

# **Report of the Individual Life Insurance Experience Committee**

## **Mortality under Standard Individually Underwritten Life Insurance Between 2002 and 2004 Policy Anniversaries**

### **Introduction**

This study is the latest in continuing reports on inter-company mortality experience. The previous report discussed experience over the 2000-01 study period and also examined experience in the five-year period from 1996-2001. Due to data limitations in the 2001-2002 study, results from that study period will not be published. In addition, the actual to expected ratios in the 2000-01 study are materially overstated as problems with certain companies data were recently identified as part of the data validation process implemented for the experience of this study period. As a result, the 2000-01 study has been removed from the SOA website and it is recommended that data from that study not be used. Due to many new contributors in the 2002-2004 study period, comparisons to previous studies are also difficult. As such, experience prior to 2002 will not be discussed and direct comparisons of actual to expected ratios in preceding reports will not be made. Going forward, longer term averages and trends over time will be presented.

Thirty-five companies contributed data to the Society of Actuaries for the 2002-04 study period and 31 companies contributed to both observation years. This is considerably more companies than the number contributing in preceding years, increasing the face amount exposure to over \$7.4 trillion. The number of deaths is just over 200,000 in the select period and 495,000 in the ultimate period. The 31 common companies represent 96% of the total exposure.

For the first time, contributors to the Intercompany Study were asked to provide information related to their preferred risk class structure. Further details on this data are described in the Risk Class Rank 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 inforce under non-forfeiture provisions are also excluded. Due to the higher volume and higher mortality and less stringent underwriting in the lower face amount bands, the definition of standard may not be consistent among the contributing companies.

The ratios of actual to expected mortality are based on the 2001 Valuation Basic Tables (2001 VBT) which have composite and smoker distinct versions and were based on experience from contributors to the SOA for the 1990-95 study period. The application of the composite or smoker distinct tables in the expected calculations relies on the smoking habit information provided in the individual company submissions. Composite tables apply to policies with unknown smoking habits. The data indicated that many companies currently code all policies issued prior to smoker distinct underwriting as smokers. Therefore, all policies with issue dates prior to 1980 are assumed to be of unknown smoking habit. Inaccuracies may still exist for certain companies, particularly for policies issued in the 1980s. 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 are also available in the Excel pivot format. There are two sets of pivot tables reflecting both the aggregate data and preferred only data. These files share a webpage with this report.

### **Select Period Results Based On 2001 VBT (Appendix A)**

Overall, mortality experience in the 25-year select period for the 2002-04 study was 88% of the 2001 VBT by policy and 71% by face amount. 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 58% of the exposure by policy, but only 13% 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 categories.

The actual to expected ratio for females is slightly higher than for males at 73% (by amount) compared to 71% for males.

By issue age, actual to expected ratios are lowest between ages 25 and 70 at 66% - 75% (by amount). Ratios are much higher (between 85% and 102%) at the younger ages. Mortality at issue ages 70-79 and 80+ is slightly higher at 81% and 73% by amount, respectively.

Mortality ratios are very low in the first duration (60% by amount), but increase in duration 2 and remain relatively flat between durations 2 and 20, except for a sharp increase at duration 3 corresponding with the end of the contestability period. The ratios are 70%, 78%, 73%, 70%, 71%, 72% for durations 2, 3, 4-5, 6-10, 11-15, and 16-20 respectively. The ratio then increases to 80% in durations 21-25.

Mortality ratios by amount steadily decrease with increasing policy size, starting at 107% for policy amounts between \$1 and \$9,999 and dropping to 63% for policies with face amounts of \$500,000 to \$2,499,999. The general decreasing trend is assumed to be attributed to increased underwriting at higher face amounts. Although there are only 213 deaths at face amounts of \$2,500,000 and above, mortality increased in that segment to 68%. Since the ratio also increased on a policy count basis, results are not explainable by just a few large claims and may be a sign of anti-selection at face amounts \$2,500,000 and above.

Non-smoker mortality is 68% of the non-smoker 2001 VBT by amount compared to 85% for smokers using the smoker 2001 VBT. This suggests that non-smoker mortality is improving significantly more than smoker mortality. The ratio for policies with unknown smoking habits is 85% of the composite VBT.

