

Insurance

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Sharing insights on key industry issues*

Americas edition • August 2008



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The Americas Insurance digest is published twice a year to address the key issues driving the insurance industry. If you would like to discuss any of the issues raised in more detail, please contact the individual authors, or the Editor-in-chief, whose details are listed at the end of each article.

We also welcome your feedback and comments on the Insurance digest, and as such, we enclose a Feedback Fax Reply form. Your feedback will help us to ensure our publications are addressing the issues that concern you.

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Editor's comment

JOHN S. SCHEID: CHAIRMAN, AMERICAS INSURANCE GROUP



With few major catastrophes and strong prices, recent years have been relatively good ones for most insurers.

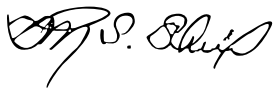
In contrast, the current investment market is very challenging; although yield curves have shown some improvement recently, economic growth is slowing, markets are volatile, asset values are eroding, and interest rates remain very low by historical standards. Most notably – as is the case with many financial institutions – life insurers are feeling the impact of market volatility, rising investment losses and a credit market squeeze, and pricing has become a major concern for commercial insurers and reinsurers.

However, the insurance industry by and large has sufficient capital and liquidity to withstand these challenges. Moreover, it is strengthening underwriting practices and exhibiting an increased appreciation for robust enterprise risk management.

In this issue of the Americas Insurance Digest, we focus on three topics of primary and immediate importance to our readers: markets and growth, product innovation, and measurement/financial reporting. Our industry practice has identified recent market developments, assessed key changes in the market, and presents several resulting insights and ideas for your consideration.

I hope you find the following articles of interest. As in the past, please continue to provide us with your ideas for future articles. You also may be interested in the Asia-Pacific and European editions of the Insurance Digest, which are available at www.pwc.com/insurance.

Sincerely,



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Bermuda reinsurance market developments

AUTHOR: ARTHUR WIGHTMAN



As Bermuda reinsurers take stock following the 2008 insurance renewals and first-quarter earnings reports, Arthur Wightman explores some of the challenges in Bermuda's developing marketplace and provides insight into the key issues facing the CEOs of Bermuda's reinsurance companies.

BERMUDA REINSURANCE MARKET DEVELOPMENTS

Overview

With a second consecutive year of favorable rates, benign losses, and reserve development, the Bermuda reinsurance market is booming. Share repurchase programs have recently realized more than \$4 billion in capital, and strong net earnings continue to boost book value and deliver high returns on average equity.

As Bermuda reinsurers take stock following the 2008 insurance renewals and first-quarter earnings reports, this article explores some of the challenges in Bermuda's developing marketplace and provides insight into the key issues facing the CEOs of Bermuda's reinsurance companies.

Ongoing softening

With the exception of European windstorm Kyrill, 2006 and 2007 were notable for an absence of major natural disasters. While Bermuda reinsurers enjoyed bumper returns, reports of a softening market grew in number beginning in mid-2007, with some sources reporting rate declines even earlier. While the headline news is that rates are falling from

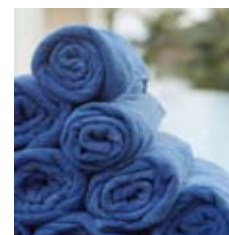
historically high pricing levels, the 2008 renewal season has also thus far been characterized by the following underlying factors:

- Renewals placed relatively late in many markets;
- Cedants electing to retain more risk despite more attractive rates and attritional losses;
- Benign past-quarter losses and several reserve releases; and
- Capacity changes, particularly in the Gulf of Mexico region, leading to increased competition.

These factors have served as catalysts for more attractive pricing for reinsurance buyers. In PricewaterhouseCoopers¹ (PwC) biennial 2006 Bermuda Market Survey, 'Capitalizing on Opportunity: A Time of Change,' Bermuda's reinsurance CEOs ranked underwriting performance and cycle management among their top concerns. Early results from the 2008 Bermuda Market Survey suggest that today even more CEOs are ranking these issues among their biggest areas of focus.

