Crediting Methods

Point to Point

Divide the index value at the end of the reset period by the index value at the beginning of the reset period. Assuming an annual frequency reset period, the formula is:

$$IndexGrowth_Y = \frac{Index_Y}{Index_{Y-1}} - 1$$

$$CreditRate_Y = \left[MIN\left(IndexGrowth_Y, Cap \right) \right] \times Participation - Spread$$

The *CreditRate* can not be less than zero.

Monthly Average

Divide the average of the monthly index values during the reset period by the index value at the beginning of the reset period. Assuming an annual frequency reset period, the formula is:

$$IndexGrowth_Y = \frac{\left(\frac{1}{12} \right) \sum_{m=1}^{12} Index_M}{Index_{Y-1}} - 1$$

$$CreditRate_Y = \left[MIN\left(IndexGrowth_Y, Cap \right) \right] \times Participation - Spread$$

The *CreditRate* can not be less than zero.

Daily Average

Divide the average of the daily index values during the reset period by the index value at the beginning of the reset period. Assuming an annual frequency reset period, the formula is:

$$IndexGrowth_Y = \frac{\left(\frac{1}{365} \right) \sum_{D=1}^{365} Index_D}{Index_{Y-1}} - 1$$

$$CreditRate_Y = \left[MIN\left(IndexGrowth_Y, Cap \right) \right] \times Participation - Spread$$

The *CreditRate* can not be less than zero.

Note: The actual number of days used in the calculation will be less than 365.

It will based on the number of days the index is actually reported.

Monthly Average Multiple Index

This calculation uses three indices. Calculate the Monthly Average during the reset period for each index. Calculate the weighted average of the three by assigning a 50% weight to the highest, 20% weight to the lowest, and 30% weight to the middle index. Assuming an annual frequency reset period, the formula is:

$$IndexOneGrowth_Y = \frac{\left(\frac{1}{12}\right)\sum_{m=1}^{12} IndexOne_M}{IndexOne_{Y-1}} - 1$$

$$IndexTwoGrowth_Y = \frac{\left(\frac{1}{12}\right)\sum_{m=1}^{12} IndexTwo_M}{IndexTwo_{Y-1}} - 1$$

$$IndexThreeGrowth_Y = \frac{\left(\frac{1}{12}\right)\sum_{m=1}^{12} IndexThree_M}{IndexThree_{Y-1}} - 1$$

Then must sort the three from highest to lowest. For this example,

assume "Two" is the highest and "One" is the lowest.

$$IndexGrowth_Y = (50\%)(IndexTwoGrowth_Y) + (30\%)(IndexThreeGrowth_Y) + (20\%)(IndexOneGrowth_Y$$

$$CreditRate_Y = \left[MIN\left(IndexGrowth_Y, Cap\right)\right] \times Participation - Spread$$

The *CreditRate* can not be less than zero.

Monthly Point to Point

Calculate the monthly growth for each month during the reset period. Apply the parameters (i.e. cap, participation rate, and spread). Sum the calculated monthly growth factors after the parameters have been applied. Assuming an annual frequency reset period, the formula is:

$$IndexGrowth_M = \frac{Index_M}{Index_{M-1}} - 1$$

$$CreditRate_M = \left[MIN\left(IndexGrowth_M, Cap\right)\right] \times Participation - Spread$$

$$CreditRate_Y = \sum_{M=1}^{12} CreditRate_M$$

The $CreditRate_Y$ can not be less than zero.

Threshold Method

Each month a Threshold Credit is applied to the account value for each Threshold Level that has been surpassed. If no new Threshold Level is surpassed, then nothing is credited to the account value.

$$CreditRate_M = \begin{Bmatrix} 0 & \text{If no Threshold Level surpassed} \\ \text{Threshold Credit} & \text{If one Threshold Level surpassed} \\ (1 + \text{Threshold Credit})^2 - 1 & \text{If two Threshold Levels surpassed} \\ (1 + \text{Threshold Credit})^N - 1 & \text{If N Threshold Levels surpassed} \end{Bmatrix}$$

Monthly Point-to-Point with Highwater

Calculate the monthly growth for each month during the reset period. Apply the parameters (i.e. cap, participation rate, and spread). Sum the calculated monthly growth factors after the parameters have been applied. The highwater feature ensures the reported account value will never be less than the reported account value on the previous anniversary (even when the $CreditRate_Y$ is less than zero). Assuming an annual frequency reset period, the formula is:

$$IndexGrowth_M = \frac{Index_M}{Index_{M-1}} - 1$$

$$CreditRate_M = \left[MIN\left(IndexGrowth_M , Cap \right) \right] \times Participation - Spread$$

$$CreditRate_Y = \sum_{M=1}^{12} CreditRate_M$$

The $CreditRate_Y$ can be less than zero.

Point to Point with End Average

Divide the average index value at the end of the reset period by the index value at the beginning of the reset period. The average index value equals the daily average over a specified number of months leading up to the end of the reset period. Assuming an annual frequency reset period, the formula is:

$$IndexGrowth_Y = \frac{AvgIndex_Y}{Index_{Y-1}} - 1$$

$$CreditRate_Y = \left[MIN\left(IndexGrowth_Y , Cap \right) \right] \times Participation - Spread$$

The *CreditRate* can not be less than zero.