

Part III – Administrative, Miscellaneous, and Procedural

Updated static mortality tables for the years 2009 through 2013.

Notice 2008-85

This notice provides the static mortality tables to be used under § 430(h)(3)(A) of the Internal Revenue Code (Code) and § 303(h)(3)(A) of the Employee Retirement Income Security Act of 1974 (ERISA). These tables apply for purposes of calculating the funding target and other items for valuation dates occurring during calendar years 2009 through 2013.

This notice also includes a modified “unisex” version of the mortality tables for use in determining minimum present value under § 417(e)(3) of the Code and § 205(g)(3) of ERISA for distributions with annuity starting dates that occur during stability periods beginning in calendar years 2009 through 2013.

BACKGROUND

Section 412 of the Code provides minimum funding requirements that generally apply for defined benefit plans. The Pension Protection Act of 2006, Public Law 109-280 (PPA), makes extensive changes to those minimum funding requirements that generally apply for plan years beginning on or after January 1, 2008. Section 430, which was added by PPA, specifies the minimum funding requirements that apply to defined benefit plans that are not multiemployer plans pursuant to § 412. Section 430(a) defines the minimum required contribution for a defined benefit plan that is not a multiemployer plan by reference to the plan’s funding target for the plan year.

Section 430(h)(3) provides rules regarding the mortality tables to be used under § 430. Under § 430(h)(3)(A), except as provided in § 430(h)(3)(C) or (D), the Secretary is to prescribe by regulation mortality tables to be used in determining any present value or making any computation under § 430. Those tables are to be based on the actual experience of pension plans and projected trends in such experience.

Section 430(h)(3)(C) provides that, upon request by a plan sponsor and approval by the Secretary, substitute mortality tables that meet the applicable requirements may be used in lieu of the standard mortality tables provided under § 430(h)(3)(A). Section 430(h)(3)(D) provides for the use of separate mortality tables with respect to certain individuals who are entitled to benefits on account of disability. These separate mortality tables are permitted to be used with respect to disabled individuals in lieu of the generally applicable mortality tables provided pursuant to § 430(h)(3)(A) or the substitute mortality tables under § 430(h)(3)(C).

Determination of Minimum Funding Requirements under § 430

On July 31, 2008, the IRS issued final regulations under § 430(h)(3), at 73 FR 44632 [TD 9419]. These regulations provide for mortality tables, based on the tables contained in the RP-2000 Mortality Tables Report¹, adjusted for mortality improvement using Projection Scale AA as recommended in that report. Section 1.430(h)(3)-1 generally requires the use of separate tables for nonannuitant and annuitant periods for large plans (those with over 500 participants as of the valuation date). Sponsors of small plans (those with 500 or fewer participants as of the valuation date) are permitted to use a combined table that applies the same mortality rates to both annuitants and nonannuitants.

Section 1.430(h)(3)-1 of the final regulations outlines the methodology that the IRS will use to establish mortality tables as provided under § 430(h)(3)(A). The mortality tables set forth in § 1.430(h)(3)-1 are based on expected mortality as of 2000 and reflect the impact of expected improvements in mortality. The regulations permit plan sponsors to apply the projection of mortality improvement in either of two ways: through use of static tables that are updated annually to reflect expected improvements in mortality, or through use of generational tables. The regulations include static mortality tables for use in actuarial valuations as of valuation dates occurring in 2008 and provide that the mortality tables for valuation dates occurring in future years are to be provided in the Internal Revenue Bulletin.

Application of These Tables for Other Purposes under the Funding Rules

Section 1.412(l)(7)-1(a), issued February 2, 2007, provides that for plan years beginning on or after January 1, 2008, the mortality tables described in § 430(h)(3)(A) are to be used to determine current liability under § 412(l)(7) of the Code for nondisabled participants. This is relevant for plans for which the effective date of § 430 is delayed, pursuant to sections 104 through 106 of PPA.

Section 1.431(c)(6)-1 of the final regulations, issued July 31, 2008, provides that the same mortality assumptions that apply for purposes of § 430(h)(3)(A) and § 1.430(h)(3)-1(a)(2) are used to determine a multiemployer plan's current liability for purposes of applying the full-funding rules of § 431(c)(6). For this purpose, a multiemployer plan is permitted to apply either the annually-adjusted static mortality tables or the generational mortality tables.

¹ The RP-2000 Mortality Tables Report was released by the Society of Actuaries in July, 2000. Society of Actuaries, RP-2000 Mortality Tables Report, at <http://www.soa.org/ccm/content/research-publications/experience-studies-tools/the-rp-2000-mortality-tables/>.

Application of Mortality Tables for Minimum Present Value Requirements under § 417(e)(3)

Section 417(e)(3) generally provides that the present value of certain benefits under a qualified pension plan (including single-sum distributions) cannot be less than the present value of the accrued benefit using applicable interest rates and the applicable mortality table. Under § 1.417(e)-1(d)(1), these rules must also be used to compute the present value of a plan benefit for purposes of determining whether consent for a distribution is required under § 411(a)(11)(A).

For plan years beginning on or after January 1, 2008, § 417(e)(3)(B) defines the term “applicable mortality table” as the mortality table specified for the plan year under § 430(h)(3)(A) (without regard to § 430(h)(3)(C) or (D)), modified as appropriate by the Secretary.

Rev. Rul. 2007-67, 2007-48 I.R.B. 1047, provides that, except as otherwise stated in future guidance, the applicable mortality table under § 417(e)(3) for 2008 is based on a fixed blend of 50% of the static male combined mortality rates and 50% of the static female combined mortality rates promulgated under § 1.430(h)(3)-1(c)(3) of the proposed regulations (which have since been issued as final regulations). The applicable mortality table for purposes of § 417(e)(3) is not a generational table. Rev. Rul. 2007-67 also provides that the applicable mortality table for a given year applies to distributions with annuity starting dates that occur during stability periods that begin during that calendar year. Rev. Rul. 2007-67 further states that the § 417(e)(3) applicable mortality table for each subsequent year will be published in future guidance and, except as provided in that future guidance, will be determined from the § 430(h)(3)(A) tables on the same basis as the applicable mortality table for 2008. This Notice sets forth the § 417(e)(3) applicable mortality table for distributions with annuity starting dates that occur during stability periods that begin during calendar years 2009 through 2013.

STATIC MORTALITY TABLES FOR YEARS 2009 THROUGH 2013

The static mortality tables that apply under § 430(h)(3)(A) for valuation dates occurring in years 2009 through 2013 are set forth in the appendix to this Notice. The mortality rates in these tables have been developed from the base rates, projection factors, and weighting factors set forth in § 1.430(h)(3)-1, using the blending techniques described in the preamble to those regulations.

The static mortality tables that apply under § 417(e)(3) for distributions with annuity starting dates occurring during stability periods beginning in years 2009 through 2013 are set forth in the appendix to this Notice in the column labeled “Unisex.” These tables were derived from the tables used for § 430(h)(3)(A) following the procedures set forth in Rev. Rul. 2007-67.

Drafting Information

The principal author of this notice is Carolyn E. Zimmerman of the Employee Plans, Tax Exempt and Government Entities Division. For further information regarding this notice, please contact Ms. Zimmerman at retirementplanquestions@irs.gov.

