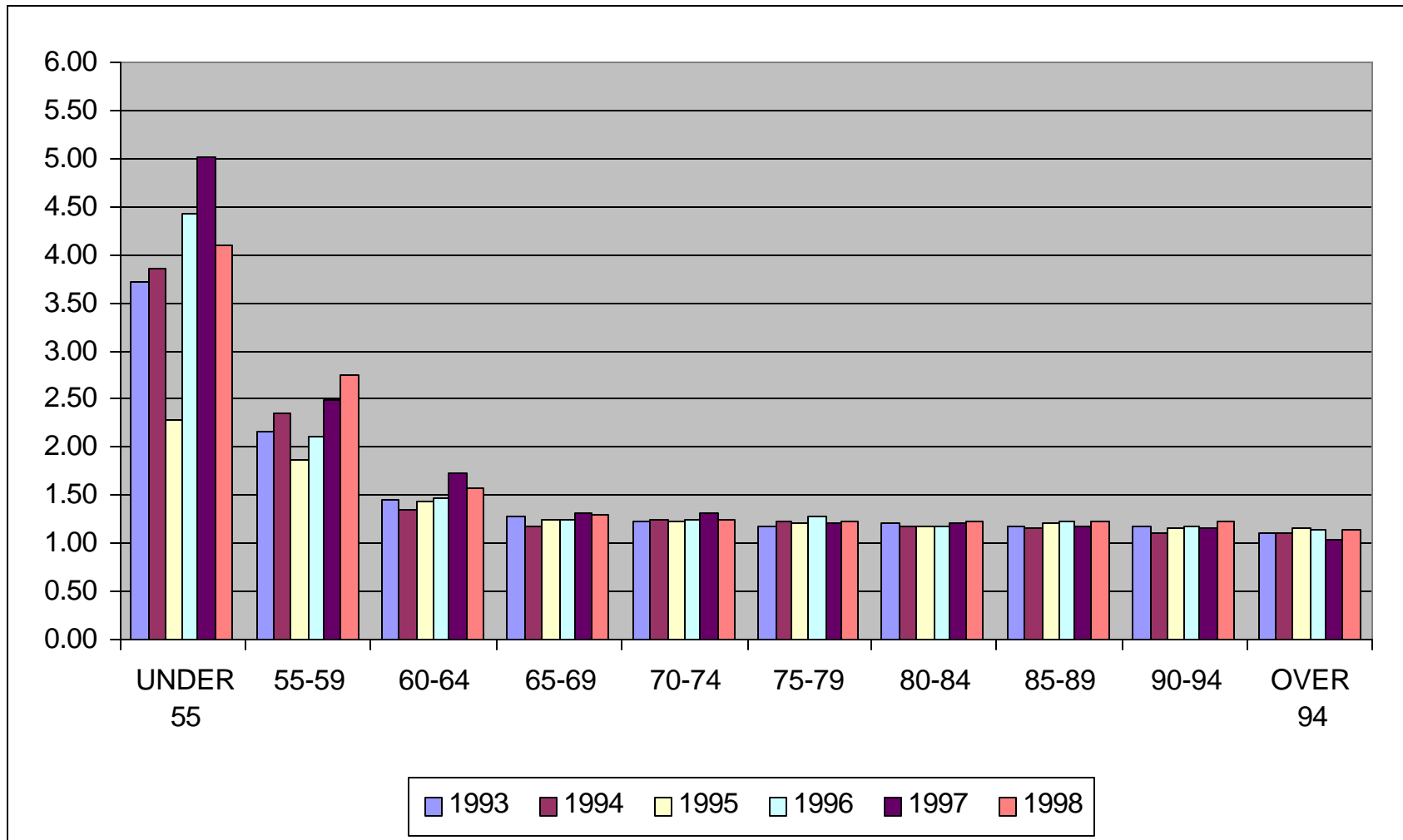


CHART IV-B

**SUMMARY OF ACTUAL/EXPECTED RATIOS FOR FEMALE INCOME FOR CALENDAR YEARS 1991 TO 1996
EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY RESERVING TABLE**

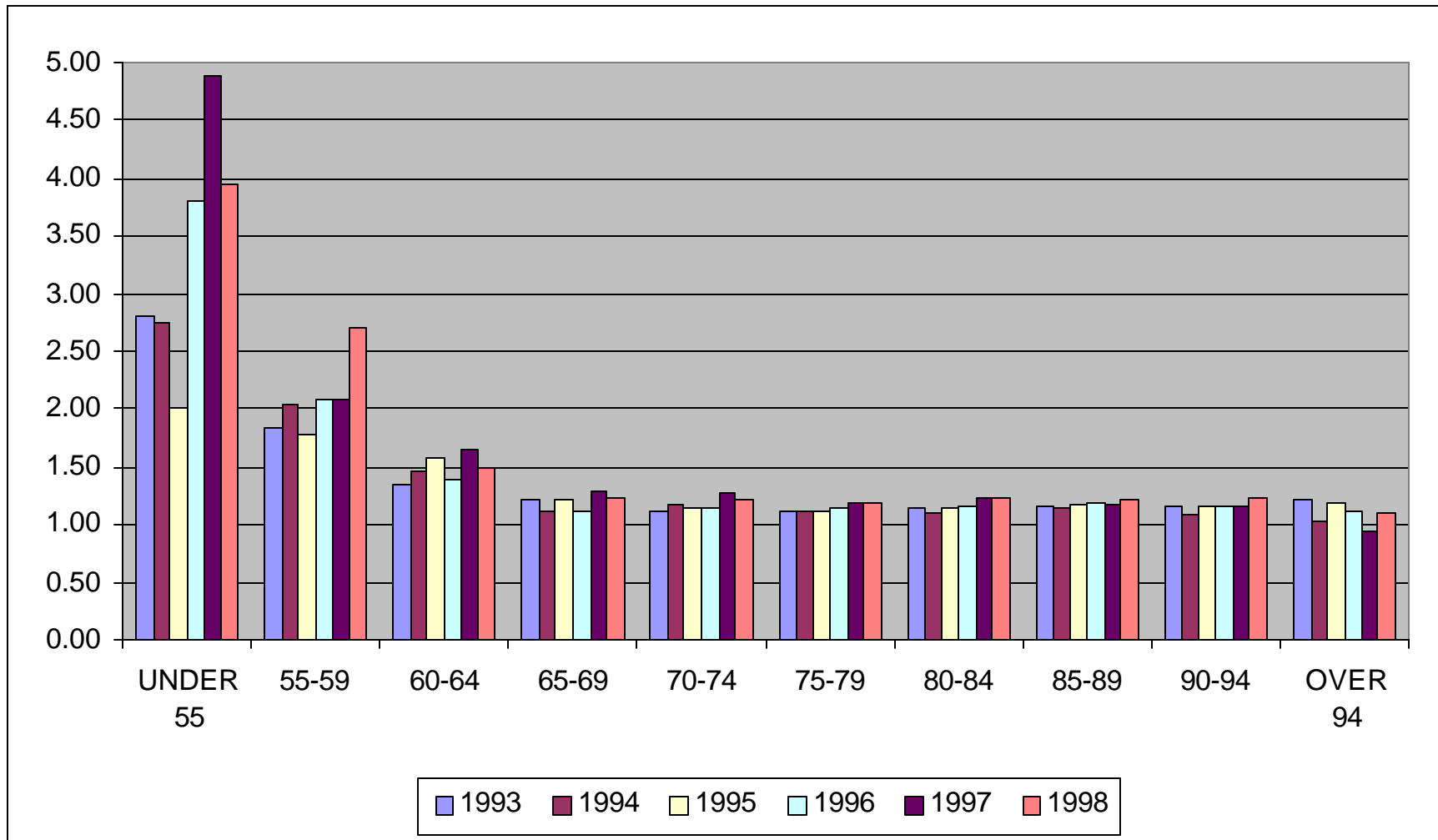


CHART I-C

SUMMARY OF ACTUAL/EXPECTED RATIOS FOR MALE LIVES FOR CALENDAR YEARS 1993 TO 1998
 EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY MORTALITY BASIC

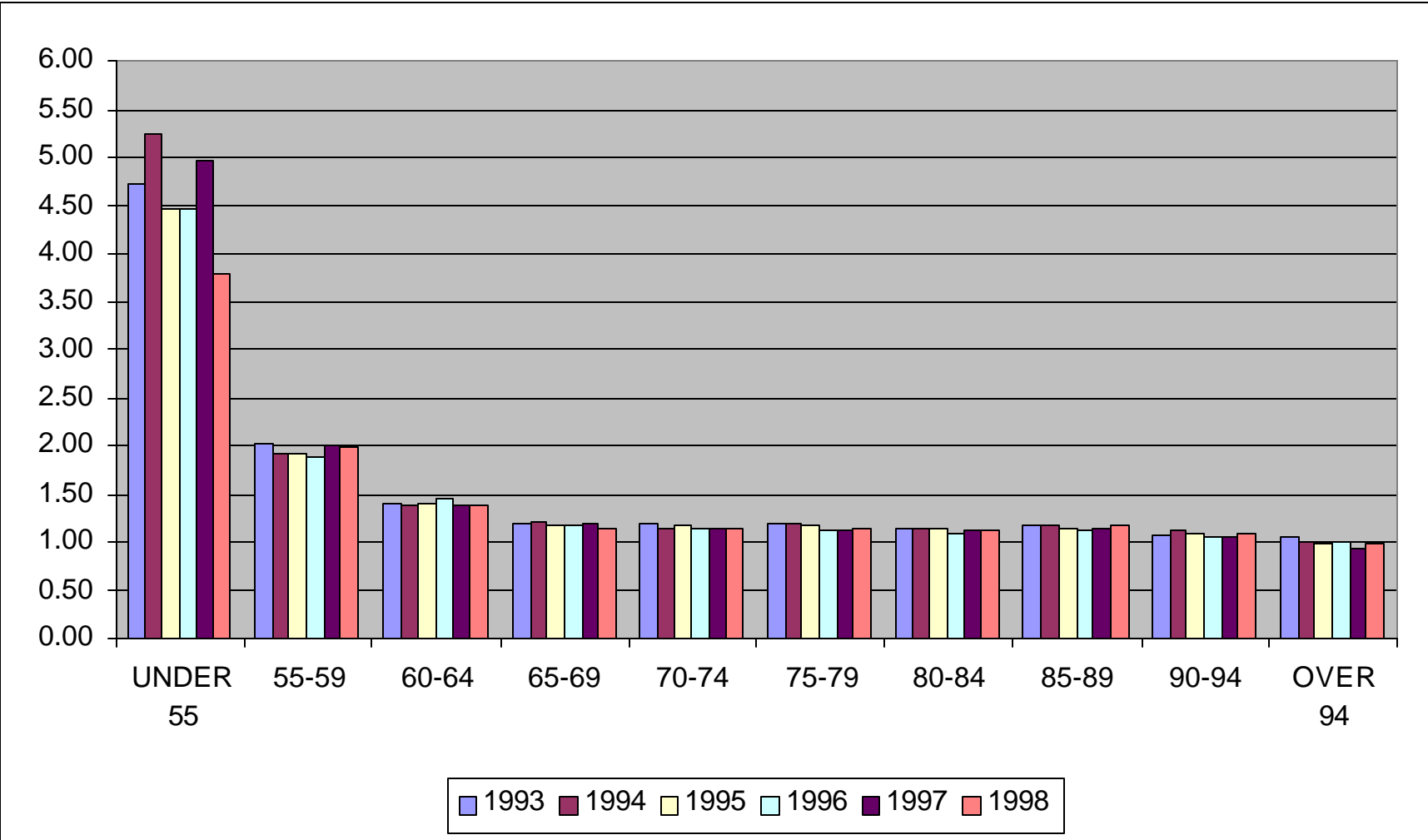


CHART II-C

SUMMARY OF ACTUAL/EXPECTED RATIOS FOR MALE INCOME FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY MORTALITY BASIC

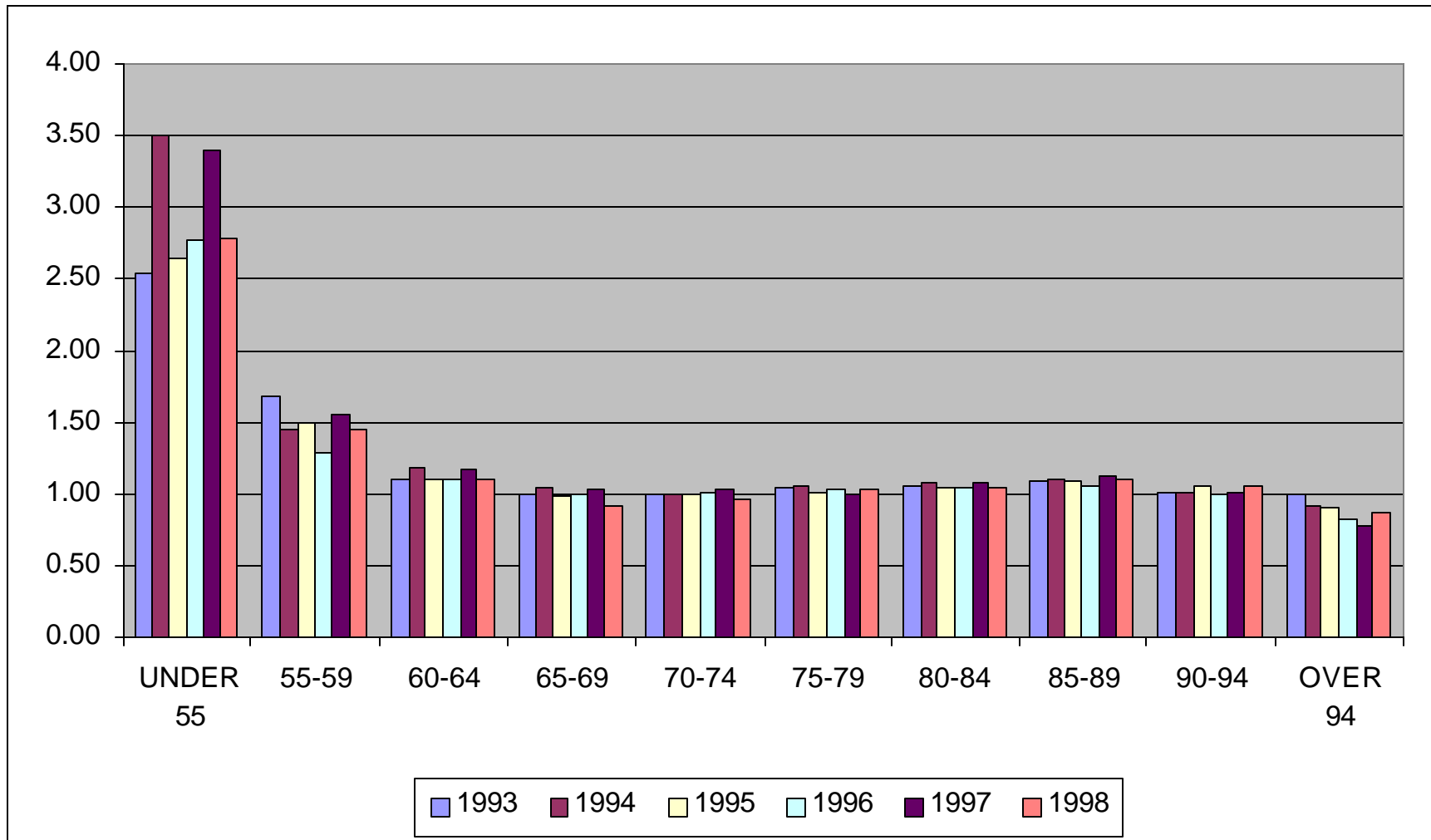


CHART III-C

SUMMARY OF ACTUAL/EXPECTED RATIOS FOR FEMALE LIVES FOR CALENDAR YEARS 1993 TO 1998
 EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY MORTALITY BASIC

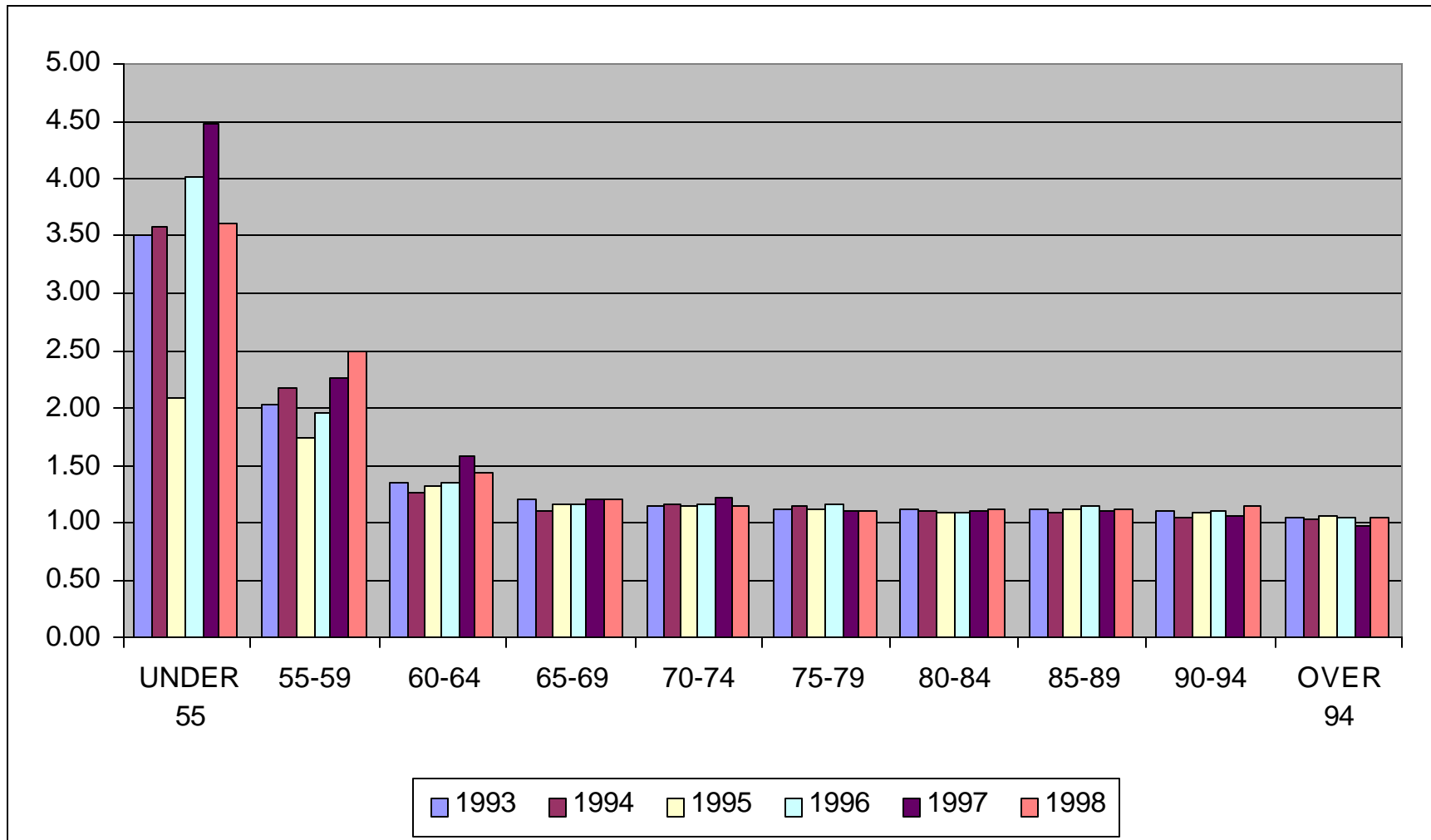


CHART IV-C

**SUMMARY OF ACTUAL/EXPECTED RATIOS FOR FEMALE INCOME FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY MORTALITY BASIC**

