

## ANNUITY NONFORFEITURE MODEL REGULATION

### Table of Contents

Section 1.	Authority
Section 2.	Purpose
Section 3.	Definitions
Section 4.	Initial Method
Section 5.	Redetermination Method
Section 6.	Nonforfeiture Rate and Minimum Nonforfeiture Amount
Section 7.	Equity-Indexed Benefits
Section 8.	Effective Date
Appendix A	
Appendix B	
Appendix C	
Appendix D	

### Section 1. Authority

This regulation is promulgated by the commissioner of insurance pursuant to Sections [insert applicable references to Section 12 of the Standard Nonforfeiture Law for Individual Deferred Annuities] of the [insert jurisdiction] Insurance Laws.

### Section 2. Purpose

The purpose of this regulation is to adopt rules to implement the provisions of [insert applicable references to Section 4 of the Standard Nonforfeiture Law for Individual Deferred Annuities].

### Section 3. Definitions

A. “Basis” carries two meanings.

- (1) When used in the context of an initial or redetermination method, “basis” means the specified period over which an average is computed that produces the value of the five-year Constant Maturity Treasury (CMT) rate. The “specified period” could be as short as a single day. The same basis shall apply to all equity-indexed benefits and the non equity-indexed benefit, if any.
  - (a) The basis may also use a specified period that is determined by the level of change in the CMT rate, or any other date dependent methodology adopted by the NAIC and approved by the commissioner. A specifically excluded method is one that defines the nonforfeiture rate as the lowest rate in a specified time period. A method based upon changes in CMT levels must move up or down in an identical manner with changes in interest rates, subject to statutory minimums and maximums.
  - (b) If the basis uses a specified period determined by the level of change in the CMT rate:
    - (i) The nonforfeiture rate applicable at the time this subsection is first utilized for a contract form shall be determined by a method using a specified period or another approved date dependent methodology.
    - (ii) A symmetrical range shall be defined that will determine when the rate shall be updated. The maximum allowable range shall be plus or minus fifty (50) basis points.
    - (iii) At the beginning of each modal period (e.g., monthly, quarterly, etc), a potential nonforfeiture rate shall be calculated using the method in (i), without incorporating any caps or floors. The “modal period” is the period the company specifies during which the current nonforfeiture rate will remain fixed.
    - (iv) If the difference between the potential nonforfeiture rate and the current initial nonforfeiture rate is less than or equal to the range, the current nonforfeiture rate shall not be updated.

- (v) If the difference between the potential nonforfeiture rate and the current nonforfeiture rate is more than the range, the current nonforfeiture rate shall be updated to be equal to the potential nonforfeiture rate adjusted for rounding and any caps or floors.
  - (vi) See the attached examples in Appendix A.
- (2) When used in the context of equity-indexed benefits, “basis” means the point in time used for establishing the parameters incorporated into the calculation of the value of the equity-indexed options. These parameters include the risk free rate, dividend yield, index volatility, prior index values if the option is path dependent, and any other relevant parameters.
- B. “Equity-indexed benefits” means a benefit in an annuity contract in which the value of the benefit is determined using an interest crediting rate based on the performance on an equity-based index and contract parameters. Excluded from this definition are variable benefits of separate account variable annuities and indexed guaranteed separate account contracts purchased by institutional buyers.
  - C. “Index term” means each period of time until the next indexed interest crediting date.
  - D. “Initial method” means the basis upon which the initial nonforfeiture rate is established and the period for which it applies. The period may last for the entire duration of the contract.
  - E. “Initial nonforfeiture rate” means the nonforfeiture rate applicable at contract issue.
  - F. “Minimum nonforfeiture amount” means the minimum value required under the [insert applicable references to Section 4B of the Standard Nonforfeiture Law for Individual Deferred Annuities] of the [insert jurisdiction] Insurance Laws. It reflects net considerations, the nonforfeiture rate, and other items as specified in [insert applicable references to Section 4A of the Standard Nonforfeiture Law for Individual Deferred Annuities] of the [insert jurisdiction] Insurance Laws.
  - G. “Nonforfeiture rate” means the interest rate used in determining the minimum nonforfeiture amount. This will be determined at issue (initial nonforfeiture rate) and, if applicable, each subsequent redetermination period (redetermination nonforfeiture rate).
  - H. “Redetermination method” means the redetermination date, basis and period for all future redetermination nonforfeiture rates.
  - I. “Redetermination nonforfeiture rate” means the nonforfeiture rate applicable at redetermination.