APPENDIX

Mortality tables for 2009

Valuation dates occurring during 2009
Distributions subject to § 417(e)(3) with annuity starting dates during
stability periods beginning in 2009

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2009 Non-Annuitant Table	2009 Annuitant Table	2009 Optional Combined Table for Small Plans	2009 Non-Annuitant Table	2009 Annuitant Table	2009 Optional Combined Table for Small Plans	2009 Table for Distributions Subject to § 417(e)(3)
1	0.000392	0.000392	0.000392	0.000352	0.000352	0.000352	0.000372
2	0.000265	0.000265	0.000265	0.000229	0.000229	0.000229	0.000247
3	0.000220	0.000220	0.000220	0.000171	0.000171	0.000171	0.000196
4	0.000171	0.000171	0.000171	0.000128	0.000128	0.000128	0.000150
5	0.000157	0.000157	0.000157	0.000116	0.000116	0.000116	0.000137
6	0.000150	0.000150	0.000150	0.000108	0.000108	0.000108	0.000129
7	0.000144	0.000144	0.000144	0.000102	0.000102	0.000102	0.000123
8	0.000133	0.000133	0.000133	0.000091	0.000091	0.000091	0.000112
9	0.000129	0.000129	0.000129	0.000086	0.000086	0.000086	0.000108
10	0.000131	0.000131	0.000131	0.000087	0.000087	0.000087	0.000109
11	0.000135	0.000135	0.000135	0.000088	0.000088	0.000088	0.000112
12	0.000140	0.000140	0.000140	0.000091	0.000091	0.000091	0.000116
13	0.000148	0.000148	0.000148	0.000095	0.000095	0.000095	0.000122
14	0.000160	0.000160	0.000160	0.000105	0.000105	0.000105	0.000133
15	0.000170	0.000170	0.000170	0.000115	0.000115	0.000115	0.000143
16	0.000179	0.000179	0.000179	0.000123	0.000123	0.000123	0.000151
17	0.000190	0.000190	0.000190	0.000131	0.000131	0.000131	0.000161
18	0.000199	0.000199	0.000199	0.000134	0.000134	0.000134	0.000167
19	0.000209	0.000209	0.000209	0.000132	0.000132	0.000132	0.000171
20	0.000218	0.000218	0.000218	0.000130	0.000130	0.000130	0.000174
21	0.000231	0.000231	0.000231	0.000127	0.000127	0.000127	0.000179
22	0.000243	0.000243	0.000243	0.000129	0.000129	0.000129	0.000186
23	0.000260	0.000260	0.000260	0.000134	0.000134	0.000134	0.000197
24	0.000275	0.000275	0.000275	0.000140	0.000140	0.000140	0.000208
25	0.000295	0.000295	0.000295	0.000148	0.000148	0.000148	0.000222

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2009 Non-Annuitant Table	2009 Annuitant Table	2009 Optional Combined Table for Small Plans	2009 Non-Annuitant Table	2009 Annuitant Table	2009 Optional Combined Table for Small Plans	2009 Table for Distributions Subject to § 417(e)(3)
26	0.000327	0.000327	0.000327	0.000160	0.000160	0.000160	0.000244
27	0.000339	0.000339	0.000339	0.000167	0.000167	0.000167	0.000253
28	0.000348	0.000348	0.000348	0.000176	0.000176	0.000176	0.000262
29	0.000365	0.000365	0.000365	0.000186	0.000186	0.000186	0.000276
30	0.000394	0.000394	0.000394	0.000207	0.000207	0.000207	0.000301
31	0.000442	0.000442	0.000442	0.000253	0.000253	0.000253	0.000348
32	0.000498	0.000498	0.000498	0.000289	0.000289	0.000289	0.000394
33	0.000559	0.000559	0.000559	0.000317	0.000317	0.000317	0.000438
34	0.000622	0.000622	0.000622	0.000342	0.000342	0.000342	0.000482
35	0.000685	0.000685	0.000685	0.000364	0.000364	0.000364	0.000525
36	0.000746	0.000746	0.000746	0.000385	0.000385	0.000385	0.000566
37	0.000802	0.000802	0.000802	0.000405	0.000405	0.000405	0.000604
38	0.000834	0.000834	0.000834	0.000426	0.000426	0.000426	0.000630
39	0.000863	0.000863	0.000863	0.000451	0.000451	0.000451	0.000657
40	0.000890	0.000890	0.000890	0.000491	0.000491	0.000491	0.000691
41	0.000919	0.000947	0.000919	0.000539	0.000539	0.000539	0.000729
42	0.000955	0.001060	0.000956	0.000593	0.000593	0.000593	0.000775
43	0.000996	0.001230	0.000999	0.000652	0.000652	0.000652	0.000826
44	0.001046	0.001456	0.001053	0.000716	0.000716	0.000716	0.000885
45	0.001102	0.001739	0.001116	0.000763	0.000767	0.000763	0.000940
46	0.001152	0.002078	0.001177	0.000810	0.000869	0.000811	0.000994
47	0.001206	0.002474	0.001246	0.000857	0.001021	0.000861	0.001054
48	0.001263	0.002926	0.001323	0.000927	0.001224	0.000937	0.001130
49	0.001322	0.003435	0.001408	0.001002	0.001478	0.001022	0.001215
50	0.001383	0.003998	0.001501	0.001111	0.001782	0.001145	0.001323
51	0.001444	0.004067	0.001575	0.001232	0.001900	0.001271	0.001423
52	0.001507	0.004085	0.001684	0.001402	0.002112	0.001455	0.001570
53	0.001614	0.004142	0.001855	0.001598	0.002386	0.001673	0.001764
54	0.001732	0.004196	0.002049	0.001824	0.002716	0.001930	0.001990
55	0.001911	0.004344	0.002414	0.002083	0.003105	0.002277	0.002346
56	0.002138	0.004580	0.002913	0.002385	0.003565	0.002722	0.002818
57	0.002404	0.004898	0.003347	0.002669	0.004047	0.003138	0.003243
58	0.002714	0.005327	0.003864	0.002918	0.004542	0.003548	0.003706
59	0.002997	0.005782	0.004386	0.003191	0.005105	0.004026	0.004206
60	0.003312	0.006332	0.005013	0.003485	0.005722	0.004593	0.004803
61	0.003745	0.007068	0.005851	0.003799	0.006386	0.005301	0.005576
62	0.004118	0.007785	0.006723	0.004128	0.007096	0.006086	0.006405
63	0.004614	0.008739	0.007874	0.004468	0.007853	0.007014	0.007444
64	0.005010	0.009670	0.008903	0.004814	0.008671	0.007916	0.008410
65	0.005399	0.010709	0.010089	0.005161	0.009565	0.008927	0.009508
66	0.005916	0.012059	0.011642	0.005503	0.010533	0.010089	0.010866
67	0.006281	0.013351	0.013005	0.005837	0.011574	0.011211	0.012108
68	0.006466	0.014525	0.014234	0.006158	0.012710	0.012397	0.013316

