

Report of the Individual Life Insurance Experience Committee

Mortality for Standard Individually Underwritten Life Insurance Between 2004 and 2005 Policy Anniversaries

Introduction

This study is the latest in the continuing reports from the Society of Actuaries (SOA) on inter-company mortality experience. The previous report discussed experience over 2002-2004 policy anniversaries, a two year study period. While some high level comparisons to the 2002-2004 study are presented in this report, there is not yet a sufficient time period to develop longer term averages and trends. The next report will cover a two year time period (2005-2007 policy anniversaries). At that time, it is anticipated that five year averages and additional trend analysis will be presented.

The purpose of this report is to present an overview of mortality results relative to the 2001 Valuation Basic Tables and present some comparisons to the prior 2002-2004 study period. Consistent with prior reports, the study is performed on a gross basis without consideration of reinsurance. The reader should exercise caution in any direct application of these results as they are generally presented in a one dimensional view. Results can be influenced by the distributions by face amounts, issue ages, and policy durations within the one dimensional view. The user is encouraged to use the detailed Excel pivot tables that go along with this study in order to examine the multi-dimensional views (e.g., by age, sex and policy duration) most relevant to the user.

Forty-two companies contributed data to the SOA for the 2004-05 study period compared to 35 companies for the 2002-2004 study. The face amount exposure is over \$4.6 trillion in the select period (policy years 1-25) and the number of deaths is 111,810 for the one-year study. This compares to just over \$7.4 trillion in face amount exposure and just over 200,000 deaths in the prior two-year study.

Although not discussed in detail in this report, actual-to-expected experience has been separately studied for the 26 common companies that contributed to each of the three policy-year studies 2002-2003, 2003-2004 and 2004-2005. A high-level summary of all-company to common-company experience over these three policy years is shown in Appendix E and in greater detail in Appendix F for a subset of this data. Since the 2004-2005 study was advertised to concentrate on preferred mortality, the new contributors represented companies with significant amounts of preferred mortality. The 16 new companies have lower mortality than the 26 common companies in both the select and the ultimate period. Therefore, reductions in actual-to-expected ratios from 2002-2003 to 2004-2005 (on both a by-policy and a by-amount basis) are considerably less on the common-company basis than on the all-company basis. For a variety of reasons, including changes in the list of contributing companies and their relative contributions, changes in the mix of experience by risk class, issue age, gender and duration and the fact that underwriting requirements generally change from one study to the next, the trends in the results described in this report should not be assumed to be indicative of mortality improvement.

For the 2002-2004 ILEC study, contributors were asked for the first time to provide information related to their preferred risk class structure. More extensive data validation and analysis was performed in connection with development of the Underwriting Criteria Score (UCS) approach for the Preferred Mortality project than was done with the data presented in the Individual Life Insurance Experience Committee (ILEC) study. ILEC study results were also presented for only three non-smoker risk classes with the middle class representing all experience other than the best or residual standard classes. For

smoker experience, only two classes were presented. For this study, the same data validation techniques applied to the UCS study were applied. Further details on the data are described in the preferred risk class section below.

Consistent with previous studies, this report examines mortality under standard individually underwritten life insurance and excludes rated, converted, and other guaranteed or simplified issues as indicated by the individual company data submissions. Policies in force under non-forfeiture provisions are also excluded. It should be noted that the definition of standard may not be consistent across companies. In addition, higher mortality ratios, particularly at the lower face amount bands for recent issues, suggest that the data may include policies that are not fully underwritten. Although the volume relative to the total in-force is probably not yet significant, term policies that have reached durations with large premium increases have not been explicitly excluded. Going forward, as larger blocks of in-force level term are anticipated to reach the end of the level premium period, this issue will need to be addressed.

As noted above, expected mortality used to compute actual-to-expected ratios is equal to the 2001 Valuation Basic Tables (2001 VBT), which have composite and smoker-distinct versions and were based on experience from contributors to the SOA intercompany studies for the 1990-95 study period. The Age Nearest Birthday (ANB) and Age Last Birthday (ALB) versions of the tables are used consistent with the issue basis coded for the individual policy records. The application of the composite or smoker distinct tables in the expected calculations relies on the smoking status information provided in the individual company submissions. Composite tables apply to policies with unknown smoking status. For consistency, all policies with issue dates prior to 1980 are assumed to be of unknown smoking status. Some inaccuracies in the smoker and non-smoker coding may exist for certain companies, particularly for policies issued in the 1980s. Juvenile policies are included as either non-smoker or smokers depending on the individual company coding; however, the expected basis is composite for these policies regardless of the coding.

Although high level summaries are provided at the end of this report, more detailed results are available in Excel pivot table format from the SOA. Results based on the 1975-80 Basic Tables, with the Milliman extension for issue ages 71-87, are also available in the Excel pivot format. There are two sets of pivot tables—one for the full set of experience data and the other for just the data with a preferred/residual risk class structure. These files are located on the SOA website (www.SOA.org) under Research, Experience Studies, Individual Life.

This report does not present results relative to the new 2008 Valuation Basic Table (2008 VBT) because additional time is needed to develop and analyze results on this basis. Results by product type (e.g., Term, UL, Traditional Permanent) have also not been presented as additional data validation and analysis efforts are also needed. The committee intends to provide both of these extra breakdowns in the next report.

Select Period Results Based On 2001 VBT (Appendix A)

Overall, mortality experience in the 25-year select period for the 2004-05 study was 83% of the 2001 VBT by policy and 67% by face amount. The corresponding 2002-2004 study ratios were 88% by policy and 71% by amount. The mortality experience (by amount) for the 26 common companies for 2004-2005 was 69.3% compared to 67.4% for all companies. The results for 2002-03, 2003-04 and 2004-05 for the common companies by face amount was 73.4%, 71.0% and 69.3% compared to 72.9%, 70.3% and 67.4% for all companies included in each of the study years. Additional details for the 26 common companies by individual study years, gender and smoking status, as well as results on a policy basis, are included in Appendices E and F. The common company results can be viewed as a more reliable indicator of trends

in overall improvement as this measure removes the impact on experience due to changes in the list of participating companies.

The variability between results by policy and by face amount is seen for all breakdowns except results by policy size. Therefore, differences between policy count results and face amount results may be attributed to the mix of business by face amount within individual reporting categories. Policies under \$100,000 comprise 54% of the exposure by policy, but only 11% of the exposure by amount. Therefore, overall results on a policy count basis are weighted heavily towards the higher A/E ratios in the lower face amount bands.

The actual-to-expected ratio (by amount) for females is slightly higher than for males at 69% compared to 67% for males, each ratio being four percentage points lower than the corresponding ratios in the 2002-2004 study. The higher concentration of female experience at the smaller policy sizes and (to a lesser extent) at the older issue ages is a likely contributing factor.

By issue age, actual-to-expected ratios (by amount) drop significantly after age 24, with age 25+ actual-to-expected ratios ranging from 61% to 73%. At ages below 25, actual-to-expected ratios range from 77% to 94%. Unlike in the 2002-2004 study, we do not see a spike in the ratio (to 81% in the 2002-2004 study) at ages 70-79 when the ratio is on a face amount basis. On a policy count basis, the spike in age 70-79 mortality ratios is exhibited in both the 2004-2005 and 2002-2004 studies.

Drilling further into multi-dimensional views often shows other distinctive patterns. For example, for male policies below \$500,000, the actual-to-expected ratios (by amount) exhibit a “U” shape with the lowest ratios at issue ages 40-59. As with the female-to-male relationship discussed above, the source of such relationships can often be traced to the distribution of business. In this instance, one contributing factor to the significantly higher actual-to-expected ratios at issue ages below 25 is the smaller size policies purchased at these ages.

Mortality ratios are very low in the first duration (56% by amount), increasing to 70%-74% in durations 2 to 5, but notably, without the duration 3 (end of contestable period) spike exhibited in the 2002-2004 study. Ratios drop to the 63%-68% range at durations 6-20 (a significant improvement over the 2002-2004 study), and increase to 77% at select durations 21-25.

