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Demystifying Life Insurance Securitization: XXX and AXXX Securitization Issues and Considerations

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Life insurance securitizations have become a burgeoning area receiving a significant amount of recent attention. A number of recent deals addressing the various capital needs of the life insurance industry have been funded. Although life insurance securitization is not yet as prolific as other types of asset-based securitizations, such as mortgages and loans, significant momentum is building. One specific need facing the life insurance industry and receiving particular focus is the funding of the “hump-backed” reserves associated with Regulations XXX and

AXXX. With the belief that statutory reserves under these regulations are overly conservative and the fact that traditional methods of reserve funding are becoming increasingly difficult and costly, securitization has been used as a vehicle to alleviate the capital strain caused by these statutory requirements. The magnitude of the capital need has been estimated by some to be in the \$100 to \$150 billion range in the coming decade, depending upon the level of product sales. Securitization could provide this much-needed capital for the industry and potentially become a more cost effective form of long-term financing. This article describes the basic building blocks used in XXX and AXXX securitizations, as well as some of the issues and considerations of which the parties involved need to be mindful when considering securitization as a funding option.

Background

Introduced in 2000, Regulation XXX significantly increased the U.S. statutory reserve requirements for term life insurance writers. In some cases, these statutory reserves have risen to over eight to 10 times that of an “economic” type reserve, such as a FAS 60 reserve under U.S. GAAP. The XXX reserve typically demonstrates a hump-backed pattern, increasing

rapidly in early years until it peaks around the midpoint of the level term period. Although the use of the 2001 CSO mortality table may lower the reserve, it does not eliminate the large gap between the statutory reserve and the economic reserve. This difference is even more acute for preferred underwriting classes, where the valuation mortality table deviates most from that expected in pricing.

The high XXX reserves cause considerable capital strain for insurers. Many companies deal with this by ceding the business to offshore reinsurers where local statutory reserving requirements are less onerous, such as permitting the use of U.S. GAAP. In order for an insurer to take reserve credit on their U.S. statutory statement, the amount of the credit taken needs to be funded, the most popular form of financing being the use of a LOC.

Two particular issues have arisen in relation to this traditional solution. The first relates to the usage of LOCs. Industry observers are forecasting a rapid increase in the cost of LOCs (possibly as much as 10 times!), as the demand increases along with the rise in XXX reserves. There is also the potential risk of LOC shortages, as banks reach internal credit concentration limits. Additionally, with the passage of BASEL II, a new capital adequacy framework for banking organizations, the reserve requirements for banks issuing LOCs have increased substantially. Furthermore, the LOC solutions used are typically annually renewable, making them a short-term solution to a long-term liability. Rating agencies have expressed their discomfort in the use of short term LOC to back reserve credits for longer-term policies.

The second issue arising with the traditional reinsurance solution is the consolidation of the reinsurance market. As there are fewer reinsurance companies willing to assume XXX-related risks, pricing has strengthened. This reduction in reinsurance capacity,

along with the related higher cost, has caused some ceding insurers to have higher than acceptable concentrations of risk.

Universal life (UL) policies with secondary guarantees are subject to Regulation AXXX (also known as Actuarial Guideline 38). Reserves under AXXX demonstrate a similar “hump-backed” pattern as XXX with longer tails since universal life typically has a longer average policy life than term life products. The reinsurance market for the AXXX reserve is very limited and most insurers currently retain the risk. As UL with secondary guarantee products evolve and grow, the burden of increased capital needs will emerge for the industry. The emergency adoption of an amendment to New York Regulation 147 in December 2004 resulted in higher reserves for some New York-licensed companies writing certain forms of UL with secondary guarantees. In addition, the ongoing discussion by NAIC’s Life and Health Actuarial Task Force (LHATF) adds an extra layer of complexity and uncertainty to the AXXX reserve debate.

In order to address the looming capital need associated with XXX and AXXX reserves, many have turned to alternate capital-funding solutions, among which securitization has been considered the more elegant solution and has increasingly been gaining popularity.

The Securitization Solution

Securitization is the process of repackaging certain assets or cash flows for sale in the capital markets as debt securities that pay periodic coupons as well as the eventual repayment of principal. Investors buying these securities will assume the risks inherent in the underlying cash flow. In order to provide investors with a choice of investments with respect to their risk appetite, these debt securities are typically divided into “tranches,” where each tranche may have different coupon payments, payment terms and risk level.

