Life ILS: 2012 year in review and looking ahead to 2013

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In 2012, in spite of extensive discussions at the National Association of Insurance Commissioners (NAIC) on the appropriate reserving method for certain universal life products and the use of captives to finance excess reserves, we estimate that at least US$12 billion in reserve financing transactions and embedded value (EV) transactions were completed. Most of these transactions involved the financing of excess reserves for U.S. life insurers selling level premium term insurance subject to Regulation XXX or universal life products with secondary guarantees (UL-SG) subject to Actuarial Guideline 38 (AXXX or AG38). The forms of financing continued to evolve in 2012.

In addition to the reserve financing transactions and the EV financing transactions, the market saw at least US$625 million in transactions to transfer catastrophic morbidity or mortality risk, and increased activity in the U.S. market (and continued activity in Europe) to transfer longevity and other pension risks.

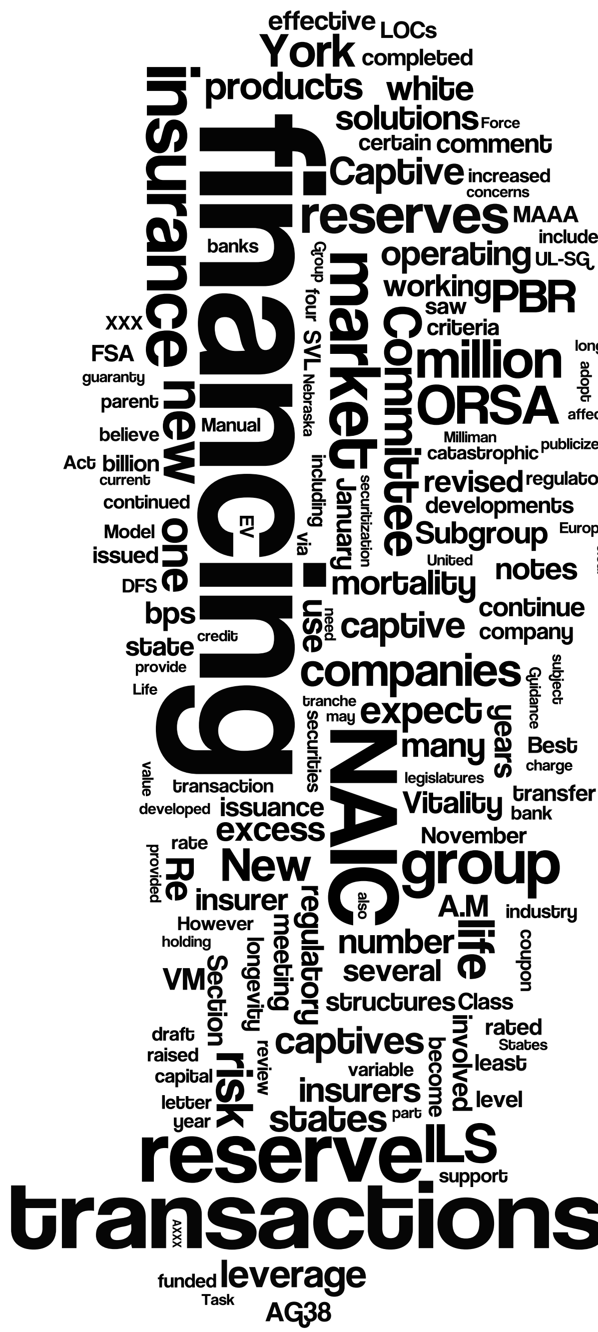
When the reserve financing market first developed, many reserve financing transactions involved the issuance of securities that were often called “life ILS,” or just “ILS,” which is an acronym for “insurance-linked securities” or “insurance-linked securitization.” While many of the current transactions do not involve the issuance of securities, in this paper we continue to refer broadly to such transactions as “life ILS” or “ILS” transactions.