#### **Section 4. Initial Method**

- A. The initial method shall be filed with the commissioner in accordance with jurisdictional filing and approval requirements.
- B. Changes to the initial method are allowed once per calendar year. Any changes to the initial method shall be filed with the commissioner in accordance with jurisdictional filing and approval requirements. A change in initial method would be applicable only to new contracts (or new certificates) issued subsequent to the effective date of the change in method.

**Drafting Note:** States may consider adopting a deemer provision such that the change in initial method could be deemed approved after an appropriate waiting period, such as 30 or 60 days.

- C. The initial method is not required to be disclosed in the contract form.
- D. The initial nonforfeiture rate is not required to be disclosed in the contract form, unless redetermination is used.
- E. The minimum nonforfeiture parameters (e.g., load, interest rate, expenses) need not be disclosed in the contract unless they are utilized in the calculation of the guaranteed minimum value of the contract as required under [insert applicable reference to section 3A(3) of the Standard Nonforfeiture Law for Individual Deferred Annuities].

**Section 5. Redetermination Method**

- A. If redetermination is used, the method shall be disclosed in the contract form (or certificate).
- B. Changes in the redetermination method for future issues (or certificates) are allowed at any time subject to jurisdictional filing and approval requirements.

**Section 6. Nonforfeiture Rate and Minimum Nonforfeiture Amount**

- A. At any point in time, an annuity contract (or certificate) without an equity-indexed benefit will have one nonforfeiture rate and one nonforfeiture amount applicable to the entire contract that is determined in compliance with [insert applicable reference to Section 4B of the Standard Nonforfeiture Law for Individual Deferred Annuities].
- B. For an annuity contract (or certificate) in which equity-indexed benefits are available the annuity contract (or certificate) may have more than one nonforfeiture rate applicable to the contract (or certificate) subject to the following:
  - (1) If the contract has a non equity-indexed benefit, the nonforfeiture interest rate applicable to the non equity-indexed benefit shall be determined in compliance with [insert applicable reference to Section 4B of the Standard Nonforfeiture Law for Individual Deferred Annuities].
  - (2) If an additional reduction is elected for equity-indexed benefits, reduced nonforfeiture interest rates may apply to each equity-indexed benefit for which the additional reduction is elected in compliance with [insert applicable reference to Section 4C of the Standard Nonforfeiture Law for Individual Deferred Annuities] and Section 7 of this regulation.
  - (3) The minimum nonforfeiture amount for the contract is determined by calculating a nonforfeiture amount, without any reduction for indebtedness to the company on the contract including interest due and accrued on the indebtedness, for each equity-indexed and non equity-indexed benefit using the nonforfeiture interest rates described in this subsection, summing the results, and then deducting any indebtedness to the company on the contract including interest due and accrued on the indebtedness.
  - (4) When contract value is transferred (see examples in Appendix B)
    - (a) From a benefit, the benefit's minimum nonforfeiture amount is reduced by the benefit's minimum nonforfeiture amount prior to the transfer multiplied by the proportion of the benefit's contract value that is transferred;
    - (b) To a benefit, the benefit's minimum nonforfeiture amount is increased by the sum of all reductions in minimum nonforfeiture amounts determined under Subparagraph (a) multiplied by the proportion of total contract value that is transferred to that benefit;
    - (c) For purposes of the calculations specified in Subparagraphs (a) and (b) above, the contract value must first be reduced by any fees associated with the transfer.
  - (5) In the case of a withdrawal from a benefit in which the amount of withdrawal exceeds the benefit's nonforfeiture amount, the insurer shall treat the excess withdrawal in a manner at least as favorable to the contractholder as deducting the excess withdrawal from the nonforfeiture amounts of other benefits in order from lowest to highest nonforfeiture interest rate.
  - (6) Any contract charge or premium taxes paid by the company must be allocated to a benefit's minimum nonforfeiture amount based on the percentage of that benefit's contract value to the total contract value.