Exhibit 1 is a simple hypothetical securitization example where the original cash flow is divided into three tranches and sold at par. The investors for the different tranches will be rewarded according to the level of risk assumed. The investors owning tranches A and B will be paid first, with the equity investors receiving the remaining cash flow. If there is an unexpected drop in cash flow, such as due to adverse mortality experience, the equity investors will bear the risk first. As the cash-flow performance worsens, losses may eventually need to be borne by the other tranches. The rating agencies calculate the rating of

each tranche based on scenario analyses such that the senior most tranche is affected only upon the most extreme negative performance experience. Conversely, if there is an unexpected increase in cash flow, the equity investors will enjoy the additional income while investors for tranches A and B receive steady coupon payments. As the equity investors assume the highest volatility, they are compensated with the highest return, compared to investors in tranches A and B.

A common type of securitization in the asset world is a mortgage-backed security (MBS), where the cash flows from a pool of mortgages are sold as debt. Insurance securitizations follow a very similar process, except that the cash flows are derived from liabilities instead of assets, and the risks are related to insurance risks such as mortality and lapsation instead of prepayment.

Exhibit 2 on page 20 is an example of how an XXX or AXXX securitization structure might be structured. This sample is purely hypothetical and is not intended to depict any existing deal, but contains common building blocks found in some of these transactions. For the forthcoming discussion, we will suppose a block of term insurance reserves under XXX is being securitized. Similar concepts would apply to UL reserves under AXXX as well.

The original company is either a direct writer or a reinsurer looking to finance its mounting XXX reserve. The company typically would set up a captive reinsurer and cede off its block of term policies under a coinsurance treaty. Many companies choose to set up captives either offshore or in states that offer favorable regulatory accounting treatment, such as allowing the use of GAAP reserves for the captive’s regulatory reporting.

There are many variations to the structure in Exhibit 2. A holding company may be set up as the parent to the captive reinsurer. Many prefer this type of holding company structure, since the original company does not directly own the captive reinsurer, and it is less likely that the original company will need to reflect the captive reinsurer on its statutory financial statement.

Securitization is the process of repackaging certain assets or cash flows for sale in the capital markets as debt securities that pay periodic coupons as well as the eventual repayment of principal.



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Exhibit 1: A Simple Securitization Example

| Pricing Base Case | | | | | | | |
|---|--------------------|------------|----------|----------|----------|----------|----------|
| Liability Cash Flow | | | 1 | 2 | 3 | 4 | 5 |
| | | | 30 | 30 | 30 | 30 | 330 |
| | Coupon Rate | NPV | | | | | |
| Tranche A | 9% | 100 | 9 | 9 | 9 | 9 | 109 |
| Tranche B | 10% | 100 | 10 | 10 | 10 | 10 | 110 |
| Equity | | | 11 | 11 | 11 | 11 | 111 |
| <i>Par = \$100 = Tranche NPV, Tranche Discount Rate = Coupon Rate</i> | | | | | | | |
| Unexpected Drop in Cash Flow by \$5 each year | | | | | | | |
| Liability Cash Flow | | | 1 | 2 | 3 | 4 | 5 |
| | | | 25 | 25 | 25 | 25 | 325 |
| | Coupon Rate | NPV | | | | | |
| Tranche A | 9% | 100 | 9 | 9 | 9 | 9 | 109 |
| Tranche B | 10% | 100 | 10 | 10 | 10 | 10 | 110 |
| Equity | | | 6 | 6 | 6 | 6 | 106 |
| Unexpected Increase in Cash Flow by \$5 each year | | | | | | | |
| Liability Cash Flow | | | 1 | 2 | 3 | 4 | 5 |
| | | | 35 | 35 | 35 | 35 | 335 |
| | Coupon Rate | NPV | | | | | |
| Tranche A | 9% | 100 | 9 | 9 | 9 | 9 | 109 |
| Tranche B | 10% | 100 | 10 | 10 | 10 | 10 | 110 |
| Equity | | | 16 | 16 | 16 | 16 | 116 |