2012 EXCESS RESERVE FINANCING: CONTINUED EVOLUTION

It is almost 10 years now since the first Regulation XXX excess reserve financing transaction in 2003. Such reserve financing transactions have become a common part of many insurers’ capital management programs, in many cases allowing companies to use debt-like financing for a portion of their reserves. Over these 10 years, the market has evolved from one largely funded by capital market securitization transactions structured and guaranteed by triple-A-rated financial guarantors, to one for which most of the financing was structured by banks providing long-dated funded or letter of credit (LOC) solutions on a recourse basis, and finally to the one in 2012, for which a substantial portion of the financing involved non-recourse LOCs or other non-recourse transactions with economics similar to non-recourse LOCs.

In 2012, we saw the continuation of several trends discussed in our 2011 year in review paper. There was a lot of activity on AXXX financing or transactions involving a combination of XXX and AXXX financing.

Similar to the trend we noted in 2011, we have seen some financing providers exit the market and others enter the market. The number of new participants or reentrants has tended over time to exceed the number of



departures, such that the number of solutions providers has grown somewhat since 2009. As supply has increased, structures have continued to evolve, including more non-recourse transactions and transactions with longer tenor. While the cost of financing has not yet returned to 2007 levels, the increase in supply has contributed to a large reduction in average financing costs over the past several years, with more advantageous terms for the insurers (such as longer durations and more flexible investment guidelines).

Aside from bank-provided LOC structures, we saw in 2011 and 2012 several other approaches used to finance excess reserves. We saw a couple of internally funded transactions, where the holding company or affiliates of an insurer have purchased surplus notes issued by a wholly owned captive to provide financing for XXX and AXXX reserves. We saw reinsurers play an increasing role in the non-recourse reserve financing market, sometimes directly via traditional reinsurance or solutions that compete with bank LOCs (e.g., one form involves a credit-linked note for which the reinsurer provides credit support), and sometimes providing a mortality "wrapper" to the bank so the bank can hedge its mortality exposure from the LOC transactions. We saw an increased use of reserve financing in mergers and acquisitions (M&A) transactions, where execution of the reserve financing is a key component of the M&A negotiations. In addition, at least one insurer has implemented a financing form called guaranty of a parent, which is available in some states (e.g., as clearly specified via statutes in Georgia, Indiana, Iowa, Nebraska, and Texas), and some solution providers that are neither banks nor reinsurers have provided or arranged financing structures that compete directly with bank LOCs.

In 2012 there were three noteworthy changes from 2011:

1. The number of non-LOC transactions increased a lot, and included at least four types of transaction structures:
   - Guaranty of a parent
   - Internally funded solutions
   - Proprietary solutions involving banks
   - Proprietary solutions not involving banks

2. We believe that the total number of reserve financing transactions in 2012 was larger than the number of transactions in 2011. Because of the point below, it is difficult to quantify the true number of transactions or the volume of such transactions.

3. A smaller percentage of transactions were disclosed publicly via press release or other means of disclosure.

OTHER ILS TRANSACTIONS IN 2012

In 2012, while most of the North American life ILS transactions involved excess reserve financing, several other innovative transactions provided financing in various forms in the United States and in Europe. See our 2011 year in review paper[1] for a discussion of other ILS transactions executed in 2011.

Unlike 2011, for which there were four completed EV securitization transactions that were publicized (three in North America and one in Europe), we are aware of only one EV securitization transaction completed in 2012, and it was private and not publicized. However, in a related form of financing that has been described as a value in force (VIF) monetization,[2] Banco Santander obtained bulk reinsurance in July 2012 to monetize the value of the individual life risk portfolio of its insurance companies in Spain and Portugal, resulting in a EUR490 million pretax capital gain. In a similar transaction, CaixaBank obtained bulk reinsurance in November 2012 to monetize the value of its individual life-risk insurance products, resulting in a EUR600 million ceding commission.

