*__All Redline edits are on top of VM-21, Section 6 (Requirements for the ASPA)__*

*__Exposure Note:__ For partial withdrawals, surrenders, and mortality assumptions in the July 2023 exposed draft, please provide comments on the structure and methodology within the additional standard projection amount calculation, rather than specific values (which will be updated by the NAIC drafting groups), in response to the exposure of the July 2023 draft.*

**Section 6: Requirements for the Additional Standard Projection Amount**

A. Overview

    1. Determining the Additional Standard Projection Amount

        a. The additional standard projection amount shall be the larger of zero and an amount determined in aggregate for all contracts within each reserving category falling under the scope of these requirements, excluding those contracts that pass the exclusion tests in Section 7 and to which VM-A, VM-C, and VM-V are applied, by calculating the Prescribed Projections Amount under the CTE with Prescribed Assumptions (CTEPA) method. The company shall assess the impact of aggregation on the additional standard projection amount.

> **Guidance Note:** The following outlines one method that may be used to assess the impact of aggregation. If a company plans to use a different method, they should discuss that method with their domiciliary commissioner.
>
> The benefit of aggregation is determined using the following steps, using the same scenario used for the cumulative decrement analysis, and using prescribed assumptions and discount rates:
>
>     1. Calculate the present value of each contract's accumulated deficiency up through the duration of the aggregate GPVAD. When determining the contract accumulated deficiency: (a) contract starting assets equal CSV; (b) contract level starting assets include both separate account and general account assets, and exclude any hedge assets; (c) discount rate for the PVAD is the NAER; and (d) for a contract that terminates prior to the duration of the GPVAD, there will no longer be liability cash flows, but assets (positive or negative) continue to accumulate.
>
>     2. The impact of aggregation is the sum of the absolute value of the negative amounts from step 1 above.
>
> Apply steps 1 and 2 above to each model point .

        b. The additional standard projection amount shall be calculated based on the scenario reserves, as discussed in Section 4.B, with certain prescribed assumptions replacing the company prudent estimate assumptions. As is the case in the projection of a scenario in the calculation of the DR and SR, the scenario reserves used to calculate the additional standard projection amount are based on an analysis of asset and liability cash flows produced along certain equity and interest rate scenario paths.

B. Additional Standard Projection Amount

    1. General

Where not inconsistent with the guidance given here, the process and methods used to determine the additional standard projection amount under the CTEPA method shall be the same as required in the calculation of the DR and SR as described in Section 3.D and Section 3.E of these requirements. Regarding groups of contracts for which a DR is calculated, any references to CTE in this section (e.g., CTE70 (adjusted) and CTE70 (best efforts)) shall instead follow a scenario reserve calculation, pursuant to the requirements in Section 7.E.2. Any additional assumptions needed to determine the additional standard projection amount shall be explicitly documented.

2. The company shall determine the Prescribed Projections Amount by following the CTEPA Method below.

3. For determining the CTE70 (adjusted), the assumptions for hedging programs with hedge payoffs that offset interest credits associated with indexed interest strategies (indexed interest credits) shall be the same as those used for the CTE70 (best efforts), following the requirements in Section 4.A.4.b.

4. Calculation Methodology

   a. CTEPA Method:

      i. If the company used a model office to calculate the CTE Amount, then the company may continue to use the same model office, or one that is no less granular than the model office that was used to determine the CTE Amount, provided that the company shall maintain consistency in the grouping method used from one valuation to the next.

      ii. Calculate the Prescribed Projections Amount as the CTE70 (adjusted) using the same method as that outlined in Section 9.C (which is the same as the DR and SR following Section 4.A.4.b for a company that does not have a future hedging strategy supporting the contracts other than those supporting index interest credits) but substituting the assumptions prescribed by Section 6.C. The calculation of this Prescribed Projections Amount also requires that the scenario reserve for any given scenario be equal to or in excess of the cash surrender value in aggregate on the valuation date for the group of contracts modeled in the projection.

   b. Once the Prescribed Projections Amount is determined by the method above, then the company shall reduce the Prescribed Projections Amount by the CTE70 (adjusted). The difference shall be referred to as the Unbuffered Additional Standard Projection Amount.

