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SECTION

# Reinsurance News

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# Reinsurance News

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### Call for Articles for next issue of Reinsurance News.

While all articles are welcome, we  
would especially like to receive articles on  
topics that would be of particular interest to  
Reinsurance Section members.

Please e-mail your articles to  
Richard Jennings ([richardcjennings@  
gmail.com](mailto:richardcjennings@gmail.com)) or Ronald Poon-Affat  
([rpoonaffat@rgare.com](mailto:rpoonaffat@rgare.com)).

Some articles may be edited or  
reduced in length for publication purposes.

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# Chairperson's Corner

By Michael Mulcahy

According to our mission statement, the Reinsurance Section has the “overriding objective of enhancing the understanding of reinsurance for all our stakeholders, actuarial as well as non-actuarial.” Below is a summary of what the section has achieved towards that goal this year.

- The Reinsurance Section sponsored or co-sponsored 13 different sessions with content pertinent to reinsurance at SOA meetings.
- We put on a Reinsurance Boot Camp held after the

Life and Annuity Symposium.

- The section provided funding for research projects on term conversion mortality, living benefits riders, earnings emergence, and retention management.
- LEARN, our program to educate regulators, gave seminars to six states and two foreign jurisdictions.
- Webcasts were presented on accelerated underwriting and living benefits.

In order to do an even better job of educating our stakehold-

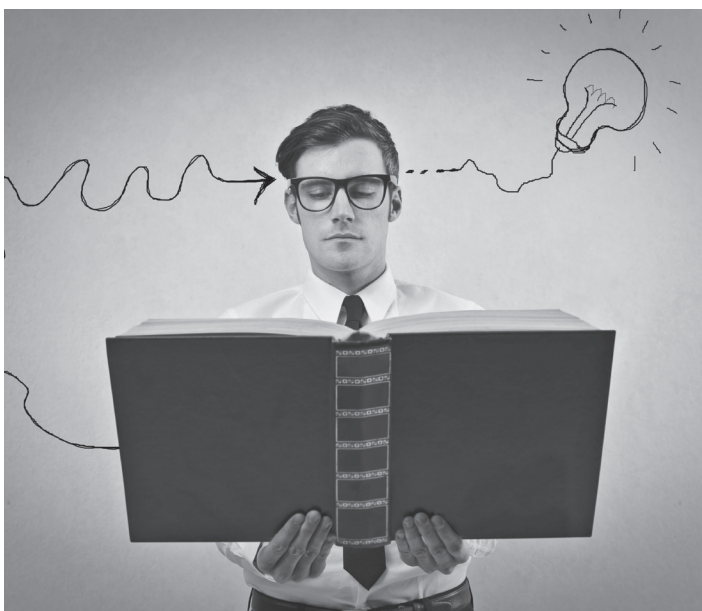
ers in the future, we surveyed our membership to get a better understanding of who we are. Below are some results from the survey. Of course, the results only reflect the portion of our members who responded. So to entice you all to reply, we also held a contest to predict currency exchange rates. Congratulations to John Nussbaum, the Reinsurance Section King of Currency. John won a \$100 Amazon gift card for predicting the U.S. Dollar to Canadian Dollar, Chinese Yuan, and Euro exchange rates to within 62 basis points

Of members who responded:

- 81 percent were from the U.S. and 10 percent from Canada.
- 42 percent work for a reinsurer, 38 percent a direct writer, 13 percent a consultant, and 7 percent other.
- 32 percent work in Pricing, 23 percent Valuation, 7 percent as a broker or Consultant, 5 percent in treaty/administration, and 33 percent other. A wide range of practice areas were listed as “other.” The most common were risk management (4 percent), senior management/executive (3 percent), and research (2 percent).
- 23 percent never use LinkedIn. 30 percent use LinkedIn between two and five times a month, and 18 percent use it more than once a week (6 percent use it daily).

who worked on the section's initiatives. There isn't enough space to name all the volunteers that help with sessions, webinars, LEARN presentations and other programs, but your service is invaluable to the council. I'd like to give a special thanks to Marc Cagen, a friend of the Council, for all his work organizing the section survey, and to Rick Lassow and Scott Campbell, for their time and efforts over the last three years as Section Council members.

I'd like to welcome our three newest council members elected this year: Mike Kaster, Tim Paris, and Katrina Spillane. Perhaps I should say our two new members, and one old one. Mike Kaster is returning to the council after a one-year “hiatus,” during which he organized the Reinsurance Boot Camp for the council. And best of luck to Dustin Hetzler, the new chairman of the Reinsurance Section Council—You've been a great help throughout the year, and I'm sure the Section will continue to meet its mission under your leadership. ■



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With my term on the Reinsurance Section Council ending, I'd like to thank all the volunteers

# The Untouchables

By Ronald Poon-Affat

**The views expressed in this article are solely those of the author and do not reflect the views of either his employer or the Society of Actuaries.**

*“Uber, the world’s largest taxi company, owns no vehicles. Facebook, the world’s most popular media owner, creates no content. Alibaba, the most valuable retailer, has no inventory. And Airbnb, the world’s largest accommodation provider, owns no real estate. Something interesting is happening.”* — Tom Goodwin, senior vice president of strategy and innovation for Havas Media North America.

Front cover from the Economist lauded the four consumer Internet giants that are engaged in combat which is worthy of a Game of Thrones end of season episode. They were named as Facebook, Google, Apple and Amazon. It was quite amazing to think that House Microsoft did not even make the cut. The innovation war does not allow anyone to rest on one’s laurels.

Speaking of innovation, In February 1688, Edward Lloyd’s Coffee House in Tower Street was referred to for the very first time in the London Gazette. Was this really the last time that reinsurers had an innovative idea? If it was, then Edward still lost points for not leveraging the idea and starting a Starbucks-like coffee chain across the British empire.

I believe we can divide the new Internet-driven technologies and businesses that are challenging existing businesses into two categories: those that sit comfortably next to existing companies, such as Amazon and Wal-Mart; and those that have largely wiped out their competitors, such as online music streaming services. (I was made to feel very antediluvian when I recently learnt that major produce CDs, opting for digital-only music sales.)

Why have traditional reinsurers not been materially changed or challenged by the new risk transfer techniques that are backed by venture capital or private equity funds? Is there really an impregnable moat that protects our industry from change? Or, could it be due to any of the following items:

- Risk transfer is complicated and can’t be challenged easily by new companies/concepts.
- The risk transfer value change is already efficient enough.
- Regulation, tax law and capital arbitrage protect reinsurance product offerings.

- Reinsurance is sufficiently essential to insurance markets as to make it irreplaceable.
- Insurers are satisfied with the current markets, which they see as stable.
- The business of reinsurance is antifragile (as defined by Nassim Nicholas Taleb, who defines antifragility as a state greater than resilience—a state where entities experiencing shocks actually benefit from them).
- Reinsurers are led by executives who have a follow-the-herd mentality and/or embrace the present too tightly.
- Reinsurance company shareholders are not pushing reinsurers to innovate.
- If and when driverless cars become a reality (since cars sit idle 97 percent of the time), self-owned cars may become a thing of the past, which will kill the car insurance market as we know it.
- Some clients are already looking to the capital markets for risk transfer solutions for catastrophe and longevity. The world’s top reinsurers, however, have not investigated this avenue.

Even if no new players are entering the risk transfer market, the four trends cited above should convince us that the reinsurance market is not untouchable, and should have us concerned about how we can reinvent our present business model and product offerings.

I would respond to all these items with a resounding “I don’t think so!”

Let’s now consider a few trends related to our clients:

- A lot of merger and acquisition activity is currently taking place. Insurance companies are getting bigger and retentions are increasing, which is shrinking reinsurance premiums.
- The average age of the career life insurance sales agent is rising fast, which means that as a cohort, agents are falling out of sync with those who comprise their primary target market: young individuals.

What really confirms the reinsurance industry’s lack of risk transfer innovation is how leading reinsurers are prospecting and selling in their newest markets. None have used the opportunity of entering a new reinsurance market to introduce or leverage a new offering or business model. If reinsurers had developed some innovations, emerging markets might have provided perfect opportunities to leapfrog the old and showcase the new. But sadly it’s business as usual—same old, same old.

Reinsurers today might very well be working on innovative ways to transfer risk, but limiting investment in research and development in this area will not enable a major breakthrough. I would like to suggest that the main culprit for this



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lack of investment in innovation might be the industry's fixation on "quarterly capitalism," or a focus on short-term results. The reinsurance industry might be too wary to shell out the big bucks necessary to fund alternative risk transfer models that may, at best, only pay off in the long run.