Aetna, through its Vitality Re special purpose vehicle (SPV) financing program, raised another US$150 million in January 2012 via two tranches of securities issued by Vitality Re III Ltd. to provide three years of excess-of-loss protection on a portion of Aetna's group commercial health insurance business (i.e., catastrophic morbidity risk transfer). For Vitality Re III Ltd., the variable rate coupon spreads[3] were 420 basis points (bps) for US$105 million of Class A notes rated BBB+ by Standard & Poor's (S&P), and 620 bps for US$45 million of Class B notes rated BB+. Relative to similar notes issued by Vitality Re II in spring 2011, such spreads were 20 bps and 5 bps lower,[4] respectively, the variable rate coupon benchmark changed from three-month LIBOR to the return of a Treasury money market fund, and the ratings for Class A notes were one notch stronger. On January 23, 2013, Aetna issued another US$150 million via two tranches to be issued by Vitality Re IV Ltd., for which noteworthy differences from Vitality III were a) Vitality Re IV provided an extra year of protection (i.e., four years) to Aetna, and b) the variable rate coupon spreads[5] were dramatically lower (275 bps for Class A notes and 375 bps for Class B notes) and more in line with market pricing for catastrophic mortality bonds.

Swiss Re raised another US$395 million of catastrophic mortality protection through the US$275 million issuance of Series 2012-1 of its Vita Capital V program, and through the US$120 million issuance of Class A notes under its new Mythen Re program. The Vita Capital V issuance covered excess mortality in Australia,

1 Routhenstein, A., Schreiber, S., & Silverman S. (February 10, 2012). Life ILS: 2011 Year in Review and Looking Ahead to 2012. Milliman Insight. Retrieved February 7, 2013, from http://publications.milliman.com/publications/life-published/pdfs/life-ils-2011-review.pdf.

2 Clark, D. & Mitchell, S. (November 2012). VIF Monetisation for Life Insurers–Key Drivers and Considerations. Milliman White Paper. Retrieved February 7, 2013, from http://ch.milliman.com/en/perspective/published-articles/pdfs/vif-monitisation-for-life-insurers.pdf.

3 Munich RE (2012). Insurance-Linked Securities (ILS): Market Update Q2 2012. Retrieved February 7, 2013, from http://www.munichre.co.jp/public/PDF/2012_Q2_ILS_market_review.pdf.

4 Aon Benfield (2011). Insurance-Linked Securities: Second Quarter Update 2011. Retrieved February 7, 2013, from http://thoughtleadership.aonbenfield.com/Documents/201107_ab_securities_ils_q2_update.pdf.

5 Artemis.bm (2013). Vitality Re IV Ltd. (Series 2013-1). Retrieved February 7, 2013, from http://www.artemis.bm/deal_directory/vitality-re-iv-ltd-series-20131/.

Canada, and the United States, and included a US$125 million 4.5-year tranche rated BBB- with a variable rate coupon spread of 270 bps, and a US$150 million 4.5-year tranche rated BB+ with a variable rate coupon spread of 340 bps.[6] The Mythen Re issuance included a US$120 million five-year tranche rated B+ that combined U.K. extreme mortality risk with North Atlantic hurricane risk (serving as the first time that mortality and hurricane risks have been combined in a publicized ILS transaction), and a US$80 million tranche rated B- that covered just hurricane risk.

The market for transferring macro longevity risk, not including insurer-to-reinsurer transactions, involved roughly the same number of publicized transactions in 2012 as in 2011, but the total amount of longevity risk transferred in such transactions was in 2012 dramatically higher than that in 2011 as a result of a few exceptionally large transactions. Although most longevity transactions in the past were UK-based deals denominated in pounds, the three largest transactions in 2012 were a US$7.5 billion group annuity purchased by Verizon, a EUR12 billion longevity swap obtained by AEGON, and a US$26 billion group annuity purchased by General Motors.

REGULATORY AND OTHER DEVELOPMENTS

There were several significant regulatory, legal, and rating agency developments in 2012 that affect the life ILS market.