   c. Reduce the Unbuffered Additional Standard Projection Amount by an amount equal to the difference between (i) and (ii), where (i) and (ii) are calculated in the following manner:

      i. Calculate the Unfloored CTE70 (adjusted), using the same procedure as CTE70 (adjusted) but without requiring that the scenario reserve for any scenario be no less than the cash surrender value in aggregate on the valuation date.

      ii. Calculate the Unfloored CTE65 (adjusted), which is calculated in the same way as Unfloored CTE70 (adjusted) but averaging the 35% (instead of

30%) largest values.

    d.    The additional standard projection amount shall subsequently be the larger of the quantity calculated in Section 6.B.4.c and zero.

5.    Modeled Reinsurance

Cash flows associated with reinsurance shall be projected in the same manner as that used in the calculation of the DR and SR as described in Section 3.

6.    Modeled Hedges

Cash flows associated with hedging shall be projected in the same manner as that used in the calculation of the CTE70 (adjusted) as discussed in Section 9.C or Section 4.A.4.b for a company without a future hedging strategy supporting the contracts other than a future hedging strategy with hedge payoffs that offset interest credits associated with indexed interest strategies.

C.    Prescribed Assumptions

1.    Assignment of Guaranteed Benefit Type

    a.    Assumptions shall be set for each contract in accordance with the contract's guaranteed benefit type, where a number of common benefit types are specifically defined in VM-01 (e.g., GMDB, GMWB, etc.).

    b.    Certain guaranteed living benefit products have features that can be described by multiple types of guaranteed benefits. If the guaranteed living benefit can be described by more than one of the definitions in VM-01 for the purpose of determining the additional standard projection amount, the company shall select the guaranteed benefit type that it deems best applicable and shall be consistent in its selection from one valuation to the next. For instance, if a guaranteed living benefit has both lifetime GMWB and non-lifetime GMWB features and the company determines that the lifetime GMWB is the most prominent component; assumptions for all contracts with such a guaranteed living benefit shall be set as if the guaranteed living benefit were only a lifetime GMWB and did not contain any of the non-lifetime GMWB features. If the company determines that the non-lifetime GMWB is the most prominent component; assumptions for all contracts with such a guaranteed living benefit shall be set as if the guaranteed living benefit were only a non-lifetime GMWB and did not contain any of the lifetime GMWB features.

    c.    If a contract cannot be classified into any categories within a given assumption, the company shall determine the defined benefit type with the most similar benefits and risk profile as the company's benefit and utilize the assumption prescribed for this benefit.

2.    Maintenance Expenses

Maintenance expense assumptions shall be determined as the sum of (a) plus (b) if the company is responsible for the administration or (c) if the company is not responsible for the administration of the contract:

    a.    Each contract for which the company is responsible for administration incurs an

annual expense equal to the Base Maintenance Expense Assumption shown in the table below for each product type multiplied by [1.025]^(valuation year – 2015) in the first projection year, and increased by an assumed annual inflation rate of [2%] for subsequent projection years.

Table 6.1: Base Maintenance Expense Assumptions

| Contract Type | Base Maintenance Expense Assumption |
|---|---|
| Contracts in the Payout Annuity Reserving Category | $50 |
| Fixed Indexed Annuities and other contracts in the Accumulation Reserving Category with guaranteed living benefits | $100 |
| All other contracts | $75 |

Drafting Note: The expense assumptions may be updated closer to adoption, such that the base maintenance expense assumptions are higher and the starting calendar year for accumulating inflation is updated to be more in line with the effective year of VM-22 PBR.

    b.      Seven basis points of the projected account value for each year in the projection.

    c.      Each contract for which the company is not responsible for administration (e.g., if the contract were assumed by the company in a reinsurance transaction in which only the risks associated with a guaranteed benefit rider were transferred) incurs an annual expense equal to $35 multiplied by [1.025]^(valuation year – 2015) in the first projection year, increased by an assumed annual inflation rate of [2%] for subsequent projection years.