Mortality is lower in the later study year, dropping from 73% in the 2002-2003 observation year to 70% in the 2003-2004 observation year. The overall mortality ratios are the same for the 31 companies contributing in both observation years suggesting the decrease is not due to a change in the mix of companies.

### **Ultimate Period Results Based On 2001 VBT (Appendix B)**

Overall, ultimate experience (durations 26+) was 89% of the 2001 VBT by face amount. This ratio dropped from 91% to 88% between the 2002-03 and 2003-04 observation years and is the same for the common companies.

Results differ significantly for males and females. Female ultimate mortality is 100% by amount, while male mortality is 87%. Mortality for males is highest between attained ages 30 and 49 at 121-144%. Mortality for females decreases by attained age from 121% at attained ages 25-29

down to 78% at attained ages 50-59. It then increases by attained age hitting 108% at attained ages 90+.

Interestingly, mortality decreases by increasing face amount in the ultimate durations (as it did in the select period) suggesting some impact of underwriting may persist beyond the 25-year select period.

### **Results By Risk Class Rank Based On 2001 VBT (Appendix C, Appendix D)**

For the first time, contributors to the 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 starting with "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. Additionally companies were asked to provide the total number of preferred classes in their preferred structure. Overall, 32 of the 35 companies contributed data with a preferred structure with at least some data with preferred structure information.

The many different preferred class structures provided were aggregated over all companies into one combined structure with three preferred non-smoker classes (or risk class ranks (RCR)) and two preferred smoker classes. In this report, non-smoker assumes non-tobacco and smokers refer to tobacco users. For non-smokers, results in RCR Band 1 are the aggregate results of companies' best preferred class. Results in RCR Band 3 are the results of companies' residual standard class. Lastly, results for RCR Band 2 are the results for policies that fit into neither Band 1 nor Band 3. For smokers, results are included for RCR Band 1 and RCR Band 3. Results for RCR Band 2 were immaterial as most companies have only a two-class preferred class structure. It should be noted that companies with a preferred class structure for non-smokers, but one class for smokers have only risk class rank data included for non-smokers.

Only data for issue ages greater than or equal to 25, durations up to 15 and face amounts of \$100,000 up to \$2,500,000 were used in the analysis of preferred mortality. This block has over \$3 trillion of exposure and just over 13,000 deaths.

Overall, mortality experience for this block of preferred business was 71% by policy and 67% by amount.

For the non-smoker classes, mortality increases by risk class rank from 54% by amount for best preferred classes, to 64% for classes in the middle ranks, and to 77% for the residual standard group.

For the smoker classes, mortality is 74% by amount for best preferred classes and 96% of that table for the residual group.

As seen in the aggregate data, within each of the risk class ranks, mortality generally decreases with increasing face amount. Differences by risk class rank band persist for the 15 durations included in the study. The drilldowns by RCR band, duration, and face band also follow the same patterns, but individual cell results should be viewed with caution as many of the cells particularly in the higher face amount bands have very few deaths.

The Individual Life Insurance Experience Committee of the Society of Actuaries wishes to thank the following companies that contributed to the 2002-2004 study:

AAA Life Insurance	Massachusetts Mutual Life
AIG's American General Life	Metropolitan Life
Allstate	Mutual of Omaha
Allstate Life of New York	New York Life
American Family Life	North American Co-Life/Health (NACOLAH)
Ameriprise	Northwestern Mutual
AmerUs Life	Ohio National
Columbus Life Insurance	Pacific Life Insurance
Empire General	Principal Financial Group
Farm Bureau Life Insurance	Protective Life
Fidelity Investments	Protective Life & Annuity
Genworth Financial	Prudential
Government Personnel	State Farm
Hartford Life	Thrivent Financial
Horace Mann Insurance	Transamerica Occidental
ING	USAA Life
Jackson National Life	West Coast
Lincoln Benefit Life	

We acknowledge the effort of the members of the Individual Life Insurance Committee:

