

**Society of Actuaries**

**2005-08 Individual Payout**

**Annuity Experience Report**

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# MORTALITY EXPERIENCE UNDER INDIVIDUAL PAYOUT ANNUITIES FOR CALENDAR YEARS 2005 THROUGH 2008

## I. OVERVIEW OF THE STUDY

The Individual Annuity Experience Committee of the Society of Actuaries has conducted an experience study of individual payout annuities, covering calendar years 2005 through 2008. The intent of this study is to provide recent annuitant mortality experience which can be compared to the Annuity 2000 Mortality Table, and the recently completed 2012 Individual Annuity Mortality Table. Sixteen companies contributed data to the study. This is the same number as the last study, but the company mix is different.

The study includes immediate annuities, annuitizations, and life settlement options of life insurance and annuity death claims. The request for data that went out to companies included substandard annuities, but the results were excluded from the study as insufficient data on substandard annuities was provided by the participating companies. Data for variable payout annuities was requested as part of this study, but not included in the report. Structured settlement annuities are excluded from this report, as the mortality experience on this specialized block is being compiled and studied separately.

This study provides a comprehensive review of intercompany mortality for individual payout annuities in the United States. The 2012 Individual Annuity Mortality Table was developed from the prior 2000-04 experience study and was validated against a preliminary version of the data in this study.

Note that the Annuity 2000 Mortality Table was not based on updated intercompany experience, but rather drew upon general population data to bring forward the 1983 IAM Table (a.k.a. 1983 Table *a*) based on 100% of male Scale G and 50% of female Scale G. As such, it was intended to be used only as an interim table, awaiting the results of a more robust intercompany annuitant study. The 1983 IAM Table was based on an intercompany experience study covering the years 1971 through 1976. There was another mortality study conducted covering 1976 through 1986, in which only eight companies participated. This latter study was reported in the Transactions of Society of Actuaries 1991-92 Reports, and served to validate the adequacy of the 1983 IAM Table at that time.

The study is based on attained ages using a calendar year approach, with the exposure split into contract year (duration) categories to allow analysis of the effect of selection over time. The results of the study are reported through Actual to Expected (A/E) ratios, with expected deaths based on the Annuity 2000 Basic Mortality Table, the 1983 Individual Annuity Mortality Basic Table, the 2012 Individual Annuity Mortality Basic Table, and the 2012 Individual Annuity Mortality “G2 for 5” Basic Table (see next paragraph). Note, that as “basic” tables, these four tables exclude the loading of 10% that was deducted from the mortality rates of the basic tables to develop their respective corresponding valuation tables. The 10% loading in the 1971, 1983, 2000, and 2012 tables was not intended to provide for any future improvement in mortality but rather to provide a safety margin to allow for the fact that some companies experience lower than average annuitant mortality.

The 2012 Individual Annuity Mortality “G2 for 5” Basic Table is the 2012 Individual Annuity Mortality Basic Table with the mortality rates backdated (increased) for five years using Projection Scale G2 that was published with the 2012 Individual Annuity Mortality Table. This produces a mortality table representative of the year 2007. This is not quite the center of the 2005-08 period, but is a reasonable approximation when it is noted that the exposures increase steadily over the four experience years.

An expanded comparison of the experience to an adjusted 2012 table is being prepared. In this, the experience of 2005 will be compared to a table that has been adjusted to the year 2005, with similar

comparisons for the other three experience years. A report of this will be published as a supplement to this report.

The current study encompasses over 2.6 million contract-years exposed, over \$12.2 billion in annual income-years exposed and over 132,000 deaths. In the 2000-04 study, one participating company provided a disproportionately high contribution of data, so that company's experience was weighted 50% in the combined-company results. After reflecting this adjustment, the study encompassed over 1.8 million contract-years exposed, almost \$7.5 billion in annual income-years exposed and over 82,000 deaths. (It was felt that no such adjustment was needed in the 2005-08 data because no one company made a disproportionately high contribution.) Note that there were five study years in the 2000-04 study and four in the current study.

The experience data was analyzed considering many significant dimensions in addition to age and gender including contract year, contract type, benefit class, tax class, and income band. Contract type refers to the previously-mentioned immediate annuities, annuitizations, and life settlement options. The life settlement options are further distinguished by source, i.e., death benefit or surrender/maturity benefit, annuity or life insurance death claim. Benefit class refers to whether the annuity is on a single life or on joint lives and whether the annuity contract has a refund feature, such as a period certain, cash refund or installment refund. Another classification, annuity type, simply consolidates the benefit classes into broader non refund and refund categories. The income bands were based on annual payout amounts, and the inclusion of this perspective allows analysis by size of the payout.

Unlike most prior studies, all sixteen participating companies contributed data for each year of the four year experience period.

### **Disclaimer**

This report is published by the Society of Actuaries (SOA) and contains information from a variety of sources. It may or may not reflect the experience of any individual company, and use of the information and conclusions contained in the report may not be appropriate in all circumstances. The SOA makes no warranty, express or implied, or representation whatsoever and assumes no liability in connection with the use or misuse of this report.

The following sixteen companies participated in this study:

Allstate	Penn Insurance & Annuity
AXA Equitable	Penn Mutual Life
Jackson National Life	Principal Life
Lincoln National	Prudential
MetLife	Standard
Nationwide Financial	Thrivent
New York Life	TIAA-CREF
Northwestern Mutual	Western & Southern

## II. TABLES OF ACTUAL-TO-EXPECTED MORTALITY RATIOS

Several actual-to-expected tables of interest have been included in the Appendix. A description of these tables is given below. Each table includes actual-to-expected mortality ratios based on contract count and annual income amount. Each table shows actual-to-expected mortality ratios using the Annuity 2000 Basic Mortality Table, as the expected basis. All tables, except Tables 5a and 5b, also show actual-to-expected mortality ratios using the 2012 IAM “G2 for 5” Basic Table as the expected basis. In addition, Tables 1a, 1b, 1c, 1d, and 1e show actual-to-expected mortality ratios using the 1983 IAM Basic Table and the 2012 IAM Basic Table as the expected basis.

Actual-to-expected mortality ratios are only shown for cells that contain at least 35 contracts terminated by death. Cells with at least 400 deaths are also noted. Caution should be used when comparing results from various cells within the tables as the credibility of each cell will be different. This is especially the case when using the accompanying pivot table.

### **Table 1a: Nonrefund Annuities by Attained Age, Contract Year, and Gender**

This table shows results for annuities with no certain period or refund feature (nonrefund). A-to-E ratios are shown by gender, attained age, and contract year, based on the Annuity 2000 Basic Table, the 1983 IAM Basic Table, the 2012 IAM Basic Table, and the 2012 IAM “G2 for 5” Basic Table.

### **Table 1b: Refund Annuities by Attained Age, Contract Year, and Gender**

This table shows results for annuities with a certain period or refund feature (refund). A-to-E ratios are shown by gender, attained age, and contract year, based on the Annuity 2000 Basic Table, the 1983 IAM Basic Table, the 2012 IAM Basic Table, and the 2012 IAM “G2 for 5” Basic Table.

### **Table 1c: Overall Results (Refund plus Nonrefund Annuities) by Attained Age, Contract Year, and Gender**

This table shows combined results for refund and non-refund annuities. A-to-E ratios are shown by gender, attained age, and contract year, based on the Annuity 2000 Basic Table, the 1983 IAM Basic Table, the 2012 IAM Basic Table, and the 2012 IAM “G2 for 5” Basic Table.

*Note: This table also contains a number of annuities where the Annuity Type is either Not Coded or Invalid, or Unknown. The number of such cases is vanishingly small in the current study, but did encompass nearly 4% of the deaths in the 2000-04 study.*

### **Table 1d: Nonrefund Annuities by Contract Type, Contract Year, and Gender**

This table shows results for annuities with no certain period or refund feature (nonrefund). A-to-E ratios are shown by gender, contract type, and contract year, based on the Annuity 2000 Basic Table, the 1983 IAM Basic Table, the 2012 IAM Basic Table, and the 2012 IAM “G2 for 5” Basic Table.

### **Table 1e: Refund Annuities by Contract Type, Contract Year, and Gender**

This table shows results for annuities with a certain period or refund feature (refund). A-to-E ratios are shown by gender, contract type, and contract year, based on the Annuity 2000 Basic Table, the 1983 IAM Basic Table, the 2012 IAM Basic Table, and the 2012 IAM “G2 for 5” Basic Table.

### **Table 2a: Nonrefund and Refund Annuities by Annual Income, Contract Year, and Gender**

This table shows results for both refund and nonrefund annuities. A-to-E ratios are shown by gender, annual income amount (in 8 income bands), and contract year, based on the Annuity 2000 Basic Table and the 2012 IAM “G2 for 5” Basic Table.

### **Table 2b1: Nonrefund and Refund Annuities by Annual Income, Contract Year, and Contract Type**

This table shows results for both refund and nonrefund annuities. A-to-E ratios are shown by contract type (immediate annuities vs. annuitizations vs. settlement options), annual income amount (in 3 income bands), and contract year, based on the Annuity 2000 Basic Table and the 2012 IAM “G2 for 5” Basic Table.

**Table 2b2: Qualified Nonrefund and Refund Annuities by Annual Income, Contract Year, and Contract Type**

This table shows results for both refund and nonrefund annuities for tax qualified contracts only. A-to-E ratios are shown by contract type (immediate annuities vs. annuitizations vs. settlement options), annual income amount (in 3 income bands), and contract year, based on the Annuity 2000 Basic Table and the 2012 IAM “G2 for 5” Basic Table.

**Table 2b3: Nonqualified Nonrefund and Refund Annuities by Annual Income, Contract Year, and Contract Type**

This table shows results for both refund and nonrefund annuities for nonqualified contracts only. A-to-E ratios are shown by contract type (immediate annuities vs. annuitizations vs. settlement options), annual income amount (in 3 income bands), and contract year, based on the Annuity 2000 Basic Table and the 2012 IAM “G2 for 5” Basic Table.

**Table 3a: Nonrefund and Refund Immediate Annuities by Attained Age, Contract Year, and Gender**

This table shows results for both refund and nonrefund annuities for immediate annuity contracts only. A-to-E ratios are shown by gender, attained age, and contract year, based on the Annuity 2000 Basic Table and the 2012 IAM “G2 for 5” Basic Table

**Table 3b: Nonrefund and Refund Annuitizations by Attained Age, Contract Year, and Gender**

This table shows results for both refund and nonrefund annuities for annuitized contracts only. A-to-E ratios are shown by gender, attained age, and contract year, based on the Annuity 2000 Basic Table and the 2012 IAM “G2 for 5” Basic Table.

**Table 3c: Nonrefund and Refund Settlement Options by Attained Age, Contract Year, and Gender**

This table shows results for both refund and nonrefund annuities for settlement option contracts only. A-to-E ratios are shown by gender, attained age, and contract year, based on the Annuity 2000 Basic Table and the 2012 IAM “G2 for 5” Basic Table.

**Table 4: Nonrefund and Refund Annuities by Single Life vs. Joint Life, Contract Type, Contract Year, and Gender**

This table gives results for both refund and nonrefund annuities. The results are broken down by gender, single life vs. joint life income options, contract type, and contract year, based on the Annuity 2000 Basic Table and the 2012 IAM “G2 for 5” Basic Table. For joint life options, if both annuitants were alive at the beginning of the calendar year of study, the reported experience is for the primary annuitant only. If only one annuitant was alive at the beginning of the calendar year of study, the reported experience is for the surviving annuitant.

**Table 5a: Nonrefund and Refund Annuities by Attained Age, Study Year, and Gender, All Companies**

This table gives results for both refund and nonrefund annuities. The results are shown by gender, attained age, and study year (2000-2008). All companies are included in the table. Values are based on the Annuity 2000 Basic Table.

**Table 5b: Nonrefund and Refund Annuities by Attained Age, Study Year, and Gender, Seven Companies Contributing Experience to All Years 2000-2008**

This table gives results for both refund and nonrefund annuities. The results are shown by gender, attained age, and study year (2000-2008). This table gives results for the seven companies that contributed experience to all calendar years 2000 through 2008. Values are based on the Annuity 2000 Basic Table.

In addition, Tables 6a, 6b and 6c have been included with data from the 2000-04 study and this study (2005-08). These include A/E ratios on only the Annuity 2000 Basic Table and the 1983 IAM Basic Table.

### III. PRINCIPAL OBSERVATIONS

While measurements using the two 2012 tables are the significant new feature in this study, comparisons using the Annuity 2000 Basic table and the 1983 IAM Basic Table facilitate comparisons to the 2000-04 report.

With expected mortality based on the Annuity 2000 Basic table, the overall income-weighted; i.e., by amount, A/E ratios (combining all companies, study years, contract years, attained ages, benefit classes, annuity types, income groups, underwriting classes, tax classes, contract types) are 0.895 for males and 0.932 for females. These compare to values of 0.929 for males and 0.977 for females in the 2000-04 report and imply yearly 0.8% mortality improvement for males and 1.1% for females over the nominal 4.5 years between the two studies. These values are, perhaps, a bit less than expected from other sources. This is not an absolute comparison, given the differences in contributing companies between the two studies. (These overall results are shown in Table 1c.)

The current study continues to show that A/E ratios for non-refund annuities are generally lower than those for refund annuities in the early durations, possibly indicating “self-selection” by annuitants with respect to their health status. The “selection” effect is very noticeable for non-refund annuities, as the A/E ratios in contract years 1-5 are well below the ratios in years 6-10 and beyond (where the impact of selection appears to have worn off to a large extent). The same pattern is not evident for refund annuities.

This pattern can be examined in Tables 1a and 1b that show A/E ratios for non-refund annuities and refund annuities, respectively (and noting that refund annuities make up over 80% of the total experience). However, the differential in the current study is less than in the 2000-04 study with non-refund A/E overall ratios actually increasing from the 2000-04 study to the current study, .789 to .846 for males and .819 to .861 for females. The refund ratios did decline, .973 to .906 for males and 1.038 to .952 for females, as might have been expected. The lower ratios for non-refund annuities suggest that a lower level of mortality may need to be considered in calculating reserves for such contracts.

Tables 2b1 examines the refund and non-refund experience in more detail, adding information by Contract Type and Income Band, Tables 2b2 and 2b3 further the comparisons by adding detail by qualified and non-qualified business. In the past the differences in A/E ratios between non-refund and refund annuities were more pronounced for non-qualified business than for qualified business. In the current study, the differences are similar, and significant, between qualified and non-qualified business for Immediate Annuities. For Annuitizations and Settlements, the prior pattern held (difference more significant for non-qualified business). Within the qualified business, the pattern of A/E ratios is mixed with the ratios for annuitizations and settlements with especially limited data for non-refund settlements.

Table 5a shows results for each calendar year of the current and 2000-04 studies for the nine study years. (All data from the 2000-04 study is included in this table even though only ten of the sixteen companies contributed data for all years in the 2000-04. All sixteen companies contributed to all years in the current study.) For females, both the prior study (2000-2004) and the current study (2005-2008) display a general trend of declining overall mortality ratios over the period for non-refund annuities, but the pattern was almost flat for refund annuities. This was true both by number of contracts and amount of annual income.

For males, for non-refund annuities, the pattern by number of contracts is somewhat different between the two studies. In the 2000-04 study, the ratios were relatively flat whereas there is a decreasing pattern in the current study. By amount of annual income, the pattern was relatively flat in both studies, but at a higher level in the current study. For refund annuities, by both number and amount, ratios were relatively flat in the 2000-04 study and increasing slightly in the current study, but at a level below that of the earlier study.

Table 5b displays the same results as Table 5a, but only for the seven companies that contributed data to all nine years of the 2000-08 period.

The slopes of linear regressions of the successive calendar year mortality ratios for all ages combined are consistent with annual mortality improvements in the 2 to 3% range for nonrefund annuities, while the slopes for refund annuities are consistent with negative improvement for males and little or no improvement for females. The table below includes the slope values for the linear regressions for the current study as well as the previous study.

Linear Regression Slope Values of Successive Calendar Year Mortality Ratios			
Income Weighted A/E Ratios			
		Current Study (2005-2008)	Previous Study (2000-2004)
Nonrefund	Male	-0.0160	-0.0500
	Female	-0.0220	-0.0330
Refund	Male	0.0140	-0.0100
	Female	-0.0040	0.0320
Unweighted Contract A/E Ratios			
		Current Study (2005-2008)	Previous Study (2000-2004)
Nonrefund	Male	-0.0320	-0.0100
	Female	-0.0360	-0.0320
Refund	Male	0.0110	-0.0120
	Female	0.0003	0.0170

Tables 1a, 1b, 1c, 1d, and 1e also show A/E ratios based on the 1983 IAM Basic mortality table. This expected basis allows the calculation of mortality improvement from 1983 to the midpoint of the current study. This calculation does indicate an overall yearly mortality improvement of 1.35% for males and 0.82% for females for refund annuities over this extended period. The improvement rates were greater for non-refund annuities (1.58% and 1.15%).

The study results also show a strong indication of “self-selection” by annuity income levels, with significantly lower A/E ratios for the higher income bands and with the A/E ratios decreasing steadily, with only one exception, as the income band increased. As shown in the following table, for male lives, overall A/E ratios decrease monotonically with increasing income bands from a high of 1.076 for annual annuity incomes less than \$2,500 to a low of 0.711 for annual incomes of \$50,000 and above. The same trend of decreasing A/E ratios with increasing income bands is observed for female lives. The pattern was quite similar in the 2000-04 study, except for the \$50,000 and over amount band which does have more limited experience in both studies. This pattern does suggest that extra care should be taken in the setting of premiums and reserves for annuities of larger amounts.

Overall Mortality Ratios By Gender and Annual Income  
Based on 2000 Annuity Basic Table  
For Experience Years 2005 to 2008

Income Group	Based on Number of Contracts		Based on Amount of Annual Income	
	Male	Female	Male	Female
Up to \$2,499	1.094	1.079	1.076	1.047
\$2,500-\$4,999	0.995	0.978	0.993	0.972
\$5,000-\$7,499	0.956	0.952	0.957	0.953
\$7,500-\$9,999	0.934	0.914	0.934	0.914
\$10,000-\$14,999	0.900	0.931	0.896	0.930
\$15,000-\$24,999	0.833	0.891	0.831	0.889
\$25,000-\$49,999	0.775	0.838	0.768	0.838
\$50,000+	0.736	0.817	0.711	0.694
Grand Total	1.023	1.032	0.895	0.932

There are 239 male deaths and 132 female deaths in the \$50,000 and over amount band. There are over 500 deaths in each of the other amount bands.

This pattern can be examined in more detail in Table 2a, which shows A/E ratios based on the Annuity 2000 Basic Table by income bands and by contract duration for non-refund and refund annuities. More detail is given in Tables 2b1, 2b2 and 2b3, where contract type and qualification status are added to the display. The general pattern is increasing ratios with increasing duration. The exception in the 2000-04 study was refund annuitizations where the pattern was relatively flat. This pattern was not duplicated in the 2005-08 study.

In Table 1c, the overall A/E ratios based on the 2012 IAM “G2 for5” Basic Table are 1.046 for males and 1.040 for females. This pattern is quite consistent across the whole retirement age range. It might have been hoped that these ratios would have been closer to 1.0. However, with the different mixed of contributing companies, this is not an unreasonable result.



## PIVOT TABLES

In addition to the tables of Actual to Expected (A/E) mortality ratios presented in the Appendix of this report, the results of this study are also presented in Excel pivot table format. Following is a description each of the pivot tables that are provided and the pivot table fields and data elements underlying the pivot tables.

### Pivot Table Fields

#### **Study Year**

Calendar year of experience (2005, 2006, 2007, 2008).

#### **Contract Years**

Number of years since contract issue (immediate annuities) or since annuitization or election of a settlement option.

#### **Attained Age**

Ages under 50; five year age groups from 50 to 99; ages 100 and over.

#### **Gender**

Male, Female.

#### **Benefit Class**

Form of annuity (e.g., single life or joint life, with or without a period certain or other refund feature, and temporary life).

#### **Annuity Type**

Benefit Classes are categorized as Refund (i.e., including a period certain or other refund feature), and Nonrefund.

#### **Income Group**

Annual annuity income amount grouped into bands: < \$2,500, \$2,500 - \$4,999, \$5,000-\$7,499, \$7,500-\$9,999, \$10,000-\$14,999, \$15,000-\$24,999, \$25,000-\$49,999, \$50,000 and over.

#### **Underwriting Class**

Underwritten as Standard or not underwritten.

(Note: contracts underwritten as Substandard were excluded from the study because the amount of data collected for these contracts was not sufficient to be credible)

#### **Tax Class**

Annuities are classified as Non-Qualified, Qualified (other than Pension Trust), Pension Trust, IRA, or Unknown tax class. Life Insurance Settlement Options are assumed to be nontaxable.

#### **Contract Type**

Immediate annuities, annuitizations of deferred annuities, life settlement options from annuities and life insurance contracts

#### **Amount Indicator**

0 or 1: 0 indicates that no annual income amount was provided for the contract (thus these contracts are not reflected in the results by amount).

## Pivot Table Tabs

The first five tabs of the Excel file contain pivot tables constructed to illustrate how the mortality experience results vary by Gender, Income Group, Tax Class, Annuity Type, Contract Type, and Contract Year. Each pivot table contains the actual number of deaths, the number of contracts exposed, amount of annual income exposed, A/E ratios by contract and A/E ratios weighted by annual income with expected deaths based on the Annuity 2000 Basic Table. These pivot tables show results by:

**Tax Class by Income Group**  
**Gender by Income Group**  
**Annuity Type**  
**Contract Type**  
**Income Group by Contract Year**

The sixth tab labeled “**All Fields**” is provided for users who want to construct their own pivot tables using any combination of the Pivot Table Fields. This pivot table contains the following data elements:

### **Contracts Exposed**

Exposure by number of contracts.

### **Amount Exposed**

Exposure weighted by annual annuity income amount.

### **Deaths**

Number of actual deaths.

### **Death Amount**

Actual deaths weighted by annual income amount.

### **Qx by Contract**

Actual death rate by number of contracts.

### **Qx by Amount**

Actual death rate weighted by annual income amount.

### **Expected Death by Contract Annuity 2000 Basic Table**

Number of expected deaths based on the Annuity 2000 Basic Table.

### **Expected Death by Contract 1983 IAM Basic Table**

Number of expected deaths based on the 1983 IAM Basic Table.

### **Expected Death by Contract 2012 IAM Basic Table**

Number of expected deaths based on the 2012 IAM Basic Table.

### **Expected Death by Contract 2012 IAM “G2 for 5” Basic Table**

Number of expected deaths based on the 2012 IAM “G2 for 5” Basic Table.

### **Expected Death by Amount Annuity 2000 Basic Table**

Expected deaths based on the Annuity 2000 Basic Table, weighted by annual income amount.

### **Expected Death by Amount 1983 IAM Basic Table**

Expected deaths based on the 1983 IAM Basic Table, weighted by annual income amount.

### **Expected Death by Amount 2012 IAM Basic Table**

Expected deaths based on the 2012 IAM Basic Table, weighted by annual income amount.

### **Expected Death by Amount 2012 IAM “G2 for 5” Basic Table**

Expected deaths based on the 2012 IAM “G2 for 5” Basic Table, weighted by annual income amount.

### **A/E Ratio by Contract Annuity 2000 Basic Table**

Ratio of actual deaths to expected deaths with expected deaths based on the Annuity 2000 Basic Table.

### **A/E Ratio by Contract 1983 IAM Basic Table**

Ratio of actual deaths to expected deaths with expected deaths based on the 1983 IAM Basic Table.

### **A/E Ratio by Contract 2012 IAM Basic Table**

Ratio of actual deaths to expected deaths with expected deaths based on the 2012 IAM Basic Table.

**A/E Ratio by Contract 2012 IAM “G2 for 5” Basic Table**

Ratio of actual deaths to expected deaths with expected deaths based on the 2012 IAM “G2 for 5” Basic Table.

**A/E Ratio by Amount Annuity 2000 Basic Table**

Ratio of actual deaths to expected deaths weighted by annual income amount with expected deaths based on the Annuity 2000 Basic Table.

**A/E Ratio by Amount 1983 IAM Basic Table**

Ratio of actual deaths to expected deaths weighted by annual income amount with expected deaths based on the 1983 IAM Basic Table.

**A/E Ratio by Amount 2012 IAM Basic Table**

Ratio of actual deaths to expected deaths weighted by annual income amount with expected deaths based on the 2012 IAM Basic Table.

**A/E Ratio by Amount 2012 IAM “G2 for 5” Basic Table**

Ratio of actual deaths to expected deaths weighted by annual income amount with expected deaths based on the 2012 IAM “G2 for 5” Basic Table.

#### IV. ACKNOWLEDGEMENTS

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Most of the work of preparing this report was done by the SOA researcher. The document was reviewed by the Individual Annuity Experience Committee, and especially its Chair, prior to the report's release.

## APPENDIX: TABLES OF ACTUAL-TO-EXPECTED MORTALITY RATIOS

**Table 1a**  
**Nonrefund Annuity Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
 Based on Annuity 2000 Basic, 1983 IAM Basic, 2012 IAM Basic, and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
<b>Based on Annuity 2000 Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	1.842	*	*	*	*	2.005
60-64.....	1.075	*	*	*	1.132	0.668	*	*	*	0.749
65-69.....	0.706	0.745	1.140	1.203	0.926	0.467	0.685	0.980	0.898	0.727
70-74.....	*	0.732	0.865	1.094	<b>0.876</b>	*	0.757	0.733	0.902	<b>0.718</b>
75-79.....	0.621	0.697	0.755	<b>0.929</b>	<b>0.867</b>	0.383	0.644	0.638	<b>0.817</b>	<b>0.703</b>
80-84.....	0.532	0.786	0.812	<b>1.009</b>	<b>0.969</b>	0.333	0.449	0.810	<b>0.940</b>	<b>0.818</b>
85-89.....	0.442	0.664	0.911	<b>1.080</b>	<b>1.033</b>	0.462	0.498	0.584	<b>0.979</b>	<b>0.815</b>
90-94.....	*	1.067	1.155	<b>1.244</b>	<b>1.227</b>	*	0.461	1.554	<b>1.239</b>	<b>1.092</b>
95-99.....	*	*	*	<b>1.301</b>	<b>1.287</b>	*	*	*	<b>1.175</b>	<b>1.201</b>
100 and Over..	*	*	*	1.123	1.121	*	*	*	1.481	1.475
All.....	0.616	<b>0.773</b>	<b>0.883</b>	<b>1.087</b>	<b>1.024</b>	0.411	<b>0.574</b>	<b>0.854</b>	<b>0.990</b>	<b>0.846</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	1.267	*	*	*	*	0.938
65-69.....	1.029	1.030	0.822	1.601	1.098	0.855	0.714	0.729	0.921	0.785
70-74.....	*	0.828	0.975	1.237	<b>1.026</b>	*	0.707	0.859	1.035	<b>0.845</b>
75-79.....	0.505	0.637	0.815	<b>1.090</b>	<b>0.990</b>	0.507	0.601	0.644	<b>1.037</b>	<b>0.840</b>
80-84.....	0.335	0.683	0.899	<b>1.048</b>	<b>0.989</b>	0.175	0.378	0.869	<b>1.012</b>	<b>0.795</b>
85-89.....	0.503	0.763	0.922	<b>1.048</b>	<b>1.009</b>	0.309	0.477	0.791	<b>0.993</b>	<b>0.800</b>
90-94.....	*	0.657	1.013	<b>1.151</b>	<b>1.114</b>	*	0.393	0.741	<b>1.104</b>	<b>0.895</b>
95-99.....	*	*	1.339	<b>1.262</b>	<b>1.256</b>	*	*	1.029	<b>1.164</b>	<b>1.075</b>
100 and Over..	*	*	*	<b>1.203</b>	<b>1.202</b>	*	*	*	<b>1.392</b>	<b>1.381</b>
All.....	0.580	<b>0.764</b>	<b>0.947</b>	<b>1.118</b>	<b>1.065</b>	0.441	<b>0.486</b>	<b>0.796</b>	<b>1.059</b>	<b>0.861</b>
<b>Based on 1983 IAM Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	1.411	*	*	*	*	1.537
60-64.....	0.831	*	*	*	0.875	0.516	*	*	*	0.579
65-69.....	0.549	0.582	0.891	0.939	0.722	0.364	0.535	0.766	0.702	0.567
70-74.....	*	0.587	0.694	0.879	<b>0.703</b>	*	0.608	0.588	0.725	<b>0.576</b>
75-79.....	0.502	0.563	0.610	<b>0.751</b>	<b>0.702</b>	0.310	0.521	0.516	<b>0.661</b>	<b>0.569</b>
80-84.....	0.429	0.634	0.655	<b>0.814</b>	<b>0.782</b>	0.268	0.362	0.653	<b>0.759</b>	<b>0.660</b>
85-89.....	0.357	0.539	0.738	<b>0.875</b>	<b>0.837</b>	0.374	0.404	0.474	<b>0.792</b>	<b>0.660</b>
90-94.....	*	0.895	0.970	<b>1.045</b>	<b>1.031</b>	*	0.388	1.304	<b>1.040</b>	<b>0.917</b>
95-99.....	*	*	*	<b>1.098</b>	<b>1.086</b>	*	*	*	<b>0.992</b>	<b>1.015</b>
100 and Over..	*	*	*	0.936	0.935	*	*	*	1.231	1.225
All.....	0.493	<b>0.621</b>	<b>0.713</b>	<b>0.887</b>	<b>0.833</b>	0.330	<b>0.466</b>	<b>0.693</b>	<b>0.806</b>	<b>0.687</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	1.092	*	*	*	*	0.809
65-69.....	0.875	0.875	0.699	1.361	0.934	0.727	0.607	0.620	0.784	0.668
70-74.....	*	0.716	0.844	1.073	<b>0.889</b>	*	0.612	0.743	0.898	<b>0.732</b>
75-79.....	0.443	0.558	0.714	<b>0.955</b>	<b>0.868</b>	0.444	0.527	0.564	<b>0.909</b>	<b>0.736</b>
80-84.....	0.295	0.601	0.790	<b>0.922</b>	<b>0.870</b>	0.154	0.333	0.764	<b>0.891</b>	<b>0.700</b>
85-89.....	0.446	0.677	0.818	<b>0.931</b>	<b>0.896</b>	0.274	0.424	0.702	<b>0.881</b>	<b>0.710</b>
90-94.....	*	0.590	0.909	<b>1.034</b>	<b>1.001</b>	*	0.353	0.666	<b>0.992</b>	<b>0.804</b>
95-99.....	*	*	1.204	<b>1.135</b>	<b>1.129</b>	*	*	0.926	<b>1.047</b>	<b>0.966</b>
100 and Over..	*	*	*	<b>1.092</b>	<b>1.091</b>	*	*	*	<b>1.258</b>	<b>1.249</b>
All.....	0.509	<b>0.672</b>	<b>0.834</b>	<b>0.994</b>	<b>0.945</b>	0.389	<b>0.430</b>	<b>0.704</b>	<b>0.940</b>	<b>0.762</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.