3.      Guarantee Actuarial Present Value

The Guarantee Actuarial Present Value (GAPV) is used in the determination of the full surrender rates (Section 6.C.5) and other voluntary contract terminations (Section 6.C.10). The GAPV represent the integrated actuarial present value of the lump sum or income payments associated with all guaranteed living and death benefits, including account value, within the policy. For the purpose of calculating the GAPV, such payments shall include the portion that is paid out of the contract holder's Account Value. Regarding contracts for which there is no account value or surrender benefit, such as some contracts within the Payout Annuity Reserving Category and Longevity Reinsurance Reserving Category, the GAPV requirements are not applicable.

The calculation of an integrated benefit, for a future projection period can be expressed as:

tpx * Living Benefit (survival to receive benefit at time t and associated amount) + qx * Death Benefit (then current probability of death multiplied by any death benefit)

The GAPV shall be calculated in the following manner:

    a.      If a guaranteed benefit is exercisable immediately, then the GAPV shall be determined assuming immediate or continued exercise of that benefit unless otherwise specified in a subsequent subsection of Section 6.C.3.

b.    If a guaranteed benefit is not exercisable immediately (e.g., because of minimum age or contract year requirements), then the GAPV shall be determined assuming exercise of the guaranteed benefit at the earliest possible time unless otherwise specified in a subsequent subsection of Section 6.C.3.

c.    Determination of the GAPV of a guaranteed benefit that is exercisable or payable at a future projection interval shall take account of any guaranteed growth in the basis for the guarantee (e.g., where the basis grows according to an index or an interest rate), as well as survival to the date of exercise using the mortality table specified in Section 6.C.3.h.

> **Drafting Note:** The Subgroup will discuss removing paragraphs a-c above upon proposed wording from the Academy that specifies the assumption for when to exercise the guarantee.

d.    Once a GMWB is exercised, the contract holder shall be assumed to withdraw in each subsequent contract year an amount equal to no less than the initial percentage taken of the GMWB's guaranteed maximum annual withdrawal amount in that contract year (and 100% when the account value is depleted).

e.    If account value growth is required to determine projected benefits or product features, then the account value growth shall either be assumed to be the current fixed index credited interest rate or the current option budget, by strategy, reduced by fees chargeable to the account value.

g.    For a GMDB that terminates at a certain age or in a certain contract year, the GAPV shall be calculated as if the GMDB does not terminate. Benefit features such as guaranteed growth in the GMDB benefit basis may be calculated so that no additional benefit basis growth occurs after the GMDB termination age or date defined in the contract.

h.    The mortality assumption used shall be the following:

    i.    Individual annuity contracts within the Accumulation Reserving Category shall use the following adjustment factors applied to the 2012 IAM Table with no mortality improvement applied:

Table 6.2: Mortality for Individual Annuities in Accumulation Reserving Category

| Attained Age | Without Guaranteed Living Benefits | | With Guaranteed Living Benefits | |
|---|---|---|---|---|
| | Female | Male | Female | Male |
| 50 and below | | | | |
| 51 | | | | |
| 52 to 56 | | | | |
| 57 to 61 | | | | |
| 62 to 66 | | | | |
| 67 to 71 | | | | |
| 72 to 76 | | | | |
| 77 to 81 | | | | |
| 82 to 86 | | | | |
| 87 to 91 | | | | |
| 92 to 96 | | | | |
| 97 to 101 | | | | |
| 102 and above | | | | |

ii.     Individual annuity contracts within the Payout Annuity Reserving Category other than Structured Settlement Contracts shall use the 2012 IAM Table with the following factors applied:

Table 6.3: Mortality for Individual Annuities in Payout Annuity Reserving Category

| Attained Age | Without Guaranteed Living Benefits | |
| --- | --- | --- |
| | Female | Male |
| 50 and below | | |
| 51 | | |
| 52 to 56 | | |
| 57 to 61 | | |
| 62 to 66 | | |
| 67 to 71 | | |
| 72 to 76 | | |
| 77 to 81 | | |
| 82 to 86 | | |
| 87 to 91 | | |
| 92 to 96 | | |
| 97 to 101 | | |
| 102 and above | | |

iii.　　Individual Structured Settlement Contracts on standard lives shall use the 1983 Individual Annuity Mortality (IAM) Table 'A' with the following factors applied:

