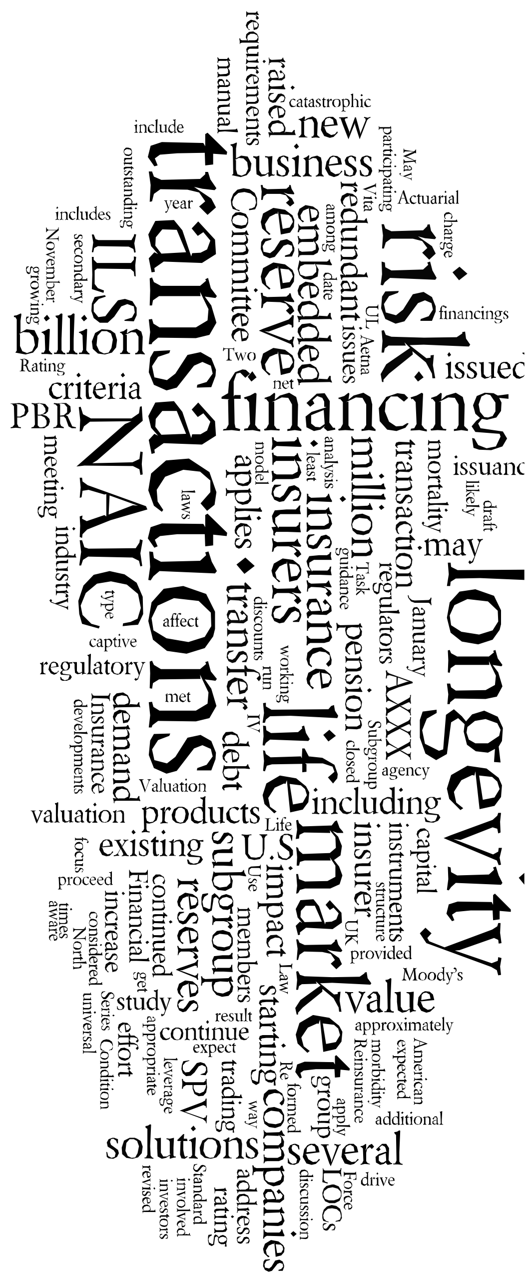
Life ILS: 2011 year in review and looking ahead to 2012

Alan Routhenstein, **FSA, MAAA**
Steven Schreiber, **FSA, MAAA**
Stuart Silverman, **FSA, MAAA, CERA**



In 2011, at least US$12 billion in reserve and embedded value financing transactions related to life insurance-linked securities (ILS) were completed. Most of these transactions involved the financing of redundant 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), with many of these transactions involving the use of bank-issued letters of credit (LOC) to finance the redundant reserves. In addition to the reserve financing transactions, the market saw at least US$500 million of transactions to transfer catastrophic morbidity or mortality risk, and at least £9 billion of transactions to transfer longevity risk (most such transactions were for UK exposures).

REDUNDANT RESERVE FINANCING: GROWTH IN AXXX SOLUTIONS

Starting with the first Regulation XXX redundant reserve transaction in 2003, a large percentage of the XXX redundant reserve financing through 2007 involved broadly marketed capital market securitization transactions structured by financial guarantors, with the guarantors bringing their triple-A ratings to the transactions. Some of the financing during that time period involved banks providing long-dated private-funded or LOC solutions, with such transactions being the preferred approach for AXXX financing. But the financial crisis brought a halt to all of these structures, as investors lost confidence in financial guarantors, credit spreads increased dramatically, and banks lost balance sheet capacity.

This market freeze lasted about a year, but starting in the fall of 2008, the redundant reserve financing market restructured itself, moving away from guarantor-wrapped securitizations and bank private-funded solutions to private LOC solutions. During 2009 most of the transactions were for XXX and involved recourse, though some banks offered non-recourse structures. As discussed in our 2010 year in review paper,[1] during 2010 a mix of recourse and non-recourse XXX financing transactions were executed. We also saw some AXXX financing activity, but most of the AXXX transactions were either internal financing provided by a parent or affiliate or full-recourse financing provided by banks.

In 2011, there was much more activity on AXXX financing, some of these non-recourse in nature, with more than half of the redundant reserve transactions we are aware of involving AXXX financing or a combination of XXX and AXXX financing. Most of the 2011 reserve financing transactions have not been publicized or have been disclosed in a less revealing manner than in prior years. Based on transactions we have worked on, together with other transactions that we heard about in the marketplace, we estimate that there were at least 12 redundant reserve transactions completed in 2011 that provided over US$7 billion of financing.