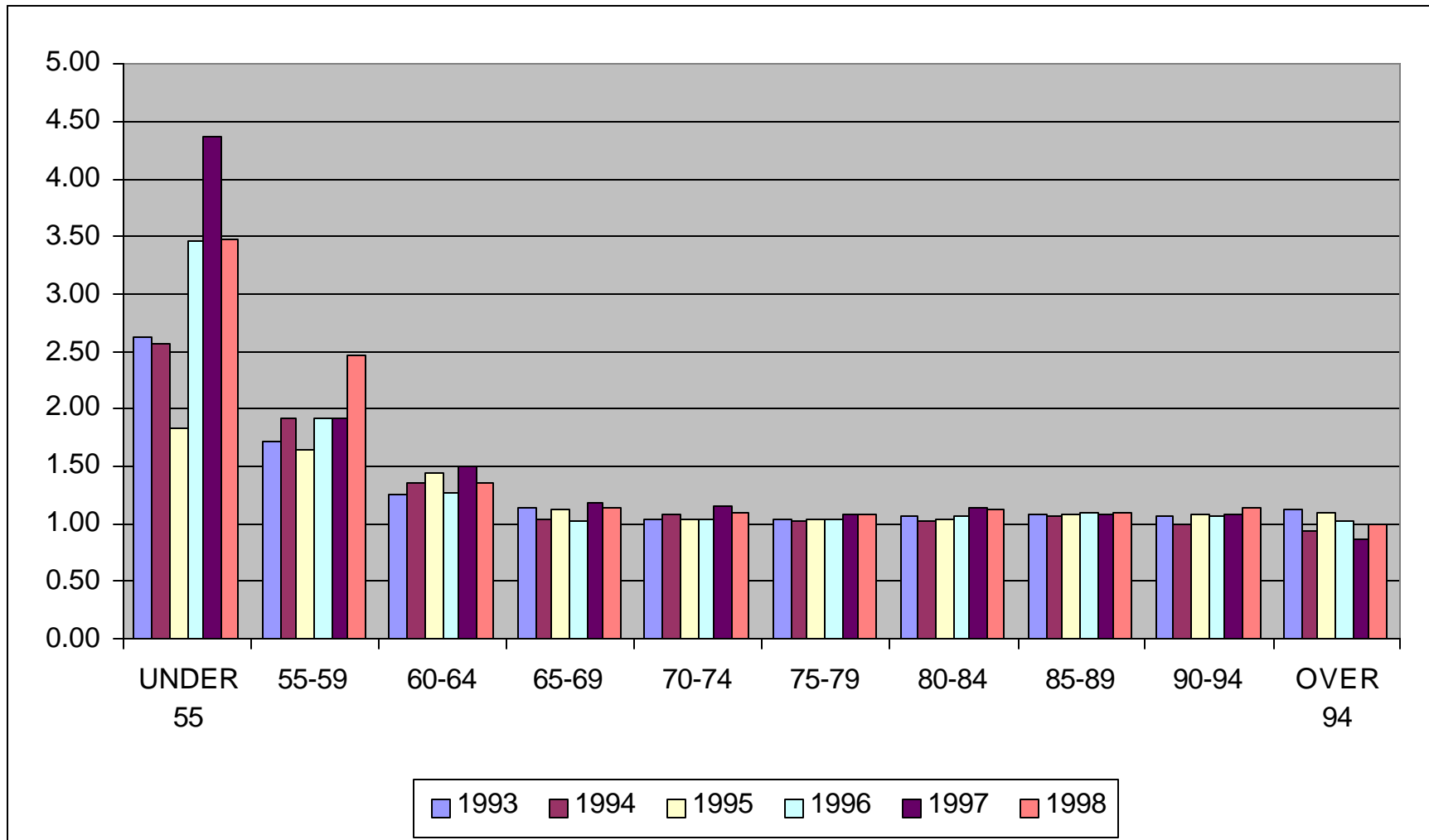


CHART I-D

**SUMMARY OF ACTUAL/EXPECTED RATIOS FOR MALE LIVES FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY MORTALITY BASIC WITH PROJECTION**

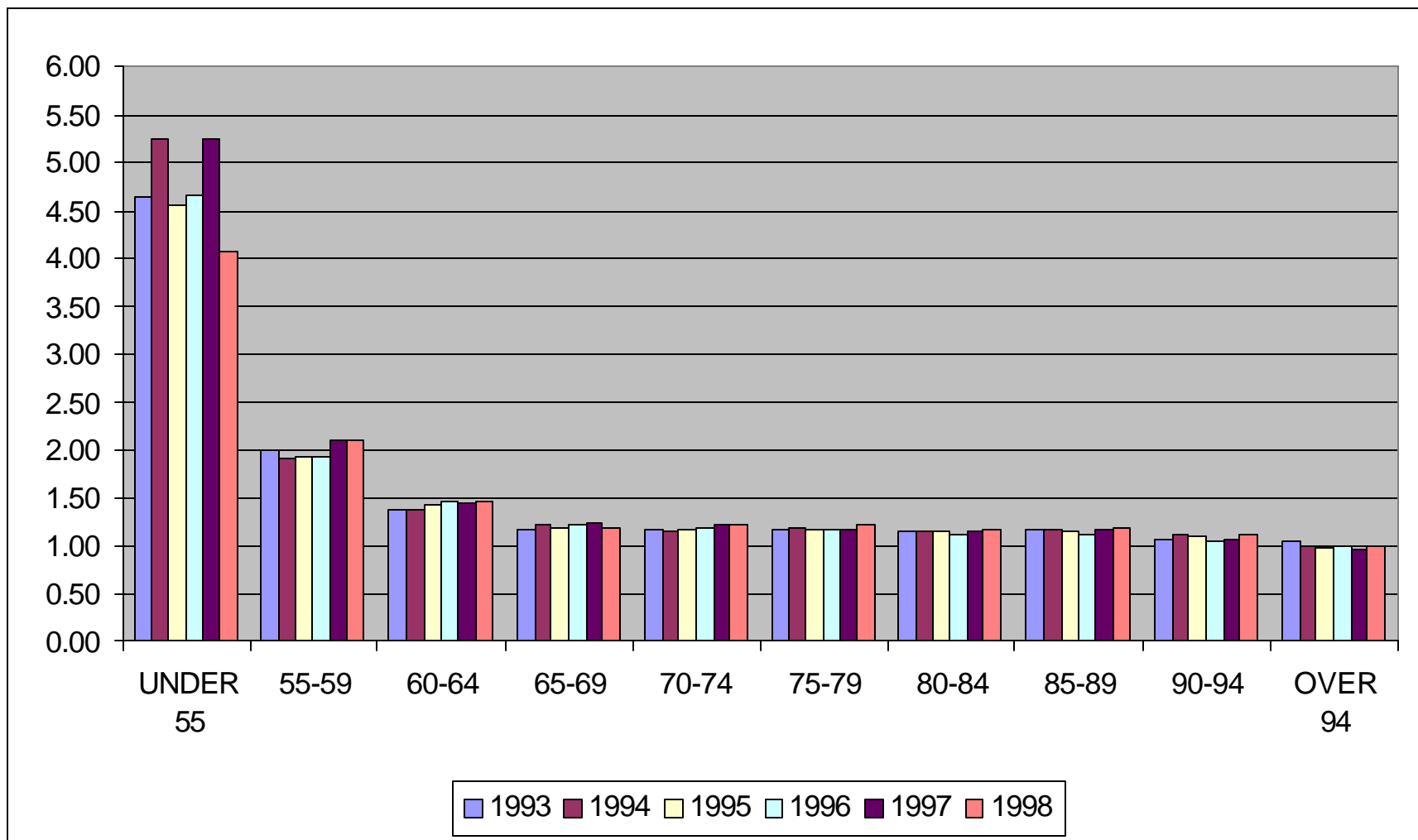


CHART II-D

**SUMMARY OF ACTUAL/EXPECTED RATIOS FOR MALE INCOME FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY MORTALITY BASIC WITH PROJECTION**

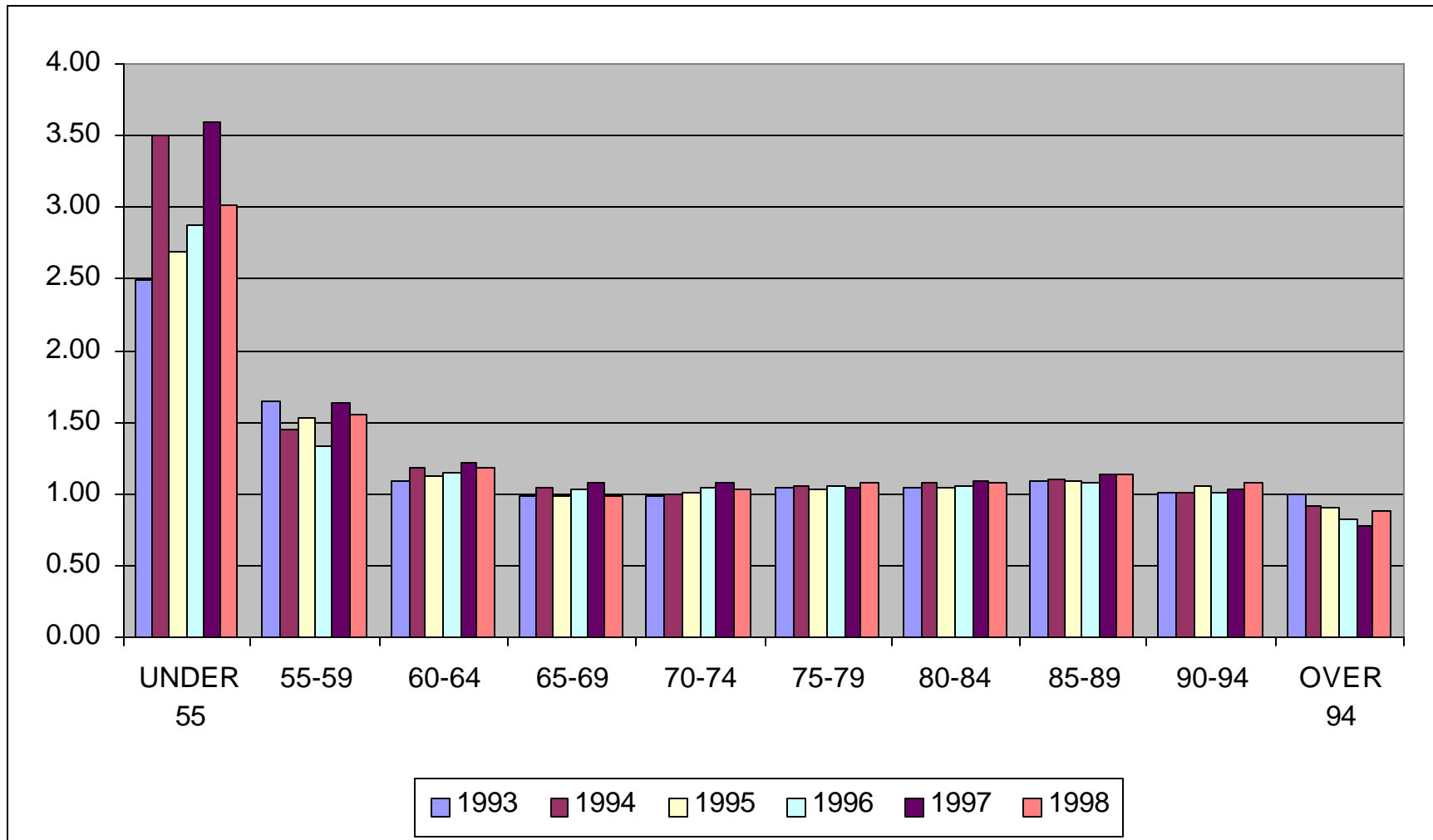


CHART III-D

SUMMARY OF ACTUAL/EXPECTED RATIOS FOR FEMALE LIVES FOR CALENDAR YEARS 1993 TO 1998
 EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY MORTALITY BASIC WITH PROJECTION

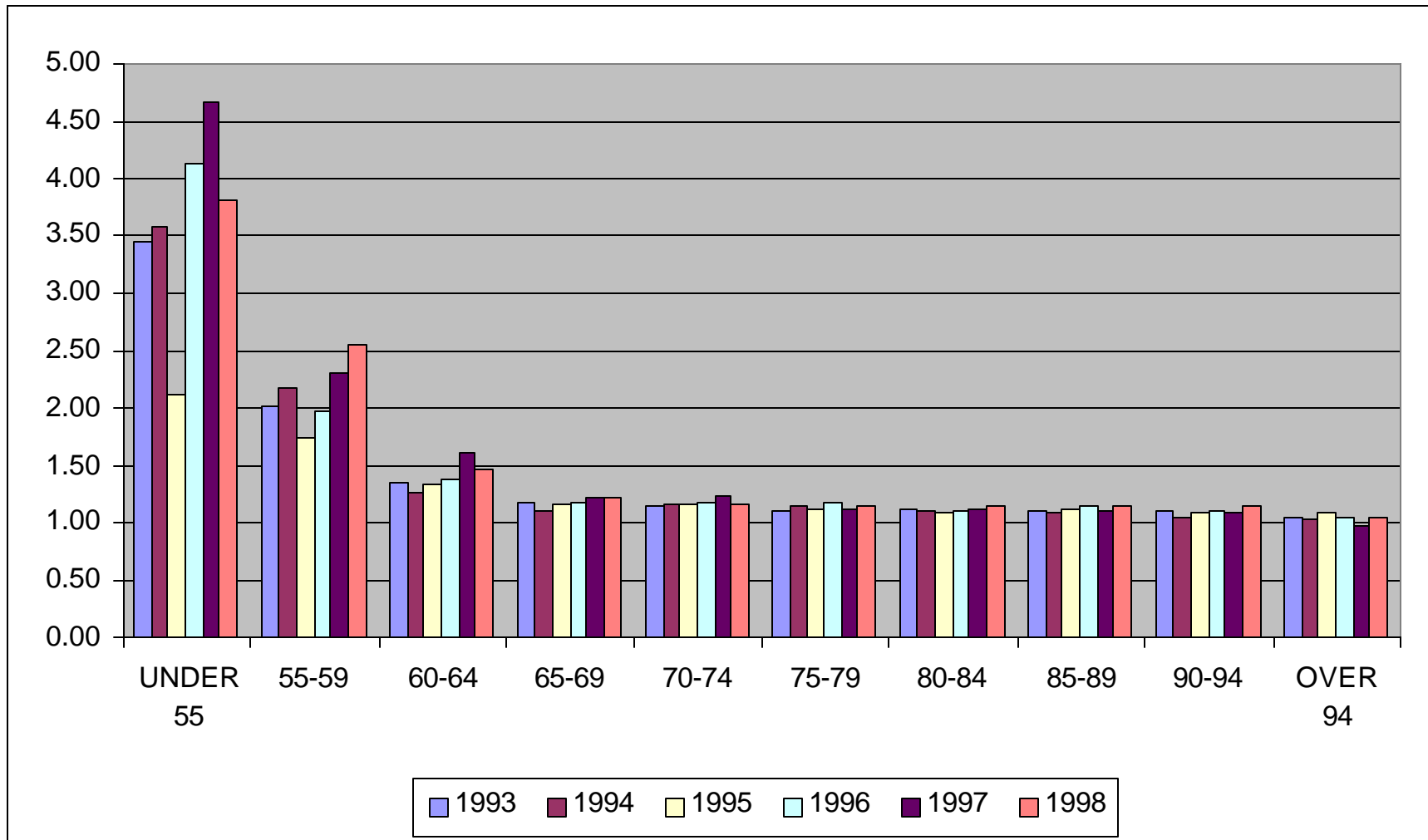


CHART IV-D

**SUMMARY OF ACTUAL/EXPECTED RATIOS FOR FEMALE INCOME FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS – 1994 GROUP ANNUITY MORTALITY BASIC WITH PROJECTION**