Mary Bahna-Nolan	Paul Langevin
Rick Bergstrom	Jess Mast
Sharon Brody	Mel McFall
Barry Edenbaum	Susan Miner
Jill Garofalo	Tony Phipps
Dieter Gaubatz	Tom Rhodes
Anna Hart	Mark Rosa
Edwin Hightower	Lynn Ruezinsky
Edward Hui	Jeff Schwartz
Douglas Ingle	Ed Wright

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## Appendix A—Select Period Results

	Actual Deaths by Policy	Ratio by Policy*	Ratio by Amount*	Exposure by Policy	% Exposure by Policy	Exposure by Amount (in millions)	% Exposure by Amount	% Expected by Amount
<b>Overall</b>	<b>205,106</b>	<b>88%</b>	<b>71%</b>	<b>54,619,966</b>	<b>100.0%</b>	<b>\$7,251,092</b>	<b>100.0%</b>	<b>100.0%</b>
<b>Issue Age</b>								
<b>0</b>	861	88%	83%	2,816,226	5.2%	\$87,455	1.2%	0.1%
<b>1-4</b>	868	93%	85%	2,660,771	4.9%	\$94,236	1.3%	0.2%
<b>5-9</b>	953	108%	96%	1,937,019	3.5%	\$71,129	1.0%	0.2%
<b>10-17</b>	2,221	116%	102%	2,872,337	5.3%	\$107,053	1.5%	0.4%
<b>18-24</b>	4,260	107%	90%	4,516,353	8.3%	\$270,491	3.7%	1.0%
<b>25-29</b>	5,873	87%	74%	6,012,954	11.0%	\$678,715	9.4%	2.9%
<b>30-34</b>	9,192	80%	69%	7,574,995	13.9%	\$1,272,546	17.5%	6.4%
<b>35-39</b>	12,880	80%	66%	7,293,402	13.4%	\$1,437,202	19.8%	9.8%
<b>40-49</b>	36,536	81%	66%	10,539,575	19.3%	\$2,039,513	28.1%	25.1%
<b>50-59</b>	55,665	87%	72%	5,656,405	10.4%	\$893,170	12.3%	25.8%
<b>60-69</b>	57,466	92%	75%	2,310,319	4.2%	\$240,262	3.3%	18.6%
<b>70-79</b>	17,057	100%	81%	407,672	0.7%	\$52,508	0.7%	7.9%
<b>80+</b>	1,274	95%	73%	21,938	0.0%	\$6,812	0.1%	1.7%
<b>Gender</b>								
<b>Female</b>	85,815	89%	73%	24,717,955	45.3%	\$2,353,862	32.5%	26.9%
<b>Male</b>	119,291	88%	71%	29,902,011	54.7%	\$4,897,230	67.5%	73.1%
<b>Duration</b>								
<b>1</b>	2,029	85%	60%	3,800,712	7.0%	\$1,046,815	14.4%	3.8%
<b>2</b>	2,931	96%	70%	3,561,666	6.5%	\$902,910	12.5%	4.5%
<b>3</b>	3,415	103%	78%	3,115,121	5.7%	\$706,379	9.7%	4.5%
<b>4-5</b>	8,940	95%	73%	6,444,262	11.8%	\$1,411,620	19.5%	12.2%
<b>6-10</b>	28,708	91%	70%	11,815,504	21.6%	\$1,635,792	22.6%	23.9%
<b>11-15</b>	49,377	84%	71%	11,303,165	20.7%	\$912,838	12.6%	24.1%
<b>16-20</b>	65,222	83%	72%	9,749,633	17.8%	\$522,771	7.2%	21.6%
<b>21-25</b>	44,484	98%	80%	4,829,904	8.8%	\$111,965	1.5%	5.5%
<b>Face Amount Bands</b>								
<b>1-9,999</b>	55,878	107%	107%	3,360,297	6.2%	\$16,745	0.2%	1.4%
<b>10,000- 24,999</b>	47,380	95%	94%	9,254,949	16.9%	\$120,122	1.7%	3.5%
<b>25,000- 49,999</b>	30,933	88%	88%	8,209,576	15.0%	\$230,181	3.2%	5.7%
<b>50,000- 99,999</b>	32,676	79%	79%	10,828,159	19.8%	\$600,930	8.3%	13.1%
<b>100,000- 249,999</b>	27,868	74%	73%	14,418,312	26.4%	\$1,793,760	24.7%	26.1%
<b>250,000- 499,999</b>	6,272	66%	65%	5,065,013	9.3%	\$1,453,879	20.1%	15.6%
<b>500,000- 999,999</b>	2,618	63%	63%	2,315,623	4.2%	\$1,286,642	17.7%	13.1%
<b>1,000,000 - 2,499,999</b>	1,268	62%	63%	1,063,392	1.9%	\$1,274,547	17.6%	13.9%
<b>2,500,000 +</b>	213	72%	68%	104,643	0.2%	\$474,286	6.5%	7.6%
<b>Smoker Status</b>								
<b>Non- Smoker</b>	114,245	80%	68%	40,901,029	74.9%	\$6,513,238	89.8%	80.9%
<b>Smoker</b>	52,859	97%	85%	7,202,742	13.2%	\$582,335	8.0%	15.7%
<b>Unknown*</b>	38,002	105%	85%	6,516,195	11.9%	\$155,519	2.1%	3.4%
<b>Observation Year</b>								
<b>2002 - 2003</b>	100,632	90%	73%	26,585,028	48.7%	\$3,334,100	46.0%	46.2%
<b>2003 - 2004</b>	104,474	87%	70%	28,034,938	51.3%	\$3,916,992	54.0%	53.8%

