

11 NCAC 11F .0404 CALCULATION OF 11 NCAC 11F .0401(b)

(a) Basic reserves shall be calculated as the greater of the segmented reserves and the unitary reserves. Both the segmented reserves and the unitary reserves for any policy shall use the same valuation mortality table and selection factors. At the option of the insurer, in calculating segmented reserves and net premiums, either of the following adjustments may be made:

- (1) Treat the unitary reserve, if greater than zero, applicable at the end of each segment as a pure endowment; and subtract the unitary reserve, if greater than zero, applicable at the beginning of each segment from the present value of guaranteed life insurance and endowment benefits for each segment; or
- (2) Treat the guaranteed cash surrender value, if greater than zero, applicable at the end of each segment as a pure endowment; and subtract the guaranteed cash surrender value, if greater than zero, applicable at the beginning of each segment from the present value of guaranteed life insurance and endowment benefits for each segment.

(b) Deficiency Reserves:

- (1) The deficiency reserve at any duration shall be calculated:
 - (A) On a unitary basis if the corresponding basic reserve determined by 11 NCAC 11F .0404(a) is unitary;
 - (B) On a segmented basis if the corresponding basic reserve determined by 11 NCAC 11F .0404(a) is segmented; or
 - (C) On the segmented basis if the corresponding basic reserve determined by 11 NCAC 11F .0404(a) is equal to both the segmented reserve and the unitary reserve.
- (2) 11 NCAC 11F .0404(b) shall apply to any policy for which the guaranteed gross premium at any duration is less than the corresponding modified net premium calculated by the method used in determining the basic reserves, but using the minimum valuation standards of mortality (specified in 11 NCAC 11F .0403 (b)) and rate of interest.
- (3) Deficiency reserves, if any, shall be calculated for each policy as the excess if greater than zero, for the current and all remaining periods, of the quantity A over the basic reserve, where A is obtained as indicated in 11 NCAC 11F .0403(b).
- (4) For deficiency reserves determined on a segmented basis, the quantity A is determined using segment lengths equal to those determined for segmented basic reserves.

(c) Minimum Value - Basic reserves may not be less than the tabular cost of insurance for the balance of the policy year, if mean reserves are used. Basic reserves may not be less than the tabular cost of insurance for the balance of the current modal period or to the paid-to-date, if later, but not beyond the next policy anniversary, if mid-terminal reserves are used. The tabular cost of insurance shall use the same valuation mortality table and interest rates as those that are used for the calculation of the segmented reserves. However, if select mortality factors are used, they shall be the 10-year select factors incorporated into the 1980 amendments of the NAIC Standard Valuation Model Law. In no case may total reserves (including basic reserves, deficiency reserves and any reserves held for supplemental benefits that would expire upon contract termination) be less than the amount that the policyowner would receive (including the cash surrender value of the supplemental benefits, if any, referred to above), exclusive of any deduction for policy loans, upon termination of the policy.

(d) Unusual Pattern of Guaranteed Cash Surrender Values:

- (1) For any policy with an unusual pattern of guaranteed cash surrender values, the reserves actually held prior to the first unusual guaranteed cash surrender value shall not be less than the reserves calculated by treating the first unusual guaranteed cash surrender value as a pure endowment and treating the policy as an n-year policy providing term insurance plus a pure endowment equal to the unusual cash surrender value, where n is the number of years from the date of issue to the date the unusual cash surrender value is scheduled.
- (2) The reserves actually held subsequent to any unusual guaranteed cash surrender value shall not be less than the reserves calculated by treating the policy as an n-year policy providing term insurance plus a pure endowment equal to the next unusual guaranteed cash surrender value, and treating any unusual guaranteed cash surrender value at the end of the prior segment as a net single premium, where:
 - (A) n is the number of years from the date of the last unusual guaranteed cash surrender value prior to the valuation date to the earlier of:
 - (i) The date of the next unusual guaranteed cash surrender value, if any, that is scheduled after the valuation date; or