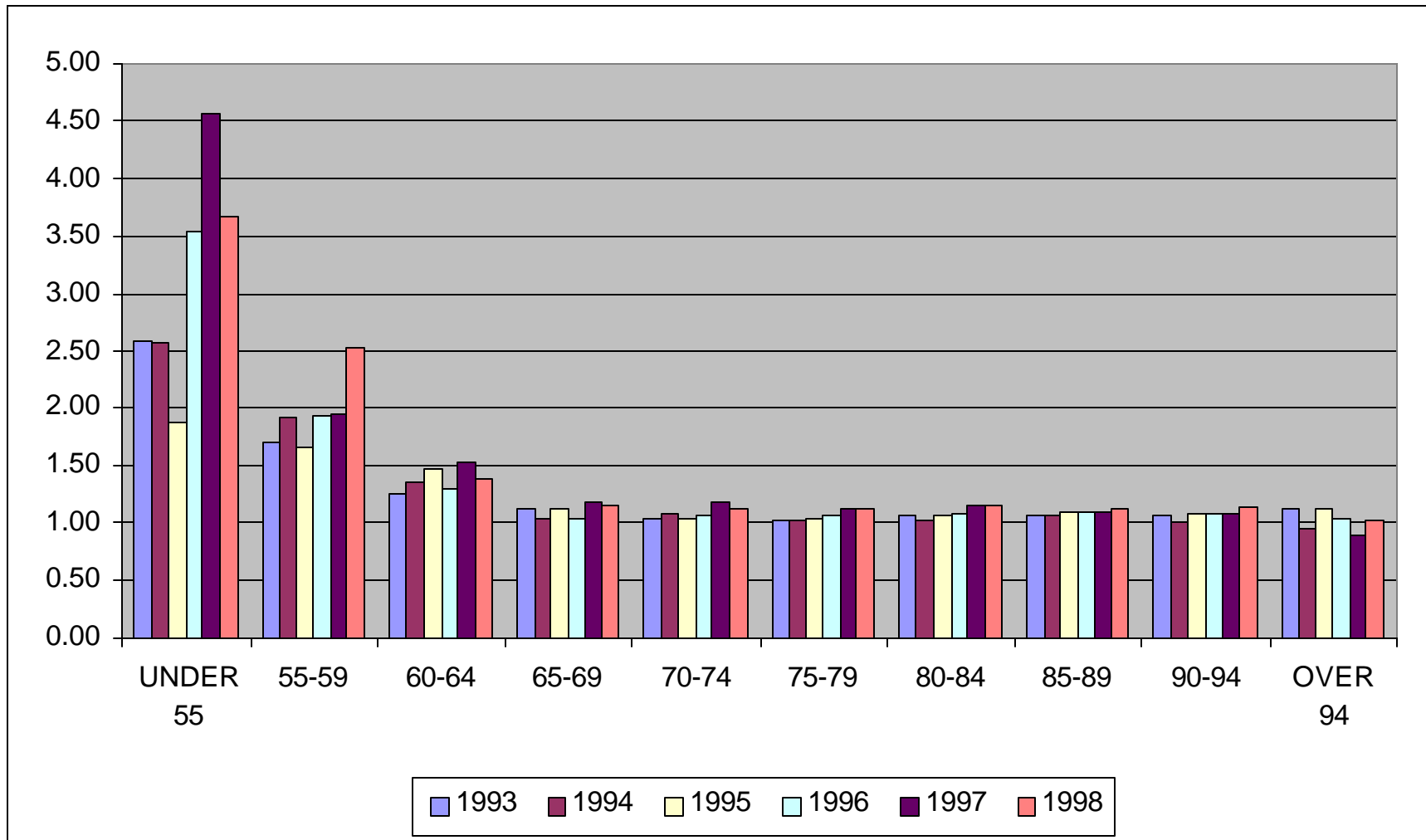


TABLE 1
SUMMARY OF RESULTS (1993-98)
EXPECTED MORTALITY BASIS--1983 GROUP ANNUITY MORTALITY

		Lives					
		1993	1994	1995	1996	1997	1998
Male	Exposure	1,019,627	1,074,896	1,273,166	1,231,833	1,135,300	1,124,169
	Actual Deaths	49,220	52,695	62,682	61,434	57,638	59,110
	Expected Deaths	45,180	48,575	58,442	58,614	54,590	55,704
	A/E Ratio	1.09	1.08	1.07	1.05	1.06	1.06
Female	Exposure	600,564	626,917	606,891	583,328	678,561	684,056
	Actual Deaths	19,810	20,923	21,865	22,361	25,470	26,935
	Expected Deaths	16,276	17,511	18,309	18,522	21,258	22,338
	A/E Ratio	1.22	1.19	1.19	1.21	1.20	1.21
Total	Exposure	1,620,191	1,701,813	1,880,056	1,815,161	1,813,862	1,808,225
	Actual Deaths	69,030	73,618	84,547	83,795	83,108	86,045
	Expected Deaths	61,455	66,086	76,751	77,136	75,848	78,042
	A/E Ratio	1.12	1.11	1.10	1.09	1.10	1.10
		Income (\$ thousands)					
Male	Exposure	4,944,854	5,448,938	6,403,001	6,510,875	6,125,617	6,246,105
	Actual Deaths	164,985	187,509	214,619	224,884	224,758	230,686
	Expected Deaths	170,186	190,473	223,897	235,273	230,622	243,362
	A/E Ratio	0.97	0.98	0.96	0.96	0.97	0.95
Female	Exposure	1,484,103	1,617,914	1,499,186	1,519,848	1,786,568	1,855,615
	Actual Deaths	35,990	39,403	39,365	41,105	51,347	55,210
	Expected Deaths	30,594	34,244	33,769	35,639	42,351	45,878
	A/E Ratio	1.18	1.15	1.17	1.15	1.21	1.20
Total	Exposure	6,428,956	7,066,852	7,902,187	8,030,722	7,912,185	8,101,720
	Actual Deaths	200,975	226,913	253,984	265,988	276,106	285,896
	Expected Deaths	200,780	224,717	257,666	270,912	272,973	289,240
	A/E Ratio	1.00	1.01	0.99	0.98	1.01	0.99

TABLE 2

SUMMARY OF EXPOSURES AND DEATHS FOR CALENDAR YEAR 1997
EXPECTED MORTALITY BASIS--1983 GROUP ANNUITY MORTALITY

Attained Age	Lives											
	Males				Females				Total			
	Exposure	Actual Deaths	Expected Deaths	A/E Ratio	Exposure	Actual Deaths	Expected Deaths	A/E Ratio	Exposure	Actual Deaths	Expected Deaths	A/E Ratio
Under 55....	13,894	201	54	3.70	15,385	100	23	4.38	29,280	301	77	3.90
55-59.....	55,435	702	411	1.71	29,268	223	95	2.35	84,703	925	505	1.83
60-64.....	124,026	1,964	1,446	1.36	62,632	660	339	1.94	186,658	2,624	1,785	1.47
65-69.....	226,101	5,288	4,575	1.16	116,470	1,642	1,042	1.58	342,571	6,930	5,618	1.23
70-74.....	248,921	8,801	8,369	1.05	144,054	3,162	2,380	1.33	392,975	11,963	10,748	1.11
75-79.....	220,312	12,058	12,039	1.00	134,750	4,557	4,125	1.10	355,062	16,615	16,165	1.03
80-84.....	148,846	13,179	13,111	1.01	97,532	5,634	5,090	1.11	246,377	18,813	18,201	1.03
85-89.....	70,941	9,786	9,256	1.06	53,248	5,166	4,392	1.18	124,189	14,952	13,648	1.10
90-94.....	22,149	4,400	4,078	1.08	20,245	3,188	2,648	1.20	42,395	7,588	6,726	1.13
Over 94.....	4,675	1,259	1,251	1.01	4,978	1,138	1,123	1.01	9,652	2,397	2,374	1.01
Total.....	1,135,300	57,638	54,590	1.06	678,561	25,470	21,258	1.20	1,813,862	83,108	75,848	1.10
Income (\$ thousands)												
Under 55....	131,263	1,483	589	2.52	60,805	430	102	4.23	192,068	1,913	691	2.77
55-59.....	448,110	4,410	3,312	1.33	116,197	740	375	1.97	564,307	5,150	3,687	1.40
60-64.....	906,053	11,964	10,496	1.14	219,513	2,181	1,185	1.84	1,125,565	14,145	11,682	1.21
65-69.....	1,409,675	28,277	28,446	0.99	367,915	4,989	3,278	1.52	1,777,590	33,266	31,724	1.05
70-74.....	1,411,557	44,679	47,211	0.95	409,512	8,485	6,720	1.26	1,821,070	53,164	53,931	0.99
75-79.....	1,027,408	49,467	55,469	0.89	315,373	10,377	9,542	1.09	1,342,781	59,844	65,012	0.92
80-84.....	522,858	44,134	45,650	0.97	179,780	10,566	9,309	1.14	702,637	54,700	54,960	1.00
85-89.....	202,284	27,380	26,292	1.04	83,361	7,954	6,839	1.16	285,645	35,335	33,131	1.07
90-94.....	54,084	10,277	9,913	1.04	27,917	4,361	3,631	1.20	82,002	14,638	13,543	1.08
Over 94.....	12,326	2,688	3,242	0.83	6,195	1,263	1,370	0.92	18,521	3,952	4,612	0.86
Total.....	6,125,617	224,758	230,622	0.97	1,786,568	51,347	42,351	1.21	7,912,185	276,106	272,973	1.01

TABLE 3

SUMMARY OF EXPOSURES AND DEATHS FOR CALENDAR YEAR 1998
EXPECTED MORTALITY BASIS--1983 GROUP ANNUITY MORTALITY

Attained Age	Lives											
	Males				Females				Total			
	Exposure	Actual Deaths	Expected Deaths	A/E Ratio	Exposure	Actual Deaths	Expected Deaths	A/E Ratio	Exposure	Actual Deaths	Expected Deaths	A/E Ratio
Under 55....	12,965	143	50	2.83	15,047	79	22	3.53	28,011	222	73	3.05
55-59.....	54,661	681	404	1.69	29,717	248	96	2.59	84,378	929	500	1.86
60-64.....	121,071	1,908	1,411	1.35	60,877	581	329	1.76	181,948	2,489	1,740	1.43
65-69.....	213,959	4,766	4,334	1.10	111,797	1,558	1,000	1.56	325,755	6,324	5,335	1.19
70-74.....	243,265	8,541	8,188	1.04	141,035	2,918	2,340	1.25	384,300	11,459	10,529	1.09
75-79.....	219,432	12,209	12,012	1.02	137,655	4,683	4,226	1.11	357,086	16,892	16,238	1.04
80-84.....	153,500	13,739	13,523	1.02	102,132	5,982	5,331	1.12	255,633	19,721	18,854	1.05
85-89.....	75,663	10,606	9,876	1.07	57,536	5,703	4,741	1.20	133,199	16,309	14,616	1.12
90-94.....	24,353	5,022	4,486	1.12	22,396	3,734	2,926	1.28	46,749	8,756	7,412	1.18
Over 94.....	5,300	1,495	1,419	1.05	5,865	1,449	1,326	1.09	11,165	2,944	2,745	1.07
Total.....	1,124,169	59,110	55,704	1.06	684,056	26,935	22,338	1.21	1,808,225	86,045	78,042	1.10
Income (\$ thousands)												
Under 55....	122,105	1,135	549	2.07	59,063	332	099	3.37	181,168	1,467	648	2.27
55-59.....	456,996	4,195	3,374	1.24	125,721	1,032	405	2.55	582,717	5,227	3,779	1.38
60-64.....	911,618	11,492	10,544	1.09	220,799	1,970	1,188	1.66	1,132,417	13,461	11,733	1.15
65-69.....	1,363,857	24,646	27,540	0.89	364,656	4,799	3,255	1.47	1,728,512	29,445	30,795	0.96
70-74.....	1,429,951	42,397	47,925	0.88	412,953	8,188	6,816	1.20	1,842,904	50,585	54,741	0.92
75-79.....	1,084,009	53,415	58,748	0.91	340,996	11,178	10,352	1.08	1,425,005	64,593	69,100	0.93
80-84.....	574,815	47,198	50,128	0.94	197,875	11,532	10,234	1.13	772,691	58,730	60,362	0.97
85-89.....	226,734	30,390	29,461	1.03	94,391	9,166	7,737	1.18	321,125	39,557	37,198	1.06
90-94.....	62,246	12,362	11,426	1.08	31,694	5,241	4,125	1.27	93,939	17,603	15,551	1.13
Over 94.....	13,775	3,456	3,665	0.94	7,468	1,773	1,667	1.06	21,243	5,229	5,332	0.98
Total.....	6,246,105	230,686	243,362	0.95	1,855,615	55,210	45,878	1.20	8,101,720	285,896	289,240	0.99

TABLE 4

SUMMARY OF EXPOSURES AND DEATHS FOR CALENDAR YEARS 1997 AND 1998
EXPECTED MORTALITY BASIS--1983 GROUP ANNUITY MORTALITY

Attained Age	Lives											
	Males				Females				Total			
	Exposure	Actual Deaths	Expected Deaths	A/E Ratio	Exposure	Actual Deaths	Expected Deaths	A/E Ratio	Exposure	Actual Deaths	Expected Deaths	A/E Ratio
Under 55.....	26,859	344	105	3.28	30,432	179	45	3.96	57,291	523	150	3.49
55-59.....	110,096	1,383	814	1.70	58,985	471	191	2.47	169,081	1,854	1,005	1.84
60-64.....	245,098	3,872	2,857	1.36	123,509	1,241	669	1.86	368,606	5,113	3,526	1.45
65-69.....	440,059	10,054	8,910	1.13	228,267	3,200	2,043	1.57	668,326	13,254	10,952	1.21
70-74.....	492,187	17,342	16,557	1.05	285,088	6,080	4,720	1.29	777,275	23,422	21,277	1.10
75-79.....	439,744	24,267	24,052	1.01	272,405	9,240	8,351	1.11	712,148	33,507	32,403	1.03
80-84.....	302,346	26,918	26,634	1.01	199,664	11,616	10,420	1.11	502,010	38,534	37,055	1.04
85-89.....	146,604	20,392	19,132	1.07	110,783	10,869	9,133	1.19	257,388	31,261	28,265	1.11
90-94.....	46,502	9,422	8,564	1.10	42,641	6,922	5,574	1.24	89,143	16,344	14,139	1.16
Over 94.....	9,975	2,754	2,670	1.03	10,843	2,587	2,450	1.06	20,817	5,341	5,119	1.04
Total.....	2,259,469	116,748	110,294	1.06	1,362,617	52,405	43,595	1.20	3,622,087	169,153	153,890	1.10
Income (\$ thousands)												
Under 55.....	253,368	2,618	1,138	2.30	119,868	762	200	3.81	373,236	3,380	1,338	2.53
55-59.....	905,106	8,605	6,687	1.29	241,917	1,772	780	2.27	1,147,023	10,377	7,466	1.39
60-64.....	1,817,671	23,456	21,041	1.11	440,312	4,151	2,374	1.75	2,257,982	27,607	23,414	1.18
65-69.....	2,773,532	52,923	55,986	0.95	732,570	9,787	6,533	1.50	3,506,102	62,711	62,519	1.00
70-74.....	2,841,508	87,076	95,136	0.92	822,465	16,672	13,536	1.23	3,663,974	103,748	108,672	0.95
75-79.....	2,111,417	102,881	114,218	0.90	656,369	21,555	19,894	1.08	2,767,786	124,436	134,112	0.93
80-84.....	1,097,673	91,333	95,778	0.95	377,655	22,098	19,543	1.13	1,475,328	113,430	115,322	0.98
85-89.....	429,017	57,771	55,754	1.04	177,752	17,121	14,576	1.17	606,769	74,891	70,330	1.06
90-94.....	116,330	22,638	21,339	1.06	59,611	9,603	7,756	1.24	175,941	32,241	29,095	1.11
Over 94.....	26,100	6,144	6,907	0.89	13,663	3,036	3,037	1.00	39,763	9,180	9,944	0.92
Total.....	12,371,722	455,444	473,984	0.96	3,642,183	106,557	88,229	1.21	16,013,905	562,002	562,213	1.00

TABLE 5

EXPERIENCE BY RETIREMENT CLASS FOR CALENDAR YEARS 1997 AND 1998
EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

Attained Age	Male Lives									
	Prior to NRD		On/After NRD		No Stated NRD		Past NRD/No Payment		Total	
	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio
Under 55.....	15,967	4.14	1,028	1.03	9,864	1.28	0	0.00	26,859	3.28
55-59.....	100,027	1.71	2,059	1.23	8,006	1.68	4	0.00	110,096	1.70
60-64.....	213,274	1.34	8,567	1.13	23,222	1.54	35	2.81	245,098	1.36
65-69.....	280,124	1.18	96,241	0.97	63,648	1.16	46	0.00	440,059	1.13
70-74.....	270,710	1.11	130,442	0.92	90,988	1.05	46	1.25	492,187	1.05
75-79.....	199,710	1.10	149,730	0.89	90,232	1.01	72	0.76	439,744	1.01
80-84.....	110,594	1.13	130,447	0.92	61,232	0.99	73	0.15	302,346	1.01
85-89.....	43,933	1.17	72,311	1.02	30,312	1.03	49	0.63	146,604	1.07
90-94.....	9,748	1.25	25,951	1.07	10,771	1.04	31	0.34	46,502	1.10
Over 94.....	1,322	1.29	6,281	1.06	2,363	0.83	8	0.00	9,975	1.03
Total.....	1,245,409	1.16	623,059	0.96	390,637	1.03	364	0.46	2,259,469	1.06
Male Income (\$ thousands)										
Under 55.....	197,650	2.58	16,746	0.65	38,972	1.21	0	0.00	253,368	2.30
55-59.....	845,810	1.28	21,512	0.86	37,751	1.60	33	0.00	905,106	1.29
60-64.....	1,628,813	1.13	64,859	1.05	123,564	0.96	434	0.31	1,817,671	1.11
65-69.....	1,935,009	0.99	503,475	0.82	334,846	0.90	201	0.00	2,773,532	0.95
70-74.....	1,612,828	0.98	734,571	0.79	493,690	0.88	419	1.10	2,841,508	0.92
75-79.....	904,535	1.02	745,041	0.76	461,166	0.90	675	0.80	2,111,417	0.90
80-84.....	365,709	1.10	502,664	0.87	228,654	0.91	647	0.33	1,097,673	0.95
85-89.....	115,342	1.16	224,770	0.98	88,670	1.02	236	1.51	429,017	1.04
90-94.....	20,490	1.24	68,024	1.05	27,544	0.97	272	0.75	116,330	1.06
Over 94.....	2,284	1.32	18,289	0.85	5,516	0.84	12	0.00	26,100	0.89
Total.....	7,628,470	1.05	2,899,951	0.86	1,840,373	0.92	2,928	0.74	12,371,722	0.96

TABLE 6

EXPERIENCE BY RETIREMENT CLASS FOR CALENDAR YEARS 1997 AND 1998
 EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

Attained Age	Female Lives									
	Prior to NRD		On/After NRD		No Stated NRD		Past NRD/No Payment		Total	
	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio
Under 55.....	16,151	5.48	1,321	1.53	12,959	1.14	0	0.00	30,432	3.96
55-59.....	49,949	2.52	2,347	1.69	6,688	2.35	2	0.00	58,985	2.47
60-64.....	98,207	1.91	8,621	1.39	16,679	1.81	3	0.00	123,509	1.86
65-69.....	128,352	1.62	59,072	1.36	40,832	1.71	11	0.00	228,267	1.57
70-74.....	134,442	1.39	87,738	1.12	62,902	1.31	7	0.00	285,088	1.29
75-79.....	108,175	1.19	103,170	1.00	61,046	1.16	14	0.00	272,405	1.11
80-84.....	66,367	1.19	92,242	1.05	41,046	1.15	8	0.00	199,664	1.11
85-89.....	33,808	1.30	55,478	1.14	21,487	1.15	10	0.00	110,783	1.19
90-94.....	10,622	1.38	23,258	1.22	8,754	1.14	8	0.00	42,641	1.24
Over 94.....	2,253	1.17	6,385	1.07	2,202	0.90	2	0.00	10,843	1.06
Total.....	648,327	1.33	439,632	1.11	274,595	1.19	64	0.00	1,362,617	1.20
Female Income (\$ thousands)										
Under 55.....	82,026	4.50	3,813	3.30	34,029	1.12	0	0.00	119,868	3.81
55-59.....	216,028	2.33	7,543	1.81	18,330	1.85	16	0.00	241,917	2.27
60-64.....	366,074	1.85	29,231	1.45	44,998	1.17	8	0.00	440,312	1.75
65-69.....	430,744	1.55	192,960	1.34	108,835	1.57	31	0.00	732,570	1.50
70-74.....	367,743	1.37	283,873	1.06	170,820	1.22	29	0.00	822,465	1.23
75-79.....	220,615	1.29	280,254	0.94	155,402	1.06	98	0.00	656,369	1.08
80-84.....	102,680	1.24	191,257	1.06	83,700	1.16	18	0.00	377,655	1.13
85-89.....	43,936	1.36	96,351	1.11	37,456	1.12	9	0.00	177,752	1.17
90-94.....	11,051	1.36	35,011	1.24	13,541	1.13	7	0.00	59,611	1.24
Over 94.....	1,987	1.16	8,306	1.02	3,367	0.86	2	0.00	13,663	1.00
Total.....	1,842,885	1.42	1,128,601	1.08	670,477	1.14	219	0.00	3,642,183	1.21