Mortality ratios (by amount) steadily decrease with increasing policy size, from 102% for policies with face amounts between \$1 and \$9,999 to 55% for policies with face amounts of \$1,000,000 to \$2,499,999. Ratios increased to 60% (based on 105 deaths) in the \$2,500,000 to \$4,999,999 size band and to 74% (based on 57 deaths) in the \$5,000,000+ size band. Although actual experience (death counts) at the highest sized bands is very limited, past studies have shown similar up-ticks in the mortality ratio. Unlike in the 2002-2004 study, we do not see a similar up-tick in the \$2,500,000 and over size band mortality ratios on a policy count basis. The general trend of decreasing mortality ratios with increasing policy size is assumed to be attributed to an increase in underwriting as the face amount increases. Drilling into the detail for policies below \$25,000 shows very high actual-to-expected ratios (by amount) at durations 5 and under. Although a definitive cause is not known, this experience may include guaranteed or simplified-issue business (not properly coded for exclusion from this study) or conversions with the date of conversion (instead of the date of issue of the original policy) listed as the policy issue date.

The non-smoker mortality ratio is 64% of the non-smoker 2001 VBT (by amount) compared to 84% for smokers using the smoker 2001 VBT. Notably, comparable 2002-2004 study ratios of 68% for non-smokers and 85% for smokers suggest that mortality improvement has been concentrated in the non-smoker category. The ratio for policies with unknown smoking habits is 83% of the composite VBT.

The overall mortality ratio (by amount) of 67% for the 2004-2005 study continues the overall apparent trend of improvement over time, with the prior 2002-2004 study showing mortality ratios of 70% for single year 2003-2004, and 73% for single year 2002-2003.

Ultimate Period Results Based On 2001 VBT (Appendix B)

Overall, the actual-to-expected ratio (by amount) in the ultimate period (durations 26+) was 82% of the 2001 VBT. This ratio dropped significantly from 91% for 2002-03 and 88% for 2003-04 observation years, but some of the change is due to differences in mix of companies in each study period. The mortality experience for the 26 common companies for 2002-03, 2003-04, and 2004-05 by face amount was 90.6%, 88.3%, and 84.6%. Additional details by individual study years and for the 26 common companies by gender and smoking status are included in Appendices E and F.

Results differ significantly for males and females. The female actual-to-expected ratio (by amount) is 91%, while the male mortality ratio (by amount) is 80%. Mortality ratios for both males and females tend to be higher at the younger and older attained ages. Mortality ratios for males are highest between attained ages 25-49 at 103-145%, lowest between ages 60-69 at 75%, and increase to 86% at ages 90+. Mortality ratios for females are highest between ages 25-39 at 103-137%, lowest between ages 50-59 at 70% and increase to 111% at ages 90+.

Interestingly, mortality ratios generally decrease by increasing face amount in the ultimate durations (as they did in the select period) suggesting that lower mortality associated with higher socio-economic status and/or, some impact of underwriting may persist beyond the 25-year select period. One exception is the female highest face amount band (\$100,000 and over) where the mortality ratio is the highest at 100%. This may be due to lack of credibility as there are only 135 deaths in this band.

Results By Preferred Class Structure (PCS) Based On 2001 VBT (Appendix C, Appendix D)

As was true for the 2002-2004 study, contributors to the 2004-2005 Intercompany Study were asked to provide information related to their preferred risk class structure. In particular, companies were asked to provide a rank for each preferred class policy using "1" for the most restrictive preferred class, "2" for the next most restrictive preferred class, up to the total number of classes in their preferred structure. Companies were also asked to provide the total number of preferred classes in their preferred structure. Overall, 31 of the 42 companies contributing to the 2004-2005 study contributed at least some data by number of risk classes and risk class rank.

For the 2002-2004 study, the many different preferred class structures were aggregated over all companies into one combined structure with three (3) non-smoker classes (or risk class ranks (PCS)) and two (2) smoker classes. For non-smokers, results in PCS Band 1 were the aggregate results of companies' best preferred class. Results in PCS Band 3 were the results of companies' residual standard class. Lastly, results for PCS Band 2 were the results for policies that fit into neither Band 1 nor Band 3. For example, if a company had four non-smoker classes, the experience for classes 2 and 3 would have been combined and reported in PCS Band 2. For smokers, results were provided for PCS Band 1 and PCS Band 3. Results for PCS Band 2 were immaterial because most companies with more than one smoker class had only two smoker classes. It should be noted that companies with a preferred class structure for non-smokers, but one class for smokers had only risk class rank data included for non-smokers.

For the 2004-2005 study, preferred/residual standard experience is provided by number of risk classes and risk class rank. Preferred Indicator = 1 in the pivot tables indicates that the business was underwritten in a preferred class structure.

The data request for both the 2002-2004 report and this report asked companies to classify the smoking status of each policy as unknown, no tobacco usage, non-smoker, cigarette smoker or tobacco user. The non-smoker category in the pivot table and experience summaries for this report consists of business classified as non-smoker or no tobacco usage and the smoker category is the business classified by contributing companies as cigarette smoker or tobacco user. Some companies allow some tobacco usage within a non-smoker classification (e.g. occasional cigar). This data would be classified as non-smoker.

Only data for issue ages greater than or equal to 25, durations 1 to 15 and face amounts of \$100,000 up to \$2,500,000 are summarized in Appendices C and D. For 2004-2005, this block had just under \$2 trillion of exposure and 7,935 deaths. Experience may include some lapse anti-selection effects since we were not able to exclude experience beyond the level premium period for level premium term plans. There may also be significant variations in experience by company.

Overall (smoker/non-smoker and male/female combined), actual-to-expected ratios (2001 VBT S/NS expected basis) for this block of PCS business were 70% by policy and 65% by amount. Corresponding ratios for the 2002-2004 experience were 71% by policy and 67% by amount. It is not clear if the apparent decrease in mortality is real, due to changes in the contributing companies (i.e., different companies and/or different relative contributions) or due to other factors.

For the non-smoker business, actual-to-expected ratios by amount increase by risk class rank from 52% for the best preferred classes (PCS Band 1, as described in the second paragraph of this section), to 60% for classes in the middle ranks (PCS Band 2), and to 81% for the residual standard group (PCS Band 3). Corresponding ratios from the 2002-2004 experience were 54%, 64% and 77%, respectively.

For the smoker classes, ratios by amount for 2004-2005 were 79% for the preferred class and 102% for the residual group. Corresponding ratios for 2002-2004 were 74% and 96%, respectively.

Although differences in mortality experience between risk classes appear to persist for the first 10-15 years (see Appendix D), there is insufficient experience to draw firm conclusions about whether (or how rapidly) A/E's are converging, particularly when considering how convergence rates may differ by issue age, gender, face amount band, etc.

When non-smoker experience is grouped into PCS Bands 1, 2 and 3, and each PCS Band is then split by face amount band, ratios tend to decrease as face amount band increases for a given PCS Band, although the decrease is very slight for PCS Band 3. The disparity between the best and worst classes, as measured by the ratio of the A/E for PCS Band 3 to the A/E for PCS Band 1, tends to increase as face amount band increases.

When developing assumptions for multi-class business, actuaries sometimes use aggregate experience by smoking status and then make assumptions about relative mortality among classes and the proportion of the business that will be in each class. The table below summarizes the 2004-2005 experience by issue age band for two- and three-class non-smoker business and two-class smoker business. The experience for companies with four or more non-smoker classes is still too sparse to be very credible when broken down by issue age band.

S/NS	# of Risk Class	Risk Class	Issue Ages	# of Deaths	% of Age Band Exposure		A/E	Ratio of A/Es*	
					Dur 1	Dur 1-15			
NS	2	1	25-49	999	65.6%	71.5%	49.7%	100.0%	
			50-59	515	56.4	61.6	54.8	100.0	
			60+	548	46.8	54.0	61.7	100.0	
			All	2,062	60.4%	69.4%	54.2%	100.0%	
	2	2	25-49	704	34.4%	28.5%	72.9%	146.7%	
			50-59	461	43.6	38.4	76.2	139.1	
			60+	742	53.2	46.0	80.8	131.0	
			All	1,907	39.6%	30.6%	77.2%	142.4%	
	3	1	25-49	191	38.0%	40.3%	44.4%	100.0%	
			50-59	107	27.4	28.5	53.2	100.0	
			60+	74	19.4	21.2	60.9	100.0	
			All	372	36.0%	38.1%	48.7%	100.0%	
		2	2	25-49	239	33.5%	33.2%	55.5%	125.0%
				50-59	177	35.4	35.9	54.5	102.4
				60+	143	37.3	36.9	66.1	108.5
All				559	33.8%	33.7%	57.4%	117.9%	
3		3	25-49	295	28.5%	26.5%	89.5%	201.6%	
			50-59	234	37.2	35.6	85.6	160.9	
			60+	246	43.3	41.9	86.6	142.2	
All	775	30.2%	28.2%	87.5%	179.7%				
S	2	1	25-49	333	64.2%	65.5%	63.6%	100.0%	
			50-59	193	60.9	59.4	90.4	100.0	
			60+	90	55.7	52.4	125.9	100.0	
			All	616	63.5%	64.3	78.6%	100.0%	
	2	2	25-49	218	35.8%	34.5%	86.7%	136.3%	
			50-59	133	39.1	40.6	89.2	98.7	
			60+	117	44.3	47.6	160.2	127.2	
			All	468	36.5%	35.7%	101.8%	129.5%	

* Ratio of A/E (in the adjacent column) to corresponding best class A/E for the same issue age group.