**Table 1a** (continued)  
**Nonrefund Annuity Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
Based on Annuity 2000 Basic, 1983 IAM Basic, 2012 IAM Basic, and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
<b>Based on 2012 IAM Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	2.483	*	*	*	*	2.699
60-64.....	1.314	*	*	*	1.383	0.817	*	*	*	0.914
65-69.....	0.935	1.017	1.566	1.638	1.257	0.623	0.935	1.347	1.231	0.987
70-74.....	*	1.117	1.321	1.672	<b>1.337</b>	*	1.156	1.119	1.379	<b>1.096</b>
75-79.....	0.906	1.019	1.101	<b>1.348</b>	<b>1.261</b>	0.559	0.941	0.931	<b>1.186</b>	<b>1.023</b>
80-84.....	0.700	1.031	1.074	<b>1.326</b>	<b>1.274</b>	0.437	0.589	1.069	<b>1.235</b>	<b>1.075</b>
85-89.....	0.509	0.758	1.041	<b>1.235</b>	<b>1.182</b>	0.532	0.565	0.662	<b>1.123</b>	<b>0.933</b>
90-94.....	*	1.038	1.116	<b>1.199</b>	<b>1.183</b>	*	0.442	1.503	<b>1.197</b>	<b>1.055</b>
95-99.....	*	*	*	<b>1.124</b>	<b>1.112</b>	*	*	*	<b>1.016</b>	<b>1.041</b>
100 and Over..	*	*	*	0.965	0.963	*	*	*	1.248	1.242
All.....	0.805	<b>1.005</b>	<b>1.166</b>	<b>1.264</b>	<b>1.221</b>	0.528	<b>0.697</b>	<b>1.084</b>	<b>1.179</b>	<b>1.030</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	1.337	*	*	*	*	0.990
65-69.....	1.101	1.114	0.892	1.730	1.185	0.918	0.772	0.790	0.996	0.848
70-74.....	*	0.954	1.125	1.440	<b>1.187</b>	*	0.815	0.991	1.205	<b>0.976</b>
75-79.....	0.644	0.809	1.037	<b>1.391</b>	<b>1.263</b>	0.647	0.765	0.820	<b>1.324</b>	<b>1.071</b>
80-84.....	0.416	0.846	1.116	<b>1.298</b>	<b>1.225</b>	0.217	0.466	1.078	<b>1.254</b>	<b>0.985</b>
85-89.....	0.582	0.881	1.065	<b>1.211</b>	<b>1.166</b>	0.357	0.552	0.913	<b>1.148</b>	<b>0.924</b>
90-94.....	*	0.751	1.157	<b>1.314</b>	<b>1.272</b>	*	0.449	0.846	<b>1.260</b>	<b>1.023</b>
95-99.....	*	*	1.369	<b>1.274</b>	<b>1.269</b>	*	*	1.062	<b>1.178</b>	<b>1.091</b>
100 and Over..	*	*	*	<b>1.126</b>	<b>1.125</b>	*	*	*	<b>1.283</b>	<b>1.274</b>
All.....	0.679	<b>0.890</b>	<b>1.112</b>	<b>1.280</b>	<b>1.225</b>	0.522	<b>0.565</b>	<b>0.929</b>	<b>1.226</b>	<b>1.001</b>
<b>Based on 2012 IAM "G2 for 5" Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	2.317	*	*	*	*	2.517
60-64.....	1.220	*	*	*	1.284	0.758	*	*	*	0.849
65-69.....	0.868	0.945	1.455	1.522	1.167	0.578	0.868	1.251	1.143	0.917
70-74.....	*	1.037	1.227	1.552	<b>1.241</b>	*	1.073	1.039	1.280	<b>1.018</b>
75-79.....	0.842	0.946	1.022	<b>1.251</b>	<b>1.171</b>	0.519	0.873	0.864	<b>1.101</b>	<b>0.950</b>
80-84.....	0.655	0.965	1.004	<b>1.241</b>	<b>1.192</b>	0.409	0.551	1.000	<b>1.156</b>	<b>1.006</b>
85-89.....	0.486	0.723	0.994	<b>1.178</b>	<b>1.128</b>	0.508	0.539	0.632	<b>1.071</b>	<b>0.890</b>
90-94.....	*	1.006	1.082	<b>1.163</b>	<b>1.148</b>	*	0.429	1.458	<b>1.161</b>	<b>1.023</b>
95-99.....	*	*	*	<b>1.105</b>	<b>1.093</b>	*	*	*	<b>0.999</b>	<b>1.023</b>
100 and Over..	*	*	*	0.958	0.956	*	*	*	1.237	1.232
All.....	0.755	<b>0.944</b>	<b>1.095</b>	<b>1.204</b>	<b>1.160</b>	0.496	<b>0.660</b>	<b>1.023</b>	<b>1.120</b>	<b>0.975</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	1.253	*	*	*	*	0.928
65-69.....	1.033	1.044	0.836	1.622	1.112	0.861	0.724	0.741	0.934	0.795
70-74.....	*	0.894	1.054	1.349	<b>1.112</b>	*	0.764	0.929	1.130	<b>0.915</b>
75-79.....	0.604	0.759	0.972	<b>1.304</b>	<b>1.184</b>	0.606	0.718	0.768	<b>1.241</b>	<b>1.004</b>
80-84.....	0.393	0.799	1.054	<b>1.226</b>	<b>1.157</b>	0.205	0.440	1.018	<b>1.185</b>	<b>0.931</b>
85-89.....	0.558	0.846	1.022	<b>1.163</b>	<b>1.119</b>	0.342	0.530	0.877	<b>1.101</b>	<b>0.887</b>
90-94.....	*	0.731	1.126	<b>1.280</b>	<b>1.239</b>	*	0.437	0.824	<b>1.228</b>	<b>0.996</b>
95-99.....	*	*	1.345	<b>1.253</b>	<b>1.247</b>	*	*	1.043	<b>1.158</b>	<b>1.072</b>
100 and Over..	*	*	*	<b>1.119</b>	<b>1.118</b>	*	*	*	<b>1.274</b>	<b>1.265</b>
All.....	0.644	<b>0.848</b>	<b>1.058</b>	<b>1.232</b>	<b>1.176</b>	0.497	<b>0.541</b>	<b>0.888</b>	<b>1.177</b>	<b>0.959</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.

**Table 1b**  
**Refund Annuity Mortality Ratios by Attained Age, Contract Year Group, and Gender**

Based on Annuity 2000 Basic, 1983 IAM Basic, 2012 IAM Basic, and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Based on Annuity 2000 Basic Table										
Male										
Under 50.....	*	*	*	*	4.022	*	*	*	*	4.701
50-54.....	*	*	*	*	1.824	*	*	*	*	1.634
55-59.....	2.188	*	*	1.465	1.690	1.864	*	*	1.125	1.321
60-64.....	0.832	0.925	1.603	1.480	<b>1.157</b>	0.924	0.771	1.516	1.515	<b>1.069</b>
65-69.....	0.833	0.893	0.916	1.162	<b>0.937</b>	0.684	0.697	0.711	1.344	<b>0.767</b>
70-74.....	0.753	<b>0.733</b>	<b>0.836</b>	<b>0.947</b>	<b>0.845</b>	0.668	<b>0.713</b>	<b>0.717</b>	<b>0.867</b>	<b>0.744</b>
75-79.....	0.810	<b>0.844</b>	<b>0.841</b>	<b>0.927</b>	<b>0.895</b>	0.701	<b>0.680</b>	<b>0.741</b>	<b>0.812</b>	<b>0.772</b>
80-84.....	<b>0.848</b>	<b>1.030</b>	<b>0.873</b>	<b>0.981</b>	<b>0.969</b>	<b>0.793</b>	<b>0.891</b>	<b>0.698</b>	<b>0.893</b>	<b>0.866</b>
85-89.....	<b>0.985</b>	<b>1.034</b>	<b>1.055</b>	<b>1.065</b>	<b>1.060</b>	<b>1.010</b>	<b>1.105</b>	<b>1.046</b>	<b>0.953</b>	<b>0.974</b>
90-94.....	1.016	1.203	<b>1.194</b>	<b>1.235</b>	<b>1.224</b>	1.010	1.124	<b>1.148</b>	<b>1.155</b>	<b>1.139</b>
95-99.....	0.999	1.296	1.294	<b>1.256</b>	<b>1.253</b>	0.986	1.821	1.040	<b>1.142</b>	<b>1.178</b>
100 and Over..	*	*	*	1.109	1.089	*	*	*	0.903	0.876
All.....	<b>0.890</b>	<b>0.936</b>	<b>0.914</b>	<b>1.055</b>	<b>1.022</b>	<b>0.854</b>	<b>0.874</b>	<b>0.805</b>	<b>0.944</b>	<b>0.906</b>
Female										
Under 50.....	*	*	*	*	3.239	*	*	*	*	3.604
50-54.....	*	*	*	*	2.261	*	*	*	*	2.803
55-59.....	*	*	*	1.885	1.971	*	*	*	1.333	1.958
60-64.....	1.097	1.487	1.080	1.424	1.281	1.227	1.450	2.099	1.018	1.382
65-69.....	0.835	0.989	1.138	1.452	<b>1.103</b>	0.826	1.005	1.077	1.336	<b>1.038</b>
70-74.....	0.820	0.895	<b>1.045</b>	<b>1.196</b>	<b>1.053</b>	0.725	0.917	<b>1.074</b>	<b>1.057</b>	<b>0.982</b>
75-79.....	0.774	0.927	<b>0.897</b>	<b>1.022</b>	<b>0.973</b>	0.644	0.837	<b>0.868</b>	<b>0.911</b>	<b>0.865</b>
80-84.....	<b>0.753</b>	<b>0.860</b>	<b>0.956</b>	<b>0.984</b>	<b>0.964</b>	<b>0.774</b>	<b>0.810</b>	<b>0.972</b>	<b>0.932</b>	<b>0.909</b>
85-89.....	<b>0.756</b>	<b>0.871</b>	<b>0.961</b>	<b>1.008</b>	<b>0.983</b>	<b>0.768</b>	<b>0.879</b>	<b>0.980</b>	<b>0.958</b>	<b>0.927</b>
90-94.....	0.766	<b>0.943</b>	<b>1.008</b>	<b>1.078</b>	<b>1.053</b>	0.944	<b>0.928</b>	<b>0.983</b>	<b>1.014</b>	<b>0.989</b>
95-99.....	0.801	1.014	1.217	<b>1.188</b>	<b>1.176</b>	0.693	0.998	1.171	<b>1.102</b>	<b>1.060</b>
100 and Over..	*	*	0.967	<b>1.202</b>	<b>1.187</b>	*	*	0.649	<b>1.141</b>	<b>1.052</b>
All.....	<b>0.797</b>	<b>0.923</b>	<b>0.989</b>	<b>1.051</b>	<b>1.023</b>	<b>0.817</b>	<b>0.900</b>	<b>0.995</b>	<b>0.979</b>	<b>0.952</b>
Based on 1983 IAM Basic Table										
Male										
Under 50.....	*	*	*	*	3.012	*	*	*	*	3.568
50-54.....	*	*	*	*	1.357	*	*	*	*	1.214
55-59.....	1.677	*	*	1.122	1.295	1.429	*	*	0.861	1.012
60-64.....	0.643	0.715	1.239	1.144	<b>0.894</b>	0.714	0.596	1.172	1.171	<b>0.826</b>
65-69.....	0.648	0.697	0.716	0.907	<b>0.731</b>	0.533	0.544	0.556	1.049	<b>0.599</b>
70-74.....	0.603	<b>0.589</b>	<b>0.671</b>	<b>0.761</b>	<b>0.679</b>	0.535	<b>0.572</b>	<b>0.576</b>	<b>0.697</b>	<b>0.598</b>
75-79.....	0.655	<b>0.682</b>	<b>0.680</b>	<b>0.750</b>	<b>0.724</b>	0.567	<b>0.550</b>	<b>0.599</b>	<b>0.657</b>	<b>0.624</b>
80-84.....	<b>0.685</b>	<b>0.831</b>	<b>0.705</b>	<b>0.792</b>	<b>0.782</b>	<b>0.640</b>	<b>0.719</b>	<b>0.563</b>	<b>0.720</b>	<b>0.699</b>
85-89.....	<b>0.797</b>	<b>0.839</b>	<b>0.854</b>	<b>0.863</b>	<b>0.859</b>	<b>0.817</b>	<b>0.896</b>	<b>0.847</b>	<b>0.771</b>	<b>0.788</b>
90-94.....	0.852	1.010	<b>1.002</b>	<b>1.036</b>	<b>1.027</b>	0.847	0.945	<b>0.964</b>	<b>0.969</b>	<b>0.955</b>
95-99.....	0.845	1.095	1.093	<b>1.061</b>	<b>1.059</b>	0.835	1.538	0.878	<b>0.965</b>	<b>0.995</b>
100 and Over..	*	*	*	0.926	0.909	*	*	*	0.752	0.729
All.....	<b>0.715</b>	<b>0.753</b>	<b>0.738</b>	<b>0.859</b>	<b>0.830</b>	<b>0.688</b>	<b>0.705</b>	<b>0.650</b>	<b>0.767</b>	<b>0.735</b>
Female										
Under 50.....	*	*	*	*	2.734	*	*	*	*	3.062
50-54.....	*	*	*	*	1.904	*	*	*	*	2.360
55-59.....	*	*	*	1.617	1.691	*	*	*	1.143	1.680
60-64.....	0.946	1.281	0.931	1.228	1.104	1.058	1.249	1.810	0.879	1.191
65-69.....	0.710	0.841	0.968	1.234	<b>0.938</b>	0.702	0.854	0.916	1.136	<b>0.883</b>
70-74.....	0.709	0.775	<b>0.905</b>	<b>1.037</b>	<b>0.912</b>	0.626	0.795	<b>0.930</b>	<b>0.916</b>	<b>0.850</b>
75-79.....	0.678	0.812	<b>0.786</b>	<b>0.896</b>	<b>0.852</b>	0.564	0.733	<b>0.760</b>	<b>0.798</b>	<b>0.758</b>
80-84.....	<b>0.662</b>	<b>0.757</b>	<b>0.841</b>	<b>0.866</b>	<b>0.848</b>	<b>0.681</b>	<b>0.713</b>	<b>0.855</b>	<b>0.820</b>	<b>0.800</b>
85-89.....	<b>0.671</b>	<b>0.773</b>	<b>0.853</b>	<b>0.894</b>	<b>0.873</b>	<b>0.682</b>	<b>0.781</b>	<b>0.870</b>	<b>0.850</b>	<b>0.823</b>
90-94.....	0.688	<b>0.847</b>	<b>0.906</b>	<b>0.968</b>	<b>0.945</b>	0.848	<b>0.834</b>	<b>0.883</b>	<b>0.910</b>	<b>0.888</b>
95-99.....	0.721	0.912	1.095	<b>1.069</b>	<b>1.058</b>	0.624	0.898	1.053	<b>0.991</b>	<b>0.953</b>
100 and Over..	*	*	0.877	<b>1.087</b>	<b>1.074</b>	*	*	0.589	<b>1.032</b>	<b>0.951</b>
All.....	<b>0.702</b>	<b>0.813</b>	<b>0.871</b>	<b>0.933</b>	<b>0.907</b>	<b>0.722</b>	<b>0.795</b>	<b>0.878</b>	<b>0.867</b>	<b>0.842</b>

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.

**Table 1b** (continued)  
**Refund Annuity Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
Based on Annuity 2000 Basic, 1983 IAM Basic, 2012 IAM Basic, and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Based on 2012 IAM Basic Table										
Male										
Under 50.....	*	*	*	*	5.352	*	*	*	*	5.974
50-54.....	*	*	*	*	2.577	*	*	*	*	2.312
55-59.....	2.947	*	*	1.978	2.279	2.510	*	*	1.524	1.784
60-64.....	1.015	1.127	1.958	1.813	<b>1.413</b>	1.128	0.940	1.852	1.855	<b>1.305</b>
65-69.....	1.110	1.223	1.265	1.581	<b>1.275</b>	0.915	0.953	0.983	1.832	<b>1.045</b>
70-74.....	1.148	<b>1.120</b>	<b>1.276</b>	<b>1.448</b>	<b>1.291</b>	1.018	<b>1.088</b>	<b>1.095</b>	<b>1.326</b>	<b>1.137</b>
75-79.....	1.180	<b>1.235</b>	<b>1.225</b>	<b>1.345</b>	<b>1.302</b>	1.021	<b>0.996</b>	<b>1.080</b>	<b>1.179</b>	<b>1.123</b>
80-84.....	<b>1.116</b>	<b>1.353</b>	<b>1.158</b>	<b>1.287</b>	<b>1.272</b>	<b>1.042</b>	<b>1.171</b>	<b>0.926</b>	<b>1.172</b>	<b>1.138</b>
85-89.....	<b>1.140</b>	<b>1.176</b>	<b>1.209</b>	<b>1.219</b>	<b>1.214</b>	<b>1.163</b>	<b>1.258</b>	<b>1.195</b>	<b>1.093</b>	<b>1.117</b>
90-94.....	0.989	1.162	<b>1.155</b>	<b>1.195</b>	<b>1.185</b>	0.980	1.082	<b>1.108</b>	<b>1.123</b>	<b>1.105</b>
95-99.....	0.869	1.124	1.122	<b>1.088</b>	<b>1.086</b>	0.859	1.577	0.900	<b>0.991</b>	<b>1.021</b>
100 and Over..	*	*	*	0.958	0.941	*	*	*	0.767	0.745
All.....	<b>1.133</b>	<b>1.216</b>	<b>1.227</b>	<b>1.248</b>	<b>1.238</b>	<b>1.064</b>	<b>1.127</b>	<b>1.079</b>	<b>1.143</b>	<b>1.124</b>
Female										
Under 50.....	*	*	*	*	4.015	*	*	*	*	4.405
50-54.....	*	*	*	*	2.910	*	*	*	*	3.611
55-59.....	*	*	*	2.275	2.373	*	*	*	1.611	2.360
60-64.....	1.159	1.565	1.141	1.509	1.353	1.298	1.528	2.219	1.080	1.461
65-69.....	0.896	1.069	1.234	1.569	<b>1.192</b>	0.887	1.086	1.168	1.445	<b>1.122</b>
70-74.....	0.937	1.035	<b>1.205</b>	<b>1.389</b>	<b>1.217</b>	0.829	1.061	<b>1.239</b>	<b>1.227</b>	<b>1.134</b>
75-79.....	0.986	1.177	<b>1.142</b>	<b>1.305</b>	<b>1.241</b>	0.820	1.064	<b>1.105</b>	<b>1.163</b>	<b>1.103</b>
80-84.....	<b>0.934</b>	<b>1.066</b>	<b>1.190</b>	<b>1.218</b>	<b>1.193</b>	<b>0.959</b>	<b>1.003</b>	<b>1.208</b>	<b>1.155</b>	<b>1.127</b>
85-89.....	<b>0.874</b>	<b>1.005</b>	<b>1.110</b>	<b>1.164</b>	<b>1.136</b>	<b>0.888</b>	<b>1.015</b>	<b>1.132</b>	<b>1.107</b>	<b>1.071</b>
90-94.....	0.877	<b>1.077</b>	<b>1.152</b>	<b>1.231</b>	<b>1.202</b>	1.079	<b>1.060</b>	<b>1.122</b>	<b>1.158</b>	<b>1.130</b>
95-99.....	0.823	1.037	1.241	<b>1.203</b>	<b>1.193</b>	0.714	1.022	1.193	<b>1.119</b>	<b>1.079</b>
100 and Over..	*	*	0.895	<b>1.105</b>	<b>1.093</b>	*	*	0.602	<b>1.047</b>	<b>0.966</b>
All.....	<b>0.930</b>	<b>1.077</b>	<b>1.168</b>	<b>1.215</b>	<b>1.186</b>	<b>0.951</b>	<b>1.046</b>	<b>1.166</b>	<b>1.143</b>	<b>1.111</b>
Based on 2012 IAM "G2 for 5" Basic Table										
Male										
Under 50.....	*	*	*	*	5.095	*	*	*	*	5.688
50-54.....	*	*	*	*	2.438	*	*	*	*	2.188
55-59.....	2.749	*	*	1.845	2.126	2.342	*	*	1.423	1.664
60-64.....	0.942	1.046	1.817	1.683	<b>1.312</b>	1.047	0.872	1.719	1.722	<b>1.211</b>
65-69.....	1.031	1.136	1.175	1.468	<b>1.184</b>	0.850	0.885	0.913	1.702	<b>0.971</b>
70-74.....	1.066	<b>1.039</b>	<b>1.185</b>	<b>1.344</b>	<b>1.198</b>	0.945	<b>1.010</b>	<b>1.017</b>	<b>1.231</b>	<b>1.055</b>
75-79.....	1.095	<b>1.146</b>	<b>1.138</b>	<b>1.249</b>	<b>1.208</b>	0.948	<b>0.924</b>	<b>1.002</b>	<b>1.094</b>	<b>1.042</b>
80-84.....	<b>1.045</b>	<b>1.266</b>	<b>1.082</b>	<b>1.205</b>	<b>1.191</b>	<b>0.975</b>	<b>1.096</b>	<b>0.866</b>	<b>1.097</b>	<b>1.065</b>
85-89.....	<b>1.087</b>	<b>1.123</b>	<b>1.153</b>	<b>1.163</b>	<b>1.158</b>	<b>1.109</b>	<b>1.201</b>	<b>1.141</b>	<b>1.043</b>	<b>1.065</b>
90-94.....	0.959	1.127	<b>1.120</b>	<b>1.158</b>	<b>1.148</b>	0.950	1.049	<b>1.074</b>	<b>1.088</b>	<b>1.071</b>
95-99.....	0.853	1.105	1.102	<b>1.069</b>	<b>1.067</b>	0.843	1.550	0.885	<b>0.973</b>	<b>1.003</b>
100 and Over..	*	*	*	0.951	0.935	*	*	*	0.761	0.739
All.....	<b>1.066</b>	<b>1.143</b>	<b>1.150</b>	<b>1.186</b>	<b>1.173</b>	<b>1.005</b>	<b>1.061</b>	<b>1.012</b>	<b>1.083</b>	<b>1.063</b>
Female										
Under 50.....	*	*	*	*	3.821	*	*	*	*	4.192
50-54.....	*	*	*	*	2.757	*	*	*	*	3.421
55-59.....	*	*	*	2.140	2.233	*	*	*	1.516	2.221
60-64.....	1.086	1.466	1.070	1.414	1.268	1.216	1.432	2.079	1.012	1.369
65-69.....	0.840	1.002	1.158	1.471	<b>1.117</b>	0.832	1.018	1.095	1.355	<b>1.052</b>
70-74.....	0.878	0.971	<b>1.129</b>	<b>1.302</b>	<b>1.141</b>	0.777	0.994	<b>1.161</b>	<b>1.150</b>	<b>1.063</b>
75-79.....	0.924	1.104	<b>1.071</b>	<b>1.223</b>	<b>1.163</b>	0.769	0.998	<b>1.036</b>	<b>1.091</b>	<b>1.034</b>
80-84.....	<b>0.883</b>	<b>1.007</b>	<b>1.123</b>	<b>1.151</b>	<b>1.127</b>	<b>0.906</b>	<b>0.948</b>	<b>1.141</b>	<b>1.091</b>	<b>1.064</b>
85-89.....	<b>0.839</b>	<b>0.965</b>	<b>1.066</b>	<b>1.117</b>	<b>1.091</b>	<b>0.852</b>	<b>0.975</b>	<b>1.087</b>	<b>1.063</b>	<b>1.028</b>
90-94.....	0.853	<b>1.049</b>	<b>1.122</b>	<b>1.199</b>	<b>1.171</b>	1.051	<b>1.032</b>	<b>1.093</b>	<b>1.128</b>	<b>1.100</b>
95-99.....	0.808	1.019	1.220	<b>1.183</b>	<b>1.172</b>	0.701	1.004	1.172	<b>1.100</b>	<b>1.060</b>
100 and Over..	*	*	0.890	<b>1.098</b>	<b>1.085</b>	*	*	0.599	<b>1.039</b>	<b>0.960</b>
All.....	<b>0.886</b>	<b>1.026</b>	<b>1.111</b>	<b>1.167</b>	<b>1.137</b>	<b>0.909</b>	<b>1.000</b>	<b>1.113</b>	<b>1.095</b>	<b>1.063</b>

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.