TABLE 7

EXPERIENCE BY BENEFIT CLASS FOR CALENDAR YEARS 1997 AND 1998
 EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

Attained Age	Male Lives							
	Life only*		Life with period certain		Cash refund		Total	
	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio
Under 55....	20,950	3.20	3,601	1.43	2,308	6.20	26,859	3.28
55-59.....	88,746	1.75	9,673	1.61	11,677	1.37	110,096	1.70
60-64.....	199,675	1.40	19,751	1.31	25,672	1.07	245,098	1.36
65-69.....	369,361	1.15	33,735	1.17	36,963	0.87	440,059	1.13
70-74.....	422,280	1.07	33,560	1.06	36,346	0.76	492,187	1.05
75-79.....	376,436	1.04	28,822	0.89	34,485	0.79	439,744	1.01
80-84.....	258,568	1.04	18,284	0.88	25,493	0.76	302,346	1.01
85-89.....	125,096	1.11	8,341	0.88	13,167	0.80	146,604	1.07
90-94.....	40,784	1.15	2,087	0.82	3,631	0.74	46,502	1.10
Over 94.....	8,784	1.10	260	1.06	931	0.45	9,975	1.03
Total.....	1,910,681	1.09	158,115	0.96	190,673	0.79	2,259,469	1.06
Male Income (\$ thousands)								
Under 55....	160,461	2.33	45,369	1.40	47,538	2.91	253,368	2.30
55-59.....	657,822	1.37	64,506	1.33	182,777	0.97	905,106	1.29
60-64.....	1,368,990	1.16	121,350	1.02	327,331	0.94	1,817,671	1.11
65-69.....	2,261,862	0.98	183,818	1.00	327,852	0.70	2,773,532	0.95
70-74.....	2,416,843	0.94	190,703	0.93	233,963	0.68	2,841,508	0.92
75-79.....	1,795,765	0.92	151,323	0.85	164,329	0.79	2,111,417	0.90
80-84.....	929,458	0.97	80,328	0.92	87,886	0.79	1,097,673	0.95
85-89.....	360,802	1.06	31,614	0.90	36,602	0.87	429,017	1.04
90-94.....	101,642	1.08	7,029	0.92	7,659	0.91	116,330	1.06
Over 94.....	24,150	0.91	623	1.01	1,327	0.53	26,100	0.89
Total.....	10,077,794	0.98	876,664	0.93	1,417,264	0.80	12,371,722	0.96

* Includes Unknown, Temporary Life, and Life Only.

TABLE 8

EXPERIENCE BY BENEFIT CLASS FOR CALENDAR YEARS 1997 AND 1998
 EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

Attained Age	Female Lives							
	Life only*		Life with period certain		Cash refund		Total	
	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio
Under 55....	26,119	3.98	3,147	1.02	1,167	9.12	30,432	3.96
55-59.....	50,612	2.52	5,115	1.94	3,259	2.54	58,985	2.47
60-64.....	104,508	1.85	10,527	2.16	8,475	1.50	123,509	1.86
65-69.....	194,958	1.60	18,489	1.52	14,820	1.18	228,267	1.57
70-74.....	248,947	1.33	18,762	1.15	17,380	0.91	285,088	1.29
75-79.....	241,185	1.14	13,485	0.96	17,735	0.80	272,405	1.11
80-84.....	177,333	1.14	7,879	1.01	14,452	0.87	199,664	1.11
85-89.....	99,217	1.22	3,609	0.95	7,958	0.94	110,783	1.19
90-94.....	38,949	1.27	1,006	1.14	2,687	0.88	42,641	1.24
Over 94.....	9,999	1.09	171	1.15	673	0.57	10,843	1.06
Total.....	1,191,826	1.23	82,187	1.12	88,604	0.90	1,362,617	1.20
Female Income (\$ thousands)								
Under 55....	94,569	3.64	17,250	0.89	8,048	10.00	119,868	3.81
55-59.....	200,440	2.40	20,135	1.89	21,342	1.42	241,917	2.27
60-64.....	356,247	1.80	39,071	1.63	44,994	1.41	440,312	1.75
65-69.....	611,001	1.53	63,017	1.39	58,552	1.30	732,570	1.50
70-74.....	707,931	1.27	64,194	1.01	50,340	0.91	822,465	1.23
75-79.....	575,769	1.12	42,014	0.76	38,586	0.92	656,369	1.08
80-84.....	333,705	1.14	20,174	1.02	23,776	1.04	377,655	1.13
85-89.....	158,745	1.21	7,346	0.87	11,661	0.91	177,752	1.17
90-94.....	54,958	1.24	1,772	1.49	2,881	1.07	59,611	1.24
Over 94.....	12,823	1.00	347	1.41	493	0.74	13,663	1.00
Total.....	3,106,190	1.23	275,320	1.04	260,673	1.04	3,642,183	1.21

* Includes Unknown, Temporary Life, and Life Only.

TABLE 9

EXPERIENCE BY SURVIVOR CONTINUANCE FOR CALENDAR YEARS 1997 AND 1998
 EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

Male Lives - % Continuing to Survivor														
Attained Age	Joint Indicator Unknown		0% (single life)		> 0% - <= 50%		> 50% - <= 75%		> 75% - <= 100%		Joint Percent Unknown		Total	
	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio
Under 55....	170	88.16	18,840	3.51	2,028	1.37	1,450	0.29	1,212	2.34	3,159	1.02	26,859	3.28
55-59.....	557	49.80	62,558	1.79	14,933	0.96	12,125	0.53	12,059	1.22	7,864	1.48	110,096	1.70
60-64.....	1,757	23.59	136,079	1.49	38,374	0.79	28,581	0.52	24,622	0.87	15,684	1.36	245,098	1.36
65-69.....	3,651	14.82	258,461	1.18	71,466	0.71	40,322	0.56	37,326	0.75	28,833	1.20	440,059	1.13
70-74.....	5,238	8.74	310,075	1.09	75,989	0.62	36,763	0.70	33,435	0.80	30,686	1.03	492,187	1.05
75-79.....	5,740	5.71	308,190	1.04	54,192	0.56	27,973	0.77	21,787	0.71	21,863	0.97	439,744	1.01
80-84.....	4,455	3.99	234,441	1.03	25,646	0.53	16,090	0.86	10,827	0.72	10,888	0.92	302,346	1.01
85-89.....	1,813	3.07	124,027	1.08	6,992	0.62	5,488	0.93	4,521	0.84	3,762	0.97	146,604	1.07
90-94.....	406	2.51	41,157	1.11	1,246	0.65	1,341	0.94	1,323	0.94	1,029	0.98	46,502	1.10
Over 94.....	72	2.19	8,898	1.06	316	0.32	257	1.08	281	0.72	151	1.08	9,975	1.03
Total.....	23,859	5.88	1,502,726	1.08	291,182	0.61	170,390	0.76	147,393	0.78	123,919	1.02	2,259,469	1.06
Male Income (\$ thousands) - % Continuing to Survivor														
Under 55....	1,511	75.93	149,315	2.42	15,354	0.89	23,152	0.03	7,246	1.96	56,791	1.50	253,368	2.30
55-59.....	5,252	45.41	452,746	1.40	115,425	0.65	157,687	0.27	66,095	0.96	107,901	1.05	905,106	1.29
60-64.....	15,803	24.66	865,178	1.23	317,771	0.53	323,489	0.38	127,686	0.85	167,743	1.03	1,817,671	1.11
65-69.....	28,195	14.93	1,358,208	0.97	555,964	0.55	381,535	0.50	201,122	0.72	248,507	0.93	2,773,532	0.95
70-74.....	36,290	9.77	1,518,522	0.96	569,100	0.47	288,554	0.59	188,529	0.71	240,514	0.89	2,841,508	0.92
75-79.....	33,403	5.91	1,286,647	0.95	351,956	0.47	178,844	0.64	110,412	0.59	150,155	0.89	2,111,417	0.90
80-84.....	21,052	4.12	756,890	0.99	137,367	0.48	75,004	0.82	43,470	0.61	63,890	0.87	1,097,673	0.95
85-89.....	8,469	3.14	330,042	1.06	33,004	0.55	22,281	0.93	14,342	0.69	20,879	0.95	429,017	1.04
90-94.....	1,840	2.44	94,367	1.09	6,252	0.64	4,640	0.99	3,856	0.77	5,375	0.90	116,330	1.06
Over 94.....	624	2.28	19,878	0.95	3,360	0.12	928	1.15	597	0.90	712	1.36	26,100	0.89
Total.....	152,439	6.91	6,831,794	1.00	2,105,553	0.49	1,456,115	0.62	763,355	0.68	1,062,467	0.92	12,371,722	0.96

TABLE 10

EXPERIENCE BY SURVIVOR CONTINUANCE FOR CALENDAR YEARS 1997 AND 1998
 EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

Female Lives - % Continuing to Survivor														
Attained Age	Joint Indicator Unknown		0% (single life)		> 0% - <= 50%		> 50% - <= 75%		> 75% - <= 100%		Joint Percent Unknown		Total	
	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio
Under 55....	15	208.06	24,565	4.74	2,829	0.64	562	0.00	1,306	0.44	1,156	1.35	30,432	3.96
55-59.....	52	101.37	44,638	2.74	7,168	1.46	2,234	0.41	3,458	0.81	1,435	2.87	58,985	2.47
60-64.....	133	50.62	96,191	1.93	14,585	1.24	4,059	0.83	6,159	1.09	2,382	3.65	123,509	1.86
65-69.....	243	32.38	187,028	1.64	23,166	0.97	5,765	0.96	8,350	0.74	3,716	2.37	228,267	1.57
70-74.....	351	17.94	243,312	1.33	24,077	0.76	5,794	0.83	7,700	0.89	3,855	1.85	285,088	1.29
75-79.....	372	9.81	242,601	1.15	17,287	0.66	4,554	0.62	5,215	0.59	2,376	0.98	272,405	1.11
80-84.....	249	6.60	184,008	1.14	8,557	0.60	2,669	0.84	3,044	0.72	1,136	0.76	199,664	1.11
85-89.....	118	3.93	106,369	1.20	1,965	0.72	809	0.99	1,183	1.01	340	0.82	110,783	1.19
90-94.....	31	3.30	41,812	1.25	263	0.82	166	0.99	283	0.83	86	1.18	42,641	1.24
Over 94.....	10	2.28	10,696	1.06	30	0.32	15	0.65	63	0.82	29	1.08	10,843	1.06
Total.....	1,574	9.95	1,181,219	1.22	99,926	0.74	26,627	0.81	36,760	0.79	16,511	1.43	1,362,617	1.20
Female Income (\$ thousands) - % Continuing to Survivor														
Under 55....	82	248.05	92,558	4.43	8,955	0.47	5,533	0.00	3,699	0.79	9,041	2.71	119,868	3.81
55-59.....	465	102.11	178,493	2.49	25,935	1.40	15,813	0.04	11,476	0.66	9,736	1.52	241,917	2.27
60-64.....	541	69.23	337,533	1.84	50,584	0.94	18,996	0.76	19,111	0.97	13,547	2.28	440,312	1.75
65-69.....	733	38.18	588,702	1.56	75,768	0.97	23,157	0.92	28,448	0.61	15,763	2.33	732,570	1.50
70-74.....	1,014	24.19	688,978	1.27	70,421	0.82	19,321	0.70	27,529	0.71	15,202	1.47	822,465	1.23
75-79.....	907	12.53	576,120	1.12	43,216	0.60	11,748	0.76	16,777	0.80	7,601	0.83	656,369	1.08
80-84.....	603	8.93	341,339	1.15	18,555	0.78	5,871	1.28	8,299	0.68	2,988	0.70	377,655	1.13
85-89.....	201	4.61	167,590	1.18	4,287	0.90	1,825	1.15	2,880	0.92	969	0.90	177,752	1.17
90-94.....	46	4.74	57,582	1.23	779	2.00	305	1.37	641	0.55	258	1.33	59,611	1.24
Over 94.....	28	1.99	13,341	1.01	121	0.16	23	0.19	106	0.52	44	0.80	13,663	1.00
Total.....	4,620	15.46	3,042,236	1.23	298,621	0.82	102,592	0.89	118,964	0.74	75,150	1.35	3,642,183	1.21

TABLE 11

EXPERIENCE BY YEARS SINCE RETIREMENT FOR CALENDAR YEARS 1997 AND 1998
EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

Attained Age	Male Lives									
	0-1		2-5		6-10		11 and Over		Total	
	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio
Under 55.....	8,444	3.16	8,187	3.30	4,024	5.09	6,204	2.13	26,859	3.28
55-59.....	38,085	1.83	60,711	1.52	7,310	2.19	3,990	2.53	110,096	1.70
60-64.....	50,910	1.28	105,389	1.26	78,411	1.45	10,388	1.93	245,098	1.36
65-69.....	37,324	1.09	163,124	1.06	153,757	1.12	85,854	1.29	440,059	1.13
70-74.....	6,923	1.04	42,221	0.95	225,210	1.02	217,833	1.09	492,187	1.05
75-79.....	3,239	1.17	15,625	0.98	70,325	1.00	350,555	1.01	439,744	1.01
80-84.....	1,680	1.13	8,124	1.04	26,392	1.02	266,150	1.01	302,346	1.01
85-89.....	674	0.86	3,575	1.19	10,427	1.09	131,928	1.06	146,604	1.07
90-94.....	162	1.01	985	1.22	2,922	1.14	42,433	1.10	46,502	1.10
Over 94.....	36	1.53	214	1.03	867	0.81	8,858	1.05	9,975	1.03
Total.....	147,476	1.26	408,155	1.11	579,645	1.07	1,124,193	1.05	2,259,469	1.06
Male Income (\$ thousands)										
Under 55.....	103,707	2.36	98,094	2.08	29,178	2.94	22,389	2.16	253,368	2.30
55-59.....	311,135	1.33	500,674	1.17	69,064	1.64	24,234	2.17	905,106	1.29
60-64.....	397,296	1.15	920,191	0.99	433,542	1.30	66,641	1.36	1,817,671	1.11
65-69.....	202,736	0.89	1,018,901	0.87	1,140,055	0.96	411,840	1.12	2,773,532	0.95
70-74.....	48,272	0.86	249,900	0.73	1,356,147	0.92	1,187,188	0.95	2,841,508	0.92
75-79.....	16,723	0.83	68,652	0.87	411,250	0.84	1,614,792	0.92	2,111,417	0.90
80-84.....	6,621	0.86	28,578	1.02	121,865	0.89	940,609	0.96	1,097,673	0.95
85-89.....	2,696	0.74	12,058	1.29	40,082	1.08	374,182	1.03	429,017	1.04
90-94.....	779	0.39	2,931	1.02	9,227	0.98	103,392	1.07	116,330	1.06
Over 94.....	121	1.21	982	0.47	6,227	0.45	18,771	1.06	26,100	0.89
Total.....	1,090,087	1.07	2,900,960	0.92	3,616,639	0.93	4,764,037	0.97	12,371,722	0.96

TABLE 12

EXPERIENCE BY YEARS SINCE RETIREMENT FOR CALENDAR YEARS 1997 AND 1998
 EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

Attained Age	Female Lives									
	0-1		2-5		6-10		11 and Over		Total	
	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio
Under 55.....	7,779	7.17	8,950	2.56	4,301	3.94	9,402	2.32	30,432	3.96
55-59.....	18,614	2.81	30,615	1.93	5,974	3.70	3,782	3.45	58,985	2.47
60-64.....	25,352	2.03	51,854	1.63	37,317	2.02	8,986	1.98	123,509	1.86
65-69.....	23,242	1.53	83,438	1.44	76,434	1.59	45,153	1.76	228,267	1.57
70-74.....	8,076	1.29	32,195	1.25	123,977	1.29	120,840	1.30	285,088	1.29
75-79.....	4,722	1.20	14,654	1.06	53,745	1.11	199,284	1.11	272,405	1.11
80-84.....	2,581	0.98	7,980	1.12	23,648	1.10	165,455	1.12	199,664	1.11
85-89.....	1,142	1.21	3,296	1.26	10,331	1.17	96,014	1.19	110,783	1.19
90-94.....	375	1.23	1,042	1.26	3,384	1.19	37,840	1.25	42,641	1.24
Over 94.....	99	1.17	263	0.96	808	1.04	9,673	1.06	10,843	1.06
Total.....	91,982	1.54	234,287	1.31	339,919	1.25	696,429	1.17	1,362,617	1.20
Female Income (\$ thousands)										
Under 55.....	40,142	5.32	49,177	2.32	11,126	5.70	19,423	4.06	119,868	3.81
55-59.....	78,980	2.62	133,989	1.82	20,280	3.55	8,669	3.30	241,917	2.27
60-64.....	101,406	2.20	209,245	1.43	106,647	1.88	23,014	2.05	440,312	1.75
65-69.....	77,531	1.39	292,198	1.38	254,386	1.49	108,455	1.89	732,570	1.50
70-74.....	28,412	1.16	109,339	1.08	383,255	1.24	301,459	1.28	822,465	1.23
75-79.....	13,424	1.07	39,122	0.95	158,105	1.02	445,718	1.12	656,369	1.08
80-84.....	5,731	1.01	15,708	1.22	57,897	1.12	298,318	1.13	377,655	1.13
85-89.....	2,132	0.92	6,102	1.19	24,045	1.16	145,472	1.18	177,752	1.17
90-94.....	620	1.19	2,016	1.22	7,608	1.21	49,366	1.24	59,611	1.24
Over 94.....	115	1.15	693	0.61	1,877	1.03	10,978	1.02	13,663	1.00
Total.....	348,494	1.58	857,589	1.26	1,025,228	1.22	1,410,871	1.18	3,642,183	1.21