\*Expected Basis is 2001 VBT, smoker distinct versions (unknown smoker status uses composite tables)

## Appendix B-Ultimate Period Results

	Actual Deaths by Policy	Ratio by Policy*	Ratio by Amount*	Exposure by Policy	% Exposure by Policy	Exposure by Amount (in millions)	% Exposure by Amount	% Expected by Amount
Overall	494,738	96%	89%	20,397,357	100%	\$123,074	100%	100%
<b>Observation Year</b>								
2002-2003	246,938	96%	91%	10,180,819	50%	\$59,581	48%	48%
2003-2004	247,800	95%	88%	10,216,538	50%	\$63,493	52%	52%
<b>Gender</b>								
Female	178,857	103%	100%	8,273,099	41%	\$30,407	25%	16%
Male	315,881	92%	87%	12,124,257	59%	\$92,667	75%	84%
<b>MALE Only Ultimate Period Data</b>								
<b>Attained Age</b>								
25-29	236	102%	95%	230,545	2%	\$1,733	2%	0%
30-34	429	136%	144%	329,356	3%	\$1,989	2%	0%
35-39	714	156%	141%	407,272	3%	\$2,041	2%	0%
40-49	4,250	135%	121%	1,387,782	11%	\$9,238	10%	1%
50-59	14,948	101%	91%	2,717,868	22%	\$25,196	27%	6%
60-69	35,391	89%	81%	2,773,929	23%	\$24,687	27%	16%
70-79	90,870	97%	88%	2,518,701	21%	\$18,485	20%	31%
80-89	129,101	91%	87%	1,513,868	13%	\$8,311	9%	35%
90+	39,942	82%	89%	244,937	2%	\$987	1%	9%
<b>Face Amount Bands</b>								
1-9,999	251,243	94%	95%	8,298,929	68%	\$28,044	30%	37%
10,000-24,999	53,710	87%	87%	3,234,239	27%	\$38,477	42%	33%
25,000-49,999	7,049	82%	82%	408,251	3%	\$11,580	13%	11%
50,000-99,999	2,761	79%	78%	131,237	1%	\$7,335	8%	9%
100,000+	1,118	77%	73%	51,602	0%	\$7,231	8%	10%
<b>FEMALE Only Ultimate Period Data</b>								
<b>Attained Age</b>								
25-29	121	125%	121%	203,053	3%	\$1,342	4%	0%
30-34	192	112%	106%	279,307	3%	\$1,380	5%	0%
35-39	341	113%	102%	344,756	4%	\$1,321	4%	0%
40-49	1,930	112%	111%	1,076,702	13%	\$4,740	16%	2%
50-59	6,002	81%	78%	1,711,887	21%	\$8,168	27%	8%
60-69	12,632	91%	88%	1,365,407	17%	\$5,623	19%	13%
70-79	46,495	105%	100%	1,771,544	21%	\$4,814	16%	28%
80-89	80,998	105%	106%	1,301,673	16%	\$2,635	9%	36%
90+	30,146	102%	108%	218,771	3%	\$384	1%	12%
<b>Face Amount Bands</b>								
1-9,999	171,348	103%	102%	7,373,964	89%	\$17,376	57%	66%
10,000-24,999	6,071	91%	92%	808,406	10%	\$9,180	30%	18%
25,000-49,999	923	97%	97%	65,833	1%	\$1,828	6%	6%
50,000-99,999	349	94%	93%	17,592	0%	\$969	3%	5%
100,000+	166	104%	107%	7,304	0%	\$1,054	4%	6%

