

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 : 1. Definition of interest-sensitive annuity insurance policy

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.

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.

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.

2. Anticipated risk incidence rate

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.

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.

3. Assumed and declared interest rates

3.1 Declared interest rate

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.

3.2. Assumed interest rate

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: $A_{\bar{n}} = V / a$

Type B: $N = 1$, $A_{\bar{n}} = V + a$

$$N \geq 2, A_{\bar{n}} = A_{\bar{n}-1} \times \frac{1 + jN-1}{1 + i}$$

Where,

i = assumed interest rate

jN = 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 N th year after annuity payments begin

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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

$A_{\bar{n}}$ = the annuity amount for the N th 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:

$$V_{\bar{n}} = A_{\bar{n}} \times a = (V_{\bar{n}-1} - A_{\bar{n}}) \times \frac{1 + jN}{1 - q}$$

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

(1) During the guaranteed payment period:

$$V_{\bar{n}} = A_{\bar{n}} \times a_{\bar{n}} + (V_{\bar{n}-1} - A_{\bar{n}} \times a_{\bar{n}}) \times \frac{1 + jN}{1 - q}$$

(2) After the guaranteed payment period:

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

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 Nth 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 Nth year after annuity benefits begin

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

an-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.