## Section 7. Equity-Indexed Benefits

- A. If a company chooses to take the additional reduction for an equity-indexed benefit as provided under [insert applicable references to Section 4C of the Standard Nonforfeiture Law for Individual Deferred Annuities], the company shall prepare a demonstration showing compliance with the requirements in [insert applicable references to Section 4C of the Standard Nonforfeiture Law for Individual Deferred Annuities].
- B. To demonstrate compliance, utilize the following steps:
- (1) Calculate the annualized option cost for the equity-indexed benefit in the form of basis points for the entire Index Term as of the beginning of the Index Term.
    - (a) Use the equity-indexed benefit's guaranteed product features, such as the guaranteed participation rate, guaranteed caps, etc.
    - (b) For the option cost, use a basis representative of the point in time at the beginning of the current index term. The company cannot change this basis during the index term.
    - (c) Make no adjustments for persistency, death, utilization, etc.
    - (d) The method and parameters for the option cost shall be calibrated to capital markets based option pricing.
  - (2) If the annualized option cost for the equity-indexed benefit is twenty-five (25) basis points or more, then the equity-indexed benefit provides substantive participation under [insert applicable references to Section 4C of the Standard Nonforfeiture Law for Individual Deferred Annuities] and the company may take a reduction equal to the lesser of 100 basis points and the annual cost basis value.
  - (3) The company shall prepare an actuarial certification (see Appendix C), signed by a member of the American Academy of Actuaries that the reduction complies with requirements [insert reference] at the time that the contract form is filed and submit it according to the requirements of the jurisdiction.

**Drafting Note:** This information shall be filed with the commissioner if a jurisdiction requires the submission of an actuarial memorandum demonstrating compliance with the jurisdiction's version of the Standard Nonforfeiture Law for Individual Deferred Annuities.

- (4) The company shall also annually prepare an actuarial certification (see Appendix D) [insert reference], signed by a member of the American Academy of Actuaries with regard to ongoing compliance and submit it in conjunction with the filing of the annual statement.

**Drafting Note:** The company should maintain demonstrations and work papers to be submitted if requested.

- C. If the commissioner determines that the additional reduction of up to 100 basis points for equity-indexed benefits has been inappropriately taken, the commissioner may require the recalculation of all values for all affected policyholders without all or part of such additional reduction.

## Section 8. Effective Date

The effective date of this regulation is [insert date].

**Appendix A**

Illustrations of indexing methods dependent upon changes in CMT levels

Example 1: Method—For each calendar year, the rate is set based on the monthly average from November of the preceding year. Each month, a potential rate will be calculated based upon the previous month’s CMT average. If the potential rate differs from the actual rate by more than 25 bps, the actual rate will be updated. This continues until the end of the calendar year, when the rate is automatically reset based upon the monthly average from November again.