TABLE 13

EXPERIENCE BY GUARANTEED STATUS FOR CALENDAR YEARS 1997 AND 1998
 EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

Attained Age	Male Lives					
	Guaranteed		Non-Guaranteed		Total	
	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio
Under 55....	13,228	1.84	13,631	4.57	26,859	3.28
55-59.....	63,398	1.34	46,698	2.18	110,096	1.70
60-64.....	150,482	1.26	94,615	1.51	245,098	1.36
65-69.....	299,955	1.11	140,105	1.17	440,059	1.13
70-74.....	363,856	1.02	128,330	1.12	492,187	1.05
75-79.....	342,839	1.00	96,904	1.03	439,744	1.01
80-84.....	244,967	1.01	57,379	1.02	302,346	1.01
85-89.....	121,709	1.09	24,895	0.97	146,604	1.07
90-94.....	39,531	1.14	6,971	0.89	46,502	1.10
Over 94.....	8,018	1.16	1,956	0.53	9,975	1.03
Total.....	1,647,985	1.05	611,484	1.08	2,259,469	1.06
Male Income (\$ thousands)						
Under 55....	70,497	1.71	182,871	2.52	253,368	2.30
55-59.....	315,777	1.05	589,329	1.41	905,106	1.29
60-64.....	813,837	0.98	1,003,833	1.22	1,817,671	1.11
65-69.....	1,533,131	0.94	1,240,401	0.95	2,773,532	0.95
70-74.....	1,872,815	0.88	968,694	0.97	2,841,508	0.92
75-79.....	1,557,635	0.89	553,782	0.93	2,111,417	0.90
80-84.....	851,559	0.95	246,114	0.98	1,097,673	0.95
85-89.....	340,289	1.06	88,729	0.94	429,017	1.04
90-94.....	94,046	1.10	22,283	0.88	116,330	1.06
Over 94.....	17,100	1.14	9,000	0.41	26,100	0.89
Total.....	7,466,688	0.95	4,905,035	0.99	12,371,722	0.96

TABLE 14

EXPERIENCE BY GUARANTEED STATUS FOR CALENDAR YEARS 1997 AND 1998
 EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

Attained Age	Female Lives					
	Guaranteed		Non-Guaranteed		Total	
	Exposure	A/E Ratio	Exposure	A/E Ratio	Exposure	A/E Ratio
Under 55....	14,407	2.86	16,025	5.03	30,432	3.96
55-59.....	35,709	2.15	23,276	2.97	58,985	2.47
60-64.....	80,342	1.78	43,167	2.00	123,509	1.86
65-69.....	161,599	1.57	66,668	1.56	228,267	1.57
70-74.....	218,833	1.29	66,256	1.27	285,088	1.29
75-79.....	219,409	1.12	52,996	1.03	272,405	1.11
80-84.....	165,521	1.14	34,143	1.00	199,664	1.11
85-89.....	93,657	1.22	17,127	1.05	110,783	1.19
90-94.....	36,551	1.27	6,090	1.05	42,641	1.24
Over 94.....	9,284	1.08	1,559	0.89	10,843	1.06
Total.....	1,035,311	1.21	327,307	1.15	1,362,617	1.20
Female Income (\$ thousands)						
Under 55....	34,447	3.43	85,421	3.97	119,868	3.81
55-59.....	98,146	2.16	143,771	2.35	241,917	2.27
60-64.....	227,328	1.68	212,984	1.82	440,312	1.75
65-69.....	446,431	1.55	286,140	1.41	732,570	1.50
70-74.....	586,281	1.23	236,184	1.23	822,465	1.23
75-79.....	509,055	1.08	147,314	1.09	656,369	1.08
80-84.....	304,478	1.16	73,177	1.03	377,655	1.13
85-89.....	145,253	1.20	32,499	1.05	177,752	1.17
90-94.....	49,669	1.29	9,941	0.99	59,611	1.24
Over 94.....	11,646	1.01	2,017	0.95	13,663	1.00
Total.....	2,412,734	1.21	1,229,449	1.22	3,642,183	1.21

TABLE 15

COMPARISON OF MALE AND FEMALE MORTALITY EXPERIENCE
FOR CALENDAR YEARS 1997 AND 1998
EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

Attained Age	Lives				
	Exposure Male	Exposure Female	A/E Ratio Male*	A/E Ratio Female*	Ratio of Female To Male Mortality
Under 55.....	26,859	30,432	3.28	1.69	0.51
55-59.....	110,096	58,985	1.70	1.09	0.64
60-64.....	245,098	123,509	1.36	0.86	0.64
65-69.....	440,059	228,267	1.13	0.69	0.61
70-74.....	492,187	285,088	1.05	0.63	0.60
75-79.....	439,744	272,405	1.01	0.62	0.61
80-84.....	302,346	199,664	1.01	0.66	0.65
85-89.....	146,604	110,783	1.07	0.75	0.70
90-94.....	46,502	42,641	1.10	0.88	0.80
Over 94.....	9,975	10,843	1.03	0.89	0.87
Total.....	2,259,469	1,362,617	1.06	0.71	0.67
Income (\$ thousands)					
Under 55.....	253,368	119,867	2.30	1.60	0.70
55-59.....	905,105	241,917	1.29	1.00	0.78
60-64.....	1,817,670	440,311	1.11	0.81	0.73
65-69.....	2,773,531	732,570	0.95	0.66	0.70
70-74.....	2,841,508	822,465	0.92	0.60	0.66
75-79.....	2,111,417	656,369	0.90	0.60	0.67
80-84.....	1,097,672	377,655	0.95	0.67	0.70
85-89.....	429,017	177,751	1.04	0.74	0.71
90-94.....	116,329	59,610	1.06	0.87	0.82
Over 94.....	26,100	13,662	0.89	0.84	0.95
Total.....	12,371,722	3,642,182	0.96	0.68	0.71

*Expected deaths for both males and females using male mortality.

TABLE 16

SUMMARY OF GROUP ANNUITY MORTALITY EXPERIENCE BY MALE LIVES
EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

	1997		1998		Change in A/E Ratios
	Exposure	A/E Ratio	Exposure	A/E Ratio	
Total	1,135,300	1.06	1,124,169	1.06	0.00
By Attained Age					
Under 55.....	13,894	3.70	12,965	2.83	-0.87
55-59.....	55,435	1.71	54,661	1.69	-0.02
60-64.....	124,026	1.36	121,071	1.35	-0.01
65-69.....	226,101	1.16	213,959	1.10	-0.06
70-74.....	248,921	1.05	243,265	1.04	-0.01
75-79.....	220,312	1.00	219,432	1.02	0.02
80-84.....	148,846	1.01	153,500	1.02	0.01
85-89.....	70,941	1.06	75,663	1.07	0.01
90-94.....	22,149	1.08	24,353	1.12	0.04
Over 94.....	4,675	1.01	5,300	1.05	0.04
By Retirement Class					
Prior to NRD	623,229	1.23	622,180	1.09	-0.14
On/After NRD	314,878	0.90	308,181	1.02	0.12
No Stated NRD	197,010	0.98	193,627	1.08	0.10
Past NRD/No Payment	184	0.56	180	0.36	-0.20
By Benefit Class					
Life only*	960,239	1.08	950,442	1.11	0.03
Life with period certain	79,608	1.06	78,507	0.86	-0.20
Cash refund	95,453	0.85	95,221	0.74	-0.11
By Survivor Class					
0% (single life)	759,767	1.08	742,959	1.09	0.01
> 0% - <= 50%	143,448	0.62	147,734	0.59	-0.03
> 50% - <= 75%	84,225	0.78	86,165	0.74	-0.04
> 75% - <= 100%	72,108	0.77	75,285	0.79	0.02
Unknown**	75,753	2.04	72,025	2.13	0.09
By Years Since Retirement					
0-1	76,214	1.27	71,262	1.24	-0.03
2-5	207,770	1.14	200,385	1.07	-0.07
6-10	300,044	1.09	279,601	1.04	-0.05
11 and Over	551,272	1.03	572,921	1.06	0.03
By Guaranteed Status					
Guaranteed	830,470	1.02	817,515	1.08	0.06
Non-Guaranteed	304,830	1.17	306,654	0.99	-0.18

* Includes Unknown, Temporary Life, and Life Only.

** Includes both cases where single or joint status is unknown and where percent continuing to survivor is unknown.

TABLE 17

SUMMARY OF GROUP ANNUITY MORTALITY EXPERIENCE BY MALE INCOME
 EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY
 (\$ THOUSANDS)

	1997		1998		Change in A/E Ratios
	Exposure	A/E Ratio	Exposure	A/E Ratio	
Total	6,125,617	0.97	6,246,105	0.95	-0.02
By Attained Age					
Under 55....	131,263	2.52	122,105	2.07	-0.45
55-59.....	448,110	1.33	456,996	1.24	-0.09
60-64.....	906,053	1.14	911,618	1.09	-0.05
65-69.....	1,409,675	0.99	1,363,857	0.89	-0.10
70-74.....	1,411,557	0.95	1,429,951	0.88	-0.07
75-79.....	1,027,408	0.89	1,084,009	0.91	0.02
80-84.....	522,858	0.97	574,815	0.94	-0.03
85-89.....	202,284	1.04	226,734	1.03	-0.01
90-94.....	54,084	1.04	62,246	1.08	0.04
Over 94.....	12,326	0.83	13,775	0.94	0.11
By Retirement Class					
Prior to NRD	3,758,554	1.14	3,869,916	0.98	-0.16
On/After NRD	1,442,526	0.81	1,457,425	0.91	0.10
No Stated NRD	923,245	0.90	917,128	0.94	0.04
Past NRD/No Payment	1,292	0.34	1,637	1.05	0.71
By Benefit Class					
Life only*	5,002,282	0.99	5,075,512	0.97	-0.02
Life with period certain	435,984	0.99	440,680	0.87	-0.12
Cash refund	687,351	0.80	729,914	0.80	0.00
By Survivor Class					
0% (single life)	3,402,469	1.01	3,429,325	1.00	-0.01
> 0% - <= 50%	1,032,431	0.52	1,073,122	0.47	-0.05
> 50% - <= 75%	706,048	0.67	750,067	0.59	-0.08
> 75% - <= 100%	370,330	0.71	393,025	0.66	-0.05
Unknown**	614,339	1.96	600,566	2.02	0.06
By Years Since Retirement					
0-1	562,514	1.07	527,573	1.07	0.00
2-5	1,469,551	0.97	1,431,409	0.87	-0.10
6-10	1,835,036	0.98	1,781,603	0.88	-0.10
11 and Over	2,258,516	0.97	2,505,521	0.98	0.01
By Guaranteed Status					
Guaranteed	3,728,967	0.92	3,737,721	0.98	0.06
Non-Guaranteed	2,396,650	1.10	2,508,384	0.88	-0.22

* Includes Unknown, Temporary Life, and Life Only.

** Includes both cases where single or joint status is unknown and where percent continuing to survivor is unknown.

TABLE 18

SUMMARY OF GROUP ANNUITY MORTALITY EXPERIENCE BY FEMALE LIVES
EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

	1997		1998		Change in A/E Ratios
	Exposure	A/E Ratio	Exposure	A/E Ratio	
Total	678,561	1.20	684,056	1.21	0.01
By Attained Age					
Under 55....	15,385	4.38	15,047	3.53	-0.85
55-59.....	29,268	2.35	29,717	2.59	0.24
60-64.....	62,632	1.94	60,877	1.76	-0.18
65-69.....	116,470	1.58	111,797	1.56	-0.02
70-74.....	144,054	1.33	141,035	1.25	-0.08
75-79.....	134,750	1.10	137,655	1.11	0.01
80-84.....	97,532	1.11	102,132	1.12	0.01
85-89.....	53,248	1.18	57,536	1.20	0.02
90-94.....	20,245	1.20	22,396	1.28	0.08
Over 94.....	4,978	1.01	5,865	1.09	0.08
By Retirement Class					
Prior to NRD	322,723	1.45	325,604	1.22	-0.23
On/After NRD	219,652	1.03	219,980	1.18	0.15
No Stated NRD	136,152	1.14	138,443	1.23	0.09
Past NRD/No Payment	35	0.00	29	0.00	0.00
By Benefit Class					
Life only*	594,046	1.22	597,779	1.24	0.02
Life with period certain	40,664	1.17	41,524	1.07	-0.10
Cash refund	43,851	0.96	44,753	0.84	-0.12
By Survivor Class					
0% (single life)	590,694	1.21	590,525	1.23	0.02
> 0% - <= 50%	48,368	0.80	51,558	0.70	-0.10
> 50% - <= 75%	12,818	0.84	13,809	0.78	-0.06
> 75% - <= 100%	17,650	0.90	19,110	0.69	-0.21
Unknown**	9,031	2.69	9,054	2.64	-0.05
By Years Since Retirement					
0-1	49,211	1.55	42,771	1.52	-0.03
2-5	115,521	1.32	118,766	1.30	-0.02
6-10	175,623	1.26	164,296	1.24	-0.02
11 and Over	338,206	1.16	358,223	1.18	0.02
By Guaranteed Status					
Guaranteed	517,621	1.19	517,689	1.24	0.05
Non-Guaranteed	160,940	1.25	166,367	1.06	-0.19

* Includes Unknown, Temporary Life, and Life Only.

** Includes both cases where single or joint status is unknown and where percent continuing to survivor is unknown.

TABLE 19

SUMMARY OF GROUP ANNUITY MORTALITY EXPERIENCE BY FEMALE INCOME
 EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY
 (\$ THOUSANDS)

	1997		1998		Change in A/E Ratios
	Exposure	A/E Ratio	Exposure	A/E Ratio	
Total	1,786,568	1.21	1,855,615	1.20	-0.01
By Attained Age					
Under 55....	60,805	4.23	59,063	3.37	-0.86
55-59.....	116,197	1.97	125,721	2.55	0.58
60-64.....	219,513	1.84	220,799	1.66	-0.18
65-69.....	367,915	1.52	364,656	1.47	-0.05
70-74.....	409,512	1.26	412,953	1.20	-0.06
75-79.....	315,373	1.09	340,996	1.08	-0.01
80-84.....	179,780	1.14	197,875	1.13	-0.01
85-89.....	83,361	1.16	94,391	1.18	0.02
90-94.....	27,917	1.20	31,694	1.27	0.07
Over 94.....	6,195	0.92	7,468	1.06	0.14
By Retirement Class					
Prior to NRD	902,067	1.57	940,819	1.28	-0.29
On/After NRD	555,207	0.98	573,394	1.17	0.19
No Stated NRD	329,196	1.13	341,282	1.16	0.03
Past NRD/No Payment	99	0.00	120	0.00	0.00
By Benefit Class					
Life only*	1,527,142	1.24	1,579,047	1.22	-0.02
Life with period certain	134,329	1.01	140,991	1.07	0.06
Cash refund	125,097	1.05	135,577	1.03	-0.02
By Survivor Class					
0% (single life)	1,497,716	1.22	1,544,520	1.23	0.01
> 0% - <= 50%	143,922	0.85	154,699	0.79	-0.06
> 50% - <= 75%	49,111	0.93	53,481	0.86	-0.07
> 75% - <= 100%	56,559	0.92	62,405	0.58	-0.34
Unknown**	39,260	2.94	40,510	2.66	-0.28
By Years Since Retirement					
0-1	182,221	1.55	166,273	1.62	0.07
2-5	417,925	1.32	439,664	1.20	-0.12
6-10	522,404	1.19	502,824	1.24	0.05
11 and Over	664,017	1.18	746,854	1.17	-0.01
By Guaranteed Status					
Guaranteed	1,194,290	1.17	1,218,444	1.24	0.07
Non-Guaranteed	592,278	1.35	637,171	1.10	-0.25

* Includes Unknown, Temporary Life, and Life Only.

** Includes both cases where single or joint status is unknown and where percent continuing to survivor is unknown.

TABLE 20

COMPARISON OF 1995-96 WITH 1997-98 GROUP ANNUITY MORTALITY EXPERIENCE
BY MALE LIVES
EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

	1995-96		1997-98		Change in A/E Ratios
	Exposure	A/E Ratio	Exposure	A/E Ratio	
Total	2,504,999	1.06	2,259,469	1.06	0.00
By Attained Age					
Under 55.....	23,690	3.31	26,859	3.28	-0.03
55-59.....	128,011	1.62	110,096	1.70	0.08
60-64.....	285,086	1.39	245,098	1.36	-0.03
65-69.....	520,921	1.13	440,059	1.13	0.00
70-74.....	562,559	1.05	492,187	1.05	0.00
75-79.....	469,175	1.02	439,744	1.01	-0.01
80-84.....	314,983	1.01	302,346	1.01	0.00
85-89.....	145,489	1.05	146,604	1.07	0.02
90-94.....	45,187	1.09	46,502	1.10	0.01
Over 94.....	9,898	1.05	9,975	1.03	-0.02
By Retirement Class					
Prior to NRD	1,435,909	1.10	1,245,409	1.16	0.06
On/After NRD	859,571	1.02	623,059	0.96	-0.06
No Stated NRD	208,833	1.12	390,637	1.03	-0.09
Past NRD/No Payment	685	0.45	364	0.46	0.01
By Benefit Class					
Life only*	2,211,588	1.07	1,910,681	1.09	0.02
Life with period certain	201,664	1.03	158,115	0.96	-0.07
Cash refund	91,747	0.92	190,673	0.79	-0.13
By Survivor Class					
0% (single life)	1,677,257	1.07	1,502,726	1.08	0.01
> 0% - <= 50%	241,105	0.98	291,182	0.61	-0.37
> 50% - <= 75%	128,173	1.05	170,390	0.76	-0.29
> 75% - <= 100%	151,298	1.05	147,393	0.78	-0.27
Unknown**	307,167	1.03	147,778	2.08	1.05
By Years Since Retirement					
0-1	180,057	1.20	147,476	1.26	0.06
2-5	526,858	1.10	408,155	1.11	0.01
6-10	756,155	1.06	579,645	1.07	0.01
11 and Over	1,041,929	1.05	1,124,193	1.05	0.00
By Guaranteed Status					
Guaranteed	1,800,524	1.09	1,647,985	1.05	-0.04
Non-Guaranteed	704,475	0.96	611,484	1.08	0.12

* Includes Unknown, Temporary Life, and Life Only.

