

Supplement to the RP-2000 Mortality Table Report

December 2003

This is a supplement to the RP-2000 Mortality Table Report released in July 2000 and is available from the SOA at http://www.soa.org/research/rp00_mortalitytables.pdf.

Since the publication of the report, actuaries have become increasingly interested in using mortality rates that reflect adjustments for collar or (benefit) amount. The report contains factors for collar or amount adjustments, but does not provide the adjusted mortality rate tables incorporating collar and amount effects. While the methodology for producing adjusted mortality tables is implicit within the report, generating the adjusted mortality rate tables will require resources at each firm to produce an adjusted table; differences in rounding and other conventions had the potential to produce differing tables. In addition, various groups have suggested that adjusted tables may be appropriate for use in a regulatory context.

The Retirement Systems Practice Advancement Committee (RSPAC) expressed concern about the lack of comparability and additional resources that would be required should users apply the report's adjustment factors differently and thus derive different values for collar- or amount-adjusted rates. Therefore, the SOA has authorized the publication of five additional standard tables reflecting collar and amount adjustments to set standard tables for the community.

This supplement contains the following tables:

- Table S-1: Combined Healthy with Blue Collar Adjustment
- Table S-2: Combined Healthy with White Collar Adjustment
- Table S-3: Healthy Annuitant with Small (Benefit) Amount Adjustment
- Table S-4: Healthy Annuitant with Medium (Benefit) Amount Adjustment
- Table S-5: Healthy Annuitant with Large (Benefit) Amount Adjustment

The supplement also contains notes for each table describing their derivation. Users of these tables are strongly encouraged to refer to the report, and particularly Chapter 5, Relative Mortality, to understand the derivation of the collar- and amount-adjustment factors. Users are cautioned that the factors for collar and amount adjustments were used as published in the report; they were not smoothed in any way. The two paragraphs below are excerpts from the report that note some anomalies in the collar- and amount-adjustment factors:

The mortality ratios for white and blue collar can both be less than 1.000 for two reasons: First, there is also a mixed collar category for which results are not shown. Second, the rates are graduated so the relationships at one age can be affected by relationships at other ages. This is especially due to the "heavy" graduation of the amount adjustment factors. Since the exposures are small at the youngest and oldest ages, the graduated amount adjustment factors are influenced by trends at the middle ages where the exposures are much larger. The exposures at the very youngest and oldest ages may be too small to provide statistically significant results.

The mortality ratio for small, medium and large amounts can all be less than 1.000 because of the graduation as explained above and also because the mortality rates

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for small, medium and large amounts are only based on data for plans that provided amounts. As shown in Table 2-11, the plans that provided amounts accounted for only 40 percent of exposures for healthy annuitants. The overall amount-adjusted mortality rates for those plans could be less than the amount-adjusted mortality rates for all healthy annuitants.

Please examine the rates and any resulting annuity values very closely to understand the relationship between the unadjusted blended rates and the collar-adjusted rates, and the unadjusted healthy annuitant rates and the amount-adjusted rates. This supplement contains tables that compare annuity values at different ages to aid your analysis. We also encourage you to review Figures 5-1 through 5-6, inclusive, of the RP-2000 report, which graphically illustrate the relative mortality values by collar and amount for employees and retirees.

Please note that the publication of these additional tables does not reflect an opinion by the RSPAC as to a preference for collar- or amount-adjusted tables. The publication of this supplement is done as a service to the SOA membership.

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Notes to Tables

For all tables, new q_x values were produced using results published by the SOA in the July 2000 RP-2000 Mortality Table Report. All table numbers reference that report. Please refer to that report to better understand the methodology described below.

Table S-1 - Combined Healthy with Blue Collar Adjustment

Blended rates (employee & healthy annuitant), adjusted for blue collar experience

Please note: Blue collar adjustment factors only exist for ages 30 - 95, inclusive. At ages less than 30, the table equals the employee table. At ages greater than 95, the table equals the healthy annuitant table.