\*Expected Basis is 2001 VBT, smoker distinct versions (unknown smoker status uses composite tables)

## Appendix C- RCR Reports (Issue Ages 25+, Duration <= 15, Face Amt 100K up to 2.5M, Risk Ind = 1)

	Actual Deaths by Policy	Ratio by Policy*	Ratio by Amount*	Exposure by Policy	% Exposure by Policy	Exposure by Amount (in millions)	% Exposure by Amount	% Expected by Amount
<b>Overall</b>	<b>13,228</b>	<b>71%</b>	<b>67%</b>	<b>11,331,381</b>		<b>\$3,267,727</b>		
<b>Issue Age</b>								
25-29	459	69%	67%	1,319,485	11.6%	\$283,547	8.7%	2.6%
30-34	929	71%	66%	2,137,822	18.9%	\$594,455	18.2%	6.4%
35-39	1,312	69%	64%	2,307,998	20.4%	\$717,702	22.0%	10.3%
40-49	3,561	68%	63%	3,469,676	30.6%	\$1,072,375	32.8%	28.5%
50-59	3,597	70%	66%	1,631,189	14.4%	\$470,461	14.4%	27.2%
60-69	2,257	77%	70%	400,459	3.5%	\$107,081	3.3%	15.3%
70-79	929	81%	79%	59,306	0.5%	\$19,804	0.6%	7.7%
80+	184	78%	82%	5,448	0.0%	\$2,302	0.1%	1.9%
<b>Gender</b>								
Female	3,753	68%	67%	4,549,736	40.2%	\$1,055,071	32.3%	26.1%
Male	9,475	72%	67%	6,781,645	59.8%	\$2,212,656	67.7%	73.9%
<b>Duration</b>								
1	755	63%	57%	1,875,597	16.6%	\$657,563	20.1%	8.1%
2	1,098	72%	65%	1,709,965	15.1%	\$557,138	17.0%	9.7%
3	1,294	80%	75%	1,435,288	12.7%	\$428,357	13.1%	9.7%
4-5	3,317	74%	70%	2,925,707	25.8%	\$887,906	27.2%	27.0%
6-10	4,175	70%	66%	2,425,413	21.4%	\$573,068	17.5%	30.3%
11-15	2,589	67%	64%	959,410	8.5%	\$163,695	5.0%	15.2%
<b>Face Amount Bands</b>								
100,000- 249,999	8,557	75%	75%	6,096,733	53.8%	\$773,961	23.7%	28.1%
250,000- 499,999	2,781	66%	66%	3,080,984	27.2%	\$870,144	26.6%	24.0%
500,000- 999,999	1,229	62%	61%	1,461,221	12.9%	\$799,790	24.5%	22.0%
1,000,000 - 2,499,999	661	62%	63%	692,444	6.1%	\$823,832	25.2%	25.8%
<b>RCR Nonsmoker</b>								
1 - Best Rank	4,326	60%	54%	5,359,910	47.3%	\$1,556,640	47.6%	39.0%
2 - Middle Rank	1,661	68%	64%	1,961,230	17.3%	\$655,798	20.1%	15.4%
3 - Residual Standard	5,502	80%	77%	3,328,494	29.4%	\$910,410	27.9%	37.1%
<b>RCR Smoker</b>								
1 - Best Rank	896	77%	74%	413,858	3.7%	\$84,699	2.6%	4.6%
3 - Residual Standard	809	95%	96%	256,811	2.3%	\$57,495	1.8%	3.8%
<b>Observation Year</b>								
2002 - 2003	5,954	73%	69%	4,975,012	43.9%	\$1,392,780	42.6%	42.7%
2003 - 2004	7,274	69%	65%	6,356,369	56.1%	\$1,874,947	57.4%	57.3%