Date	5 Year CMT Monthly Average	Potential NF rate	Actual NF Rate	Comments
Nov. 2003	3.0%	N/a	N/a	Monthly rate for Jan. 2004—1.75% (3.0%—125 bps)
Dec. 2003	3.0%	N/a	N/a	
Jan. 2004	3.1%	N/a	1.75%	Based on Nov. 2003
Feb. 2004	3.2%	1.85% (3.1%—125 bps)	1.75%	No change since difference between actual rate and potential rate is less than 25 bps
March 2004	3.3%	1.95%	1.75%	No change since difference is only 20 bps. Note that result of March CMT means April actual rate will change.
April 2004	3.3%	2.05%	2.05%	Potential rate (2.05%) differs from actual rate (1.75%) by more than 25 bps, so update actual rate.
May 2004	3.1%	2.05%	2.05%	
June 2004	3.1%	1.85%	2.05%	
July 2004	2.6%	1.85%	2.05%	5 year CMT dropped this month, so next month potential NF rate will drop. Since more than 25 bps change, actual NF rate changes.
Aug. 2004	2.6%	1.35%	1.35%	
Sept. 2004	2.6%	1.35%	1.35%	
Oct. 2004	2.6%	1.35%	1.35%	
Nov. 2004	2.7%	1.35%	1.35%	Monthly rate for Jan. 2005—1.45% (2.7%—125 bps)
Dec. 2004	3.0%	1.45%	1.35%	Less than 25 bps change
Jan. 2005	2.8%	N/a	1.45%	Based on Nov. 2004
Feb. 2005	2.8%	1.55%	1.45%	Less than 25 bps change
March 2005	2.8%	1.55%	1.45%	
April 2005	2.8%	1.55%	1.45%	
May 2005	3.25%	1.55%	1.45%	
June 2005	3.25%	2.0%	2.0%	Update rate since more than 25 bps change from potential rate to actual rate.
July 2005	3.25%	2.0%	2.0%	

Example 2: relatively level interest rate environment. Method—This example starts with an initial NF rate based on a single point in time. Once this initial rate is determined, it is in effect until the potential rate differs from the actual rate by more than 25 bps. This example does not automatically set each calendar year from a set month. For this example, the initial rate is set for the contract form based off a one month average with a one month lag for a contract form that will launch in January 2004. March potential rate is based off of January CMT rates, April potential rate is determined from February CMT rates and so on. So for issues in January 2004, the rate is based on November 2003 monthly average. For all issues after January 2004, the actual rate will change only if it differs from the potential rate by more than 25 bps. These examples will look at what happens in relatively level interest rate environment—keeping in mind that the NF rate MUST be updated so all 5 year CMT rates upon which the nonforfeiture rate is based occur within 15 months from contract issue date.

Date	5 Year CMT Monthly Average	Potential NF rate	Actual NF Rate	Comments
Nov. 2003	3.0%	N/a	N/a	Month for base rate—“sets a starting peg in the ground”
Dec. 2003	3.1%	N/a	N/a	One month lag
Jan. 2004	3.1%	1.75%	1.75%	Initial rate for block
Feb. 2004	<b>3.3%</b>	1.85%	1.75%	
March 2004	<b>3.5%</b>	1.85%	1.75%	
April 2004	3.5%	2.05%	2.05%	
May 2004	3.5%	2.25%	2.05%	
June 2004	3.5%	2.25%	2.05%	
July 2004	3.5%	2.25%	2.05%	
Aug. 2004	3.5%	2.25%	2.05%	
Sept. 2004	3.5%	2.25%	2.05%	
Oct. 2004	3.5%	2.25%	2.05%	
Nov. 2004	3.5%	2.25%	2.05%	
Dec. 2004	3.5%	2.25%	2.05%	
Jan. 2005	3.5%	2.25%	2.05%	
Feb. 2005	3.5%	2.25%	2.05%	
March 2005	3.5%	2.25%	2.05%	
April 2005	3.5%	2.25%	2.05%	
May 2005	3.5%	2.25%	2.25%	Since CMT rate that determined actual NF rate of 2.05% occurred more than 15 months ago, the actual rate MUST be updated. Given the method, this means this rate is based on March CMT rate (monthly average with a one month lag—see description in method for this example).
June 2005	3.5%	2.25%	2.25%	
July 2005	3.5%	2.25%	2.25%	

Example 3: Shows what to do when 1% floor comes into play. Method—This example starts with an initial NF rate based on a single point in time. The potential rate is determined based on the preceding month CMT average. If the potential rate differs from the actual rate by more than 25 bps, the actual rate is updated. This example shows how to handle statutory minimums (use the same logic for maximums).