** Includes both cases where single or joint status is unknown and where percent continuing to survivor is unknown.

TABLE 21

COMPARISON OF 1995-96 WITH 1997-98 GROUP ANNUITY MORTALITY EXPERIENCE
BY MALE INCOME
EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY
(\$ THOUSANDS)

	1995-96		1997-98		Change in A/E Ratios
	Exposure	A/E Ratio	Exposure	A/E Ratio	
Total	12,913,876	0.96	12,371,722	0.96	0.00
By Attained Age					
Under 55.....	266,218	2.00	253,368	2.30	0.30
55-59.....	1,034,472	1.20	905,106	1.29	0.09
60-64.....	2,116,170	1.09	1,817,670	1.11	0.02
65-69.....	3,128,310	0.96	2,773,532	0.95	-0.01
70-74.....	2,938,698	0.92	2,841,508	0.92	0.00
75-79.....	1,931,088	0.91	2,111,417	0.90	-0.01
80-84.....	992,569	0.94	1,097,673	0.95	0.01
85-89.....	382,799	1.00	429,017	1.04	0.04
90-94.....	101,679	1.05	116,330	1.06	0.01
Over 94.....	21,872	0.91	26,100	0.89	-0.02
By Retirement Class					
Prior to NRD	8,308,427	1.00	7,628,470	1.05	0.05
On/After NRD	3,692,831	0.91	2,899,951	0.86	-0.05
No Stated NRD	910,230	0.99	1,840,373	0.92	-0.07
Past NRD/No Payment	2,387	0.65	2,928	0.74	0.09
By Benefit Class					
Life only*	11,052,805	0.96	10,077,794	0.98	0.02
Life with period certain	889,783	0.96	876,664	0.93	-0.03
Cash refund	971,288	0.88	1,417,264	0.80	-0.08
By Survivor Class					
0% (single life)	7,248,423	0.98	6,831,793	1.00	0.02
> 0% - <= 50%	1,540,256	0.87	2,105,553	0.49	-0.38
> 50% - <= 75%	852,055	0.93	1,456,115	0.62	-0.31
> 75% - <= 100%	758,835	0.96	763,355	0.68	-0.28
Unknown**	2,514,308	0.93	1,214,906	1.99	1.06
By Years Since Retirement					
0-1	1,392,523	1.01	1,090,087	1.07	0.06
2-5	3,629,022	0.95	2,900,960	0.92	-0.03
6-10	4,222,414	0.93	3,616,639	0.93	0.00
11 and Over	3,669,916	0.97	4,764,037	0.97	0.00
By Guaranteed Status					
Guaranteed	7,741,847	0.98	7,466,687	0.95	-0.03
Non-Guaranteed	5,172,029	0.91	4,905,035	0.99	0.08

* Includes Unknown, Temporary Life, and Life Only.

** Includes both cases where single or joint status is unknown and where percent continuing to survivor is unknown.

TABLE 22

COMPARISON OF 1995-96 WITH 1997-98 GROUP ANNUITY MORTALITY EXPERIENCE
BY FEMALE LIVES
EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

	1995-96		1997-98		Change in A/E Ratios
	Exposure	A/E Ratio	Exposure	A/E Ratio	
Total	1,190,219	1.20	1,362,617	1.20	0.00
By Attained Age					
Under 55.....	17,478	2.90	30,432	3.96	1.06
55-59.....	49,569	1.91	58,985	2.47	0.56
60-64.....	112,408	1.64	123,509	1.86	0.22
65-69.....	217,242	1.51	228,267	1.57	0.06
70-74.....	261,571	1.26	285,088	1.29	0.03
75-79.....	230,630	1.14	272,405	1.11	-0.03
80-84.....	166,142	1.09	199,664	1.11	0.02
85-89.....	91,689	1.21	110,783	1.19	-0.02
90-94.....	34,836	1.22	42,641	1.24	0.02
Over 94.....	8,654	1.11	10,843	1.06	-0.05
By Retirement Class					
Prior to NRD	586,694	1.24	648,327	1.33	0.09
On/After NRD	449,851	1.16	439,632	1.11	-0.05
No Stated NRD	153,448	1.27	274,595	1.19	-0.08
Past NRD/No Payment	225	0.70	64	0.00	-0.70
By Benefit Class					
Life only*	1,078,321	1.20	1,191,826	1.23	0.03
Life with period certain	83,190	1.21	82,187	1.12	-0.09
Cash refund	28,708	1.12	88,604	0.90	-0.22
By Survivor Class					
0% (single life)	1,044,417	1.21	1,181,219	1.22	0.01
> 0% - <= 50%	43,255	0.74	99,926	0.74	0.00
> 50% - <= 75%	12,233	1.13	26,627	0.81	-0.32
> 75% - <= 100%	22,574	1.01	36,760	0.79	-0.22
Unknown**	67,739	1.23	18,085	2.67	1.44
By Years Since Retirement					
0-1	81,847	1.38	91,982	1.54	0.16
2-5	231,896	1.29	234,287	1.31	0.02
6-10	346,519	1.22	339,919	1.25	0.03
11 and Over	529,957	1.18	696,429	1.17	-0.01
By Guaranteed Status					
Guaranteed	943,165	1.20	1,035,311	1.21	0.01
Non-Guaranteed	247,053	1.22	327,307	1.15	-0.07

* Includes Unknown, Temporary Life, and Life Only.

** Includes both cases where single or joint status is unknown and where percent continuing to survivor is unknown.

TABLE 23

COMPARISON OF 1995-96 WITH 1997-98 GROUP ANNUITY MORTALITY EXPERIENCE
BY FEMALE INCOME
EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY
(\$ THOUSANDS)

	1995-96		1997-98		Change in A/E Ratios
	Exposure	A/E Ratio	Exposure	A/E Ratio	
Total	3,019,034	1.16	3,642,183	1.21	0.05
By Attained Age					
Under 55.....	80,357	2.57	119,868	3.81	1.24
55-59.....	197,089	1.85	241,917	2.27	0.42
60-64.....	396,993	1.67	440,312	1.75	0.08
65-69.....	663,930	1.40	732,570	1.50	0.10
70-74.....	708,753	1.15	822,465	1.23	0.08
75-79.....	496,983	1.04	656,369	1.08	0.04
80-84.....	284,315	1.06	377,655	1.13	0.07
85-89.....	134,484	1.17	177,752	1.17	0.00
90-94.....	45,792	1.20	59,611	1.24	0.04
Over 94.....	10,337	1.12	13,663	1.00	-0.12
By Retirement Class					
Prior to NRD	1,600,156	1.23	1,842,885	1.42	0.19
On/After NRD	1,089,147	1.10	1,128,601	1.08	-0.02
No Stated NRD	329,338	1.21	670,477	1.14	-0.07
Past NRD/No Payment	393	3.28	219	0.00	-3.28
By Benefit Class					
Life only*	2,665,321	1.16	3,106,189	1.23	0.07
Life with period certain	225,683	1.16	275,320	1.04	-0.12
Cash refund	128,030	1.14	260,673	1.04	-0.10
By Survivor Class					
0% (single life)	2,563,733	1.18	3,042,236	1.23	0.05
> 0% - <= 50%	111,690	0.72	298,621	0.82	0.10
> 50% - <= 75%	38,075	1.08	102,592	0.89	-0.19
> 75% - <= 100%	62,170	0.83	118,964	0.74	-0.09
Unknown**	243,365	1.18	79,770	2.80	1.62
By Years Since Retirement					
0-1	328,456	1.32	348,494	1.58	0.26
2-5	807,926	1.24	857,589	1.26	0.02
6-10	959,852	1.15	1,025,228	1.22	0.07
11 and Over	922,799	1.13	1,410,871	1.18	0.05
By Guaranteed Status					
Guaranteed	2,117,903	1.16	2,412,734	1.21	0.05
Non-Guaranteed	901,130	1.18	1,229,449	1.22	0.04

* Includes Unknown, Temporary Life, and Life Only.

** Includes both cases where single or joint status is unknown and where percent continuing to survivor is unknown.

TABLE 24

SUMMARY OF MORTALITY IMPROVEMENT FOR MALE LIVES
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

ATTAINED AGE	Male Lives					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	3.51	3.89	3.32	3.31	3.70	2.83
55-59	1.74	1.64	1.63	1.61	1.71	1.69
60-64	1.37	1.34	1.38	1.41	1.36	1.35
65-69	1.15	1.17	1.13	1.14	1.16	1.10
70-74	1.08	1.05	1.06	1.05	1.05	1.04
75-79	1.05	1.06	1.03	1.00	1.00	1.02
80-84	1.04	1.03	1.03	0.99	1.01	1.02
85-89	1.08	1.07	1.06	1.04	1.06	1.07
90-94	1.09	1.14	1.12	1.06	1.08	1.12
OVER 94	1.10	1.07	1.04	1.07	1.01	1.05
TOTAL	1.09	1.08	1.07	1.05	1.06	1.06

ATTAINED AGE	ANNUAL IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.110	0.148	0.003	-0.119		
55-59	0.056	0.007	0.011	-0.060	0.013	0.006	0.001
60-64	0.020	-0.028	-0.021	0.034	0.005	0.002	-0.000
65-69	-0.018	0.039	-0.009	-0.016	0.049	0.009	0.008
70-74	0.029	-0.004	0.007	-0.001	0.008	0.008	0.006
75-79	-0.006	0.027	0.024	0.002	-0.015	0.006	0.010
80-84	0.008	-0.004	0.039	-0.013	-0.011	0.004	0.006
85-89	0.006	0.013	0.022	-0.021	-0.016	0.001	0.003
90-94	-0.045	0.016	0.058	-0.020	-0.038	-0.006	0.003
OVER 94	0.027	0.027	-0.027	0.057	-0.047	0.008	0.010
TOTAL	0.004	0.011	0.023	-0.007	-0.005	0.005	0.007

TABLE 25

SUMMARY OF MORTALITY IMPROVEMENT FOR MALE INCOME
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

ATTAINED AGE	Male Income					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	1.88	2.59	1.95	2.05	2.52	2.07
55-59	1.45	1.25	1.29	1.11	1.33	1.24
60-64	1.09	1.16	1.09	1.09	1.14	1.09
65-69	0.96	1.01	0.95	0.97	0.99	0.89
70-74	0.92	0.92	0.91	0.92	0.95	0.88
75-79	0.94	0.94	0.91	0.92	0.89	0.91
80-84	0.95	0.97	0.94	0.94	0.97	0.94
85-89	1.02	1.03	1.01	0.98	1.04	1.03
90-94	1.03	1.03	1.08	1.02	1.04	1.08
OVER 94	1.05	0.98	0.96	0.87	0.83	0.94
TOTAL	0.97	0.98	0.96	0.96	0.97	0.95

ATTAINED AGE	ANNUAL IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.378	0.246	-0.050	-0.228		
55-59	0.138	-0.033	0.136	-0.196	0.066	0.022	0.020
60-64	-0.066	0.062	-0.001	-0.044	0.044	-0.001	0.002
65-69	-0.049	0.064	-0.029	-0.021	0.100	0.013	0.011
70-74	-0.001	0.002	-0.010	-0.024	0.065	0.006	0.002
75-79	-0.008	0.039	-0.010	0.026	-0.020	0.005	0.008
80-84	-0.016	0.027	0.003	-0.029	0.026	0.002	0.002
85-89	-0.016	0.018	0.030	-0.060	0.009	-0.004	-0.002
90-94	0.000	-0.047	0.057	-0.019	-0.044	-0.011	-0.006
OVER 94	0.066	0.023	0.089	0.051	-0.137	0.018	0.032
TOTAL	-0.015	0.026	0.003	-0.020	0.027	0.004	0.004

TABLE 26

SUMMARY OF MORTALITY IMPROVEMENT FOR FEMALE LIVES
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

ATTAINED AGE	Female Lives					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	3.40	3.49	2.02	3.87	4.38	3.53
55-59	2.11	2.26	1.80	2.03	2.35	2.59
60-64	1.66	1.55	1.62	1.66	1.94	1.76
65-69	1.56	1.45	1.51	1.51	1.58	1.56
70-74	1.27	1.28	1.26	1.27	1.33	1.25
75-79	1.12	1.14	1.12	1.16	1.10	1.11
80-84	1.13	1.11	1.09	1.10	1.11	1.12
85-89	1.20	1.17	1.21	1.22	1.18	1.20
90-94	1.23	1.17	1.22	1.23	1.20	1.28
OVER 94	1.09	1.07	1.13	1.10	1.01	1.09
TOTAL	1.22	1.19	1.19	1.21	1.20	1.21

ATTAINED AGE	ANNUAL IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.025	0.421	-0.919	-0.130		
55-59	-0.072	0.203	-0.128	-0.158	-0.100	-0.051	-0.037
60-64	0.070	-0.048	-0.024	-0.171	0.092	-0.016	-0.029
65-69	0.070	-0.045	0.001	-0.042	0.011	-0.001	-0.007
70-74	-0.011	0.018	-0.011	-0.045	0.062	0.002	-0.001
75-79	-0.018	0.014	-0.037	0.049	-0.003	0.001	0.003
80-84	0.015	0.018	-0.004	-0.010	-0.014	0.001	0.001
85-89	0.023	-0.031	-0.012	0.037	-0.023	-0.001	-0.001
90-94	0.048	-0.035	-0.012	0.021	-0.060	-0.008	-0.007
OVER 94	0.017	-0.051	0.021	0.081	-0.078	-0.002	0.005
TOTAL	0.018	0.001	-0.011	0.008	-0.006	0.002	0.001

TABLE 27

SUMMARY OF MORTALITY IMPROVEMENT FOR FEMALE INCOME
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1983 GROUP ANNUITY MORTALITY

ATTAINED AGE	Female Income					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	2.55	2.48	1.77	3.32	4.23	3.37
55-59	1.78	1.98	1.71	1.99	1.97	2.55
60-64	1.54	1.65	1.77	1.56	1.84	1.66
65-69	1.47	1.36	1.46	1.34	1.52	1.47
70-74	1.15	1.19	1.15	1.14	1.26	1.20
75-79	1.04	1.03	1.03	1.04	1.09	1.08
80-84	1.08	1.03	1.05	1.07	1.14	1.13
85-89	1.15	1.14	1.16	1.17	1.16	1.18
90-94	1.20	1.12	1.20	1.20	1.20	1.27
OVER 94	1.16	0.99	1.16	1.08	0.92	1.06
TOTAL	1.18	1.15	1.17	1.15	1.21	1.20

ATTAINED AGE	ANNUAL IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	0.028	0.284	-0.870	-0.277		
55-59	-0.114	0.139	-0.164	0.006	-0.291	-0.085	-0.057
60-64	-0.072	-0.075	0.119	-0.177	0.099	-0.021	-0.016
65-69	0.078	-0.077	0.081	-0.132	0.031	-0.004	-0.008
70-74	-0.036	0.037	0.005	-0.104	0.049	-0.010	-0.011
75-79	0.006	-0.002	-0.009	-0.045	0.007	-0.009	-0.011
80-84	0.039	-0.017	-0.017	-0.062	0.007	-0.010	-0.015
85-89	0.013	-0.023	-0.007	0.008	-0.019	-0.005	-0.006
90-94	0.069	-0.077	0.005	-0.003	-0.058	-0.013	-0.014
OVER 94	0.152	-0.179	0.069	0.148	-0.153	0.007	0.020
TOTAL	0.022	-0.013	0.011	-0.051	0.007	-0.005	-0.007

TABLE 16A

SUMMARY OF GROUP ANNUITY MORTALITY EXPERIENCE BY MALE LIVES
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY STATIC

	1997		1998		Change in A/E Ratios
	Exposure	A/E Ratio	Exposure	A/E Ratio	
Total	1,135,300	1.22	1,124,169	1.23	0.01
By Attained Age					
Under 55....	13,894	5.31	12,965	4.07	-1.24
55-59.....	55,435	2.14	54,661	2.11	-0.03
60-64.....	124,026	1.49	121,071	1.48	-0.01
65-69.....	226,101	1.28	213,959	1.22	-0.06
70-74.....	248,921	1.23	243,265	1.22	-0.01
75-79.....	220,312	1.21	219,432	1.23	0.02
80-84.....	148,846	1.19	153,500	1.20	0.01
85-89.....	70,941	1.22	75,663	1.24	0.02
90-94.....	22,149	1.14	24,353	1.18	0.04
Over 94.....	4,675	1.01	5,300	1.06	0.05
By Retirement Class					
Prior to NRD	623,229	1.43	622,180	1.27	-0.16
On/After NRD	314,878	1.04	308,181	1.18	0.14
No Stated NRD	197,010	1.14	193,627	1.24	0.10
Past NRD/No Payment	184	0.63	180	0.41	-0.22
By Benefit Class					
Life only*	960,239	1.25	950,442	1.28	0.03
Life with period certain	79,608	1.23	78,507	1.00	-0.23
Cash refund	95,453	0.98	95,221	0.85	-0.13
By Survivor Class					
0% (single life)	759,767	1.24	742,959	1.26	0.02
> 0% - <= 50%	143,448	0.73	147,734	0.69	-0.04
> 50% - <= 75%	84,225	0.91	86,165	0.86	-0.05
> 75% - <= 100%	72,108	0.90	75,285	0.91	0.01
Unknown**	75,753	2.38	72,025	2.48	0.10
By Years Since Retirement					
0-1	76,214	1.45	71,262	1.42	-0.03
2-5	207,770	1.30	200,385	1.22	-0.08
6-10	300,044	1.26	279,601	1.21	-0.05
11 and Over	551,272	1.20	572,921	1.23	0.03
By Guaranteed Status					
Guaranteed	830,470	1.19	817,515	1.25	0.06
Non-Guaranteed	304,830	1.36	306,654	1.15	-0.21

* Includes Unknown, Temporary Life, and Life Only.

** Includes both cases where single or joint status is unknown
and where percent continuing to survivor is unknown.

TABLE 17A

SUMMARY OF GROUP ANNUITY MORTALITY EXPERIENCE BY MALE INCOME
 EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY STATIC
 (\$ THOUSANDS)

	1997		1998		Change in A/E Ratios
	Exposure	A/E Ratio	Exposure	A/E Ratio	
Total	6,125,617	1.13	6,246,105	1.10	-0.03
By Attained Age					
Under 55....	131,263	3.66	122,105	3.00	-0.66
55-59.....	448,110	1.67	456,996	1.56	-0.11
60-64.....	906,053	1.25	911,618	1.19	-0.06
65-69.....	1,409,675	1.10	1,363,857	0.99	-0.11
70-74.....	1,411,557	1.11	1,429,951	1.04	-0.07
75-79.....	1,027,408	1.08	1,084,009	1.10	0.02
80-84.....	522,858	1.15	574,815	1.12	-0.03
85-89.....	202,284	1.20	226,734	1.19	-0.01
90-94.....	54,084	1.09	62,246	1.14	0.05
Over 94.....	12,326	0.83	13,775	0.94	0.11
By Retirement Class					
Prior to NRD	3,758,554	1.32	3,869,916	1.14	-0.18
On/After NRD	1,442,526	0.94	1,457,425	1.06	0.12
No Stated NRD	923,245	1.04	917,128	1.10	0.06
Past NRD/No Payment	1,292	0.40	1,637	1.21	0.81
By Benefit Class					
Life only*	5,002,282	1.15	5,075,512	1.13	-0.02
Life with period certain	435,984	1.15	440,680	1.01	-0.14
Cash refund	687,351	0.92	729,914	0.92	0.00
By Survivor Class					
0% (single life)	3,402,469	1.17	3,429,325	1.16	-0.01
> 0% - <= 50%	1,032,431	0.61	1,073,122	0.55	-0.06
> 50% - <= 75%	706,048	0.77	750,067	0.68	-0.09
> 75% - <= 100%	370,330	0.83	393,025	0.76	-0.07
Unknown**	614,339	2.28	600,566	2.36	0.08
By Years Since Retirement					
0-1	562,514	1.23	527,573	1.23	0.00
2-5	1,469,551	1.10	1,431,409	0.99	-0.11
6-10	1,835,036	1.13	1,781,603	1.02	-0.11
11 and Over	2,258,516	1.13	2,505,521	1.14	0.01
By Guaranteed Status					
Guaranteed	3,728,967	1.07	3,737,721	1.14	0.07
Non-Guaranteed	2,396,650	1.28	2,508,384	1.02	-0.26

* Includes Unknown, Temporary Life, and Life Only.