Table 6.4: Mortality for Structured Settlement Contracts

| Attained Age | Structured Settlements – Standard Lives | | |
|---|---|---|---|
| | Durations 1 to 5 | Durations 6 to 10 | Durations 11 and greater |
| 40 and below | | | |
| 41 to 45 | | | |
| 46 to 50 | | | |
| 51 to 55 | | | |
| 56 to 60 | | | |
| 61 to 65 | | | |
| 65 to 70 | | | |
| 71 to 75 | | | |
| 76 to 80 | | | |
| 81 to 85 | | | |
| 86 to 90 | | | |
| 91 to 95 | | | |
| 96 to 100 | | | |
| 101 and above | | | |

Substandard lives shall use the mortality described above for standard lives, with the "Constant Extra Death" (CED) methodology, as described in Actuarial Guideline IX. The factors for rate-up are provided as follows:

| Attained Age | Factors for Rate-Up 1 to 20 | | | |
| --- | --- | --- | --- | --- |
| | Durations 1 to 10 | Durations 11 to 20 | Durations 21 to 31 | Durations 31 and greater |
| 40 and below | | | | |
| 41 to 80 | | | | |
| 81 and above | | | | |

| Attained Age | Factors for Rate-Up 21 and greater | | | |
| --- | --- | --- | --- | --- |
| | Durations 1 to 10 | Durations 11 to 20 | Durations 21 to 31 | Durations 31 and greater |
| 40 and below | | | | |
| 41 to 80 | | | | |
| 81 and above | | | | |

iv.  Group annuities, international business, and ~~contracts within the~~ Longevity Reinsurance contracts where the underlying risk is associated with group annuities ~~Reserving Category~~ shall use the lower of the 1994 GAM Table with Projection Scale AA applied to the valuation date and the company's prudent estimate assumptions. Longevity Reinsurance contracts where the underlying risk is associated with individual annuities shall use the lower of the 2012 IAM table with factors in Table 6.3 and the company's prudent estimate assumptions. The company prudent estimate assumptions for group annuities, international business, and contracts within the Longevity Reinsurance Reserving Category shall be developed separately from each other as appropriate.

Commented [A1]: Assumption should be consistent with the Payout Annuity Reserving Category

> **Guidance Note:** The above tables include implicit historical mortality improvement until Dec 31, 2021. Projecting mortality to a specific date rather than the valuation date in the above step is a practical expedient to streamline calculations. This date should be considered an experience assumption to be periodically reviewed and updated as the Life Actuarial (A) Task Force reviews and updates the assumptions used in the Standard Projection.

i. The discount rate used shall be the 10-year Treasury Department bond rate on the valuation date unless otherwise specified in a subsequent subsection of Section 6.C.3.

4. Partial Withdrawals

Partial withdrawals required contractually or previously elected (e.g., a contract operating under an automatic withdrawal provision, or that has voluntarily enrolled in an automatic withdrawal program, on the valuation date) are to be deducted from the Account Value in each projection interval consistent with the projection frequency used, as described in Section 4.F, and according to the terms of the contract. However, if a GMWB contract's automatic withdrawals results in partial withdrawal amounts in excess of the GMWB's guaranteed maximum annual withdrawal amount, such automatic withdrawals shall be revised such that they equal the GMWB's guaranteed maximum annual withdrawal amount. However, for tax qualified contracts with ages greater than or equal to the federal required minimum distribution (RMD) age, if the prescribed withdrawal amount is below the RMD amount, the withdrawal amount may be reset to the RMD amount.

> **Guidance Note:** Companies are expected to model withdrawal amounts consistent with the RMD amount where applicable and where practically feasible; however, it is understood that this level of modeling sophistication may not be available for all companies.