1 Routhenstein, A., Schreiber, S. "Life ILS: 2010 year in review and looking ahead to 2011." Milliman Insight, Jan. 31, 2011. Available at http://publications.milliman.com/research/life-rr/pdfs/life-2010-year-review.pdf

Similar to the trend we noted in 2010, during 2011 we saw more banks entering the marketplace and completing transactions, with each providing a transaction structure with some unique features. Also similar to 2010, we have seen a few banks exit or take a hiatus from this 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 did not return to 2007 levels, the increase in supply has contributed to some reduction in financing costs and 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 several other approaches used to finance redundant reserves. We saw a couple of self-financed 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 a key role in the non-recourse reserve financing market, sometimes directly via traditional reinsurance, 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 M&A transactions where execution of the reserve financing is a key component of the M&A negotiations. In addition, some insurers have explored parental guarantee structures available in some states (e.g., the Limited Purpose Subsidiary approach allowed under Iowa law), and some solution providers have begun to offer other structures not directly involving bank LOCs.

OTHER 2011 TRANSACTIONS

In 2011, while most of the North American life ILS transactions involved redundant reserve financing, several other innovative transactions provided financing in various forms in the U.S., in Canada, and in Europe.

We are aware of several transactions related to regulatory closed blocks (closed books of participating individual life business, formed at the time mutual insurance companies converted to a stock company structure). Two companies that executed regulatory-closed-block-related transactions in 2011 include Prudential Financial and Phoenix.

Aurigen Reinsurance brought the first capital markets embedded value transaction to market since 2007, with the issuance of C$120 million of notes. This transaction involved the monetization of the embedded value on 12 of Aurigen Re's reinsurance treaties.

Aetna, through its Vitality Re special purpose vehicle (SPV), raised US$150 million at the end of 2010 to provide excess-of-loss protection on a portion of Aetna's group commercial health insurance business (i.e., catastrophic morbidity risk transfer). Two additional Aetna issuances, in April 2011 and in January 2012, raised an additional US$300 million.

Swiss Re raised another US$180 million through issuance of Series V and Series VI of its Vita IV mortality catastrophe bond program. In addition to the Vita IV issuance, there is interest in the marketplace for more mortality catastrophe bond offerings.

We continued to see a fair amount of activity in the secondary market trading of outstanding wrapped securitizations. Many of the outstanding bonds are trading at fairly steep discounts. This is not necessarily because of the underlying insurance risk, but rather we believe because of the lack of information available to investors to evaluate the risk of existing transactions. Taking advantage of these deep discounts, several issuers have been buying up some or all of the paper associated with their transactions.

The market for trading macro longevity risk continued to develop in 2011. The overall market (not including insurer-to-reinsurer transactions) was about £12 billion in 2011 with approximately £3 billion in pension buy-ins and buy-outs and £9 billion in longevity swaps. There have been some fairly sizable transactions that have taken place in 2011. The largest 2011 longevity risk transfer transaction we are aware of is the longevity swap involving Rolls-Royce to hedge approximately £3 billion of its pension liabilities. Most of the 2011 longevity transactions have been bespoke indemnity trades, where the longevity risk has been ultimately assumed by insurers, reinsurers, or a syndicate of insurers and/or reinsurers. Further, most of the transactions focus on retired lives receiving benefits. However, in February, Pall Pension Fund entered into a £70 million index-based transaction to hedge the longevity risk of its non-retired life members. We have also even seen cross-border transactions, with U.S. insurance companies hedging UK longevity risk (e.g., Prudential Financial providing reinsurance on £450 million of Rothesay Life's pension liability).

RATING AGENCY DEVELOPMENTS

There were a couple of noteworthy rating agency developments in 2011 that affect the life ILS market.

- Moody's issued operating debt guidance in May 2011, which applies for leverage analysis of debt instruments used in reserve or embedded value financing transactions. This guidance does not apply for LOCs, but it clarifies that Moody's assesses the impact of LOCs on an insurer's liquidity and capital adequacy.

- Fitch issued Total Financing & Commitment (TFC) ratio criteria in May 2011 (which applies for leverage analysis of debt instruments or LOCs used for reserve or embedded value financing), Insurance-Linked Securities (ILS) criteria in August 2011 (which applies for the rating of ILS debt instruments issued by a captive or by an SPV), and Insurance Rating Methodology criteria in September 2011 (which applies for the rating of a captive that purchases an LOC).