Date	5 Year CMT Monthly Average	Potential NF rate	Actual NF Rate	Comments
Dec. 2003	2.4%	N/a	N/a	Starting month for the block—this sets the “peg in the ground”
Jan. 2004	2.3%	1.15%	1.15%	Initial rate for block
Feb. 2004	2.3%	1.05%	1.15%	
March 2004	2.25%	1.05%	1.15%	
April 2004	2.25%	1.0%	1.15%	
June 2004	2.1%	0.85%	1.0%	The potential rate is not subject to statutory minimums and maximums. It must be unbounded in order to determine if a change of more than 25 bps has occurred. In this case, it has, so the actual rate is updated, factoring in statutory minimums and maximums.
July 2004	2.1%	0.85%	1.0%	
Aug. 2004	2.1%	0.85%	1.0%	

Example 4: real life 5 year CMT averages. Method—Monthly average 5 year CMT with a one month lag time. NF rate is held constant as long as the potential nonforfeiture rate is within a range of plus or minus 50 bps from the current nonforfeiture rate.

<http://www.federalreserve.gov/releases/h15/current/h15.pdf> and  
[Http://www.treas.gov/offices/domestic-finance/debt-management/interest-rate/index.html](http://www.treas.gov/offices/domestic-finance/debt-management/interest-rate/index.html)

	(1) CMT Rate	(2) Potential NF Rate	(3) Actual NF Rate	
July 2002	3.81	N/a	2.95	Assumed as a given
Aug. 2002	3.29	2.55	2.95	
Sept. 2002	2.94	2.05	2.05	
Oct. 2002	2.95	1.70	2.05	
Nov. 2002	3.05	1.70	2.05	
Dec. 2002	3.03	1.80	2.05	
Jan. 2003	3.05	1.80	2.05	
Feb. 2003	2.90	1.80	2.05	
March 2003	2.78	1.65	2.05	
April 2003	2.93	1.55	2.05	
May 2003	2.52	1.70	2.05	
June 2003	2.27	1.25	1.25	
July 2003	2.87	1.00	1.25	
Aug. 2003	3.37	1.60	1.25	

- (1) = monthly average 5 year CMT from above named sources
- (2) = monthly average minus 125 bps—“potential NF rate”, then rounded
- (3) = actual rate according to a value triggered method with range of plus or minus 50 bps

Note: the above examples are just that—examples. There are many more methods that could be used that may also be appropriate.

## Appendix B

Transfer of minimum nonforfeiture amount for Section 6.

This example will show a simple demonstration of how the minimum nonforfeiture amount is to be transferred in an equity-indexed annuity under Section 6. Assume that the 5 year CMT is 3.75%. This results in a fixed annuity nonforfeiture rate of 2.5%. Further assume that the equity-indexed benefit receives the additional 100 bps reduction, so its nonforfeiture rate is 1.5%. This contract has a fixed interest option within an EIA. The policyholder may transfer money on any contract anniversary. Assuming there are transfers, the minimum nonforfeiture amount is path dependent. The minimum nonforfeiture amount will roll forward and get transferred back and forth at the benefit level, then added together to determine the minimum nonforfeiture amount for the contract. Note that there are slight rounding differences.

Year 1

Policyholder initially allocates 50% of premium each to fixed and equity-indexed benefits.

$$\text{EIA benefit} = 50\% * (100,000 * 87.5\% - \$50) * 1.015 = 44,380.88$$

$$\text{Fixed benefit} = 50\% * (100,000 * 87.5\% - \$50) * 1.025 = 44,818.13$$

The total minimum nonforfeiture amount is  $44,380.88 + 44,818.13 = 89,199.00$ .