For any contract not on an automatic withdrawal provision as described in the preceding paragraph, depending on the guaranteed benefit type, other partial withdrawals shall be projected as follows but shall not exceed the free partial withdrawal amount above which surrender charges are incurred and may be floored at the RMD amount for tax qualified contracts with ages greater than or equal to the federal RMD age:

a. For contracts in the Accumulation Reserving Category either without a guaranteed living benefit or prior to exercising a guaranteed living benefit, the partial withdrawal amount each year shall equal the following percentages of account value, based on the contract holder's attained age:

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Table 6.5: Partial Withdrawals for Accumulation Reserving Category Contracts – Qualified

| Attained Age | Contracts without GLBs | Contracts with GLBs prior to exercising | Contracts with GLBs after exercising and ITM ≤ 125% | Contracts with GLBs after exercising and ITM > 125% |
|---|---|---|---|---|
| 59 and under | 1.70% | 0.95% | 0.75% | 0.75% |
| 60 – 64 | 2.05% | 1.15% | 5.00% | 8.25% |
| 65 – 69 | 2.25% | 1.40% | 14.50% | 21.50% |
| 70 – 74 | 3.40% | 2.70% | 25.00% | 36.75% |
| 75 – 79 | 4.55% | 4.30% | 29.50% | 43.50% |
| 80 and over | 6.00% | 5.80% | 29.50% | 43.50% |

Table 6.6: Partial Withdrawals for Accumulation Reserving Category Contracts – Non-Qualified

| Attained Age | Contracts without GLBs | Contracts with GLBs prior to exercising | Contracts with GLBs after exercising and ITM ≤ 125% | Contracts with GLBs after exercising and ITM > 125% |
|---|---|---|---|---|
| 59 and under | 1.65% | 1.15% | 1.00% | 1.25% |
| 60 – 64 | 1.65% | 1.15% | 5.25% | 9.25% |
| 65 – 69 | 1.65% | 1.15% | 13.25% | 20.50% |
| 70 – 74 | 1.65% | 1.65% | 20.00% | 28.75% |
| 75 – 79 | 1.65% | 1.65% | 22.50% | 34.50% |
| 80 and over | 1.65% | 1.65% | 22.50% | 34.50% |

$$ITM = GAPV \div Account\,Value$$

b. For contracts in the Accumulation Reserving Category with a guaranteed living benefit and an account value of zero, the partial withdrawal amount shall be the guaranteed maximum withdrawal amount.

c. For contracts in the Accumulation Reserving Category with lifetime guaranteed living benefits that, in the contract year immediately preceding that during the valuation date, withdrew a non-zero amount not in excess of the guaranteed living benefit's guaranteed annual withdrawal amount, the partial withdrawal amount shall be the guaranteed maximum annual withdrawal amount each year until the contract Account Value reaches zero.

d. For other contracts in the Accumulation Reserving Category with lifetime guaranteed living benefits, partial withdrawals shall be projected to commence pursuant to the company's own prudent best estimate assumptions, but ensuring that, at a minimum, guaranteed living benefit utilization rates in aggregate, measured by benefit base under the scenario that produces the scenario reserve that is closest to the CTE70 amount, are at least as high as the utilization rates shown in the table below. Once guaranteed living benefit withdrawals are projected to commence, the partial withdrawal amount shall be 100% of the guaranteed annual withdrawal amount each year until the contract's account value reaches zero.

Table 6.8: Utilization Assumptions for Accumulation Reserving Category Contracts with Lifetime Benefits

| Qualification Status | Before 65 | 65 to 70 | 71 to 75 | 76 and above |
|---|---|---|---|---|
| Qualified | 12% | 20% | 30% | 35% |
| Non-Qualified | 15% | 40% | 80% | 95% |

e. For contracts in the Accumulation Reserving Category with Non-lifetime guaranteed living benefits that, in the contract year immediately preceding that during the valuation date, withdrew a non-zero amount not in excess of the guaranteed living benefits annual withdrawal amount, the partial withdrawal amount shall be 70% of the guaranteed living benefits guaranteed annual withdrawal amount each year until the contract Account Value reaches zero.

f. For contracts in the Accumulation Reserving Category with Non-lifetime guaranteed living benefits, partial withdrawals shall be projected to commence pursuant to the Company's own prudent best estimate assumptions, but ensuring that, at a minimum, guaranteed living benefit utilization rates in aggregate, measured by benefit base under the scenario that produces a scenario reserve closest to the CTE70 amount, are at least as high as the utilization rates shown in the table below. Once guaranteed living benefit withdrawals are projected to commence, the partial withdrawal amount shall be 70% of the guaranteed annual withdrawal amount each year until the contract's account value reaches zero.