Nonetheless, I believe the reinsurance market will eventually be impacted dramatically by a new and innovative way of doing business. The question is: will the innovation be a complement, as Airbnb is to traditional hotels, or a disruptor such as Netflix, which killed Blockbuster but sits happily next to cinemas? Right now that's hard to say.

Change will definitely come, whether the traditional reinsurance market embraces it or not. It has to: the reinsurance market is huge, representing US\$570 billion in capital, and it is profitable, representing a tempting opportunity. Indeed, for many years, Warren Buffet extolled this industry, trumpeting his reinsurance investments (although *The Wall Street Journal* recently reported that even Berkshire Hathaway is reassessing its exposure to the sector). Nonetheless, at some point, a new player is going to take notice of the industry and innovate, and traditional reinsurers, unfortunately, may have little influence over events and no control of the consequences.

So, it's not if, but when. The only question is which of the seven kingdoms will be the first to be materially impacted. Here I refer to the seven realms of Life, P&C, Reinsurers, Retrocessionaires, Brokers, On-Shore and Off Shore. Who will be left standing at the end?

Winter is coming. ■

This editorial's inspiration came from a presentation by IE Business School (Madrid, Spain) Professor Eloy B. Garcia on Geopolitical Challenges in a Multipolar World. A fascinating Q&A session with Professor Garcia is included within this newsletter.

# Brazilian Reinsurance Market Research Report

By Ronald Poon-Affat

The views expressed in this article are solely those of the author and do not reflect the views of either his employer or the Society of Actuaries.

Rodrigo Botti is the CFO and COO of Terra Brasis Re. Terra Brasis Re is a local multi-line Brazilian Reinsurance company operating since 2012. *Terra Report* is a comprehensive report that analyses and provides insightful comments regarding the Brazilian reinsurance market on a quarterly basis both in English and Portuguese. It is akin to a financial report provided by the Investment houses on specific industries and *Terra Report* has received high praise both within Brazil and internationally. The SOA Newsletter *Reinsurance News* recently interviewed Rodrigo on the development of this report.

WHEN DID YOU START? WHAT IS THE FREQUENCY?

We published the first edition of *Terra Report* in December 2010. At the time, we were at a pre-operational phase, still waiting for the approval from Brazil's regulatory superintendence—Susep.

We publish the report on a quarterly basis. I must confess though, that in the first two years, we had some issues and only managed to publish three editions in each of those years.

We publish all editions in both a Portuguese and an English

version. All the material is fully available at our webpage.

HOW DID YOU COME UP WITH THE IDEA FOR THE REPORT. WHAT INSPIRED YOU?

Terra Brasis' business model is strongly based on the belief that a reinsurer is more than just a capacity provider. A reinsurer must be a long-term

partner and a service provider to the insurance industry.

With that in mind, we developed several initiatives that we believed would add value to our clients and partner. *Terra Report* was one of them.

HOW DID YOU USE YOUR BACKGROUND IN FINANCE TO PRESENT THE ANALYSIS?

Back in 2001 I worked at the research department of a top investment bank. It was an exceptional team, ranked #2 in Emerging Market Fixed Income Research by *Institutional Investor Magazine*.

It was a great experience at a very interesting time. Interna-

tional fixed-income investors, who up to that point only invested in Emerging Market External Debt, were starting to explore Emerging Market Local Debt and other onshore investment products. To do so, they had to learn—and learn fast—about the peculiarities of the financial market of each individual emerging market country. One of our main roles was to educate these investors about this new investment frontier.

This experience helped with the development of *Terra Report*. I do see a parallel between these situations, as currently Brazilian insurance and reinsurance professionals are eager to keep pace with the new dynamic of the



country's reinsurance market and International professionals need to learn more about this fast growing market.

#### HOW MUCH EFFORT IS PUT INTO THE DEVELOPMENT OF THE REPORT?

There is considerable effort, but it is a very fulfilling job. We have a relative small team cracking the numbers, developing the analysis and putting together the report. Nevertheless, we try to engage the whole company in this effort. Before we publish each edition, we circulate a draft among management. We discuss the results internally and many times change and try to improve the report based on these discussions. In addition, for each edition we try to bring something new or a particular analysis.

Lastly, after we publish each edition we do a large meeting with the whole company, presenting the results. It is a great way to keep everyone up to date with market development and at the same time to test your conclusions.

#### WHAT ARE SOME KEY/INTERESTING OBSERVATIONS ABOUT BRAZILIAN REINSURANCE MARKET?

For one thing, it is not a boring place. There is always something new, something changing.

Jokes aside, the Brazilian Reinsurance market is a very dynamic market, with great long-term potential. One should not underestimate the magnitude of the transformation the Brazilian market went through. In the

space of five years, the Brazilian reinsurance market went from an IRB monopoly to one with 16 local and more than 100 foreign entities authorized to do business in the country. Moreover, the transition happened without any meaningful disruption and with significant benefits to cedants. It was a case study success.

One other interesting point is that the current reinsurance environment in Brazil is not homogeneous relative to the players involved. We currently have in the market Global, Regional and Local reinsurers competing, which to me translates into a very healthy environment, with clear benefits to the final consumers and the Brazilian society. It would have been disappointing if an IRB monopoly had been replaced by an oligopoly, dominated by the handful of the top Global Reinsurers.

#### DO YOU HAVE DIFFICULTIES WITH THE DATA?

Yes. As with the production of any market report, there are challenges in compiling data. We use in great part the data provided by the Brazilian Insurance Regulatory body, Susep. We are immensely grateful to them for making this data available to the public. It is a great tool, not only for us, but also for all market participants, which is only made possible by Susep's significant efforts.

The main challenges to the data analysis arise from the somewhat complex structure of the Brazilian insurance and reinsurance market. Accounting standards, for instance, have changed over time and

therefore one must be very careful when trying to construct historical series. In my opinion, a great part of the *Terra Report's* value comes from the process of working through the raw data to create valuable information.

#### DO YOU RECEIVE NEGATIVE/POSITIVE/SURPRISING FEEDBACK FROM THE MARKET? WHAT ARE YOUR PLANS FOR THE REPORT?

We have been receiving some very positive feedback. *Terra Report* is now distributed to more than 2,000 professionals in 25 countries and is available at our webpage. We also have been quoted and we have written articles to several well respected magazines in both Brazil and abroad, which makes us quite proud.

We have no immediate plans for changing the report. We have actually been focused in other initiatives. Two year ago, we developed a Brazilian Natural Catastrophe map, which we believe is the first in the industry dedicated solely to Brazil. Last year we created an interactive electronic version of this map, now available at our webpage. This year, what we have been working in is a new project, now close to completion, which we believe will fill another gap of the Brazilian Reinsurance Market. Unfortunately, I cannot elaborate further at the moment.

WHAT ARE YOUR OBSERVATIONS ABOUT THE DEVELOPMENT OF THE BRAZILIAN MARKET? It looks like we are heading to

another bumpy year in Brazil. We are currently compiling the data for the June 2015 edition. Premium volume continues to grow at a healthy pace, but results are deteriorating. The Loss Ratio of all Local Reinsurers combined reached 85 percent (123 percent excluding IRB) against 60 percent (70 percent excluding IRB) registered in the same period of the previous year.

On the positive side, we are seeing significant growth in the premium ceded from insurance companies outside Brazil to local Brazilian reinsurers, which demonstrates that the internationalization strategy of some local reinsurers is working. We do see, in the short term, Brazil as a regional reinsurance hub. ■

The reports are set out at <http://www.terrabrasis.com.br/en/Report/>. Rodrigo Botti is based in Sao Paulo, Brazil and his contact email is [rodrigo.botti@terrabrasis.com.br](mailto:rodrigo.botti@terrabrasis.com.br)



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# Impacts of AG 48

By Keith Bucich, Francis Rahil and John Shaw

**A**ctuarial Guideline XL-VIII (AG 48) is effective as of Jan. 1, 2015 for XXX and AXXX<sup>1</sup> business ceded to a captive reinsurer. This article provides an overview of AG 48 and an illustrative example of how AG 48 could impact asset requirements and related costs for companies that use captives to finance redundant XXX and AXXX reserves.