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2009 Non-Annuitant Table	2009 Annuitant Table	2009 Optional Combined Table for Small Plans	2009 Non-Annuitant Table	2009 Annuitant Table	2009 Optional Combined Table for Small Plans	2009 Table for Distributions Subject to § 417(e)(3)
69	0.006780	0.016045	0.015780	0.006463	0.013985	0.013704	0.014742
70	0.006903	0.017436	0.017162	0.006750	0.015452	0.015157	0.016160
71	0.007774	0.019292	0.019022	0.007373	0.016873	0.016583	0.017803
72	0.009516	0.021421	0.021173	0.008619	0.018768	0.018493	0.019833
73	0.012129	0.023860	0.023646	0.010487	0.020528	0.020290	0.021968
74	0.015613	0.026618	0.026446	0.012978	0.022752	0.022554	0.024500
75	0.019968	0.030193	0.030060	0.016092	0.024716	0.024569	0.027315
76	0.025194	0.033653	0.033565	0.019829	0.027232	0.027131	0.030348
77	0.031291	0.038045	0.037992	0.024188	0.030479	0.030415	0.034204
78	0.038259	0.042968	0.042944	0.029170	0.033598	0.033568	0.038256
79	0.046098	0.048531	0.048525	0.034775	0.037094	0.037086	0.042806
80	0.054807	0.054807	0.054807	0.041002	0.041002	0.041002	0.047905
81	0.062339	0.062339	0.062339	0.045382	0.045382	0.045382	0.053861
82	0.070779	0.070779	0.070779	0.050310	0.050310	0.050310	0.060545
83	0.078898	0.078898	0.078898	0.055861	0.055861	0.055861	0.067380
84	0.089172	0.089172	0.089172	0.062127	0.062127	0.062127	0.075650
85	0.098983	0.098983	0.098983	0.070337	0.070337	0.070337	0.084660
86	0.109743	0.109743	0.109743	0.079719	0.079719	0.079719	0.094731
87	0.123554	0.123554	0.123554	0.090353	0.090353	0.090353	0.106954
88	0.138984	0.138984	0.138984	0.100638	0.100638	0.100638	0.119811
89	0.153594	0.153594	0.153594	0.113562	0.113562	0.113562	0.133578
90	0.172016	0.172016	0.172016	0.125502	0.125502	0.125502	0.148759
91	0.187360	0.187360	0.187360	0.137817	0.137817	0.137817	0.162589
92	0.206439	0.206439	0.206439	0.150220	0.150220	0.150220	0.178330
93	0.222695	0.222695	0.222695	0.165060	0.165060	0.165060	0.193878
94	0.238927	0.238927	0.238927	0.177036	0.177036	0.177036	0.207982
95	0.259058	0.259058	0.259058	0.188377	0.188377	0.188377	0.223718
96	0.274955	0.274955	0.274955	0.198905	0.198905	0.198905	0.236930
97	0.290399	0.290399	0.290399	0.211822	0.211822	0.211822	0.251111
98	0.310289	0.310289	0.310289	0.220391	0.220391	0.220391	0.265340
99	0.324963	0.324963	0.324963	0.227712	0.227712	0.227712	0.276338
100	0.339084	0.339084	0.339084	0.233696	0.233696	0.233696	0.286390
101	0.358628	0.358628	0.358628	0.244834	0.244834	0.244834	0.301731
102	0.371685	0.371685	0.371685	0.254498	0.254498	0.254498	0.313092
103	0.383040	0.383040	0.383040	0.266044	0.266044	0.266044	0.324542
104	0.392003	0.392003	0.392003	0.279055	0.279055	0.279055	0.335529
105	0.397886	0.397886	0.397886	0.293116	0.293116	0.293116	0.345501
106	0.400000	0.400000	0.400000	0.307811	0.307811	0.307811	0.353906
107	0.400000	0.400000	0.400000	0.322725	0.322725	0.322725	0.361363
108	0.400000	0.400000	0.400000	0.337441	0.337441	0.337441	0.368721
109	0.400000	0.400000	0.400000	0.351544	0.351544	0.351544	0.375772
110	0.400000	0.400000	0.400000	0.364617	0.364617	0.364617	0.382309
111	0.400000	0.400000	0.400000	0.376246	0.376246	0.376246	0.388123

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2009 Non-Annuitant Table	2009 Annuitant Table	2009 Optional Combined Table for Small Plans	2009 Non-Annuitant Table	2009 Annuitant Table	2009 Optional Combined Table for Small Plans	2009 Table for Distributions Subject to § 417(e)(3)
112	0.400000	0.400000	0.400000	0.386015	0.386015	0.386015	0.393008
113	0.400000	0.400000	0.400000	0.393507	0.393507	0.393507	0.396754
114	0.400000	0.400000	0.400000	0.398308	0.398308	0.398308	0.399154
115	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
116	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
117	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
118	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
119	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
120	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

Mortality tables for 2010

**Valuation dates occurring during 2010
Distributions subject to § 417(e)(3) with annuity starting dates during
stability periods beginning in 2010**

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2010 Non-Annuitant Table	2010 Annuitant Table	2010 Optional Combined Table for Small Plans	2010 Non-Annuitant Table	2010 Annuitant Table	2010 Optional Combined Table for Small Plans	2010 Table for Distributions Subject to § 417(e)(3)
1	0.000384	0.000384	0.000384	0.000345	0.000345	0.000345	0.000365
2	0.000259	0.000259	0.000259	0.000224	0.000224	0.000224	0.000242
3	0.000215	0.000215	0.000215	0.000168	0.000168	0.000168	0.000192
4	0.000168	0.000168	0.000168	0.000126	0.000126	0.000126	0.000147
5	0.000154	0.000154	0.000154	0.000113	0.000113	0.000113	0.000134
6	0.000147	0.000147	0.000147	0.000106	0.000106	0.000106	0.000127
7	0.000141	0.000141	0.000141	0.000100	0.000100	0.000100	0.000121
8	0.000130	0.000130	0.000130	0.000089	0.000089	0.000089	0.000110
9	0.000126	0.000126	0.000126	0.000084	0.000084	0.000084	0.000105
10	0.000128	0.000128	0.000128	0.000085	0.000085	0.000085	0.000107
11	0.000132	0.000132	0.000132	0.000086	0.000086	0.000086	0.000109
12	0.000138	0.000138	0.000138	0.000089	0.000089	0.000089	0.000114
13	0.000145	0.000145	0.000145	0.000094	0.000094	0.000094	0.000120
14	0.000157	0.000157	0.000157	0.000103	0.000103	0.000103	0.000130
15	0.000167	0.000167	0.000167	0.000114	0.000114	0.000114	0.000141
16	0.000176	0.000176	0.000176	0.000121	0.000121	0.000121	0.000149
17	0.000186	0.000186	0.000186	0.000129	0.000129	0.000129	0.000158
18	0.000196	0.000196	0.000196	0.000132	0.000132	0.000132	0.000164
19	0.000205	0.000205	0.000205	0.000130	0.000130	0.000130	0.000168

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2010 Non-Annuitant Table	2010 Annuitant Table	2010 Optional Combined Table for Small Plans	2010 Non-Annuitant Table	2010 Annuitant Table	2010 Optional Combined Table for Small Plans	2010 Table for Distributions Subject to § 417(e)(3)
20	0.000214	0.000214	0.000214	0.000128	0.000128	0.000128	0.000171
21	0.000227	0.000227	0.000227	0.000125	0.000125	0.000125	0.000176
22	0.000238	0.000238	0.000238	0.000126	0.000126	0.000126	0.000182
23	0.000256	0.000256	0.000256	0.000132	0.000132	0.000132	0.000194
24	0.000271	0.000271	0.000271	0.000138	0.000138	0.000138	0.000205
25	0.000292	0.000292	0.000292	0.000146	0.000146	0.000146	0.000219
26	0.000325	0.000325	0.000325	0.000158	0.000158	0.000158	0.000242
27	0.000337	0.000337	0.000337	0.000165	0.000165	0.000165	0.000251
28	0.000347	0.000347	0.000347	0.000174	0.000174	0.000174	0.000261
29	0.000363	0.000363	0.000363	0.000183	0.000183	0.000183	0.000273
30	0.000392	0.000392	0.000392	0.000205	0.000205	0.000205	0.000299
31	0.000440	0.000440	0.000440	0.000251	0.000251	0.000251	0.000346
32	0.000496	0.000496	0.000496	0.000286	0.000286	0.000286	0.000391
33	0.000557	0.000557	0.000557	0.000314	0.000314	0.000314	0.000436
34	0.000619	0.000619	0.000619	0.000338	0.000338	0.000338	0.000479
35	0.000682	0.000682	0.000682	0.000360	0.000360	0.000360	0.000521
36	0.000742	0.000742	0.000742	0.000380	0.000380	0.000380	0.000561
37	0.000798	0.000798	0.000798	0.000399	0.000399	0.000399	0.000599
38	0.000829	0.000829	0.000829	0.000420	0.000420	0.000420	0.000625
39	0.000857	0.000857	0.000857	0.000444	0.000444	0.000444	0.000651
40	0.000883	0.000883	0.000883	0.000484	0.000484	0.000484	0.000684
41	0.000911	0.000938	0.000911	0.000530	0.000530	0.000530	0.000721
42	0.000945	0.001049	0.000946	0.000584	0.000584	0.000584	0.000765
43	0.000985	0.001215	0.000988	0.000642	0.000642	0.000642	0.000815
44	0.001033	0.001436	0.001040	0.000705	0.000705	0.000705	0.000873
45	0.001087	0.001713	0.001101	0.000751	0.000755	0.000751	0.000926
46	0.001136	0.002045	0.001161	0.000797	0.000855	0.000798	0.000980
47	0.001188	0.002432	0.001227	0.000842	0.001004	0.000846	0.001037
48	0.001243	0.002875	0.001302	0.000911	0.001203	0.000921	0.001112
49	0.001300	0.003373	0.001384	0.000984	0.001452	0.001004	0.001194
50	0.001358	0.003926	0.001474	0.001092	0.001751	0.001125	0.001300
51	0.001416	0.003990	0.001544	0.001212	0.001869	0.001251	0.001398
52	0.001477	0.004003	0.001650	0.001383	0.002083	0.001435	0.001543
53	0.001582	0.004059	0.001818	0.001579	0.002358	0.001653	0.001736
54	0.001697	0.004112	0.002008	0.001805	0.002689	0.001910	0.001959
55	0.001875	0.004262	0.002368	0.002066	0.003080	0.002258	0.002313
56	0.002099	0.004497	0.002860	0.002371	0.003543	0.002706	0.002783
57	0.002363	0.004815	0.003290	0.002655	0.004027	0.003122	0.003206
58	0.002671	0.005241	0.003802	0.002903	0.004519	0.003530	0.003666
59	0.002949	0.005690	0.004316	0.003175	0.005079	0.004005	0.004161
60	0.003259	0.006230	0.004933	0.003468	0.005694	0.004571	0.004752
61	0.003688	0.006962	0.005763	0.003780	0.006354	0.005274	0.005519
62	0.004056	0.007668	0.006622	0.004108	0.007061	0.006056	0.006339