Table 6.9: Utilization Assumptions for Accumulation Reserving Category Contracts with Non-Lifetime Benefits

| Qualification Status | Before 65 | 65 to 70 | 71 to 75 | 76 and above |
|---|---|---|---|---|
| Qualified | 12% | 20% | 30% | 35% |
| Non-Qualified | 15% | 40% | 80% | 95% |

g. For contracts with no minimum guaranteed benefits, the partial withdrawal amount each year shall equal 3.5% of the Account Value.

h. There may be instances where the company has certain data limitations, (e.g., with respect to policies that are not enrolled in an automatic withdrawal program but have exercised a non-excess withdrawal in the contract year immediately preceding the valuation date. The company may employ an appropriate proxy method if it does not result in a material understatement of the reserve.

       i.     For contracts that do not offer withdrawal benefits, such as some contracts within the Payout Annuity Reserving Category and Longevity Reinsurance Reserving Category, this section is not applicable.

5.     Full Surrenders

For contracts that offer surrender benefits, base lapse and full surrender rates shall be dynamically adjusted upward (or downward) when the actual credited rate is below (or above) the competitor rate. For contracts with a guaranteed living benefit, base lapse and full surrender rates shall be further adjusted based on the ITM of the rider value. The following formula shall be used:

$Total\ Lapse = (Base\ Lapse + Rate\ Factor) \times ITM\ Factor$ where

| | |
|---|---|
| $ITM\ Factor = 1$ | if ITM $\leq$ 1.25 |
| $ITM\ Factor = (1.25 \div ITM)^2$ | if ITM > 1.25 |
| ITM Factor $= 0$ | if AV = 0 |

$ITM = GAPV \div Account\ Value$

$Rate\ Factor = Market\ Factor \times Max(0, 1 - 10 \times (1\text{-}CSV/AV)) \times$ GMIR/SNFL Era Factor

GMIR/SNFL Era Factor $= 1$ (for current in-scope business, should be revisited and developed when high GMIR business is included in-scope from the inforce)

$Market\ Factor = X \times (CR - MR)$      if CR ≥ MR $Market Factor = 0$
                                  if MR > CR ≥ (MR − BF)

$Market Factor = Y \times (MR - BF - CR)$   if CR < (MR − BF)

     X = 1 during SC Period, 5 at Shock, and 3 thereafter

     Y = 3 during SC Period, 5 at Shock, and 6 thereafter

*Minimum Rate Factor* = -2% generally, -4% at shock

*Maximum Rate Factor* = 10% during surrender charge period, 60% at shock, and 35% thereafter

*CR* = the crediting rate, or options budget, at the time of the projection

*MR* = the market competitor rate at the time of the projection. calibrated to the 10-YR treasury plus 60% BBB / 40% A spreads – pricing spread, such that the pricing spread is calibrated to current rate and cap levels at the start of the projection

*BF* = a buffer factor where dynamic lapses do not occur, 25bps

*Base Lapse* = Determined using the following tables:

Table 6.9: Base Lapse Rates for Fixed Indexed Annuities with no Guaranteed Living Benefits

| Years Before or After Surrender Charge Expiration | Attained Age | | | |
|---|---|---|---|---|
| | Before 60 | 60 to 69 | 70 to 79 | 80 and above |
| 5 or more yrs after expiry | 6.5% | 7.0% | 6.0% | 5.0% |
| 4 yrs after expiry | 8.0% | 8.5% | 6.5% | 5.0% |
| 3 yrs after expiry | 8.5% | 9.5% | 7.0% | 5.5% |
| 2 yrs after expiry | 11.0% | 12.0% | 9.0% | 7.0% |
| 1 yrs after expiry | 15.0% | 17.5% | 13.5% | 9.0% |
| Upon expiry | 33.5% | 41.5% | 37.0% | 23.5% |
| 1 yrs to expiry | 4.5% | 3.5% | 4.0% | 4.0% |
| 2 yrs to expiry | 4.0% | 3.5% | 3.0% | 3.0% |
| 3 yrs to expiry | 2.5% | 2.0% | 2.0% | 2.0% |
| 4 yrs to expiry | 3.0% | 2.5% | 2.5% | 2.5% |
| 5 yrs or more to expiry | 2.0% | 2.5% | 2.0% | 1.5% |