AG 48 introduces several new concepts for the ceding of this type of business to a captive reinsurer:

- a. Actuarial Method
- b. Primary Security
- c. Required Level of Primary Security
- d. Other Security

Using an illustrative universal life product with a secondary guarantee (ULSG), we will demonstrate each of the above concepts and its applicability as of Jan. 1, 2015. These new concepts will be compared to the same product prior to AG

48 being effective showing the difference between the pre AG 48 asset financing and the post AG 48 asset financing.

## BACKGROUND

Due to perceived redundancies in statutory reserves for level premium term and universal life products with secondary guarantees (ULSG), some companies that sell these products have utilized a captive reinsurance financing structure. Using captives lessens reserve strain and frees up surplus that can be used to invest in new products or acquisitions, improve RBC ratios, or increase distributions to shareholders.

Currently, under one common financing structure, the assets supporting the first layer of statutory reserves ceded to the captive consist of securities such as bonds, stocks, and mortgages. This first layer of reserves is sometimes referred to as the economic reserve<sup>2</sup> and is generally based on best estimates around cash flows

for benefits, expenses and premiums associated with the risk being reinsured, potentially with some added provision for risk. The assets supporting the economic reserve are usually held in trust or in a coinsurance funds withheld arrangement for the ceding company. The assets needed to support the remainder of the statutory reserve (often referred to as the redundant reserve) are financed using alternative means such as letters of credit. Before AG 48, there was no uniform guidance for the calculation of the economic reserve and no requirements for the types of assets that had to be held to support the economic reserve.

However, as of Jan. 1, 2015, reserve financing arrangements utilizing captives or special purpose vehicles are subject to AG 48, which prescribes the Required Level of Primary Security based on the Actuarial Method, a modified version of VM-20, and the asset classes that can be held as Primary Security.

## ACTUARIAL GUIDELINE 48

On Dec. 16, 2014, the NAIC Executive Committee and Plenary adopted AG 48 effective Jan. 1, 2015. The purpose of the guideline is to establish uniform standards for XXX or AXXX reserve financing transactions utilizing captives or special

purpose vehicles. AG 48 addresses the types and amounts of assets that need to be held as security under the reinsurance contract, on a funds withheld, trust, or modified coinsurance basis. Also, it establishes additional requirements for the actuarial opinion for reserve financing transactions. AG 48 applies to treaties entered into (or new business added to existing treaties) after Dec. 31, 2014.

AG 48 specifically applies to financing arrangements for term life insurance business subject to the Valuation of Life Insurance Policies Model Regulation (Model 830 or Regulation XXX) and universal life insurance business subject to Actuarial Guideline XXXVIII (AG 38 or AXXX). AG 48 is not limited to transactions involving a captive structure. Any reinsurer that does not meet one of the exemptions<sup>3</sup> and reinsures policies with Regulation XXX/AG 38 reserves will be subject to the new rules.

For ULSG, when the secondary guarantee risk is ceded, the ceding company will typically take a reserve credit for the excess of the AG 38 reserve over the reserve for the base UL policy (UL CRVM). For transactions prior to AG 48, the company calculated an economic reserve and the redundant reserve. The economic reserve calculation

	Year 5	Year 10	Year 15	Year 20	Year 25	Year 30
(1) UL CRVM	\$36,167	\$62,924	\$58,217	\$37,389	\$ 9,404	\$ 0
(2) AG 38	52,929	80,942	79,082	64,824	43,276	17,890
(3) Ceded reserve (2) - (1)	16,761	18,018	20,865	27,434	33,872	17,890
(4) Economic reserve <sup>4</sup>	0	759	4,684	10,388	18,534	11,382
(5) Retained reserve + economic reserve: (1) + (4)	36,167	63,683	62,901	47,777	27,938	11,382
(6) Amount financed/redundant reserve: (2) - (5)	16,761	17,259	16,181	17,046	15,338	6,508



	Year 5	Year 10	Year 15	Year 20	Year 25	Year 30
(1) UL CRVM	\$36,167	\$62,924	\$58,217	\$37,389	\$ 9,404	\$ 0
(2) AG 38	52,929	80,942	79,082	64,824	43,276	17,890
(3) Ceded reserve: (2) - (1)	16,761	18,018	20,865	27,434	33,872	17,890
(4) Actuarial Method Reserve (Primary security)	7,957	2,803	8,050	14,442	21,055	12,551
(5) Retained reserve + Primary Security: (1) + (4)	44,124	65,727	66,267	51,831	30,459	12,551
(6) Amount financed/Other Security: (2) - (5)	8,805	15,215	12,815	12,993	12,817	5,339

was based on secondary guarantee claims and reinsurance premiums. The redundant reserve was equal to the total ceded reserve less the economic reserve.

On page 8, is an illustrative example for a transaction prior to AG 48 for a ULSG product. The economic reserve in this example is a gross premium valuation reserve using moderately adverse assumptions. The example also assumes that the assets held by the captive would qualify as Primary Security assets.

In this pre AG 48 example, for policy year 10 the ceding company would take a reserve credit of 18,018 and the assets for the economic reserve of 759 would be held in a funds withheld account or trust arrangement. The redundant reserve of 17,259 would be financed by a letter of credit or other financing vehicle.

For treaties subject to AG 48, the assets required (Primary Security) would no longer be the amount necessary to back an economic reserve based on the secondary guarantee claims and reinsurance premiums but would be based on the Actuarial Method defined as a modified VM-20 reserve.

Per VM-20, the reserve is the

higher of the net premium reserve, deterministic reserve, and stochastic reserve. The net premium reserve is a formulaic reserve using prescribed assumptions that is meant to serve as a floor to the more principles-based components of VM-20. The deterministic reserve is a gross premium valuation using prudent best estimate assumptions. The stochastic reserve is a CTE 70 calculation based on the greatest present value of accumulated deficiencies concept similar to Actuarial Guideline 43 (VACARVM or AG 43).

The modification to the VM-20 reserve required by the Actuarial Method is a factor applied to the net premium reserve. The factors (which are all less than or equal to 1.0) vary by issue age, gender, and smoking class. The reserve requirement for a ULSG product per AG 48 is the maximum of (i) the factor times the net premium reserves, (ii) the deterministic reserve, and (iii) the stochastic reserve. The VM-20 items are calculated on a gross of reinsurance basis. The primary security requirement for the captive is equal to the modified VM-20 reserve less the retained reserve (UL CRVM).

A key component of the illustration is calculating the Actuarial Method Reserve according to VM-20. The calculation of the VM-20 reserve will likely require companies to upgrade modelling capabilities to allow stochastic projections of both assets and liabilities. Sensitivity analysis of key assumptions will also be required. Processes and

controls around assumption setting and model governance will need to be strengthened as valuation moves from formulaic reserves using prescribed assumptions to a principles-based approach using company specific assumptions.

TABLE 1

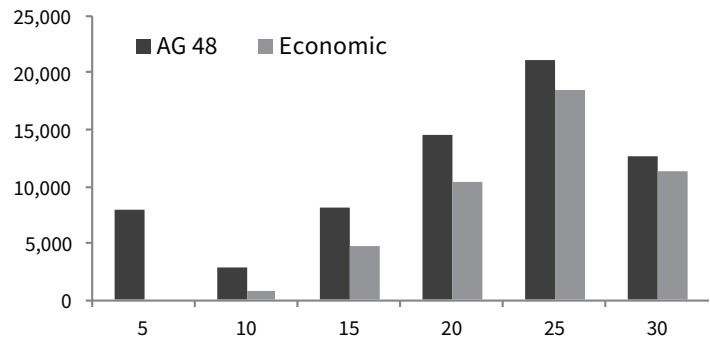
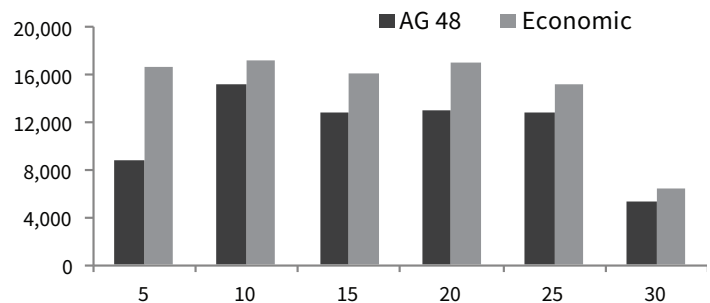


TABLE 2



On page 9 (top) is an illustrative example for the transaction considered above subject to AG 48.

Table 1 (pg. 9) compares the asset requirements based on a pre AG 48 economic reserve and the Primary Security requirements per AG 48.