**Table 1c**  
**Refund and Nonrefund Annuity Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
 Based on Annuity 2000 Basic, 1983 IAM Basic, 2012 IAM Basic, and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Based on Annuity 2000 Basic Table										
Male										
Under 50.....	*	*	*	3,234	3,822	*	*	*	3,548	4,819
50-54.....	*	*	*	1,597	1,873	*	*	*	1,839	1,528
55-59.....	2.333	*	*	1,582	1,720	1.708	*	*	1,230	1,432
60-64.....	0.885	0.922	1.517	1,469	<b>1.151</b>	0.872	0.798	1.336	1.373	<b>0.998</b>
65-69.....	0.808	<b>0.864</b>	<b>0.965</b>	1,169	<b>0.934</b>	0.641	<b>0.694</b>	<b>0.774</b>	1.266	<b>0.759</b>
70-74.....	0.686	<b>0.733</b>	<b>0.841</b>	<b>0.976</b>	<b>0.851</b>	0.597	<b>0.720</b>	<b>0.720</b>	<b>0.874</b>	<b>0.740</b>
75-79.....	0.777	<b>0.817</b>	<b>0.828</b>	<b>0.927</b>	<b>0.890</b>	0.612	<b>0.673</b>	<b>0.725</b>	<b>0.813</b>	<b>0.760</b>
80-84.....	<b>0.797</b>	<b>0.987</b>	<b>0.862</b>	<b>0.986</b>	<b>0.969</b>	<b>0.668</b>	<b>0.773</b>	<b>0.720</b>	<b>0.900</b>	<b>0.857</b>
85-89.....	<b>0.917</b>	<b>0.970</b>	<b>1.027</b>	<b>1.068</b>	<b>1.056</b>	<b>0.892</b>	<b>0.907</b>	<b>0.925</b>	<b>0.957</b>	<b>0.945</b>
90-94.....	1.001	1.178	<b>1.186</b>	<b>1.237</b>	<b>1.225</b>	0.933	0.851	<b>1.272</b>	<b>1.170</b>	<b>1.129</b>
95-99.....	1.014	1.274	1.213	<b>1.269</b>	<b>1.263</b>	0.991	1.645	1.197	<b>1.156</b>	<b>1.187</b>
100 and Over..	*	*	*	<b>1.114</b>	<b>1.100</b>	*	*	*	<b>1.172</b>	<b>1.130</b>
All.....	<b>0.847</b>	<b>0.907</b>	<b>0.908</b>	<b>1.061</b>	<b>1.023</b>	<b>0.757</b>	<b>0.799</b>	<b>0.814</b>	<b>0.952</b>	<b>0.895</b>
Female										
Under 50.....	*	*	*	*	3,324	*	*	*	*	4,199
50-54.....	*	*	*	*	2,274	*	*	*	*	2,645
55-59.....	2.187	*	*	2,021	1,974	3.089	*	*	1,340	1,834
60-64.....	1.060	1.444	1.159	1,456	<b>1.278</b>	1.111	1.404	1.853	1,061	<b>1.301</b>
65-69.....	0.877	0.998	1.073	<b>1.479</b>	<b>1.102</b>	0.832	0.939	1.004	<b>1.266</b>	<b>0.985</b>
70-74.....	0.784	<b>0.883</b>	<b>1.030</b>	<b>1.204</b>	<b>1.048</b>	0.701	<b>0.877</b>	<b>1.027</b>	<b>1.053</b>	<b>0.954</b>
75-79.....	0.729	<b>0.875</b>	<b>0.884</b>	<b>1.038</b>	<b>0.976</b>	0.609	<b>0.785</b>	<b>0.827</b>	<b>0.939</b>	<b>0.860</b>
80-84.....	<b>0.683</b>	<b>0.825</b>	<b>0.946</b>	<b>0.998</b>	<b>0.969</b>	<b>0.613</b>	<b>0.687</b>	<b>0.949</b>	<b>0.948</b>	<b>0.885</b>
85-89.....	<b>0.725</b>	<b>0.850</b>	<b>0.953</b>	<b>1.016</b>	<b>0.989</b>	<b>0.678</b>	<b>0.764</b>	<b>0.932</b>	<b>0.965</b>	<b>0.900</b>
90-94.....	0.744	<b>0.894</b>	<b>1.009</b>	<b>1.094</b>	<b>1.066</b>	0.922	<b>0.777</b>	<b>0.921</b>	<b>1.033</b>	<b>0.967</b>
95-99.....	0.813	0.969	1.243	<b>1.208</b>	<b>1.197</b>	0.699	0.878	1.138	<b>1.120</b>	<b>1.063</b>
100 and Over..	*	*	1.009	<b>1.203</b>	<b>1.194</b>	*	*	0.746	<b>1.218</b>	<b>1.145</b>
All.....	<b>0.765</b>	<b>0.894</b>	<b>0.981</b>	<b>1.066</b>	<b>1.032</b>	<b>0.739</b>	<b>0.791</b>	<b>0.950</b>	<b>0.995</b>	<b>0.932</b>
Based on 1983 IAM Basic Table										
Male										
Under 50.....	*	*	*	2,396	2,855	*	*	*	2,653	3,653
50-54.....	*	*	*	1,188	1,393	*	*	*	1,367	1,136
55-59.....	1.788	*	*	1,212	1,318	1.309	*	*	0,941	1,097
60-64.....	0.684	0.712	1.172	1,136	<b>0.890</b>	0.674	0.616	1.033	1,061	<b>0.771</b>
65-69.....	0.629	<b>0.674</b>	<b>0.754</b>	0,913	<b>0.729</b>	0.499	<b>0.542</b>	<b>0.605</b>	0,988	<b>0.592</b>
70-74.....	0.550	<b>0.588</b>	<b>0.675</b>	<b>0.784</b>	<b>0.683</b>	0.478	<b>0.578</b>	<b>0.578</b>	<b>0.703</b>	<b>0.594</b>
75-79.....	0.629	<b>0.661</b>	<b>0.669</b>	<b>0.750</b>	<b>0.720</b>	0.495	<b>0.544</b>	<b>0.586</b>	<b>0.658</b>	<b>0.614</b>
80-84.....	<b>0.643</b>	<b>0.797</b>	<b>0.696</b>	<b>0.796</b>	<b>0.782</b>	<b>0.539</b>	<b>0.624</b>	<b>0.581</b>	<b>0.726</b>	<b>0.692</b>
85-89.....	<b>0.741</b>	<b>0.787</b>	<b>0.832</b>	<b>0.865</b>	<b>0.855</b>	<b>0.722</b>	<b>0.735</b>	<b>0.750</b>	<b>0.775</b>	<b>0.765</b>
90-94.....	0.839	0.988	<b>0.995</b>	<b>1.038</b>	<b>1.028</b>	0.782	0.716	<b>1.068</b>	<b>0.981</b>	<b>0.947</b>
95-99.....	0.858	1.077	1.026	<b>1.071</b>	<b>1.066</b>	0.839	1.390	1.012	<b>0.976</b>	<b>1.003</b>
100 and Over..	*	*	*	<b>0.930</b>	<b>0.918</b>	*	*	*	<b>0.974</b>	<b>0.940</b>
All.....	<b>0.680</b>	<b>0.729</b>	<b>0.734</b>	<b>0.865</b>	<b>0.831</b>	<b>0.610</b>	<b>0.645</b>	<b>0.658</b>	<b>0.774</b>	<b>0.726</b>
Female										
Under 50.....	*	*	*	*	2,804	*	*	*	*	3,569
50-54.....	*	*	*	*	1,914	*	*	*	*	2,227
55-59.....	1.877	*	*	1,734	1,694	2.650	*	*	1,149	1,574
60-64.....	0.914	1.243	0.999	1,256	<b>1.102</b>	0.958	1.209	1.597	0,915	<b>1.121</b>
65-69.....	0.745	0.848	0.913	<b>1.258</b>	<b>0.937</b>	0.707	0.798	0.854	<b>1.076</b>	<b>0.838</b>
70-74.....	0.678	<b>0.765</b>	<b>0.892</b>	<b>1.044</b>	<b>0.907</b>	0.606	<b>0.760</b>	<b>0.889</b>	<b>0.913</b>	<b>0.826</b>
75-79.....	0.639	<b>0.766</b>	<b>0.774</b>	<b>0.909</b>	<b>0.855</b>	0.533	<b>0.687</b>	<b>0.724</b>	<b>0.822</b>	<b>0.753</b>
80-84.....	<b>0.601</b>	<b>0.726</b>	<b>0.832</b>	<b>0.878</b>	<b>0.852</b>	<b>0.539</b>	<b>0.604</b>	<b>0.835</b>	<b>0.834</b>	<b>0.778</b>
85-89.....	<b>0.643</b>	<b>0.755</b>	<b>0.846</b>	<b>0.902</b>	<b>0.878</b>	<b>0.601</b>	<b>0.678</b>	<b>0.828</b>	<b>0.856</b>	<b>0.799</b>
90-94.....	0.668	<b>0.803</b>	<b>0.906</b>	<b>0.983</b>	<b>0.957</b>	0.828	<b>0.698</b>	<b>0.827</b>	<b>0.928</b>	<b>0.869</b>
95-99.....	0.732	0.871	1.118	<b>1.086</b>	<b>1.076</b>	0.629	0.789	1.023	<b>1.007</b>	<b>0.956</b>
100 and Over..	*	*	0.915	<b>1.089</b>	<b>1.081</b>	*	*	0.678	<b>1.101</b>	<b>1.036</b>
All.....	<b>0.673</b>	<b>0.786</b>	<b>0.864</b>	<b>0.947</b>	<b>0.915</b>	<b>0.653</b>	<b>0.699</b>	<b>0.839</b>	<b>0.882</b>	<b>0.825</b>

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.

**Table 1c (continued)**  
**Refund and Nonrefund Annuity Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
 Based on Annuity 2000 Basic, 1983 IAM Basic, 2012 IAM Basic, and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Based on 2012 IAM Basic Table										
Male										
Under 50.....	*	*	*	4.422	5.122	*	*	*	4.583	6.145
50-54.....	*	*	*	2.256	2.646	*	*	*	2.602	2.162
55-59.....	3.142	*	*	2.136	2.320	2.300	*	*	1.666	1.933
60-64.....	1.080	1.124	1.853	1.799	<b>1.407</b>	1.064	0.973	1.632	1.681	<b>1.218</b>
65-69.....	1.076	<b>1.182</b>	<b>1.331</b>	1.592	<b>1.271</b>	0.857	<b>0.950</b>	<b>1.068</b>	1.726	<b>1.033</b>
70-74.....	1.046	<b>1.119</b>	<b>1.284</b>	<b>1.492</b>	<b>1.299</b>	0.910	<b>1.099</b>	<b>1.099</b>	<b>1.337</b>	<b>1.130</b>
75-79.....	1.133	<b>1.196</b>	<b>1.206</b>	<b>1.346</b>	<b>1.295</b>	0.892	<b>0.985</b>	<b>1.057</b>	<b>1.180</b>	<b>1.105</b>
80-84.....	<b>1.049</b>	<b>1.296</b>	<b>1.144</b>	<b>1.294</b>	<b>1.273</b>	<b>0.877</b>	<b>1.016</b>	<b>0.955</b>	<b>1.182</b>	<b>1.127</b>
85-89.....	<b>1.060</b>	<b>1.104</b>	<b>1.177</b>	<b>1.222</b>	<b>1.209</b>	<b>1.028</b>	<b>1.031</b>	<b>1.056</b>	<b>1.098</b>	<b>1.083</b>
90-94.....	0.975	1.139	<b>1.147</b>	<b>1.196</b>	<b>1.184</b>	0.908	0.817	<b>1.229</b>	<b>1.136</b>	<b>1.094</b>
95-99.....	0.882	1.106	1.053	<b>1.098</b>	<b>1.093</b>	0.863	1.426	1.040	<b>1.001</b>	<b>1.029</b>
100 and Over..	*	*	*	<b>0.961</b>	<b>0.949</b>	*	*	*	<b>0.992</b>	<b>0.957</b>
All.....	<b>1.082</b>	<b>1.177</b>	<b>1.216</b>	<b>1.251</b>	<b>1.235</b>	<b>0.950</b>	<b>1.014</b>	<b>1.079</b>	<b>1.149</b>	<b>1.107</b>
Female										
Under 50.....	*	*	*	*	4.119	*	*	*	*	5.139
50-54.....	*	*	*	*	2.927	*	*	*	*	3.406
55-59.....	2.630	*	*	2.439	2.377	3.721	*	*	1.619	2.210
60-64.....	1.120	1.519	1.225	1.543	<b>1.350</b>	1.175	1.479	1.958	1.125	<b>1.375</b>
65-69.....	0.940	1.078	1.164	<b>1.599</b>	<b>1.190</b>	0.894	1.015	1.088	<b>1.369</b>	<b>1.064</b>
70-74.....	0.896	<b>1.022</b>	<b>1.187</b>	<b>1.400</b>	<b>1.211</b>	0.803	<b>1.014</b>	<b>1.184</b>	<b>1.223</b>	<b>1.102</b>
75-79.....	0.929	<b>1.112</b>	<b>1.125</b>	<b>1.324</b>	<b>1.245</b>	0.776	<b>0.998</b>	<b>1.052</b>	<b>1.198</b>	<b>1.096</b>
80-84.....	<b>0.848</b>	<b>1.023</b>	<b>1.177</b>	<b>1.235</b>	<b>1.200</b>	<b>0.760</b>	<b>0.849</b>	<b>1.180</b>	<b>1.174</b>	<b>1.096</b>
85-89.....	<b>0.839</b>	<b>0.982</b>	<b>1.101</b>	<b>1.174</b>	<b>1.142</b>	<b>0.783</b>	<b>0.882</b>	<b>1.077</b>	<b>1.115</b>	<b>1.040</b>
90-94.....	0.851	<b>1.021</b>	<b>1.153</b>	<b>1.250</b>	<b>1.218</b>	1.055	<b>0.888</b>	<b>1.052</b>	<b>1.180</b>	<b>1.105</b>
95-99.....	0.835	0.990	1.268	<b>1.222</b>	<b>1.212</b>	0.720	0.897	1.163	<b>1.136</b>	<b>1.082</b>
100 and Over..	*	*	0.933	<b>1.114</b>	<b>1.104</b>	*	*	0.693	<b>1.119</b>	<b>1.053</b>
All.....	<b>0.893</b>	<b>1.042</b>	<b>1.157</b>	<b>1.229</b>	<b>1.194</b>	<b>0.864</b>	<b>0.919</b>	<b>1.112</b>	<b>1.161</b>	<b>1.087</b>
Based on 2012 IAM "G2 for 5" Basic Table										
Male										
Under 50.....	*	*	*	4.210	4.877	*	*	*	4.365	5.852
50-54.....	*	*	*	2.133	2.503	*	*	*	2.462	2.046
55-59.....	2.931	*	*	1.993	2.164	2.145	*	*	1.555	1.804
60-64.....	1.003	1.043	1.720	1.670	<b>1.305</b>	0.988	0.903	1.515	1.560	<b>1.131</b>
65-69.....	0.999	<b>1.098</b>	<b>1.236</b>	1.478	<b>1.180</b>	0.796	<b>0.882</b>	<b>0.992</b>	1.604	<b>0.960</b>
70-74.....	0.971	<b>1.039</b>	<b>1.192</b>	<b>1.385</b>	<b>1.206</b>	0.845	<b>1.020</b>	<b>1.021</b>	<b>1.241</b>	<b>1.049</b>
75-79.....	1.052	<b>1.110</b>	<b>1.120</b>	<b>1.249</b>	<b>1.202</b>	0.828	<b>0.914</b>	<b>0.981</b>	<b>1.096</b>	<b>1.026</b>
80-84.....	<b>0.982</b>	<b>1.214</b>	<b>1.069</b>	<b>1.211</b>	<b>1.192</b>	<b>0.821</b>	<b>0.951</b>	<b>0.892</b>	<b>1.106</b>	<b>1.055</b>
85-89.....	<b>1.011</b>	<b>1.054</b>	<b>1.123</b>	<b>1.166</b>	<b>1.153</b>	<b>0.980</b>	<b>0.984</b>	<b>1.007</b>	<b>1.047</b>	<b>1.034</b>
90-94.....	0.945	1.104	<b>1.112</b>	<b>1.159</b>	<b>1.148</b>	0.880	0.793	<b>1.192</b>	<b>1.101</b>	<b>1.061</b>
95-99.....	0.866	1.086	1.035	<b>1.079</b>	<b>1.074</b>	0.847	1.402	1.021	<b>0.984</b>	<b>1.011</b>
100 and Over..	*	*	*	<b>0.954</b>	<b>0.942</b>	*	*	*	<b>0.983</b>	<b>0.949</b>
All.....	<b>1.018</b>	<b>1.107</b>	<b>1.140</b>	<b>1.189</b>	<b>1.171</b>	<b>0.896</b>	<b>0.956</b>	<b>1.014</b>	<b>1.090</b>	<b>1.046</b>
Female										
Under 50.....	*	*	*	*	3.920	*	*	*	*	4.891
50-54.....	*	*	*	*	2.773	*	*	*	*	3.227
55-59.....	2.474	*	*	2.295	2.237	3.500	*	*	1.523	2.080
60-64.....	1.050	1.423	1.148	1.446	<b>1.265</b>	1.101	1.386	1.835	1.054	<b>1.288</b>
65-69.....	0.882	1.011	1.092	<b>1.499</b>	<b>1.116</b>	0.838	0.951	1.020	<b>1.283</b>	<b>0.998</b>
70-74.....	0.840	<b>0.957</b>	<b>1.113</b>	<b>1.312</b>	<b>1.135</b>	0.752	<b>0.950</b>	<b>1.110</b>	<b>1.146</b>	<b>1.033</b>
75-79.....	0.871	<b>1.042</b>	<b>1.055</b>	<b>1.242</b>	<b>1.167</b>	0.727	<b>0.936</b>	<b>0.987</b>	<b>1.123</b>	<b>1.028</b>
80-84.....	<b>0.801</b>	<b>0.966</b>	<b>1.111</b>	<b>1.167</b>	<b>1.134</b>	<b>0.718</b>	<b>0.802</b>	<b>1.114</b>	<b>1.109</b>	<b>1.035</b>
85-89.....	<b>0.804</b>	<b>0.943</b>	<b>1.057</b>	<b>1.127</b>	<b>1.096</b>	<b>0.752</b>	<b>0.847</b>	<b>1.034</b>	<b>1.070</b>	<b>0.998</b>
90-94.....	0.829	<b>0.994</b>	<b>1.122</b>	<b>1.217</b>	<b>1.186</b>	1.027	<b>0.865</b>	<b>1.024</b>	<b>1.149</b>	<b>1.076</b>
95-99.....	0.820	0.973	1.246	<b>1.202</b>	<b>1.192</b>	0.707	0.881	1.142	<b>1.116</b>	<b>1.063</b>
100 and Over..	*	*	0.927	<b>1.106</b>	<b>1.097</b>	*	*	0.689	<b>1.111</b>	<b>1.046</b>
All.....	<b>0.850</b>	<b>0.992</b>	<b>1.101</b>	<b>1.182</b>	<b>1.146</b>	<b>0.825</b>	<b>0.879</b>	<b>1.062</b>	<b>1.113</b>	<b>1.040</b>

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.

**Table 1d**  
**Nonrefund Annuity Mortality Ratios by Contract Type, Contract Year Group, and Gender**  
 Based on Annuity 2000 Basic, 1983 IAM Basic, 2012 IAM Basic, and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Contract Type	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Based on Annuity 2000 Basic Table										
Male										
Immediate Annuity	0.595	0.859	<b>1.055</b>	<b>1.156</b>	<b>1.074</b>	0.376	0.553	<b>1.035</b>	<b>1.108</b>	<b>0.854</b>
Annuity Option of a Deferred Annuity	0.660	0.714	<b>0.809</b>	<b>1.042</b>	<b>0.977</b>	0.497	0.600	<b>0.750</b>	<b>0.916</b>	<b>0.817</b>
Settlement Option of Annuity Death Claim	*	*	*	*	*	*	*	*	*	*
Settlement Option of Life Insurance Death Claim	*	*	*	*	*	*	*	*	*	*
Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
Settlement Option (Unknown Source)	*	*	0.821	<b>1.119</b>	<b>1.087</b>	*	*	0.820	<b>1.038</b>	<b>0.952</b>
All.....	0.616	<b>0.773</b>	<b>0.883</b>	<b>1.087</b>	<b>1.024</b>	0.411	<b>0.574</b>	<b>0.854</b>	<b>0.990</b>	<b>0.846</b>
Female										
Immediate Annuity	0.474	0.780	<b>1.037</b>	<b>1.158</b>	<b>1.063</b>	0.401	0.511	<b>0.836</b>	<b>1.161</b>	<b>0.839</b>
Annuity Option of a Deferred Annuity	0.804	0.784	<b>0.901</b>	<b>1.103</b>	<b>1.066</b>	0.575	0.439	<b>0.757</b>	<b>0.991</b>	<b>0.861</b>
Settlement Option of Annuity Death Claim	*	*	*	1.118	1.146	*	*	*	0.948	0.942
Settlement Option of Life Insurance Death Claim	*	*	*	*	1.084	*	*	*	*	0.666
Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
Settlement Option (Unknown Source)	*	*	0.723	<b>1.102</b>	<b>1.063</b>	*	*	0.731	<b>1.038</b>	<b>0.941</b>
All.....	0.580	<b>0.764</b>	<b>0.947</b>	<b>1.118</b>	<b>1.065</b>	0.441	<b>0.486</b>	<b>0.796</b>	<b>1.059</b>	<b>0.861</b>
Based on 1983 IAM Basic Table										
Male										
Immediate Annuity	0.479	0.694	<b>0.858</b>	<b>0.947</b>	<b>0.876</b>	0.303	0.451	<b>0.845</b>	<b>0.906</b>	<b>0.696</b>
Annuity Option of a Deferred Annuity	0.523	0.570	<b>0.652</b>	<b>0.847</b>	<b>0.792</b>	0.397	0.483	<b>0.606</b>	<b>0.744</b>	<b>0.661</b>
Settlement Option of Annuity Death Claim	*	*	*	*	*	*	*	*	*	*
Settlement Option of Life Insurance Death Claim	*	*	*	*	*	*	*	*	*	*
Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
Settlement Option (Unknown Source)	*	*	0.666	<b>0.917</b>	<b>0.890</b>	*	*	0.666	<b>0.847</b>	<b>0.776</b>
All.....	0.493	<b>0.621</b>	<b>0.713</b>	<b>0.887</b>	<b>0.833</b>	0.330	<b>0.466</b>	<b>0.693</b>	<b>0.806</b>	<b>0.687</b>
Female										
Immediate Annuity	0.417	0.690	<b>0.919</b>	<b>1.031</b>	<b>0.945</b>	0.354	0.454	<b>0.743</b>	<b>1.033</b>	<b>0.745</b>
Annuity Option of a Deferred Annuity	0.698	0.683	<b>0.788</b>	<b>0.978</b>	<b>0.943</b>	0.504	0.386	<b>0.664</b>	<b>0.877</b>	<b>0.760</b>
Settlement Option of Annuity Death Claim	*	*	*	0.991	1.015	*	*	*	0.839	0.831
Settlement Option of Life Insurance Death Claim	*	*	*	*	0.964	*	*	*	*	0.590
Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
Settlement Option (Unknown Source)	*	*	0.640	<b>0.983</b>	<b>0.948</b>	*	*	0.649	<b>0.925</b>	<b>0.837</b>
All.....	0.509	<b>0.672</b>	<b>0.834</b>	<b>0.994</b>	<b>0.945</b>	0.389	<b>0.430</b>	<b>0.704</b>	<b>0.940</b>	<b>0.762</b>
Based on 2012 IAM Basic Table										
Male										
Immediate Annuity	0.759	1.055	<b>1.273</b>	<b>1.301</b>	<b>1.239</b>	0.479	0.636	<b>1.194</b>	<b>1.250</b>	<b>0.992</b>
Annuity Option of a Deferred Annuity	0.887	0.976	<b>1.125</b>	<b>1.259</b>	<b>1.215</b>	0.650	0.773	<b>1.009</b>	<b>1.135</b>	<b>1.037</b>
Settlement Option of Annuity Death Claim	*	*	*	*	*	*	*	*	*	*
Settlement Option of Life Insurance Death Claim	*	*	*	*	*	*	*	*	*	*
Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
Settlement Option (Unknown Source)	*	*	1.044	<b>1.234</b>	<b>1.213</b>	*	*	1.028	<b>1.196</b>	<b>1.115</b>
All.....	0.805	<b>1.005</b>	<b>1.166</b>	<b>1.264</b>	<b>1.221</b>	0.528	<b>0.697</b>	<b>1.084</b>	<b>1.179</b>	<b>1.030</b>
Female										
Immediate Annuity	0.564	0.916	<b>1.211</b>	<b>1.309</b>	<b>1.214</b>	0.477	0.594	<b>0.966</b>	<b>1.313</b>	<b>0.966</b>
Annuity Option of a Deferred Annuity	0.914	0.904	<b>1.064</b>	<b>1.285</b>	<b>1.242</b>	0.672	0.510	<b>0.896</b>	<b>1.175</b>	<b>1.017</b>
Settlement Option of Annuity Death Claim	*	*	*	1.294	1.328	*	*	*	1.113	1.107
Settlement Option of Life Insurance Death Claim	*	*	*	*	1.247	*	*	*	*	0.777
Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
Settlement Option (Unknown Source)	*	*	0.846	<b>1.231</b>	<b>1.193</b>	*	*	0.848	<b>1.182</b>	<b>1.076</b>
All.....	0.679	<b>0.890</b>	<b>1.112</b>	<b>1.280</b>	<b>1.225</b>	0.522	<b>0.565</b>	<b>0.929</b>	<b>1.226</b>	<b>1.001</b>
Based on 2012 IAM "G2 for 5" Basic Table										
Male										
Immediate Annuity	0.714	0.997	<b>1.207</b>	<b>1.244</b>	<b>1.181</b>	0.451	0.606	<b>1.137</b>	<b>1.195</b>	<b>0.945</b>
Annuity Option of a Deferred Annuity	0.828	0.912	<b>1.051</b>	<b>1.194</b>	<b>1.148</b>	0.610	0.728	<b>0.946</b>	<b>1.072</b>	<b>0.978</b>
Settlement Option of Annuity Death Claim	*	*	*	*	*	*	*	*	*	*
Settlement Option of Life Insurance Death Claim	*	*	*	*	*	*	*	*	*	*
Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
Settlement Option (Unknown Source)	*	*	0.985	<b>1.183</b>	<b>1.161</b>	*	*	0.971	<b>1.140</b>	<b>1.061</b>
All.....	0.755	<b>0.944</b>	<b>1.095</b>	<b>1.204</b>	<b>1.160</b>	0.496	<b>0.660</b>	<b>1.023</b>	<b>1.120</b>	<b>0.975</b>
Female										
Immediate Annuity	0.536	0.875	<b>1.160</b>	<b>1.264</b>	<b>1.169</b>	0.454	0.571	<b>0.929</b>	<b>1.267</b>	<b>0.929</b>
Annuity Option of a Deferred Annuity	0.862	0.854	<b>1.006</b>	<b>1.232</b>	<b>1.188</b>	0.637	0.486	<b>0.849</b>	<b>1.122</b>	<b>0.969</b>
Settlement Option of Annuity Death Claim	*	*	*	1.242	1.273	*	*	*	1.064	1.056
Settlement Option of Life Insurance Death Claim	*	*	*	*	1.200	*	*	*	*	0.744
Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
Settlement Option (Unknown Source)	*	*	0.810	<b>1.192</b>	<b>1.154</b>	*	*	0.815	<b>1.141</b>	<b>1.037</b>
All.....	0.644	<b>0.848</b>	<b>1.058</b>	<b>1.232</b>	<b>1.176</b>	0.497	<b>0.541</b>	<b>0.888</b>	<b>1.177</b>	<b>0.959</b>

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.