Some observations based on the results summarized in the preceding table are:

1. For a given risk class structure, the percentage of the exposure in the best preferred class decreases as issue age increases. For the three non-smoker class structure, most of the decrease in best preferred class exposure appears as an increase in the residual class exposure since the exposure percentage for class 2 increases only slightly as issue age increases.
2. With few exceptions, A/E's for a given risk class increase with issue age.
3. Looking at ratios of A/E's to the best class A/E by issue age group in the last column of Table 1, we can also see that ratios of A/E's by issue age band for the 2004-2005 experience generally decrease as issue age increases. In other words, the differential in mortality results between the best and worst risk classes becomes smaller as issue age increases.

Ratios of A/E's to the A/E for the best class, for all ages combined, are summarized below and compared to corresponding ratios for 2002-2004 experience of companies able to assign an underwriting criteria score (UCS) to their experience (see Appendix E of the PM/POG Interim Report on the SOA website under Individual Life Experience Studies – 2008 Preferred Mortality Reports). The differences in the ratios among the classes appear to be significantly less for the 2004-2005 experience study than for the 2002-2004 UCS data. One driver of the difference is a different mix of participating companies. Thirty-

one companies contributed preferred data to the 2004-2005 study, while only 18 of these companies were included in the 2002-2004 UCS results.

Table 2 \$100,000 - \$2,499,999 – Male/Female Combined – Issue Ages 25+ Durations 1-10 for 2002-2004 UCS <u>Durations 1-15 for 2004-2005</u> (Expected Basis: 2001 VBT)								
S/NS	# of Risk Classes	Risk Class	2002-2004 UCS			2004-2005		
			# of Deaths	A/E	Ratios of A/Es	# of Deaths	A/E	Ratios of A/Es
NS	2	1	811	49.9%	100.0%	2,062	54.2%	100.0%
		2	965	95.6	191.6	1,907	77.2	142.4
	3	1	565	51.6%	100.0%	372	48.7%	100.0%
		2	661	67.8	131.4	559	57.4	117.9
		3	978	101.5	196.7	775	87.5	179.7
S	2	1	404	73.4%	100.0%	616	78.6%	100.0%
		2	349	113.2	154.2	468	101.8	129.5

The A/E Ratios in the last column of Table 2 come from corresponding all ages A/E ratios in the last column of Table 1.

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AAA Life Insurance	Mutual of Omaha
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AUL - OneAmerica	Nationwide Financial
AXA Financial – AXA-Equitable	Nationwide Life & Annuity
AXA Financial - MONY	New York Life
Columbus Life	Northwestern Mutual
Connecticut Mutual	Ohio National
Empire General	Pacific Life
Farm Bureau Financial	Penn Mutual
Farm Family	Protective Life
Fidelity Investments	Protective Life & Annuity
Genworth Financial	Prudential
Government Personnel Mutual Life	State Farm
Guardian Life	Sun Life Financial
Horace Mann	Thrivent Financial
ING	TIAA-CREF
Jackson National Life	Transamerica Occidental
John Hancock	USAA Life
Liberty Mutual	West Coast Life
Massachusetts Mutual Life	Western & Southern
Metropolitan Life	
Minnesota Life (Securian Financial)	

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*Underwriting professional.

** Quantitative specialist.

APPENDIX A**SOA Industry Life Experience, 2004-2005**

Expected Basis: 2001 VBT

SELECT PERIOD ONLY (Dur <=25)

Amounts in \$1,000,000 Units

	Actual Deaths by Policy	Expected Deaths by Policy	Ratio by Policy	Actual Deaths by Amount	Expected Deaths by Amount	Ratio by Amount	Exposure by Policy	% Exposure by Policy	Exposure by Amount	% Exposure by Amount	% Expected by Amount
Overall	111,810	135,203	83%	\$8,605	\$12,767	67%	29,014,145	100.0%	\$4,676,777	100.0%	100.0%
Issue Age											
0	433	485	89%	\$11	\$14	77%	1,346,009	4.6%	\$44,849	1.0%	0.1%
1-4	470	483	97%	\$13	\$16	83%	1,288,547	4.4%	\$49,380	1.1%	0.1%
5-9	528	451	117%	\$15	\$16	93%	932,806	3.2%	\$37,326	0.8%	0.1%
10-17	1,080	954	113%	\$34	\$36	94%	1,387,833	4.8%	\$57,221	1.2%	0.3%
18-24	1,969	2,035	97%	\$88	\$109	81%	2,249,453	7.8%	\$152,991	3.3%	0.9%
25-29	3,084	3,741	82%	\$224	\$322	70%	3,130,498	10.8%	\$405,850	8.7%	2.5%
30-34	4,973	6,638	75%	\$525	\$772	68%	4,097,460	14.1%	\$813,798	17.4%	6.0%
35-39	7,089	9,605	74%	\$749	\$1,228	61%	4,033,208	13.9%	\$939,831	20.1%	9.6%
40-49	20,394	27,018	75%	\$2,053	\$3,222	64%	5,910,735	20.4%	\$1,361,103	29.1%	25.2%
50-59	30,586	37,539	81%	\$2,246	\$3,338	67%	3,162,522	10.9%	\$604,200	12.9%	26.1%
60-69	31,327	35,908	87%	\$1,717	\$2,390	72%	1,237,799	4.3%	\$164,836	3.5%	18.7%
70-79	9,172	9,514	96%	\$744	\$1,016	73%	221,042	0.8%	\$38,127	0.8%	8.0%
80+	705	832	85%	\$185	\$288	64%	16,233	0.1%	\$7,264	0.2%	2.3%
Gender											
Female	45,189	54,153	83%	\$2,261	\$3,294	69%	12,902,540	44.5%	\$1,452,087	31.0%	25.8%
Male	66,621	81,050	82%	\$6,345	\$9,473	67%	16,111,604	55.5%	\$3,224,690	69.0%	74.2%
Duration											
1	1,059	1,265	84%	\$256	\$455	56%	1,838,661	6.3%	\$597,538	12.8%	3.6%
2	1,557	1,746	89%	\$417	\$598	70%	1,804,825	6.2%	\$586,181	12.5%	4.7%
3	1,980	2,120	93%	\$466	\$642	73%	1,805,590	6.2%	\$532,100	11.4%	5.0%
4-5	4,075	4,418	92%	\$870	\$1,169	74%	2,993,008	10.3%	\$746,100	16.0%	9.2%
6-10	13,584	16,083	84%	\$1,873	\$2,994	63%	6,320,323	21.8%	\$1,182,019	25.3%	23.5%
11-15	22,962	29,291	78%	\$1,839	\$2,825	65%	5,556,270	19.2%	\$550,068	11.8%	22.1%
16-20	36,434	46,302	79%	\$1,987	\$2,916	68%	5,453,575	18.8%	\$365,120	7.8%	22.8%
21-25	30,159	33,978	89%	\$897	\$1,168	77%	3,241,892	11.2%	\$117,651	2.5%	9.1%
Size											
1-9,999	25,749	25,353	102%	\$124	\$121	102%	1,399,714	4.8%	\$7,075	0.2%	0.9%
10,000-24,999	24,308	27,075	90%	\$299	\$338	89%	4,159,472	14.3%	\$54,009	1.2%	2.6%
25,000-49,999	17,781	21,514	83%	\$510	\$621	82%	4,325,901	14.9%	\$120,898	2.6%	4.9%
50,000-99,999	19,135	24,987	77%	\$1,078	\$1,415	76%	5,645,202	19.5%	\$312,882	6.7%	11.1%
100,000-249,999	17,192	24,253	71%	\$2,114	\$3,034	70%	7,763,731	26.8%	\$972,985	20.8%	23.8%
250,000-499,999	4,465	6,758	66%	\$1,296	\$1,984	65%	3,183,387	11.0%	\$912,247	19.5%	15.5%
500,000-999,999	2,034	3,256	62%	\$1,153	\$1,852	62%	1,621,199	5.6%	\$901,627	19.3%	14.5%
1,000,000-2,499,999	984	1,741	57%	\$1,184	\$2,151	55%	828,314	2.9%	\$998,002	21.3%	16.8%
2,500,000-4,999,999	105	174	60%	\$331	\$553	60%	59,368	0.2%	\$184,756	4.0%	4.3%
5,000,000+	57	91	62%	\$517	\$698	74%	27,857	0.1%	\$212,297	4.5%	5.5%
Smkr Status											
Non-Smoker	67,710	89,241	76%	\$6,857	\$10,673	64%	22,560,794	77.8%	\$4,254,250	91.0%	83.6%
Smoker	28,853	30,925	93%	\$1,498	\$1,793	84%	3,646,719	12.6%	\$336,993	7.2%	14.0%
Unknown	15,247	15,038	101%	\$250	\$301	83%	2,806,632	9.7%	\$85,534	1.8%	2.4%