** Includes both cases where single or joint status is unknown and where percent continuing to survivor is unknown.

TABLE 18A

SUMMARY OF GROUP ANNUITY MORTALITY EXPERIENCE BY FEMALE LIVES
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY STATIC

	1997		1998		Change in A/E Ratios
	Exposure	A/E Ratio	Exposure	A/E Ratio	
Total	678,561	1.21	684,056	1.22	0.01
By Attained Age					
Under 55....	15,385	4.81	15,047	3.88	-0.93
55-59.....	29,268	2.44	29,717	2.69	0.25
60-64.....	62,632	1.71	60,877	1.55	-0.16
65-69.....	116,470	1.30	111,797	1.29	-0.01
70-74.....	144,054	1.30	141,035	1.22	-0.08
75-79.....	134,750	1.19	137,655	1.20	0.01
80-84.....	97,532	1.18	102,132	1.20	0.02
85-89.....	53,248	1.18	57,536	1.21	0.03
90-94.....	20,245	1.15	22,396	1.22	0.07
Over 94.....	4,978	1.04	5,865	1.12	0.08
By Retirement Class					
Prior to NRD	322,723	1.45	325,604	1.23	-0.22
On/After NRD	219,652	1.05	219,980	1.20	0.15
No Stated NRD	136,152	1.15	138,443	1.25	0.10
Past NRD/No Payment	35	0.00	29	0.00	0.00
By Benefit Class					
Life only*	594,046	1.23	597,779	1.26	0.03
Life with period certain	40,664	1.17	41,524	1.07	-0.10
Cash refund	43,851	0.97	44,753	0.85	-0.12
By Survivor Class					
0% (single life)	590,694	1.23	590,525	1.25	0.02
> 0% - <= 50%	48,368	0.80	51,558	0.70	-0.10
> 50% - <= 75%	12,818	0.84	13,809	0.78	-0.06
> 75% - <= 100%	17,650	0.89	19,110	0.69	-0.20
Unknown**	9,031	2.69	9,054	2.65	-0.04
By Years Since Retirement					
0-1	49,211	1.49	42,771	1.45	-0.04
2-5	115,521	1.25	118,766	1.24	-0.01
6-10	175,623	1.26	164,296	1.23	-0.03
11 and Over	338,206	1.19	358,223	1.21	0.02
By Guaranteed Status					
Guaranteed	517,621	1.20	517,689	1.26	0.06
Non-Guaranteed	160,940	1.25	166,367	1.07	-0.18

* Includes Unknown, Temporary Life, and Life Only.

** Includes both cases where single or joint status is unknown
and where percent continuing to survivor is unknown.

TABLE 19A

SUMMARY OF GROUP ANNUITY MORTALITY EXPERIENCE BY FEMALE INCOME
 EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY STATIC
 (\$ THOUSANDS)

	1997		1998		Change in A/E Ratios
	Exposure	A/E Ratio	Exposure	A/E Ratio	
Total	1,786,568	1.22	1,855,615	1.21	-0.01
By Attained Age					
Under 55....	60,805	4.70	59,063	3.74	-0.96
55-59.....	116,197	2.05	125,721	2.65	0.60
60-64.....	219,513	1.62	220,799	1.46	-0.16
65-69.....	367,915	1.26	364,656	1.22	-0.04
70-74.....	409,512	1.24	412,953	1.18	-0.06
75-79.....	315,373	1.17	340,996	1.16	-0.01
80-84.....	179,780	1.22	197,875	1.21	-0.01
85-89.....	83,361	1.17	94,391	1.19	0.02
90-94.....	27,917	1.15	31,694	1.22	0.07
Over 94.....	6,195	0.94	7,468	1.09	0.15
By Retirement Class					
Prior to NRD	902,067	1.54	940,819	1.27	-0.27
On/After NRD	555,207	1.00	573,394	1.19	0.19
No Stated NRD	329,196	1.15	341,282	1.18	0.03
Past NRD/No Payment	99	0.00	120	0.00	0.00
By Benefit Class					
Life only*	1,527,142	1.25	1,579,047	1.24	-0.01
Life with period certain	134,329	1.00	140,991	1.07	0.07
Cash refund	125,097	1.05	135,577	1.03	-0.02
By Survivor Class					
0% (single life)	1,497,716	1.23	1,544,520	1.25	0.02
> 0% - <= 50%	143,922	0.84	154,699	0.78	-0.06
> 50% - <= 75%	49,111	0.91	53,481	0.86	-0.05
> 75% - <= 100%	56,559	0.92	62,405	0.58	-0.34
Unknown**	39,260	2.89	40,510	2.63	-0.26
By Years Since Retirement					
0-1	182,221	1.47	166,273	1.54	0.07
2-5	417,925	1.23	439,664	1.13	-0.10
6-10	522,404	1.18	502,824	1.23	0.05
11 and Over	664,017	1.22	746,854	1.21	-0.01
By Guaranteed Status					
Guaranteed	1,194,290	1.18	1,218,444	1.25	0.07
Non-Guaranteed	592,278	1.33	637,171	1.09	-0.24

* Includes Unknown, Temporary Life, and Life Only.

** Includes both cases where single or joint status is unknown and where percent continuing to survivor is unknown.

TABLE 24A

SUMMARY OF MORTALITY IMPROVEMENT FOR MALE LIVES
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY STATIC

ATTAINED AGE	Male Lives					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	5.06	5.62	4.81	4.80	5.31	4.07
55-59	2.18	2.05	2.04	2.02	2.14	2.11
60-64	1.49	1.46	1.51	1.54	1.49	1.48
65-69	1.28	1.30	1.25	1.26	1.28	1.22
70-74	1.27	1.24	1.24	1.23	1.23	1.22
75-79	1.27	1.27	1.24	1.21	1.21	1.23
80-84	1.23	1.22	1.22	1.18	1.19	1.20
85-89	1.25	1.24	1.22	1.20	1.22	1.24
90-94	1.15	1.20	1.18	1.11	1.14	1.18
OVER 94	1.11	1.08	1.05	1.07	1.01	1.06
TOTAL	1.26	1.26	1.24	1.21	1.22	1.23

ATTAINED AGE	ANNUAL IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.110	0.145	0.001	-0.107		
55-59	0.056	0.006	0.012	-0.061	0.012	0.005	0.001
60-64	0.020	-0.029	-0.021	0.034	0.005	0.002	-0.000
65-69	-0.018	0.039	-0.010	-0.016	0.048	0.009	0.008
70-74	0.029	-0.005	0.007	-0.001	0.008	0.008	0.006
75-79	-0.006	0.027	0.024	0.002	-0.015	0.006	0.010
80-84	0.008	-0.004	0.039	-0.013	-0.011	0.004	0.006
85-89	0.006	0.014	0.022	-0.021	-0.016	0.001	0.003
90-94	-0.045	0.016	0.057	-0.020	-0.037	-0.006	0.003
OVER 94	0.030	0.033	-0.025	0.056	-0.047	0.009	0.012
TOTAL	0.004	0.012	0.023	-0.008	-0.004	0.005	0.007

TABLE 25A

SUMMARY OF MORTALITY IMPROVEMENT FOR MALE INCOME
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY STATIC

ATTAINED AGE	Male Income					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	2.73	3.77	2.84	2.98	3.66	3.00
55-59	1.81	1.56	1.61	1.39	1.67	1.56
60-64	1.19	1.27	1.19	1.20	1.25	1.19
65-69	1.07	1.12	1.05	1.08	1.10	0.99
70-74	1.07	1.07	1.07	1.08	1.11	1.04
75-79	1.13	1.14	1.09	1.10	1.08	1.10
80-84	1.13	1.15	1.12	1.11	1.15	1.12
85-89	1.18	1.19	1.17	1.14	1.20	1.19
90-94	1.09	1.08	1.14	1.07	1.09	1.14
OVER 94	1.07	0.99	0.97	0.88	0.83	0.94
TOTAL	1.12	1.14	1.11	1.11	1.13	1.10

ATTAINED AGE	ANNUAL IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.377	0.246	-0.050	-0.225		
55-59	0.139	-0.035	0.137	-0.198	0.066	0.022	0.020
60-64	-0.066	0.061	-0.002	-0.044	0.044	-0.001	0.001
65-69	-0.049	0.065	-0.030	-0.022	0.100	0.013	0.011
70-74	-0.001	0.002	-0.010	-0.024	0.065	0.006	0.002
75-79	-0.008	0.039	-0.010	0.026	-0.020	0.005	0.008
80-84	-0.016	0.027	0.003	-0.029	0.026	0.002	0.002
85-89	-0.016	0.019	0.030	-0.060	0.009	-0.003	-0.002
90-94	0.001	-0.049	0.056	-0.020	-0.043	-0.011	-0.006
OVER 94	0.068	0.026	0.091	0.056	-0.136	0.021	0.035
TOTAL	-0.016	0.026	0.002	-0.021	0.027	0.004	0.004

TABLE 26A

SUMMARY OF MORTALITY IMPROVEMENT FOR FEMALE LIVES
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY STATIC

ATTAINED AGE	Female Lives					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	3.77	3.86	2.25	4.32	4.81	3.88
55-59	2.18	2.34	1.87	2.11	2.44	2.69
60-64	1.46	1.36	1.42	1.46	1.71	1.55
65-69	1.29	1.20	1.25	1.25	1.30	1.29
70-74	1.24	1.25	1.23	1.25	1.30	1.22
75-79	1.20	1.23	1.21	1.25	1.19	1.20
80-84	1.21	1.19	1.17	1.17	1.18	1.20
85-89	1.20	1.17	1.21	1.22	1.18	1.21
90-94	1.18	1.13	1.17	1.18	1.15	1.22
OVER 94	1.13	1.11	1.16	1.13	1.04	1.12
TOTAL	1.22	1.20	1.21	1.22	1.21	1.22

ATTAINED AGE	ANNUAL IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.026	0.418	-0.921	-0.115		
55-59	-0.072	0.202	-0.128	-0.159	-0.102	-0.052	-0.037
60-64	0.070	-0.049	-0.024	-0.172	0.092	-0.017	-0.030
65-69	0.070	-0.045	0.001	-0.042	0.011	-0.001	-0.007
70-74	-0.012	0.017	-0.012	-0.045	0.061	0.002	-0.002
75-79	-0.018	0.014	-0.037	0.049	-0.003	0.001	0.002
80-84	0.015	0.018	-0.003	-0.010	-0.014	0.001	0.001
85-89	0.023	-0.031	-0.012	0.037	-0.023	-0.001	-0.001
90-94	0.048	-0.035	-0.012	0.021	-0.060	-0.008	-0.007
OVER 94	0.014	-0.038	0.021	0.081	-0.079	-0.000	0.007
TOTAL	0.017	-0.001	-0.013	0.007	-0.007	0.000	-0.001

TABLE 27A

SUMMARY OF MORTALITY IMPROVEMENT FOR FEMALE INCOME
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY STATIC

ATTAINED AGE	Female Income					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	2.83	2.75	1.98	3.71	4.70	3.74
55-59	1.84	2.05	1.77	2.06	2.05	2.65
60-64	1.35	1.45	1.56	1.38	1.62	1.46
65-69	1.21	1.12	1.21	1.11	1.26	1.22
70-74	1.12	1.17	1.12	1.12	1.24	1.18
75-79	1.12	1.11	1.11	1.12	1.17	1.16
80-84	1.15	1.11	1.13	1.14	1.22	1.21
85-89	1.16	1.14	1.17	1.18	1.17	1.19
90-94	1.15	1.07	1.15	1.15	1.15	1.22
OVER 94	1.21	1.02	1.19	1.11	0.94	1.09
TOTAL	1.17	1.15	1.17	1.16	1.22	1.21

ATTAINED AGE	ANNUAL IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	0.026	0.280	-0.870	-0.267		
55-59	-0.114	0.138	-0.164	0.004	-0.292	-0.085	-0.058
60-64	-0.072	-0.077	0.118	-0.177	0.099	-0.022	-0.017
65-69	0.077	-0.077	0.081	-0.132	0.031	-0.004	-0.008
70-74	-0.037	0.036	0.004	-0.106	0.047	-0.011	-0.012
75-79	0.006	-0.002	-0.009	-0.045	0.007	-0.009	-0.011
80-84	0.039	-0.017	-0.017	-0.062	0.007	-0.010	-0.015
85-89	0.013	-0.023	-0.006	0.008	-0.019	-0.005	-0.006
90-94	0.069	-0.077	0.005	-0.003	-0.058	-0.013	-0.014
OVER 94	0.151	-0.164	0.070	0.151	-0.155	0.011	0.024
TOTAL	0.019	-0.018	0.008	-0.053	0.005	-0.008	-0.010

TABLE 24B

SUMMARY OF MORTALITY IMPROVEMENT FOR MALE LIVES
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY RESERVING TABLE

ATTAINED AGE	Male Lives					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	4.97	5.62	4.90	4.99	5.62	4.38
55-59	2.14	2.05	2.08	2.09	2.25	2.26
60-64	1.47	1.46	1.53	1.58	1.55	1.57
65-69	1.26	1.30	1.27	1.30	1.33	1.29
70-74	1.25	1.24	1.26	1.27	1.29	1.30
75-79	1.25	1.27	1.26	1.24	1.26	1.29
80-84	1.22	1.22	1.24	1.20	1.22	1.25
85-89	1.24	1.24	1.23	1.21	1.24	1.27
90-94	1.15	1.20	1.19	1.12	1.15	1.20
OVER 94	1.11	1.08	1.05	1.08	1.02	1.07
TOTAL	1.25	1.26	1.26	1.24	1.26	1.28

ATTAINED AGE	A/E IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.131	0.129	-0.019	-0.126		
55-59	0.040	-0.011	-0.005	-0.079	-0.005	-0.012	-0.016
60-64	0.006	-0.045	-0.036	0.020	-0.010	-0.013	-0.015
65-69	-0.032	0.026	-0.024	-0.030	0.035	-0.005	-0.006
70-74	0.014	-0.020	-0.009	-0.016	-0.007	-0.008	-0.009
75-79	-0.019	0.014	0.012	-0.011	-0.028	-0.006	-0.003
80-84	0.000	-0.012	0.031	-0.022	-0.019	-0.004	-0.002
85-89	-0.000	0.007	0.016	-0.027	-0.022	-0.005	-0.003
90-94	-0.049	0.012	0.054	-0.024	-0.041	-0.009	-0.001
OVER 94	0.029	0.031	-0.027	0.055	-0.049	0.008	0.010
TOTAL	-0.006	0.001	0.013	-0.018	-0.014	-0.005	-0.003

TABLE 25B

SUMMARY OF MORTALITY IMPROVEMENT FOR MALE INCOME
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY RESERVING TABLE

ATTAINED AGE	Male Income					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	2.68	3.77	2.90	3.10	3.87	3.24
55-59	1.78	1.56	1.64	1.44	1.75	1.67
60-64	1.17	1.27	1.21	1.23	1.30	1.27
65-69	1.05	1.12	1.06	1.11	1.15	1.05
70-74	1.06	1.07	1.09	1.12	1.16	1.10
75-79	1.11	1.14	1.11	1.13	1.12	1.15
80-84	1.12	1.15	1.13	1.13	1.18	1.16
85-89	1.17	1.19	1.18	1.15	1.23	1.22
90-94	1.08	1.08	1.14	1.08	1.11	1.16
OVER 94	1.06	0.99	0.97	0.88	0.84	0.95
TOTAL	1.11	1.14	1.13	1.14	1.17	1.15

ATTAINED AGE	A/E IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.404	0.231	-0.071	-0.249		
55-59	0.124	-0.052	0.122	-0.219	0.050	0.005	0.003
60-64	-0.082	0.047	-0.016	-0.059	0.030	-0.016	-0.013
65-69	-0.064	0.052	-0.044	-0.036	0.087	-0.001	-0.003
70-74	-0.016	-0.014	-0.026	-0.040	0.051	-0.009	-0.013
75-79	-0.021	0.026	-0.023	0.013	-0.033	-0.008	-0.004
80-84	-0.025	0.019	-0.005	-0.038	0.018	-0.006	-0.006
85-89	-0.022	0.012	0.024	-0.066	0.003	-0.010	-0.008
90-94	-0.002	-0.052	0.052	-0.023	-0.047	-0.014	-0.010
OVER 94	0.066	0.024	0.090	0.054	-0.138	0.019	0.033
TOTAL	-0.028	0.014	-0.009	-0.032	0.017	-0.008	-0.008

TABLE 26B

SUMMARY OF MORTALITY IMPROVEMENT FOR FEMALE LIVES
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY RESERVING TABLE

ATTAINED AGE	Female Lives					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	3.71	3.86	2.28	4.44	5.02	4.10
55-59	2.17	2.34	1.88	2.13	2.48	2.75
60-64	1.45	1.36	1.43	1.47	1.73	1.58
65-69	1.28	1.20	1.26	1.26	1.32	1.31
70-74	1.23	1.25	1.24	1.26	1.33	1.26
75-79	1.20	1.23	1.22	1.27	1.22	1.23
80-84	1.20	1.19	1.18	1.19	1.21	1.23
85-89	1.20	1.17	1.21	1.23	1.19	1.23
90-94	1.18	1.13	1.17	1.19	1.16	1.24
OVER 94	1.13	1.11	1.16	1.13	1.04	1.13
TOTAL	1.22	1.20	1.21	1.23	1.23	1.25