Table 6.10: Base Lapse Rates for Non-Indexed Fixed Deferred Annuities
with no Guaranteed Living Benefits

| Years Before or After Surrender Charge Expiration | Attained Age | | | |
|---|---|---|---|---|
| | Before 60 | 60 to 69 | 70 to 79 | 80 and above |
| 5 or more yrs after expiry | | | | |
| 4 yrs after expiry | | | | |
| 3 yrs after expiry | | | | |
| 2 yrs after expiry | | | | |
| 1 yrs after expiry | | | | |
| Upon expiry | | | | |
| 1 yrs to expiry | | | | |
| 2 yrs to expiry | | | | |
| 3 yrs to expiry | | | | |
| 4 yrs to expiry | | | | |
| 5 yrs or more to expiry | | | | |

Table 6.11: Base Lapse Rates for Fixed Annuities with Guaranteed Living Benefits Prior to Utilization

| Surrender Charge Expiration Status and In-the-Moneyness (ITM) | Attained Age | | | |
|---|---|---|---|---|
| | Before 60 | 60 to 69 | 70 to 79 | 80 and above |
| Prior to Expiry and ITM of: | | | | |
| Below 100% | 2.0% | 1.5% | 3.5% | 5.5% |
| 100% to 124% | 2.0% | 1.5% | 1.5% | 2.0% |
| 125% and over | 1.5% | 1.0% | 1.5% | 2.0% |
| At Expiry and ITM of: | | | | |
| Below 100% | 91.5% | 92.0% | 90.0% | 81.0% |
| 100% to 124% | 18.0% | 16.0% | 15.5% | 11.0% |
| 125% and over | 5.5% | 6.0% | 7.5% | 7.0% |
| After Expiry and ITM of: | | | | |
| Below 100% | 69.5% | 68.5% | 58.5% | 44.5% |
| 100% to 124% | 10.5% | 8.0% | 7.0% | 5.0% |
| 125% and over | 3.0% | 3.5% | 4.5% | 3.5% |

Table 6.12: Base Lapse Rates for Fixed Annuities with Guaranteed Living Benefits After Utilization

| Surrender Charge Expiration Status and In-the-Moneyness (ITM) | Attained Age | | | |
|---|---|---|---|---|
| | Before 60 | 60 to 69 | 70 to 79 | 80 and above |
| Prior to Expiry and ITM of: | | | | |
| Below 100% | 1.0% | 1.0% | 1.0% | 5.5% |
| 100% to 124% | 1.0% | 1.0% | 1.0% | 1.5% |
| 125% and over | 1.0% | 1.0% | 1.0% | 5.5% |
| At Expiry and ITM of: | | | | |
| Below 100% | 9.0% | 32.5% | 14.0% | 0.0% |
| 100% to 124% | 2.0% | 3.0% | 2.5% | 19.5% |
| 125% and over | 1.5% | 1.0% | 1.0% | 4.0% |
| After Expiry and ITM of: | | | | |
| Below 100% | 3.5% | 10.5% | 4.5% | 0.0% |
| 100% to 124% | 1.5% | 1.0% | 1.5% | 1.5% |
| 125% and over | 1.5% | 1.0% | 1.0% | 3.0% |

For contracts in which there is no account value or surrender benefit, such as some contracts within the Payout Annuity Reserving Category and Longevity Reinsurance Reserving Category, this section is not applicable.

6.      Annuitizations

The annuitization rate for contracts shall be 0% at all projection intervals.

7.      Index Transfers and Future Deposits

a.      No transfers between fixed and index strategies or accounts shall be assumed in the projection unless required by the contract (e.g., contractual rights given to the insurer to implement a contractually specified portfolio insurance management strategy). When transfers must be modeled, to the extent not inconsistent with contract language, the allocation of transfers

to indices, accounts, or funds must be in proportion to the contract's current allocation to funds.

b. No future deposits to account value shall be assumed unless required by the terms of the contract, in which case they must be modeled. When future deposits must be modeled, to the extent not inconsistent with contract language, the allocation of the deposit to funds must be in proportion to the contract's current allocation to such funds.