**Table 1e**  
**Refund Annuity Mortality Ratios by Contract Type, Contract Year Group, and Gender**  
 Based on Annuity 2000 Basic, 1983 IAM Basic, 2012 IAM Basic, and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Contract Type	Based on Number of Contracts					Based on Amounts of Annual Income					
	Contract Years					Contract Years					
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years	
Based on Annuity 2000 Basic Mortality Table											
Male	Immediate Annuity	<b>0.957</b>	<b>1.095</b>	<b>1.006</b>	<b>1.090</b>	<b>1.068</b>	<b>0.934</b>	<b>1.058</b>	<b>0.975</b>	<b>1.038</b>	<b>1.012</b>
	Annuitization of a Deferred Annuity	<b>0.783</b>	<b>0.810</b>	<b>0.848</b>	<b>1.027</b>	<b>0.988</b>	<b>0.631</b>	<b>0.711</b>	<b>0.713</b>	<b>0.901</b>	<b>0.844</b>
	Settlement Option of Annuity Death Claim	*	*	*	0.869	0.850	*	*	*	0.834	0.828
	Settlement Option of Life Insurance Death Claim	*	*	*	<b>1.240</b>	<b>1.206</b>	*	*	*	<b>1.148</b>	<b>1.103</b>
	Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
	Settlement Option (Unknown Source)	0.880	<b>0.906</b>	<b>1.023</b>	<b>1.114</b>	<b>1.067</b>	0.987	<b>0.907</b>	<b>1.017</b>	<b>1.066</b>	<b>1.023</b>
	All.....	<b>0.890</b>	<b>0.936</b>	<b>0.914</b>	<b>1.055</b>	<b>1.022</b>	<b>0.854</b>	<b>0.874</b>	<b>0.805</b>	<b>0.944</b>	<b>0.906</b>
Female	Immediate Annuity	<b>0.845</b>	<b>0.942</b>	<b>0.959</b>	<b>1.039</b>	<b>1.004</b>	<b>0.864</b>	<b>0.956</b>	<b>1.004</b>	<b>1.014</b>	<b>0.973</b>
	Annuitization of a Deferred Annuity	<b>0.782</b>	<b>0.929</b>	<b>0.982</b>	<b>1.043</b>	<b>1.027</b>	<b>0.681</b>	<b>0.816</b>	<b>0.948</b>	<b>0.946</b>	<b>0.925</b>
	Settlement Option of Annuity Death Claim	*	*	*	<b>1.005</b>	<b>1.021</b>	*	*	*	<b>0.944</b>	<b>0.960</b>
	Settlement Option of Life Insurance Death Claim	*	*	*	<b>1.192</b>	<b>1.211</b>	*	*	*	<b>1.222</b>	<b>1.243</b>
	Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
	Settlement Option (Unknown Source)	0.659	<b>0.860</b>	<b>1.033</b>	<b>1.101</b>	<b>1.036</b>	0.765	<b>0.838</b>	<b>1.051</b>	<b>1.034</b>	<b>0.966</b>
	All.....	<b>0.797</b>	<b>0.923</b>	<b>0.989</b>	<b>1.051</b>	<b>1.023</b>	<b>0.817</b>	<b>0.900</b>	<b>0.995</b>	<b>0.979</b>	<b>0.952</b>
Based on 1983 IAM Basic Table											
Male	Immediate Annuity	<b>0.772</b>	<b>0.885</b>	<b>0.816</b>	<b>0.891</b>	<b>0.871</b>	<b>0.755</b>	<b>0.857</b>	<b>0.791</b>	<b>0.846</b>	<b>0.823</b>
	Annuitization of a Deferred Annuity	<b>0.624</b>	<b>0.647</b>	<b>0.683</b>	<b>0.834</b>	<b>0.801</b>	<b>0.504</b>	<b>0.569</b>	<b>0.575</b>	<b>0.731</b>	<b>0.683</b>
	Settlement Option of Annuity Death Claim	*	*	*	0.704	0.688	*	*	*	0.674	0.668
	Settlement Option of Life Insurance Death Claim	*	*	*	<b>1.018</b>	<b>0.989</b>	*	*	*	<b>0.940</b>	<b>0.901</b>
	Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
	Settlement Option (Unknown Source)	0.711	<b>0.734</b>	<b>0.831</b>	<b>0.909</b>	<b>0.869</b>	0.801	<b>0.737</b>	<b>0.827</b>	<b>0.869</b>	<b>0.833</b>
	All.....	<b>0.715</b>	<b>0.753</b>	<b>0.738</b>	<b>0.859</b>	<b>0.830</b>	<b>0.688</b>	<b>0.705</b>	<b>0.650</b>	<b>0.767</b>	<b>0.735</b>
Female	Immediate Annuity	<b>0.745</b>	<b>0.832</b>	<b>0.848</b>	<b>0.925</b>	<b>0.892</b>	<b>0.765</b>	<b>0.846</b>	<b>0.891</b>	<b>0.902</b>	<b>0.863</b>
	Annuitization of a Deferred Annuity	<b>0.684</b>	<b>0.811</b>	<b>0.859</b>	<b>0.924</b>	<b>0.908</b>	<b>0.599</b>	<b>0.715</b>	<b>0.832</b>	<b>0.836</b>	<b>0.816</b>
	Settlement Option of Annuity Death Claim	*	*	*	<b>0.888</b>	<b>0.903</b>	*	*	*	<b>0.832</b>	<b>0.845</b>
	Settlement Option of Life Insurance Death Claim	*	*	*	<b>1.064</b>	<b>1.080</b>	*	*	*	<b>1.090</b>	<b>1.107</b>
	Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
	Settlement Option (Unknown Source)	0.581	<b>0.760</b>	<b>0.914</b>	<b>0.980</b>	<b>0.920</b>	0.677	<b>0.742</b>	<b>0.931</b>	<b>0.919</b>	<b>0.857</b>
	All.....	<b>0.702</b>	<b>0.813</b>	<b>0.871</b>	<b>0.933</b>	<b>0.907</b>	<b>0.722</b>	<b>0.795</b>	<b>0.878</b>	<b>0.867</b>	<b>0.842</b>
Based on 2012 IAM Basic Table											
Male	Immediate Annuity	<b>1.203</b>	<b>1.364</b>	<b>1.266</b>	<b>1.238</b>	<b>1.247</b>	<b>1.144</b>	<b>1.284</b>	<b>1.197</b>	<b>1.200</b>	<b>1.201</b>
	Annuitization of a Deferred Annuity	<b>1.025</b>	<b>1.111</b>	<b>1.192</b>	<b>1.245</b>	<b>1.227</b>	<b>0.829</b>	<b>0.986</b>	<b>1.001</b>	<b>1.113</b>	<b>1.076</b>
	Settlement Option of Annuity Death Claim	*	*	*	1.059	1.054	*	*	*	1.047	1.057
	Settlement Option of Life Insurance Death Claim	*	*	*	<b>1.351</b>	<b>1.333</b>	*	*	*	<b>1.281</b>	<b>1.250</b>
	Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
	Settlement Option (Unknown Source)	1.101	<b>1.122</b>	<b>1.287</b>	<b>1.281</b>	<b>1.259</b>	1.189	<b>1.089</b>	<b>1.250</b>	<b>1.240</b>	<b>1.215</b>
	All.....	<b>1.133</b>	<b>1.216</b>	<b>1.227</b>	<b>1.248</b>	<b>1.238</b>	<b>1.064</b>	<b>1.127</b>	<b>1.079</b>	<b>1.143</b>	<b>1.124</b>
Female	Immediate Annuity	<b>0.995</b>	<b>1.107</b>	<b>1.129</b>	<b>1.179</b>	<b>1.151</b>	<b>1.012</b>	<b>1.115</b>	<b>1.169</b>	<b>1.161</b>	<b>1.125</b>
	Annuitization of a Deferred Annuity	<b>0.886</b>	<b>1.064</b>	<b>1.166</b>	<b>1.225</b>	<b>1.204</b>	<b>0.774</b>	<b>0.937</b>	<b>1.125</b>	<b>1.122</b>	<b>1.092</b>
	Settlement Option of Annuity Death Claim	*	*	*	<b>1.170</b>	<b>1.191</b>	*	*	*	<b>1.126</b>	<b>1.143</b>
	Settlement Option of Life Insurance Death Claim	*	*	*	<b>1.333</b>	<b>1.356</b>	*	*	*	<b>1.380</b>	<b>1.404</b>
	Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
	Settlement Option (Unknown Source)	0.776	<b>1.010</b>	<b>1.212</b>	<b>1.254</b>	<b>1.191</b>	0.892	<b>0.977</b>	<b>1.221</b>	<b>1.187</b>	<b>1.117</b>
	All.....	<b>0.930</b>	<b>1.077</b>	<b>1.168</b>	<b>1.215</b>	<b>1.186</b>	<b>0.951</b>	<b>1.046</b>	<b>1.166</b>	<b>1.143</b>	<b>1.111</b>
Based on 2012 IAM "G2 for 5" Basic Table											
Male	Immediate Annuity	<b>1.134</b>	<b>1.288</b>	<b>1.195</b>	<b>1.182</b>	<b>1.187</b>	<b>1.082</b>	<b>1.216</b>	<b>1.134</b>	<b>1.143</b>	<b>1.140</b>
	Annuitization of a Deferred Annuity	<b>0.960</b>	<b>1.038</b>	<b>1.112</b>	<b>1.179</b>	<b>1.160</b>	<b>0.777</b>	<b>0.920</b>	<b>0.934</b>	<b>1.052</b>	<b>1.014</b>
	Settlement Option of Annuity Death Claim	*	*	*	1.003	0.996	*	*	*	0.988	0.995
	Settlement Option of Life Insurance Death Claim	*	*	*	<b>1.296</b>	<b>1.276</b>	*	*	*	<b>1.225</b>	<b>1.194</b>
	Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
	Settlement Option (Unknown Source)	1.039	<b>1.061</b>	<b>1.215</b>	<b>1.221</b>	<b>1.197</b>	1.128	<b>1.034</b>	<b>1.183</b>	<b>1.180</b>	<b>1.154</b>
	All.....	<b>1.066</b>	<b>1.143</b>	<b>1.150</b>	<b>1.186</b>	<b>1.173</b>	<b>1.005</b>	<b>1.061</b>	<b>1.012</b>	<b>1.083</b>	<b>1.063</b>
Female	Immediate Annuity	<b>0.948</b>	<b>1.057</b>	<b>1.079</b>	<b>1.138</b>	<b>1.108</b>	<b>0.968</b>	<b>1.068</b>	<b>1.122</b>	<b>1.118</b>	<b>1.080</b>
	Annuitization of a Deferred Annuity	<b>0.842</b>	<b>1.008</b>	<b>1.102</b>	<b>1.172</b>	<b>1.151</b>	<b>0.739</b>	<b>0.890</b>	<b>1.065</b>	<b>1.071</b>	<b>1.041</b>
	Settlement Option of Annuity Death Claim	*	*	*	<b>1.119</b>	<b>1.138</b>	*	*	*	<b>1.070</b>	<b>1.085</b>
	Settlement Option of Life Insurance Death Claim	*	*	*	<b>1.292</b>	<b>1.312</b>	*	*	*	<b>1.334</b>	<b>1.356</b>
	Settlement Option of Life Insurance Maturity or Surrender	*	*	*	*	*	*	*	*	*	*
	Settlement Option (Unknown Source)	0.739	<b>0.965</b>	<b>1.159</b>	<b>1.209</b>	<b>1.145</b>	0.853	<b>0.935</b>	<b>1.171</b>	<b>1.143</b>	<b>1.073</b>
	All.....	<b>0.886</b>	<b>1.026</b>	<b>1.111</b>	<b>1.167</b>	<b>1.137</b>	<b>0.909</b>	<b>1.000</b>	<b>1.113</b>	<b>1.095</b>	<b>1.063</b>

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.

**Table 2a**  
**Nonrefund and Refund Annuity Mortality Ratios by Annual Income, Contract Year Group, and Gender**  
Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Income Band	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
<b>Nonrefund, Based on Annuity 2000 Basic Table</b>										
<b>Male</b>										
Less than \$2500	0.768	0.745	<b>1.007</b>	<b>1.133</b>	<b>1.101</b>	0.790	0.825	<b>0.987</b>	<b>1.143</b>	<b>1.105</b>
\$2500-\$4999	0.565	0.832	0.850	<b>1.047</b>	<b>0.983</b>	0.563	0.816	0.845	<b>1.043</b>	<b>0.977</b>
\$5000-\$7499	0.608	0.815	0.754	<b>1.018</b>	<b>0.932</b>	0.612	0.799	0.758	<b>1.024</b>	<b>0.935</b>
\$7500-\$9999	*	0.730	0.707	0.989	<b>0.886</b>	*	0.738	0.707	0.987	<b>0.888</b>
\$10000-\$14999	0.661	0.845	0.792	0.980	<b>0.898</b>	0.671	0.828	0.775	0.980	<b>0.893</b>
\$15000-\$24999	*	0.759	0.803	0.909	0.820	*	0.773	0.785	0.906	0.815
\$25000-\$49999	*	*	0.774	0.913	0.804	*	*	0.748	0.899	0.787
\$50000 and over	*	*	*	*	0.670	*	*	*	*	0.540
All.....	0.616	<b>0.773</b>	<b>0.883</b>	<b>1.087</b>	<b>1.024</b>	0.411	<b>0.574</b>	<b>0.854</b>	<b>0.990</b>	<b>0.846</b>
<b>Female</b>										
Less than \$2500	0.761	0.836	<b>1.007</b>	<b>1.132</b>	<b>1.111</b>	0.628	0.815	<b>1.039</b>	<b>1.115</b>	<b>1.088</b>
\$2500-\$4999	0.640	0.801	0.980	<b>1.117</b>	<b>1.054</b>	0.636	0.816	0.982	<b>1.112</b>	<b>1.050</b>
\$5000-\$7499	*	0.937	1.037	<b>1.032</b>	<b>0.982</b>	*	0.950	1.036	<b>1.033</b>	<b>0.983</b>
\$7500-\$9999	*	0.594	0.729	1.070	<b>0.911</b>	*	0.599	0.724	1.075	<b>0.915</b>
\$10000-\$14999	*	0.665	0.728	1.181	<b>0.931</b>	*	0.660	0.735	1.179	<b>0.926</b>
\$15000-\$24999	*	0.726	0.799	0.882	0.789	*	0.737	0.795	0.877	0.787
\$25000-\$49999	*	*	*	0.802	0.660	*	*	*	0.824	0.669
\$50000 and over	*	*	*	*	*	*	*	*	*	*
All.....	0.580	<b>0.764</b>	<b>0.947</b>	<b>1.118</b>	<b>1.065</b>	0.441	<b>0.486</b>	<b>0.796</b>	<b>1.059</b>	<b>0.861</b>
<b>Refund, Based on Annuity 2000 Basic Table</b>										
<b>Male</b>										
Less than \$2500	<b>0.954</b>	<b>0.996</b>	<b>0.975</b>	<b>1.114</b>	<b>1.092</b>	<b>0.956</b>	<b>1.012</b>	<b>0.960</b>	<b>1.093</b>	<b>1.070</b>
\$2500-\$4999	<b>0.826</b>	<b>0.912</b>	<b>0.943</b>	<b>1.031</b>	<b>0.997</b>	<b>0.832</b>	<b>0.913</b>	<b>0.945</b>	<b>1.029</b>	<b>0.996</b>
\$5000-\$7499	0.965	0.979	<b>0.899</b>	<b>0.972</b>	<b>0.961</b>	0.983	0.968	<b>0.901</b>	<b>0.972</b>	<b>0.961</b>
\$7500-\$9999	0.912	0.993	0.881	<b>0.955</b>	<b>0.943</b>	0.914	1.000	0.880	<b>0.955</b>	<b>0.944</b>
\$10000-\$14999	0.845	0.874	<b>0.834</b>	<b>0.930</b>	<b>0.901</b>	0.851	0.870	<b>0.829</b>	<b>0.925</b>	<b>0.897</b>
\$15000-\$24999	0.826	0.791	0.791	<b>0.859</b>	<b>0.836</b>	0.832	0.798	0.791	<b>0.855</b>	<b>0.835</b>
\$25000-\$49999	0.810	0.819	0.646	<b>0.796</b>	<b>0.768</b>	0.825	0.788	0.627	<b>0.801</b>	<b>0.764</b>
\$50000 and over	*	*	0.630	0.835	0.759	*	*	0.677	0.850	0.800
All.....	<b>0.890</b>	<b>0.936</b>	<b>0.914</b>	<b>1.055</b>	<b>1.022</b>	<b>0.854</b>	<b>0.874</b>	<b>0.805</b>	<b>0.944</b>	<b>0.906</b>
<b>Female</b>										
Less than \$2500	<b>0.829</b>	<b>0.956</b>	<b>1.019</b>	<b>1.084</b>	<b>1.069</b>	<b>0.768</b>	<b>0.927</b>	<b>1.008</b>	<b>1.055</b>	<b>1.036</b>
\$2500-\$4999	<b>0.726</b>	<b>0.890</b>	<b>0.950</b>	<b>0.996</b>	<b>0.960</b>	<b>0.723</b>	<b>0.881</b>	<b>0.940</b>	<b>0.992</b>	<b>0.953</b>
\$5000-\$7499	0.775	<b>0.956</b>	<b>0.944</b>	<b>0.973</b>	<b>0.944</b>	0.776	<b>0.956</b>	<b>0.944</b>	<b>0.976</b>	<b>0.946</b>
\$7500-\$9999	0.834	0.850	0.983	<b>0.929</b>	<b>0.915</b>	0.828	0.853	0.991	<b>0.925</b>	<b>0.914</b>
\$10000-\$14999	0.823	0.957	1.023	<b>0.927</b>	<b>0.931</b>	0.818	0.961	1.028	<b>0.924</b>	<b>0.930</b>
\$15000-\$24999	0.780	0.890	1.038	<b>0.937</b>	<b>0.918</b>	0.790	0.890	1.031	<b>0.933</b>	<b>0.916</b>
\$25000-\$49999	0.949	0.857	0.870	0.881	<b>0.890</b>	0.947	0.873	0.855	0.874	<b>0.887</b>
\$50000 and over	*	*	*	0.969	1.047	*	*	*	1.025	0.999
All.....	<b>0.797</b>	<b>0.923</b>	<b>0.989</b>	<b>1.051</b>	<b>1.023</b>	<b>0.817</b>	<b>0.900</b>	<b>0.995</b>	<b>0.979</b>	<b>0.952</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.

**Table 2a** (continued)

**Nonrefund and Refund Annuity Mortality Ratios by Annual Income, Contract Year Group, and Gender**  
 Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Income Band	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Nonrefund, Based on 2012 IAM "G2 for 5" Basic Table										
Male										
Less than \$2500	0.958	0.934	<b>1.276</b>	<b>1.237</b>	<b>1.225</b>	0.979	1.022	<b>1.238</b>	<b>1.258</b>	<b>1.240</b>
\$2500-\$4999	0.692	1.014	1.046	<b>1.177</b>	<b>1.128</b>	0.689	0.993	1.037	<b>1.174</b>	<b>1.122</b>
\$5000-\$7499	0.747	0.984	0.915	<b>1.150</b>	<b>1.077</b>	0.753	0.965	0.920	<b>1.158</b>	<b>1.081</b>
\$7500-\$9999	*	0.878	0.873	1.138	<b>1.040</b>	*	0.889	0.873	1.137	<b>1.043</b>
\$10000-\$14999	0.797	1.023	0.984	1.127	<b>1.058</b>	0.809	1.004	0.963	1.128	<b>1.053</b>
\$15000-\$24999	*	0.909	0.976	1.050	0.965	*	0.926	0.953	1.045	0.958
\$25000-\$49999	*	*	0.930	1.054	0.950	*	*	0.896	1.039	0.931
\$50000 and over	*	*	*	*	0.763	*	*	*	*	0.597
All .....	0.755	<b>0.944</b>	<b>1.095</b>	<b>1.204</b>	<b>1.160</b>	0.496	<b>0.660</b>	<b>1.023</b>	<b>1.120</b>	<b>0.975</b>
Female										
Less than \$2500	0.830	0.924	<b>1.126</b>	<b>1.241</b>	<b>1.220</b>	0.689	0.903	<b>1.164</b>	<b>1.231</b>	<b>1.203</b>
\$2500-\$4999	0.711	0.890	1.096	<b>1.249</b>	<b>1.178</b>	0.707	0.907	1.097	<b>1.243</b>	<b>1.173</b>
\$5000-\$7499	*	1.041	1.159	<b>1.153</b>	<b>1.096</b>	*	1.056	1.158	<b>1.154</b>	<b>1.097</b>
\$7500-\$9999	*	0.658	0.808	1.196	<b>1.016</b>	*	0.664	0.802	1.202	<b>1.020</b>
\$10000-\$14999	*	0.742	0.814	1.322	<b>1.041</b>	*	0.735	0.822	1.318	<b>1.036</b>
\$15000-\$24999	*	0.807	0.890	0.984	0.880	*	0.819	0.887	0.978	0.878
\$25000-\$49999	*	*	*	0.889	0.737	*	*	*	0.912	0.746
\$50000 and over	*	*	*	*	0.489	*	*	*	*	*
All .....	0.644	<b>0.848</b>	<b>1.058</b>	<b>1.232</b>	<b>1.176</b>	0.497	<b>0.541</b>	<b>0.888</b>	<b>1.177</b>	<b>0.959</b>
Refund, Based on 2012 IAM "G2 for 5" Basic Table										
Male										
Less than \$2500	<b>1.166</b>	<b>1.240</b>	<b>1.239</b>	<b>1.233</b>	<b>1.232</b>	<b>1.164</b>	<b>1.248</b>	<b>1.208</b>	<b>1.219</b>	<b>1.217</b>
\$2500-\$4999	<b>0.995</b>	<b>1.104</b>	<b>1.175</b>	<b>1.171</b>	<b>1.157</b>	<b>1.002</b>	<b>1.104</b>	<b>1.178</b>	<b>1.170</b>	<b>1.156</b>
\$5000-\$7499	1.147	1.176	<b>1.118</b>	<b>1.116</b>	<b>1.123</b>	1.167	1.163	<b>1.120</b>	<b>1.116</b>	<b>1.124</b>
\$7500-\$9999	1.087	1.197	1.105	<b>1.108</b>	<b>1.114</b>	1.090	1.205	1.103	<b>1.109</b>	<b>1.115</b>
\$10000-\$14999	0.997	1.054	<b>1.044</b>	<b>1.081</b>	<b>1.065</b>	1.003	1.049	<b>1.039</b>	<b>1.075</b>	<b>1.060</b>
\$15000-\$24999	0.961	0.962	0.996	<b>1.004</b>	<b>0.994</b>	0.967	0.970	0.995	<b>0.998</b>	<b>0.991</b>
\$25000-\$49999	0.950	1.006	0.827	<b>0.917</b>	<b>0.913</b>	0.968	0.970	0.802	<b>0.920</b>	<b>0.907</b>
\$50000 and over	*	*	0.790	0.938	0.888	*	*	0.846	0.960	0.935
All .....	<b>1.066</b>	<b>1.143</b>	<b>1.150</b>	<b>1.186</b>	<b>1.173</b>	<b>1.005</b>	<b>1.061</b>	<b>1.012</b>	<b>1.083</b>	<b>1.063</b>
Female										
Less than \$2500	<b>0.913</b>	<b>1.060</b>	<b>1.150</b>	<b>1.198</b>	<b>1.184</b>	<b>0.852</b>	<b>1.031</b>	<b>1.138</b>	<b>1.172</b>	<b>1.152</b>
\$2500-\$4999	<b>0.810</b>	<b>0.992</b>	<b>1.066</b>	<b>1.115</b>	<b>1.074</b>	<b>0.807</b>	<b>0.982</b>	<b>1.055</b>	<b>1.110</b>	<b>1.067</b>
\$5000-\$7499	0.864	<b>1.063</b>	<b>1.054</b>	<b>1.092</b>	<b>1.057</b>	0.865	<b>1.063</b>	<b>1.055</b>	<b>1.095</b>	<b>1.059</b>
\$7500-\$9999	0.933	0.946	1.097	<b>1.045</b>	<b>1.026</b>	0.926	0.951	1.106	<b>1.041</b>	<b>1.024</b>
\$10000-\$14999	0.916	1.063	1.143	<b>1.041</b>	<b>1.042</b>	0.912	1.066	1.148	<b>1.039</b>	<b>1.041</b>
\$15000-\$24999	0.867	0.985	1.155	<b>1.052</b>	<b>1.025</b>	0.878	0.984	1.148	<b>1.049</b>	<b>1.023</b>
\$25000-\$49999	1.054	0.947	0.970	0.993	<b>0.996</b>	1.051	0.965	0.953	0.984	<b>0.991</b>
\$50000 and over	*	*	*	1.074	1.164	*	*	*	1.139	1.112
All .....	<b>0.886</b>	<b>1.026</b>	<b>1.111</b>	<b>1.167</b>	<b>1.137</b>	<b>0.909</b>	<b>1.000</b>	<b>1.113</b>	<b>1.095</b>	<b>1.063</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.

**Table 2b1**  
**Nonrefund and Refund Annuity Mortality Ratios by Annual Income, Contract Year Group, and Contract Type**  
Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Income Band	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
<b>Nonrefund, Based on Annuity 2000 Basic Table</b>										
Immediate										
Less than \$2500	0.628	0.942	<b>1.203</b>	<b>1.156</b>	<b>1.136</b>	0.593	0.961	<b>1.242</b>	<b>1.191</b>	<b>1.160</b>
\$2500-\$7499	0.536	0.860	1.039	<b>1.161</b>	<b>1.056</b>	0.512	0.870	1.011	<b>1.153</b>	<b>1.040</b>
\$7500 and over	0.483	0.675	0.856	<b>1.155</b>	<b>0.885</b>	0.368	0.462	0.879	<b>1.104</b>	<b>0.735</b>
All.....	0.530	<b>0.812</b>	<b>1.045</b>	<b>1.157</b>	<b>1.067</b>	0.389	<b>0.531</b>	<b>0.928</b>	<b>1.135</b>	<b>0.846</b>
Annuitizations										
Less than \$2500	0.868	0.704	<b>0.941</b>	<b>1.129</b>	<b>1.097</b>	0.812	0.722	<b>0.906</b>	<b>1.109</b>	<b>1.068</b>
\$2500-\$7499	0.691	0.877	0.826	<b>0.989</b>	<b>0.947</b>	0.690	0.883	0.843	<b>0.979</b>	<b>0.941</b>
\$7500 and over	0.541	0.660	0.702	<b>0.906</b>	<b>0.816</b>	0.482	0.462	0.712	<b>0.870</b>	<b>0.735</b>
All.....	0.722	<b>0.744</b>	<b>0.848</b>	<b>1.076</b>	<b>1.025</b>	0.531	<b>0.534</b>	<b>0.752</b>	<b>0.949</b>	<b>0.835</b>
Settlements										
Less than \$2500	*	*	0.822	<b>1.114</b>	<b>1.098</b>	*	*	0.863	<b>1.086</b>	<b>1.070</b>
\$2500-\$7499	*	*	0.795	<b>1.110</b>	<b>1.035</b>	*	*	0.788	<b>1.107</b>	<b>1.027</b>
\$7500 and over	*	*	0.760	1.003	0.917	*	*	0.809	0.925	0.816
All.....	*	*	0.801	<b>1.108</b>	<b>1.074</b>	*	*	0.809	<b>1.037</b>	<b>0.950</b>
<b>Refund, Based on Annuity 2000 Basic Table</b>										
Immediate										
Less than \$2500	<b>0.977</b>	<b>1.051</b>	<b>0.975</b>	<b>1.082</b>	<b>1.068</b>	<b>0.944</b>	<b>1.022</b>	<b>0.950</b>	<b>1.069</b>	<b>1.049</b>
\$2500-\$7499	<b>0.853</b>	<b>0.990</b>	<b>0.968</b>	<b>1.031</b>	<b>0.995</b>	<b>0.872</b>	<b>0.998</b>	<b>0.953</b>	<b>1.027</b>	<b>0.991</b>
\$7500 and over	<b>0.895</b>	<b>0.994</b>	<b>1.012</b>	<b>1.000</b>	<b>0.975</b>	<b>0.901</b>	<b>1.001</b>	<b>1.018</b>	<b>1.002</b>	<b>0.977</b>
All.....	<b>0.896</b>	<b>1.008</b>	<b>0.980</b>	<b>1.062</b>	<b>1.033</b>	<b>0.897</b>	<b>1.001</b>	<b>0.991</b>	<b>1.027</b>	<b>0.992</b>
Annuitizations										
Less than \$2500	<b>0.876</b>	<b>0.949</b>	<b>0.984</b>	<b>1.091</b>	<b>1.074</b>	<b>0.831</b>	<b>0.947</b>	<b>0.965</b>	<b>1.060</b>	<b>1.042</b>
\$2500-\$7499	0.761	<b>0.853</b>	<b>0.883</b>	<b>0.986</b>	<b>0.957</b>	0.770	<b>0.840</b>	<b>0.877</b>	<b>0.976</b>	<b>0.948</b>
\$7500 and over	0.671	<b>0.737</b>	<b>0.768</b>	<b>0.874</b>	<b>0.837</b>	0.594	<b>0.698</b>	<b>0.725</b>	<b>0.850</b>	<b>0.802</b>
All.....	<b>0.783</b>	<b>0.858</b>	<b>0.897</b>	<b>1.035</b>	<b>1.006</b>	<b>0.650</b>	<b>0.743</b>	<b>0.776</b>	<b>0.917</b>	<b>0.871</b>
Settlements										
Less than \$2500	0.688	0.891	<b>1.062</b>	<b>1.150</b>	<b>1.118</b>	0.664	0.897	<b>1.076</b>	<b>1.123</b>	<b>1.087</b>
\$2500-\$7499	0.715	<b>0.878</b>	<b>0.999</b>	<b>1.000</b>	<b>0.957</b>	0.732	<b>0.893</b>	<b>1.017</b>	<b>1.007</b>	<b>0.965</b>
\$7500 and over	0.858	0.872	1.071	<b>1.067</b>	<b>0.992</b>	0.920	0.843	1.049	<b>1.020</b>	<b>0.973</b>
All.....	<b>0.749</b>	<b>0.881</b>	<b>1.038</b>	<b>1.115</b>	<b>1.064</b>	<b>0.851</b>	<b>0.865</b>	<b>1.041</b>	<b>1.049</b>	<b>0.995</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.

