

## CHAPTER 45-04-08 ANNUITY TABLES

### Section

45-04-08-01	Definitions
45-04-08-02	Individual Annuity or Pure Endowment Contracts
45-04-08-02.1	Application for the 2012 IAR Mortality Table
45-04-08-03	Group Annuity or Pure Endowment Contracts
45-04-08-03.1	Application of the 1994 GAR Table
45-04-08-04	Separability

### **45-04-08-01. Definitions.**

As used in this chapter:

1. "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.
2. "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.
3. "1994 GAR Table" means that mortality table developed by the society of actuaries group annuity valuation table task force and shown at XLVII transactions of the society of actuaries 866-867 (1995).
4. "2012 IAR Table" means that generational mortality table developed by the society of actuaries committee on life insurance research and containing rates,  $q_x^{2012+n}$ , derived from a combination of the 2012 IAM Period Table and Projection Scale G2.
5. "2012 Individual Annuity Mortality Period Life (2012 IAM Period) Table" or "2012 IAM Period Table" means the period table containing loaded mortality rates for calendar year 2012. This table contains rates,  $q_x^{2012}$ , developed by the society of actuaries committee on life insurance.
6. "Annuity 2000 Mortality Table" means that mortality table developed by the society of actuaries committee on life insurance research and shown at XLVII transactions of the society of actuaries 240 (1995).
7. "Projection Scale G2 (Scale G2)" is a table of annual rates,  $G2_x$ , of which mortality improvement by age for projecting future mortality rates beyond calendar year 2012. This table was developed by the society of actuaries committee on life insurance research.

**History:** Effective January 1, 1985; amended effective September 1, 1999; October 1, 2015.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-35

### **45-04-08-02. Individual annuity or pure endowment contracts.**

1. Except as provided in subsections 2 and 3, 1983 Table "a" is recognized and approved as an individual mortality table for valuation and, at the option of the company, may be used for purposes of determining the minimum standard of valuation for any individual annuity or pure endowment contract issued on or after July 1, 1983.

2. Except as provided in subsection 3, 1983 Table "a" is to be used for determining the minimum standard of valuation for any individual annuity or pure endowment contract issued on or after January 1, 1986.
3. Except as provided in subsection 4, the Annuity 2000 Mortality Table must be used for determining the minimum standard of valuation of any individual annuity or pure endowment contract issued on or after September 1, 1999.
4. Except as provided in subsection 5, the 2012 IAR Table must be used for determining the minimum standard of valuation for any individual annuity or pure endowment contract issued on or after January 1, 2016.
5. 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 September 1, 1999, solely when the contract is based on life contingencies and is issued to fund periodic benefits arising from:
  - a. Settlements of various forms of claims pertaining to court settlements or out-of-court settlements from tort actions;
  - b. Settlements involving similar actions such as workers' compensation claims; or
  - c. Settlements of long-term disability claims when a temporary or life annuity has been used in lieu of continuing disability payments.

**History:** Effective January 1, 1985; amended effective September 1, 1999; October 1, 2015.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-35

#### **45-04-08-02.1. 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 per 1,000). Also, the rounding shall occur according to the formula above, starting at the 2012 IAM Period Table rate.

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

$$q_x^{2013} = 0.741 * (1-0.010) ^ 1 = 0.73358, \text{ which is rounded to } 0.734.$$

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

A method leading to incorrect round would be to calculate  $q_x^{2014}$  as  $q_x^{2013} * (1-0.010)$ , or  $0.734 * 0.99 = 0.727$ . It is incorrect to use the already rounded  $q_x^{2013}$  to calculate  $q_x^{2014}$ .

**History:** Effective October 1, 2015.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-35

#### **45-04-08-03. Group annuity or pure endowment contracts.**

1. Except as provided in subsections 2 and 3, the 1983 GAM Table and 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 any annuity or pure endowment purchased on or after July 1, 1983, under a group annuity or pure endowment contract.
2. Except as provided in subsection 3, either the 1983 GAM Table or the 1994 GAR Table must be used for determining the minimum standard of valuation for any annuity or pure endowment purchased on or after January 1, 1986, under a group annuity or pure endowment contract.
3. The 1994 GAR Table must be used for determining the minimum standard of valuation for any annuity or pure endowment purchased on or after September 1, 1999, under a group annuity or pure endowment contract.

**History:** Effective January 1, 1985; amended effective September 1, 1999.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-35

##### **45-04-08-03.1. Application of the 1994 GAR Table.**

In using the 1994 GAR Table, the mortality rate for a person age  $x$  in year  $(1994 + n)$  is calculated as follows:

$$q_x^{1994+n} = q_x^{1994}(1 - AA_x)^n$$

where the  $q_x^{1994}$  and  $AA_x$  are as specified in the 1994 GAR Table.

**History:** Effective September 1, 1999.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-35

##### **45-04-08-04. Separability.**

If any provision of this chapter or the application thereof to any person or circumstances is for any reason held to be invalid, the remainder of the regulation and the application of such provision to other persons or circumstances is not affected thereby.

**History:** Effective January 1, 1985.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-35