8. Mortality

The following mortality rates shall be used:

a. Individual annuity contracts within the Accumulation Reserving Category shall use the mortality rates in Section 6.C.3.h.i with Projection Scale G2 mortality improvement factors applied from December 31, 2021 up until each future projection year.

b. Individual annuity contracts within the Payout Annuity Reserving Category other than Structured Settlement Contracts shall use the mortality rates in Section 6.C.3.h.ii with Projection Scale G2 mortality improvement factors applied from December 31, 2021 up until each future projection year.

c. Individual Structured Settlement Contracts shall use the mortality rates in Section 6.C.3.h.iii with the following mortality improvement factors applied from December 31, 2021 up until each future projection year.

[Future improvement]

d. Group annuities, international business, and contracts within the Longevity Reinsurance Category shall use the mortality rates in Section 6.C.3.h.iv with Projection Scale AA mortality improvement factors applied from the valuation date up until each future projection year. However, if the company's prudent estimate assumption is used in Section 6.C.3.h.iv and already reflects mortality improvement from December 31, 2021 up until the projection year, then Projection Scale AA mortality improvement factors shall not be used.

9. Account Value Depletions

The following assumptions shall be used when a contract's Account Value reaches zero:

a. If the contract has a guaranteed living benefit, the contract shall take benefits that are equal in amount each year to the guaranteed maximum annual withdrawal amount.

b. If the contract has any other guaranteed benefits, including a GMDB, the contract shall remain in-force. If the guaranteed benefits contractually terminate upon account value depletion, such termination provisions are

assumed to be voided in order to approximate the contract holder's retaining adequate Account Value to maintain the guaranteed benefits in-force. At the option of the company, fees associated with the contract and guaranteed benefits may continue to be charged and modeled as collected even if the account value has reached zero. While the contract must remain in-force, benefit features may still be terminated according to contractual terms other than account value depletion provisions.

    c.    If the contract has no minimum guaranteed benefits, the contract should be terminated according to contractual terms.

10.    Other Voluntary Contract Terminations

For contracts that have other elective provisions that allow a contract holder to terminate the contract voluntarily, the termination rate shall be calculated as detailed above in Section 6.C.5 with the following adjustments:

    a.    If the contract holder is not yet eligible to terminate the contract under the elective provisions, the termination rate shall be zero.

    b.    After the contract holder becomes eligible to terminate the contract under the elective provisions, the termination rate shall be determined using assumptions in Section 6.C.5.

    c.    In Section 6.C.5, the ITM of a contract's guaranteed benefit shall be calculated based on the ratio of the guaranteed benefit's GAPV to the termination value of the contract. The termination value of the contract shall be calculated as the GAPV of the payment stream that the contract holder is entitled to receive upon termination of the contract; if the contract holder has multiple options for the payment stream, the termination value shall be the highest GAPV of these options.

    d.    For contracts with guaranteed living benefits, for all contract years in which a withdrawal is projected, the termination rate obtained from Section 6.C.5 shall be additionally multiplied by 60%.

11.    Crediting Rates and Investment Spread

    a.    This section applies to all contracts that provide crediting rates after initial issuance.

    b.    For Fixed Index Annuities, the option budget is the assumed crediting rate for quantifying the investment spread between the net portfolio earned rate and the crediting rate.

    c.    With respect to setting a limit on the annual spread between the net portfolio earned rate and the crediting rate:

        i.    The maximum annual spread is [2.25%] for policies without an initial bonus.

        ii.    For policies with an initial bonus of [B%], the maximum annual spread is [2.25%] + [B%]/SCP during the surrender charge period

(SCP). The maximum annual spread is reduced back to [2.25%] after the SCP.

iii.    The extra maximum annual spread [B%]/SCP allows the insurer to recapture the initial bonus via higher spread during the SCP.

> **Drafting Note:** The NAIC VM-22 (A) Subgroup expressed openness to hearing any future proposals that address persistency bonuses in the requirements described above to limit the investment spread.