**Table 2b1** (continued)  
**Nonrefund and Refund Annuity Mortality Ratios by Annual Income, Contract Year Group, and Contract Type**  
Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Income Band	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Nonrefund, Based on 2012 IAM "G2 for 5" Basic Table										
Immediate										
Less than \$2500	0.732	1.079	<b>1.375</b>	<b>1.249</b>	<b>1.239</b>	0.690	1.093	<b>1.409</b>	<b>1.297</b>	<b>1.275</b>
\$2500-\$7499	0.625	0.981	1.169	<b>1.270</b>	<b>1.171</b>	0.597	0.992	1.135	<b>1.261</b>	<b>1.154</b>
\$7500 and over	0.559	0.762	0.956	<b>1.257</b>	<b>0.985</b>	0.428	0.508	0.966	<b>1.192</b>	<b>0.814</b>
All.....	0.616	<b>0.923</b>	<b>1.179</b>	<b>1.255</b>	<b>1.174</b>	0.453	<b>0.587</b>	<b>1.026</b>	<b>1.232</b>	<b>0.937</b>
Annuitizations										
Less than \$2500	1.011	0.841	<b>1.139</b>	<b>1.261</b>	<b>1.236</b>	0.944	0.860	<b>1.098</b>	<b>1.248</b>	<b>1.213</b>
\$2500-\$7499	0.803	1.032	0.998	<b>1.137</b>	<b>1.098</b>	0.803	1.040	1.018	<b>1.127</b>	<b>1.093</b>
\$7500 and over	0.639	0.789	0.861	<b>1.059</b>	<b>0.965</b>	0.566	0.538	0.862	<b>1.014</b>	<b>0.865</b>
All.....	0.844	<b>0.885</b>	<b>1.030</b>	<b>1.215</b>	<b>1.170</b>	0.623	<b>0.623</b>	<b>0.911</b>	<b>1.094</b>	<b>0.974</b>
Settlements										
Less than \$2500	*	*	0.958	<b>1.186</b>	<b>1.173</b>	*	*	1.007	<b>1.169</b>	<b>1.156</b>
\$2500-\$7499	*	*	0.914	<b>1.220</b>	<b>1.145</b>	*	*	0.906	<b>1.216</b>	<b>1.137</b>
\$7500 and over	*	*	0.864	1.121	1.030	*	*	0.924	1.036	0.921
All.....	*	*	0.925	<b>1.188</b>	<b>1.159</b>	*	*	0.927	<b>1.139</b>	<b>1.054</b>
Refund, Based on 2012 IAM "G2 for 5" Basic Table										
Immediate										
Less than \$2500	<b>1.136</b>	<b>1.221</b>	<b>1.145</b>	<b>1.172</b>	<b>1.171</b>	<b>1.099</b>	<b>1.183</b>	<b>1.112</b>	<b>1.169</b>	<b>1.162</b>
\$2500-\$7499	0.986	<b>1.134</b>	<b>1.110</b>	<b>1.138</b>	<b>1.115</b>	1.006	<b>1.142</b>	<b>1.090</b>	<b>1.133</b>	<b>1.112</b>
\$7500 and over	1.020	<b>1.124</b>	<b>1.140</b>	<b>1.101</b>	<b>1.091</b>	1.021	<b>1.127</b>	<b>1.148</b>	<b>1.107</b>	<b>1.094</b>
All.....	<b>1.031</b>	<b>1.154</b>	<b>1.129</b>	<b>1.157</b>	<b>1.143</b>	<b>1.021</b>	<b>1.133</b>	<b>1.127</b>	<b>1.131</b>	<b>1.109</b>
Annuitizations										
Less than \$2500	<b>1.011</b>	<b>1.128</b>	<b>1.206</b>	<b>1.227</b>	<b>1.219</b>	<b>0.955</b>	<b>1.121</b>	<b>1.181</b>	<b>1.197</b>	<b>1.188</b>
\$2500-\$7499	<b>0.871</b>	<b>1.005</b>	<b>1.084</b>	<b>1.133</b>	<b>1.110</b>	<b>0.882</b>	<b>0.990</b>	<b>1.078</b>	<b>1.124</b>	<b>1.102</b>
\$7500 and over	<b>0.785</b>	<b>0.903</b>	<b>0.968</b>	<b>1.020</b>	<b>0.993</b>	<b>0.702</b>	<b>0.867</b>	<b>0.919</b>	<b>0.989</b>	<b>0.953</b>
All.....	<b>0.904</b>	<b>1.025</b>	<b>1.108</b>	<b>1.176</b>	<b>1.156</b>	<b>0.761</b>	<b>0.910</b>	<b>0.973</b>	<b>1.059</b>	<b>1.023</b>
Settlements										
Less than \$2500	0.801	1.033	<b>1.235</b>	<b>1.251</b>	<b>1.230</b>	0.773	1.036	<b>1.244</b>	<b>1.236</b>	<b>1.210</b>
\$2500-\$7499	0.819	<b>1.000</b>	<b>1.141</b>	<b>1.116</b>	<b>1.078</b>	0.837	<b>1.017</b>	<b>1.162</b>	<b>1.122</b>	<b>1.088</b>
\$7500 and over	0.964	0.976	1.209	<b>1.182</b>	<b>1.109</b>	1.026	0.940	1.180	<b>1.128</b>	<b>1.084</b>
All.....	<b>0.857</b>	<b>1.005</b>	<b>1.193</b>	<b>1.220</b>	<b>1.179</b>	<b>0.958</b>	<b>0.974</b>	<b>1.182</b>	<b>1.161</b>	<b>1.113</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.



Table 2b2

**Qualified Nonrefund and Refund Annuity Mortality Ratios by Annual Income, Contract Year Group, and Contract Type**  
Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Income Band	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
<b>Nonrefund, Based on Annuity 2000 Basic Table</b>										
Immediate										
Less than \$2500	*	0.922	0.975	<b>1.024</b>	<b>1.006</b>	*	0.981	0.967	<b>1.010</b>	<b>0.993</b>
\$2500-\$7499	*	0.772	0.850	<b>0.907</b>	<b>0.870</b>	*	0.773	0.858	<b>0.896</b>	<b>0.862</b>
\$7500 and over	*	*	0.576	0.843	0.732	*	*	0.520	0.775	0.649
All.....	0.606	0.795	0.852	<b>0.972</b>	<b>0.929</b>	0.428	0.631	0.658	<b>0.862</b>	<b>0.770</b>
Annuitizations										
Less than \$2500	0.887	0.722	<b>0.943</b>	<b>1.115</b>	<b>1.087</b>	0.812	0.735	<b>0.907</b>	<b>1.100</b>	<b>1.064</b>
\$2500-\$7499	0.779	0.942	0.769	<b>0.988</b>	<b>0.953</b>	0.815	0.934	0.781	<b>0.979</b>	<b>0.946</b>
\$7500 and over	0.566	0.743	0.677	<b>0.895</b>	<b>0.829</b>	0.415	0.770	0.719	<b>0.858</b>	<b>0.800</b>
All.....	0.785	0.791	<b>0.833</b>	<b>1.065</b>	<b>1.024</b>	0.541	0.799	<b>0.748</b>	<b>0.940</b>	<b>0.882</b>
Settlements										
Less than \$2500	*	*	*	<b>1.042</b>	<b>1.032</b>	*	*	*	<b>1.016</b>	<b>1.005</b>
\$2500-\$7499	*	*	*	1.070	<b>1.041</b>	*	*	*	1.066	<b>1.039</b>
\$7500 and over	*	*	*	0.987	0.967	*	*	*	0.929	0.922
All.....	*	*	0.879	<b>1.044</b>	<b>1.029</b>	*	*	1.003	<b>0.997</b>	<b>0.981</b>
<b>Refund, Based on Annuity 2000 Basic Table</b>										
Immediate										
Less than \$2500	1.060	1.025	<b>0.947</b>	<b>1.042</b>	<b>1.036</b>	0.994	0.933	<b>0.898</b>	<b>1.045</b>	<b>1.028</b>
\$2500-\$7499	0.899	0.923	<b>0.931</b>	<b>0.973</b>	<b>0.960</b>	0.916	0.928	<b>0.926</b>	<b>0.972</b>	<b>0.960</b>
\$7500 and over	0.790	0.861	0.828	<b>0.925</b>	<b>0.889</b>	0.763	0.766	0.725	<b>0.887</b>	<b>0.837</b>
All.....	<b>0.915</b>	<b>0.948</b>	<b>0.922</b>	<b>1.012</b>	<b>0.996</b>	<b>0.821</b>	<b>0.832</b>	<b>0.821</b>	<b>0.955</b>	<b>0.918</b>
Annuitizations										
Less than \$2500	<b>0.952</b>	<b>0.917</b>	<b>0.956</b>	<b>1.089</b>	<b>1.073</b>	<b>0.919</b>	<b>0.911</b>	<b>0.939</b>	<b>1.057</b>	<b>1.041</b>
\$2500-\$7499	0.862	<b>0.849</b>	<b>0.860</b>	<b>0.980</b>	<b>0.959</b>	0.868	<b>0.836</b>	<b>0.855</b>	<b>0.972</b>	<b>0.951</b>
\$7500 and over	0.713	0.704	<b>0.747</b>	<b>0.871</b>	<b>0.838</b>	0.627	0.644	<b>0.709</b>	<b>0.848</b>	<b>0.803</b>
All.....	<b>0.868</b>	<b>0.835</b>	<b>0.872</b>	<b>1.031</b>	<b>1.006</b>	<b>0.701</b>	<b>0.696</b>	<b>0.755</b>	<b>0.913</b>	<b>0.872</b>
Settlements										
Less than \$2500	*	0.840	0.867	<b>1.040</b>	<b>0.994</b>	*	0.857	0.830	<b>1.025</b>	<b>0.968</b>
\$2500-\$7499	0.779	0.816	0.819	<b>0.871</b>	<b>0.849</b>	0.781	0.844	0.830	<b>0.876</b>	<b>0.856</b>
\$7500 and over	*	*	0.837	0.889	0.860	*	*	0.796	0.855	0.812
All.....	0.660	0.842	0.844	<b>0.987</b>	<b>0.940</b>	0.630	0.878	0.814	<b>0.914</b>	<b>0.866</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.

**Table 2b2** (continued)  
**Qualified Nonrefund and Refund Annuity Mortality Ratios by Annual Income, Contract Year Group, and Contract Type**  
Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Income Band	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Nonrefund, Based on 2012 IAM "G2 for 5" Basic Table										
Immediate										
Less than \$2500	*	1.068	1.135	<b>1.149</b>	<b>1.233</b>	*	1.129	1.120	<b>1.139</b>	<b>1.126</b>
\$2500-\$7499	*	0.891	0.990	<b>1.029</b>	<b>1.111</b>	*	0.893	1.000	<b>1.019</b>	<b>0.986</b>
\$7500 and over	*	*	0.684	0.961	0.992	*	*	0.620	0.880	0.753
All.....	0.715	0.921	0.996	<b>1.096</b>	<b>1.176</b>	0.515	0.740	0.777	<b>0.978</b>	<b>0.886</b>
Annuitizations										
Less than \$2500	1.034	0.868	<b>1.158</b>	<b>1.253</b>	<b>1.135</b>	0.947	0.885	<b>1.116</b>	<b>1.244</b>	<b>1.215</b>
\$2500-\$7499	0.912	1.130	0.953	<b>1.140</b>	<b>0.995</b>	0.955	1.121	0.970	<b>1.131</b>	<b>1.106</b>
\$7500 and over	0.686	0.923	0.860	<b>1.050</b>	<b>0.848</b>	0.512	0.968	0.909	<b>1.004</b>	<b>0.960</b>
All.....	0.924	0.958	<b>1.033</b>	<b>1.208</b>	<b>1.056</b>	0.656	0.992	<b>0.940</b>	<b>1.089</b>	<b>1.042</b>
Settlements										
Less than \$2500	*	*	*	<b>1.124</b>	<b>1.118</b>	*	*	*	<b>1.107</b>	<b>1.099</b>
\$2500-\$7499	*	*	*	1.189	<b>1.163</b>	*	*	*	1.185	<b>1.162</b>
\$7500 and over	*	*	*	1.114	1.099	*	*	*	1.050	1.050
All.....	*	*	1.055	<b>1.138</b>	<b>1.127</b>	*	*	1.218	<b>1.111</b>	<b>1.100</b>
Refund, Based on 2012 IAM "G3 for 5" Basic Table										
Immediate										
Less than \$2500	1.270	1.234	<b>1.155</b>	<b>1.150</b>	<b>1.156</b>	1.192	1.121	<b>1.096</b>	<b>1.160</b>	<b>1.155</b>
\$2500-\$7499	1.080	1.113	<b>1.138</b>	<b>1.091</b>	<b>1.097</b>	1.102	1.118	<b>1.134</b>	<b>1.090</b>	<b>1.098</b>
\$7500 and over	0.959	1.046	1.012	<b>1.032</b>	<b>1.022</b>	0.930	0.931	0.892	<b>0.989</b>	<b>0.964</b>
All.....	<b>1.102</b>	<b>1.143</b>	<b>1.126</b>	<b>1.123</b>	<b>1.123</b>	<b>0.996</b>	<b>1.008</b>	<b>1.007</b>	<b>1.066</b>	<b>1.049</b>
Annuitizations										
Less than \$2500	<b>1.112</b>	<b>1.107</b>	<b>1.189</b>	<b>1.227</b>	<b>1.221</b>	<b>1.073</b>	<b>1.101</b>	<b>1.169</b>	<b>1.196</b>	<b>1.190</b>
\$2500-\$7499	1.014	<b>1.031</b>	<b>1.084</b>	<b>1.128</b>	<b>1.117</b>	1.023	<b>1.016</b>	<b>1.080</b>	<b>1.121</b>	<b>1.111</b>
\$7500 and over	0.880	0.899	<b>0.969</b>	<b>1.018</b>	<b>1.001</b>	0.787	0.834	<b>0.922</b>	<b>0.988</b>	<b>0.961</b>
All.....	<b>1.029</b>	<b>1.026</b>	<b>1.101</b>	<b>1.174</b>	<b>1.160</b>	<b>0.863</b>	<b>0.886</b>	<b>0.973</b>	<b>1.056</b>	<b>1.031</b>
Settlements										
Less than \$2500	*	1.004	1.060	<b>1.164</b>	<b>1.129</b>	*	1.025	1.016	<b>1.157</b>	<b>1.109</b>
\$2500-\$7499	0.930	0.984	1.002	<b>1.000</b>	<b>0.993</b>	0.933	1.020	1.019	<b>1.006</b>	<b>1.003</b>
\$7500 and over	*	*	1.033	1.025	1.021	*	*	0.989	0.989	0.970
All.....	0.788	1.014	1.034	<b>1.115</b>	<b>1.080</b>	0.761	1.072	1.005	<b>1.046</b>	<b>1.017</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.

**Table 2b3**

**Nonqualified Nonrefund and Refund Annuity Mortality Ratios by Annual Income, Contract Year Group, and Contract Type**  
Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Income Band	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
<b>Nonrefund, Based on Annuity 2000 Basic Table</b>										
Immediate										
Less than \$2500	0.575	0.957	1.465	<b>1.252</b>	<b>1.232</b>	0.514	0.930	1.506	<b>1.359</b>	<b>1.306</b>
\$2500-\$7499	0.521	0.927	1.171	<b>1.383</b>	<b>1.192</b>	0.482	0.942	1.110	<b>1.370</b>	<b>1.162</b>
\$7500 and over	0.483	0.703	0.993	<b>1.412</b>	<b>0.970</b>	0.370	0.457	1.057	<b>1.359</b>	<b>0.779</b>
All.....	0.511	0.834	<b>1.191</b>	<b>1.308</b>	<b>1.161</b>	0.382	0.520	<b>1.086</b>	<b>1.362</b>	<b>0.888</b>
Annuitizations										
Less than \$2500	*	*	0.929	<b>1.282</b>	<b>1.186</b>	*	*	0.895	<b>1.202</b>	<b>1.089</b>
\$2500-\$7499	*	0.714	1.018	1.021	0.907	*	0.752	1.048	1.008	0.907
\$7500 and over	*	0.522	0.776	1.101	0.732	*	0.211	0.691	1.053	0.528
All.....	0.527	0.617	0.913	<b>1.221</b>	<b>1.027</b>	0.521	0.268	0.760	<b>1.074</b>	<b>0.626</b>
Settlements										
Less than \$2500	*	*	0.609	<b>1.164</b>	<b>1.135</b>	*	*	0.634	<b>1.132</b>	<b>1.098</b>
\$2500-\$7499	*	*	0.675	1.110	<b>0.978</b>	*	*	0.649	1.109	<b>0.964</b>
\$7500 and over	*	*	*	0.908	0.879	*	*	*	0.779	0.706
All.....	*	*	0.681	<b>1.148</b>	<b>1.097</b>	*	*	0.797	<b>1.026</b>	<b>0.903</b>
<b>Refund, Based on Annuity 2000 Basic Table</b>										
Immediate										
Less than \$2500	<b>0.939</b>	<b>1.076</b>	<b>0.993</b>	<b>1.100</b>	<b>1.081</b>	<b>0.917</b>	<b>1.071</b>	<b>0.977</b>	<b>1.076</b>	<b>1.054</b>
\$2500-\$7499	<b>0.833</b>	<b>1.015</b>	<b>0.985</b>	<b>1.078</b>	<b>1.011</b>	<b>0.855</b>	<b>1.026</b>	<b>0.963</b>	<b>1.070</b>	<b>1.005</b>
\$7500 and over	<b>0.919</b>	<b>1.042</b>	<b>1.057</b>	<b>1.044</b>	<b>1.008</b>	<b>0.929</b>	<b>1.068</b>	<b>1.090</b>	<b>1.096</b>	<b>1.034</b>
All.....	<b>0.890</b>	<b>1.039</b>	<b>1.004</b>	<b>1.090</b>	<b>1.048</b>	<b>0.915</b>	<b>1.058</b>	<b>1.043</b>	<b>1.082</b>	<b>1.029</b>
Annuitizations										
Less than \$2500	0.681	1.052	<b>1.130</b>	<b>1.125</b>	<b>1.086</b>	0.666	1.033	<b>1.071</b>	<b>1.104</b>	<b>1.050</b>
\$2500-\$7499	0.638	0.868	0.971	<b>1.124</b>	<b>0.944</b>	0.652	0.855	0.964	<b>1.084</b>	<b>0.924</b>
\$7500 and over	0.617	0.834	0.888	1.007	<b>0.829</b>	0.548	0.871	0.830	0.938	<b>0.786</b>
All.....	0.644	<b>0.921</b>	<b>1.015</b>	<b>1.117</b>	<b>1.001</b>	0.580	<b>0.878</b>	<b>0.889</b>	<b>1.033</b>	<b>0.861</b>
Settlements										
Less than \$2500	0.679	0.874	<b>1.111</b>	<b>1.183</b>	<b>1.140</b>	0.644	0.863	<b>1.131</b>	<b>1.163</b>	<b>1.107</b>
\$2500-\$7499	0.646	0.827	<b>0.987</b>	<b>1.036</b>	<b>0.922</b>	0.664	0.858	<b>0.999</b>	<b>1.065</b>	<b>0.939</b>
\$7500 and over	0.851	0.914	1.144	1.058	<b>0.982</b>	0.918	0.896	1.154	1.058	<b>0.995</b>
All.....	<b>0.720</b>	<b>0.863</b>	<b>1.064</b>	<b>1.158</b>	<b>1.069</b>	<b>0.835</b>	<b>0.880</b>	<b>1.087</b>	<b>1.107</b>	<b>0.999</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.

**Table 2b3** (continued)

**Nonqualified Nonrefund and Refund Annuity Mortality Ratios by Annual Income, Contract Year Group, and Contract Type**  
Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Income Band	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
<b>Nonrefund, Based on 2012 IAM "G2 for 5" Basic Table</b>										
Immediate										
Less than \$2500	0.668	1.082	1.635	<b>1.323</b>	<b>1.316</b>	0.597	1.045	1.672	<b>1.448</b>	<b>1.408</b>
\$2500-\$7499	0.605	1.049	1.290	<b>1.473</b>	<b>1.299</b>	0.559	1.067	1.221	<b>1.456</b>	<b>1.266</b>
\$7500 and over	0.553	0.786	1.078	<b>1.494</b>	<b>1.062</b>	0.428	0.497	1.128	<b>1.423</b>	<b>0.849</b>
All.....	0.589	0.939	<b>1.311</b>	<b>1.385</b>	<b>1.254</b>	0.443	0.568	<b>1.167</b>	<b>1.437</b>	<b>0.968</b>
Annuitizations										
Less than \$2500	*	*	1.029	<b>1.342</b>	<b>1.259</b>	*	*	1.001	<b>1.277</b>	<b>1.178</b>
\$2500-\$7499	*	0.805	1.129	1.107	1.002	*	0.847	1.161	1.091	1.001
\$7500 and over	*	0.585	0.853	1.203	0.813	*	0.232	0.753	1.161	0.583
All.....	0.604	0.697	1.009	<b>1.290</b>	<b>1.111</b>	0.593	0.294	0.832	<b>1.168</b>	<b>0.691</b>
Settlements										
Less than \$2500	*	*	0.695	<b>1.230</b>	<b>1.204</b>	*	*	0.727	<b>1.210</b>	<b>1.178</b>
\$2500-\$7499	*	*	0.757	1.203	<b>1.069</b>	*	*	0.727	1.203	<b>1.055</b>
\$7500 and over	*	*	*	0.998	0.969	*	*	*	0.858	0.789
All.....	*	*	0.768	<b>1.220</b>	<b>1.172</b>	*	*	0.890	<b>1.111</b>	<b>0.990</b>
<b>Refund, Based on 2012 IAM "G2 for 5" Basic Table</b>										
Immediate										
Less than \$2500	<b>1.076</b>	<b>1.231</b>	<b>1.141</b>	<b>1.182</b>	<b>1.176</b>	<b>1.053</b>	<b>1.222</b>	<b>1.119</b>	<b>1.169</b>	<b>1.160</b>
\$2500-\$7499	<b>0.951</b>	<b>1.145</b>	<b>1.101</b>	<b>1.176</b>	<b>1.121</b>	<b>0.974</b>	<b>1.156</b>	<b>1.075</b>	<b>1.167</b>	<b>1.115</b>
\$7500 and over	<b>1.034</b>	<b>1.161</b>	<b>1.163</b>	<b>1.138</b>	<b>1.117</b>	<b>1.038</b>	<b>1.187</b>	<b>1.203</b>	<b>1.206</b>	<b>1.147</b>
All.....	<b>1.010</b>	<b>1.172</b>	<b>1.129</b>	<b>1.177</b>	<b>1.150</b>	<b>1.027</b>	<b>1.181</b>	<b>1.158</b>	<b>1.184</b>	<b>1.140</b>
Annuitizations										
Less than \$2500	0.760	1.190	<b>1.281</b>	<b>1.222</b>	<b>1.195</b>	0.743	1.164	<b>1.215</b>	<b>1.211</b>	<b>1.165</b>
\$2500-\$7499	0.708	0.966	1.082	<b>1.244</b>	<b>1.049</b>	0.722	0.951	1.071	<b>1.198</b>	<b>1.025</b>
\$7500 and over	0.677	0.916	0.967	1.111	<b>0.908</b>	0.599	0.949	0.899	1.029	<b>0.857</b>
All.....	0.714	<b>1.027</b>	<b>1.132</b>	<b>1.220</b>	<b>1.104</b>	0.636	<b>0.965</b>	<b>0.974</b>	<b>1.136</b>	<b>0.945</b>
Settlements										
Less than \$2500	0.784	0.998	<b>1.258</b>	<b>1.275</b>	<b>1.242</b>	0.743	0.981	<b>1.271</b>	<b>1.268</b>	<b>1.220</b>
\$2500-\$7499	0.729	0.922	<b>1.089</b>	<b>1.138</b>	<b>1.021</b>	0.748	0.955	<b>1.103</b>	<b>1.167</b>	<b>1.039</b>
\$7500 and over	0.941	1.001	1.246	1.152	<b>1.076</b>	1.005	0.974	1.252	1.145	<b>1.082</b>
All.....	<b>0.812</b>	<b>0.965</b>	<b>1.185</b>	<b>1.252</b>	<b>1.170</b>	<b>0.923</b>	<b>0.968</b>	<b>1.194</b>	<b>1.207</b>	<b>1.096</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.

**Table 3a**  
**Immediate Annuity Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
 Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
<b>Nonrefund, Based on Annuity 2000 Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*
65-69.....	*	*	*	*	0.771	*	*	*	*	0.579
70-74.....	*	*	1.252	0.942	0.932	*	*	0.742	0.840	0.596
75-79.....	*	*	1.114	0.949	0.924	*	*	0.812	0.903	0.675
80-84.....	0.530	1.000	0.888	<b>1.145</b>	<b>1.053</b>	0.343	0.669	0.773	<b>1.072</b>	<b>0.802</b>
85-89.....	*	0.649	1.026	<b>1.114</b>	<b>1.022</b>	*	0.583	0.733	<b>0.996</b>	<b>0.763</b>
90-94.....	*	1.043	1.145	<b>1.278</b>	<b>1.234</b>	*	0.395	1.922	<b>1.446</b>	<b>1.167</b>
95-99.....	*	*	*	1.312	1.299	*	*	*	1.096	0.962
100 and Over..	*	*	*	1.223	1.210	*	*	*	1.606	1.595
All.....	0.595	0.859	<b>1.055</b>	<b>1.156</b>	<b>1.074</b>	0.376	0.553	<b>1.035</b>	<b>1.108</b>	<b>0.854</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*
65-69.....	*	*	*	*	0.949	*	*	*	*	0.746
70-74.....	*	*	*	1.160	1.018	*	*	*	0.776	0.803
75-79.....	*	*	1.056	1.088	0.961	*	*	0.812	1.049	0.683
80-84.....	*	0.746	0.961	<b>1.141</b>	<b>0.993</b>	*	0.416	1.044	<b>1.176</b>	<b>0.754</b>
85-89.....	0.440	0.849	0.968	<b>1.137</b>	<b>1.039</b>	0.289	0.603	0.784	<b>1.152</b>	<b>0.809</b>
90-94.....	*	0.645	1.054	<b>1.158</b>	<b>1.083</b>	*	0.428	0.757	<b>1.138</b>	<b>0.871</b>
95-99.....	*	*	1.307	<b>1.236</b>	<b>1.224</b>	*	*	0.780	<b>1.157</b>	<b>0.979</b>
100 and Over..	*	*	*	1.156	1.154	*	*	*	1.447	1.428
All.....	0.474	0.780	<b>1.037</b>	<b>1.158</b>	<b>1.063</b>	0.401	0.511	<b>0.836</b>	<b>1.161</b>	<b>0.839</b>
<b>Refund, Based on Annuity 2000 Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	4.123	*	*	*	*	4.860
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	1.483	*	*	*	*	1.228
60-64.....	1.268	*	*	*	1.316	1.258	*	*	*	1.230
65-69.....	1.013	0.935	0.950	1.434	1.026	0.777	0.716	0.622	2.088	0.924
70-74.....	0.622	0.990	1.028	0.921	<b>0.895</b>	0.626	1.013	0.917	0.980	<b>0.862</b>
75-79.....	0.881	0.951	0.914	<b>1.028</b>	<b>0.977</b>	0.827	0.616	0.851	<b>0.922</b>	<b>0.844</b>
80-84.....	0.880	1.173	0.903	<b>1.010</b>	<b>0.999</b>	0.775	1.065	0.795	<b>0.960</b>	<b>0.921</b>
85-89.....	1.030	1.131	1.050	<b>1.061</b>	<b>1.063</b>	1.032	1.153	1.073	<b>1.001</b>	<b>1.033</b>
90-94.....	1.193	1.309	1.289	<b>1.241</b>	<b>1.245</b>	1.162	1.259	1.313	<b>1.186</b>	<b>1.207</b>
95-99.....	*	*	*	<b>1.175</b>	<b>1.162</b>	*	*	*	<b>1.041</b>	<b>1.053</b>
100 and Over..	*	*	*	0.987	0.985	*	*	*	0.781	0.761
All.....	<b>0.957</b>	<b>1.095</b>	<b>1.006</b>	<b>1.090</b>	<b>1.068</b>	<b>0.934</b>	<b>1.058</b>	<b>0.975</b>	<b>1.038</b>	<b>1.012</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	2.064	*	*	*	*	2.312
60-64.....	*	*	*	*	1.190	*	*	*	*	1.837
65-69.....	1.024	0.986	0.971	1.614	1.099	0.980	1.145	1.098	2.206	1.270
70-74.....	0.837	0.895	1.030	1.334	<b>1.032</b>	0.665	0.971	0.957	1.416	<b>0.975</b>
75-79.....	0.817	0.997	1.003	<b>1.099</b>	<b>1.020</b>	0.729	0.902	0.982	<b>1.065</b>	<b>0.937</b>
80-84.....	0.769	0.884	<b>0.908</b>	<b>0.978</b>	<b>0.937</b>	0.770	0.799	<b>0.928</b>	<b>1.027</b>	<b>0.921</b>
85-89.....	<b>0.807</b>	<b>0.861</b>	<b>0.962</b>	<b>0.993</b>	<b>0.960</b>	<b>0.806</b>	<b>0.925</b>	<b>0.983</b>	<b>0.960</b>	<b>0.924</b>
90-94.....	0.931	0.975	<b>0.896</b>	<b>1.028</b>	<b>1.006</b>	0.992	0.982	<b>0.937</b>	<b>0.966</b>	<b>0.968</b>
95-99.....	1.002	1.255	1.119	<b>1.137</b>	<b>1.137</b>	0.992	1.232	1.142	<b>1.032</b>	<b>1.065</b>
100 and Over..	*	*	*	<b>1.125</b>	<b>1.117</b>	*	*	*	<b>1.001</b>	<b>0.975</b>
All.....	<b>0.845</b>	<b>0.942</b>	<b>0.959</b>	<b>1.039</b>	<b>1.004</b>	<b>0.864</b>	<b>0.956</b>	<b>1.004</b>	<b>1.014</b>	<b>0.973</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.