APPENDIX A**SOA Industry Life Experience, 2004-2005**

Expected Basis: 2001 VBT

SELECT PERIOD ONLY (Dur<=25)

A/E Ratios by Gender and Smoker Status

	Male Non-Smoker*			Male Smoker*			Female Non-Smoker*			Female Smoker*		
	Actual Deaths by Policy	A/E Ratio by Policy	A/E Ratio by Amount	Actual Deaths by Policy	A/E Ratio by Policy	A/E Ratio by Amount	Actual Deaths by Policy	A/E Ratio by Policy	A/E Ratio by Amount	Actual Deaths by Policy	A/E Ratio by Policy	A/E Ratio by Amount
Overall	42,681	76.5%	64.0%	16,817	92.5%	83.0%	25,029	74.9%	65.0%	12,036	94.5%	84.9%
Issue Age												
0	154	91.0%	86.9%	27	71.0%	58.3%	73	84.1%	74.5%	6	33.8%	26.5%
1-4	186	108.7%	107.2%	36	77.9%	60.5%	55	66.0%	53.8%	13	64.3%	57.9%
5-9	196	122.7%	99.2%	51	92.7%	60.6%	79	107.8%	84.3%	19	86.1%	109.0%
10-17	330	121.6%	98.6%	132	87.8%	87.7%	129	98.4%	79.0%	36	51.2%	39.6%
18-24	725	101.1%	82.1%	308	90.2%	74.3%	404	89.6%	78.0%	150	80.8%	69.6%
25-29	1,225	79.1%	65.9%	552	88.1%	79.1%	735	80.0%	69.6%	238	76.8%	67.7%
30-34	2,064	73.3%	64.8%	898	78.9%	84.5%	1,127	71.0%	66.2%	401	71.7%	62.4%
35-39	2,964	72.8%	60.5%	1,373	82.3%	62.8%	1,474	65.1%	58.7%	595	68.6%	67.9%
40-49	8,039	70.8%	61.3%	4,109	90.0%	79.6%	3,756	61.9%	58.4%	2,226	85.4%	72.0%
50-59	11,484	72.2%	61.7%	5,088	101.2%	93.4%	5,559	69.2%	69.5%	3,388	100.0%	82.1%
60-69	11,869	80.4%	69.8%	3,561	95.2%	88.2%	7,563	80.3%	66.8%	4,027	103.2%	95.1%
70-79	3,255	90.0%	69.4%	644	87.0%	91.4%	3,727	95.4%	67.6%	866	119.2%	140.6%
80+	190	81.4%	58.3%	38	71.4%	65.1%	348	82.7%	64.4%	71	112.6%	123.9%
Duration												
1	514	83.0%	60.9%	154	106.8%	72.4%	254	71.9%	38.3%	57	88.8%	55.6%
2	755	83.1%	57.4%	233	126.8%	137.6%	373	76.0%	83.6%	90	109.6%	69.4%
3	966	86.3%	71.8%	266	112.2%	81.2%	524	90.6%	64.5%	118	112.0%	141.6%
4-5	1,930	84.5%	68.4%	564	106.4%	94.0%	1,055	87.2%	79.3%	303	124.1%	120.2%
6-10	6,055	76.7%	59.1%	1,895	98.1%	85.5%	3,964	82.0%	60.8%	1,351	116.0%	84.8%
11-15	9,604	73.3%	61.8%	3,435	93.1%	76.9%	6,680	71.9%	64.6%	2,857	98.0%	83.7%
16-20	15,469	76.2%	66.4%	6,620	90.3%	81.3%	8,064	70.1%	63.1%	4,876	88.0%	74.9%
21-25	7,388	77.1%	73.0%	3,650	88.2%	78.6%	4,115	79.6%	72.2%	2,384	90.9%	94.0%
Face Amount												
1-9,999	3,702	98.9%	100.6%	2,365	109.5%	110.5%	6,385	91.2%	92.5%	4,478	104.4%	107.3%
10,000-24,999	6,952	90.5%	88.9%	4,181	99.6%	96.9%	5,798	78.5%	77.9%	3,470	94.9%	93.1%
25,000-49,999	7,587	81.3%	80.8%	3,383	91.7%	91.1%	3,902	73.2%	72.9%	1,660	89.0%	88.5%
50,000-99,999	9,591	75.9%	75.4%	3,552	87.5%	87.2%	3,937	66.6%	66.8%	1,335	81.3%	80.4%
100,000-249,999	9,739	68.7%	67.3%	2,573	83.2%	82.1%	3,554	65.4%	65.1%	864	85.3%	84.6%
250,000-499,999	2,906	64.8%	64.0%	483	78.3%	78.0%	874	62.3%	62.0%	137	81.5%	81.1%
500,000-999,999	1,392	60.0%	60.0%	191	77.5%	76.7%	370	61.9%	61.3%	59	93.3%	95.3%
1,000,000-2,499,999	699	55.1%	53.8%	78	71.8%	67.5%	176	55.6%	54.8%	28	81.5%	72.6%
2,500,000-4,999,999	78	64.0%	64.0%	5	44.7%	51.0%	20	55.6%	52.0%	2	43.8%	40.6%
5,000,000+	35	56.9%	61.8%	6	144.9%	165.2%	13	57.0%	88.1%	3	119.8%	109.6%

*Juvenile policies are included as either non-smoker or smokers depending on the individual company coding; however, the expected basis is the same for these policies regardless of the coding.

APPENDIX B

SOA Industry Life Experience, 2004-2005
Expected Basis: 2001 VBT
ULTIMATE PERIOD ONLY (Dur 26+)
Amounts in \$1,000,000 Units