- **Reserving for UL-SG products.** In response to concerns raised in 2011 by some regulators on the reserve methodologies being used by some companies for certain kinds of secondary guarantee universal life products, the NAIC adopted revisions to AG38 in September 2012. These amendments, developed by a joint working group of the NAIC Life Insurance and Annuities Committee (A Committee) and the Financial Condition Committee (E Committee), included a new Section 8D that applies to certain UL-SG products with multiple charge structures sold between July 1, 2005, and December 31, 2012. Under the new methodology, reserves will be at least as great as those calculated by each insurer using the insurer's assumptions and methodology as of December 31, 2011, but for certain products higher reserves will need to be held. The amendments also include a new Section 8E that applies to all new UL-SG business sold from January 1, 2013, until the effective date of principles-based reserves (PBR). In order to facilitate consistent implementation of these AG38 amendments, the NAIC established a new working group called the Emerging Actuarial Issues (E) Working Group (EAIWG) to work expeditiously, under an abbreviated public comment and review period of at least seven days, to respond to questions from state regulators and companies with respect to requirements under AG38.

  Based on our discussion with many companies, it seems likely that the Section 8D revisions, while creating a lot of work for many companies, will not result in a significant increase in reserves for most companies. Only a few companies may end up with a significant increase in reserves under Section 8D. The market is waiting to see what the impact of new Section 8E will have on new product design, pricing, and insurers' need for financing on such products.

- **The NAIC Captive and SPV Use Subgroup.** This subgroup (Captive Subgroup), which was formed in 2011 in response to concerns raised in a New York Times article in May 2011, held many public and regulator-only meetings during 2012, culminating in the exposure of a draft white paper on October 17, 2012. The NAIC received 11 written comment letters (four from regulators, and seven from interested parties) through November 26, and on November 26 released a revised draft white paper dated November 29 that included some minor drafting refinements. It also heard oral statements from some of these organizations and discussed the comments at its most recent open meeting, on November 29. Subgroup members, other regulators who submitted comment letters, and some of the interested parties who submitted comment letters spoke at the meeting in support of and/or against one or more forms of reserve financing or other uses of captives. The Captive Subgroup adjourned without reaching conclusions other than to request NAIC staff to modify the white paper to a) clarify that the Captive Subgroup does not consider captives to be a "shadow insurance industry," b) add some or all of Appendix 1 from the American Council of Life Insurers (ACLI) comment letter that lists "Current Disclosures and Requirements," and c) reflect some of the other comments received. A timetable was not clarified, but next steps are for the Captive Subgroup to submit a final white paper to the E Committee in satisfaction of the Captive Subgroup's charge for 2011 and 2012.

- **State legislative and regulatory issues directly affecting life ILS transactions.**

  – **In general.** While the Captive Subgroup was studying the use of captives in 2012, most state regulators that approved reserve financing transactions before 2012 continued to provide regulatory approval in 2012 to let insurers implement one or more forms of reserve financing solutions. We know of two states that postponed approval decisions in late 2011 or early 2012 that ultimately provided approvals in 2012.

  – **Nebraska.** Nebraska enacted legislation in April 2012 that permits guaranty of a parent. In doing so, Nebraska became the fifth state to explicitly permit guaranty of a parent as an alternative form of financing. Unlike the other four states (Georgia, Indiana, Iowa, and Texas), Nebraska's drafting approach does not define the term "limited purpose subsidiary," but instead defines the term "special purpose financial captive," which appears in the captive statutes of several other states.

  – **New York.** On July 18 the New York Department of Financial Services (DFS) asked each insurer licensed in New York for detailed responses by August 8 to a questionnaire about the use of captives by the insurer or any of its affiliates. It is not

6 Artemis.bm (2012). Vita Capital V Ltd. (Series 2012-1). Retrieved February 7, 2013, from http://www.artemis.bm/deal_directory/vita-capital-v-ltd/.

clear at this time what DFS will be doing with the information it has gathered. However, at a February 7, 2013, meeting with industry representatives, Superintendent Lawsky stated that the New York DFS a) is still reviewing the captive information it collected, b) is actively involved in regulatory discussions of the Captive Subgroup, and c) intends to be actively involved in 2013 NAIC discussions as a member of the A Committee, the E Committee, and the Executive Committee.

