

Content

Title :	Directions for Interest-Sensitive Annuity Insurance Policy Premium Rates Ch
Date :	2005.05.24
Legislative :	1. Adopted and issued 3 April 2001 per Letter No. (90)-Taiwan-Finance-Insurance-0900750246 of the Ministry of Finance; for immediate implementation 2. Full 7 points amended and issued 24 May 2005 per Order No. Financial-Supervisory-Insurance-I-09402500991 of the Financial Supervisory Commission, Executive Yuan, for application to interest-sensitive annuity insurance policies issued as from 1 June 2005
Content :	<p>1. Definition of interest-sensitive annuity insurance policy</p> <p>During the accumulation period, the insurance company shall calculate the annuity policy non-forfeiture value at a declared interest rate, based on the premium paid by the proposer after deduction of expense loading. When annuitization begins, annuity amounts will be calculated based on the annuity policy non-forfeiture value.</p> <p>Type A: When annuitization begins, a fixed annuity payment will be determined based on the then-current age, an assumed interest rate, and an annuity table.</p> <p>Type B: When annuity payments begin, the annuity amount for the first year will be calculated on the basis of the then-current age, an assumed interest rate, a declared interest rate, and an annuity table; annuity amounts for each of the second and subsequent years will be adjusted based on another declared interest rate and the assumed interest rate stated above.</p> <p>2. Anticipated risk incidence rate</p> <p>The anticipated risk incidence rate for calculation of annuity amount shall be determined by each company, based on the annuity table promulgated per Letter No. Taiwan-Finance-Insurance-862397037 of the Ministry of Finance, dated 30 June 1997.</p> <p>When submitting a product for review, a company shall attach a description of the bases for determination of the anticipated risk incidence rate and other relevant materials.</p> <p>3. Assumed and declared interest rates</p> <p>3.1 Declared interest rate</p> <p>A declared interest rate shall be determined by a company in consideration of factors such as the potential return on investment for a relevant asset allocation plan and the company's reasonable profit margin, except that in all cases a declared interest rate shall not exceed the yield rate announced, prior to the declaration thereof, by the Central Bank for 10-year central government bonds on the secondary market for the nearest month, and shall not be negative.</p> <p>3.2. Assumed interest rate</p>

Annuity payment period: An assumed interest rate shall not exceed the declared interest rate for the month in which the annuity starting date falls, and shall not be negative.

When submitting a product for review, a company shall attach a description of the bases for determination of the assumed interest rate and declared interest rate and other relevant materials.

4. Formula for annuity calculations

..
Type A: $\text{Annuity}_N = V \div a$

..
Type B: $N = 1$, $\text{Annuity}_N = V + a$
 $1 + j_{N-1}$

$N \geq 2$, $\text{Annuity}_N = \text{Annuity}_{N-1} \times \frac{1 + j_{N-1}}{1 + i}$

Where,

i = assumed interest rate

j_N = The declared interest rate for the month in which the annuity date or an annuity anniversary occurs (there is a separate value for each annuity year)

N = the Nth year after annuity payments begin

..

a = annuity present value factor calculated on the basis of the assumed interest rate and anticipated risk incidence rate

V = annuity policy non-forfeiture value

Annuity_N = the annuity amount for the Nth year after annuity payments begin

5. Anticipated expense loading factor (annuity accumulation period)

To be determined by a company itself and specified in a contract.

When submitting a product for review, a company shall attach a description of the bases for determination of the anticipated expense loading factor and other relevant materials.

6. Policy reserve

6.1 Manner of provisioning:

Annuity accumulation period: provisioned in the full amount of the annuity policy non-forfeiture value.

Annuity payment period:

Type A: provisioned by the level reserve method.

Type B: calculated as follows:

6.1.1 Sample calculation for life annuity:

$$V_N = \text{Annuity}_{N+1} \times a = (V_{N-1} - \text{Annuity}_N) \times \frac{1 + j_N}{1 - q}$$

6.1.2 Sample calculation for life annuity with a guaranteed payment period of n years:

(1) During the guaranteed payment period:

$$V_N = \text{Annuity}_{N+1} \times a_{n-N} + (V_{N-1} - \text{Annuity}_N \times a_{n-N+1}) \times \frac{1 + j_N}{1 - q}$$

(2) After the guaranteed payment period:

$$VN = \text{Annuity}_{N+1} \times a = (VN-1 - \text{Annuity}_N) \times \frac{1+jN}{1-q}$$

Where,

i = assumed interest rate

jN = The declared interest rate for the month in which an annuity anniversary occurs (there is a separate value for each annuity year)

N = the N th year after annuity payments begin

q = expected mortality

a = annuity present value factor calculated on the basis of assumed interest rate and anticipated risk incidence rate

VN = policy reserve at the end of the N th year after annuity benefits begin

Annuity_N = the annuity amount for the N th year after annuity payments begin

a_{n-N} = present value factor for annuity certain, as calculated for the $(n-N)$ th year using an assumed interest rate

n : the number of years for which payment of annuities is guaranteed

Calculated based on 90 percent of the mortality in the annuity table promulgated per Letter No. Taiwan-Finance-Insurance-862397037 of the Ministry of Finance, dated 30 June 1997; and not in any case to exceed the anticipated risk incidence rate used for calculation of annuity amount.

6.3 Assumed interest rate:

Annuity payment period:

Type A: The lower of the assumed interest rate used in calculation of annuity amount or the interest rate calculated in observance of the requirement that "the policy reserve interest rate for a new contract shall be determined using the automatically adjusted actuarial formula".

Type B: Based on the assumed interest rate applicable at the time of calculation

7. Surrender value

The method of or standard for calculation of surrender value is to be determined by a company itself subject to the provisions of Article 119 of the Insurance Act, and shall be expressly stipulated in the contract.

When submitting a product for review, a company shall attach the bases for determination of the method of or standard for calculation of surrender value.