\*Expected Basis is 2001 VBT, smoker distinct versions (unknown smoker status uses composite tables)

## Appendix D: Detailed RCR Reports

ILEC 2002-2004 Study - Nonsmokers							
Risk Class Rank Indicator = 1; Issue Ages >= 25; Durations up to 15; Face Amount 100K up to 2.5M							
Durations Ratios by Amount^							
Ranking RCR Bands	1	2	3	4-5	6-10	11-15	Grand Total
1 Best Rank	35.5%	53.6%	57.4%	58.2%	53.2%	55.6%	53.9%
2 Middle Ranks	54.9%	54.4%	69.5%	69.9%	53.7%	*	63.9%
3 Residual Standard Rank	85.9%	87.4%	96.5%	77.1%	75.8%	68.4%	77.5%
* Cell has 35 or fewer deaths							

ILEC 2002-2004 Study - Nonsmokers							
Risk Class Rank Indicator = 1; Issue Ages >= 25; Durations up to 15; Face Amount 100K up to 2.5M							
Durations Number of Deaths							
Ranking RCR Bands	1	2	3	4-5	6-10	11-15	Grand Total
1 Best Rank	177	342	384	997	1507	919	4326
2 Middle Ranks	200	243	296	741	177	4	1661
3 Residual Standard Rank	271	376	434	1120	1954	1347	5502

ILEC 2002-2004 Study - Smokers							
Risk Class Rank Indicator = 1; Issue Ages >= 25; Durations up to 15; Face Amount 100K up to 2.5M							
Durations Ratios by Amount^							
Ranking RCR Bands	1	2	3	4-5	6-10	11-15	Grand Total
1 Best Rank	54.5%	67.7%	100.5%	84.3%	68.1%	68.3%	74.1%
3 Residual Standard Rank	72.2%	103.3%	113.6%	107.2%	92.8%	80.6%	95.9%

Number of Deaths ILEC 2002-2004 Study - Smokers							
Risk Class Rank Indicator = 1; Issue Ages >= 25; Durations up to 15; Face Amount 100K up to 2.5M							
Durations Number of Deaths							
Ranking RCR Bands	1	2	3	4-5	6-10	11-15	Grand Total
1 Best Rank	50	67	88	214	278	199	896
3 Residual Standard Rank	55	67	84	224	259	120	809

^Expected Basis is 2001 VBT, smoker distinct versions (unknown smoker status uses composite tables)



ILEC 2002-2004 Study – Nonsmokers – By Face Amount Bands								
Risk Class Rank Indicator = 1; Issue Ages >= 25; Durations up to 15; Face Amount 100K up to 2.5M								
		Durations Ratios by Amount^						
Face Amount Bands	Ranking RCR Bands	1	2	3	4-5	6-10	11-15	Grand Total
100,000-249,999	1 Best Rank	53.3%	69.8%	71.2%	66.5%	64.5%	61.7%	64.7%
100,000-249,999	2 Middle Ranks	64.9%	61.0%	83.3%	79.3%	61.1%	*	73.0%
100,000-249,999	3 Residual Stand Rank	78.2%	92.3%	96.0%	92.4%	79.7%	74.1%	81.7%
250,000-499,999	1 Best Rank	45.3%	58.0%	61.6%	56.0%	53.1%	59.0%	55.4%
250,000-499,999	2 Middle Ranks	62.7%	64.9%	60.7%	58.0%	68.5%	*	61.4%
250,000-499,999	3 Residual Stand Rank	89.7%	89.8%	103.5%	76.5%	73.7%	68.0%	77.8%
500,000-999,999	1 Best Rank	*	54.9%	*	57.6%	41.8%	48.0%	47.2%
500,000-999,999	2 Middle Ranks	*	55.0%	82.8%	68.0%	*	*	65.5%
500,000-999,999	3 Residual Stand Rank	*	90.1%	83.6%	61.1%	72.5%	78.0%	72.4%
1,000,000-2,499,999	1 Best Rank	*	*	*	54.1%	48.0%	*	46.7%
1,000,000-2,499,999	2 Middle Ranks	*	*	*	73.4%	*	*	58.3%
1,000,000-2,499,999	3 Residual Stand Rank	*	*	*	79.3%	76.3%	*	76.7%
* Cell has 35 or fewer deaths								