- **Principles-based reserves (PBR).** The NAIC took a big step forward in 2012 toward ultimately implementing PBR. At the conclusion of the NAIC fall national meeting, the NAIC approved a substantially complete version of the Valuation Manual (VM) developed by the NAIC Life Actuarial Task Force (LATF) to support PBR. Specifically, 43 jurisdictions voted "yes" on the VM (one more than the supermajority of 42 needed for NAIC approval). The VM, together with the revised Standard Valuation Law (SVL)—revised to incorporate PBR—can now be presented to state legislatures starting in 2013. If 42 jurisdictions, including states representing more than 75% of the industry premium (measured as of 2008), adopt the revised SVL, then PBR will become effective. Because several large states (including New York and California) opposed adoption of the VM and because of the late 2012 adoption date of the VM will limit the number of state legislatures that will consider the revised SVL in 2013, we believe the earliest that PBR may become effective is January 1, 2016, and it may take longer. Individual companies can further delay full implementation by electing an optional three-year transition period. PBR, if it does become effective, will initially apply only to business written on or after the effective date. While the insurance departments from both New York and California did not support adoption of the VM—these states account for about 18% of the industry's 2008 premiums (and the jurisdictions that voted "no" on the VM account for about 24% of the industry premium)—that does not mean that the legislatures in these states won't adopt the revised SVL. However, support from its insurance department makes it more likely that a state will adopt the revised SVL. A letter from the New York DFS superintendent was sent to all insurance commissioners just prior to the NAIC meeting, explaining the reasons for the opposition to PBR of the New York DFS. LATF is continuing deliberations on a variety of "Additional Work" items that need to be completed in order to finalize the VM before it is implemented.

- **Own Risk and Solvency Assessment (ORSA)**
  As part of its 2012 charge reporting to the NAIC Solvency Modernization Initiative (SMI) Task Force, the Group Solvency Issues (GSI) Working Group completed its drafting of the NAIC Risk Management and ORSA Model Act (ORSA Model Act) designed to a) ensure that insurance holding companies with U.S. insurance subsidiaries are subject to regulatory supervision, and b) require that insurance groups of sufficient size utilize an appropriate enterprise risk management framework defined as an ORSA. On a September 12 joint conference call meeting of the NAIC Executive Committee and Plenary, the NAIC adopted the ORSA Model Act with the intention that state legislatures will adopt it in 2013 or 2014, and it will become effective on January 1, 2015. The ORSA Model Act requires an insurer (or its insurance group) that doesn't qualify for a small company exemption to annually conduct an ORSA consistent with the NAIC's then current ORSA Guidance Manual, and to annually file, with its domestic regulator (or lead state commissioner of the insurance group), a confidential summary report (ORSA Summary Report) that contains information prescribed in the then current ORSA Guidance Manual. Although use of captives is not explicitly mentioned in the ORSA Model Act or the current version of the ORSA Guidance Manual, the ORSA Guidance Manual statement, that insurers "should have sound processes for assessing capital adequacy in relation to their risk profile and those processes should be integrated into the insurer's management and decision-making culture," appears to implicitly require insurance groups to consider material captive programs in their ORSAs.

- **A.M. Best issued operating leverage criteria in January 2012.**
  An insurance group that utilizes reserve financing needs to be aware of A.M. Best's operating leverage criteria, as these criteria affect A.M. Best's views on the ceding company and the holding company, and thus could impact the insurance group's decision on how to structure a particular financing. These criteria apply to both funded and unfunded reserve financing, and also apply to a variety of other activities such as securities lending, Federal Home Loan Bank borrowings, guaranteed investment contracts, and certain off-balance-sheet liabilities. Some highlights that affect reserve financing are:

  — A.M. Best calculates leverage at the statutory insurance operating company level and at the consolidated holding company level. At the group level, credit for operating leverage will be reduced if the sum of activities qualifying for operating leverage exceeds 30% of consolidated GAAP liabilities, excluding separate-account liabilities.