Prior to age 30, q_x values equal the Employee q_x value from Tables 4-5 and 4-6 for males and females, respectively, with no adjustment

For ages 30 -49, q_x values equal the Employee q_x value from Tables 4-5 and 4-6, adjusted by the Blue Collar Employee Adjustment factors from Table 5-5

For ages 50 - 70, blended q_x values were created a similar methodology as was used to create the mixed collar blended q_x values in Tables 4-5 and 4-6:

$$\text{Blended } q_x = \text{Employee } q_x * \text{Blue Collar Employee Adjustment}(x) * (1 - \text{Accumulated Percent Retired}(x)) + \text{Healthy Annuitant } q_x * \text{Blue Collar Healthy Annuitant Adjustment}(x) * \text{Accumulated Percent Retired}(x)$$

Employee q_x and Healthy Annuitant q_x values were taken from Tables 4-5 and 4-6

Accumulated Percent Retired values were taken from Table 4-4

Blue Collar Employee Adjustment factors were taken from Table 5-5

Blue Collar Healthy Annuitant Adjustment factors were taken from Tables 5-6 and 5-7 for males and females, respectively

For ages 71 - 95, q_x values equal the Healthy Annuitant q_x value from Tables 4-5 and 4-6, adjusted by the Blue Collar Healthy Annuitant Adjustment factors from Tables 5-6 and 5-7

Over age 95, q_x values equal the Healthy Annuitant q_x value from Tables 4-5 and 4-6, with no adjustment

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Notes to Tables

For all tables, new q_x values were produced using results published by the SOA in the July 2000 RP-2000 Mortality Table Report. All table numbers reference that report. Please refer to that report to better understand the methodology described below.

Table S-2 - Combined Healthy with White Collar Adjustment

Blended rates (employee & healthy annuitant), adjusted for white collar experience

Please note: White collar adjustment factors only exist for ages 30 - 95, inclusive. At ages less than 30, the table equals the employee table. At ages greater than 95, the table equals the healthy annuitant table.

Prior to age 30, q_x values equal the Employee q_x value from Tables 4-5 and 4-6 for males and females, respectively, with no adjustment

For ages 30 -49, q_x values equal the Employee q_x value from Tables 4-5 and 4-6, adjusted by the White Collar Employee Adjustment factors from Table 5-5.

For ages 50 - 70, blended q_x values were created a similar methodology as was used to create the no collar blended q_x values in Tables 4-5 and 4-6:

$$\text{Blended } q_x = \text{Employee } q_x * \text{White Collar Employee Adjustment}(x) * (1 - \text{Accumulated Percent Retired}(x)) + \text{Healthy Annuitant } q_x * \text{White Collar Healthy Annuitant Adjustment}(x) * \text{Accumulated Percent Retired}(x)$$

Employee q_x and Healthy Annuitant q_x values were taken from Tables 4-5 and 4-6

Accumulated Percent Retired values were taken from Table 4-4

White Collar Employee Adjustment factors were taken from Table 5-5

White Collar Healthy Annuitant Adjustment factors were taken from Tables 5-6 and 5-7 for males and females, respectively

For ages 71 - 95, q_x values equal the Healthy Annuitant q_x value from Tables 4-5 and 4-6, adjusted by the White Collar Healthy Annuitant Adjustment factors from Tables 5-6 and 5-7

Over age 95, q_x values equal the Healthy Annuitant q_x value from Tables 4-5 and 4-6, with no adjustment

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Notes to Tables

For all tables, new q_x values were produced using results published by the SOA in the July 2000 RP-2000 Mortality Table Report. All table numbers reference that report. Please refer to that report to better understand the methodology described below.

Table S-3 - Healthy Annuitant with Small (Benefit) Amount Adjustment

Healthy annuitant tables, adjusted for small benefit amount experience

Please note: Small amount adjustment factors only exist for ages 50 - 95, inclusive. At other ages, the table equals the healthy annuitant table.

For ages 50 - 95, q_x values equal the Healthy Annuitant q_x value from Tables 4-5 and 4-6 for males and females, respectively, adjusted by the Small Amount Healthy Annuitant Adjustment factors from Tables 5-6 and 5-7 for males and females, respectively

Over age 95, q_x values equal the Healthy Annuitant q_x value from Tables 4-5 and 4-6, with no adjustment

Table S-4 - Healthy Annuitant with Medium (Benefit) Amount Adjustment

Healthy annuitant tables, adjusted for medium benefit amount experience

Please note: Medium amount adjustment factors only exist for ages 50 - 95, inclusive. At other ages, the table equals the healthy annuitant table.