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2010 Non-Annuitant Table	2010 Annuitant Table	2010 Optional Combined Table for Small Plans	2010 Non-Annuitant Table	2010 Annuitant Table	2010 Optional Combined Table for Small Plans	2010 Table for Distributions Subject to § 417(e)(3)
63	0.004549	0.008617	0.007764	0.004446	0.007814	0.006979	0.007372
64	0.004940	0.009535	0.008779	0.004790	0.008628	0.007877	0.008328
65	0.005323	0.010559	0.009947	0.005135	0.009517	0.008882	0.009415
66	0.005839	0.011903	0.011491	0.005476	0.010481	0.010040	0.010766
67	0.006199	0.013177	0.012835	0.005808	0.011516	0.011155	0.011995
68	0.006375	0.014321	0.014034	0.006127	0.012646	0.012335	0.013185
69	0.006685	0.015820	0.015559	0.006431	0.013915	0.013636	0.014598
70	0.006800	0.017175	0.016905	0.006716	0.015374	0.015080	0.015993
71	0.007663	0.019003	0.018738	0.007334	0.016772	0.016484	0.017611
72	0.009389	0.021100	0.020856	0.008570	0.018655	0.018382	0.019619
73	0.011978	0.023502	0.023292	0.010424	0.020384	0.020148	0.021720
74	0.015430	0.026219	0.026051	0.012897	0.022592	0.022395	0.024223
75	0.019744	0.029771	0.029641	0.015988	0.024519	0.024374	0.027008
76	0.024921	0.033182	0.033096	0.019697	0.027014	0.026914	0.030005
77	0.030961	0.037551	0.037500	0.024024	0.030266	0.030202	0.033851
78	0.037864	0.042452	0.042428	0.028969	0.033363	0.033333	0.037881
79	0.045630	0.047997	0.047991	0.034532	0.036834	0.036826	0.042409
80	0.054259	0.054259	0.054259	0.040715	0.040715	0.040715	0.047487
81	0.061778	0.061778	0.061778	0.045064	0.045064	0.045064	0.053421
82	0.070213	0.070213	0.070213	0.049957	0.049957	0.049957	0.060085
83	0.078267	0.078267	0.078267	0.055470	0.055470	0.055470	0.066869
84	0.088548	0.088548	0.088548	0.061692	0.061692	0.061692	0.075120
85	0.098290	0.098290	0.098290	0.069915	0.069915	0.069915	0.084103
86	0.108975	0.108975	0.108975	0.079321	0.079321	0.079321	0.094148
87	0.122813	0.122813	0.122813	0.089992	0.089992	0.089992	0.106403
88	0.138289	0.138289	0.138289	0.100235	0.100235	0.100235	0.119262
89	0.152826	0.152826	0.152826	0.113221	0.113221	0.113221	0.133024
90	0.171327	0.171327	0.171327	0.125125	0.125125	0.125125	0.148226
91	0.186611	0.186611	0.186611	0.137404	0.137404	0.137404	0.162008
92	0.205819	0.205819	0.205819	0.149770	0.149770	0.149770	0.177795
93	0.222027	0.222027	0.222027	0.164730	0.164730	0.164730	0.193379
94	0.238210	0.238210	0.238210	0.176682	0.176682	0.176682	0.207446
95	0.258540	0.258540	0.258540	0.188000	0.188000	0.188000	0.223270
96	0.274405	0.274405	0.274405	0.198507	0.198507	0.198507	0.236456
97	0.289819	0.289819	0.289819	0.211610	0.211610	0.211610	0.250715
98	0.309979	0.309979	0.309979	0.220170	0.220170	0.220170	0.265075
99	0.324638	0.324638	0.324638	0.227485	0.227485	0.227485	0.276062
100	0.338745	0.338745	0.338745	0.233462	0.233462	0.233462	0.286104
101	0.358628	0.358628	0.358628	0.244834	0.244834	0.244834	0.301731
102	0.371685	0.371685	0.371685	0.254498	0.254498	0.254498	0.313092
103	0.383040	0.383040	0.383040	0.266044	0.266044	0.266044	0.324542
104	0.392003	0.392003	0.392003	0.279055	0.279055	0.279055	0.335529
105	0.397886	0.397886	0.397886	0.293116	0.293116	0.293116	0.345501

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2010 Non-Annuitant Table	2010 Annuitant Table	2010 Optional Combined Table for Small Plans	2010 Non-Annuitant Table	2010 Annuitant Table	2010 Optional Combined Table for Small Plans	2010 Table for Distributions Subject to § 417(e)(3)
106	0.400000	0.400000	0.400000	0.307811	0.307811	0.307811	0.353906
107	0.400000	0.400000	0.400000	0.322725	0.322725	0.322725	0.361363
108	0.400000	0.400000	0.400000	0.337441	0.337441	0.337441	0.368721
109	0.400000	0.400000	0.400000	0.351544	0.351544	0.351544	0.375772
110	0.400000	0.400000	0.400000	0.364617	0.364617	0.364617	0.382309
111	0.400000	0.400000	0.400000	0.376246	0.376246	0.376246	0.388123
112	0.400000	0.400000	0.400000	0.386015	0.386015	0.386015	0.393008
113	0.400000	0.400000	0.400000	0.393507	0.393507	0.393507	0.396754
114	0.400000	0.400000	0.400000	0.398308	0.398308	0.398308	0.399154
115	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
116	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
117	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
118	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
119	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
120	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

Mortality tables for 2011

**Valuation dates occurring during 2011
Distributions subject to § 417(e)(3) with annuity starting dates during
stability periods beginning in 2011**

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2011 Non-Annuitant Table	2011 Annuitant Table	2011 Optional Combined Table for Small Plans	2011 Non-Annuitant Table	2011 Annuitant Table	2011 Optional Combined Table for Small Plans	2011 Table for Distributions Subject to § 417(e)(3)
1	0.000377	0.000377	0.000377	0.000338	0.000338	0.000338	0.000358
2	0.000254	0.000254	0.000254	0.000220	0.000220	0.000220	0.000237
3	0.000211	0.000211	0.000211	0.000164	0.000164	0.000164	0.000188
4	0.000164	0.000164	0.000164	0.000123	0.000123	0.000123	0.000144
5	0.000151	0.000151	0.000151	0.000111	0.000111	0.000111	0.000131
6	0.000144	0.000144	0.000144	0.000104	0.000104	0.000104	0.000124
7	0.000138	0.000138	0.000138	0.000098	0.000098	0.000098	0.000118
8	0.000128	0.000128	0.000128	0.000087	0.000087	0.000087	0.000108
9	0.000124	0.000124	0.000124	0.000083	0.000083	0.000083	0.000104
10	0.000125	0.000125	0.000125	0.000083	0.000083	0.000083	0.000104
11	0.000130	0.000130	0.000130	0.000085	0.000085	0.000085	0.000108
12	0.000135	0.000135	0.000135	0.000088	0.000088	0.000088	0.000112
13	0.000142	0.000142	0.000142	0.000092	0.000092	0.000092	0.000117