In this example, with AG 48, more of the reserve will have to be backed by real assets and less of the XXX/AG38 reserve can be financed.

Table 2 (pg. 9) compares the amount of assets financed using other securities (redundant reserves) based on an economic reserve (as defined for this illustration) and the Primary Security requirements per AG 48.

#### OTHER CONSIDERATIONS

In addition to specifying the Amount of Primary Security and Amount of Other Security requirements for captive transactions, AG 48 addresses the types and amounts of assets that need to be held as security under the reinsurance contract, on a funds withheld, trust, or modified coinsurance basis. The requirements differ for Primary Security and Other Security assets.

Primary Security assets are the assets backing the reserve calculated by the Actuarial Method per AG 48. Other Security assets are the assets allowed to back the excess of the AG 38 reserve or Regulation XXX reserve over the AG 48 reserve.

For Primary Security assets, allowable assets include cash and SVO-listed securities meeting certain criteria. For funds with-

held and modified coinsurance reinsurance arrangements, allowable assets include commercial loans in good standing of CM3 quality and higher, policy loans, and derivatives used to support and hedge liabilities pertaining to the actual risks in the policies ceded pursuant to the reinsurance arrangement.

AG 48 defines Other Security assets as any asset acceptable to the Commissioner of the ceding insurer's domiciliary state, including any asset meeting the definition of Primary Security.

AG 48 also requires the ceding company's appointed actuary to certify that Primary Security funds are held in an amount at least equal to the Required Level of Primary Security and that Other Security funds are held in an amount at least equal to the remaining portion of the reserve that is financed.

#### CONCLUSION

While offering standardization of captive treatment in the U.S. life insurance industry, AG 48 also brings about changes to the levels of captive funding as well as the operational complications associated with the newly required AG 48 calculations. Companies need to be aware that the economic and administrative costs of funding XXX and AG 38 reserve redundancies have likely risen in the AG 48 environment. ■

#### ENDNOTES

- <sup>1</sup> XXX refers to the Valuation of Life Insurance Policies Model Regulation and AXXX refers to Actuarial Guideline 38
- <sup>2</sup> In this article, the term economic reserve is used generically as the reserve amount required by the regulator of the captive.
- <sup>3</sup> These exemptions include: (1) YRT reinsurance, (2) Reinsurance transactions with certified reinsurers, (3) Collateral trust funding, (4) Captives that file financial statements without any departures from NAIC statutory accounting practices, and (5) Exemptions granted by the ceding insurer's domiciliary regulator.
- <sup>4</sup> The calculated economic reserve in year 5 was negative and floored at 0 in this illustration.



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# Appeals Court Affirms District Court Ruling in Validus Case—§ 4371 Excise Tax Inapplicable on Foreign-to-Foreign Transactions

By Edward C. Clabault

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On May 26, 2015, the United States Court of Appeals for the District of Columbia Circuit (the Court) affirmed the District Court's grant of summary judgment in favor of the plaintiff in *Validus Reinsurance Ltd. v. United States of America*.<sup>1</sup> The Court held, as a matter of law, that the Federal Excise Tax (FET) on insurance transactions does not apply to foreign-to-foreign reinsurance transactions, including retrocessions.

As we described in a previous *TAXING TIMES* Tidbit,<sup>2</sup> Validus Reinsurance Ltd. ("Validus"), a Bermuda reinsurer, had reinsured U.S. risks, and then retroceded a portion of those risks to foreign persons not eligible for an FET exemption under a tax treaty. The Internal Revenue Service (IRS), pursuant to its position as stated in Rev. Rul. 2008-15,<sup>3</sup> assessed an FET of 1 percent on Validus for the retrocession. Validus paid the tax, and appealed.

Under Internal Revenue Code (IRC) § 4371, there is an excise tax of 4 percent that is imposed on each dollar of premium paid covering U.S. risks on (1) casualty insurance and indemnity bonds, and an excise tax of 1 percent on (2) life insurance, sickness and accident policies, and annuity contracts. There is also (3) a 1 percent excise tax on reinsurance covering any contracts listed in (1) or (2).

The District Court's ruling on Feb. 5, 2014 held, in looking to the plain language of the statute, that the excise tax statute did not apply to retrocession transactions. The District Court noted that the tax imposed on reinsurance transactions only applied to the reinsurance of contracts, as defined under IRC § 4371(1) and (2), and would not apply to retrocessions because reinsurance is not listed in (1) or (2). The District Court noted that the language of the statute was clear and, therefore, did not look beyond it.

The District Court's ruling called into question two situations. First, in cases where a U.S. reinsurer retrocedes risks with a foreign retroces-

sionaire not eligible for treaty benefits, under the District Court's reading of the statute, no FET would be due on such U.S.-to-foreign retrocessions. This outcome ran counter to long-standing industry understanding and practice where, for FET purposes, retrocessions were treated as a type of reinsurance transaction.

Second, Example 1 in Rev. Rul. 2008-15 states that in cases where a foreign direct writer has insured U.S. risks, then reinsured such risks with a foreign reinsurer not eligible for a treaty exemption, the foreign-to-foreign reinsurance transaction is subject to the FET. The District Court's ruling did not address such situations, as it limited itself to a discussion of retrocessions, leaving an open question as to whether these transactions are taxable.

On April 3, 2014, the United States gave notice of its intent to appeal. Oral arguments were heard on Feb. 20, 2015, with the Government maintaining that retrocessions were a type of reinsurance and that the plain reading of the statute, on which the District Court based its opinion, should result in retrocessions being subject to the FET. Validus countered that the District Court was correct in treating reinsurance transactions as distinct from retrocessions, and further argued that clear Congressional intent to apply the FET in an extraterritorial manner was lacking.

First, the Circuit Court addressed the application of the FET to retrocessions, noting that paragraph (3) of IRC §

4371 imposed a tax on reinsurance policies covering those described in paragraphs (1) and (2). Focusing on the statute's use of the word "covering," the Government argued for an expansive interpretation that would result in all reinsurance and retrocessions with underlying U.S. risks being potentially subject to tax. Validus argued for a more restrictive interpretation that would make the FET applicable only to reinsurance transactions. The Court found that both the Government and Validus presented plausible interpretations, and thus focused its analysis on the purpose of the statute. The Court noted that the statute seeks to level the playing field between domestic and foreign insurance and reinsurance businesses by imposing an excise tax on persons insuring or reinsuring U.S. risks where such persons are not subject to U.S. income tax on the income derived from such U.S. risks. It further stated that because a retrocession is "merely another type of reinsurance," Validus' interpretation of the statute would create a distinction between retrocessions and reinsurance issued by foreign persons to domestic insureds that would be at odds with the clear purpose of the FET. The Court thus concluded that retrocessions would be subject to the FET in the same manner as reinsurance transactions.

Next, the Court turned to the application of the FET in the foreign-to-foreign context. Citing *Morrison*,<sup>4</sup> the Court noted that a statute has no extraterritorial application unless such application is clearly expressed in the statute itself, in the stat-



ute's context or purpose, or in its legislative history. The Government offered, and the Court found, no indication that the FET was meant to apply in an extraterritorial manner. While acknowledging the Government's argument that the FET is always technically extraterritorial inasmuch as it applies to foreign persons not subject to U.S. income tax, the Court differentiated between U.S.-to-foreign transactions where one party to the contract is in the United States, which clearly were within the purview of the statute, and foreign-to-foreign transactions whose treatment was less clear. The Court further noted that, according to the Government's argument, the extraterritorial reach of the FET could extend indefinitely as U.S. risks are retroceded again and again, finding such situation clearly different from that authorized under IRC § 4371. Because IRC § 4371 was ambiguous with respect to wholly foreign retrocessions, the Court relied on the presumption against extraterritorial application and found for *Validus*.

While the Court's decision was a clear victory for *Validus* and other offshore reinsurers, it also cleared up two ambiguities that arose from the District Court's decision. First, by stating that retrocessions were a type of reinsurance, the taxability of U.S.-to-foreign retrocessions is confirmed. Second, by limiting the FET's extraterritorial scope, it is now clear that a foreign-to-foreign reinsurance transaction is not subject to the FET.