'Nobody wins the Tour de France on the flat or going downhill. Everyone who has ever won the race has done so climbing the Alps. A soft market is the true test for an underwriter. Those are the years when you separate the winners from the losers.'
(Constantine Iordanou, President and Chief Executive Officer, Arch Capital Group)

As reinsurance markets soften, the phrase 'underwriting discipline' is being referenced in many investor calls and in many publications and press releases as a defense against writing 'bad business.' A softening market calls for tough decisions, even if it means walking away from significant renewal business. On April 10, 2008, the Colorado State University forecast team upgraded its early-season hurricane forecast, and predicted that the US Atlantic basin will likely experience a significantly above-average hurricane season. Clearly, major natural disasters will noticeably change the cycle outlook, resulting in declining rates. How well will Bermuda reinsurers stand up to the possibility of major losses following two unproblematic



Nobody wins the Tour de France on the flat or going downhill.

¹ PricewaterhouseCoopers refers to the global network of member firms of PricewaterhouseCoopers International Limited, each of which is a separate and independent legal entity.

years? Have underwriters been disciplined enough to walk away from technically inadequate risks and leave business on the table? How robust are the capital, aggregation, management skills, and underwriting talents of Bermuda's 'Class of 2005'? How will in-house stochastic models hold up? Are the adjustments made following Hurricanes Katrina, Wilma, and Rita robust? Which companies are really holding the underwriting line?

In tandem with a soft reinsurance environment, constrained growth, investment market turbulence, the weak dollar, and a string of oil price records all indicate a continuing decline in interest rates in 2008. This decline will have a corresponding impact on investment returns principally based on bond portfolios and, ultimately, underwriting.

Managing capital

Capital management is another key issue at the top of Bermuda's reinsurance CEOs agendas. By the time second-quarter earnings were reported in 2007, Bermuda reinsurers had undertaken various initiatives to return underemployed capital to their shareholders. More than 15 major Bermuda reinsurance companies completed share repurchase initiatives by the end of 2007, with the notable exceptions of ACE and Validus (the latter only after its IPO in July 2007). Both of these companies elected to hold capital to pursue acquisitions. XL repurchased in excess of \$1 billion (approximately 10%

of opening shareholders' funds), and AWAC, only eighteen months following its IPO, repurchased in excess of 25% of opening shareholders' funds. Despite these repurchases, most Bermuda reinsurance companies saw their capital swell by the end of 2007, reflecting the considerable economic successes of 2006 and 2007.

Of course, capital management goes hand-in-hand with managing an underwriting cycle, and Bermuda reinsurance CEOs face a variety of pressures when formulating their annual capital management strategies. On one hand, rating agency and regulatory constraints provide considerable impetus to retain capital. As attention turns toward a potentially destructive wind season following 2007's considerable capital returns, many companies may decide to hold surplus capital, at least for the medium term. But on the other hand, shareholders' objectives for returns must be met, and after two abundant years, shareholders are understandably anticipating a capital response. If Bermuda reinsurance companies are genuinely maintaining underwriting discipline, further capital returns or dividends are likely.

The subprime crisis

While few companies escaped without a scratch from the subprime lending crisis, the relatively conservative investment policy of the Bermuda market (which tends to focus on book value growth through high-quality,

fixed-income investments) served to minimize asset-side losses. The exceptions have generally responded to declining interest rates by widening their investment risk appetites. However, investments in asset-backed securities (including mortgage-backed securities) have largely been sheltered from significant exposure due to the propensity of the Bermuda market to invest in 'super-senior' investment tranches. By holding approximately 5% of its fixed income investment portfolio in securities exposed to subprime and related risks, XL was something of an outlier.

'Directors and Officers' and 'Errors and Omissions' liability claims resulting from the subprime mortgage crisis (e.g., claims against investment advisors, managers, and other organizations) are causing heightened concern among Bermuda reinsurers writing those lines. Historically, claims from these exposures are very difficult to predict or quantify. Market estimates vary wildly, with current valuations rising in light of recent market developments (e.g., the collapse of Bear, Stearns & Co. Inc.; first-quarter earnings statements etc.).