For ages 50 - 95, q_x values equal the Healthy Annuitant q_x value from Tables 4-5 and 4-6 for males and females, respectively, adjusted by the Medium Amount Healthy Annuitant Adjustment factors from Tables 5-6 and 5-7 for males and females, respectively

Over age 95, q_x values equal the Healthy Annuitant q_x value from Tables 4-5 and 4-6, with no adjustment

Table S-5 - Healthy Annuitant with Large (Benefit) Amount Adjustment

Healthy annuitant tables, adjusted for large benefit amount experience

Please note: Large amount adjustment factors only exist for ages 50 - 95, inclusive. At other ages, the table equals the healthy annuitant table.

For ages 50 - 95, q_x values equal the Healthy Annuitant q_x from Tables 4-5 and 4-6 for males and females, respectively, adjusted by the Large Amount Healthy Annuitant Adjustment factors from Tables 5-6 and 5-7 for males and females, respectively

Over age 95, q_x values equal the Healthy Annuitant q_x value from Tables 4-5 and 4-6, with no adjustment

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Table S-1		
Combined Healthy with Blue Collar Adjustment		
Age	Male Combined Healthy Blue Collar	Female Combined Healthy Blue Collar
1	0.000637	0.000571
2	0.000430	0.000372
3	0.000357	0.000278
4	0.000278	0.000208
5	0.000255	0.000188
6	0.000244	0.000176
7	0.000234	0.000165
8	0.000216	0.000147
9	0.000209	0.000140
10	0.000212	0.000141
11	0.000219	0.000143
12	0.000228	0.000148
13	0.000240	0.000155
14	0.000254	0.000162
15	0.000269	0.000170
16	0.000284	0.000177
17	0.000301	0.000184
18	0.000316	0.000188
19	0.000331	0.000190
20	0.000345	0.000191
21	0.000357	0.000192
22	0.000366	0.000194
23	0.000373	0.000197
24	0.000376	0.000201
25	0.000376	0.000207
26	0.000378	0.000214
27	0.000382	0.000223
28	0.000393	0.000235
29	0.000412	0.000248
30	0.000726	0.000293
31	0.000800	0.000328
32	0.000875	0.000367
33	0.000949	0.000413
34	0.001019	0.000463
35	0.001087	0.000519
36	0.001150	0.000579
37	0.001206	0.000644
38	0.001262	0.000715
39	0.001315	0.000793
40	0.001371	0.000878

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Table S-1		
Combined Healthy with Blue Collar Adjustment		
Age	Male Combined Healthy Blue Collar	Female Combined Healthy Blue Collar
41	0.001434	0.000971
42	0.001508	0.001073
43	0.001591	0.001176
44	0.001686	0.001282
45	0.001793	0.001387
46	0.001894	0.001492
47	0.002006	0.001600
48	0.002128	0.001712
49	0.002264	0.001832
50	0.002412	0.001963
51	0.002744	0.002098
52	0.002995	0.002247
53	0.003296	0.002408
54	0.003643	0.002589
55	0.004196	0.002795
56	0.004967	0.003059
57	0.005629	0.003390
58	0.006398	0.003798
59	0.007258	0.004309
60	0.008270	0.004949
61	0.009428	0.005794
62	0.010773	0.006781
63	0.012310	0.007979
64	0.013811	0.009135
65	0.015539	0.010398
66	0.017554	0.011838
67	0.019542	0.013217
68	0.021681	0.014716
69	0.023944	0.016387
70	0.026758	0.018634
71	0.029337	0.020734
72	0.032192	0.023062
73	0.035401	0.025566
74	0.039053	0.028182
75	0.043131	0.030888
76	0.047693	0.033784
77	0.052675	0.036902
78	0.058117	0.040415
79	0.064067	0.044370
80	0.070547	0.048953