	Actual Deaths by Policy	Expected Deaths by Policy	Ratio by Policy	Actual Deaths by Amount	Expected Deaths by Amount	Ratio by Amount	Exposure by Policy	% Exposure by Policy	Exposure by Amount	% Exposure by Amount	Expected by Amount
Overall	269,974	302,860	89%	\$1,457	\$1,780	82%	11,327,363	100.0%	\$79,112	100.0%	100.0%
Gender											
Female	95,181	98,815	96%	\$253	\$278	91%	4,553,175	40.2%	\$19,406	24.5%	15.6%
Male	174,793	204,045	86%	\$1,204	\$1,503	80%	6,774,188	59.8%	\$59,705	75.5%	84.4%
MALE Only Ultimate Period Data											
Attained Age											
25-29	152	129	118%	\$1	\$1	103%	129,256	1.1%	\$1,132	1.4%	0.1%
30-34	217	168	129%	\$2	\$1	128%	175,450	1.5%	\$1,237	1.6%	0.1%
35-39	365	244	150%	\$2	\$1	145%	214,765	1.9%	\$1,274	1.6%	0.1%
40-49	2,153	1,693	127%	\$14	\$13	111%	734,752	6.5%	\$5,383	6.8%	0.7%
50-59	7,550	8,249	92%	\$73	\$89	82%	1,477,094	13.0%	\$15,678	19.8%	5.0%
60-69	18,556	23,005	81%	\$176	\$234	75%	1,570,723	13.9%	\$16,191	20.5%	13.1%
70-79	47,223	55,229	86%	\$358	\$461	78%	1,439,848	12.7%	\$12,203	15.4%	25.9%
80-89	74,001	86,277	86%	\$457	\$562	81%	890,332	7.9%	\$5,916	7.5%	31.6%
90+	24,576	29,050	85%	\$121	\$141	86%	141,968	1.3%	\$691	0.9%	7.9%
Size											
1-9,999	132,679	151,195	88%	\$413	\$466	89%	4,378,476	38.7%	\$15,091	19.1%	26.2%
10,000-24,999	33,944	42,158	81%	\$399	\$500	80%	1,940,069	17.1%	\$23,294	29.4%	28.1%
25,000-49,999	5,143	6,721	77%	\$145	\$192	75%	307,328	2.7%	\$8,758	11.1%	10.8%
50,000-99,999	2,134	2,728	78%	\$118	\$152	78%	102,182	0.9%	\$5,731	7.2%	8.6%
100,000+	893	1,242	72%	\$128	\$192	66%	46,133	0.4%	\$6,832	8.6%	10.8%
FEMALE Only Ultimate Period Data											
Attained Age											
25-29	63	54	116%	\$0	\$0	116%	113,771	1.0%	\$881	1.1%	0.0%
30-34	87	94	93%	\$1	\$1	137%	149,695	1.3%	\$884	1.1%	0.0%
35-39	158	161	98%	\$1	\$1	103%	180,749	1.6%	\$829	1.0%	0.0%
40-49	1,011	959	105%	\$5	\$5	96%	582,488	5.1%	\$2,872	3.6%	0.3%
50-59	3,185	4,336	73%	\$17	\$24	70%	969,429	8.6%	\$5,334	6.7%	1.3%
60-69	6,587	8,181	81%	\$29	\$38	77%	790,534	7.0%	\$3,746	4.7%	2.1%
70-79	22,535	24,256	93%	\$66	\$74	89%	936,403	8.3%	\$2,950	3.7%	4.2%
80-89	43,729	43,842	100%	\$97	\$101	96%	708,906	6.3%	\$1,662	2.1%	5.7%
90+	17,826	16,932	105%	\$38	\$34	111%	121,200	1.1%	\$248	0.3%	1.9%
Size											
1-9,999	90,297	92,910	97%	\$159	\$166	96%	3,929,523	34.7%	\$9,700	12.3%	9.3%
10,000-24,999	3,899	4,730	82%	\$44	\$55	81%	544,239	4.8%	\$6,280	7.9%	3.1%
25,000-49,999	604	745	81%	\$17	\$21	81%	56,992	0.5%	\$1,584	2.0%	1.2%
50,000-99,999	246	300	82%	\$13	\$16	82%	15,785	0.1%	\$870	1.1%	0.9%
100,000+	135	131	103%	\$19	\$19	100%	6,635	0.1%	\$972	1.2%	1.1%

APPENDIX C*

**SOA Industry Life Experience, 2004-2005
Preferred Class Structure Business Only
Expected Basis: 2001 VBT**

Issue Ages 25+, Duration <=15, Face Amt 100K up to 2.5M
Amounts in \$1,000,000 Units

	Actual Deaths by Policy	Expected Deaths by Policy	Ratio by Policy	Actual Deaths by Amount	Expected Deaths by Amount	Ratio by Amount	Exposure by Policy	% Exposure by Policy	Exposure by Amount	% Exposure by Amount	% Expected by Amount
Overall	7,935	11,313	70%	\$2,171	\$3,354	65%	6,108,316	100.0%	\$1,989,943	100.0%	100.0%
Issue Age											
25-29	220	318	69%	\$49	\$75	66%	628,825	10.3%	\$161,582	8.1%	2.2%
30-34	436	701	62%	\$120	\$201	60%	1,113,883	18.2%	\$361,859	18.2%	6.0%
35-39	739	1,097	67%	\$208	\$331	63%	1,242,914	20.3%	\$433,115	21.8%	9.9%
40-49	1,995	3,118	64%	\$541	\$935	58%	1,911,677	31.3%	\$655,656	32.9%	27.9%
50-59	2,224	3,163	70%	\$579	\$908	64%	928,349	15.2%	\$292,264	14.7%	27.1%
60-69	1,526	1,877	81%	\$409	\$521	79%	237,701	3.9%	\$69,046	3.5%	15.5%
70-79	608	804	76%	\$180	\$276	65%	39,546	0.6%	\$13,770	0.7%	8.2%
80+	187	235	80%	\$85	\$107	79%	5,422	0.1%	\$2,652	0.1%	3.2%
Gender											
Female	2,264	3,328	68%	\$563	\$856	66%	2,380,637	39.0%	\$609,300	30.6%	25.5%
Male	5,671	7,984	71%	\$1,609	\$2,498	64%	3,727,679	61.0%	\$1,380,643	69.4%	74.5%
Duration											
1	411	614	67%	\$138	\$242	57%	859,701	14.1%	\$352,586	17.7%	7.2%
2	642	874	73%	\$218	\$327	67%	870,578	14.3%	\$340,486	17.1%	9.8%
3	841	1,026	82%	\$242	\$351	69%	840,078	13.8%	\$295,723	14.9%	10.5%
4-5	1,529	1,935	79%	\$438	\$608	72%	1,240,893	20.3%	\$390,136	19.6%	18.1%
6-10	3,006	4,475	67%	\$806	\$1,290	63%	1,772,320	29.0%	\$508,869	25.6%	38.4%
11-15	1,506	2,390	63%	\$330	\$537	61%	524,746	8.6%	\$102,144	5.1%	16.0%
Face Amount											
100,000-249,999	4,769	6,363	75%	\$589	\$797	74%	2,855,114	46.7%	\$365,044	18.3%	23.8%
250,000-499,999	1,798	2,754	65%	\$514	\$789	65%	1,823,186	29.8%	\$515,027	25.9%	23.5%
500,000-999,999	896	1,382	65%	\$504	\$770	65%	929,512	15.2%	\$509,842	25.6%	23.0%
1,000,000-2,499,999	472	814	58%	\$564	\$998	57%	500,505	8.2%	\$600,030	30.2%	29.7%
PCS Nonsmoker											
1 - Best Rank	2,664	4,691	57%	\$749	\$1,453	52%	2,825,355	46.3%	\$932,778	46.9%	43.3%
2 - Middle Rank(s)	1,271	1,873	68%	\$390	\$650	60%	1,295,405	21.2%	\$494,350	24.8%	19.4%
3 - Residual Standard	2,916	3,529	83%	\$793	\$978	81%	1,589,987	26.0%	\$468,202	23.5%	29.2%
PCS Smoker											
1 - Best Rank	616	767	80%	\$132	\$168	79%	256,249	4.2%	\$60,835	3.1%	5.0%
3 - Residual Standard	468	452	103%	\$106	\$104	102%	141,321	2.3%	\$33,779	1.7%	3.1%
PCS Nonsmoker - 2 Risk Classes											
Class Rank											
1	2062	3,531	58%	\$533	\$984	54%	1,730,436	28.3%	\$457,044	23.0%	29.3%
2	1907	2,452	78%	\$495	\$641	77%	817,898	13.4%	\$201,540	10.1%	19.1%
PCS Nonsmoker - 3 Risk Classes											
Class Rank											
1	372	711	52%	\$126	\$258	49%	703,527	11.5%	\$288,427	14.5%	7.7%
2	559	827	68%	\$161	\$280	57%	691,494	11.3%	\$255,186	12.8%	8.4%
3	775	832	93%	\$229	\$262	88%	616,668	10.1%	\$213,903	10.7%	7.8%
PCS Nonsmoker - 4 Risk Classes											
Class Rank											
1	199	378	53%	\$85	\$188	45%	358,528	5.9%	\$175,694	8.8%	5.6%
2	365	571	64%	\$118	\$210	56%	330,784	5.4%	\$136,572	6.9%	6.3%
3	277	375	74%	\$95	\$131	73%	239,603	3.9%	\$92,115	4.6%	3.9%
4	226	238	95%	\$68	\$73	94%	152,699	2.5%	\$51,950	2.6%	2.2%

* Data in Appendix C includes small amount of data with more than 4 risk classes, but not considered credible enough to report separately.