**Table 3a** (continued)  
**Immediate Annuity Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
 Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
<b>Nonrefund, Based on 2012 IAM "G2 for 5" Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*
65-69.....	*	*	*	*	0.968	*	*	*	*	0.725
70-74.....	*	*	1.774	1.336	1.321	*	*	1.050	1.191	0.844
75-79.....	*	*	1.504	1.278	1.246	*	*	1.097	1.217	0.912
80-84.....	0.651	1.229	1.093	<b>1.406</b>	<b>1.294</b>	0.422	0.823	0.950	<b>1.316</b>	<b>0.985</b>
85-89.....	*	0.709	1.116	<b>1.214</b>	<b>1.115</b>	*	0.631	0.791	<b>1.086</b>	<b>0.829</b>
90-94.....	*	0.984	1.072	<b>1.192</b>	<b>1.153</b>	*	0.367	1.794	<b>1.351</b>	<b>1.090</b>
95-99.....	*	*	*	1.115	1.104	*	*	*	0.931	0.820
100 and Over..	*	*	*	1.035	1.024	*	*	*	1.337	1.327
<b>All.....</b>	<b>0.714</b>	<b>0.997</b>	<b>1.207</b>	<b>1.244</b>	<b>1.181</b>	<b>0.451</b>	<b>0.606</b>	<b>1.137</b>	<b>1.195</b>	<b>0.945</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*
65-69.....	*	*	*	*	0.962	*	*	*	*	0.755
70-74.....	*	*	*	1.265	1.105	*	*	*	0.846	0.870
75-79.....	*	*	1.262	1.302	1.150	*	*	0.972	1.255	0.817
80-84.....	*	0.873	1.123	<b>1.333</b>	<b>1.161</b>	*	0.484	1.219	<b>1.375</b>	<b>0.882</b>
85-89.....	0.488	0.941	1.074	<b>1.261</b>	<b>1.152</b>	0.321	0.669	0.869	<b>1.277</b>	<b>0.898</b>
90-94.....	*	0.718	1.172	<b>1.287</b>	<b>1.205</b>	*	0.476	0.842	<b>1.264</b>	<b>0.968</b>
95-99.....	*	*	1.320	<b>1.225</b>	<b>1.216</b>	*	*	0.793	<b>1.147</b>	<b>0.976</b>
100 and Over..	*	*	*	1.077	1.075	*	*	*	1.313	1.298
<b>All.....</b>	<b>0.536</b>	<b>0.875</b>	<b>1.160</b>	<b>1.264</b>	<b>1.169</b>	<b>0.454</b>	<b>0.571</b>	<b>0.929</b>	<b>1.267</b>	<b>0.929</b>
<b>Refund, Based on 2012 IAM "G2 for 5" Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	4.991	*	*	*	*	5.856
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	1.867	*	*	*	*	1.552
60-64.....	1.439	*	*	*	1.494	1.428	*	*	*	1.397
65-69.....	1.258	1.187	1.215	1.814	1.294	0.965	0.904	0.794	2.605	1.159
70-74.....	0.880	1.404	1.457	1.307	<b>1.268</b>	0.887	1.437	1.299	1.390	<b>1.222</b>
75-79.....	1.191	1.286	1.233	<b>1.383</b>	<b>1.316</b>	1.117	0.832	1.149	<b>1.241</b>	<b>1.138</b>
80-84.....	1.082	1.442	1.113	<b>1.238</b>	<b>1.226</b>	0.951	1.307	0.978	<b>1.177</b>	<b>1.130</b>
85-89.....	1.130	1.232	1.147	<b>1.156</b>	<b>1.159</b>	1.129	1.254	1.168	<b>1.092</b>	<b>1.127</b>
90-94.....	1.125	1.233	1.209	<b>1.161</b>	<b>1.167</b>	1.093	1.182	1.230	<b>1.112</b>	<b>1.132</b>
95-99.....	*	*	*	<b>0.999</b>	<b>0.989</b>	*	*	*	<b>0.885</b>	<b>0.896</b>
100 and Over..	*	*	*	0.835	0.833	*	*	*	0.656	0.640
<b>All.....</b>	<b>1.134</b>	<b>1.288</b>	<b>1.195</b>	<b>1.182</b>	<b>1.187</b>	<b>1.082</b>	<b>1.216</b>	<b>1.134</b>	<b>1.143</b>	<b>1.140</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	2.338	*	*	*	*	2.630
60-64.....	*	*	*	*	1.179	*	*	*	*	1.826
65-69.....	1.033	0.999	0.987	1.637	1.113	0.989	1.159	1.114	2.234	1.285
70-74.....	0.900	0.973	1.116	1.453	<b>1.119</b>	0.717	1.054	1.036	1.538	<b>1.055</b>
75-79.....	0.976	1.190	1.200	<b>1.316</b>	<b>1.221</b>	0.870	1.077	1.174	<b>1.275</b>	<b>1.121</b>
80-84.....	0.899	1.035	<b>1.064</b>	<b>1.142</b>	<b>1.095</b>	0.901	0.934	<b>1.086</b>	<b>1.199</b>	<b>1.077</b>
85-89.....	<b>0.895</b>	<b>0.955</b>	<b>1.066</b>	<b>1.101</b>	<b>1.065</b>	<b>0.894</b>	<b>1.026</b>	<b>1.090</b>	<b>1.064</b>	<b>1.024</b>
90-94.....	1.037	1.086	<b>0.997</b>	<b>1.143</b>	<b>1.119</b>	1.103	1.093	<b>1.043</b>	<b>1.074</b>	<b>1.077</b>
95-99.....	1.019	1.267	1.126	<b>1.130</b>	<b>1.131</b>	1.017	1.251	1.143	<b>1.029</b>	<b>1.067</b>
100 and Over..	*	*	*	<b>1.029</b>	<b>1.022</b>	*	*	*	<b>0.911</b>	<b>0.888</b>
<b>All.....</b>	<b>0.948</b>	<b>1.057</b>	<b>1.079</b>	<b>1.138</b>	<b>1.108</b>	<b>0.968</b>	<b>1.068</b>	<b>1.122</b>	<b>1.118</b>	<b>1.080</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.

**Table 3b**  
**Annuitizations Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
<b>Nonrefund, Based on Annuity 2000 Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	2.114	*	*	*	*	1.811
60-64.....	*	*	*	*	1.173	*	*	*	*	0.885
65-69.....	0.705	0.776	1.295	1.215	0.977	0.502	0.752	1.153	1.055	0.823
70-74.....	*	0.642	0.797	1.125	<b>0.851</b>	*	0.813	0.699	0.939	<b>0.751</b>
75-79.....	*	0.743	0.658	<b>0.935</b>	<b>0.855</b>	*	0.810	0.608	<b>0.816</b>	<b>0.728</b>
80-84.....	*	*	0.820	<b>0.961</b>	<b>0.933</b>	*	*	0.800	<b>0.883</b>	<b>0.816</b>
85-89.....	*	*	0.814	<b>1.057</b>	<b>1.024</b>	*	*	0.430	<b>0.940</b>	<b>0.800</b>
90-94.....	*	*	*	<b>1.196</b>	<b>1.192</b>	*	*	*	<b>1.067</b>	<b>0.944</b>
95-99.....	*	*	*	1.238	1.207	*	*	*	1.239	1.690
100 and Over..	*	*	*	1.095	1.106	*	*	*	1.038	1.069
All.....	0.660	0.714	<b>0.809</b>	<b>1.042</b>	<b>0.977</b>	0.497	0.600	<b>0.750</b>	<b>0.916</b>	<b>0.817</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	1.202	*	*	*	*	0.950
65-69.....	1.230	0.949	0.724	1.689	1.100	1.028	0.744	0.574	1.159	0.815
70-74.....	*	0.726	0.961	1.289	<b>1.040</b>	*	0.559	0.867	1.179	<b>0.883</b>
75-79.....	*	*	0.755	<b>1.100</b>	<b>1.014</b>	*	*	0.588	<b>1.036</b>	<b>0.937</b>
80-84.....	*	*	0.845	<b>1.032</b>	<b>1.004</b>	*	*	0.673	<b>0.939</b>	<b>0.810</b>
85-89.....	*	*	0.904	<b>1.036</b>	<b>1.019</b>	*	*	0.843	<b>0.924</b>	<b>0.789</b>
90-94.....	*	*	1.061	<b>1.126</b>	<b>1.113</b>	*	*	0.644	<b>1.084</b>	<b>0.877</b>
95-99.....	*	*	*	<b>1.266</b>	<b>1.277</b>	*	*	*	<b>1.006</b>	<b>1.154</b>
100 and Over..	*	*	*	1.355	1.353	*	*	*	1.517	1.532
All.....	0.804	0.784	<b>0.901</b>	<b>1.103</b>	<b>1.066</b>	0.575	0.439	<b>0.757</b>	<b>0.991</b>	<b>0.861</b>
<b>Refund, Based on Annuity 2000 Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	1.870	*	*	*	*	1.725
55-59.....	*	*	*	1.468	1.777	*	*	*	1.216	1.609
60-64.....	0.667	1.062	1.714	1.348	1.134	0.701	0.773	1.520	1.406	0.942
65-69.....	0.766	0.866	0.934	1.126	<b>0.920</b>	0.641	0.680	0.743	0.932	<b>0.712</b>
70-74.....	0.852	0.667	<b>0.805</b>	<b>0.958</b>	<b>0.841</b>	0.694	0.634	<b>0.683</b>	<b>0.845</b>	<b>0.713</b>
75-79.....	0.714	0.715	<b>0.805</b>	<b>0.910</b>	<b>0.873</b>	0.361	0.654	<b>0.703</b>	<b>0.798</b>	<b>0.748</b>
80-84.....	0.697	0.863	<b>0.792</b>	<b>0.959</b>	<b>0.944</b>	0.807	0.619	<b>0.619</b>	<b>0.865</b>	<b>0.835</b>
85-89.....	0.762	0.878	0.976	<b>1.050</b>	<b>1.042</b>	0.675	1.204	0.837	<b>0.918</b>	<b>0.916</b>
90-94.....	0.635	1.146	0.980	<b>1.223</b>	<b>1.203</b>	0.422	0.931	0.935	<b>1.123</b>	<b>1.079</b>
95-99.....	*	*	*	<b>1.274</b>	<b>1.273</b>	*	*	*	<b>1.197</b>	<b>1.217</b>
100 and Over..	*	*	*	1.366	1.385	*	*	*	1.437	1.529
All.....	<b>0.783</b>	<b>0.810</b>	<b>0.848</b>	<b>1.027</b>	<b>0.988</b>	<b>0.631</b>	<b>0.711</b>	<b>0.713</b>	<b>0.901</b>	<b>0.844</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	1.642	1.971	*	*	*	0.945	1.512
60-64.....	1.207	1.335	*	1.521	1.311	1.113	1.006	*	1.225	1.100
65-69.....	0.751	1.003	1.139	1.348	<b>1.085</b>	0.693	0.975	1.028	0.941	<b>0.927</b>
70-74.....	0.926	0.844	<b>1.037</b>	<b>1.184</b>	<b>1.071</b>	0.794	0.796	<b>1.118</b>	<b>0.977</b>	<b>0.986</b>
75-79.....	*	0.867	<b>0.822</b>	<b>0.997</b>	<b>0.955</b>	*	0.696	<b>0.779</b>	<b>0.863</b>	<b>0.824</b>
80-84.....	0.821	1.022	0.984	<b>0.990</b>	<b>0.989</b>	0.764	0.894	0.964	<b>0.898</b>	<b>0.900</b>
85-89.....	0.712	1.010	0.850	<b>1.003</b>	<b>0.994</b>	0.610	0.961	0.916	<b>0.941</b>	<b>0.928</b>
90-94.....	0.488	0.734	1.178	<b>1.102</b>	<b>1.077</b>	0.721	0.653	0.999	<b>1.043</b>	<b>0.990</b>
95-99.....	*	*	1.293	<b>1.192</b>	<b>1.166</b>	*	*	0.959	<b>1.159</b>	<b>0.984</b>
100 and Over..	*	*	*	1.274	1.286	*	*	*	1.570	1.430
All.....	<b>0.782</b>	<b>0.929</b>	<b>0.982</b>	<b>1.043</b>	<b>1.027</b>	<b>0.681</b>	<b>0.816</b>	<b>0.948</b>	<b>0.946</b>	<b>0.925</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.

**Table 3b** (continued)  
**Annuitizations Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
<b>Nonrefund, Based on 2012 IAM "G2 for 5" Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	2.663	*	*	*	*	2.272
60-64.....	*	*	*	*	1.331	*	*	*	*	1.002
65-69.....	0.867	0.985	1.660	1.534	1.233	0.622	0.957	1.482	1.343	1.043
70-74.....	*	0.910	1.130	1.596	<b>1.206</b>	*	1.153	0.991	1.332	<b>1.064</b>
75-79.....	*	1.012	0.893	<b>1.261</b>	<b>1.156</b>	*	1.101	0.824	<b>1.100</b>	<b>0.983</b>
80-84.....	*	*	1.019	<b>1.183</b>	<b>1.150</b>	*	*	0.990	<b>1.088</b>	<b>1.006</b>
85-89.....	*	*	0.890	<b>1.156</b>	<b>1.119</b>	*	*	0.468	<b>1.031</b>	<b>0.876</b>
90-94.....	*	*	*	<b>1.121</b>	<b>1.117</b>	*	*	*	<b>1.002</b>	<b>0.887</b>
95-99.....	*	*	*	1.053	1.027	*	*	*	1.056	1.441
100 and Over..	*	*	*	0.929	0.939	*	*	*	0.867	0.893
<b>All.....</b>	<b>0.828</b>	<b>0.912</b>	<b>1.051</b>	<b>1.194</b>	<b>1.148</b>	<b>0.610</b>	<b>0.728</b>	<b>0.946</b>	<b>1.072</b>	<b>0.978</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	1.188	*	*	*	*	0.938
65-69.....	1.233	0.963	0.737	1.710	1.114	1.033	0.755	0.584	1.176	0.826
70-74.....	*	0.784	1.038	1.406	<b>1.126</b>	*	0.604	0.937	1.287	<b>0.956</b>
75-79.....	*	*	0.899	<b>1.316</b>	<b>1.211</b>	*	*	0.700	<b>1.239</b>	<b>1.119</b>
80-84.....	*	*	0.995	<b>1.208</b>	<b>1.176</b>	*	*	0.792	<b>1.101</b>	<b>0.949</b>
85-89.....	*	*	1.003	<b>1.149</b>	<b>1.130</b>	*	*	0.935	<b>1.025</b>	<b>0.875</b>
90-94.....	*	*	1.180	<b>1.253</b>	<b>1.238</b>	*	*	0.715	<b>1.206</b>	<b>0.976</b>
95-99.....	*	*	*	<b>1.261</b>	<b>1.272</b>	*	*	*	<b>1.007</b>	<b>1.157</b>
100 and Over..	*	*	*	1.251	1.248	*	*	*	1.400	1.413
<b>All.....</b>	<b>0.862</b>	<b>0.854</b>	<b>1.006</b>	<b>1.232</b>	<b>1.188</b>	<b>0.637</b>	<b>0.486</b>	<b>0.849</b>	<b>1.122</b>	<b>0.969</b>
<b>Refund, Based on 2012 IAM "G2 for 5" Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	2.496	*	*	*	*	2.302
55-59.....	*	*	*	1.848	2.235	*	*	*	1.528	2.016
60-64.....	0.755	1.200	1.943	1.532	1.286	0.794	0.874	1.721	1.596	1.066
65-69.....	0.946	1.100	1.199	1.422	<b>1.163</b>	0.797	0.865	0.956	1.189	<b>0.904</b>
70-74.....	1.206	0.945	<b>1.141</b>	<b>1.360</b>	<b>1.193</b>	0.983	0.899	<b>0.969</b>	<b>1.200</b>	<b>1.011</b>
75-79.....	0.968	0.978	<b>1.091</b>	<b>1.227</b>	<b>1.180</b>	0.489	0.893	<b>0.952</b>	<b>1.075</b>	<b>1.010</b>
80-84.....	0.867	1.062	<b>0.988</b>	<b>1.178</b>	<b>1.161</b>	0.998	0.767	<b>0.773</b>	<b>1.064</b>	<b>1.029</b>
85-89.....	0.853	0.951	1.074	<b>1.149</b>	<b>1.141</b>	0.753	1.308	0.919	<b>1.006</b>	<b>1.005</b>
90-94.....	0.600	1.061	0.919	<b>1.150</b>	<b>1.131</b>	0.399	0.859	0.873	<b>1.060</b>	<b>1.017</b>
95-99.....	*	*	*	<b>1.086</b>	<b>1.085</b>	*	*	*	<b>1.022</b>	<b>1.039</b>
100 and Over..	*	*	*	1.171	1.185	*	*	*	1.205	1.279
<b>All.....</b>	<b>0.960</b>	<b>1.038</b>	<b>1.112</b>	<b>1.179</b>	<b>1.160</b>	<b>0.777</b>	<b>0.920</b>	<b>0.934</b>	<b>1.052</b>	<b>1.014</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	1.865	2.234	*	*	*	1.069	1.707
60-64.....	1.194	1.315	*	1.511	1.297	1.101	0.991	*	1.214	1.087
65-69.....	0.754	1.016	1.159	1.366	<b>1.098</b>	0.696	0.988	1.046	0.955	<b>0.939</b>
70-74.....	0.984	0.914	<b>1.119</b>	<b>1.289</b>	<b>1.160</b>	0.844	0.861	<b>1.208</b>	<b>1.065</b>	<b>1.067</b>
75-79.....	*	1.026	<b>0.979</b>	<b>1.193</b>	<b>1.141</b>	*	0.825	<b>0.928</b>	<b>1.033</b>	<b>0.984</b>
80-84.....	0.966	1.197	1.162	<b>1.159</b>	<b>1.158</b>	0.898	1.046	1.138	<b>1.051</b>	<b>1.055</b>
85-89.....	0.791	1.119	0.943	<b>1.113</b>	<b>1.103</b>	0.678	1.065	1.016	<b>1.043</b>	<b>1.029</b>
90-94.....	0.544	0.814	1.311	<b>1.226</b>	<b>1.199</b>	0.803	0.725	1.111	<b>1.161</b>	<b>1.102</b>
95-99.....	*	*	1.294	<b>1.192</b>	<b>1.167</b>	*	*	0.965	<b>1.161</b>	<b>0.985</b>
100 and Over..	*	*	*	1.158	1.168	*	*	*	1.431	1.302
<b>All.....</b>	<b>0.842</b>	<b>1.008</b>	<b>1.102</b>	<b>1.172</b>	<b>1.151</b>	<b>0.739</b>	<b>0.890</b>	<b>1.065</b>	<b>1.071</b>	<b>1.041</b>

\* Fewer than 35 contracts terminated by death. Ratios in **bold** have at least 400 deaths.



**Table 3c**  
**Settlements Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
<b>Nonrefund, Based on Annuity 2000 Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*
65-69.....	*	*	*	*	*	*	*	*	*	*
70-74.....	*	*	*	*	1.038	*	*	*	*	1.007
75-79.....	*	*	*	0.851	0.820	*	*	*	0.617	0.571
80-84.....	*	*	*	<b>0.991</b>	<b>0.952</b>	*	*	*	<b>0.992</b>	<b>0.863</b>
85-89.....	*	*	*	<b>1.087</b>	<b>1.068</b>	*	*	*	<b>1.059</b>	<b>1.011</b>
90-94.....	*	*	*	<b>1.282</b>	<b>1.276</b>	*	*	*	<b>1.216</b>	<b>1.229</b>
95-99.....	*	*	*	1.351	1.352	*	*	*	1.336	1.332
100 and Over..	*	*	*	1.052	1.052	*	*	*	0.944	0.944
All.....	*	*	0.828	<b>1.115</b>	<b>1.083</b>	*	*	0.892	<b>1.037</b>	<b>0.960</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*
65-69.....	*	*	*	*	*	*	*	*	*	*
70-74.....	*	*	*	*	*	*	*	*	*	*
75-79.....	*	*	*	1.028	0.913	*	*	*	1.017	0.818
80-84.....	*	*	*	0.969	<b>0.928</b>	*	*	*	1.018	<b>0.888</b>
85-89.....	*	*	*	<b>0.962</b>	<b>0.933</b>	*	*	*	<b>0.876</b>	<b>0.799</b>
90-94.....	*	*	*	<b>1.183</b>	<b>1.157</b>	*	*	*	<b>1.072</b>	<b>1.017</b>
95-99.....	*	*	*	<b>1.283</b>	<b>1.266</b>	*	*	*	<b>1.337</b>	<b>1.297</b>
100 and Over..	*	*	*	1.141	1.140	*	*	*	1.122	1.100
All.....	*	0.578	0.779	<b>1.103</b>	<b>1.068</b>	*	0.492	0.739	<b>1.036</b>	<b>0.941</b>
<b>Refund, Based on Annuity 2000 Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*
65-69.....	*	1.029	*	*	0.859	*	0.874	*	*	0.719
70-74.....	0.789	0.622	0.796	0.847	0.768	0.702	0.799	0.820	0.845	0.793
75-79.....	*	0.949	0.931	0.845	<b>0.867</b>	*	1.056	0.956	0.692	<b>0.840</b>
80-84.....	0.849	0.862	1.038	<b>1.055</b>	<b>1.030</b>	0.882	0.762	0.857	<b>1.017</b>	<b>0.951</b>
85-89.....	1.032	0.916	1.151	<b>1.149</b>	<b>1.127</b>	1.237	0.830	1.263	<b>1.111</b>	<b>1.115</b>
90-94.....	1.019	0.960	1.221	<b>1.260</b>	<b>1.235</b>	1.112	0.851	1.040	<b>1.245</b>	<b>1.144</b>
95-99.....	*	*	*	1.427	<b>1.442</b>	*	*	*	1.319	<b>1.472</b>
100 and Over..	*	*	*	1.082	0.963	*	*	*	0.865	0.595
All.....	0.879	<b>0.893</b>	<b>1.017</b>	<b>1.127</b>	<b>1.079</b>	0.985	<b>0.899</b>	<b>1.017</b>	<b>1.068</b>	<b>1.024</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*
65-69.....	*	*	*	2.075	1.254	*	*	*	1.347	1.056
70-74.....	*	1.059	1.117	1.057	0.994	*	1.225	0.970	0.862	0.978
75-79.....	0.681	0.845	0.948	<b>1.045</b>	<b>0.960</b>	0.494	0.871	0.970	<b>0.955</b>	<b>0.880</b>
80-84.....	0.672	0.711	1.011	<b>0.968</b>	<b>0.929</b>	0.793	0.781	1.077	<b>0.922</b>	<b>0.912</b>
85-89.....	0.608	0.791	1.034	<b>1.059</b>	<b>1.005</b>	0.706	0.664	1.027	<b>1.044</b>	<b>0.932</b>
90-94.....	0.713	1.031	1.107	<b>1.129</b>	<b>1.105</b>	1.036	0.965	1.078	<b>1.064</b>	<b>1.050</b>
95-99.....	*	*	1.294	<b>1.292</b>	<b>1.271</b>	*	*	1.407	<b>1.208</b>	<b>1.140</b>
100 and Over..	*	*	*	1.311	1.254	*	*	*	1.213	0.968
All.....	0.663	<b>0.872</b>	<b>1.053</b>	<b>1.106</b>	<b>1.053</b>	0.762	<b>0.841</b>	<b>1.059</b>	<b>1.034</b>	<b>0.973</b>

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.

**Table 3c (continued)**  
**Settlements Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
 Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
<b>Nonrefund, Based on 2012 IAM "G2 for 5" Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*
65-69.....	*	*	*	*	*	*	*	*	*	*
70-74.....	*	*	*	*	1.472	*	*	*	*	1.428
75-79.....	*	*	*	1.143	1.102	*	*	*	0.829	0.768
80-84.....	*	*	*	<b>1.215</b>	<b>1.168</b>	*	*	*	<b>1.216</b>	<b>1.058</b>
85-89.....	*	*	*	<b>1.186</b>	<b>1.165</b>	*	*	*	<b>1.161</b>	<b>1.108</b>
90-94.....	*	*	*	<b>1.198</b>	<b>1.192</b>	*	*	*	<b>1.141</b>	<b>1.153</b>
95-99.....	*	*	*	1.146	1.147	*	*	*	1.136	1.133
100 and Over..	*	*	*	0.906	0.906	*	*	*	0.813	0.813
All.....	*	*	0.992	<b>1.179</b>	<b>1.158</b>	*	*	1.055	<b>1.139</b>	<b>1.071</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*
65-69.....	*	*	*	*	*	*	*	*	*	*
70-74.....	*	*	*	*	*	*	*	*	*	*
75-79.....	*	*	*	1.231	1.094	*	*	*	1.218	0.979
80-84.....	*	*	*	1.131	<b>1.083</b>	*	*	*	1.189	<b>1.038</b>
85-89.....	*	*	*	<b>1.067</b>	<b>1.035</b>	*	*	*	<b>0.972</b>	<b>0.886</b>
90-94.....	*	*	*	<b>1.315</b>	<b>1.286</b>	*	*	*	<b>1.192</b>	<b>1.131</b>
95-99.....	*	*	*	<b>1.272</b>	<b>1.255</b>	*	*	*	<b>1.332</b>	<b>1.291</b>
100 and Over..	*	*	*	1.065	1.064	*	*	*	1.046	1.025
All.....	*	0.646	0.874	<b>1.195</b>	<b>1.160</b>	*	0.549	0.826	<b>1.139</b>	<b>1.038</b>
<b>Refund, Based on 2012 IAM "G2 for 5" Basic Table</b>										
<b>Male</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*
65-69.....	*	1.322	*	1.417	1.089	*	1.117	*	1.990	0.910
70-74.....	1.117	0.882	1.129	1.202	1.089	0.993	1.134	1.162	1.200	1.125
75-79.....	*	1.283	1.257	1.137	<b>1.167</b>	*	1.429	1.291	0.930	<b>1.132</b>
80-84.....	1.047	1.059	1.281	<b>1.294</b>	<b>1.265</b>	1.085	0.935	1.055	<b>1.249</b>	<b>1.169</b>
85-89.....	1.148	0.988	1.254	<b>1.252</b>	<b>1.229</b>	1.369	0.898	1.372	<b>1.211</b>	<b>1.216</b>
90-94.....	0.957	0.896	1.145	<b>1.179</b>	<b>1.156</b>	1.039	0.787	0.974	<b>1.170</b>	<b>1.072</b>
95-99.....	*	*	*	1.214	<b>1.227</b>	*	*	*	1.121	<b>1.252</b>
100 and Over..	*	*	*	0.972	0.864	*	*	*	0.754	0.513
All.....	1.038	<b>1.049</b>	<b>1.212</b>	<b>1.229</b>	<b>1.203</b>	1.126	<b>1.026</b>	<b>1.184</b>	<b>1.181</b>	<b>1.154</b>
<b>Female</b>										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*
65-69.....	*	*	*	2.103	1.271	*	*	*	1.366	1.071
70-74.....	*	1.153	1.211	1.150	1.078	*	1.334	1.052	0.939	1.060
75-79.....	0.813	1.008	1.133	<b>1.251</b>	<b>1.148</b>	0.590	1.040	1.159	<b>1.144</b>	<b>1.052</b>
80-84.....	0.789	0.833	1.185	<b>1.131</b>	<b>1.087</b>	0.930	0.914	1.261	<b>1.079</b>	<b>1.067</b>
85-89.....	0.674	0.877	1.147	<b>1.174</b>	<b>1.115</b>	0.783	0.736	1.138	<b>1.157</b>	<b>1.034</b>
90-94.....	0.794	1.147	1.231	<b>1.255</b>	<b>1.228</b>	1.154	1.074	1.198	<b>1.183</b>	<b>1.167</b>
95-99.....	*	*	1.292	<b>1.284</b>	<b>1.264</b>	*	*	1.402	<b>1.203</b>	<b>1.136</b>
100 and Over..	*	*	*	1.200	1.148	*	*	*	1.108	0.887
All.....	0.743	<b>0.977</b>	<b>1.180</b>	<b>1.214</b>	<b>1.162</b>	0.849	<b>0.938</b>	<b>1.180</b>	<b>1.145</b>	<b>1.081</b>

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.