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Table S-1		
Combined Healthy with Blue Collar Adjustment		
Age	Male Combined Healthy Blue Collar	Female Combined Healthy Blue Collar
81	0.078164	0.054233
82	0.086361	0.060235
83	0.095191	0.067006
84	0.104668	0.074661
85	0.115077	0.083100
86	0.126358	0.092336
87	0.138628	0.102406
88	0.151945	0.113312
89	0.166254	0.124754
90	0.181757	0.136686
91	0.196373	0.148653
92	0.211623	0.160455
93	0.227353	0.171967
94	0.243172	0.182616
95	0.259466	0.192564
96	0.283905	0.205379
97	0.299852	0.215240
98	0.315296	0.223947
99	0.330207	0.231387
100	0.344556	0.237467
101	0.358628	0.244834
102	0.371685	0.254498
103	0.383040	0.266044
104	0.392003	0.279055
105	0.397886	0.293116
106	0.400000	0.307811
107	0.400000	0.322725
108	0.400000	0.337441
109	0.400000	0.351544
110	0.400000	0.364617
111	0.400000	0.376246
112	0.400000	0.386015
113	0.400000	0.393507
114	0.400000	0.398308
115	0.400000	0.400000
116	0.400000	0.400000
117	0.400000	0.400000
118	0.400000	0.400000
119	0.400000	0.400000
120	1.000000	1.000000

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Table S-2		
Combined Healthy with White Collar Adjustment		
Age	Male Combined Healthy White Collar	Female Combined Healthy White Collar
1	0.000637	0.000571
2	0.000430	0.000372
3	0.000357	0.000278
4	0.000278	0.000208
5	0.000255	0.000188
6	0.000244	0.000176
7	0.000234	0.000165
8	0.000216	0.000147
9	0.000209	0.000140
10	0.000212	0.000141
11	0.000219	0.000143
12	0.000228	0.000148
13	0.000240	0.000155
14	0.000254	0.000162
15	0.000269	0.000170
16	0.000284	0.000177
17	0.000301	0.000184
18	0.000316	0.000188
19	0.000331	0.000190
20	0.000345	0.000191
21	0.000357	0.000192
22	0.000366	0.000194
23	0.000373	0.000197
24	0.000376	0.000201
25	0.000376	0.000207
26	0.000378	0.000214
27	0.000382	0.000223
28	0.000393	0.000235
29	0.000412	0.000248
30	0.000353	0.000284
31	0.000388	0.000325
32	0.000431	0.000363
33	0.000481	0.000401
34	0.000534	0.000435
35	0.000591	0.000466
36	0.000649	0.000497
37	0.000707	0.000527
38	0.000766	0.000562
39	0.000827	0.000599
40	0.000890	0.000645

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Table S-2		
Combined Healthy with White Collar Adjustment		
Age	Male Combined Healthy White Collar	Female Combined Healthy White Collar
41	0.000958	0.000699
42	0.001035	0.000763
43	0.001124	0.000837
44	0.001225	0.000922
45	0.001342	0.001016
46	0.001458	0.001119
47	0.001583	0.001229
48	0.001711	0.001344
49	0.001843	0.001463
50	0.001978	0.001589
51	0.002303	0.001767
52	0.002498	0.001924
53	0.002715	0.002099
54	0.002948	0.002303
55	0.003302	0.002586
56	0.003749	0.002951
57	0.004090	0.003316
58	0.004488	0.003719
59	0.004967	0.004167
60	0.005583	0.004677
61	0.006353	0.005299
62	0.007314	0.005988
63	0.008477	0.006814
64	0.009690	0.007670
65	0.011061	0.008651
66	0.012581	0.009790
67	0.014037	0.010945
68	0.015570	0.012165
69	0.017195	0.013507
70	0.019275	0.015185
71	0.021400	0.016870
72	0.023871	0.018784
73	0.026710	0.020903
74	0.029968	0.023218
75	0.033634	0.025717
76	0.037783	0.028489
77	0.042356	0.031547
78	0.047484	0.034963
79	0.053177	0.038767
80	0.059412	0.043080