APPENDIX D
Preferred Class Structure
Business Only

SOA Industry Life Experience, 2004-2005
Issue Ages 25+, Durations <=15
Face Amounts 100,000-2,499,999
Expected Basis: 2001 VBT

Non-smokers

Durations Ratios by Amount							
Ranking PCS Bands	1	2	3	4-5	6-10	11-15	Grand Total
1 – Best Rank	38.9%	52.5%	52.5%	54.9%	51.6%	51.1%	51.6%
2 – Middle Rank(s)	53.4	63.5	58.6	68.1	56.5	17.8	60.0
3 – Residual Standard	72.3	80.3	99.0	90.9	79.4	71.4	81.1

Non-smokers

Durations Number of Deaths							
Ranking PCS Bands	1	2	3	4-5	6-10	11-15	Grand Total
1 – Best Rank	55	132	220	450	1,159	648	2,664
2 – Middle Rank(s)	133	189	214	311	422	2	1,271
3 – Residual Standard	149	208	287	574	1,046	652	2,916

Smokers

Durations Ratios by Amount							
Ranking PCS Bands	1	2	3	4-5	6-10	11-15	Grand Total
1 - Best Rank	71.4%	102.4%	81.9%	82.3%	77.2%	66.0%	54.2%
3 - Residual Standard	86.0	80.2	86.6	117.1	106.9	105.2	77.2

Smokers

Durations Number of Deaths							
Ranking PCS Bands	1	2	3	4-5	6-10	11-15	Grand Total
1 - Best Rank	41	65	64	99	211	136	616
3 - Residual Standard	33	48	56	95	168	68	468

APPENDIX D
Preferred Class Structure
Business Only

SOA Industry Life Experience, 2004-2005
Issue Ages 25+, Durations <=15
Face Amounts 100,000-2,499,999
Expected Basis: 2001 VBT

Non-smokers – 2 Risk Classes

Durations Ratios by Amount							
Class Rank	1	2	3	4-5	6-10	11-15	Grand Total
1	39.8%	78.2%	57.3%	60.3%	53.1%	50.9%	54.2%
2	64.8	89.3	85.1	86.8	77.5	70.9	77.2

Non-smokers - 2 Risk Classes

Durations Number of Deaths							
Class Rank	1	2	3	4-5	6-10	11-15	Grand Total
1	16	49	113	288	949	647	2,062
2	25	63	91	282	800	646	1,907

Non-smokers – 3 Risk Classes

Durations Ratios by Amount							
Class Rank	1	2	3	4-5	6-10	11-15	Grand Total
1	43.7%	37.3%	52.9%	57.1%	47.1%	230.4%	48.7%
2	49.3	51.4	59.3	63.9	59.4	17.8	57.4
3	67.2	71.1	109.5	98.2	86.2	172.6	87.5

Non-smokers - 3 Risk Classes

Durations Number of Deaths							
Class Rank	1	2	3	4-5	6-10	11-15	Grand Total
1	25	42	49	103	152	1	372
2	74	73	98	154	158	2	559
3	101	106	138	230	194	6	775

APPENDIX D
Preferred Class Structure
Business Only

SOA Industry Life Experience, 2004-2005
Issue Ages 25+, Durations <=15
Face Amounts 100,000-2,499,999
Expected Basis: 2001 VBT

Non-smokers – 4 Risk Classes

Durations Ratios by Amount							
Class Rank	1	2	3	4-5	6-10	11-15	Grand Total
1	30.3%	46.6%	48.3%	37.2%	57.7%	#N/A	45.1%
2	42.9	70.3	56.5	72.3	42.7	#N/A	56.1
3	77.7	77.8	61.9	75.9	72.0	#N/A	72.8
4	113.7	93.3	98.9	85.3	88.0	#N/A	93.8

Non-smokers - 4 Risk Classes

Durations Number of Deaths							
Class Rank	1	2	3	4-5	6-10	11-15	Grand Total
1	14	41	58	59	27	#N/A	199
2	26	69	78	90	102	#N/A	365
3	33	47	37	64	96	#N/A	277
4	23	39	58	62	44	#N/A	226

Non-smokers

Durations Ratios by Amount								
Face Amount Bands	Ranking PCS Bands	1	2	3	4-5	6-10	11-15	Grand Total
100,000-249,999	1 – Best Rank	33.1%	45.8%	80.3%	73.9%	61.2%	57.1%	61.8%
100,000-249,999	2 – Middle Rank(s)	87.8	75.2	80.8	74.8	63.3	66.3	72.1
100,000-249,999	3 – Residual Standard	77.9	80.8	99.9	100.3	84.8	66.3	82.2
250,000-499,999	1 – Best Rank	36.6%	61.1%	50.5%	51.9%	51.6%	45.6%	50.4%
250,000-499,999	2 – Middle Rank(s)	66.2	69.9	79.9	75.1	53.7	0.0	66.5
250,000-499,999	3 – Residual Standard	97.3	86.7	87.7	88.8	82.9	63.3	81.9
500,000-999,999	1 – Best Rank	39.4%	61.3%	66.9%	61.9%	45.3%	54.6%	52.7%
500,000-999,999	2 – Middle Rank(s)	63.8	58.5	54.3	74.1	57.5	0.0	61.3
500,000-999,999	3 – Residual Standard	66.5	105.4	125.2	92.3	66.1	72.5	82.1
1,000,000-2,499,999	1 – Best Rank	40.6%	44.3%	33.7%	40.9%	49.3%	45.0%	44.4%
1,000,000-2,499,999	2 – Middle Rank(s)	87.8	75.2	80.8	74.8	63.3	0.0	49.0
1,000,000-2,499,999	3 – Residual Standard	77.9	80.8	99.9	100.3	84.8	88.1	78.6

APPENDIX D
Preferred Class Structure Only
SOA Industry Life Experience, 2004-2005
Issue Ages 25+, Durations <=15
Face Amounts 100,000-2,499,999
Expected Basis: 2001 VBT

Non-smokers

Durations Number of Deaths								
Face Amount Bands	Ranking PCS Bands	1	2	3	4-5	6-10	11-15	Grand Total
100,000-249,999	1 - Best Rank	13	37	116	258	677	466	1,567
100,000-249,999	2 - Middle Rank(s)	64	83	108	156	229	2	642
100,000-249,999	3 - Residual Standard	60	94	160	339	671	465	1,789
250,000-499,999	1 - Best Rank	18	46	49	100	287	108	608
250,000-499,999	2 - Middle Rank(s)	38	57	67	86	96	0	344
250,000-499,999	3 - Residual Standard	57	60	61	135	240	103	656
500,000-999,999	1 - Best Rank	13	32	40	66	121	50	322
500,000-999,999	2 - Middle Rank(s)	23	28	26	47	62	0	186
500,000-999,999	3 - Residual Standard	20	39	46	66	80	50	301
1,000,000-2,499,999	1 - Best Rank	11	17	15	26	74	24	167
1,000,000-2,499,999	2 - Middle Rank(s)	8	21	13	22	35	0	99
1,000,000-2,499,999	3 - Residual Standard	12	15	20	34	55	34	170

Smokers

Durations Ratios by Amount								
Face Amount Bands	Ranking PCS Bands	1	2	3	4-5	6-10	11-15	Grand Total
100,000-249,999	1 - Best Rank	75.5%	108.8%	104.3%	78.5%	76.3%	78.2%	81.7%
100,000-249,999	3 - Residual Standard	104.0	138.1	134.5	117.6	99.4	80.1	107.4
250,000-499,999	1 - Best Rank	78.1%	117.4%	68.8%	82.4%	55.4%	60.6%	71.0%
250,000-499,999	3 - Residual Standard	83.7	68.5	85.0	90.0	98.6	120.0	93.8
500,000-999,999	1 - Best Rank	77.1%	112.4%	101.2%	103.9%	74.2%	32.1%	83.9%
500,000-999,999	3 - Residual Standard	109.5	44.3	101.7	113.8	105.7	218.5	114.2
1,000,000-2,499,999	1 - Best Rank	55.3%	68.4%	49.4%	67.1%	110.3%	38.0%	76.9%
1,000,000-2,499,999	3 - Residual Standard	46.8	41.9	0.0	151.1	136.2	38.0	89.6%