Exhibit 2: A Sample Securitization Structure

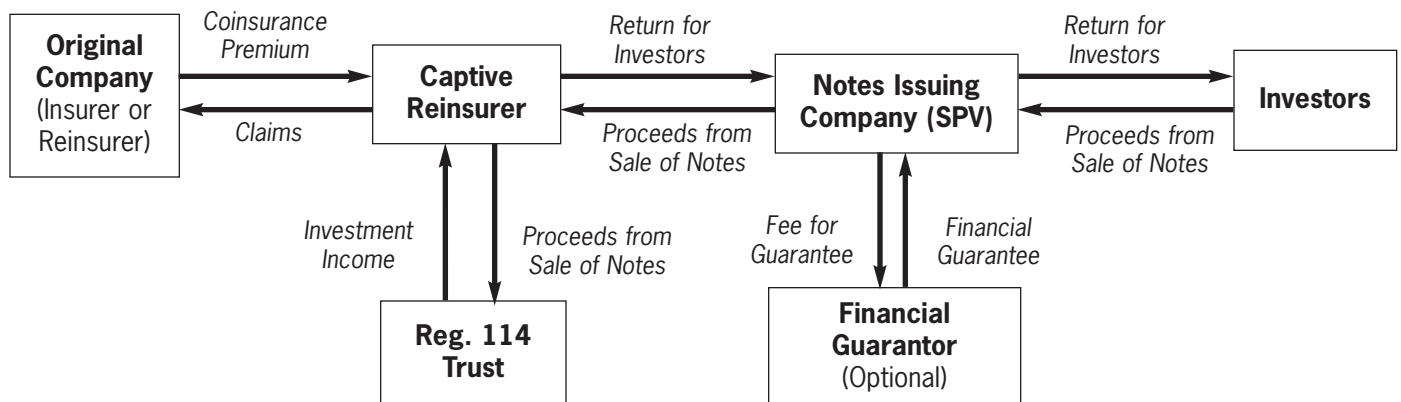


Exhibit 3: Financial Guarantee Example

| Unexpected Drop in Cash Flow by \$25 each year Tranches A and B Guaranteed by Financial Guarantor | | | | | | | |
|--|--------|-----|---------------|---------------|---------------|---------------|-----------------|
| Liability Cash Flow | | | <u>1</u> 5 | <u>2</u> 5 | <u>3</u> 5 | <u>4</u> 5 | <u>5</u> 305 |
| | Coupon | NPV | | | | | |
| Tranche A - Wrapped | 9% | 100 | 9 | 9 | 9 | 9 | 109 |
| Tranche B | 10% | 68 | 0 | 0 | 0 | 0 | 110 |
| Equity | | | 0 | 0 | 0 | 0 | 86 |
| Financial Guarantee | | | 4 | 4 | 4 | 4 | 0 |

In order for the original company to obtain the needed statutory reserve credit, an important consideration is to ensure that proper risk transfer has occurred. Statement of Statutory Accounting Principles (SSAP) No. 61 and Appendix A-791 of the NAIC's Accounting Practices and Procedures Manual must be followed. For example, for a term policy, mortality and lapse risks must be transferred, whereas a universal life policy requires the transfer of mortality, lapse, asset credit quality, reinvestment and disintermediation risks. A reinsurance treaty that transfers only the secondary guarantee risk may not pass the definition of risk transfer. Failing to qualify for risk transfer in a reinsurance arrangement could result in the loss of favorable insurance accounting treatment for the original company.

Special Purpose Vehicles (SPVs, and also known as Special Purpose Entities, or SPEs) are often used in securitization. An SPV is set up to serve a specific purpose, such as raising capital and servicing investors in a securitization. It performs little or no other activities. The investors have claims to assets only in the SPV and have no recourse to the original company. Similarly, the creditors of the original company have no claims to any assets in the SPV. The equity holder of the SPV is often the original

company, an affiliate or an investment bank, and controls the SPV's activities, including the issuing of debt or equity securities, as well as selling notes to the investors. In GAAP accounting, SPVs are subject to complex accounting requirements. For example in the United States, if an SPV is determined to be a Variable Interest Entity (VIE), as defined in Financial Accounting Standards Board Interpretation No. 46 (FIN 46), which contains complex guidance regarding SPV consolidation, FIN 46 would apply. Otherwise, different accounting requirements, such as Accounting Research Bulletin 51 (ARB 51), Statement of Financial Accounting Standards No. 94 (FAS 94), and Accounting Principle Board Opinion No. 18 (APB 18) may be applicable. Under International Financial Reporting Standards (IFRS), separate requirements apply, such as Standing Interpretations Committee (SIC) 12. A discussion on SPV accounting requirements is beyond the scope of this article. Qualified accountants, tax and legal professionals should always be consulted in any transaction.