The IRS' renewed focus on the cascading excise tax, which began with the publication of Rev. Rul. 2008-15, caused many offshore insurers to have an unexpected U.S. tax bill during these past seven years. Some offshore reinsurers were not prepared or able to track specific risks on all underlying contracts and had to estimate the magnitude of their premiums relating to U.S. risks based on such factors as the domicile of the ceding company. This methodology could never provide a fully accurate picture, especially in instances where an underlying contract covers worldwide risks. Notwithstand-

ing the IRS' assurances that it would not look past the first foreign-to-foreign transaction to assess the FET, as U.S. risks moved further down the chain of reinsurance and retrocessions, the FET exposure remained, but the ability of companies to accurately track the taxable premium became more and more imprecise and difficult. With the *Validus* decision, this uncertainty is no more.

During the course of the *Validus* litigation, many foreign insurers that paid the cascading FET submitted protective refund claims, and for those insurers that have not yet acted, it is likely that there will be additional refund claims in the coming months. The deadline for the IRS to file a notice of appeal was Aug. 24, 2015, which passed without any action on their part. We now await word on how the IRS will approach the refund claims.

*Note: The views expressed are those of the author and do not necessarily reflect the views of Ernst & Young LLP. ■*



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#### ENDNOTES

- <sup>1</sup> *Validus Reinsurance Ltd. v. United States of America*, 19 F. Supp. 3d 225 (D.D.C. 2014), aff'd, 786 F.3d 1039 (D.C. Cir. 2015).
- <sup>2</sup> Edward C. Clabault, "District Court Rules § 4371 Excise Tax Inapplicable on Foreign-to-Foreign Retrocessions," *TAXING TIMES* Vol. 10, Issue 2 (May 2014), at 30.
- <sup>3</sup> 2008-12 I.R.B. 633.
- <sup>4</sup> *Morrison v. Nat'l Austl. Bank Ltd.*, 561 U.S. 247, 255 (2010).

# Amid Abundant Capital, A New Reality Takes Hold in the Reinsurance Market

By Robert DeRose

The rapid pace of change within the reinsurance sector over the past few years has given way to the permutations of a “new reality” that is being shaped by abundant capacity from traditional and alternative sources. Additional contributing factors include the ongoing low interest rate environment and intense competition that is driving thinner margins as demand for reinsurance coverage diminishes. Many observers now believe these changes are more structural than the cyclical ones that have defined the reinsurance sector’s past evolution.

Traditional reinsurance protection has historically been the

primary source of capacity for cedents. That is clearly changing as primary companies retain more risk and increasingly utilize alternative markets for their risk management needs (see Exhibit 1). At the same time, the old playbook of private equity starting a traditional reinsurance company and then exiting via an initial public offering is growing less attractive.

Investors would rather put capital to work for a relatively short period of time (typically one to three years) as opposed to creating new companies that require longer-term capital commitments with a less certain exit strategy. Ease of entry and exit, among other things, is key to re-

insurance risk functioning like a tradable asset class. This appears to be the ultimate end game, conceivably for all reinsurance risks, to be able to wait for the market to open, and trade in or out of various pools of reinsurance risk—even if there was an event the night before.

Alternative sources of capacity were drawn to the market by the increased reliability of risk models, diversification benefits and potential returns to investors. The low-yield environment in place since the 2008 financial crisis has made these types of investments all the more compelling for investors.

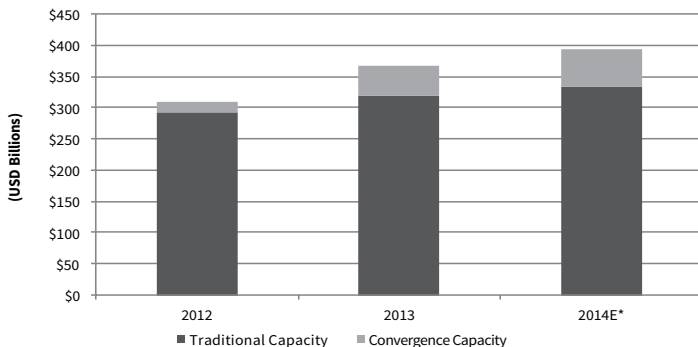
More recently, investors and users of this capacity are bypassing the traditional reinsurer and transferring risk directly to the capital markets. Lower interest rates have led to an increased inflow of alternative capital as investors look for uncorrelated ways to improve returns. This phenomenon has given rise to collateralized funds, unrated sidecars, more flexible forms of insurance-linked securities (ILS) and the birth of “Hedge Fund Re.”

According to Guy Carpenter, today’s alternative capital accounts for about 18 percent of total dedicated capital in the global reinsurance market compared with just 8 percent in 2008. As a result, competition for U.S. property catastrophe business has been fierce since third-party capital exploded into the market (starting in earnest around 2006). The pressure has since rippled to other classes and geographies as capacity is reallocated.

Given the lack of any major events in 2014, most reinsurers delivered underwriting profits and solid earnings. Combined ratios for most were below 100, driven in part by continued reserve releases and well-diversified books of business. The growth in capital once again outpaced the net premium revenue, which together with alternative capacity in the form of catastrophe bonds, sidecars and other structured products continued to fuel strong price competition. In 2014, US\$8.79 billion in capital flowed to new catastrophe bond issues alone, and thus far in 2015 more than US\$6 billion has been invested. It is estimated that there are now approximately US\$25 billion in outstanding catastrophe bonds.

Recent estimates of the volume of alternative capital place the overall value at between US\$45 billion to US\$60 billion at year-end 2014. The growth in the ILS property catastrophe exposure market has been phenomenal given that it was non-existent 20 years ago. The total cumulative issuance of property/casualty-related catastrophe bonds has grown to approximately US\$63.3 billion from 1997 through June 30, 2015 (see Exhibit 2). Catastrophe bonds issuance related to property/casualty exposures have witnessed an average annual growth of approximately 24.4 percent from 1997 through 2014. The combined catastrophe bonds related to both property/casualty and life/health exposures saw an average annual increase of about 16 percent from 2006 through 2014 (See Exhibit 3).

EXHIBIT 1



\*Estimate by Guy Carpenter

Source: A.M. Best and Guy Carpenter

## EXHIBIT 2

Catastrophe Bond Issuance - P/C-Related Risks		
Year	Amount (USD mm)	% Change from Prior Year
2015*	4,354	n.a.
2014	8,298	13%
2013	7,314	24%
2012	5,878	37%
2011	4,279	0%
2010	4,299	26%
2009	3,398	25%
2008	2,729	-63%
2007	7,430	58%
2006	4,693	136%
2005	1,991	74%
2004	1,143	-34%
2003	1,730	42%
2002	1,220	24%
2001	985	-14%
2000	1,139	18%
1999	967	14%
1998	846	34%
1997	633	n.a.
Total / Average	63,329	24%

\* Through June 30, 2015. Source: A.M. Best data and research

The emergence of this market, which blends traditional reinsurance/insurance contracts with financial instruments, has generally been caused by perceived inefficiencies in the traditional reinsurance market, the insurance underwriting cycle due to pricing and major catastrophe events, the desire by holders of peak insurance exposures to diversify the source of reinsurance coverage and the emergence of enterprise risk management (i.e., credit risk reduction).

Most of the financial instruments underlying the convergence market have been patterned on asset-backed securities, futures and options, and other derivative instruments that provide direct access to the capital markets, which has greater capacity than the traditional reinsurance market. This process has led to the transferring of insurance risks from insurers/reinsurers to capital market participants.

One notable development in the cat bond marketplace is



the evolution of “cat bond lite” transactions, which are gaining traction due to the efforts of the major insurance brokers, overseas insurance managers and the Florida take-out companies through the depopulation program of Citizens Property Insurance Corporation. An alternative to the traditional 144A cat bond offerings, cat bond lite are private catastrophe bond platforms designed to create an efficient way to fund smaller catastrophe reinsurance programs by capital market participants. Cat bond lite offerings, which are generally below US\$50 million, witnessed an increase in dollar amount and number in 2013 and have been on a steady growth trajectory in 2014 and the first half of 2015 (see Exhibits 4A and 4B, pg. 16).

Cat bond lite provides the following advantages compared to the traditional 144A cat bond offerings: lower transaction and structuring costs; reduced and

streamlined documentation, easy entry for small- to medium-size insurers and easy accessibility for small investors. The number of platforms, the number and dollar amount of cat bond lite issuance will continue to flourish.

Going into 2016, pricing is expected to remain under pressure for reinsurance and affect most lines of business. Rates for U.S. property catastrophe continue to decline more significantly than in other regions; however, the reductions are starting to spill over into other territories and lines of business. During the Jan. 1, 2015 renewal season, reinsurance pricing was down 5 percent to as much as 20 percent for certain risks. The subsequent April 1 renewal season saw pricing declines of 5 percent to 15 percent, and June and July renewals declined as much as 15 percent on average for some risks.