Smokers

Durations Number of Deaths								
Face Amount Bands	Ranking PCS Bands	1	2	3	4-5	6-10	11-15	Grand Total
100,000-249,999	1 - Best Rank	24	38	44	61	157	122	446
100,000-249,999	3 - Residual Standard	21	38	43	65	114	44	325
250,000-499,999	1 - Best Rank	10	18	12	22	30	11	103
250,000-499,999	3 - Residual Standard	7	7	8	16	34	15	87
500,000-999,999	1 - Best Rank	5	7	6	12	15	2	47
500,000-999,999	3 - Residual Standard	4	2	5	8	13	8	40
1,000,000-2,499,999	1 - Best Rank	2	2	2	4	9	1	20
1,000,000-2,499,999	3 - Residual Standard	1	1	0	6	7	1	16

APPENDIX E

SOA Industry Life Experience, 2003-2005
Expected Basis: 2001 VBT
A/E Ratios for All Companies & Common 26 Companies
SELECT PERIOD ONLY (Durations less than or equal to 25 years)

A/E by Policy (All Companies)

	Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003
Male Non-smoker	82.9%	79.8%	76.5%	-3.1%	-3.3%	-6.4%
Male Smoker	97.6%	95.9%	92.5%	-1.7%	-3.4%	-5.1%
Male Unknown	107.0%	103.6%	100.9%	-3.5%	-2.7%	-6.1%
Female Non-smoker	80.6%	78.0%	74.9%	-2.6%	-3.2%	-5.8%
Female Smoker	97.5%	98.5%	94.5%	1.0%	-4.0%	-3.0%
Female Unknown	102.8%	105.5%	101.8%	2.7%	-3.7%	-0.9%
Total	89.6%	86.8%	82.7%	-2.8%	-4.1%	-6.9%

A/E by Policy (Common Companies)

	Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003
Male Non-smoker	83.0%	79.5%	76.7%	-3.5%	-2.8%	-6.3%
Male Smoker	97.7%	95.8%	93.0%	-2.0%	-2.8%	-4.8%
Male Unknown	107.1%	103.4%	100.5%	-3.6%	-2.9%	-6.5%
Female Non-smoker	80.6%	78.3%	75.6%	-2.3%	-2.7%	-5.0%
Female Smoker	97.6%	98.0%	95.9%	0.4%	-2.1%	-1.8%
Female Unknown	102.9%	105.7%	101.5%	2.7%	-4.1%	-1.4%
Total	89.9%	86.9%	83.3%	-3.0%	-3.7%	-6.6%

A/E by Amount (All Companies)

	Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003
Male Non-smoker	70.1%	66.3%	64.0%	-3.8%	-2.4%	-6.1%
Male Smoker	82.9%	84.0%	83.0%	1.1%	-0.9%	0.1%
Male Unknown	81.9%	86.2%	81.1%	4.3%	-5.1%	-0.8%
Female Non-smoker	69.4%	68.5%	65.0%	-0.9%	-3.5%	-4.4%
Female Smoker	89.2%	89.1%	84.9%	-0.1%	-4.2%	-4.3%
Female Unknown	91.4%	84.1%	87.3%	-7.3%	3.2%	-4.2%
Total	72.9%	70.3%	67.4%	-2.6%	-2.9%	-5.5%

A/E by Amount (Common Companies)

	Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003
Male Non-smoker	70.5%	66.7%	65.3%	-3.8%	-1.4%	-5.2%
Male Smoker	83.2%	83.5%	86.4%	0.3%	2.9%	3.1%
Male Unknown	81.1%	86.3%	79.1%	5.3%	-7.3%	-2.0%
Female Non-smoker	70.0%	70.7%	67.8%	0.8%	-2.9%	-2.2%
Female Smoker	90.0%	88.8%	89.1%	-1.2%	0.3%	-0.9%
Female Unknown	89.5%	87.0%	83.4%	-2.4%	-3.6%	-6.1%
Total	73.4%	71.0%	69.3%	-2.3%	-1.7%	-4.0%

APPENDIX E

SOA Industry Life Experience, 2003-2005
Expected Basis: 2001 VBT
A/E Ratios for All Companies & Common 26 Companies
ULTIMATE PERIOD ONLY (Durations greater than 25 years)

A/E by Policy (All Companies)

	Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003
Male	92.9%	91.2%	85.7%	-1.7%	-5.6%	-7.3%
Female	102.7%	102.4%	96.3%	-0.3%	-6.1%	-6.4%
Total	96.2%	95.0%	89.1%	-1.2%	-5.9%	-7.1%

A/E by Policy (Common Companies)

	Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003
Male	93.1%	91.2%	88.2%	-1.8%	-3.1%	-4.9%
Female	102.8%	102.4%	97.8%	-0.4%	-4.6%	-5.0%
Total	96.3%	95.0%	91.5%	-1.3%	-3.5%	-4.8%

A/E by Amount (All Companies)

	Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003
Male	88.7%	86.0%	80.1%	-2.7%	-5.9%	-8.6%
Female	100.4%	99.4%	91.2%	-1.0%	-8.1%	-9.1%
Total	90.6%	88.2%	81.8%	-2.3%	-6.4%	-8.7%

A/E by Amount (Common Companies)

	Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003
Male	88.7%	86.0%	82.9%	-2.6%	-3.1%	-5.8%
Female	100.6%	99.5%	93.1%	-1.1%	-6.4%	-7.5%
Total	90.6%	88.3%	84.6%	-2.3%	-3.7%	-6.0%

APPENDIX F**SOA Industry Life Experience, 2003-2005****Expected Basis: 2001 VBT****A/E Ratios for All Companies & Common 26 Companies (Face Amounts \$100,000 - \$2,499,999)****SELECT PERIOD ONLY (Durations less than or equal to 25 years)****MALE NON-SMOKER**

Issue Age	A/E by Policy (All Companies)						A/E by Policy (Common Companies)					
	Policy Year Ending			Differences			Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003	2003	2004	2005	2004-2003	2005-2004	2005-2003
25-39	71.8%	64.5%	65.0%	-7.2%	0.4%	-6.8%	71.3%	64.4%	65.2%	-6.9%	0.7%	-6.1%
40-49	66.3%	66.3%	61.7%	0.0%	-4.6%	-4.6%	66.9%	66.1%	60.7%	-0.8%	-5.4%	-6.2%
50-59	69.1%	67.2%	64.5%	-1.9%	-2.6%	-4.6%	68.8%	66.7%	64.0%	-2.1%	-2.7%	-4.8%
60-69	77.4%	72.1%	73.7%	-5.2%	1.5%	-3.7%	77.5%	73.0%	74.4%	-4.5%	1.5%	-3.0%
70+	84.7%	79.6%	74.3%	-5.1%	-5.3%	-10.4%	85.6%	81.2%	83.7%	-4.5%	2.5%	-1.9%
Total	71.2%	67.8%	66.0%	-3.4%	-1.8%	-5.1%	71.1%	67.8%	66.1%	-3.3%	-1.7%	-5.0%

Issue Age	A/E by Amount (All Companies)						A/E by Amount (Common Companies)					
	Policy Year Ending			Differences			Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003	2003	2004	2005	2004-2003	2005-2004	2005-2003
25-39	67.4%	59.6%	60.4%	-7.8%	0.9%	-7.0%	67.1%	59.8%	61.2%	-7.2%	1.3%	-5.9%
40-49	63.7%	62.0%	57.5%	-1.7%	-4.5%	-6.2%	65.1%	61.9%	56.6%	-3.2%	-5.3%	-8.5%
50-59	65.7%	63.3%	59.8%	-2.4%	-3.5%	-5.9%	64.0%	63.6%	60.8%	-0.4%	-2.8%	-3.2%
60-69	72.9%	67.4%	69.3%	-5.6%	1.9%	-3.7%	74.4%	68.2%	70.6%	-6.2%	2.4%	-3.8%
70+	74.6%	76.2%	67.3%	1.6%	-8.9%	-7.3%	76.4%	81.2%	79.9%	4.8%	-1.3%	3.5%
Total	67.2%	63.5%	61.3%	-3.7%	-2.2%	-5.9%	67.4%	64.1%	62.3%	-3.3%	-1.8%	-5.1%