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2011 Non-Annuitant Table	2011 Annuitant Table	2011 Optional Combined Table for Small Plans	2011 Non-Annuitant Table	2011 Annuitant Table	2011 Optional Combined Table for Small Plans	2011 Table for Distributions Subject to § 417(e)(3)
14	0.000154	0.000154	0.000154	0.000101	0.000101	0.000101	0.000128
15	0.000163	0.000163	0.000163	0.000112	0.000112	0.000112	0.000138
16	0.000172	0.000172	0.000172	0.000119	0.000119	0.000119	0.000146
17	0.000183	0.000183	0.000183	0.000128	0.000128	0.000128	0.000156
18	0.000192	0.000192	0.000192	0.000130	0.000130	0.000130	0.000161
19	0.000201	0.000201	0.000201	0.000128	0.000128	0.000128	0.000165
20	0.000210	0.000210	0.000210	0.000126	0.000126	0.000126	0.000168
21	0.000223	0.000223	0.000223	0.000123	0.000123	0.000123	0.000173
22	0.000234	0.000234	0.000234	0.000124	0.000124	0.000124	0.000179
23	0.000252	0.000252	0.000252	0.000130	0.000130	0.000130	0.000191
24	0.000268	0.000268	0.000268	0.000136	0.000136	0.000136	0.000202
25	0.000290	0.000290	0.000290	0.000143	0.000143	0.000143	0.000217
26	0.000323	0.000323	0.000323	0.000156	0.000156	0.000156	0.000240
27	0.000335	0.000335	0.000335	0.000163	0.000163	0.000163	0.000249
28	0.000345	0.000345	0.000345	0.000172	0.000172	0.000172	0.000259
29	0.000362	0.000362	0.000362	0.000181	0.000181	0.000181	0.000272
30	0.000390	0.000390	0.000390	0.000203	0.000203	0.000203	0.000297
31	0.000438	0.000438	0.000438	0.000249	0.000249	0.000249	0.000344
32	0.000493	0.000493	0.000493	0.000284	0.000284	0.000284	0.000389
33	0.000554	0.000554	0.000554	0.000311	0.000311	0.000311	0.000433
34	0.000616	0.000616	0.000616	0.000335	0.000335	0.000335	0.000476
35	0.000679	0.000679	0.000679	0.000356	0.000356	0.000356	0.000518
36	0.000738	0.000738	0.000738	0.000376	0.000376	0.000376	0.000557
37	0.000794	0.000794	0.000794	0.000394	0.000394	0.000394	0.000594
38	0.000824	0.000824	0.000824	0.000414	0.000414	0.000414	0.000619
39	0.000851	0.000851	0.000851	0.000437	0.000437	0.000437	0.000644
40	0.000876	0.000876	0.000876	0.000477	0.000477	0.000477	0.000677
41	0.000903	0.000930	0.000903	0.000522	0.000522	0.000522	0.000713
42	0.000936	0.001038	0.000937	0.000575	0.000575	0.000575	0.000756
43	0.000974	0.001201	0.000977	0.000633	0.000633	0.000633	0.000805
44	0.001021	0.001418	0.001028	0.000695	0.000695	0.000695	0.000862
45	0.001073	0.001689	0.001087	0.000739	0.000744	0.000739	0.000913
46	0.001120	0.002014	0.001144	0.000783	0.000842	0.000784	0.000964
47	0.001171	0.002393	0.001210	0.000827	0.000989	0.000831	0.001021
48	0.001223	0.002826	0.001281	0.000894	0.001185	0.000904	0.001093
49	0.001277	0.003314	0.001360	0.000967	0.001430	0.000986	0.001173
50	0.001333	0.003856	0.001447	0.001073	0.001722	0.001106	0.001277
51	0.001389	0.003914	0.001515	0.001193	0.001839	0.001231	0.001373
52	0.001448	0.003923	0.001618	0.001363	0.002054	0.001414	0.001516
53	0.001550	0.003978	0.001781	0.001560	0.002330	0.001633	0.001707
54	0.001663	0.004030	0.001968	0.001787	0.002662	0.001891	0.001930
55	0.001839	0.004181	0.002323	0.002050	0.003056	0.002241	0.002282
56	0.002062	0.004416	0.002809	0.002357	0.003522	0.002690	0.002750

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2011 Non-Annuitant Table	2011 Annuitant Table	2011 Optional Combined Table for Small Plans	2011 Non-Annuitant Table	2011 Annuitant Table	2011 Optional Combined Table for Small Plans	2011 Table for Distributions Subject to § 417(e)(3)
57	0.002323	0.004733	0.003234	0.002642	0.004007	0.003107	0.003171
58	0.002628	0.005158	0.003741	0.002889	0.004496	0.003512	0.003627
59	0.002902	0.005599	0.004247	0.003159	0.005054	0.003985	0.004116
60	0.003207	0.006131	0.004854	0.003451	0.005665	0.004548	0.004701
61	0.003633	0.006857	0.005676	0.003761	0.006322	0.005248	0.005462
62	0.003995	0.007553	0.006522	0.004087	0.007026	0.006026	0.006274
63	0.004486	0.008496	0.007655	0.004423	0.007775	0.006944	0.007300
64	0.004871	0.009401	0.008656	0.004766	0.008584	0.007837	0.008247
65	0.005249	0.010411	0.009808	0.005110	0.009470	0.008839	0.009324
66	0.005763	0.011748	0.011342	0.005449	0.010428	0.009989	0.010666
67	0.006118	0.013006	0.012668	0.005779	0.011458	0.011099	0.011884
68	0.006286	0.014121	0.013838	0.006096	0.012583	0.012274	0.013056
69	0.006591	0.015599	0.015341	0.006398	0.013846	0.013568	0.014455
70	0.006698	0.016917	0.016651	0.006683	0.015298	0.015006	0.015829
71	0.007553	0.018718	0.018457	0.007297	0.016672	0.016386	0.017422
72	0.009263	0.020783	0.020543	0.008524	0.018543	0.018271	0.019407
73	0.011828	0.023149	0.022943	0.010365	0.020242	0.020008	0.021476
74	0.015247	0.025826	0.025661	0.012819	0.022434	0.022239	0.023950
75	0.019521	0.029354	0.029226	0.015887	0.024323	0.024180	0.026703
76	0.024650	0.032717	0.032633	0.019568	0.026798	0.026700	0.029667
77	0.030634	0.037063	0.037013	0.023863	0.030054	0.029991	0.033502
78	0.037473	0.041943	0.041920	0.028772	0.033130	0.033100	0.037510
79	0.045167	0.047469	0.047463	0.034294	0.036576	0.036568	0.042016
80	0.053716	0.053716	0.053716	0.040430	0.040430	0.040430	0.047073
81	0.061222	0.061222	0.061222	0.044749	0.044749	0.044749	0.052986
82	0.069651	0.069651	0.069651	0.049608	0.049608	0.049608	0.059630
83	0.077641	0.077641	0.077641	0.055082	0.055082	0.055082	0.066362
84	0.087928	0.087928	0.087928	0.061260	0.061260	0.061260	0.074594
85	0.097602	0.097602	0.097602	0.069495	0.069495	0.069495	0.083549
86	0.108212	0.108212	0.108212	0.078924	0.078924	0.078924	0.093568
87	0.122076	0.122076	0.122076	0.089632	0.089632	0.089632	0.105854
88	0.137598	0.137598	0.137598	0.099834	0.099834	0.099834	0.118716
89	0.152062	0.152062	0.152062	0.112881	0.112881	0.112881	0.132472
90	0.170642	0.170642	0.170642	0.124750	0.124750	0.124750	0.147696
91	0.185864	0.185864	0.185864	0.136991	0.136991	0.136991	0.161428
92	0.205202	0.205202	0.205202	0.149320	0.149320	0.149320	0.177261
93	0.221361	0.221361	0.221361	0.164401	0.164401	0.164401	0.192881
94	0.237495	0.237495	0.237495	0.176329	0.176329	0.176329	0.206912
95	0.258023	0.258023	0.258023	0.187624	0.187624	0.187624	0.222824
96	0.273856	0.273856	0.273856	0.198110	0.198110	0.198110	0.235983
97	0.289239	0.289239	0.289239	0.211398	0.211398	0.211398	0.250319
98	0.309669	0.309669	0.309669	0.219950	0.219950	0.219950	0.264810
99	0.324314	0.324314	0.324314	0.227257	0.227257	0.227257	0.275786

