



SOCIETY OF ACTUARIES

Article from:

Taxing Time

February 2008 – Volume 4, Issue 1

TAXING TIMES

X-Rated Reserves: AXXX and XXX

by Christian DesRochers

The label "XXX" has a certain connotation to most of the world, but for the life insurance industry, it refers to the statutory reserve standards for term insurance and secondary-guarantee universal life (SGUL). For at least a decade, the reserve standards articulated in *The Valuation of Life Insurance Policies Model Regulation* (Regulation XXX) and more recently, Actuarial Guideline 38, *The Application of the Valuation of Life Insurance Policies Model Regulation* (AXXX) have been the subject of controversy within the life insurance industry. The discussions have been spirited, and at times heated, with strong feeling on both sides of the issue. While most debates on actuarial issues would be rated "G," the XXX issues have been rated "X," with no one under 17 admitted. What some people see as innovative product design, others see as attempts to sidestep the "spirit" of the regulation. What some see as appropriate levels of statutory reserves, other see as excessive, unnecessarily raising the cost to buyers of term insurance and SGUL products. Arguably, the issues surrounding XXX and AXXX have been a driving force in the development of principles-based reserves (PBR). The story of XXX and AXXX also has federal income tax aspects, which is the subject of this article.

Background

The National Association of Insurance Commissioners (NAIC) promulgated the original Regulation XXX in 1995, but it was adopted only by New York as Regulation

147, *Valuation of Life Insurance Reserves*. A revised XXX, *The Valuation of Life Insurance Policies Model Regulation*, was adopted by the NAIC in March 1999, effective Jan. 1, 2000.¹ Although the Model Regulation was formally enacted by approximately only 40 states, it is a part of codification (as Regulation 830), so it is effectively the reserve standard in all states. The Actuarial Standards Board (ASB) published ASOP 40, *Compliance with the NAIC Valuation of Life Insurance Policies Model Regulation with Respect to Deficiency Reserve Mortality* in December 2000. The NAIC Life and Health Actuarial Task Force (LHATF) approved Actuarial Guideline 38 (AXXX) *Application of the Valuation of Life Insurance Policies Model Regulation* in 2002 to be effective on Jan. 1, 2003. Together the Model Regulation, ASOP and AG 38 provide the framework for statutory reserves for term insurance and SGUL.²

Statutory Reserve Methods for Term Policies

The Standard Valuation Law defines reserves prospectively, as the present value of future benefits less the present value of future valuation net premiums. As a corollary, at issue the present value of future valuation net premiums is equal to the present value of future benefits. Valuation net premiums generally follow the pattern of gross premiums; that is, the valuation net premium is determined as a uniform percentage of the gross premium.³

continued → 6

¹ The "original" XXX had 15-year select factors that could be used to adjust the valuation mortality table, while the "revised" 1999 XXX used 20-year select factors.

² The American Academy of Actuaries (Academy) also published an XXX Practice Note in February 2001, which was updated in December 2006.

³ For purposes of simplicity, the reserve discussion is ignoring the effect of a modified valuation method, where a different first year valuation premium is used. Under XXX, a CRVM allowance is permitted only in the first segment.

→ contents

X-Rated Reserves: AXXX and XXX by Christian DesRochers	1
From the Editor Brian G. King	2
Letter to the Editor	3
From the Chair Kory J. Olsen	5
Time to Say Goodbye to the 1980 CSO Mortality Table by Brian G. King and Craig R. Springfield	9
I-COLI: The Genesis of Revenue Procedure 2007-61 and the Future of Insurer-Owned Life Insurance by John T. Adney, Kirk Van Brunt and Michelle A. Garcia	15
Proration for Segregated Asset Accounts—Part Two by Susan J. Hotine	21
Calculation of Tax Expense in a Principles-Based Reserves Environment by Edward L. Robbins	24
IRS to Rule on the Meaning of Statutory Reserves by Peter H. Winslow and Samuel A. Mitchell	30
Proposed Regulations Would Deny Reserve Deductions for Certain Captives by Rick Gelfond and Yvonne S. Fujimoto	34
ACLI Update Column by Bill Ehwell	37
T: Taxing Times Tidbits	38

A **unitary** valuation method considers the entire stream of future gross premiums and develops a proportional set of valuation net premiums. However, unitary reserves are sensitive to the slope of gross premiums. Under a level-premium policy, benefits are generally pre-funded. That is, the present value of future benefits exceeds the present value of future premiums, thus creating a positive reserve. However, a steeply sloped scale of gross premiums can result in the reserve system post-funding benefits. In that case, the present value of future premiums exceeds the present value of future benefits, thus creating a “negative” or zero reserve. A creative product designer can set unitary reserves at any desired level, simply by adjusting the scale of future gross premiums.