  — A.M. Best at the group level has treated captive surplus note issuance as operating leverage where the cash flows generated are projected to be more than sufficient to fund the debt payments. However, if there is some recourse to the issuer, these types of issues will not be afforded full operating leverage credit.

  — A.M. Best will only consider full operating leverage treatment for LOCs that have a remaining maturity of five years or longer. If LOCs have near-term rollover risk (i.e., less than five years), they will be considered financial leverage.

  — A.M. Best will qualitatively incorporate "guaranty of a parent" financing as part of its operating leverage tolerance.

LOOKING AHEAD TO 2013

Below we present our views as to potential developments in 2013.

- **In the reserve financing marketplace.** We expect that reserve financing will continue to drive the life ILS market. With XXX and AXXX excess reserves growing between US$10 billion and US$15 billion per year, the life insurance industry will continue to be open to cost-effective solutions to finance excess reserves. However, a variety of factors might affect which financing structures are most popular, as discussed below.

  – **AG38.** As companies continue to deal with excess reserves on certain in-force products (including the impact of the new Section 8D of AG38), we await the development of new or modified UL-SG products in 2013 in response to the new Section 8E of AG38.

  – **NAIC captive-related regulatory developments.** It is not clear whether the Captive Subgroup's final white paper will remedy some ambiguities within the draft dated November 29, such as some anti-captive and pro-captive statements that were inconsistent with each other. While it is also not clear what the E Committee will do with the Captive Subgroup's white paper once finalized, we expect that the E Committee (or possibly the NAIC Executive Committee, as suggested by the ACLI in its comment letter), at an in-person meeting in April or August, will charge a new NAIC working group to take action steps to address concerns raised by the final white paper. We expect that the working group will discuss "the varying ways that life insurers use captives," as suggested in the ACLI's comment letter, rather than assume that PBR will eliminate the need for reserve financing transactions as currently implied by the draft white paper. Although we expect that the working group will strengthen NAIC disclosure requirements for insurers ceding to captives, given the ambiguities in the draft white paper it is not clear how the working group will address the other concerns expressed in the paper. During 2013 we believe that many insurers will continue to move forward with reserve financing transactions, as they are an important part of many companies' capital management strategies. We will continue to monitor developments on this topic in 2013.

  – **Rating agency developments.** A.M. Best, Fitch, Moody's, and S&P periodically review their criteria and deliberate on whether updates are appropriate. In light of ongoing ILS-related legal and regulatory developments, and given how financing structures have evolved in the last couple of years, we would not be surprised if one or more rating agencies in 2013 or 2014 introduces changes to their ILS-related criteria.

  – **PBR.** Work will continue on the VM, which is meant as a living document subject to annual revisions by the NAIC, as the revised SVL is introduced in the legislatures of several states in 2013. As noted earlier, we believe PBR may not become effective prior to January 1, 2016, at the earliest.

  – **ORSA.** After the E Committee charges a new working group to enhance the NAIC regulatory framework to reflect insurer use of captives, we expect in 2013 or 2014 that a new working group will discuss with the SMI Task Force or its GSI Working Group whether any of the documents developed by the SMI Task Force should be enhanced to provide explicit guidance on insurer use of captives.

- **In the EV financing market.** We expect to see a couple of ILS transactions in Europe or the United States, but we expect a greater number of VIF monetization transactions executed by insurance subsidiaries of banks in solutions that might not be viewed as ILS (like Banco Santander and CaixaBank did in 2012) to strengthen bank balance sheets.

- **In the catastrophic morbidity and mortality risk transfer market.** We expect that the lower-risk transfer cost priced into Vitality Re IV will draw more issuers to the market and we will see more transactions get completed than in 2012.

- **In the longevity risk transfer market.** We expect continued development around the world. Certainly, following the GM and Verizon transactions in the United States, there has been increased interest, which we expect to grow, especially if the level of underfunding on defined benefit pension plans is reduced.

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