Year 2

At the end of year 1, assume that due to market performance, the *contract value* is now allocated 60% in the equity-indexed benefit and 40% in the fixed benefit. The policyholder decides to re-allocate his contract value so that it is again at 50% in the equity-indexed benefit and 50% in the fixed interest benefit. This means that 1/6<sup>th</sup> (10% out of the 60%) of the equity-indexed contract value is transferred to the fixed interest contract value. Thus, 1/6<sup>th</sup> of the equity-indexed nonforfeiture amount is transferred to the fixed nonforfeiture amount. The results follow:

$$\text{EIA benefit} = 44,380.88 - 7,396.81 = 36,984.06$$

$$\text{Fixed benefit} = 44,818.13 + 7,396.81 = 52,214.94$$

Note that the total minimum nonforfeiture amount remains level at 89,199.00.

Year 2 calculations are identical to year 1 with the adjusted starting values. Note that since contract value is again split 50% each, the contract charge is also allocated 50% to each benefit.

$$\text{EIA benefit} = (36,984.06 - 50\% * \$50) * 1.015 = 37,513.45$$

$$\text{Fixed benefit} = (52,214.94 - 50\% * \$50) * 1.025 = 53,494.68$$

$$\text{Total} = 91,008.13$$

With different starting allocations and re-allocations, all the calculations operate the same, but would be adjusted “accordingly.”



## Appendix C

### **Initial Actuarial Certification of Compliance for Equity Indexed Annuities with (identify state regulation that corresponds to the Annuity Nonforfeiture Model Regulation)**

For use with Equity-Indexed Annuity contract forms at time of filing.

I, (state name and professional designation) am responsible for evaluating compliance with the (identify state law and regulation that corresponds to the Standard Nonforfeiture Law for Individual Deferred Annuities and the Annuity Nonforfeiture Model Regulation) for (name of insurance company). I have reviewed (identify contract form) and am familiar with the (identify state law and regulation that corresponds to the Standard Nonforfeiture Law for Individual Deferred Annuities and the Annuity Nonforfeiture Model Regulation) as they pertain to equity-indexed annuities. I have also reviewed the methodology that will be used in calculating and setting assumptions for the additional reduction in nonforfeiture rate for equity-indexed annuities. Based on my review, I certify that the methodology used for (identify contract form) meets the minimum requirements of the (identify state law and regulation that corresponds to the Standard Nonforfeiture Law for Individual Deferred Annuities and the Annuity Nonforfeiture Model Regulation).

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(Name of actuary)

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(Signature of actuary)

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(Date of certification)

**Appendix D**

**Actuarial Certification of Compliance for Equity Indexed Annuities with (identify state regulation that corresponds to the Annuity Nonforfeiture Model Regulation)**

For use in certifying compliance with the (identify state regulation that corresponds to the Annuity Nonforfeiture Model Regulation).

I, (state name and professional designation) am responsible for evaluating compliance with the (identify state law and regulation that corresponds to the Standard Nonforfeiture Law for Individual Deferred Annuities and the Annuity Nonforfeiture Model Regulation) for (name of insurance company). I am familiar with the (identify state law and regulation that corresponds to the Standard Nonforfeiture Law for Individual Deferred Annuities and the Annuity Nonforfeiture Model Regulation) as they pertain to equity-indexed annuities. I have reviewed the equity index features of (identify all contract forms covered by this certification) for ongoing compliance with the requirements of (identify state regulation that corresponds to the Annuity Nonforfeiture Model Regulation) that deal with the additional reduction relating to equity-indexed annuities. I have reviewed the assumptions used to support the additional reduction that is permitted to be used with equity-indexed annuities.

Based on my review, I certify that the additional reduction used to determine nonforfeiture values provided under the policy forms identified above met the requirements of (identify state regulation that corresponds to the Annuity Nonforfeiture Model Regulation) as it relates to equity-indexed annuities in force as of December 31, (previous calendar year).

\_\_\_\_\_  
(Name of actuary)

\_\_\_\_\_  
(Signature of actuary)

\_\_\_\_\_  
(Date of certification)

\_\_\_\_\_  
*Chronological Summary of Actions (all references are to the Proceedings of the NAIC)*

*2005 Proc. 3<sup>rd</sup> Quarter (adopted by parent committee)  
2005 Proc. 4<sup>th</sup> Quarter 31, 34-46, 2713 (adopted by Plenary).*