Over the years, the NAIC has proposed various reserve methods to deal with what was seen as the “unitary loophole” in the Standard Valuation Law. Actuarial Guideline IV, adopted in December 1984 and applicable to **term** insurance plans under the 1958 CSO used a term method, which required that a separate valuation net premium be computed for each term period. The approach chosen in the 1995 version of XXX, and carried forward to the current versions of XXX and AXXX, defines a **segment** method, in which a segment is defined by comparing the ratio of successive gross premiums (G_t) to the ratio of successive mortality rates (R_t) from tables applicable to deficiency reserves. Whenever the ratio of successive gross premiums is greater than the ratio of mortality rates, a new segment is created. Reserves are required to be the greater of the “segmented” or “unitary” valuation method. The result is a “humpback” pattern of statutory reserves. For a 20- to 30-year term policy, reserves may increase for the first 10 or 15 years, before ultimately leveling off and then declining. For longer term guarantees or SGUL, reserves may increase for periods as long as 20 to 30 years.

Deficiency Reserves

Before 1976, deficiency reserves equaled the present value of the excess of valuation net premiums over gross premiums. However, this led to the result that higher basic reserve standards translated to higher deficiency reserves. The 1976 amendments to the Standard Valuation Law defined an AMR (alternate minimum reserve) as the reserve based on minimum mortality and maximum valuation interest rate, replacing the valuation net premium by the gross premium for all

years in which the actual gross premium is less than the minimum valuation net premium. In that case the Additional Reserve = AMR – Basic Reserve. If the gross premiums are always greater than the minimum modified net premiums, then no deficiencies are required. Under XXX, deficiency reserves are computed using the same method, either unitary or segmented, which resulted in the greatest basic reserve. The deficiency is equal to the excess of (A) over the basic reserve, where (A) is equal to the basic reserve recalculated by replacing the net premium by the gross premium in any year in which the modified net premium exceeds the gross premium.

Regulation XXX added “select” mortality factors to the 1980 CSO. The 2001 CSO is itself a select and ultimate table. Companies must use “standard” valuation mortality for basic reserves, although consistency between basic and deficiency reserves is not required. Regulation XXX also made changes in the permissible reserve mortality assumptions by allowing the use of “X factors” based on a company’s expected mortality in the first segment of the deficiency reserve calculation. The effect is intended to reduce the amount of deficiency reserve.

Secondary Guarantee Universal Life

SGUL products provide a guarantee that the policy will remain in force based on the level of premiums paid under the contract. Many products accomplish this through a notional fund called a “shadow account” which provides that the secondary guarantee will be in effect so long as the shadow fund remains positive. The statutory reserves are based generally on the concept of a funding ratio, which represents the degree to which the secondary guarantee is “funded.”⁴ As the result of disagreements within the industry and the regulators as to the application of AXXX to these products, which are addressed in section 8 of Actuarial Guideline 38, there are three separate rules in effect, depending on the issue date of the underlying contract. Section 8A is effective for issues from Jan. 1, 2003 to July 1, 2005. Section 8B, the so-called “CEO Compromise” is effective for issues from July 1, 2005 to Dec. 31, 2006, and section 8C, referred to as the “Interim Solution,” is effective for issues from Jan. 1, 2007 to Dec. 31, 2010, when it is expected to be replaced by the introduction of principles-based reserves. The changes effective in January 2007 introduced a preferred risk version of the

⁴ The “funding ratio” is similar to the “r” factor in the Universal Life Model Regulation. By minimizing the funding ratio, shadow fund design strategies can result in lower AXXX reserves.

