

Methodology:

The C-3 RBC is calculated as follows:

- A. CTE (XX) is calculated as follows (please see the field test specifications for XX testing values): Apply the CTE methodology described in NAIC Valuation Manual VM-22 and calculate the CTE (XX) as the numerical average of the (100-XX) percent largest values of the Scenario Reserves, as defined by Section 4 of VM-22. In performing this calculation, the process and methods used to calculate the Scenario Reserves use the requirements of VM-22 and should be the same as used for the reserve calculations. The effect of Federal Income Tax should be handled following one of the following two methods:
 - 1. If using the Macro Tax Adjustment (MTA): The modeled cash flows will ignore the effect of Federal Income Tax. As a result, for each individual scenario, the numerical value of the scenario reserve used in this calculation should be identical to that for the same scenario in the Aggregate Reserve calculation under VM-22. Federal Income Tax is reflected later in the formula in paragraph B.1.
 - 2. If using Specific Tax Recognition (STR): At the option of the company, CTE After-Tax (XX) (CTEAT (XX)) may be calculated using an approach in which the effect of Federal Income Tax is reflected in the projection of Accumulated Deficiencies, as defined in Section 4.A. of VM-22, when calculating the Scenario Reserve for each scenario. To reflect the effect of Federal Income Tax, the company should first determine the amount of tax reserves at the beginning of the projection, a tax adjustment is required. The CTEAT (XX) must be increased on an approximate basis to correct for the understatement of modeled tax expense. The additional taxable income at the time of claim will be realized over the projection and will be approximated using the duration to worst, i.e., the duration producing the lowest present value for each scenario. The method of developing the approximate tax adjustment is described below. The increase to CTEAT (XX) may be approximated as the corporate tax rate times f times the difference between the company's actual tax reserves and projected tax reserves at the start of the projections. For this calculation, f is calculated as follows: For the scenarios reflected in calculating CTE (98), the ~~Scenario Greatest Present Value~~ scenario reserve is determined and its associated projection duration is tabulated. At each such duration, the ratio of the number of contracts in force (or covered lives for group contracts) to the number of contracts in force (or covered lives) at the start of the modeling projection is calculated. The average ratio is then calculated over all CTE (XX) scenarios and f is one minus this average ratio..

B. Determination of RBC amount using stochastic modeling:

1. If using the MTA: Calculate the RBC Requirement by the following formula in which the statutory reserve is the actual reserve reported in the Annual Statement. in the second term – i.e., the difference between statutory reserves and tax reserves multiplied by the Federal Income Tax Rate – may not exceed the portion of the company’s non-admitted deferred tax assets attributable to the same portfolio of contracts to which VM-21 is applied in calculating statutory reserves:

$$YY\% \times ((CTE (XX) + [Additional Standard Projection Amount] - \text{Statutory Reserve}) \times (1 - \text{Federal Income Tax Rate}) - (\text{Statutory Reserve} - \text{Tax Reserve}) \times \text{Federal Income Tax Rate})$$

2. If the company elects to use the STR: The C-3 RBC is determined by the following formula:

$$YY\% \times (CTEAT (XX) + [Additional Standard Projection Amount] - \text{Statutory Reserve})$$

(TBD) The Additional Standard Projection Amount is calculated using the methodology outlined in Section TBD of VM-22. If the Statutory Reserve does not include an Additional Standard Projection Amount then the calculation above will also omit that amount.

Aggregation

Aggregation levels should be the same as those used for reserves.

Interest Rate Risk vs. Market Risk

The objective is to assign a value for the risk of unexpected market shocks comparable to that assigned to variable products. This risk may result from optionality in either the product or the supporting assets.

The C-3 RBC amount above should be split into interest rate risk and a market risk components using a method developed by the company, and sample methods are listed below. If the method was developed by the company, please provide details.

Method 1: Perform a single model run that reflects both (a) and (b) below:

(a) Model no interest rate variation, by either (1) holding the Treasury curve on the valuation date constant over the projection for all scenarios or (2) use the expected forward curve for all scenarios or (3) use identical interest rate scenarios corresponding to the AIRG with all random variables set to zero

(b) Model stochastic separate account returns in the usual way across all scenarios.

Compute the resulting C-3 RBC TAR, and call this the C-3c component (market risk). Subtract this value from the true C-3 RBC TAR to determine the C-3a component (interest rate risk).

Method 2: Companies could also consider applying Stochastic Exclusion Test scenarios to bifurcate market and interest rate risk. The model run approach would be similar as Method 1.