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Table S-2		
Combined Healthy with White Collar Adjustment		
Age	Male Combined Healthy White Collar	Female Combined Healthy White Collar
81	0.066782	0.047936
82	0.074932	0.053367
83	0.083976	0.059506
84	0.093792	0.066389
85	0.104665	0.074193
86	0.116780	0.082835
87	0.130193	0.092484
88	0.144868	0.103011
89	0.161095	0.114269
90	0.178273	0.126151
91	0.194975	0.138531
92	0.212056	0.150998
93	0.229456	0.163445
94	0.246431	0.175487
95	0.263211	0.186923
96	0.283905	0.205379
97	0.299852	0.215240
98	0.315296	0.223947
99	0.330207	0.231387
100	0.344556	0.237467
101	0.358628	0.244834
102	0.371685	0.254498
103	0.383040	0.266044
104	0.392003	0.279055
105	0.397886	0.293116
106	0.400000	0.307811
107	0.400000	0.322725
108	0.400000	0.337441
109	0.400000	0.351544
110	0.400000	0.364617
111	0.400000	0.376246
112	0.400000	0.386015
113	0.400000	0.393507
114	0.400000	0.398308
115	0.400000	0.400000
116	0.400000	0.400000
117	0.400000	0.400000
118	0.400000	0.400000
119	0.400000	0.400000
120	1.000000	1.000000

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Table S-3		
Healthy Annuitant with Small (Benefit) Amount		
Age	Male Healthy Annuitant Small Amount	Female Healthy Annuitant Small Amount
50	0.007700	0.004491
51	0.007590	0.004770
52	0.007591	0.005035
53	0.007708	0.005292
54	0.007942	0.005547
55	0.008302	0.005819
56	0.008861	0.006119
57	0.009556	0.006455
58	0.010398	0.006840
59	0.011370	0.007279
60	0.012474	0.007769
61	0.013691	0.008317
62	0.014991	0.008935
63	0.016361	0.009632
64	0.017788	0.010447
65	0.019283	0.011390
66	0.020845	0.012474
67	0.022534	0.013719
68	0.024388	0.015162
69	0.026438	0.016790
70	0.028779	0.018617
71	0.031450	0.020660
72	0.034483	0.022835
73	0.037862	0.025106
74	0.041595	0.027469
75	0.045703	0.029905
76	0.050223	0.032514
77	0.055115	0.035333
78	0.060411	0.038497
79	0.066268	0.042087
80	0.072607	0.046200
81	0.080038	0.050882
82	0.088132	0.056238
83	0.096985	0.062381
84	0.106564	0.069447
85	0.116849	0.077291
86	0.128077	0.086117
87	0.140124	0.095855
88	0.152849	0.106337
89	0.166254	0.117367
90	0.180290	0.129048

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Table S-3		
Healthy Annuitant with Small (Benefit) Amount		
Age	Male Healthy Annuitant Small Amount	Female Healthy Annuitant Small Amount
91	0.192977	0.140844
92	0.205775	0.153047
93	0.218240	0.165150
94	0.230387	0.177498
95	0.242079	0.189841
96	0.283905	0.205379
97	0.299852	0.215240
98	0.315296	0.223947
99	0.330207	0.231387
100	0.344556	0.237467
101	0.358628	0.244834
102	0.371685	0.254498
103	0.383040	0.266044
104	0.392003	0.279055
105	0.397886	0.293116
106	0.400000	0.307811
107	0.400000	0.322725
108	0.400000	0.337441
109	0.400000	0.351544
110	0.400000	0.364617
111	0.400000	0.376246
112	0.400000	0.386015
113	0.400000	0.393507
114	0.400000	0.398308
115	0.400000	0.400000
116	0.400000	0.400000
117	0.400000	0.400000
118	0.400000	0.400000
119	0.400000	0.400000
120	1.000000	1.000000