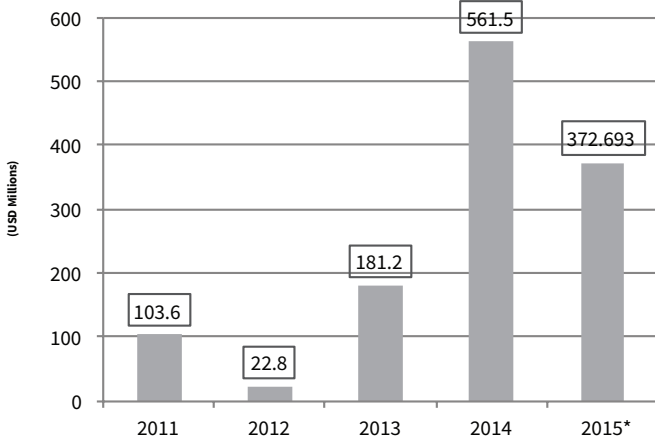
## EXHIBIT 3

Catastrophe Bond Issues				
Year	Property/Casualty Related Perils	Life/Health Related Perils	Combined Perils	% Change from Prior Year
	USD (mm)			
2015*	4,354	699	5,053	n.a.
2014	8,298	500	8,798	15%
2013	7,314	330	7,644	21%
2012	5,878	425	6,303	37%
2011	4,279	330	4,609	-2%
2010	4,299	425	4,724	36%
2009	3,398	75	3,473	23%
2008	2,729	100	2,829	-64%
2007	7,430	521	7,950	63%
2006	4,693	179	4,873	n.a.
Average				16%

\* Through June 30, 2015. Source: A.M. Best data and research

## EXHIBIT 4A

Private Catastrophe Bond Issued through 2011 - 2015 (P/C Related Risks)



\* Through June 30, 2015. Source: A.M. Best and Guy Carpenter

Over the past several years, (re) insurers have voiced the need to remain focused on underwriting given the years of low investment yields and the expectation that favorable reserve releases will eventually end. The market is expected to remain extremely challenging and with that some companies may not be able to remain as disciplined as they need to be. Third party capital continues to pour into the market with no ease in sight as hedge funds, pension funds and other investors continue to look for yield and sources of diversification.

The cheaper sources of capital entering the reinsurance segment won't necessarily result in winners across the board. Those deemed winners at the end of the day must be able to walk away from bad business, have the capital and expertise to write

new, more complex lines of business and provide the products and services that clients want in a global economy. Other factors defining success include the ability to both manage the inflow of third-party capital to their own benefit and participate in the new era of consolidation without being left out.

Further market consolidation is also a likely response to the current market environment as balance sheet scale becomes an even more important attribute to retain and win new clients. Broadly speaking, rated balance sheets are well-capitalized and capable of withstanding various stress scenarios. This strength may be eroded over time for some carriers as earnings come under increased pressure, favorable reserve development wanes, earnings grow more volatile and the ability to earn back losses

following events is prolonged by the instantaneous inflow of alternative capacity.

All of these issues reflect increased concern that underwriting discipline, which until recently had been a hallmark for the reinsurance sector, is strained as companies look to protect market share at the expense of profitability. Given where rate adequacy is, it will continue to take optimal conditions, including benign or near-benign catastrophe years, a continued flow of net favorable loss reserve development and stable financial markets to produce even low double-digit returns. Such return measures would have been considered average or perhaps mediocre just a few short years ago.

In A.M. Best's view, companies with diverse business portfolio,

advanced distribution capabilities and broad geographic scope are better positioned to withstand the pressures in this type of operating environment and have greater ability to target profitable opportunities as they arise. It also places increased emphasis on dynamic capital management in order for companies to manage the underwriting cycle and remain relevant to equity investors. ■

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## EXHIBIT 4B

Private Cat bonds Issued in 2015 as of June 30, 2015 (P/C Related Risks)

Platform	Amount (\$ mm)	Issue Date	Maturity Date
Kane SAC Limited	27.53	1/2/15	1/12/16
Kane SAC Limited	16.82	1/2/15	1/12/16
Kane SAC Limited	26.68	1/2/15	1/12/16
Kane SAC Limited	54.81	1/5/15	1/15/16
Kane SAC Limited	20.70	2/20/15	2/3/16
Kane SAC Limited	18.80	5/28/15	6/22/17
Market Re Ltd.	6.70	6/10/15	6/7/16
Market Re Ltd.	70.51	6/10/15	6/7/16
Market Re Ltd.	24.38	6/10/15	6/7/16
Market Re Ltd.	10.00	4/29/15	5/1/16
Oak Leaf Re Ltd.	1.77	3/28/15	6/7/16
Oak Leaf Re Ltd.	47.00	3/28/15	6/7/16
Oak Leaf Re Ltd.	47.00	3/28/15	6/7/16
Total	372.69		

Source: A.M. Best data and research



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# Financial Tools to Manage Longevity Risk

By Matthew Daitch

**W**riting about longevity risk is increasingly popular, whether an Adviser brief about an individual's longevity risk or industry papers regarding risk exposure inherent in defined benefit pension plans or payout annuity blocks. This article will seek a balanced discussion about longevity risk—why it is of interest to U.S. life insurers but not necessarily a priority and what might happen that could change that perspective. We then will present an attractive option for managing longevity risk, the longevity swap, and provide real world scenarios illustrating how a longevity swap can help a firm manage their bottom line more effectively.

## LOW PRIORITY

Unlike in Europe where longevity exposure is actively managed, longevity risk has generally been downplayed by U.S. Life Insurers for three main reasons:

- No statutory requirements,
- Low exposure, and
- Longevity's role as a mortality hedge.

**No statutory capital requirements.** Currently the NAIC RBC formula does not have a C-2 component for mispricing

longevity risk. Once a mortality basis has been chosen for the annuity statutory reserve assumption, it is rarely if ever revisited. However, there is no guarantee that this treatment will continue. In Europe, Solvency II has explicit methods for calculating capital for longevity risk. The U.K.'s Financial Services Authority publishes new mortality improvement assumptions that must be used for valuation, which can create a material level of volatility on a company's balance sheet. The NAIC's progress on a principles-based approach to valuation may be the first step towards adequately accounting for longevity risk.

**Low exposure.** For most life insurers, longevity risk is less a material risk than the mortality, morbidity, equity or credit risk on their balance sheets. There are many reasons for this, but two main drivers. First, immediate annuity sales, while growing, remain a very small percentage of annuity sales and second, very few deferred annuities get annuitized. Additionally, defined contribution pension assets almost are never annuitized and for defined benefit plans, lump sums often are the option of choice if offered as a distribution option. It is highly unlikely that mandatory

annuitization of pension asset legislation could pass in the U.S. in the foreseeable future. As a result, most CRO's focus on managing the more material risks on a company's books.

**Longevity may act as a mortality hedge.** Even if a carrier's exposure to longevity risk could be determined material, in many cases life insurers may opt to increase their exposure to longevity risk with the thought that it can serve as a hedge against their mortality blocks. After all, an insurer cannot pay death benefits and annuity income to the same person simultaneously. In Europe, Solvency II enables an insurer to take diversification credits when its in force contain offsetting risks. While one cannot take explicit credits in the U.S., companies still may view hedging as favorable for their own internal risk management purposes. However, unless an insurer holds both the longevity and mortality risk on the same life, the hedge will not be perfect. Mortality risk is centered in middle age while longevity risk is focused on older age. Mortality improvement during the last few decades has been different between the 30-50 and 65+ age groups.

## WHY MANAGE LONGEVITY RISK

Given the reasons why a U.S. life insurer may not currently manage its longevity risk exposure, why might it be prudent to do so?

**Lack of longevity expertise.** The life insurance industry is expert in mortality risk. That knowledge foundation does not extend as strongly to longevity

risk. Experts historically have understated life expectancy. In many countries (i.e., the U.S., Canada, U.K., Netherlands, etc.), recent annual mortality improvement at older ages is well above levels experienced historically. As a larger percentage of the population reaches older ages, more government and private research dollars will be directed towards addressing longevity, making it difficult to predict what future improvement will be. Best practices promote keeping the risks one understands and minimizing exposure to all others.

