

Title 210 - NEBRASKA DEPARTMENT OF INSURANCE

Chapter 42 - RULE FOR RECOGNIZING MORTALITY TABLES FOR USE IN DETERMINING RESERVE LIABILITIES FOR ANNUITIES

001. Statutory authority.

This Rule is promulgated by the Director of Insurance under the authority granted by Neb. Rev. Stat. §§ 44-101.01 and 44-8907.

002. Purpose.

The purpose of this Rule is to recognize the following mortality tables for use in determining the minimum standard of valuation for annuity and pure endowment contracts: the 1983 Table "a," the 1983 Group Annuity Mortality (1983 GAM) Table, the Annuity 2000 Mortality Table, the 2012 Individual Annuity Reserving (2012 IAR) Table, and the 1994 Group Annuity Reserving (1994 GAR) Table.

003. Definitions.

003.01 As used in this Rule "1983 Table "a" means that mortality table developed by the Society of Actuaries Committee to Recommend a New Mortality Basis for Individual Annuity Valuation and adopted as a recognized mortality table for annuities in June 1982 by the National Association of Insurance Commissioners.

003.02 As used in this Rule "1983 GAM Table" means that mortality table developed by the Society of Actuaries Committee on Annuities and adopted as a recognized mortality table for annuities in December 1983 by the National Association of Insurance Commissioners.

003.03 As used in this Rule "1994 GAR Table" means that mortality table developed by the Society of Actuaries Group Annuity Valuation Table Task Force and shown on pages 866-867 of Volume XLVII of the Transactions of the Society of Actuaries (1995).

003.04 As used in this Rule "Annuity 2000 Mortality Table" means that mortality table developed by the Society of Actuaries Committee on Life Insurance Research and shown on page 240 of Volume XLVII of the Transactions of the Society of Actuaries (1995).

003.05 As used in this Rule, Period table means a table of mortality rates applicable to a given calendar year (the Period).

003.06 As used in this Rule, Generational mortality table means a mortality table containing a set of mortality rates that decrease for a given age from one year to the next based on a combination of a Period table and a projection scale containing rates of mortality improvement.

003.07 As used in this Rule 2012 IAR Table means that Generational mortality table developed by the Society of Actuaries Committee on Life Insurance

004.05 The 1983 Table "a" without projection is to be used for determining the minimum standards of valuation for an individual annuity or pure endowment contract issued on or after January 1, 1999, solely when the contract is based on life contingencies and is issued to fund periodic benefits arising from:

- (1) Settlements of various forms of claims pertaining to court settlements or out-of-court settlements from tort actions;
- (2) Settlements involving similar actions such as workers' compensation claims; or
- (3) Settlements of long-term disability claims where a temporary or life annuity has been used in lieu of continuing disability payments.

005. Application of the 2012 IAR Mortality Table.

In using the 2012 IAR Mortality Table, the mortality rate for a person age x in year $(2012 + n)$ is calculated as follows:

$$q_x^{2012+n} = q_x^{2012}(1-G2_x)^n$$

The resulting q_x^{2012+n} shall be rounded to three decimal places per 1,000, e.g., 0.741 deaths per 1,000. Also, the rounding shall occur according to the formula above, starting at the 2012 periodic table rate.

For example, for a male age 30, $q_x^{2012} = 0.741$

$$q_x^{2013} = 0.741 * (1 - 0.010) ^ 1 = 0.73359, \text{ which is rounded to } 0.734$$

$$q_x^{2014} = 0.741 * (1 - 0.010) ^ 2 = 0.7262541, \text{ which is rounded to } 0.726$$

A method leading to incorrect rounding would be to calculate

$$q_x^{2014} \text{ as } q_x^{2013} * (1 - 0.010), \text{ or } 0.734 * 0.99 = 0.727$$

It is incorrect to use the already rounded q_x^{2013} to calculate q_x^{2014}

006. Group annuity or pure endowment contracts.

006.01 Except as provided in subsections 006.02 and 006.03, the 1983 GAM Table, the 1983 Table "a" and the 1994 GAR Table are recognized and approved as group annuity mortality tables for valuation and, at the option of the company, any one of these tables may be used for purposes of valuation for an annuity or pure endowment purchased on or after August 24, 1979 under a group annuity or pure endowment contract.

006.02 Except as provided in subsection 006.03, either the 1983 GAM Table or the 1994 GAR Table shall be used for determining the minimum standard of

valuation for any annuity or pure endowment purchased on or after January 1, 1987 under a group annuity or pure endowment contract.

006.03 The 1994 GAR Table shall be used for determining the minimum standard of valuation for any annuity or pure endowment purchased on or after January 1, 1999 under a group annuity or pure endowment contract.