Once the securitization cash flows are repackaged into different tranches, notes will be sold to the investors. The proceeds from the sale of the notes

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A company doing a securitization needs to be prepared for the scrutiny of its business and practices by actuaries, accountants, lawyers, investment bankers, rating agencies, regulators and financial guarantors.

will then be passed from the SPV back to the captive reinsurer to be placed in a Regulation 114 trust. The cash flows used in a securitization are derived typically from captive reinsurers' profits and the Regulation 114 trust investment income. Regulation 114 of the Official Compilation of Codes, Rules and Regulations (11 NYCRR 4) of the New York State Insurance Department specifies rules on the use of a trust

account to fund reserve credits under a reinsurance arrangement. For example, only certain types of investments are allowed in the trust, and equity investments are not permitted. The trust is typically set up at a bank, which acts as the trustee, while the beneficiary of the trust is the original company, with the grantor being the captive reinsurer.

The recent XXX deals completed were "wrapped" by third party financial guarantors (also known as monoline guarantors) to assist in the sale of the notes by boosting the credit rating of the notes. These companies typically guarantee, or "wra,p" the deals by guaranteeing the investors payment of interest and principal in certain tranches. In our prior example, tranche A could be "wrapped" so that if the liability cash flows do not support the payment of the principal and interest, the financial guarantor would be responsible to provide the remainder, as shown in Exhibit 3. In this example, tranche B and the equity investors will receive no periodic payments and limited principal payments.

By having some of the notes wrapped, higher proceeds can be raised and the wrapped notes will receive a high credit rating. The SPV pays the financial guarantor a premium to compensate for the risks the guarantor assumes. The actuarial risks these monoline companies are guaranteeing require significant analyses to be performed.

Many constituents are involved in the structuring of a life insurance securitization deal. Actuaries are needed to construct actuarial models in order to project liability cash flows to be securitized and perform sensitivity testing to analyze the risks of being unable to pay down the various tranches of the debt. Furthermore, actuaries need to carefully evaluate the financial impacts on various accounting bases, such

as statutory, economic and GAAP. Consolidated GAAP impacts would be more involved and complicated because of the potential FIN 46 issues. GAAP earnings emergence patterns need to be carefully studied as well. Financial guarantors may perform due diligence on the actuarial projections to properly understand the insurance risks they are assuming, such as mortality and lapsation. Accountants are closely involved, especially in dealing with the complex rules for the SPVs and the accounting ramifications. Investment bankers are needed to help structure and market the deal. Lawyers are needed to review the legality of the structure. Rating agencies are intimately involved throughout the process to provide proper ratings for the resulting securities. Finally, the regulators are involved for the final approvals. In a recent transaction, there were 17 different professional firms involved in some capacity! The sheer number of parties involved is an indication of the complexity of these securitization deals.

The New Frontier

Life insurance securitizations are complex transactions, given the nature of the business involved. In the near term, these transactions will continue to be time consuming and costly due to the intricate modeling and analyses required. Moreover, as new players and non-insurance investors try to get through the initial learning curve, additional time and cost may be required. A company needs to be prepared for the scrutiny of its business and practices by actuaries, accountants, lawyers, investment bankers, rating agencies, regulators and financial guarantors. The development of sound actuarial models, assumptions and experience studies is crucial. Processes and controls must be top notch in this new frontier in life insurance company capital management. The fact that a number of transactions has been completed to date is a good indication of the capital markets' growing acceptance of the inherent insurance risks involved.

XXX and AXXX securitizations are two of the many forms of securitizations in the United States allowing the life insurance industry to tap into the vast capital market for funding. Many European companies have used securitization to allow for more efficient use of capital, such as embedded value securitizations. The current activities in the United States could catapult securitization to be a leading capital solution for the life insurance industry. §