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Table S-4		
Healthy Annuitant with Medium (Benefit) Amount		
Age	Male Healthy Annuitant Medium Amount	Female Healthy Annuitant Medium Amount
50	0.004449	0.002403
51	0.004715	0.002793
52	0.005034	0.003168
53	0.005413	0.003529
54	0.005843	0.003876
55	0.006330	0.004216
56	0.006932	0.004569
57	0.007623	0.004946
58	0.008426	0.005369
59	0.009341	0.005852
60	0.010368	0.006392
61	0.011476	0.006995
62	0.012661	0.007651
63	0.013930	0.008356
64	0.015255	0.009113
65	0.016666	0.009929
66	0.018169	0.010820
67	0.019801	0.011825
68	0.021603	0.012959
69	0.023643	0.014244
70	0.025981	0.015687
71	0.028649	0.017316
72	0.031673	0.019136
73	0.034975	0.021178
74	0.038510	0.023472
75	0.042298	0.026082
76	0.046259	0.029108
77	0.050518	0.032536
78	0.055094	0.036467
79	0.060070	0.040883
80	0.065591	0.045833
81	0.072257	0.051288
82	0.079601	0.057195
83	0.087834	0.063631
84	0.096885	0.070490
85	0.106770	0.077756
86	0.117640	0.085339
87	0.129513	0.093158
88	0.142458	0.101294
89	0.156435	0.109503
90	0.171303	0.117724

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Table S-4		
Healthy Annuitant with Medium (Benefit) Amount		
Age	Male Healthy Annuitant Medium Amount	Female Healthy Annuitant Medium Amount
91	0.185585	0.125805
92	0.200360	0.133975
93	0.215436	0.141800
94	0.230638	0.149164
95	0.245824	0.156385
96	0.283905	0.205379
97	0.299852	0.215240
98	0.315296	0.223947
99	0.330207	0.231387
100	0.344556	0.237467
101	0.358628	0.244834
102	0.371685	0.254498
103	0.383040	0.266044
104	0.392003	0.279055
105	0.397886	0.293116
106	0.400000	0.307811
107	0.400000	0.322725
108	0.400000	0.337441
109	0.400000	0.351544
110	0.400000	0.364617
111	0.400000	0.376246
112	0.400000	0.386015
113	0.400000	0.393507
114	0.400000	0.398308
115	0.400000	0.400000
116	0.400000	0.400000
117	0.400000	0.400000
118	0.400000	0.400000
119	0.400000	0.400000
120	1.000000	1.000000

RP-2000 Supplemental Tables

December 2003

Age	Male Healthy Annuitant Large Amount	Female Healthy Annuitant Large Amount
50	0.003181	0.002246
51	0.003389	0.002112
52	0.003623	0.002128
53	0.003880	0.002275
54	0.004145	0.002530
55	0.004423	0.002871
56	0.004752	0.003270
57	0.005104	0.003714
58	0.005502	0.004193
59	0.005973	0.004701
60	0.006549	0.005227
61	0.007228	0.005784
62	0.008031	0.006374
63	0.008936	0.007011
64	0.009924	0.007704
65	0.010977	0.008467
66	0.012043	0.009324
67	0.013119	0.010295
68	0.014232	0.011402
69	0.015380	0.012668
70	0.016699	0.014114
71	0.018206	0.015755
72	0.020052	0.017627
73	0.022243	0.019754
74	0.024849	0.022123
75	0.027884	0.024789
76	0.031458	0.027746
77	0.035508	0.031001
78	0.040083	0.034587
79	0.045241	0.038518
80	0.050979	0.042851
81	0.057705	0.047632
82	0.065194	0.052804
83	0.073389	0.058506
84	0.082318	0.064651
85	0.092039	0.071405
86	0.102535	0.078602
87	0.113732	0.086414
88	0.125893	0.094749
89	0.138794	0.103664
90	0.152595	0.113115

RP-2000 Supplemental Tables

December 2003

Table S-5		
Healthy Annuitant with Large (Benefit) Amount		
Age	Male Healthy Annuitant Large Amount	Female Healthy Annuitant Large Amount
91	0.165808	0.123058
92	0.179782	0.133660
93	0.194407	0.144698
94	0.209830	0.156476
95	0.225762	0.168639
96	0.283905	0.205379
97	0.299852	0.215240
98	0.315296	0.223947
99	0.330207	0.231387
100	0.344556	0.237467
101	0.358628	0.244834
102	0.371685	0.254498
103	0.383040	0.266044
104	0.392003	0.279055
105	0.397886	0.293116
106	0.400000	0.307811
107	0.400000	0.322725
108	0.400000	0.337441
109	0.400000	0.351544
110	0.400000	0.364617
111	0.400000	0.376246
112	0.400000	0.386015
113	0.400000	0.393507
114	0.400000	0.398308
115	0.400000	0.400000
116	0.400000	0.400000
117	0.400000	0.400000
118	0.400000	0.400000
119	0.400000	0.400000
120	1.000000	1.000000