ILEC 2002-2004 Study – Nonsmokers – By Face Amount Bands								
Risk Class Rank Indicator = 1; Issue Ages >= 25; Durations up to 15; Face Amount 100K up to 2.5M								
Face Amount Bands	Ranking RCR Bands	Durations						Grand Total
		Number of Deaths						
		1	2	3	4-5	6-10	11-15	
100,000-249,999	1 Best Rank	82	183	224	560	1027	703	2779
100,000-249,999	2 Middle Ranks	100	120	172	435	104	0	931
100,000-249,999	3 Residual Stand Rank	131	204	241	676	1247	1047	3546
250,000-499,999	1 Best Rank	59	89	101	250	327	157	983
250,000-499,999	2 Middle Ranks	58	70	58	148	49	0	383
250,000-499,999	3 Residual Stand Rank	79	96	121	246	409	183	1134
500,000-999,999	1 Best Rank	26	50	33	128	101	40	378
500,000-999,999	2 Middle Ranks	29	35	48	102	19	2	235
500,000-999,999	3 Residual Stand Rank	33	50	46	113	187	87	516
1,000,000-2,499,999	1 Best Rank	10	20	26	59	52	19	186
1,000,000-2,499,999	2 Middle Ranks	13	18	18	56	5	2	112
1,000,000-2,499,999	3 Residual Stand Rank	28	26	26	85	111	30	306

^\*Expected Basis is 2001 VBT, smoker distinct versions (unknown smoker status uses composite tables)

ILEC 2002-2004 Study – Smokers – By Face Amount Bands								
Risk Class Rank Indicator = 1; Issue Ages >= 25; Durations up to 15; Face Amount 100K up to 2.5M								
Face Amount Bands	Ranking RCR Bands	Durations						Grand Total
		Ratios by Amount						
		1	2	3	4-5	6-10	11-15	
100,000-249,999	1 Best Rank	81.1%	94.4%	95.2%	88.3%	79.5%	64.7%	79.4%
100,000-249,999	3 Residual Stand Rank	104.8%	84.3%	107.9%	102.2%	85.8%	86.2%	93.0%
250,000-499,999	1 Best Rank	*	*	*	62.1%	58.0%	*	64.6%
250,000-499,999	3 Residual Stand Rank	*	*	*	105.5%	89.2%	*	95.2%
500,000-999,999	1 Best Rank	*	*	*	*	*	*	62.6%
500,000-999,999	3 Residual Stand Rank	*	*	*	*	*	*	88.7%
1,000,000-2,499,999	1 Best Rank	*	*	*	*	*	*	82.8%
1,000,000-2,499,999	3 Residual Stand Rank	*	*	*	*	*	*	109.0%
* Cell has 35 or fewer deaths								

ILEC 2002-2004 Study – Smokers – By Face Amount Bands								
Risk Class Rank Indicator = 1; Issue Ages >= 25; Durations up to 15; Face Amount 100K up to 2.5M								
		Durations Number of Deaths						
Face Amount Bands	Ranking RCR Bands	1	2	3	4-5	6-10	11-15	Grand Total
100,000-249,999	1 Best Rank	37	51	63	158	230	174	713
100,000-249,999	3 Residual Stand Rank	42	42	57	153	173	96	563
250,000-499,999	1 Best Rank	8	10	17	32	31	18	116
250,000-499,999	3 Residual Stand Rank	9	17	16	46	51	19	158
500,000-999,999	1 Best Rank	5	4	3	15	11	4	42
500,000-999,999	3 Residual Stand Rank	3	4	6	16	27	1	57
1,000,000-2,499,999	1 Best Rank	0	2	5	9	6	3	25
1,000,000-2,499,999	3 Residual Stand Rank	1	4	5	9	8	4	31

\*Expected Basis is 2001 VBT, smoker distinct versions (unknown smoker status uses composite tables)