LOOKING AHEAD TO 2012

In 2012, we expect that UK longevity risk transfer transactions will continue to drive the European life ILS market, and that, in the U.S., redundant reserve financings will continue to drive the North American life ILS market, with a continued and increased focus on

AXXX financings. With the XXX and AXXX redundancies growing between US$10 billion and US$15 billion per year, the life insurance industry will continue to be open to solutions to help unlock surplus that is tied up in funding redundant reserves. But there will be some head winds in 2012, including the low interest rate environment. Some other key factors to watch in 2012 include:

- **Captive & SPV Use Subgroup at the NAIC**: In October, the National Association of Insurance Commissioners (NAIC) Executive Committee/Plenary provided the following charge to the NAIC Financial Condition (E) Committee for 2011 and 2012:

  Study insurers' use of captives and special purpose vehicles to transfer 3rd party insurance risk in relation to existing state laws and regulations and establish appropriate regulatory requirements to address concerns identified in this study. The appropriate regulatory requirements may involve modifications to existing NAIC model laws and/or generation of a new NAIC model law.

  In November, the E Committee established a new subgroup to accomplish its charge. The subgroup includes members from the Financial Analysis (E) Working Group, Life Actuarial (A) Task Force and the Reinsurance (E) Task Force. The new subgroup is called the "Captives & SPV Use Subgroup." The subgroup held its first meeting at the end of January 2012. Depending on what comes out of this subgroup, this could have impact on the type and structure of life ILS transactions.

- **AG38**: There was extensive discussion, at times heated, at the NAIC in 2011 about how to apply Actuarial Guideline 38 to reserve certain types of shadow account universal life products, including so-called "Term UL." Both among regulators and among companies there are different views as to how such reserves should be calculated. At the November NAIC meeting a new joint working group was formed, composed of members of the Life Insurance and Annuities (A) Committee and Financial Condition (E) Committee, to address issues surrounding the statutory reserve requirements for insurers offering UL-SG products. The group has met several times, including releasing in January a draft framework on how to proceed. The draft framework separates the treatment of existing business and business issued after a yet-to-be-defined date. We expect the NAIC to proceed quickly, at least with regard to new business, and to possibly take action as early as its March 2012 meeting. The net result of this NAIC effort may increase demand from some insurers for AXXX financing solutions starting in 2012.

- **Principles-based reserves (PBR)**: 2011 was the year of the impact study for PBR. A significant effort was expended on the part of the participating companies and the regulators in performing, reviewing, and analyzing the results. The impact study raised several issues, which the industry and the regulators are working to address. The goal for 2012 is to get the valuation manual to a point considered complete so that the revised valuation manual, together with the Standard Valuation Law that includes recognition of the valuation manual, can be presented to state legislatures starting in 2013. It likely will take at least two years to satisfy the PBR operative date criteria (requisite numbers of states and premium amounts) thereby approving the revised Standard Valuation Law. If PBR is implemented, it likely won't happen before 2015, and even so, there is an optional three-year transition period. The net result of this PBR effort is unclear at this time, though based on the current draft (which is still evolving) of the valuation manual, we may expect to see a decrease in insurer demand for term life reserve financing solutions, and possibly modified insurer demand for UL-SG and embedded value financing solutions.

- **Longevity risk**: We anticipate more longevity risk transfer transactions in 2012 and into the foreseeable future. The life insurance industry is starting to increase its marketing of longevity products to the growing number of retiring Baby Boomers. Further, it seems that Solvency II may require insurers to hold total reserves and capital for longevity products that the market considers redundant, and if so, it is possible that ILS-type solutions will be considered helpful. Further, interested parties have been exploring ways to entice U.S. pension plans to participate in the longevity market (but this may prove difficult until funding ratios improve). The next challenge for this market is to find a way to pass risk to investors (and not just the insurers). Otherwise, in the long run, insurers may run into capacity issues, which will stifle the longevity market.

Alan Routhenstein, FSA, MAAA, is a consulting actuary in the New York office of Milliman. Contact him *at alan.routhenstein@milliman.com.*

Steven Schreiber, FSA, MAAA, is a principal and consulting actuary in the New York office of Milliman. Contact him at *steve.schreiber@milliman.com*

Stuart Silverman, FSA, MAAA, CERA, is a principal and consulting actuary in the New York office of Milliman. Contact him at *stuart.silverman@milliman.com.*