ATTAINED AGE	A/E IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.040	0.410	-0.947	-0.131		
55-59	-0.078	0.198	-0.134	-0.166	-0.108	-0.057	-0.043
60-64	0.065	-0.055	-0.029	-0.178	0.087	-0.022	-0.035
65-69	0.065	-0.051	-0.004	-0.047	0.006	-0.006	-0.012
70-74	-0.018	0.011	-0.019	-0.052	0.055	-0.005	-0.008
75-79	-0.026	0.007	-0.044	0.042	-0.011	-0.006	-0.005
80-84	0.008	0.011	-0.011	-0.017	-0.021	-0.006	-0.006
85-89	0.019	-0.035	-0.016	0.033	-0.028	-0.006	-0.006
90-94	0.046	-0.038	-0.015	0.018	-0.063	-0.010	-0.010
OVER 94	0.013	-0.039	0.019	0.079	-0.081	-0.002	0.006
TOTAL	0.012	-0.007	-0.018	0.001	-0.013	-0.005	-0.006

TABLE 27B

SUMMARY OF MORTALITY IMPROVEMENT FOR FEMALE INCOME
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY RESERVING TABLE

ATTAINED AGE	Female Income					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	2.79	2.75	2.01	3.81	4.89	3.94
55-59	1.83	2.05	1.78	2.08	2.09	2.71
60-64	1.35	1.45	1.57	1.39	1.64	1.49
65-69	1.21	1.12	1.21	1.12	1.28	1.24
70-74	1.12	1.17	1.13	1.13	1.26	1.21
75-79	1.11	1.11	1.12	1.14	1.20	1.20
80-84	1.14	1.11	1.13	1.16	1.24	1.24
85-89	1.15	1.14	1.17	1.19	1.18	1.21
90-94	1.15	1.07	1.16	1.16	1.16	1.23
OVER 94	1.20	1.02	1.19	1.11	0.95	1.09
TOTAL	1.16	1.15	1.17	1.17	1.24	1.24

ATTAINED AGE	A/E IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	0.013	0.270	-0.894	-0.284		
55-59	-0.120	0.133	-0.170	-0.001	-0.299	-0.091	-0.064
60-64	-0.077	-0.082	0.114	-0.183	0.094	-0.027	-0.022
65-69	0.073	-0.082	0.076	-0.138	0.026	-0.009	-0.013
70-74	-0.044	0.030	-0.002	-0.113	0.041	-0.017	-0.018
75-79	-0.001	-0.009	-0.017	-0.053	-0.001	-0.016	-0.019
80-84	0.032	-0.025	-0.024	-0.069	0.000	-0.017	-0.022
85-89	0.009	-0.028	-0.011	0.004	-0.023	-0.010	-0.010
90-94	0.067	-0.080	0.003	-0.006	-0.061	-0.015	-0.017
OVER 94	0.149	-0.165	0.069	0.150	-0.157	0.009	0.022
TOTAL	0.014	-0.023	0.002	-0.060	-0.001	-0.014	-0.016

TABLE 24C

SUMMARY OF MORTALITY IMPROVEMENT FOR MALE LIVES
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY BASIC

ATTAINED AGE	Male Lives					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	4.71	5.23	4.47	4.47	4.94	3.78
55-59	2.02	1.91	1.90	1.88	1.99	1.97
60-64	1.39	1.36	1.40	1.43	1.38	1.38
65-69	1.19	1.21	1.16	1.17	1.19	1.13
70-74	1.18	1.15	1.15	1.15	1.15	1.14
75-79	1.18	1.19	1.15	1.13	1.12	1.14
80-84	1.14	1.13	1.14	1.09	1.11	1.12
85-89	1.16	1.15	1.14	1.11	1.14	1.15
90-94	1.07	1.12	1.10	1.04	1.06	1.10
OVER 94	1.04	1.01	0.97	1.00	0.94	0.99
TOTAL	1.17	1.17	1.16	1.13	1.14	1.14

ATTAINED AGE	A/E IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.110	0.145	0.001	-0.107		
55-59	0.056	0.006	0.012	-0.061	0.012	0.005	0.001
60-64	0.020	-0.029	-0.021	0.034	0.005	0.002	-0.000
65-69	-0.018	0.039	-0.010	-0.016	0.048	0.009	0.008
70-74	0.029	-0.005	0.007	-0.001	0.008	0.008	0.006
75-79	-0.006	0.027	0.024	0.002	-0.015	0.006	0.010
80-84	0.008	-0.004	0.039	-0.013	-0.011	0.004	0.006
85-89	0.006	0.014	0.022	-0.021	-0.016	0.001	0.003
90-94	-0.045	0.016	0.057	-0.020	-0.037	-0.006	0.003
OVER 94	0.030	0.033	-0.025	0.056	-0.047	0.009	0.012
TOTAL	0.004	0.012	0.023	-0.008	-0.004	0.005	0.007

TABLE 25C

SUMMARY OF MORTALITY IMPROVEMENT FOR MALE INCOME
FOR CALENDAR-YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY BASIC

ATTAINED AGE	Male Income					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	2.54	3.50	2.64	2.78	3.40	2.79
55-59	1.68	1.45	1.50	1.29	1.55	1.45
60-64	1.11	1.18	1.11	1.11	1.16	1.11
65-69	0.99	1.04	0.97	1.00	1.02	0.92
70-74	1.00	1.00	1.00	1.01	1.03	0.97
75-79	1.05	1.06	1.02	1.03	1.00	1.02
80-84	1.05	1.07	1.04	1.04	1.07	1.04
85-89	1.09	1.11	1.09	1.06	1.12	1.11
90-94	1.01	1.01	1.06	1.00	1.02	1.06
OVER 94	0.99	0.93	0.90	0.82	0.77	0.88
TOTAL	1.05	1.06	1.03	1.03	1.05	1.02

ATTAINED AGE	A/E IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.377	0.246	-0.050	-0.225		
55-59	0.139	-0.035	0.137	-0.198	0.066	0.022	0.020
60-64	-0.066	0.061	-0.002	-0.044	0.044	-0.001	0.001
65-69	-0.049	0.065	-0.030	-0.022	0.100	0.013	0.011
70-74	-0.001	0.002	-0.010	-0.024	0.065	0.006	0.002
75-79	-0.008	0.039	-0.010	0.026	-0.020	0.005	0.008
80-84	-0.016	0.027	0.003	-0.029	0.026	0.002	0.002
85-89	-0.016	0.019	0.030	-0.060	0.009	-0.003	-0.002
90-94	0.001	-0.049	0.056	-0.020	-0.043	-0.011	-0.006
OVER 94	0.068	0.026	0.091	0.056	-0.136	0.021	0.035
TOTAL	-0.016	0.026	0.002	-0.021	0.027	0.004	0.004

TABLE 26C

SUMMARY OF MORTALITY IMPROVEMENT FOR FEMALE LIVES
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY BASIC

ATTAINED AGE	Female Lives					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	3.50	3.59	2.09	4.01	4.48	3.61
55-59	2.03	2.18	1.74	1.96	2.27	2.50
60-64	1.36	1.26	1.32	1.36	1.59	1.44
65-69	1.20	1.11	1.16	1.16	1.21	1.20
70-74	1.15	1.17	1.15	1.16	1.21	1.14
75-79	1.12	1.14	1.12	1.17	1.11	1.11
80-84	1.12	1.11	1.09	1.09	1.10	1.12
85-89	1.12	1.09	1.12	1.14	1.10	1.12
90-94	1.10	1.05	1.08	1.10	1.07	1.14
OVER 94	1.05	1.04	1.07	1.05	0.97	1.04
TOTAL	1.14	1.12	1.12	1.14	1.13	1.14

TABLE 26C
SUMMARY OF MORTALITY IMPROVEMENT FOR FEMALE LIVES
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY BASIC

ATTAINED AGE	A/E IMPROVEMENT FACTORS						ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993	1994	1995	1996	1997	1998		
	TO 1994	TO 1995	TO 1996	TO 1997	TO 1998			
UNDER 55	-0.026	0.418	-0.921	-0.115	0.193	-0.090	-0.043	
55-59	-0.072	0.202	-0.128	-0.159	-0.102	-0.052	-0.037	
60-64	0.070	-0.049	-0.024	-0.172	0.092	-0.017	-0.030	
65-69	0.070	-0.045	0.001	-0.042	0.011	-0.001	-0.007	
70-74	-0.012	0.017	-0.012	-0.045	0.061	0.002	-0.002	
75-79	-0.018	0.014	-0.037	0.049	-0.003	0.001	0.002	
80-84	0.015	0.018	-0.003	-0.010	-0.014	0.001	0.001	
85-89	0.023	-0.031	-0.012	0.037	-0.023	-0.001	-0.001	
90-94	0.048	-0.035	-0.012	0.021	-0.060	-0.008	-0.007	
OVER 94	0.014	-0.037	0.021	0.081	-0.079	-0.000	0.007	
TOTAL	0.017	-0.001	-0.013	0.007	-0.007	0.000	-0.001	

TABLE 27C

SUMMARY OF MORTALITY IMPROVEMENT FOR FEMALE INCOME
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY BASIC

ATTAINED AGE	Female Income					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	2.63	2.56	1.84	3.45	4.37	3.48
55-59	1.72	1.91	1.65	1.92	1.91	2.47
60-64	1.26	1.35	1.45	1.28	1.51	1.36
65-69	1.13	1.04	1.12	1.03	1.17	1.13
70-74	1.05	1.08	1.04	1.04	1.15	1.10
75-79	1.04	1.03	1.03	1.04	1.09	1.08
80-84	1.07	1.03	1.05	1.06	1.13	1.12
85-89	1.08	1.06	1.09	1.09	1.08	1.11
90-94	1.07	1.00	1.07	1.07	1.07	1.13
OVER 94	1.12	0.95	1.11	1.03	0.88	1.01
TOTAL	1.09	1.07	1.08	1.08	1.13	1.13

ATTAINED AGE	A/E IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	0.026	0.280	-0.870	-0.267		
55-59	-0.114	0.138	-0.164	0.004	-0.292	-0.085	-0.058
60-64	-0.072	-0.077	0.118	-0.177	0.099	-0.022	-0.017
65-69	0.077	-0.077	0.081	-0.132	0.031	-0.004	-0.008
70-74	-0.037	0.036	0.004	-0.106	0.047	-0.011	-0.012
75-79	0.006	-0.002	-0.009	-0.045	0.007	-0.009	-0.011
80-84	0.039	-0.017	-0.017	-0.062	0.007	-0.010	-0.015
85-89	0.013	-0.023	-0.006	0.008	-0.019	-0.005	-0.006
90-94	0.069	-0.077	0.005	-0.003	-0.058	-0.013	-0.014
OVER 94	0.151	-0.163	0.070	0.151	-0.155	0.011	0.024
TOTAL	0.019	-0.018	0.008	-0.053	0.005	-0.008	-0.010

TABLE 24D

SUMMARY OF MORTALITY IMPROVEMENT FOR MALE LIVES
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY BASIC WITH PROJECTION

ATTAINED AGE	Male Lives					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	4.62	5.23	4.55	4.64	5.22	4.07
55-59	1.99	1.91	1.93	1.94	2.09	2.10
60-64	1.37	1.36	1.42	1.47	1.44	1.46
65-69	1.17	1.21	1.18	1.21	1.24	1.20
70-74	1.17	1.15	1.17	1.18	1.20	1.21
75-79	1.16	1.19	1.17	1.15	1.17	1.20
80-84	1.13	1.13	1.15	1.11	1.14	1.16
85-89	1.15	1.15	1.14	1.13	1.16	1.18
90-94	1.07	1.12	1.10	1.04	1.07	1.11
OVER 94	1.04	1.01	0.97	1.00	0.95	0.99
TOTAL	1.16	1.17	1.17	1.15	1.17	1.19

ATTAINED AGE	A/E IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.131	0.129	-0.019	-0.126		
55-59	0.040	-0.011	-0.005	-0.079	-0.005	-0.012	-0.016
60-64	0.006	-0.045	-0.036	0.020	-0.010	-0.013	-0.015
65-69	-0.032	0.026	-0.024	-0.030	0.035	-0.005	-0.006
70-74	0.014	-0.020	-0.009	-0.016	-0.007	-0.008	-0.009
75-79	-0.019	0.014	0.012	-0.011	-0.028	-0.006	-0.003
80-84	0.000	-0.012	0.031	-0.022	-0.019	-0.004	-0.002
85-89	-0.000	0.007	0.016	-0.027	-0.022	-0.005	-0.003
90-94	-0.049	0.012	0.054	-0.024	-0.041	-0.009	-0.001
OVER 94	0.029	0.032	-0.027	0.055	-0.049	0.008	0.011
TOTAL	-0.006	0.001	0.013	-0.018	-0.014	-0.005	-0.003

TABLE 25D

SUMMARY OF MORTALITY IMPROVEMENT FOR MALE INCOME
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY BASIC WITH PROJECTION

ATTAINED AGE	Male Income					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	2.50	3.50	2.69	2.89	3.60	3.02
55-59	1.65	1.45	1.53	1.34	1.63	1.55
60-64	1.09	1.18	1.13	1.14	1.21	1.18
65-69	0.98	1.04	0.99	1.03	1.07	0.97
70-74	0.98	1.00	1.01	1.04	1.08	1.03
75-79	1.04	1.06	1.03	1.05	1.04	1.07
80-84	1.04	1.07	1.05	1.05	1.09	1.07
85-89	1.09	1.11	1.10	1.07	1.14	1.14
90-94	1.01	1.01	1.06	1.01	1.03	1.08
OVER 94	0.99	0.93	0.90	0.82	0.78	0.88
TOTAL	1.03	1.06	1.05	1.06	1.09	1.07

ATTAINED AGE	A/E IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.404	0.231	-0.071	-0.249		
55-59	0.124	-0.052	0.122	-0.219	0.050	0.005	0.003
60-64	-0.082	0.047	-0.016	-0.059	0.030	-0.016	-0.013
65-69	-0.064	0.052	-0.044	-0.036	0.087	-0.001	-0.003
70-74	-0.016	-0.014	-0.026	-0.040	0.051	-0.009	-0.013
75-79	-0.021	0.026	-0.023	0.013	-0.033	-0.008	-0.004
80-84	-0.025	0.019	-0.005	-0.038	0.018	-0.006	-0.006
85-89	-0.022	0.012	0.024	-0.066	0.003	-0.010	-0.008
90-94	-0.002	-0.052	0.052	-0.023	-0.047	-0.014	-0.010
OVER 94	0.066	0.025	0.090	0.054	-0.138	0.019	0.033
TOTAL	-0.028	0.014	-0.009	-0.032	0.017	-0.008	-0.008

TABLE 26D

SUMMARY OF MORTALITY IMPROVEMENT FOR FEMALE LIVES
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY BASIC WITH PROJECTION

ATTAINED AGE	Female Lives					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	3.45	3.59	2.12	4.12	4.67	3.82
55-59	2.02	2.18	1.75	1.98	2.31	2.56
60-64	1.35	1.26	1.33	1.37	1.61	1.47
65-69	1.19	1.11	1.17	1.17	1.23	1.22
70-74	1.15	1.17	1.15	1.17	1.24	1.17
75-79	1.11	1.14	1.13	1.18	1.13	1.15
80-84	1.11	1.11	1.09	1.11	1.12	1.15
85-89	1.11	1.09	1.13	1.15	1.11	1.14
90-94	1.10	1.05	1.09	1.10	1.08	1.15
OVER 94	1.05	1.04	1.08	1.06	0.97	1.05
TOTAL	1.13	1.12	1.13	1.15	1.15	1.16

ATTAINED AGE	A/E IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	-0.040	0.410	-0.947	-0.131		
55-59	-0.078	0.198	-0.134	-0.166	-0.108	-0.057	-0.043
60-64	0.065	-0.055	-0.029	-0.178	0.087	-0.022	-0.035
65-69	0.065	-0.051	-0.004	-0.047	0.006	-0.006	-0.012
70-74	-0.018	0.011	-0.019	-0.052	0.055	-0.005	-0.008
75-79	-0.026	0.007	-0.044	0.042	-0.011	-0.006	-0.005
80-84	0.008	0.011	-0.011	-0.017	-0.021	-0.006	-0.006
85-89	0.019	-0.035	-0.016	0.033	-0.028	-0.006	-0.006
90-94	0.046	-0.038	-0.015	0.018	-0.063	-0.010	-0.010
OVER 94	0.013	-0.039	0.019	0.079	-0.081	-0.002	0.006
TOTAL	0.012	-0.007	-0.018	0.001	-0.013	-0.005	-0.006

TABLE 27D

SUMMARY OF MORTALITY IMPROVEMENT FOR FEMALE INCOME
FOR CALENDAR YEARS 1993 TO 1998
EXPECTED MORTALITY BASIS-1994 GROUP ANNUITY MORTALITY BASIC WITH PROJECTION

ATTAINED AGE	Female Income					
	Actual to Expected					
	1993	1994	1995	1996	1997	1998
UNDER 55	2.59	2.56	1.87	3.54	4.55	3.67
55-59	1.71	1.91	1.66	1.94	1.94	2.52
60-64	1.25	1.35	1.46	1.29	1.53	1.38
65-69	1.12	1.04	1.13	1.04	1.19	1.15
70-74	1.04	1.08	1.05	1.05	1.17	1.12
75-79	1.03	1.03	1.04	1.06	1.11	1.12
80-84	1.06	1.03	1.05	1.08	1.15	1.15
85-89	1.07	1.06	1.09	1.10	1.10	1.13
90-94	1.07	1.00	1.08	1.07	1.08	1.15
OVER 94	1.12	0.95	1.11	1.03	0.88	1.02
TOTAL	1.08	1.07	1.09	1.09	1.15	1.15

ATTAINED AGE	A/E IMPROVEMENT FACTORS					ARITHMETIC AVERAGE	LOGLINEAR REGRESSION SLOPE
	1993 TO 1994	1994 TO 1995	1995 TO 1996	1996 TO 1997	1997 TO 1998		
	UNDER 55	0.013	0.270	-0.894	-0.284		
55-59	-0.120	0.133	-0.170	-0.001	-0.299	-0.091	-0.064
60-64	-0.077	-0.082	0.114	-0.183	0.094	-0.027	-0.022
65-69	0.073	-0.082	0.076	-0.138	0.026	-0.009	-0.013
70-74	-0.044	0.030	-0.002	-0.113	0.041	-0.017	-0.018
75-79	-0.001	-0.009	-0.017	-0.053	-0.001	-0.016	-0.019
80-84	0.032	-0.025	-0.024	-0.069	0.000	-0.017	-0.022
85-89	0.009	-0.028	-0.011	0.004	-0.023	-0.010	-0.010
90-94	0.067	-0.080	0.003	-0.006	-0.061	-0.015	-0.017
OVER 94	0.149	-0.165	0.069	0.150	-0.157	0.009	0.023
TOTAL	0.014	-0.023	0.002	-0.060	-0.001	-0.014	-0.016