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2011 Non-Annuitant Table	2011 Annuitant Table	2011 Optional Combined Table for Small Plans	2011 Non-Annuitant Table	2011 Annuitant Table	2011 Optional Combined Table for Small Plans	2011 Table for Distributions Subject to § 417(e)(3)
100	0.338406	0.338406	0.338406	0.233229	0.233229	0.233229	0.285818
101	0.358628	0.358628	0.358628	0.244834	0.244834	0.244834	0.301731
102	0.371685	0.371685	0.371685	0.254498	0.254498	0.254498	0.313092
103	0.383040	0.383040	0.383040	0.266044	0.266044	0.266044	0.324542
104	0.392003	0.392003	0.392003	0.279055	0.279055	0.279055	0.335529
105	0.397886	0.397886	0.397886	0.293116	0.293116	0.293116	0.345501
106	0.400000	0.400000	0.400000	0.307811	0.307811	0.307811	0.353906
107	0.400000	0.400000	0.400000	0.322725	0.322725	0.322725	0.361363
108	0.400000	0.400000	0.400000	0.337441	0.337441	0.337441	0.368721
109	0.400000	0.400000	0.400000	0.351544	0.351544	0.351544	0.375772
110	0.400000	0.400000	0.400000	0.364617	0.364617	0.364617	0.382309
111	0.400000	0.400000	0.400000	0.376246	0.376246	0.376246	0.388123
112	0.400000	0.400000	0.400000	0.386015	0.386015	0.386015	0.393008
113	0.400000	0.400000	0.400000	0.393507	0.393507	0.393507	0.396754
114	0.400000	0.400000	0.400000	0.398308	0.398308	0.398308	0.399154
115	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
116	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
117	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
118	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
119	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
120	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

Mortality tables for 2012

Valuation dates occurring during 2012 Distributions subject to § 417(e)(3) with annuity starting dates during stability periods beginning in 2012

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2012 Non-Annuitant Table	2012 Annuitant Table	2012 Optional Combined Table for Small Plans	2012 Non-Annuitant Table	2012 Annuitant Table	2012 Optional Combined Table for Small Plans	2012 Table for Distributions Subject to § 417(e)(3)
1	0.000369	0.000369	0.000369	0.000331	0.000331	0.000331	0.000350
2	0.000249	0.000249	0.000249	0.000216	0.000216	0.000216	0.000233
3	0.000207	0.000207	0.000207	0.000161	0.000161	0.000161	0.000184
4	0.000161	0.000161	0.000161	0.000121	0.000121	0.000121	0.000141
5	0.000148	0.000148	0.000148	0.000109	0.000109	0.000109	0.000129
6	0.000141	0.000141	0.000141	0.000102	0.000102	0.000102	0.000122
7	0.000136	0.000136	0.000136	0.000096	0.000096	0.000096	0.000116
8	0.000125	0.000125	0.000125	0.000085	0.000085	0.000085	0.000105

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2012 Non-Annuitant Table	2012 Annuitant Table	2012 Optional Combined Table for Small Plans	2012 Non-Annuitant Table	2012 Annuitant Table	2012 Optional Combined Table for Small Plans	2012 Table for Distributions Subject to § 417(e)(3)
9	0.000121	0.000121	0.000121	0.000081	0.000081	0.000081	0.000101
10	0.000123	0.000123	0.000123	0.000082	0.000082	0.000082	0.000103
11	0.000127	0.000127	0.000127	0.000083	0.000083	0.000083	0.000105
12	0.000132	0.000132	0.000132	0.000086	0.000086	0.000086	0.000109
13	0.000139	0.000139	0.000139	0.000090	0.000090	0.000090	0.000115
14	0.000151	0.000151	0.000151	0.000099	0.000099	0.000099	0.000125
15	0.000160	0.000160	0.000160	0.000110	0.000110	0.000110	0.000135
16	0.000169	0.000169	0.000169	0.000118	0.000118	0.000118	0.000144
17	0.000179	0.000179	0.000179	0.000126	0.000126	0.000126	0.000153
18	0.000188	0.000188	0.000188	0.000128	0.000128	0.000128	0.000158
19	0.000197	0.000197	0.000197	0.000126	0.000126	0.000126	0.000162
20	0.000206	0.000206	0.000206	0.000124	0.000124	0.000124	0.000165
21	0.000219	0.000219	0.000219	0.000121	0.000121	0.000121	0.000170
22	0.000230	0.000230	0.000230	0.000122	0.000122	0.000122	0.000176
23	0.000248	0.000248	0.000248	0.000127	0.000127	0.000127	0.000188
24	0.000264	0.000264	0.000264	0.000134	0.000134	0.000134	0.000199
25	0.000287	0.000287	0.000287	0.000141	0.000141	0.000141	0.000214
26	0.000321	0.000321	0.000321	0.000154	0.000154	0.000154	0.000238
27	0.000334	0.000334	0.000334	0.000161	0.000161	0.000161	0.000248
28	0.000343	0.000343	0.000343	0.000170	0.000170	0.000170	0.000257
29	0.000360	0.000360	0.000360	0.000179	0.000179	0.000179	0.000270
30	0.000388	0.000388	0.000388	0.000201	0.000201	0.000201	0.000295
31	0.000436	0.000436	0.000436	0.000247	0.000247	0.000247	0.000342
32	0.000491	0.000491	0.000491	0.000282	0.000282	0.000282	0.000387
33	0.000551	0.000551	0.000551	0.000309	0.000309	0.000309	0.000430
34	0.000613	0.000613	0.000613	0.000332	0.000332	0.000332	0.000473
35	0.000675	0.000675	0.000675	0.000352	0.000352	0.000352	0.000514
36	0.000735	0.000735	0.000735	0.000371	0.000371	0.000371	0.000553
37	0.000790	0.000790	0.000790	0.000389	0.000389	0.000389	0.000590
38	0.000819	0.000819	0.000819	0.000409	0.000409	0.000409	0.000614
39	0.000845	0.000845	0.000845	0.000431	0.000431	0.000431	0.000638
40	0.000869	0.000869	0.000869	0.000469	0.000469	0.000469	0.000669
41	0.000895	0.000922	0.000895	0.000515	0.000515	0.000515	0.000705
42	0.000926	0.001028	0.000927	0.000567	0.000567	0.000567	0.000747
43	0.000964	0.001187	0.000967	0.000623	0.000623	0.000623	0.000795
44	0.001008	0.001399	0.001015	0.000684	0.000684	0.000684	0.000850
45	0.001059	0.001664	0.001073	0.000727	0.000732	0.000727	0.000900
46	0.001104	0.001982	0.001128	0.000770	0.000828	0.000771	0.000950
47	0.001153	0.002353	0.001191	0.000812	0.000972	0.000816	0.001004
48	0.001203	0.002777	0.001260	0.000878	0.001164	0.000888	0.001074
49	0.001256	0.003254	0.001337	0.000949	0.001404	0.000968	0.001153
50	0.001309	0.003786	0.001421	0.001055	0.001692	0.001087	0.001254
51	0.001363	0.003840	0.001486	0.001174	0.001810	0.001211	0.001349