APPENDIX 1

2012 IAM Period Table
Female, Age Nearest Birthday

AGE	1000	q ^x 2012	AGE	1000	q ^x 2012	AGE	1000	q ^x 2012	AGE	1000	q ^x 2012
0		1.621	30		0.300	60		3.460	90		88.377
1		0.405	31		0.321	61		3.916	91		97.491
2		0.259	32		0.338	62		4.409	92		107.269
3		0.179	33		0.351	63		4.933	93		118.201
4		0.137	34		0.365	64		5.507	94		130.969
5		0.125	35		0.381	65		6.146	95		146.449
6		0.117	36		0.402	66		6.551	96		163.908
7		0.110	37		0.429	67		7.039	97		179.695
8		0.095	38		0.463	68		7.628	98		196.151
9		0.088	39		0.504	69		8.311	99		213.150
10		0.085	40		0.552	70		9.074	100		230.722
11		0.086	41		0.600	71		9.910	101		251.505
12		0.094	42		0.650	72		10.827	102		273.007
13		0.108	43		0.697	73		11.839	103		295.086
14		0.131	44		0.740	74		12.974	104		317.591
15		0.156	45		0.780	75		14.282	105		340.362
16		0.179	46		0.825	76		15.799	106		362.371
17		0.198	47		0.885	77		17.550	107		384.113
18		0.211	48		0.964	78		19.582	108		400.000
19		0.221	49		1.051	79		21.970	109		400.000
20		0.228	50		1.161	80		24.821	110		400.000
21		0.234	51		1.308	81		28.351	111		400.000
22		0.240	52		1.460	82		32.509	112		400.000
23		0.245	53		1.613	83		37.329	113		400.000
24		0.247	54		1.774	84		42.830	114		400.000
25		0.250	55		1.950	85		48.997	115		400.000
26		0.256	56		2.154	86		55.774	116		400.000
27		0.261	57		2.399	87		63.140	117		400.000
28		0.270	58		2.700	88		71.066	118		400.000
29		0.281	59		3.054	89		79.502	119		400.000
									120		1000.000

APPENDIX 2

2012 IAM Period Table
Male, Age Nearest Birthday

AGE	1000	q ^x 2012	AGE	1000	q ^x 2012	AGE	1000	q ^x 2012	AGE	1000	q ^x 2012
0		1.605	30		0.741	60		5.096	90		109.993

APPENDIX 3

Projection Scale G2
Female, Age Nearest Birthday

AGE	G2x	AGE	G2x	AGE	G2x	AGE	G2x
0	0.010	30	0.010	60	0.013	90	0.006
1	0.010	31	0.010	61	0.013	91	0.006
2	0.010	32	0.010	62	0.013	92	0.005
3	0.010	33	0.010	63	0.013	93	0.005
4	0.010	34	0.010	64	0.013	94	0.004
5	0.010	35	0.010	65	0.013	95	0.004
6	0.010	36	0.010	66	0.013	96	0.004
7	0.010	37	0.010	67	0.013	97	0.003
8	0.010	38	0.010	68	0.013	98	0.003
9	0.010	39	0.010	69	0.013	99	0.002
10	0.010	40	0.010	70	0.013	100	0.002
11	0.010	41	0.010	71	0.013	101	0.002
12	0.010	42	0.010	72	0.013	102	0.001
13	0.010	43	0.010	73	0.013	103	0.001
14	0.010	44	0.010	74	0.013	104	0.000
15	0.010	45	0.010	75	0.013	105	0.000
16	0.010	46	0.010	76	0.013	106	0.000
17	0.010	47	0.010	77	0.013	107	0.000
18	0.010	48	0.010	78	0.013	108	0.000
19	0.010	49	0.010	79	0.013	109	0.000
20	0.010	50	0.010	80	0.013	110	0.000
21	0.010	51	0.010	81	0.012	111	0.000
22	0.010	52	0.011	82	0.012	112	0.000
23	0.010	53	0.011	83	0.011	113	0.000
24	0.010	54	0.011	84	0.010	114	0.000
25	0.010	55	0.012	85	0.010	115	0.000
26	0.010	56	0.012	86	0.009	116	0.000
27	0.010	57	0.012	87	0.008	117	0.000
28	0.010	58	0.012	88	0.007	118	0.000
29	0.010	59	0.013	89	0.007	119	0.000
						120	0.000

APPENDIX 4

Projection Scale G2
Male, Age Nearest Birthday

AGE	G2x	AGE	G2x	AGE	G2x	AGE	G2x
0	0.010	30	0.010	60	0.015	90	0.007