## Longevity risk is long-dated.

A single life annuity issued today to a 65-year-old likely will pay out benefits on average for 20-25 years. For a joint annuity with a younger spouse, the annuity will stay on an insurer's books much longer. Demographers' views on longevity trends—such as changes to ultimate Omega age, impact of future medical breakthroughs, global convergence, etc.—vary widely with some experts projecting that life expectancy may reach 100 during our lifetimes. While payout annuities will not cause an insurer's earnings to be volatile on a year-to-year basis, better than expected mortality will lead to a slow bleed of earnings as excess claims ratios last over an extended period of time.

## OPTIONS FOR MANAGING LONGEVITY RISK

If a carrier chooses to manage their longevity risk, there are three main alternatives:

**Buy-Out/Assumption Reinsurance.** Existing pension plan as-

sets or an insured annuity block are transferred to a (re)insurance company. All asset and longevity risk is transferred, including the administration.

**Buy-In/Coinsurance.** Pension plans use the assets backing their defined benefit plan to buy a group annuity from an insurance company. The annuity is recorded as an asset on the pension plan's books. All asset and longevity risk is transferred, but administration is not.

**Longevity Swap/Longevity Reinsurance.** Carrier pays fixed premium equal to the expected annuity income payments plus a risk fee to a (re)insurer in exchange for receiving actual annuity income payments paid by the carrier. As a result, the carrier's payments are fixed and known. Longevity risk is transferred, but the carrier keeps asset risk and administration.

#### THE BENEFITS OF A LONGEVITY SWAP

Both a Buy-Out and Buy-In require an upfront premium, and thus the immediate recognition of a loss since the premium is likely to be higher than their current reserve. Alternatively, a longevity swap allows one to manage the longevity risk much more efficiently, with no

upfront premium and potentially no immediate impact on a firm's balance sheet. A longevity swap can protect the income statement from unexpected costs arising from:

- Mortality improvements at a higher rate than priced,
- Errors in the base table,
- Basis error if characteristics of annuity block differs from basis used to create the firm's mortality table, and
- Volatility associated with a heterogeneous block.

If a future statutory regime requires assumptions to be updated to reflect recent mortality improvement experience, a carrier's balance sheet will be greatly exposed. Even if the current regime remains, the income statement will experience a slow bleed if actual experience deviates from expected. One way to illustrate the impact of assumption deviation is to compare the relative impact on the present value of cash flows under different but reasonable mortality events relative to a common pricing approach.

Let's assume Company A priced its annuities in 2012 by generationally improving the Annuity

2000 Basic Table to 2012 using 100 percent of Male Scale G and 50 percent of Female Scale G (the basis used to convert Table 1983A to the Annuity 2000 table), and then assume the same improvement rates from 2012 and on. Figure 1 shows the ratio of the present value as of Jan. 1, 2012 of cash flows under alternative scenarios relative to the pricing scenario.

Results can be highly volatile. Using our example, Company A's present value of cash flows range from meeting expected (A2000 Table w/Scale G) to negative (any cell over 100 percent). Scenarios vary widely, with significant potential losses in the male population if results mirror the A2000+US recent average mortality improvement, for example. When these losses are multiplied by potentially tens of thousands of contracts for even average attained-age life expectancy, annual financial losses can become material quickly.

If Company A had purchased a longevity swap, the company would be immune to these volatile scenarios. The company would lock in future claims equal to the premium stream paid to the reinsurer. The insurer no longer needs to wor-

ry about the negative financial consequences associated with better than expected mortality improvement. ■

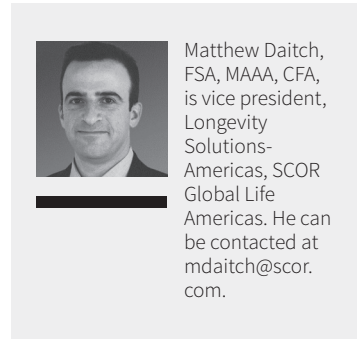


FIGURE 1 – CASH FLOW OUTCOMES CHANGE WITH TABLE BASIS

	MALE			FEMALE		
	65	75	85	65	75	85
A2000 Table w/ Scale G	100.0%	100.0%	100.0%	103.7%	104.7%	105.6%
IAM2012 w/ Scale G2	104.1%	104.7%	98.8%	103.3%	105.7%	106.1%
A2000 Table with improvement rates = U.S. average 1999-2007 (A2000+U.S. avg)	105.3%	106.2%	106.7%	103.5%	104.3%	105.5%
A2000+U.K. Avg (98 - 06)	107.5%	107.4%	104.6%	104.8%	104.6%	102.7%
A2000+Canada Avg (99 - 07)	104.5%	104.7%	102.9%	103.0%	103.9%	102.8%

# Life, Health & Annuity Reinsurance; 4<sup>th</sup> Edition 2015

By Larry N. Stern

We are indebted to John and Denise Tiller for once again updating the “reinsurance bible,” *Life, Health & Annuity Reinsurance*. I don’t know anyone involved with reinsurance that doesn’t have a copy of at least one edition. This latest edition (the 4<sup>th</sup>) includes so much more material I believe it should be added to your bookshelf.

Not only since the first edition was published some 25 years ago, but also, since the very first reinsurance transactions were completed, the fundamental principles of life, health, and annuity reinsurance have not changed:

- Reinsurance is a financial transaction; it protects the bottom line and surplus of the insurance company. The basics of any transaction remain the equitable transfer from the ceding company of significant risks and responsibility for payment of future benefits (and expenses) in exchange for reserve credit, to the reinsurer in exchange for compensation. Over time risk transfer and reserve credit rules have been defined, edited, and modified by regulators; however, these two concepts remain the foundation for every reinsurance transaction.

- The three basic forms of reinsurance transactions remain the same—coinsurance, modified coinsurance, and yearly renewable term. Over time the solution structures have become more sophisticated (and complex) as sources for solutions expanded to provide more capacity, as well as electronic techniques aiding creativity.

So what is new in the 4<sup>th</sup> edition? The 3<sup>rd</sup> edition was last published in 2005—well before the financial crisis; shortly after XXX/XXXX regulations, but before the explosion of using captives for reinsurance solutions; barely at the beginning of another expansion of reinsurance/capital market entities becoming global to

enhance capacity. All of these topics and more are covered in the 4<sup>th</sup> edition.

The 4<sup>th</sup> edition reflects many of the changes having taken place during the previous 10-year period. Expanding on more than just the reinsurance practices in the United States, notably significant material has been added reflecting:

- Reinsurance practices in Canada and several other international jurisdictions,
- The importance of arbitration and treaty contract language,
- Risk transfer considerations,
- How to treat reinsurance for in-force blocks of business, and
- The emergence of the use of captives for special reinsurance solutions.

Since the last edition, of course the financial crisis in 2008 has been the most critical factor as it affected the financial services industry, not only in the United States,

but also Canada and around the world. As an outgrowth, Congress, the NAIC, FASB, and the Actuarial Standards Board enacted new regulations—all of these enactments touch reinsurance in one form or another and are addressed in the new edition.

A very important factor also affecting the content was the availability of relevant and reliable information on the Internet. The sections covering international topics came from English language versions of websites, including China and Japan. Information was obtained from actuaries, regulators, accounting firms—a whole host of “alphabet soup” organizations—all listed in the bibliography.

The book opens in the first chapter with an abridged history of reinsurance. Attribution is given to David A. Holland’s excellent and well-researched article “A Brief History of Reinsurance”. We all know (or should know) insurers and merchants began meeting in Edwin Lloyd’s London Coffee House in 1688 leading to the creation



of Lloyd's founding in 1769. But did you know:

- As early as before 3000 BC in the first known example of risk management, Chinese merchants placed goods on multiple ships, realizing the significant risk of placing all of their goods on one ship? Or,
- German, Russian, and Austro-Hungarian companies dominated the world life reinsurance market until World War I, writing two-thirds of the reinsurance premium in the world? The war, as could be expected, totally destroyed their market.

For “history buffs” there are more tidbits in the first chapter. The authors realized the backstory surrounding the development of regulation, taxes, and the reinsurance industry itself was worthy of preservation in one text.

The authors have taken care to make the book easy to read:

- A word in **bold** type for its first appearance means it will also appear in the glossary.
- Sidebars are used to add “nuggets” of information—new to this edition.
- Tables and graphics throughout the book provide examples of important aspects of reinsurance structures and provide extensive illustrations of financial statement treatment before and after reinsurance transactions.