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2012 Non-Annuitant Table	2012 Annuitant Table	2012 Optional Combined Table for Small Plans	2012 Non-Annuitant Table	2012 Annuitant Table	2012 Optional Combined Table for Small Plans	2012 Table for Distributions Subject to § 417(e)(3)
52	0.001419	0.003845	0.001585	0.001344	0.002025	0.001395	0.001490
53	0.001519	0.003898	0.001746	0.001541	0.002302	0.001613	0.001680
54	0.001630	0.003949	0.001929	0.001769	0.002635	0.001872	0.001901
55	0.001805	0.004101	0.002279	0.002034	0.003031	0.002223	0.002251
56	0.002024	0.004337	0.002758	0.002343	0.003501	0.002674	0.002716
57	0.002284	0.004652	0.003179	0.002629	0.003987	0.003091	0.003135
58	0.002586	0.005075	0.003681	0.002874	0.004474	0.003494	0.003588
59	0.002856	0.005509	0.004179	0.003143	0.005029	0.003965	0.004072
60	0.003156	0.006033	0.004777	0.003433	0.005637	0.004525	0.004651
61	0.003579	0.006754	0.005591	0.003743	0.006290	0.005222	0.005407
62	0.003935	0.007440	0.006425	0.004067	0.006991	0.005996	0.006211
63	0.004423	0.008378	0.007548	0.004401	0.007736	0.006909	0.007229
64	0.004803	0.009270	0.008535	0.004742	0.008542	0.007798	0.008167
65	0.005175	0.010266	0.009671	0.005084	0.009422	0.008794	0.009233
66	0.005688	0.011595	0.011194	0.005421	0.010376	0.009939	0.010567
67	0.006039	0.012837	0.012504	0.005750	0.011401	0.011043	0.011774
68	0.006198	0.013923	0.013644	0.006066	0.012520	0.012212	0.012928
69	0.006499	0.015380	0.015126	0.006366	0.013776	0.013500	0.014313
70	0.006597	0.016663	0.016401	0.006649	0.015221	0.014930	0.015666
71	0.007444	0.018437	0.018180	0.007258	0.016572	0.016288	0.017234
72	0.009138	0.020471	0.020235	0.008476	0.018432	0.018162	0.019199
73	0.011679	0.022802	0.022600	0.010303	0.020100	0.019868	0.021234
74	0.015067	0.025438	0.025276	0.012739	0.022277	0.022083	0.023680
75	0.019302	0.028943	0.028818	0.015784	0.024128	0.023986	0.026402
76	0.024384	0.032259	0.032177	0.019438	0.026583	0.026486	0.029332
77	0.030313	0.036581	0.036532	0.023701	0.029844	0.029781	0.033157
78	0.037089	0.041439	0.041416	0.028573	0.032898	0.032869	0.037143
79	0.044712	0.046947	0.046941	0.034054	0.036320	0.036312	0.041627
80	0.053179	0.053179	0.053179	0.040147	0.040147	0.040147	0.046663
81	0.060671	0.060671	0.060671	0.044435	0.044435	0.044435	0.052553
82	0.069094	0.069094	0.069094	0.049260	0.049260	0.049260	0.059177
83	0.077020	0.077020	0.077020	0.054696	0.054696	0.054696	0.065858
84	0.087312	0.087312	0.087312	0.060831	0.060831	0.060831	0.074072
85	0.096919	0.096919	0.096919	0.069078	0.069078	0.069078	0.082999
86	0.107454	0.107454	0.107454	0.078529	0.078529	0.078529	0.092992
87	0.121344	0.121344	0.121344	0.089273	0.089273	0.089273	0.105309
88	0.136910	0.136910	0.136910	0.099435	0.099435	0.099435	0.118173
89	0.151302	0.151302	0.151302	0.112543	0.112543	0.112543	0.131923
90	0.169960	0.169960	0.169960	0.124375	0.124375	0.124375	0.147168
91	0.185121	0.185121	0.185121	0.136580	0.136580	0.136580	0.160851
92	0.204586	0.204586	0.204586	0.148872	0.148872	0.148872	0.176729
93	0.220697	0.220697	0.220697	0.164072	0.164072	0.164072	0.192385
94	0.236783	0.236783	0.236783	0.175976	0.175976	0.175976	0.206380

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2012 Non-Annuitant Table	2012 Annuitant Table	2012 Optional Combined Table for Small Plans	2012 Non-Annuitant Table	2012 Annuitant Table	2012 Optional Combined Table for Small Plans	2012 Table for Distributions Subject to § 417(e)(3)
95	0.257507	0.257507	0.257507	0.187249	0.187249	0.187249	0.222378
96	0.273309	0.273309	0.273309	0.197713	0.197713	0.197713	0.235511
97	0.288660	0.288660	0.288660	0.211187	0.211187	0.211187	0.249924
98	0.309359	0.309359	0.309359	0.219730	0.219730	0.219730	0.264545
99	0.323989	0.323989	0.323989	0.227030	0.227030	0.227030	0.275510
100	0.338068	0.338068	0.338068	0.232996	0.232996	0.232996	0.285532
101	0.358628	0.358628	0.358628	0.244834	0.244834	0.244834	0.301731
102	0.371685	0.371685	0.371685	0.254498	0.254498	0.254498	0.313092
103	0.383040	0.383040	0.383040	0.266044	0.266044	0.266044	0.324542
104	0.392003	0.392003	0.392003	0.279055	0.279055	0.279055	0.335529
105	0.397886	0.397886	0.397886	0.293116	0.293116	0.293116	0.345501
106	0.400000	0.400000	0.400000	0.307811	0.307811	0.307811	0.353906
107	0.400000	0.400000	0.400000	0.322725	0.322725	0.322725	0.361363
108	0.400000	0.400000	0.400000	0.337441	0.337441	0.337441	0.368721
109	0.400000	0.400000	0.400000	0.351544	0.351544	0.351544	0.375772
110	0.400000	0.400000	0.400000	0.364617	0.364617	0.364617	0.382309
111	0.400000	0.400000	0.400000	0.376246	0.376246	0.376246	0.388123
112	0.400000	0.400000	0.400000	0.386015	0.386015	0.386015	0.393008
113	0.400000	0.400000	0.400000	0.393507	0.393507	0.393507	0.396754
114	0.400000	0.400000	0.400000	0.398308	0.398308	0.398308	0.399154
115	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
116	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
117	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
118	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
119	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
120	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

Mortality tables for 2013

**Valuation dates occurring during 2013
Distributions subject to § 417(e)(3) with annuity starting dates during
stability periods beginning in 2013**

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2013 Non-Annuitant Table	2013 Annuitant Table	2013 Optional Combined Table for Small Plans	2013 Non-Annuitant Table	2013 Annuitant Table	2013 Optional Combined Table for Small Plans	2013 Table for Distributions Subject to § 417(e)(3)
1	0.000362	0.000362	0.000362	0.000324	0.000324	0.000324	0.000343
2	0.000244	0.000244	0.000244	0.000211	0.000211	0.000211	0.000228
3	0.000203	0.000203	0.000203	0.000158	0.000158	0.000158	0.000181