**Table 4**  
 Single Life and Joint Life Annuity Mortality Ratios by Contract Type, Contract Year Group, and Gender  
 Based on Annuity 2000 Basic and 2012 IAM "G2 for 5" Basic Tables, For Experience Years 2005-2008

Contract Type	Based on Number of Contracts					Based on Amounts of Annual Income					
	Contract Years					Contract Years					
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years	
Nonrefund, Based on Annuity 2000 Basic Table											
Male Single	Immediate	0.527	0.836	1.146	<b>1.214</b>	<b>1.132</b>	0.280	0.479	1.148	<b>1.216</b>	<b>0.885</b>
	Annuity Settlements	0.614	0.817	0.862	<b>1.128</b>	<b>1.066</b>	0.491	0.529	0.847	<b>0.993</b>	<b>0.861</b>
	All Single	*	*	0.865	<b>1.123</b>	<b>1.091</b>	*	*	0.981	<b>1.079</b>	<b>0.971</b>
		0.552	0.826	<b>0.970</b>	<b>1.154</b>	<b>1.094</b>	0.333	0.503	<b>0.991</b>	<b>1.092</b>	<b>0.884</b>
Joint	Immediate	0.709	0.910	0.801	<b>0.921</b>	<b>0.875</b>	0.650	0.842	0.667	<b>0.813</b>	<b>0.762</b>
	Annuity Settlements	0.697	0.631	0.765	<b>0.931</b>	<b>0.873</b>	0.504	0.693	0.668	<b>0.850</b>	<b>0.776</b>
	All Joint	*	*	*	<b>1.096</b>	<b>1.066</b>	*	*	*	<b>0.979</b>	<b>0.942</b>
		0.697	0.704	<b>0.768</b>	<b>0.961</b>	<b>0.903</b>	0.583	0.740	<b>0.665</b>	<b>0.861</b>	<b>0.789</b>
All Male	0.616	<b>0.773</b>	<b>0.883</b>	<b>1.087</b>	<b>1.024</b>	0.411	<b>0.574</b>	<b>0.854</b>	<b>0.990</b>	<b>0.846</b>	
Female Single	Immediate	0.451	0.760	<b>1.038</b>	<b>1.162</b>	<b>1.061</b>	0.388	0.495	<b>0.812</b>	<b>1.167</b>	<b>0.814</b>
	Annuity Settlements	0.796	0.776	<b>0.907</b>	<b>1.134</b>	<b>1.092</b>	0.561	0.385	<b>0.740</b>	<b>1.041</b>	<b>0.863</b>
	All Single	*	*	0.809	<b>1.136</b>	<b>1.092</b>	*	*	0.782	<b>1.013</b>	<b>0.904</b>
		0.558	<b>0.745</b>	<b>0.956</b>	<b>1.143</b>	<b>1.081</b>	0.428	<b>0.456</b>	<b>0.783</b>	<b>1.086</b>	<b>0.843</b>
Joint	Immediate	*	*	1.028	1.120	<b>1.084</b>	*	*	1.147	1.125	<b>1.076</b>
	Annuity Settlements	*	*	0.880	<b>0.971</b>	<b>0.956</b>	*	*	0.819	<b>0.859</b>	<b>0.856</b>
	All Joint	*	*	*	<b>0.981</b>	<b>0.971</b>	*	*	*	<b>1.102</b>	<b>1.075</b>
		0.761	0.955	0.886	<b>0.998</b>	<b>0.983</b>	0.666	1.032	0.880	<b>0.968</b>	<b>0.948</b>
All Female	0.580	<b>0.764</b>	<b>0.947</b>	<b>1.118</b>	<b>1.065</b>	0.441	<b>0.486</b>	<b>0.796</b>	<b>1.059</b>	<b>0.861</b>	
Refund, Based on Annuity 2000 Basic Table											
Male Single	Immediate	<b>0.985</b>	<b>1.118</b>	<b>1.012</b>	<b>1.095</b>	<b>1.077</b>	<b>0.985</b>	<b>1.089</b>	<b>1.050</b>	<b>1.073</b>	<b>1.055</b>
	Annuity Settlements	0.854	<b>0.969</b>	<b>1.065</b>	<b>1.141</b>	<b>1.105</b>	0.706	<b>0.915</b>	<b>0.955</b>	<b>1.021</b>	<b>0.975</b>
	All Single	0.897	0.923	<b>1.032</b>	<b>1.135</b>	<b>1.093</b>	1.028	0.938	<b>1.070</b>	<b>1.080</b>	<b>1.053</b>
		<b>0.939</b>	<b>1.031</b>	<b>1.037</b>	<b>1.120</b>	<b>1.090</b>	<b>0.940</b>	<b>1.013</b>	<b>1.015</b>	<b>1.053</b>	<b>1.026</b>
Joint	Immediate	0.879	1.025	0.986	<b>1.074</b>	<b>1.039</b>	0.814	0.980	0.780	<b>0.972</b>	<b>0.921</b>
	Annuity Settlements	0.718	<b>0.691</b>	<b>0.728</b>	<b>0.983</b>	<b>0.938</b>	0.579	<b>0.615</b>	<b>0.628</b>	<b>0.871</b>	<b>0.805</b>
	All Joint	*	0.723	0.938	1.037	<b>0.959</b>	*	0.716	0.815	0.995	<b>0.878</b>
		<b>0.791</b>	<b>0.780</b>	<b>0.770</b>	<b>0.995</b>	<b>0.952</b>	<b>0.704</b>	<b>0.713</b>	<b>0.652</b>	<b>0.885</b>	<b>0.824</b>
All Male	<b>0.890</b>	<b>0.936</b>	<b>0.914</b>	<b>1.055</b>	<b>1.022</b>	<b>0.854</b>	<b>0.874</b>	<b>0.805</b>	<b>0.944</b>	<b>0.906</b>	
Female Single	Immediate	<b>0.849</b>	<b>0.940</b>	<b>0.969</b>	<b>1.042</b>	<b>1.006</b>	<b>0.859</b>	<b>0.941</b>	<b>1.027</b>	<b>1.017</b>	<b>0.971</b>
	Annuity Settlements	<b>0.765</b>	<b>0.954</b>	<b>1.016</b>	<b>1.106</b>	<b>1.069</b>	<b>0.683</b>	<b>0.821</b>	<b>0.924</b>	<b>1.018</b>	<b>0.945</b>
	All Single	0.645	<b>0.859</b>	<b>1.039</b>	<b>1.099</b>	<b>1.044</b>	0.724	<b>0.833</b>	<b>1.055</b>	<b>1.028</b>	<b>0.963</b>
		<b>0.792</b>	<b>0.925</b>	<b>1.003</b>	<b>1.077</b>	<b>1.035</b>	<b>0.809</b>	<b>0.894</b>	<b>1.002</b>	<b>1.020</b>	<b>0.962</b>
Joint	Immediate	0.780	0.976	0.839	<b>1.015</b>	<b>0.987</b>	0.958	1.182	0.757	<b>1.002</b>	<b>0.985</b>
	Annuity Settlements	0.886	0.828	<b>0.898</b>	<b>0.995</b>	<b>0.987</b>	0.664	0.795	<b>1.003</b>	<b>0.906</b>	<b>0.908</b>
	All Joint	*	*	1.476	1.438	1.460	*	*	1.150	1.217	1.335
		0.871	0.909	<b>0.913</b>	<b>1.001</b>	<b>0.993</b>	0.946	0.970	<b>0.955</b>	<b>0.922</b>	<b>0.927</b>
All Female	<b>0.797</b>	<b>0.923</b>	<b>0.989</b>	<b>1.051</b>	<b>1.023</b>	<b>0.817</b>	<b>0.900</b>	<b>0.995</b>	<b>0.979</b>	<b>0.952</b>	

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.

**Table 5a**  
**Nonrefund and Refund Annuity Mortality Ratios by Attained Age, Study Year, and Gender**  
 Based on Annuity 2000 Basic Table, For Experience Years 2000-2008, All Companies

Attained Age	Based on Number of Contracts									Based on Amounts of Annual Income								
	Study Years									Study Years								
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2000	2001	2002	2003	2004	2005	2006	2007	2008
Nonrefund, Based on Annuity 2000 Basic Table																		
Male																		
Under 50.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
65-69.....	1.324	0.985	1.263	1.366	1.118	0.894	0.788	1.102	0.912	0.885	0.679	0.860	1.218	0.824	0.778	0.765	0.752	0.627
70-74.....	1.157	0.963	1.041	1.064	0.939	0.907	0.873	0.832	0.887	1.039	0.657	0.739	0.778	0.833	0.713	0.766	0.562	0.827
75-79.....	1.044	0.931	1.004	1.016	0.893	<b>0.871</b>	<b>0.923</b>	0.809	0.865	0.892	0.683	0.738	0.687	0.616	<b>0.687</b>	<b>0.853</b>	0.684	<b>0.602</b>
80-84.....	1.075	1.131	1.019	<b>1.002</b>	<b>1.072</b>	<b>1.071</b>	<b>0.981</b>	<b>0.879</b>	<b>0.949</b>	0.990	0.801	0.733	<b>0.696</b>	<b>0.776</b>	<b>0.943</b>	<b>0.724</b>	<b>0.857</b>	<b>0.760</b>
85-89.....	1.166	1.147	1.215	<b>1.161</b>	<b>1.134</b>	<b>1.074</b>	<b>1.103</b>	<b>1.003</b>	<b>0.967</b>	0.840	0.814	1.010	<b>0.716</b>	<b>0.527</b>	<b>0.800</b>	<b>0.878</b>	<b>0.775</b>	<b>0.813</b>
90-94.....	0.984	1.117	1.543	1.303	1.237	<b>1.239</b>	<b>1.338</b>	<b>1.207</b>	<b>1.134</b>	0.868	0.906	0.832	0.780	0.708	<b>0.938</b>	<b>1.271</b>	<b>0.951</b>	<b>1.184</b>
95-99.....	1.502	1.525	1.183	1.502	1.235	1.382	1.388	1.262	1.112	0.974	1.035	0.793	1.346	1.241	1.398	1.245	1.009	1.180
100 and Over..	*	*	*	*	*	*	1.445	0.928	1.248	*	*	*	*	*	*	2.444	0.621	0.982
All.....	<b>1.132</b>	<b>1.097</b>	<b>1.163</b>	<b>1.146</b>	<b>1.088</b>	<b>1.058</b>	<b>1.077</b>	<b>0.979</b>	<b>0.984</b>	<b>0.921</b>	<b>0.778</b>	<b>0.844</b>	<b>0.784</b>	<b>0.700</b>	<b>0.850</b>	<b>0.912</b>	<b>0.790</b>	<b>0.836</b>
Female																		
Under 50.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
65-69.....	1.272	1.458	1.200	1.016	1.289	1.076	0.888	1.149	1.260	1.102	1.060	0.633	0.749	1.251	0.970	0.562	0.796	0.821
70-74.....	1.227	1.109	0.925	1.178	1.184	1.059	1.171	0.943	0.922	1.221	0.829	0.771	0.892	0.884	0.951	0.946	0.677	0.809
75-79.....	1.100	1.039	1.045	1.101	1.098	0.935	0.948	1.088	0.995	0.829	0.959	0.748	0.721	0.860	0.758	0.814	1.033	0.751
80-84.....	1.086	1.094	1.104	<b>1.039</b>	<b>1.030</b>	<b>1.028</b>	<b>0.998</b>	<b>0.959</b>	<b>0.973</b>	0.920	0.745	0.743	<b>1.716</b>	<b>0.678</b>	<b>0.840</b>	<b>0.787</b>	<b>0.822</b>	<b>0.742</b>
85-89.....	<b>1.098</b>	<b>1.134</b>	<b>1.048</b>	<b>1.040</b>	<b>1.027</b>	<b>1.117</b>	<b>1.048</b>	<b>0.994</b>	<b>0.900</b>	<b>0.856</b>	<b>0.813</b>	<b>0.790</b>	<b>0.597</b>	<b>0.726</b>	<b>0.877</b>	<b>0.854</b>	<b>0.833</b>	<b>0.684</b>
90-94.....	<b>1.177</b>	<b>1.155</b>	<b>1.152</b>	<b>1.143</b>	<b>1.003</b>	<b>1.179</b>	<b>1.128</b>	<b>1.074</b>	<b>1.079</b>	<b>0.853</b>	<b>0.812</b>	<b>0.632</b>	<b>0.648</b>	<b>0.589</b>	<b>0.950</b>	<b>0.902</b>	<b>0.734</b>	<b>0.995</b>
95-99.....	1.232	1.311	1.160	1.200	1.340	<b>1.327</b>	<b>1.249</b>	<b>1.171</b>	<b>1.275</b>	1.200	1.001	1.131	0.671	0.898	<b>1.043</b>	<b>1.094</b>	<b>0.886</b>	<b>1.243</b>
100 and Over..	1.250	1.220	1.195	1.400	1.327	1.379	1.228	1.172	1.018	1.566	1.103	1.100	1.025	0.939	1.554	1.196	1.740	0.952
All.....	<b>1.150</b>	<b>1.155</b>	<b>1.099</b>	<b>1.114</b>	<b>1.092</b>	<b>1.125</b>	<b>1.080</b>	<b>1.044</b>	<b>1.016</b>	<b>0.937</b>	<b>0.848</b>	<b>0.761</b>	<b>0.882</b>	<b>0.731</b>	<b>0.903</b>	<b>0.867</b>	<b>0.847</b>	<b>0.836</b>
Refund, Based on Annuity 2000 Basic Table																		
Male																		
Under 50.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	1.803	*	1.970	1.758	*	*	*	*	*	2.020	*	1.497	1.003
60-64.....	1.260	1.361	1.269	1.456	1.432	1.281	1.189	1.069	1.093	1.037	0.980	1.006	1.290	1.063	1.007	1.211	1.073	0.983
65-69.....	1.153	1.066	1.164	1.065	0.958	0.988	0.871	0.978	0.909	0.990	0.826	0.988	1.014	0.915	0.790	0.779	0.642	0.995
70-74.....	<b>0.992</b>	<b>0.980</b>	<b>0.961</b>	<b>1.030</b>	<b>0.893</b>	<b>0.831</b>	<b>0.894</b>	<b>0.771</b>	<b>0.886</b>	<b>0.803</b>	<b>0.853</b>	<b>0.806</b>	<b>0.821</b>	<b>0.775</b>	<b>0.711</b>	<b>0.797</b>	<b>0.652</b>	<b>0.819</b>
75-79.....	<b>0.995</b>	<b>0.987</b>	<b>1.020</b>	<b>0.993</b>	<b>0.996</b>	<b>0.894</b>	<b>0.922</b>	<b>0.851</b>	<b>0.915</b>	<b>0.827</b>	<b>0.872</b>	<b>0.860</b>	<b>0.908</b>	<b>0.872</b>	<b>0.776</b>	<b>0.778</b>	<b>0.734</b>	<b>0.800</b>
80-84.....	<b>1.058</b>	<b>1.105</b>	<b>1.122</b>	<b>1.087</b>	<b>1.009</b>	<b>0.955</b>	<b>0.959</b>	<b>1.007</b>	<b>0.956</b>	<b>0.949</b>	<b>0.951</b>	<b>1.016</b>	<b>0.930</b>	<b>0.873</b>	<b>0.853</b>	<b>0.879</b>	<b>0.893</b>	<b>0.839</b>
85-89.....	<b>1.183</b>	<b>1.287</b>	<b>1.149</b>	<b>1.281</b>	<b>1.159</b>	<b>1.038</b>	<b>1.049</b>	<b>1.052</b>	<b>1.094</b>	<b>1.111</b>	<b>1.197</b>	<b>0.991</b>	<b>1.283</b>	<b>1.033</b>	<b>0.912</b>	<b>0.983</b>	<b>1.007</b>	<b>0.976</b>
90-94.....	<b>1.316</b>	<b>1.164</b>	<b>1.405</b>	<b>1.450</b>	<b>1.313</b>	<b>1.235</b>	<b>1.213</b>	<b>1.213</b>	<b>1.235</b>	<b>1.469</b>	<b>1.124</b>	<b>1.334</b>	<b>1.347</b>	<b>1.218</b>	<b>1.208</b>	<b>1.143</b>	<b>1.142</b>	<b>1.096</b>
95-99.....	1.477	1.515	1.478	1.475	1.407	1.222	<b>1.310</b>	<b>1.313</b>	<b>1.176</b>	2.468	1.293	1.423	1.445	1.166	<b>1.190</b>	<b>1.214</b>	<b>1.186</b>	<b>1.140</b>
100 and Over..	*	*	*	*	*	1.197	1.172	1.070	0.942	*	*	*	*	*	1.076	0.757	1.082	0.676
All.....	<b>1.089</b>	<b>1.106</b>	<b>1.122</b>	<b>1.148</b>	<b>1.074</b>	<b>1.005</b>	<b>1.020</b>	<b>1.022</b>	<b>1.041</b>	<b>0.964</b>	<b>0.963</b>	<b>0.976</b>	<b>1.028</b>	<b>0.933</b>	<b>0.877</b>	<b>0.909</b>	<b>0.908</b>	<b>0.925</b>
Female																		
Under 50.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	1.957	*	2.609	*	*	*	*	*	*	1.271	*	2.823	*
60-64.....	1.714	1.201	1.767	1.340	1.843	1.416	1.079	1.246	1.382	1.690	0.958	1.385	1.124	0.967	2.388	1.023	1.137	1.112
65-69.....	1.382	1.222	1.288	1.329	1.133	1.212	1.175	1.035	1.004	1.233	0.982	1.508	1.269	1.088	1.034	1.059	0.964	1.093
70-74.....	<b>1.175</b>	<b>1.077</b>	<b>1.160</b>	<b>1.143</b>	<b>1.206</b>	<b>1.071</b>	<b>1.002</b>	<b>1.068</b>	<b>1.071</b>	<b>1.118</b>	<b>1.022</b>	<b>1.012</b>	<b>1.039</b>	<b>1.121</b>	<b>1.012</b>	<b>1.018</b>	<b>0.906</b>	<b>0.992</b>
75-79.....	<b>1.042</b>	<b>1.048</b>	<b>1.043</b>	<b>1.027</b>	<b>1.022</b>	<b>0.964</b>	<b>0.983</b>	<b>0.982</b>	<b>0.962</b>	<b>0.935</b>	<b>0.884</b>	<b>0.873</b>	<b>0.951</b>	<b>0.993</b>	<b>0.830</b>	<b>0.860</b>	<b>0.922</b>	<b>0.847</b>
80-84.....	<b>1.018</b>	<b>1.071</b>	<b>1.052</b>	<b>1.001</b>	<b>0.932</b>	<b>0.982</b>	<b>0.979</b>	<b>0.953</b>	<b>0.941</b>	<b>0.965</b>	<b>0.987</b>	<b>0.952</b>	<b>0.873</b>	<b>0.868</b>	<b>0.942</b>	<b>0.940</b>	<b>0.845</b>	<b>0.916</b>
85-89.....	<b>1.042</b>	<b>1.046</b>	<b>1.083</b>	<b>1.114</b>	<b>1.069</b>	<b>0.975</b>	<b>0.967</b>	<b>1.002</b>	<b>0.987</b>	<b>1.388</b>	<b>0.984</b>	<b>1.068</b>	<b>1.161</b>	<b>0.981</b>	<b>0.939</b>	<b>0.918</b>	<b>0.947</b>	<b>0.908</b>
90-94.....	<b>1.146</b>	<b>1.105</b>	<b>1.205</b>	<b>1.157</b>	<b>1.107</b>	<b>1.088</b>	<b>1.040</b>	<b>1.032</b>	<b>1.054</b>	<b>1.099</b>	<b>1.095</b>	<b>1.128</b>	<b>1.025</b>	<b>1.085</b>	<b>0.968</b>	<b>0.926</b>	<b>0.995</b>	<b>1.039</b>
95-99.....	1.161	1.127	1.257	1.339	1.262	1.220	1.128	1.152	1.205	1.536	0.856	<b>0.996</b>	<b>1.013</b>	<b>1.278</b>	<b>1.013</b>	<b>1.098</b>	<b>1.025</b>	<b>1.087</b>
100 and Over..	1.395	1.127	1.256	1.368	1.077	1.176	1.236	1.120	1.216	1.193	1.204	1.138	2.187	0.860	0.976	0.956	1.044	1.197
All.....	<b>1.098</b>	<b>1.081</b>	<b>1.121</b>	<b>1.106</b>	<b>1.063</b>	<b>1.037</b>	<b>1.013</b>	<b>1.020</b>	<b>1.022</b>	<b>1.157</b>	<b>0.987</b>	<b>1.028</b>	<b>1.036</b>	<b>1.015</b>	<b>0.957</b>	<b>0.947</b>	<b>0.944</b>	<b>0.959</b>

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.

**Table 5b**  
**Nonrefund and Refund Annuity Mortality Ratios by Attained Age, Study Year, and Gender**  
 Based on Annuity 2000 Basic Table, For 7 Companies Contributing Experience to All Years 2000-2008

Attained Age	Based on Number of Contracts								Based on Amounts of Annual Income									
	Study Years								Study Years									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>Nonrefund, Based on Annuity 2000 Basic Table</b>																		
<b>Male</b>																		
Under 50.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
65-69.....	1.229	1.073	1.399	1.328	1.140	1.020	0.784	1.161	1.038	0.876	0.841	1.094	1.561	0.989	0.930	0.678	0.830	0.821
70-74.....	1.139	1.010	1.084	1.102	0.944	1.004	0.871	0.848	0.908	1.072	0.760	0.807	0.827	0.862	0.751	0.799	0.582	0.981
75-79.....	1.027	0.942	0.978	0.956	0.935	0.960	0.943	0.829	0.853	0.953	0.706	0.829	0.666	0.699	0.738	0.859	0.739	0.620
80-84.....	1.079	1.127	0.950	1.039	1.117	<b>1.196</b>	<b>1.051</b>	<b>0.840</b>	<b>0.964</b>	1.097	0.929	0.876	0.751	0.926	<b>1.001</b>	<b>0.741</b>	<b>0.759</b>	<b>0.831</b>
85-89.....	1.223	1.115	1.246	1.164	1.209	<b>1.208</b>	<b>1.197</b>	<b>0.987</b>	<b>0.976</b>	0.878	1.125	1.225	0.879	0.702	<b>0.856</b>	<b>0.972</b>	<b>0.721</b>	<b>0.792</b>
90-94.....	1.040	1.156	1.685	1.363	1.262	1.397	1.442	1.189	1.099	1.019	1.103	1.131	0.998	0.909	1.018	1.275	0.736	1.263
95-99.....	1.483	1.548	1.190	1.413	1.251	1.665	1.342	1.303	1.144	0.727	1.235	1.056	1.193	1.691	2.210	1.217	1.036	1.363
100 and Over..	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
All.....	<b>1.144</b>	<b>1.103</b>	<b>1.184</b>	<b>1.149</b>	<b>1.127</b>	<b>1.178</b>	<b>1.118</b>	<b>0.959</b>	<b>0.978</b>	<b>0.981</b>	<b>0.913</b>	<b>0.969</b>	<b>0.867</b>	<b>0.845</b>	<b>0.925</b>	<b>0.914</b>	<b>0.737</b>	<b>0.886</b>
<b>Female</b>																		
Under 50.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
60-64.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
65-69.....	1.329	1.468	*	*	*	1.143	0.827	1.128	1.252	1.217	1.152	*	*	*	0.935	0.542	0.835	0.751
70-74.....	1.298	1.172	0.904	1.333	1.107	1.131	1.245	0.891	0.987	1.361	0.984	0.764	1.077	0.813	0.996	0.952	0.640	0.931
75-79.....	1.116	0.998	1.062	1.096	1.163	1.018	1.008	1.128	1.057	0.952	1.038	0.877	0.853	1.014	0.840	0.888	1.167	0.938
80-84.....	1.104	1.121	1.137	1.091	1.065	<b>1.137</b>	<b>1.020</b>	<b>0.970</b>	<b>0.994</b>	1.094	0.852	0.946	1.042	0.856	<b>0.896</b>	<b>0.782</b>	<b>0.815</b>	<b>0.830</b>
85-89.....	1.119	1.173	1.075	1.033	1.069	<b>1.298</b>	<b>1.090</b>	<b>0.981</b>	<b>0.881</b>	0.921	1.445	0.997	0.837	1.046	<b>0.990</b>	<b>0.914</b>	<b>0.831</b>	<b>0.715</b>
90-94.....	1.121	1.191	1.179	1.116	1.003	<b>1.293</b>	<b>1.179</b>	<b>1.091</b>	<b>1.039</b>	1.152	1.243	1.078	1.073	0.993	<b>1.137</b>	<b>1.117</b>	<b>0.782</b>	<b>0.837</b>
95-99.....	1.229	1.375	1.204	1.171	1.468	1.410	1.315	1.167	1.255	1.328	1.257	1.079	0.619	1.304	1.090	1.267	0.925	1.076
100 and Over..	1.058	1.111	1.391	1.479	1.366	1.380	1.477	1.229	1.166	1.528	1.160	1.185	1.261	1.471	1.270	1.200	2.227	1.188
All.....	<b>1.149</b>	<b>1.182</b>	<b>1.128</b>	<b>1.121</b>	<b>1.128</b>	<b>1.232</b>	<b>1.125</b>	<b>1.046</b>	<b>1.013</b>	<b>1.098</b>	<b>1.157</b>	<b>0.962</b>	<b>0.939</b>	<b>1.002</b>	<b>0.986</b>	<b>0.939</b>	<b>0.885</b>	<b>0.833</b>
<b>Refund, Based on Annuity 2000 Basic Table</b>																		
<b>Male</b>																		
Under 50.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	2.014	*	2.134	*	*	*	*	*	2.142	*	1.446	*
60-64.....	1.240	1.351	1.406	1.331	1.509	1.329	1.138	1.038	0.987	0.992	1.006	1.210	1.019	1.107	0.962	1.163	0.782	0.782
65-69.....	1.137	1.067	1.182	1.058	0.883	1.011	0.899	0.960	0.882	0.943	0.862	1.028	0.821	0.742	0.789	0.666	0.635	0.864
70-74.....	<b>0.969</b>	<b>0.948</b>	<b>0.953</b>	<b>0.937</b>	<b>0.847</b>	<b>0.786</b>	<b>0.880</b>	<b>0.732</b>	<b>0.907</b>	<b>0.783</b>	<b>0.860</b>	<b>0.753</b>	<b>0.772</b>	<b>0.698</b>	<b>0.638</b>	<b>0.751</b>	<b>0.616</b>	<b>0.844</b>
75-79.....	<b>0.989</b>	<b>0.969</b>	<b>0.984</b>	<b>0.907</b>	<b>0.967</b>	<b>0.878</b>	<b>0.877</b>	<b>0.787</b>	<b>0.909</b>	<b>0.830</b>	<b>0.866</b>	<b>0.824</b>	<b>0.821</b>	<b>0.869</b>	<b>0.733</b>	<b>0.753</b>	<b>0.689</b>	<b>0.784</b>
80-84.....	<b>1.036</b>	<b>1.075</b>	<b>1.100</b>	<b>1.027</b>	<b>0.990</b>	<b>0.960</b>	<b>0.945</b>	<b>0.979</b>	<b>0.916</b>	<b>0.919</b>	<b>0.916</b>	<b>1.019</b>	<b>0.919</b>	<b>0.865</b>	<b>0.833</b>	<b>0.877</b>	<b>0.853</b>	<b>0.823</b>
85-89.....	<b>1.182</b>	<b>1.283</b>	<b>1.105</b>	<b>1.175</b>	<b>1.065</b>	<b>0.987</b>	<b>1.024</b>	<b>1.016</b>	<b>1.073</b>	<b>1.112</b>	<b>1.193</b>	<b>0.979</b>	<b>1.209</b>	<b>0.989</b>	<b>0.872</b>	<b>0.954</b>	<b>0.964</b>	<b>0.937</b>
90-94.....	1.289	1.154	<b>1.401</b>	<b>1.342</b>	<b>1.219</b>	<b>1.222</b>	<b>1.162</b>	<b>1.217</b>	<b>1.225</b>	1.460	1.126	<b>1.271</b>	<b>1.342</b>	<b>1.091</b>	<b>1.160</b>	<b>1.120</b>	<b>1.066</b>	<b>1.063</b>
95-99.....	1.522	1.441	1.605	1.305	1.383	1.245	1.249	1.377	1.176	2.635	1.363	1.760	1.364	1.137	1.118	1.415	1.468	1.093
100 and Over..	*	*	*	*	*	1.236	*	*	*	*	*	*	*	*	1.038	*	*	*
All.....	<b>1.077</b>	<b>1.086</b>	<b>1.097</b>	<b>1.061</b>	<b>1.021</b>	<b>0.974</b>	<b>0.979</b>	<b>0.976</b>	<b>1.010</b>	<b>0.945</b>	<b>0.948</b>	<b>0.947</b>	<b>0.959</b>	<b>0.890</b>	<b>0.821</b>	<b>0.877</b>	<b>0.847</b>	<b>0.882</b>
<b>Female</b>																		
Under 50.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	*	*	*	2.697	*	*	*	*	*	*	*	*	1.684	*
60-64.....	1.696	1.256	1.710	1.357	1.862	1.316	1.156	1.322	1.303	1.446	1.087	1.306	1.152	1.077	1.119	1.253	0.967	0.884
65-69.....	1.371	1.204	1.282	1.270	1.127	1.154	1.211	1.004	1.030	1.077	1.041	1.059	1.205	0.903	0.979	1.017	0.870	0.907
70-74.....	1.101	1.031	1.125	1.109	1.116	<b>1.049</b>	<b>0.985</b>	<b>1.032</b>	<b>1.072</b>	1.043	0.850	0.946	0.999	1.012	<b>0.975</b>	<b>0.892</b>	<b>0.871</b>	<b>0.954</b>
75-79.....	<b>1.033</b>	<b>1.024</b>	<b>1.044</b>	<b>1.011</b>	<b>0.985</b>	<b>0.891</b>	<b>0.937</b>	<b>0.954</b>	<b>0.947</b>	<b>0.936</b>	<b>0.862</b>	<b>0.884</b>	<b>0.897</b>	<b>0.949</b>	<b>0.773</b>	<b>0.797</b>	<b>0.860</b>	<b>0.824</b>
80-84.....	<b>0.972</b>	<b>1.072</b>	<b>1.018</b>	<b>0.971</b>	<b>0.911</b>	<b>0.998</b>	<b>0.967</b>	<b>0.930</b>	<b>0.919</b>	<b>0.899</b>	<b>1.024</b>	<b>0.941</b>	<b>0.861</b>	<b>0.852</b>	<b>0.919</b>	<b>0.922</b>	<b>0.817</b>	<b>0.915</b>
85-89.....	<b>1.054</b>	<b>1.022</b>	<b>1.041</b>	<b>1.041</b>	<b>1.025</b>	<b>0.936</b>	<b>0.931</b>	<b>1.011</b>	<b>0.982</b>	<b>1.564</b>	<b>0.966</b>	<b>1.151</b>	<b>1.194</b>	<b>0.990</b>	<b>0.915</b>	<b>0.866</b>	<b>0.972</b>	<b>0.914</b>
90-94.....	<b>1.149</b>	<b>1.130</b>	<b>1.177</b>	<b>1.066</b>	<b>1.041</b>	<b>1.040</b>	<b>1.081</b>	<b>1.034</b>	<b>1.021</b>	<b>1.142</b>	<b>1.138</b>	<b>1.162</b>	<b>0.934</b>	<b>1.088</b>	<b>0.923</b>	<b>1.027</b>	<b>1.005</b>	<b>1.047</b>
95-99.....	1.197	1.201	1.225	1.164	1.107	<b>1.155</b>	<b>1.110</b>	<b>1.131</b>	<b>1.209</b>	2.035	1.094	1.137	1.081	1.047	<b>0.947</b>	<b>1.106</b>	<b>0.999</b>	<b>1.210</b>
100 and Over..	1.472	*	1.217	1.298	1.035	1.227	1.216	1.213	1.300	1.121	*	1.083	2.374	0.980	1.002	1.021	1.256	1.590
All.....	<b>1.085</b>	<b>1.074</b>	<b>1.103</b>	<b>1.047</b>	<b>1.014</b>	<b>0.996</b>	<b>0.994</b>	<b>1.006</b>	<b>1.000</b>	<b>1.200</b>	<b>0.993</b>	<b>1.035</b>	<b>1.017</b>	<b>0.983</b>	<b>0.907</b>	<b>0.920</b>	<b>0.922</b>	<b>0.954</b>

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.