The book is organized into six sections:

Part One (Chapters 1 – 3) introduces the special vocabulary of reinsurance and the basic concepts. These terms and concepts are essential to understanding the material discussed in later chapters.

- Chapter 1: Basic Terms and Concepts
- Chapter 2: Automatic Reinsurance
- Chapter 3: Facultative Reinsurance

Part Two (Chapters 4 – 7) deals with the methods and application of reinsurance.

- Chapter 4: Basic Methods of Reinsurance
- Chapter 5: Advanced Methods and Structures of Reinsurance
- Chapter 6: Assumption
- Chapter 7: Reinsurance of In-force Policies

Part Three (Chapters 8 – 10) focuses on the reinsurance treaty and risk considerations in the United States and Canada. The authors have taken great care to differentiate terms between U.S. versions and Canadian versions. Reinsurance treaties must address risk transfer and the insolvency risk issues.

- Chapter 8: The Reinsurance Treaty
- Chapter 9: Risk Transfer Consideration
- Chapter 10: Insolvency and Reinsurance

Part Four (Chapters 11 – 16) deals with regulation, account-

ing, and taxes.

- Chapter 11: U.S. Regulation of Reinsurance
- Chapter 12: Canadian Regulation of Reinsurance
- Chapter 13: U.S. Statutory Accounting
- Chapter 14: U.S. GAAP Accounting
- Chapter 15: U.S. Tax Considerations
- Chapter 16: Canadian Accounting and Tax Considerations

Part Five (Chapters 17 – 22) focuses on special products and topics.

- Chapter 17: Nonproportional Reinsurance
- Chapter 18: Health Reinsurance
- Chapter 19: Annuity Reinsurance
- Chapter 20: Captives
- Chapter 21: Reinsurance Outside Canada and the United States
- Chapter 22: Additional Reinsurance Topics (Group Life, AD&D, accelerated living benefits, reinsurance with affiliates, reinsurance intermediaries, dispute resolution)

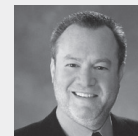
Part Six (Chapters 23 – 24) covers administration and management considerations.

- Chapter 23: Reinsurance Administration
- Chapter 24: Managing Reinsurance

Appendices

- Sample Treaty – Automatic Self-Administered YRT Reinsurance Agreement (courtesy of Swiss Re).
- Glossary – all terms in the text in **bold** type are defined.
- Bibliography – sources are listed separately for each part of the book.

The 4<sup>th</sup> edition is intended to continue to serve as a reference for both seasoned knowledgeable individuals and those new to reinsurance. It is impossible for one book to contain all the knowledge necessary to analyze or document every possible reinsurance transaction—however, this book comes close! The purpose of this edition is to provide the historical foundation and current regulatory/technological framework for reinsurance professionals to design reinsurance solutions to fit the 21<sup>st</sup> century. ■



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# Q&A with Professor Eloy B. Garcia

By Ronald Poon-Affat

**A**s the editor of *Reinsurance News*, I recently caught up with Professor Eloy B. García, Professor of Banking, Finance and Economic Environment - IE Business School (Madrid, Spain). Professor Garcia was speaking at a CFA luncheon on “Geopolitical Challenges in a Multipolar World” in Sao Paulo, Brazil.

**Ronald Poon-Affat:** Your presentation gave us a whirlwind tour of the forces of innovation that are disrupting so many traditional business models/industries. Why do you think that the Insurance/Banking markets are still following what are essentially traditional models?

**Professor Eloy:** We must differentiate in both banking and insurance, very clearly the essential components of their respective business models and the delivery models/channels for their products.

We also must be aware that both are the most regulated ones with very high and difficult entry barriers for new comers. This alone provides incumbent entities with a formidable first mover advantage that provides considerable protection against

exogenous disruptive business models, that affect many other industries (note, please, that I don’t mean here impenetrability but just that they enjoy a “built-in natural protection”).

**Ronald Poon-Affat:** But can’t it be argued that both Banking and Insurance are financial services industries, and hence are more similar than dissimilar?

**Professor Eloy:** Both industries are essentially service industries based on “knowledge.” However, here is where the first major difference between the two arises: the knowledge of banking is derived from the intermediary function exercised between two counterparts: the original supplier of funds (depositor, investor, etc.) and the user (borrower), that form the supply and demand. In the case of insurance, the “knowledge” component resides in the experience and dynamic probability distributions accumulated over long periods that accrue specifically to each company or line of insurance business. That is, in the insurance business, there is no intermediation, but only contingencies; that is the essence of insurance. Some of this is present in banking in the

form of options, carried off a balance sheet.

**Ronald Poon-Affat:** So what’s your opinion regarding the susceptibility to disruption? Banking or Insurance?

**Professor Eloy:** The key point rests in understanding how the nature of the balance sheets of both businesses differ radically. Whereas in banks the assets belong (or are owed to) the counterparts present in the liability side (depositors, bond holder, etc.), in the insurance business, both assets and liabilities are owned by the insurance company. The assets are the investments that protect the contingencies reflected in the liability side of the balance sheet. As long as an “event” does not arise, the “funded reserves” belong to the firm itself or the members of the “mutual” as a whole.

This is in my opinion the basic reason why insurance is not a very attractive (read here possible) industry to disrupt. The ownership of the knowledge related to probability of occurrence of a given event is particular to each insurance company or line of business.

This is not the case with banking in which institutions intermediate specific flows of funds

that belong to specific individuals and specific users or borrowers. This type of “service knowledge” is an easy target for disrupting newcomers as it is already happening with P2P, crowdfunding, etc., as alone these don’t leverage their financial positions (through fractional reserve requirements and/or straight balance sheet leverage or capital/lending ratio).

In the latter case, disrupters are attacking the essential of the banking business by poaching clients or piercing into the banks’ value chain as well as the delivery channels. (This may get even more critical if the bitcoin-related block-chain technical breakthrough proves to be the demise of the “third trusted” party model pervasive in financial markets, which in the case of banking is present precisely as the “intermediary role” knowledge/function.

In short, insurance is probably proving to be so far unattractive for disruption because it is a business that does not have a defined counterpart: it is not a third trusted party that may be replaced (digitally or with whatever new business model that may emerge). The very existence of the insurance firm itself, fund, mutual, etc., offering specific risk coverage

Table 8.1 Ranking of IC Management Scores (from high to low)

Rank	Component	Category
1	Management	Human Capital
2	Employees	Human Capital
3	Network	Relationship Capital
4	Customers	Relationship Capital
5	Brand	Relationship Capital
6	Business Recipe	Business Recipe
7	Process	Structural Capital
8	Intellectual Property	Structural Capital

based on proprietary actuarial knowledge is the essence of the insurance. In a way, it is a business model that could be described—stretching it a bit, as an “immanent” business model.

Nonetheless, this does not mean that the “delivery channels” (marketing, etc.) cannot be disrupted. But even in this case, what would be the use of this disruption if the “essence” of the business cannot be captured as well? What would be the attraction of capturing the “hardware” (i.e., the delivery channel) if you can’t own the “software” (i.e., the dynamic actuarial knowledge).



**Ronald Poon-Affat:** I find your comment regarding the fundamental differences that exist between the balance sheets of insurance companies versus banks to be very interesting. I was recently reading about the effect of intangible capital on balance sheets, which leads me to ask what are your views regarding the treatment of insurance companies? Can you recommend additional reading?

**Professor Eloy:** Intangible capital is a topic that is currently very central to valuation of businesses. Whereas in the past the values of business were fundamentally given by the productive fixed assets carried in their balance sheets, nowadays the most valuable companies are those that possess specific types of intangible (read here different kinds of knowledge) assets. I would list the insurance industry within this group of businesses.

There is a relatively recent book *Intangible Capital: Putting*

*knowledge to work in the 21st-century organization* by Mary Adams and Michael Oleksak (Praeger, 2010), that covers how the function of the traditional balance sheet is becoming severely limited in reflecting the true value of modern businesses/industries that have or are becoming digitized.

The authors suggest a ranking of Intangible Capital Management Scores. We observe that the lower we go on the list, the change in those business models may come less easy. If we were to position the insurance industry somewhere in the last three, where I think it belongs, (Business Recipe, Process or Intellectual Property) the path to change may not be easy according to the findings of that research.

**Ronald Poon-Affat:** I would like to thank you for your time and insights regarding the future of the insurance markets within this brave new disruptive world in which we now live. ■



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