

ACTUARIAL GUIDELINE XXV

CALCULATION OF MINIMUM RESERVES AND MINIMUM NONFORFEITURE VALUES FOR POLICIES WITH GUARANTEED INCREASING DEATH BENEFITS BASED ON AN INDEX

A. Valuation - Text

For a policy where premiums are fixed in amount at issue which provides for whole life insurance with the amount of death benefit adjusted periodically with the Consumer Price Index or another cost of living index, the value of the minimum reserve at any time shall be based on the maximum valuation interest rate for the year of issue and an acceptable mortality table for life insurance statutory reserves and based on the death benefit and premium pattern adjusted as provided in the policy by reasonable annual increases based on the index. The present value of future benefits component shall be further adjusted each year by the ratio of the then current amount of death benefit to the initially projected amount of death benefit. If the policy provides for future premiums and such premiums are also adjusted periodically with the Consumer Price Index or another cost of living index, the present value of future premiums component shall likewise be further adjusted each year by the ratio of the then current amount of death benefit to the initially projected amount of death benefit. The assumption as to what is a reasonable annual increase in death benefits based on the index must not be less than the maximum valuation interest rate for the year of issue less:

1. 2.0% If the annual increase is limited to an annual and non-cumulative maximum of 0% through 5.0%
2. 1.5% If the annual increase is limited to an annual and cumulative maximum of 0% through 5.0%.
3. 1.5% If the annual increase is limited to an annual and non-cumulative maximum of 5.01% through 10.0%.
4. 1.25% If the annual increase is limited to an annual and cumulative maximum of 5.01% through 10.0%.
5. 1.0% For all other plans.

The term “annual and non-cumulative maximum” refers to a maximum where each annual increase is limited to the lower of the maximum or the increase in the index without carry forward of excess index increases.

The term “annual and cumulative maximum” refers to a maximum where each annual increase is limited to the lower of the maximum or the increase in the index with carry forward of excess index increases.

In no event shall the assumption as to an annual increase based on the index be less than 1.0%.

This guideline for valuation shall be effective immediately for policies issued on or after January 1, 1991.

B. Nonforfeiture – Text

The threshold amount shall be \$10,000 until December 31, 2009. For years beginning after December 31, 2009, the threshold amount for a calendar year shall be the product of \$10,000 and the ratio of 1) the index for June of the prior year to 2) 136.0 (the index as of June 30, 1991), rounded to the nearest \$25. If this calculation would result in an increase in the threshold amount of less than \$500, the unadjusted threshold amount from the prior year shall continue in effect for the next calendar year. In no calendar year shall the increase in threshold amount exceed 5% of the prior calendar year threshold amount.

The index used to determine the threshold amount for years beginning after December 31, 2009, shall be the Consumer Price Index for All Urban Consumers (CPI-U) as of June 30 of that year. If this index is no longer available, another index which, in the actuary’s opinion, reflects the change in general consumer prices for the year should be substituted.

I. FOR POLICIES WHERE ANY DEATH BENEFIT FOR ANY POLICY YEAR WOULD EXCEED THE THRESHOLD AMOUNT EVEN IN ABSENCE OF ANY ANNUAL INCREASES BASED ON THE INDEX

For a policy where premiums are fixed in amount at issue which provides for whole life insurance with the amount of death benefit adjusted periodically with the Consumer Price Index or another cost of living index, the value of the minimum nonforfeiture benefit at any time shall be based on the maximum nonforfeiture interest rate for the year of issue and an acceptable mortality table for life insurance nonforfeiture and based on the death benefit and premium pattern adjusted as provided in the policy by reasonable annual increases based on the index. The present value of future benefits component shall be further adjusted each year by the ratio of the then current amount of death benefit to the initially projected amount of death benefit. If the policy provides for future premiums and such premiums are also adjusted periodically with the Consumer Price Index or another cost of living index, the present value of future premiums component shall likewise be further adjusted each year by the ratio of the then current amount of death benefit to the initially projected amount of death benefit. The assumption as to what is a reasonable annual increase in death benefits based on the index must not be less than the maximum valuation interest rate for the year of issue less:

1. 2.0% If the annual increase is limited to an annual and non-cumulative maximum of 0% through 5.0%.
2. 1.5% If the annual increase is limited to an annual and cumulative maximum of 0% through 5.0%.
3. 1.5% If the annual increase is limited to an annual and non-cumulative maximum of 5.01% through 10.0%.
4. 1.25% If the annual increase is limited to an annual and cumulative maximum of 5.01% through 10.0%.
5. 1.0% For all other plans.

The term “annual and non-cumulative maximum” refers to a maximum where each annual increase is limited to the lower of the maximum or the increase in the index without carry forward of excess index increases.

The term “annual and cumulative maximum” refers to a maximum where each annual increase is limited to the lower of the maximum or the increase in the index with carry forward of excess index increases.

In no event shall the assumption as to an annual increase based on the index be less than 1.0%.