**Table 6a - All Years**  
**Nonfund Annuity Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
Based on Annuity 2000 Basic and 1983 IAM Basic Tables, For Experience Years 2000-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Based on Annuity 2000 Basic Table										
Male										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	2.063	*	*	*	*	4.496
55-59.....	*	*	*	1.638	1.719	*	*	*	2.294	1.652
60-64.....	1.195	1.152	1.334	1.545	1.290	0.874	0.933	0.840	0.786	0.880
65-69.....	0.734	0.913	1.239	1.391	<b>1.053</b>	0.493	0.828	1.031	0.874	<b>0.798</b>
70-74.....	0.531	0.783	<b>0.941</b>	<b>1.159</b>	<b>0.949</b>	0.401	0.668	<b>0.783</b>	<b>1.000</b>	<b>0.757</b>
75-79.....	0.579	0.711	<b>0.822</b>	<b>0.988</b>	<b>0.915</b>	0.356	0.557	<b>0.656</b>	<b>0.847</b>	<b>0.706</b>
80-84.....	0.649	0.829	0.894	<b>1.043</b>	<b>1.003</b>	0.338	0.523	0.801	<b>0.944</b>	<b>0.802</b>
85-89.....	0.577	0.821	0.974	<b>1.131</b>	<b>1.080</b>	0.341	0.605	0.598	<b>1.007</b>	<b>0.786</b>
90-94.....	0.886	1.024	0.996	<b>1.278</b>	<b>1.233</b>	0.301	0.601	1.116	<b>1.200</b>	<b>0.975</b>
95-99.....	*	*	1.168	<b>1.324</b>	<b>1.322</b>	*	*	1.157	<b>1.216</b>	<b>1.167</b>
100 and Over..	*	*	*	1.265	1.270	*	*	*	1.494	1.485
All.....	<b>0.707</b>	<b>0.867</b>	<b>0.945</b>	<b>1.131</b>	<b>1.064</b>	<b>0.398</b>	<b>0.633</b>	<b>0.806</b>	<b>0.999</b>	<b>0.823</b>
Female										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	2.103	*	*	*	*	1.098
60-64.....	1.056	1.174	1.747	1.695	1.366	0.799	0.983	1.321	1.448	1.039
65-69.....	0.968	1.023	1.080	1.681	<b>1.161</b>	0.729	0.779	1.016	0.962	<b>0.855</b>
70-74.....	0.690	0.908	<b>1.011</b>	<b>1.280</b>	<b>1.070</b>	0.590	0.728	<b>0.871</b>	<b>1.112</b>	<b>0.873</b>
75-79.....	0.483	0.732	<b>0.890</b>	<b>1.126</b>	<b>1.027</b>	0.416	0.564	<b>0.686</b>	<b>1.051</b>	<b>0.831</b>
80-84.....	0.487	0.710	<b>0.932</b>	<b>1.078</b>	<b>1.018</b>	0.686	0.456	<b>0.828</b>	<b>1.017</b>	<b>0.862</b>
85-89.....	0.552	0.781	<b>0.938</b>	<b>1.076</b>	<b>1.030</b>	0.331	0.568	<b>0.726</b>	<b>1.009</b>	<b>0.778</b>
90-94.....	0.691	0.913	<b>0.988</b>	<b>1.154</b>	<b>1.118</b>	0.531	0.453	<b>0.689</b>	<b>1.102</b>	<b>0.795</b>
95-99.....	1.284	0.985	1.231	<b>1.261</b>	<b>1.253</b>	0.739	0.750	0.922	<b>1.125</b>	<b>1.022</b>
100 and Over..	*	*	*	<b>1.221</b>	<b>1.229</b>	*	*	*	<b>1.269</b>	<b>1.296</b>
All.....	<b>0.657</b>	<b>0.852</b>	<b>0.987</b>	<b>1.139</b>	<b>1.087</b>	<b>0.518</b>	<b>0.547</b>	<b>0.778</b>	<b>1.060</b>	<b>0.844</b>
Based on 1983 IAM Basic Table										
Male										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	1.535	*	*	*	*	3.346
55-59.....	*	*	*	1.254	1.317	*	*	*	1.758	1.266
60-64.....	0.924	0.890	1.031	1.194	0.997	0.676	0.721	0.650	0.608	0.680
65-69.....	0.571	0.713	0.968	1.085	<b>0.821</b>	0.384	0.647	0.806	0.683	<b>0.623</b>
70-74.....	0.425	0.629	<b>0.755</b>	<b>0.931</b>	<b>0.762</b>	0.321	0.536	<b>0.629</b>	<b>0.803</b>	<b>0.607</b>
75-79.....	0.468	0.575	<b>0.665</b>	<b>0.799</b>	<b>0.740</b>	0.288	0.450	<b>0.531</b>	<b>0.685</b>	<b>0.571</b>
80-84.....	0.524	0.669	0.722	<b>0.842</b>	<b>0.809</b>	0.273	0.422	0.647	<b>0.762</b>	<b>0.647</b>
85-89.....	0.467	0.665	0.790	<b>0.916</b>	<b>0.875</b>	0.276	0.491	0.485	<b>0.815</b>	<b>0.637</b>
90-94.....	0.743	0.859	0.837	<b>1.074</b>	<b>1.036</b>	0.253	0.504	0.937	<b>1.007</b>	<b>0.819</b>
95-99.....	*	*	0.988	<b>1.117</b>	<b>1.116</b>	*	*	0.978	<b>1.027</b>	<b>0.986</b>
100 and Over..	*	*	*	1.055	1.060	*	*	*	1.242	1.235
All.....	<b>0.567</b>	<b>0.697</b>	<b>0.764</b>	<b>0.922</b>	<b>0.865</b>	<b>0.321</b>	<b>0.513</b>	<b>0.654</b>	<b>0.813</b>	<b>0.668</b>
Female										
Under 50.....	*	*	*	*	*	*	*	*	*	*
50-54.....	*	*	*	*	*	*	*	*	*	*
55-59.....	*	*	*	*	1.805	*	*	*	*	0.942
60-64.....	0.911	1.011	1.505	1.462	1.178	0.689	0.846	1.139	1.249	0.896
65-69.....	0.823	0.870	0.919	1.430	<b>0.987</b>	0.620	0.662	0.864	0.818	<b>0.727</b>
70-74.....	0.596	0.786	<b>0.875</b>	<b>1.109</b>	<b>0.927</b>	0.510	0.630	<b>0.754</b>	<b>0.964</b>	<b>0.756</b>
75-79.....	0.423	0.641	<b>0.779</b>	<b>0.987</b>	<b>0.900</b>	0.364	0.494	<b>0.601</b>	<b>0.921</b>	<b>0.728</b>
80-84.....	0.428	0.624	<b>0.819</b>	<b>0.948</b>	<b>0.896</b>	0.603	0.401	<b>0.728</b>	<b>0.895</b>	<b>0.759</b>
85-89.....	0.490	0.693	<b>0.833</b>	<b>0.956</b>	<b>0.914</b>	0.294	0.504	<b>0.645</b>	<b>0.896</b>	<b>0.690</b>
90-94.....	0.620	0.820	<b>0.887</b>	<b>1.037</b>	<b>1.004</b>	0.476	0.406	<b>0.619</b>	<b>0.990</b>	<b>0.714</b>
95-99.....	1.155	0.886	1.107	<b>1.134</b>	<b>1.126</b>	0.665	0.675	0.830	<b>1.012</b>	<b>0.919</b>
100 and Over..	*	*	*	<b>1.107</b>	<b>1.114</b>	*	*	*	<b>1.147</b>	<b>1.173</b>
All.....	<b>0.578</b>	<b>0.750</b>	<b>0.869</b>	<b>1.013</b>	<b>0.964</b>	<b>0.458</b>	<b>0.485</b>	<b>0.689</b>	<b>0.940</b>	<b>0.748</b>

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.

**Table 6b - All Years**  
**Refund Annuity Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
Based on Annuity 2000 Basic and 1983 IAM Basic Tables, For Experience Years 2000-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Based on Annuity 2000 Basic Table										
Male										
Under 50.....	*	*	*	3.246	3.895	*	*	*	4.049	4.732
50-54.....	*	*	*	1.380	1.857	*	*	*	1.898	1.715
55-59.....	1.684	1.782	2.016	1.463	1.650	1.569	1.170	1.321	1.406	1.385
60-64.....	0.975	1.133	1.606	1.433	<b>1.240</b>	0.875	0.943	1.583	1.380	<b>1.073</b>
65-69.....	<b>0.893</b>	<b>0.941</b>	<b>1.014</b>	<b>1.259</b>	<b>1.005</b>	<b>0.713</b>	<b>0.787</b>	<b>0.848</b>	<b>1.265</b>	<b>0.829</b>
70-74.....	<b>0.792</b>	<b>0.809</b>	<b>0.910</b>	<b>1.008</b>	<b>0.906</b>	<b>0.663</b>	<b>0.698</b>	<b>0.793</b>	<b>0.907</b>	<b>0.775</b>
75-79.....	<b>0.872</b>	<b>0.862</b>	<b>0.882</b>	<b>0.984</b>	<b>0.941</b>	<b>0.775</b>	<b>0.757</b>	<b>0.778</b>	<b>0.849</b>	<b>0.812</b>
80-84.....	<b>0.933</b>	<b>1.049</b>	<b>0.973</b>	<b>1.015</b>	<b>1.009</b>	<b>0.886</b>	<b>0.903</b>	<b>0.801</b>	<b>0.906</b>	<b>0.892</b>
85-89.....	<b>1.067</b>	<b>1.158</b>	<b>1.130</b>	<b>1.099</b>	<b>1.103</b>	<b>1.058</b>	<b>1.181</b>	<b>1.099</b>	<b>0.978</b>	<b>1.013</b>
90-94.....	<b>1.215</b>	<b>1.232</b>	<b>1.244</b>	<b>1.261</b>	<b>1.256</b>	<b>1.213</b>	<b>1.176</b>	<b>1.167</b>	<b>1.178</b>	<b>1.180</b>
95-99.....	1.285	1.411	1.322	1.298	1.303	1.087	1.831	1.252	1.173	1.240
100 and Over..	*	*	*	1.111	1.098	*	*	*	0.939	0.997
All.....	<b>0.970</b>	<b>0.992</b>	<b>0.978</b>	<b>1.084</b>	<b>1.054</b>	<b>0.907</b>	<b>0.912</b>	<b>0.866</b>	<b>0.959</b>	<b>0.930</b>
Female										
Under 50.....	*	*	*	*	2.831	*	*	*	*	3.454
50-54.....	*	*	*	1.903	2.323	*	*	*	5.589	3.459
55-59.....	2.622	1.553	2.211	1.980	2.069	2.731	1.388	1.874	1.565	1.896
60-64.....	1.239	1.420	1.412	1.557	<b>1.398</b>	1.192	1.290	1.750	1.192	<b>1.318</b>
65-69.....	0.936	<b>1.079</b>	<b>1.213</b>	<b>1.494</b>	<b>1.176</b>	1.020	<b>1.071</b>	<b>1.089</b>	<b>1.332</b>	<b>1.107</b>
70-74.....	<b>0.859</b>	<b>0.951</b>	<b>1.122</b>	<b>1.230</b>	<b>1.099</b>	<b>0.785</b>	<b>0.880</b>	<b>1.117</b>	<b>1.123</b>	<b>1.016</b>
75-79.....	<b>0.783</b>	<b>0.929</b>	<b>0.939</b>	<b>1.057</b>	<b>1.000</b>	<b>0.684</b>	<b>0.821</b>	<b>0.903</b>	<b>0.941</b>	<b>0.891</b>
80-84.....	<b>0.762</b>	<b>0.917</b>	<b>1.002</b>	<b>0.997</b>	<b>0.980</b>	<b>0.782</b>	<b>0.863</b>	<b>0.980</b>	<b>0.929</b>	<b>0.912</b>
85-89.....	<b>0.840</b>	<b>0.927</b>	<b>1.005</b>	<b>1.033</b>	<b>1.011</b>	<b>0.832</b>	<b>0.930</b>	<b>1.164</b>	<b>0.978</b>	<b>0.977</b>
90-94.....	<b>0.918</b>	<b>1.000</b>	<b>1.041</b>	<b>1.104</b>	<b>1.080</b>	<b>0.969</b>	<b>1.023</b>	<b>1.033</b>	<b>1.028</b>	<b>1.019</b>
95-99.....	0.961	1.069	1.163	1.210	1.194	0.767	1.270	1.095	1.093	1.084
100 and Over..	*	*	1.020	1.218	1.197	*	*	0.981	1.226	1.158
All.....	<b>0.869</b>	<b>0.972</b>	<b>1.035</b>	<b>1.073</b>	<b>1.047</b>	<b>0.858</b>	<b>0.961</b>	<b>1.049</b>	<b>0.992</b>	<b>0.981</b>
Based on 1983 IAM Basic Table										
Male										
Under 50.....	*	*	*	2.403	2.902	*	*	*	3.030	3.585
50-54.....	*	*	*	1.027	1.382	*	*	*	1.411	1.275
55-59.....	1.290	1.367	1.545	1.120	1.264	1.203	0.897	1.012	1.076	1.061
60-64.....	0.754	0.875	1.242	1.108	<b>0.959</b>	0.676	0.728	1.224	1.067	<b>0.829</b>
65-69.....	<b>0.695</b>	<b>0.735</b>	<b>0.793</b>	<b>0.982</b>	<b>0.784</b>	<b>0.555</b>	<b>0.615</b>	<b>0.663</b>	<b>0.988</b>	<b>0.647</b>
70-74.....	<b>0.634</b>	<b>0.650</b>	<b>0.730</b>	<b>0.811</b>	<b>0.728</b>	<b>0.531</b>	<b>0.561</b>	<b>0.636</b>	<b>0.729</b>	<b>0.622</b>
75-79.....	<b>0.705</b>	<b>0.697</b>	<b>0.713</b>	<b>0.796</b>	<b>0.761</b>	<b>0.627</b>	<b>0.612</b>	<b>0.629</b>	<b>0.687</b>	<b>0.657</b>
80-84.....	<b>0.753</b>	<b>0.846</b>	<b>0.786</b>	<b>0.819</b>	<b>0.814</b>	<b>0.715</b>	<b>0.729</b>	<b>0.647</b>	<b>0.731</b>	<b>0.719</b>
85-89.....	<b>0.863</b>	<b>0.939</b>	<b>0.915</b>	<b>0.890</b>	<b>0.893</b>	<b>0.856</b>	<b>0.958</b>	<b>0.891</b>	<b>0.792</b>	<b>0.820</b>
90-94.....	<b>1.018</b>	<b>1.035</b>	<b>1.044</b>	<b>1.058</b>	<b>1.054</b>	<b>1.017</b>	<b>0.988</b>	<b>0.980</b>	<b>0.988</b>	<b>0.990</b>
95-99.....	1.087	1.193	1.118	1.096	1.101	0.920	1.548	1.058	0.991	1.048
100 and Over..	*	*	*	0.927	0.917	*	*	*	0.782	0.830
All.....	<b>0.779</b>	<b>0.799</b>	<b>0.790</b>	<b>0.882</b>	<b>0.855</b>	<b>0.731</b>	<b>0.735</b>	<b>0.700</b>	<b>0.778</b>	<b>0.753</b>
Female										
Under 50.....	*	*	*	*	2.386	*	*	*	*	2.931
50-54.....	*	*	*	1.602	1.955	*	*	*	4.705	2.911
55-59.....	2.250	1.334	1.897	1.698	1.775	2.344	1.192	1.609	1.342	1.627
60-64.....	1.068	1.223	1.217	1.343	<b>1.205</b>	1.028	1.111	1.509	1.029	<b>1.137</b>
65-69.....	0.795	<b>0.918</b>	<b>1.031</b>	<b>1.271</b>	<b>1.000</b>	0.867	<b>0.910</b>	<b>0.926</b>	<b>1.133</b>	<b>0.942</b>
70-74.....	<b>0.742</b>	<b>0.824</b>	<b>0.971</b>	<b>1.066</b>	<b>0.952</b>	<b>0.678</b>	<b>0.763</b>	<b>0.967</b>	<b>0.973</b>	<b>0.880</b>
75-79.....	<b>0.685</b>	<b>0.814</b>	<b>0.823</b>	<b>0.926</b>	<b>0.876</b>	<b>0.599</b>	<b>0.719</b>	<b>0.791</b>	<b>0.825</b>	<b>0.780</b>
80-84.....	<b>0.670</b>	<b>0.807</b>	<b>0.881</b>	<b>0.877</b>	<b>0.862</b>	<b>0.688</b>	<b>0.759</b>	<b>0.862</b>	<b>0.817</b>	<b>0.803</b>
85-89.....	<b>0.746</b>	<b>0.823</b>	<b>0.893</b>	<b>0.917</b>	<b>0.897</b>	<b>0.738</b>	<b>0.826</b>	<b>1.033</b>	<b>0.868</b>	<b>0.867</b>
90-94.....	<b>0.824</b>	<b>0.899</b>	<b>0.935</b>	<b>0.992</b>	<b>0.970</b>	<b>0.870</b>	<b>0.919</b>	<b>0.928</b>	<b>0.923</b>	<b>0.915</b>
95-99.....	0.865	0.961	1.046	1.088	1.073	0.690	1.142	0.985	0.983	0.975
100 and Over..	*	*	0.925	1.101	1.082	*	*	0.891	1.108	1.047
All.....	<b>0.765</b>	<b>0.856</b>	<b>0.912</b>	<b>0.951</b>	<b>0.927</b>	<b>0.758</b>	<b>0.849</b>	<b>0.927</b>	<b>0.879</b>	<b>0.868</b>

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.

**Table 6c - All Years**  
**Refund and Nonrefund Annuity Mortality Ratios by Attained Age, Contract Year Group, and Gender**  
 Based on Annuity 2000 Basic and 1983 IAM Basic Tables, For Experience Years 2000-2008

Attained Age	Based on Number of Contracts					Based on Amounts of Annual Income				
	Contract Years					Contract Years				
	1-2	3-5	6-10	11 and Over	All Contract Years	1-2	3-5	6-10	11 and Over	All Contract Years
Based on Annuity 2000 Basic Table										
Male										
Under 50.....	*	*	*	2.794	3.622	*	*	*	3.780	4.835
50-54.....	*	*	*	1.463	1.896	*	*	*	1.800	2.189
55-59.....	1.800	1.767	1.872	1.502	1.667	1.408	1.183	1.746	1.518	1.434
60-64.....	1.022	1.144	1.551	1.454	<b>1.253</b>	0.873	0.941	1.409	1.272	<b>1.029</b>
65-69.....	<b>0.873</b>	<b>0.941</b>	<b>1.059</b>	<b>1.283</b>	<b>1.017</b>	<b>0.670</b>	<b>0.795</b>	<b>0.886</b>	<b>1.186</b>	<b>0.823</b>
70-74.....	<b>0.753</b>	<b>0.804</b>	<b>0.915</b>	<b>1.037</b>	<b>0.913</b>	<b>0.619</b>	<b>0.692</b>	<b>0.790</b>	<b>0.925</b>	<b>0.771</b>
75-79.....	<b>0.815</b>	<b>0.838</b>	<b>0.873</b>	<b>0.985</b>	<b>0.936</b>	<b>0.650</b>	<b>0.717</b>	<b>0.758</b>	<b>0.848</b>	<b>0.792</b>
80-84.....	<b>0.882</b>	<b>1.013</b>	<b>0.961</b>	<b>1.020</b>	<b>1.008</b>	<b>0.709</b>	<b>0.799</b>	<b>0.799</b>	<b>0.911</b>	<b>0.874</b>
85-89.....	<b>0.990</b>	<b>1.092</b>	<b>1.101</b>	<b>1.108</b>	<b>1.101</b>	<b>0.843</b>	<b>0.976</b>	<b>0.964</b>	<b>0.982</b>	<b>0.965</b>
90-94.....	<b>1.167</b>	<b>1.189</b>	<b>1.192</b>	<b>1.264</b>	<b>1.250</b>	<b>1.006</b>	<b>0.976</b>	<b>1.152</b>	<b>1.180</b>	<b>1.129</b>
95-99.....	1.336	1.447	1.262	<b>1.307</b>	<b>1.308</b>	1.015	1.640	1.191	<b>1.187</b>	<b>1.214</b>
100 and Over..	*	*	*	<b>1.167</b>	<b>1.159</b>	*	*	*	<b>1.198</b>	<b>1.206</b>
All.....	<b>0.925</b>	<b>0.971</b>	<b>0.973</b>	<b>1.094</b>	<b>1.057</b>	<b>0.775</b>	<b>0.841</b>	<b>0.853</b>	<b>0.965</b>	<b>0.907</b>
Female										
Under 50.....	*	*	*	2.871	3.002	*	*	*	4.156	3.933
50-54.....	*	*	*	2.026	2.392	*	*	*	5.190	3.204
55-59.....	2.422	1.618	2.166	2.109	2.089	2.418	1.292	1.801	1.541	1.772
60-64.....	1.197	1.366	1.484	1.589	<b>1.392</b>	1.108	1.225	1.711	1.242	<b>1.273</b>
65-69.....	0.936	<b>1.065</b>	<b>1.190</b>	<b>1.524</b>	<b>1.170</b>	0.952	<b>1.002</b>	<b>1.072</b>	<b>1.256</b>	<b>1.050</b>
70-74.....	<b>0.837</b>	<b>0.941</b>	<b>1.097</b>	<b>1.239</b>	<b>1.093</b>	<b>0.749</b>	<b>0.856</b>	<b>1.059</b>	<b>1.120</b>	<b>0.986</b>
75-79.....	<b>0.737</b>	<b>0.898</b>	<b>0.932</b>	<b>1.075</b>	<b>1.007</b>	<b>0.619</b>	<b>0.763</b>	<b>0.869</b>	<b>0.963</b>	<b>0.878</b>
80-84.....	<b>0.716</b>	<b>0.878</b>	<b>0.989</b>	<b>1.017</b>	<b>0.989</b>	<b>0.754</b>	<b>0.754</b>	<b>0.944</b>	<b>0.947</b>	<b>0.900</b>
85-89.....	<b>0.801</b>	<b>0.906</b>	<b>0.993</b>	<b>1.044</b>	<b>1.017</b>	<b>0.706</b>	<b>0.826</b>	<b>1.050</b>	<b>0.982</b>	<b>0.928</b>
90-94.....	<b>0.887</b>	<b>0.985</b>	<b>1.033</b>	<b>1.119</b>	<b>1.091</b>	<b>0.866</b>	<b>0.824</b>	<b>0.937</b>	<b>1.044</b>	<b>0.958</b>
95-99.....	1.010	1.049	<b>1.179</b>	<b>1.227</b>	<b>1.213</b>	0.762	1.141	<b>1.078</b>	<b>1.099</b>	<b>1.070</b>
100 and Over..	*	*	1.119	<b>1.224</b>	<b>1.215</b>	*	*	1.088	<b>1.235</b>	<b>1.196</b>
All.....	<b>0.836</b>	<b>0.951</b>	<b>1.027</b>	<b>1.091</b>	<b>1.058</b>	<b>0.775</b>	<b>0.846</b>	<b>0.988</b>	<b>1.006</b>	<b>0.948</b>
Based on 1983 IAM Basic Table										
Male										
Under 50.....	*	*	*	2.065	2.693	*	*	*	2.827	3.657
50-54.....	*	*	*	1.089	1.410	*	*	*	1.338	1.628
55-59.....	1.379	1.355	1.434	1.151	1.277	1.079	0.907	1.337	1.162	1.099
60-64.....	0.790	0.884	1.198	1.124	<b>0.969</b>	0.675	0.727	1.089	0.983	<b>0.795</b>
65-69.....	<b>0.679</b>	<b>0.734</b>	<b>0.828</b>	<b>1.001</b>	<b>0.794</b>	<b>0.522</b>	<b>0.620</b>	<b>0.693</b>	<b>0.926</b>	<b>0.642</b>
70-74.....	<b>0.603</b>	<b>0.646</b>	<b>0.734</b>	<b>0.833</b>	<b>0.733</b>	<b>0.496</b>	<b>0.555</b>	<b>0.634</b>	<b>0.744</b>	<b>0.619</b>
75-79.....	<b>0.659</b>	<b>0.678</b>	<b>0.706</b>	<b>0.796</b>	<b>0.757</b>	<b>0.526</b>	<b>0.580</b>	<b>0.613</b>	<b>0.686</b>	<b>0.640</b>
80-84.....	<b>0.711</b>	<b>0.818</b>	<b>0.776</b>	<b>0.823</b>	<b>0.813</b>	<b>0.572</b>	<b>0.644</b>	<b>0.646</b>	<b>0.735</b>	<b>0.705</b>
85-89.....	<b>0.801</b>	<b>0.886</b>	<b>0.892</b>	<b>0.898</b>	<b>0.892</b>	<b>0.682</b>	<b>0.791</b>	<b>0.781</b>	<b>0.795</b>	<b>0.781</b>
90-94.....	<b>0.978</b>	<b>0.999</b>	<b>1.001</b>	<b>1.061</b>	<b>1.050</b>	<b>0.843</b>	<b>0.820</b>	<b>0.967</b>	<b>0.990</b>	<b>0.948</b>
95-99.....	1.130	1.223	1.067	<b>1.103</b>	<b>1.105</b>	0.859	1.386	1.007	<b>1.003</b>	<b>1.026</b>
100 and Over..	*	*	*	<b>0.974</b>	<b>0.968</b>	*	*	*	<b>0.996</b>	<b>1.003</b>
All.....	<b>0.743</b>	<b>0.782</b>	<b>0.786</b>	<b>0.891</b>	<b>0.858</b>	<b>0.624</b>	<b>0.679</b>	<b>0.690</b>	<b>0.783</b>	<b>0.735</b>
Female										
Under 50.....	*	*	*	2.415	2.529	*	*	*	3.520	3.338
50-54.....	*	*	*	1.706	2.014	*	*	*	4.369	2.697
55-59.....	2.078	1.390	1.859	1.809	1.792	2.075	1.109	1.546	1.321	1.521
60-64.....	1.032	1.176	1.280	1.371	<b>1.200</b>	0.955	1.055	1.475	1.071	<b>1.098</b>
65-69.....	0.796	<b>0.905</b>	<b>1.012</b>	<b>1.296</b>	<b>0.995</b>	0.809	<b>0.852</b>	<b>0.912</b>	<b>1.068</b>	<b>0.893</b>
70-74.....	<b>0.723</b>	<b>0.816</b>	<b>0.950</b>	<b>1.074</b>	<b>0.946</b>	<b>0.647</b>	<b>0.741</b>	<b>0.917</b>	<b>0.971</b>	<b>0.854</b>
75-79.....	<b>0.646</b>	<b>0.786</b>	<b>0.817</b>	<b>0.942</b>	<b>0.883</b>	<b>0.542</b>	<b>0.669</b>	<b>0.761</b>	<b>0.844</b>	<b>0.769</b>
80-84.....	<b>0.630</b>	<b>0.772</b>	<b>0.870</b>	<b>0.894</b>	<b>0.870</b>	<b>0.663</b>	<b>0.663</b>	<b>0.830</b>	<b>0.833</b>	<b>0.792</b>
85-89.....	<b>0.711</b>	<b>0.804</b>	<b>0.881</b>	<b>0.927</b>	<b>0.902</b>	<b>0.627</b>	<b>0.733</b>	<b>0.932</b>	<b>0.872</b>	<b>0.824</b>
90-94.....	<b>0.796</b>	<b>0.884</b>	<b>0.928</b>	<b>1.005</b>	<b>0.980</b>	<b>0.777</b>	<b>0.740</b>	<b>0.842</b>	<b>0.937</b>	<b>0.860</b>
95-99.....	0.909	0.944	<b>1.060</b>	<b>1.104</b>	<b>1.090</b>	0.685	1.026	<b>0.970</b>	<b>0.989</b>	<b>0.963</b>
100 and Over..	*	*	1.014	<b>1.108</b>	<b>1.099</b>	*	*	0.989	<b>1.116</b>	<b>1.082</b>
All.....	<b>0.736</b>	<b>0.837</b>	<b>0.904</b>	<b>0.969</b>	<b>0.937</b>	<b>0.685</b>	<b>0.749</b>	<b>0.873</b>	<b>0.891</b>	<b>0.839</b>

\* Fewer than 35 contracts terminated by death. Ratios in bold have at least 400 deaths.