- (ii) The mandatory expiration date of the policy;
- (B) The net premium for a given year during the n-year period is equal to the product of the net to gross ratio and the respective gross premium; and
- (C) The net to gross ratio is equal to Item (i) divided by Item (ii):
 - (i) The present value, at the beginning of the n-year period, of death benefits payable during the n-year period plus the present value, at the beginning of the n-year period, of the next unusual guaranteed cash surrender value, if any, minus the amount of the last unusual guaranteed cash surrender value, if any, scheduled at the beginning of the n-year period.
 - (ii) The present value, at the beginning of the n-year period, of the scheduled gross premiums payable during the n-year period.
- (3) For the purposes of 11 NCAC 11F .0404(d) a policy is considered to have an unusual pattern of guaranteed cash surrender values if any future guaranteed cash surrender value exceeds the prior year's guaranteed cash surrender value by more than the sum of:
 - (A) One hundred ten percent (110%) of the scheduled gross premium for that year;
 - (B) One hundred ten percent (110%) of one year's accrued interest on the sum of the prior year's guaranteed cash surrender value and the scheduled gross premium using the nonforfeiture interest rate used for calculating policy guaranteed cash surrender values; and
 - (C) Five percent (5%) of the first policy year surrender charge, if any.
- (e) Optional Exemption for Yearly Renewable Term Reinsurance - At the option of the company, the following approach for reserves on YRT reinsurance may be used:
 - (1) Calculate the valuation net premium for each future policy year as the tabular cost of insurance for that future year;
 - (2) Basic reserves shall never be less than the tabular cost of insurance for the appropriate period, as defined in 11 NCAC 11F .0404(c);
 - (3) Deficiency reserves:
 - (A) For each policy year, calculate the excess, if greater than zero, of the valuation net premium over the respective maximum guaranteed gross premium.
 - (B) Deficiency reserves shall never be less than the sum of the present values, at the date of valuation, of the excesses determined in accordance with Part (A) of this Subparagraph.
 - (4) For purposes of 11 NCAC 11F .0404(e), the calculations use the maximum valuation interest rate and the 1980 CSO mortality tables with or without ten-year select mortality factors, or any other table adopted after January 1, 2000, by the NAIC and adopted as a rule by the Commissioner for this purpose;
 - (5) A reinsurance agreement shall be considered YRT reinsurance for purposes of this Rule if only the mortality risk is reinsured.
 - (6) If the assuming company chooses this optional exemption, the ceding company's reinsurance reserve credit shall be limited to the amount of reserve held by the assuming company for the affected policies.
- (f) Optional Exemption for Attained-Age-Based Yearly Renewable Term Life Insurance Policies - At the option of the company, the following approach for reserves for attained-age-based YRT life insurance policies may be used:
 - (1) Calculate the valuation net premium for each future policy year as the tabular cost of insurance for that future year;
 - (2) Basic reserves shall never be less than the tabular cost of insurance for the appropriate period, as defined in 11 NCAC 11F.0404(c);
 - (3) Deficiency reserves:
 - (A) For each policy year, calculate the excess, if greater than zero, of the valuation net premium over the respective maximum guaranteed gross premium.
 - (B) Deficiency reserves shall never be less than the sum of the present values, at the date of valuation, of the excesses determined in accordance with Part (A) of this Subparagraph;
 - (4) For purposes of 11 NCAC 11F .0404(f), the calculations use the maximum valuation interest rate and the 1980 CSO valuation tables with or without 10-year select mortality factors, or any other table adopted after January 1, 2000, by the NAIC and adopted as a rule by the Commissioner for this purpose;

- (5) A policy shall be considered an attained-age-based YRT life insurance policy for purposes of this Rule if:
 - (A) The premium rates (on both the initial current premium scale and the guaranteed maximum premium scale) are based upon the attained age of the insured such that the rate for any given policy at a given attained age of the insured is independent of the year the policy was issued; and
 - (B) The premium rates (on both the initial current premium scale and the guaranteed maximum premium scale) are the same as the premium rates for policies covering all insureds of the same sex, risk class, plan of insurance and attained age;
- (6) For policies that become attained-age-based YRT policies after an initial period of coverage, the approach of this Rule may be used after the initial period if:
 - (A) The initial period is constant for all insureds of the same sex, risk class and plan of insurance; or
 - (B) The initial period runs to a common attained age for all insureds of the same sex, risk class and plan of insurance; and
 - (C) After the initial period of coverage, the policy meets the conditions of Subparagraph (f)(5) of this Rule;
- (7) If this election is made, this approach shall be applied in determining reserves for all attained-age-based YRT life insurance policies issued on or after January 1, 2000.
- (g) Exemption from Unitary Reserves for Certain n-Year Renewable Term Life Insurance Policies - Unitary basic reserves and unitary deficiency reserves need not be calculated for a policy if the following conditions are met:
 - (1) The policy consists of a series of n-year periods, including the first period and all renewal periods, where n is the same for each period, except that for the final renewal period, n may be truncated or extended to reach the expiry age, provided that this final renewal period is less than 10 years and less than twice the size of the earlier n-year periods, and for each period, the premium rates on both the initial current premium scale and the guaranteed maximum premium scale are level;
 - (2) The guaranteed gross premiums in all n-year periods are not less than the corresponding net premiums based upon the 1980 CSO Table with or without the 10-year select mortality factors; and
 - (3) There are no cash surrender values in any policy year.
- (h) Exemption from Unitary Reserves for Certain Juvenile Policies - Unitary basic reserves and unitary deficiency reserves need not be calculated for a policy if the following conditions are met, based upon the initial current premium scale at issue:
 - (1) At issue, the insured is age 24 or younger;
 - (2) Until the insured reaches the end of the juvenile period, which shall occur at or before age 25, the gross premiums and death benefits are level, and there are no cash surrender values; and
 - (3) After the end of the juvenile period, gross premiums are level for the remainder of the premium paying period, and death benefits are level for the remainder of the life of the policy.

*History Note: Authority G.S. 58-2-40; 58-58-50(d); 58-58-50(k);
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