2001 CSO Table, and allowed lapse rates to be used in the reserve mechanics.

Tax Reserves

Under the 1984 Tax Act, life insurance companies are permitted to deduct the increase in a “Federally prescribed reserve,” (FPR) enabling the insurer to offset premium income by some measure of their expected future benefits. Under current law, section 807(c)(1) allows a deduction for life insurance reserves as defined in section 816(b)(1), in amounts described in section 807(d). Under section 807(d)(2), the amount of the reserve for any contract is determined using the tax reserve method applicable to the contract, the greater of the applicable federal or state assumed rate of interest, and the Commissioners’ standard tables for mortality and morbidity adjusted as appropriate to reflect the risks (e.g., substandard risks) incurred under the contract which are not otherwise taken into account. Except for the designated tax reserve method, interest rate and mortality table, generally the FPR must be computed using the same actuarial basis as the statutory reserve.⁵ For section 807(d) purposes, the “tax reserve method” varies depending on the type of contract at issue. For life insurance contracts, the tax reserve method is the Commissioners’ Reserve Valuation Method (CRVM). By virtue of its adoption by the NAIC, the XXX segmented method serves as the tax reserve method beginning in 1995.⁶ However, until the widespread adoption of the segmented methodology in 2000, generally, the “statutory cap” was the effective tax reserve, typically $\frac{1}{2}$ cx.

Regardless of the basis of the statutory reserves, tax reserves are computed using the aggregate table. Section 807(d)(5)(E) requires that the table (and option thereunder) which generally yields the lowest reserves shall be used to determine the tax reserves.⁷ It is generally agreed

that the appropriate tax reserve is the basic XXX reserve computed using ultimate mortality.

Deficiency Reserves and the “Statutory Cap”

Generally, section 807(d)(1) imposes a two-part system for the deduction of life insurance reserves. The rules for computing the amount of life insurance reserves taken into account in computing a life insurance company’s taxable income “require the insurance company to compare the net surrender value of the contract, the FPR for the contract, and the statutory reserve for the contract.” Section 807(d) requires these comparisons to be made on a contract-by-contract basis. As a result, the allowable reserve necessarily falls in a range bounded by the net surrender value (a floor) and the annual statement reserve (a ceiling). The limitation based on the annual statement reserve is commonly referred to as the “statutory cap.” Thus, if the statutory cap falls below the FPR, the cap becomes the deductible amount.

For XXX contracts issued before 2000, as well as contracts with select and ultimate reserves, there are occasions where the statutory cap controls the tax reserve. Generally, deficiency reserves are not deductible.⁸ However, the issue of whether a deficiency reserve is a part of the statutory cap remains unresolved, with some indications that the IRS believes that deficiency reserves should be excluded from the statutory cap, despite a strongly held taxpayer view that deficiency reserves are in fact a part of the statutory cap. Resolution of this issue will have an impact on XXX reserves, particularly for pre-2000 tax years.⁹

New Valuation Tables

Part of the so-called “Interim Solution” was the promulgation of the NAIC *Model Regulation Permitting*

continued → 8

⁵ In computing tax reserves, the effect of deferred and uncollected premium and excess interest must also be eliminated from the statutory reserve.

⁶ See TAM 200328006. The effective dates of actuarial guidelines are the later of the effective date or the date adopted by the NAIC. However, the 2007-2008 Treasury Priority Guidance Plan indicates the IRS is considering a revenue ruling on the meaning of the term “statutory reserves” under section 807 “where the company is subject to different statutory requirements in different states.” This may clarify the IRS view of the effective date of XXX in various states. See Peter H. Winslow and Samuel A. Mitchell, “IRS to Rule on the Meaning of Statutory Reserves,” this issue of *Taxing Times*, 30.

⁷ Rev. Rulings 87-26 and 92-19. The 1980 CSO without select factors produces the lowest tax reserve on an industry-wide basis. Similarly, the 2001 CSO Academy Report to LHATF indicates the 2001 CSO Ultimate generally produces lower reserves.

⁸ See Code section 816(h). Treatment of deficiency reserves.--For purposes of this section and section 842(b)(2)(B)(i), the terms “life insurance reserves” and “total reserves” shall not include deficiency reserves.