II. FOR POLICIES WHERE ANY DEATH BENEFIT FOR ANY POLICY YEAR WOULD NOT EXCEED THE THRESHOLD AMOUNT IN ABSENCE OF ANY ANNUAL INCREASES BASED ON THE INDEX

For a policy where premiums are fixed in amount at issue which provides for whole life insurance with the amount of death benefit adjusted periodically with the Consumer Price Index or another cost-of-living index, the unadjusted value of the minimum nonforfeiture benefit at any time shall be based on a level death benefit, an acceptable mortality table for life insurance nonforfeiture and a nonforfeiture interest rate equal to the greater of (a) and (b):

(a) the nonforfeiture interest rate defined in Section 3 of VM-02, Minimum Nonforfeiture Mortality and Interest, less:

1. 4.5%-0 bp If the annual increase based on the index is limited to a maximum of 0% through 5.0%.
2. 4.25%-25 bp If the annual increase based on the index is limited to a maximum of 5.01% through 10.0%.
3. 4.0%-50 bp For all other plans.

(b) The Applicable Accumulation Test Minimum Rate in the Cash Value Accumulation Test under IRS Section 7702 (Life Insurance Contract Defined) of the U.S. Internal Revenue Code.

The present value of future benefits component shall be further adjusted each year by the ratio of the then current amount of death benefit to the initially projected amount of death benefit. If the policy provides for future premiums and such premiums are also adjusted periodically with the Consumer Price Index or another cost-of-living index, the present value of future premiums component shall likewise be further adjusted each year by the ratio of the then current amount of death benefit to the initially projected amount of death benefit.

For purposes of this guideline multiple policies on a single life shall be aggregated and only those policies aggregating not more than \$10,000 (or the threshold amount¹ after December 31, 2009), shall be considered under B.II.

This guideline for nonforfeiture shall be effective immediately for policies issued on or after January 1, 1991.

BACKGROUND

A number of companies are marketing individual life insurance policies with guaranteed increasing death benefits tied into a consumer price index or another cost-of-living index and are for low initial amounts of insurance sold through funeral directors to provide for burial expenses. Some of the policies provide for graded death benefits such as the return of premium with or without interest for the early policy years or for a fixed scheduled increase in death benefits prior to the operation of the index. In some cases, there is a maximum on the increase for any year. The vast majority of such policies are single premium policies, but some are annual premium policies (generally limited payment). The annual premium may or may not be subject to adjustment with the index.

Since the changes in the index are not known at issue, but from past experience, increases within a given range can be expected with a high probability, it is necessary to assume some increases and then to continually adjust the present value of future benefits component and, if appropriate, the present value of future premiums component in the reserve and nonforfeiture calculation.

Theoretically the same assumed increases in the death benefits should be used for both valuation and nonforfeiture. This guideline so provides for policies where the amount of death benefit in any given policy year would exceed \$10,000 (or the threshold amount¹ after December 31, 2009), even if there were no increases based on the index. For practical purposes this may mean that such policies are not marketable for higher amounts as it is most likely that such policies will not qualify under the IRS Section 7702. The cash value accumulation test to qualify thereunder requires a minimum interest rate ~~of 4%~~ and an assumed level amount of death benefits.

In the case of policies for an initial amount of insurance of \$5,000 or less, the IRS rules provide an exception to the prohibition of assuming increasing death benefits. However, since many of the policies for very low amounts of initial face amount of insurance would require relatively high expenses if underwritten, many of the policies are issued with simplified underwriting or on a guaranteed issue basis with lower amounts of death benefits in the early policy years, some of the resulting annual increases are such as would disqualify many of the policies for the exception. Therefore, it is recommended that policies for low amounts of insurance be allowed to qualify under the cash value accumulation test by permitting the nonforfeiture values to be based on a level death benefit and ~~4% or higher interest~~ an interest rate not less than the VM-02 nonforfeiture interest rate Applicable Accumulation Test Minimum Rate in the Cash Value Accumulation Test under IRS Section 7702 and requiring such values to be updated as increases based on the index take place. The amount in this guideline is set at \$10,000 (or the threshold amount¹ after December 31, 2009), to allow for future adjustments and for different patterns of benefits for low amounts.

For single premium policies, the value of nonforfeiture benefits based on a level death benefit and a net assumed nonforfeiture interest rate equal to the maximum nonforfeiture interest rate less an assumed increase based on the index and such factors then adjusted by the projected increases will approximate factors based on assumed increases and the maximum nonforfeiture interest rate. ~~However, the net interest rate is likely to be less than 4%. Thus, the~~ the VM-02 nonforfeiture interest rate the Applicable Accumulation Test Minimum Rate in the Cash Value Accumulation Test under IRS Section 7702 for policies of low amounts of insurance is apt to produce lower cash values than the procedure for large amounts of insurance. Such lower values can be justified based upon the fact that the highly specialized market is prearranged funeral expenses for very small amounts of insurance per policy.

To emphasize the qualification with the IRS rules for the very low amounts of insurance, the nonforfeiture guideline for small amount policies is stated in terms of the net rate, a level death benefit and continual adjustment.

For solvency purposes, reserves should be conservative. The same rules apply for reserve regardless of the size of the policy. That is, lower reserves are not permitted for policies with very low amounts of insurance per policy.

Paragraph 5c(3) of the Model Standard Nonforfeiture Law states that unscheduled changes do not need to be taken into account until the time of the change. The changes guaranteed according to an index are a hybrid, i.e., the changes are scheduled but the amount of the change is not known until the index is determined. Thus, the changes must be recognized at issue. This guideline is a hybrid with increases assumed at issue either explicitly or implicitly but with further adjustments made at the time the increase based on the index is determined.

¹ In 2010, the actuarial guideline was modified to substitute a threshold amount for 10,000, such threshold being increased by the change in the CPI-U, the CPI for All Urban Consumers.