APPENDIX F**SOA Industry Life Experience, 2003-2005****Expected Basis: 2001 VBT****A/E Ratios for All Companies & Common 26 Companies (Face Amounts \$100,000 - \$2,499,999)****SELECT PERIOD ONLY (Durations less than or equal to 25 years)****MALE SMOKER**

Issue Age	A/E by Policy (All Companies)						A/E by Policy (Common Companies)					
	Policy Year Ending			Differences			Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003	2003	2004	2005	2004-2003	2005-2004	2005-2003
25-39	72.0%	73.8%	69.5%	1.8%	-4.3%	-2.5%	72.4%	74.5%	69.0%	2.1%	-5.4%	-3.3%
40-49	81.7%	74.9%	81.3%	-6.9%	6.5%	-0.4%	83.6%	74.9%	82.7%	-8.7%	7.8%	-0.9%
50-59	97.7%	93.4%	93.6%	-4.3%	0.2%	-4.2%	97.2%	93.7%	94.1%	-3.5%	0.4%	-3.1%
60-69	85.4%	77.9%	90.0%	-7.5%	12.2%	4.7%	85.0%	77.0%	90.3%	-8.0%	13.3%	5.3%
70+	88.5%	86.9%	84.3%	-1.6%	-2.6%	-4.2%	89.2%	91.5%	82.6%	2.3%	-8.9%	-6.6%
Total	83.3%	79.6%	82.0%	-3.8%	2.5%	-1.3%	83.8%	79.9%	82.3%	-3.9%	2.4%	-1.4%

Issue Age	A/E by Amount (All Companies)						A/E by Amount (Common Companies)					
	Policy Year Ending			Differences			Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003	2003	2004	2005	2004-2003	2005-2004	2005-2003
25-39	67.1%	72.1%	61.9%	5.0%	-10.2%	-5.2%	66.8%	73.4%	61.8%	6.6%	-11.6%	-5.0%
40-49	73.8%	71.8%	78.6%	-1.9%	6.7%	4.8%	75.5%	69.1%	81.6%	-6.4%	12.5%	6.1%
50-59	95.4%	94.2%	87.4%	-1.2%	-6.8%	-8.0%	95.3%	96.6%	92.1%	1.3%	-4.5%	-3.2%
60-69	87.9%	78.8%	88.2%	-9.2%	9.4%	0.2%	90.9%	80.1%	93.4%	-10.8%	13.3%	2.5%
70+	77.8%	56.9%	90.7%	-20.9%	33.8%	12.9%	81.8%	63.9%	93.9%	-17.9%	30.0%	12.2%
Total	79.5%	77.9%	78.2%	-1.6%	0.2%	-1.4%	80.4%	78.5%	80.8%	-2.0%	2.3%	0.4%

APPENDIX F

SOA Industry Life Experience, 2003-2005
Expected Basis: 2001 VBT
A/E Ratios for All Companies & Common 26 Companies (Face Amounts \$100,000 - \$2,499,999)
SELECT PERIOD ONLY (Durations less than or equal to 25 years)

FEMALE NON-SMOKER

Issue Age	A/E by Policy (All Companies)						A/E by Policy (Common Companies)					
	Policy Year Ending			Differences			Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003	2003	2004	2005	2004-2003	2005-2004	2005-2003
25-39	64.0%	62.3%	64.0%	-1.7%	1.7%	0.0%	63.6%	62.3%	64.7%	-1.3%	2.4%	1.1%
40-49	58.6%	59.9%	55.0%	1.4%	-4.9%	-3.6%	58.5%	61.3%	55.5%	2.8%	-5.8%	-3.0%
50-59	60.4%	62.9%	61.2%	2.5%	-1.7%	0.8%	58.5%	64.9%	61.6%	6.4%	-3.3%	3.1%
60-69	73.8%	71.5%	67.4%	-2.3%	-4.2%	-6.5%	73.1%	72.5%	70.7%	-0.6%	-1.8%	-2.4%
70+	90.4%	80.8%	80.7%	-9.6%	0.0%	-9.7%	86.2%	80.6%	82.5%	-5.7%	1.9%	-3.8%
Total	67.5%	65.8%	64.0%	-1.7%	-1.8%	-3.5%	66.0%	66.5%	64.9%	0.6%	-1.7%	-1.1%

Issue Age	A/E by Amount (All Companies)						A/E by Amount (Common Companies)					
	Policy Year Ending			Differences			Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003	2003	2004	2005	2004-2003	2005-2004	2005-2003
25-39	65.3%	58.7%	60.8%	-6.5%	2.1%	-4.5%	64.3%	59.2%	62.3%	-5.0%	3.1%	-2.0%
40-49	54.4%	56.5%	51.5%	2.1%	-5.1%	-3.0%	54.6%	57.4%	52.8%	2.8%	-4.6%	-1.8%
50-59	58.3%	59.6%	57.8%	1.2%	-1.8%	-0.5%	56.4%	61.1%	59.5%	4.6%	-1.6%	3.0%
60-69	61.7%	71.8%	61.5%	10.1%	-10.3%	-0.2%	64.0%	73.8%	64.8%	9.8%	-9.1%	0.7%
70+	89.0%	76.7%	75.2%	-12.3%	-1.5%	-13.7%	86.5%	77.8%	76.4%	-8.7%	-1.4%	-10.1%
Total	66.1%	64.3%	61.3%	-1.8%	-2.9%	-4.7%	65.2%	65.3%	62.7%	0.2%	-2.7%	-2.5%

APPENDIX F

SOA Industry Life Experience, 2003-2005
Expected Basis: 2001 VBT
A/E Ratios for All Companies & Common 26 Companies (Face Amounts \$100,000 - \$2,499,999)
SELECT PERIOD ONLY (Durations less than or equal to 25 years)

FEMALE SMOKER

Issue Age	A/E by Policy (All Companies)						A/E by Policy (Common Companies)					
	Policy Year Ending			Differences			Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003	2003	2004	2005	2004-2003	2005-2004	2005-2003
25-39	74.9%	75.7%	67.6%	0.9%	-8.1%	-7.3%	77.6%	73.1%	67.7%	-4.5%	-5.3%	-9.8%
40-49	75.6%	66.7%	73.8%	-8.9%	7.1%	-1.8%	74.1%	68.1%	76.1%	-6.0%	8.0%	2.0%
50-59	82.3%	91.0%	90.4%	8.8%	-0.7%	8.1%	82.7%	91.7%	91.2%	9.0%	-0.5%	8.5%
60-69	99.8%	107.1%	106.0%	7.3%	-1.1%	6.2%	96.6%	104.4%	107.6%	7.8%	3.3%	11.1%
70+	100.1%	93.3%	128.3%	-6.8%	35.0%	28.2%	95.6%	90.2%	130.6%	-5.4%	40.4%	35.0%
Total	83.3%	83.0%	85.7%	-0.3%	2.7%	2.4%	82.7%	82.5%	87.0%	-0.2%	4.5%	4.3%

Issue Age	A/E by Amount (All Companies)						A/E by Amount (Common Companies)					
	Policy Year Ending			Differences			Policy Year Ending			Differences		
	2003	2004	2005	2004-2003	2005-2004	2005-2003	2003	2004	2005	2004-2003	2005-2004	2005-2003
25-39	69.7%	69.3%	62.7%	-0.4%	-6.6%	-7.0%	72.0%	68.5%	64.7%	-3.6%	-3.7%	-7.3%
40-49	74.2%	71.7%	68.8%	-2.4%	-2.9%	-5.4%	76.6%	75.3%	72.7%	-1.3%	-2.6%	-3.8%
50-59	88.3%	90.7%	81.7%	2.4%	-9.0%	-6.6%	93.4%	83.3%	88.9%	-10.1%	5.7%	-4.4%
60-69	103.7%	98.1%	102.5%	-5.5%	4.4%	-1.1%	104.6%	95.2%	114.0%	-9.4%	18.8%	9.4%
70+	101.7%	92.6%	120.3%	-9.1%	27.7%	18.6%	103.6%	90.3%	120.5%	-13.3%	30.2%	16.9%
Total	86.7%	83.6%	84.1%	-3.2%	0.5%	-2.6%	89.3%	82.0%	89.1%	-7.3%	7.2%	-0.2%