⁹ See Peter H. Winslow and Lori J. Jones, “The Statutory Cap on Tax Reserves Includes Deficiency Reserves,” *Taxing Times*, Vol. 2 Issue 2, September 2006, 14.

the Recognition of Preferred Mortality Tables for Use in Determining Minimum Reserves, which allows states to adopt “preferred” versions of the 2001 CSO prepared for the American Council of Life Insurers (ACLI) by Tillinghast. The table provides mortality rates for super preferred, preferred, and residual nonsmokers, as well as preferred and residual smokers. The preferred table is permitted for valuation only, and has limitations on its use. The plans to which it is applied must have preferred mortality classes, and the use of the tables is based on actuarial certification of mortality. Actuarial Guideline TAB (AG42) provides guidance in selecting preferred tables. State adoptions of the table are currently in progress. Under AG TAB, if a company used the 2001 CSO Preferred Tables for basic reserves, they must also be used for deficiency reserves.

Section 807(d)(5)(A) defines the term “prevailing commissioners’ table” as “the most recent commissioners’ standard tables prescribed by the NAIC which are permitted to be used in computing reserves . . . under the insurance laws of at least 26 States when the contract was issued.” As the preferred table is subject to some limitations on use, it is not clear as to whether it will be considered a prevailing table upon its adoption by 26 states. In the aggregate, the 2001 CSO Preferred table produces the same reserves as the 2001 CSO smoker and nonsmoker tables. However, as proportion of preferred business changes, the aggregate reserves are lower under the preferred table. Similarly, there are instances in which the select and ultimate tables result in lower reserves than the ultimate table. This could create some issues under the section 807(d)(5)(E) “lowest reserve” rule. The preferred 2001 CSO is seen as an interim step, as the Society of Actuaries is currently developing a “scientific” preferred mortality table. How and when this may impact tax reserves also remains an open issue.

Factors Other Than Mortality and Interest

One of the other changes in the computation of reserves for SGUL was the introduction of a lapse factor into the computation of statutory reserves. Section 8C provides that, for certain issue ages and policy durations, a specified lapse rate (either 2 percent or 1 percent) “may be used” in the reserve calculation. The effect of the use of the lapse factor is to reduce the reserve. It is not clear as to how this affects the tax reserve (except perhaps through the statutory cap). One view is that tax reserves are fully defined by the FPR in section 807(d), and that

only interest and mortality are used. Another view is that courts have generally permitted factors other than interest and mortality to be recognized in the calculation of life insurance reserves, so the use of a lapse rate should follow the statutory calculation, which follows the logic that tax reserves are statutory reserves, which are adjusted by the FPR limitations. Resolution of this issue may have an implication for the tax issues surrounding PBR.

IRS Comments

The debate continues as to whether the XXX and AXXX reserves are unnecessary and redundant.¹⁰ However, redundant or not, the pattern of reserves that emerges under XXX creates a significant need for additional capital to fund the reserves. Insurers have dealt with the issue in a number of ways including reinsurance, surplus notes and securitizations. From a federal income tax perspective, these transactions deal with the reserve deductions in different ways, but one structure is to reinsure the AXXX and XXX reserves to a downstream onshore captive, which preserves the potential tax benefits of the reserve deduction. One way in which this is accomplished is to issue a bond in the subsidiary that serves to collateralize the reserves in the downstream company.¹¹

The securitization activity has apparently attracted the attention of the Internal Revenue Service (IRS). In a conference last October, representatives of the IRS Large and Midsize Business Division (LMSB) commented that the IRS would begin to study life insurance securitizations, focusing on the relationship of the investors to the insurance risk that is being securitized. Given the timing of the audit cycle, the IRS is now beginning to audit tax years in which the securitizations first appeared. The questions raised by the IRS address a series of issues that have no immediate answer. While the IRS does not appear to have any specific guidance in mind, one issue may be the characterization of the assets of the reinsurer. Although most observers would describe an XXX securitization as debt, the IRS could argue for equity treatment based on participation of the investors in the mortality experience of the underlying block of business. Treatment as equity would affect the deductibility of interest paid to the bondholders. Whatever the outcome, it appears to signal the beginning of another chapter in the XXX and AXXX saga, one that the life insurance industry hopes will not be X-Rated. ◀

¹⁰ In fact, the reserves are often segmented into “economic” and “non-economic” elements.

¹¹ For a detailed discussion of tax issues involved in XXX securitizations, see Michael A. Bell, “Removal of Profit/Loss Separation Rule from Life-Nonlife Regulations Eliminates Tax Issue from Securitizing Triple-X Business,” *Taxing Times*, Vol. 2 Issue 2, September 2006, 18.

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