RP-2000 Supplemental Tables
December 2003

Table S-6			
Comparison of RP-2000 Combined Healthy Rates			
(No Collar, White Collar and Blue Collar)			
5% Interest, Monthly Annuity Due			
Deferred Annuity to 65 for Ages Less Than 65			
Immediate Annuity for Ages Greater Than 65			
Age	Combined Healthy, Unadjusted	Combined Healthy with White Collar Adjustment	Combined Healthy with Blue Collar Adjustment
Males			
30	1.8201	1.8973	1.7165
40	2.9866	3.1082	2.8253
50	4.9376	5.1302	4.6842
60	8.3475	8.6377	7.9705
65	11.1405	11.4461	10.7467
70	9.4777	9.7703	9.1371
80	6.0918	6.2670	5.9548
90	3.3758	3.4273	3.4206
Females			
30	2.0270	2.0753	1.9790
40	3.3168	3.3956	3.2401
50	5.4623	5.5869	5.3490
60	9.1490	9.3445	8.9667
65	12.0794	12.2962	11.8488
70	10.5153	10.7274	10.2712
80	7.2303	7.3815	7.0515
90	4.3051	4.4043	4.2615
Percent Change in Monthly Annuity Due			
Age	From Unadjusted to White Collar	From Unadjusted to Blue Collar	
Males			
30	4.2%	-5.7%	
40	4.1%	-5.4%	
50	3.9%	-5.1%	
60	3.5%	-4.5%	
65	2.7%	-3.5%	
70	3.1%	-3.6%	
80	2.9%	-2.2%	
90	1.5%	1.3%	
Females			
30	2.4%	-2.4%	
40	2.4%	-2.3%	
50	2.3%	-2.1%	
60	2.1%	-2.0%	
65	1.8%	-1.9%	
70	2.0%	-2.3%	
80	2.1%	-2.5%	
90	2.3%	-1.0%	

RP-2000 Supplemental Tables
December 2003

Table S-7				
Comparison of RP-2000 Healthy Annuitant Rates				
(No Adjustment, Small Amount, Medium Amount, Large Amount)				
5% Interest, Monthly Annuity Due				
Deferred Annuity to 65 for Ages Less Than 65, Immediate Annuity for Ages Greater Than 65				
Age	Healthy Annuitant, Unadjusted	Healthy Annuitant with Small Amount Adjustment	Healthy Annuitant with Medium Amount Adjustment	Healthy Annuitant with Large Amount Adjustment
Males				
50	4.7846	4.2965	4.5848	5.2344
60	8.2845	7.6377	7.9643	8.9104
65	11.1203	10.5164	10.8377	11.8462
70	9.4777	8.9979	9.2895	10.2616
80	6.0918	5.9162	6.1839	6.7099
90	3.3758	3.4831	3.5473	3.7859
Females				
50	5.3822	5.1717	5.4228	5.6179
60	9.0875	8.9256	9.2012	9.4304
65	12.0578	11.9196	12.2062	12.4298
70	10.5153	10.4090	10.6714	10.8697
80	7.2303	7.2524	7.3507	7.5464
90	4.3051	4.3673	4.6719	4.6679
Percent Change in Monthly Annuity Due				
Age	From Unadjusted to Small Amount	From Unadjusted to Medium Amount	From Unadjusted to Large Amount	
Males				
50	-10.2%	-4.2%	9.4%	
60	-7.8%	-3.9%	7.6%	
65	-5.4%	-2.5%	6.5%	
70	-5.1%	-2.0%	8.3%	
80	-2.9%	1.5%	10.1%	
90	3.2%	5.1%	12.1%	
Females				
50	-3.9%	0.8%	4.4%	
60	-1.8%	1.3%	3.8%	
65	-1.1%	1.2%	3.1%	
70	-1.0%	1.5%	3.4%	
80	0.3%	1.7%	4.4%	
90	1.4%	8.5%	8.4%	