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2013 Non-Annuitant Table	2013 Annuitant Table	2013 Optional Combined Table for Small Plans	2013 Non-Annuitant Table	2013 Annuitant Table	2013 Optional Combined Table for Small Plans	2013 Table for Distributions Subject to § 417(e)(3)
4	0.000158	0.000158	0.000158	0.000118	0.000118	0.000118	0.000138
5	0.000145	0.000145	0.000145	0.000107	0.000107	0.000107	0.000126
6	0.000139	0.000139	0.000139	0.000100	0.000100	0.000100	0.000120
7	0.000133	0.000133	0.000133	0.000094	0.000094	0.000094	0.000114
8	0.000123	0.000123	0.000123	0.000083	0.000083	0.000083	0.000103
9	0.000119	0.000119	0.000119	0.000080	0.000080	0.000080	0.000100
10	0.000120	0.000120	0.000120	0.000080	0.000080	0.000080	0.000100
11	0.000124	0.000124	0.000124	0.000081	0.000081	0.000081	0.000103
12	0.000129	0.000129	0.000129	0.000084	0.000084	0.000084	0.000107
13	0.000136	0.000136	0.000136	0.000088	0.000088	0.000088	0.000112
14	0.000148	0.000148	0.000148	0.000097	0.000097	0.000097	0.000123
15	0.000157	0.000157	0.000157	0.000108	0.000108	0.000108	0.000133
16	0.000166	0.000166	0.000166	0.000116	0.000116	0.000116	0.000141
17	0.000176	0.000176	0.000176	0.000124	0.000124	0.000124	0.000150
18	0.000185	0.000185	0.000185	0.000127	0.000127	0.000127	0.000156
19	0.000193	0.000193	0.000193	0.000124	0.000124	0.000124	0.000159
20	0.000202	0.000202	0.000202	0.000122	0.000122	0.000122	0.000162
21	0.000215	0.000215	0.000215	0.000119	0.000119	0.000119	0.000167
22	0.000226	0.000226	0.000226	0.000120	0.000120	0.000120	0.000173
23	0.000244	0.000244	0.000244	0.000125	0.000125	0.000125	0.000185
24	0.000261	0.000261	0.000261	0.000132	0.000132	0.000132	0.000197
25	0.000284	0.000284	0.000284	0.000139	0.000139	0.000139	0.000212
26	0.000319	0.000319	0.000319	0.000153	0.000153	0.000153	0.000236
27	0.000332	0.000332	0.000332	0.000159	0.000159	0.000159	0.000246
28	0.000342	0.000342	0.000342	0.000168	0.000168	0.000168	0.000255
29	0.000358	0.000358	0.000358	0.000177	0.000177	0.000177	0.000268
30	0.000386	0.000386	0.000386	0.000199	0.000199	0.000199	0.000293
31	0.000434	0.000434	0.000434	0.000245	0.000245	0.000245	0.000340
32	0.000488	0.000488	0.000488	0.000280	0.000280	0.000280	0.000384
33	0.000548	0.000548	0.000548	0.000306	0.000306	0.000306	0.000427
34	0.000610	0.000610	0.000610	0.000328	0.000328	0.000328	0.000469
35	0.000672	0.000672	0.000672	0.000348	0.000348	0.000348	0.000510
36	0.000731	0.000731	0.000731	0.000367	0.000367	0.000367	0.000549
37	0.000786	0.000786	0.000786	0.000384	0.000384	0.000384	0.000585
38	0.000815	0.000815	0.000815	0.000403	0.000403	0.000403	0.000609
39	0.000839	0.000839	0.000839	0.000424	0.000424	0.000424	0.000632
40	0.000862	0.000862	0.000862	0.000462	0.000462	0.000462	0.000662
41	0.000887	0.000914	0.000887	0.000507	0.000507	0.000507	0.000697
42	0.000917	0.001018	0.000918	0.000558	0.000558	0.000558	0.000738
43	0.000953	0.001174	0.000956	0.000614	0.000614	0.000614	0.000785
44	0.000996	0.001382	0.001003	0.000674	0.000674	0.000674	0.000839
45	0.001045	0.001642	0.001058	0.000716	0.000721	0.000716	0.000887
46	0.001089	0.001954	0.001113	0.000757	0.000815	0.000758	0.000936

Age	MALE	MALE	MALE	FEMALE	FEMALE	FEMALE	UNISEX
	2013 Non-Annuitant Table	2013 Annuitant Table	2013 Optional Combined Table for Small Plans	2013 Non-Annuitant Table	2013 Annuitant Table	2013 Optional Combined Table for Small Plans	2013 Table for Distributions Subject to § 417(e)(3)
47	0.001136	0.002317	0.001173	0.000797	0.000956	0.000801	0.000987
48	0.001184	0.002732	0.001240	0.000862	0.001145	0.000871	0.001056
49	0.001234	0.003199	0.001314	0.000932	0.001381	0.000951	0.001133
50	0.001286	0.003718	0.001396	0.001037	0.001664	0.001068	0.001232
51	0.001337	0.003767	0.001458	0.001155	0.001781	0.001192	0.001325
52	0.001390	0.003768	0.001553	0.001325	0.001997	0.001375	0.001464
53	0.001489	0.003820	0.001711	0.001523	0.002274	0.001594	0.001653
54	0.001597	0.003870	0.001890	0.001752	0.002609	0.001854	0.001872
55	0.001770	0.004023	0.002235	0.002017	0.003007	0.002205	0.002220
56	0.001988	0.004259	0.002709	0.002329	0.003480	0.002658	0.002684
57	0.002245	0.004573	0.003125	0.002616	0.003967	0.003076	0.003101
58	0.002544	0.004994	0.003622	0.002860	0.004452	0.003477	0.003550
59	0.002810	0.005421	0.004112	0.003128	0.005003	0.003946	0.004029
60	0.003105	0.005936	0.004700	0.003416	0.005609	0.004502	0.004601
61	0.003525	0.006653	0.005508	0.003724	0.006259	0.005196	0.005352
62	0.003876	0.007329	0.006329	0.004046	0.006956	0.005966	0.006148
63	0.004361	0.008260	0.007442	0.004379	0.007697	0.006874	0.007158
64	0.004736	0.009140	0.008416	0.004718	0.008499	0.007759	0.008088
65	0.005103	0.010122	0.009536	0.005059	0.009375	0.008750	0.009143
66	0.005615	0.011444	0.011048	0.005394	0.010324	0.009889	0.010469
67	0.005960	0.012670	0.012341	0.005721	0.011344	0.010988	0.011665
68	0.006111	0.013728	0.013453	0.006036	0.012457	0.012151	0.012802
69	0.006408	0.015165	0.014915	0.006335	0.013708	0.013433	0.014174
70	0.006499	0.016413	0.016155	0.006616	0.015145	0.014856	0.015506
71	0.007338	0.018161	0.017908	0.007221	0.016472	0.016190	0.017049
72	0.009016	0.020164	0.019932	0.008430	0.018322	0.018054	0.018993
73	0.011533	0.022460	0.022261	0.010244	0.019959	0.019729	0.020995
74	0.014889	0.025057	0.024898	0.012662	0.022121	0.021929	0.023414
75	0.019084	0.028538	0.028415	0.015685	0.023935	0.023795	0.026105
76	0.024118	0.031808	0.031728	0.019312	0.026371	0.026275	0.029002
77	0.029991	0.036105	0.036057	0.023544	0.029635	0.029573	0.032815
78	0.036703	0.040942	0.040920	0.028380	0.032667	0.032638	0.036779
79	0.044254	0.046431	0.046425	0.033821	0.036066	0.036058	0.041242
80	0.052647	0.052647	0.052647	0.039866	0.039866	0.039866	0.046257
81	0.060125	0.060125	0.060125	0.044124	0.044124	0.044124	0.052125
82	0.068542	0.068542	0.068542	0.048916	0.048916	0.048916	0.058729
83	0.076403	0.076403	0.076403	0.054313	0.054313	0.054313	0.065358
84	0.086701	0.086701	0.086701	0.060405	0.060405	0.060405	0.073553
85	0.096240	0.096240	0.096240	0.068664	0.068664	0.068664	0.082452
86	0.106702	0.106702	0.106702	0.078137	0.078137	0.078137	0.092420
87	0.120616	0.120616	0.120616	0.088916	0.088916	0.088916	0.104766
88	0.136225	0.136225	0.136225	0.099037	0.099037	0.099037	0.117631
89	0.150545	0.150545	0.150545	0.112205	0.112205	0.112205	0.131375