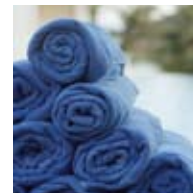
Another issue that is reasonably compartmentalized, but with which the industry must still contend, is losses stemming from investments in financial guaranty companies. By guarantying asset-backed securities (including collateralized debt obligations and mortgage-backed securities)

these companies have incurred steep losses linked to subprime mortgages. XL reported significant losses relating to its 46% investment in and other reinsurance/indemnification relationships with Security Capital Assurance. Renaissance Re and Partner Re also incurred losses (albeit much less severe) from their investments in Channel Re.

Taxation status

Bermuda's tax status regarding on-shore underwriting and investment income clearly underpins the business models of most reinsurance companies attracted to the island, leading Bermuda's reinsurance CEOs to focus on any circumstances that could affect those models. In a recent article,² the rating agency Fitch estimates that reinsurance in the Bermuda market's median 2003–2007 effective income tax rate was roughly 15 percentage points lower than that of the US market. In late September 2007, the Coalition for a Domestic Insurance Industry (CDII), a group of 14 large US-based insurance groups led by W. R. Berkley Corporation, reported to the US Senate Finance Committee that a major tax advantage exists in places such as Bermuda and the Cayman Islands. This advantage, said the coalition, allows foreign insurance groups to legally avoid paying billions of dollars in taxes by moving sizeable portions of their taxable underwriting and investment income from their US-based businesses out of the country by reinsuring the business to another group

2 Fitch Ratings Insurance Property/Casualty Insurers Bermuda, US and Canada Special Report Bermuda Market Overview.



BERMUDA REINSURANCE MARKET DEVELOPMENTS continued



company. The impact of the CDII's activities is likely to crystallize over the coming months. In anticipation of this, it's worth noting that the Internal Revenue Service (IRS) already possesses significant tools to address questions of unfair income shifting (e.g., Section 482).

A further tax consideration that Bermuda companies are evaluating is the IRS's recent

guidance on the application of federal excise taxes on foreign insurers and reinsurers. The IRS has interpreted certain relevant tax codes to mean that excise taxes should not only be imposed on each policy of insurance or reinsurance covering US risks issued by any foreign insurer or reinsurer, but also on subsequent reinsurance policies. This application of the excise tax is commonly referred to as the

'cascading' theory. This could have a potentially significant prospective, as well as retroactive, effect on Bermuda reinsurers.

As the race for the White House unfolds, tax reform can be expected to become a 'hot topic' on the agenda of the next President and the next Congress. For corporations, tax reform could provide for the most significant revisions to the tax code since 1986. Fitch notes, however, that 'Despite the heightened criticism, Bermuda's tax advantage is unlikely to disappear in the foreseeable future (...) Washington's reluctance to give up tax revenue makes legislation that would reduce taxes on US reinsurers, to level the playing field between them and their Bermuda-domiciled competitors, even more unlikely.'

Diversification and acquisitions

PricewaterhouseCoopers 2006 Bermuda Market Survey also identified diversification (both product-line and geographical) as another item high on the agenda of Bermuda reinsurance CEOs. Indications from the 2008 survey also highlight this trend as remaining of vital importance, particularly as the market enters a softer phase. The last 12 months have been extremely active, with some companies seeking out and securing significant operations to bolster their global franchises, and there is every indication that this activity will continue. Product-line diversifications mostly avoided the property

casualty business, and geographic diversification focused both on traditional markets such as those in London, continental Europe, and the US, and newer markets in Dubai and Latin America.

Other industry activity included ACE's acquisition of Combined Insurance and Atlantic, AXIS's acquisition of Media Pro, Ariel's acquisition of Atrium, and Validus's acquisition of Talbot. Arch, Flagstone, and others established presences in Dubai, with Aspen setting up in Dublin. AWAC added to its presence in the US through its Converium purchase. Montpelier established syndicate 5151 at Lloyd's of London, and Partner Re opened an office in Beijing. Bermuda reinsurers have traditionally preferred to compete directly in other markets by establishing their own representative offices or companies. But as Bermuda reinsurance companies look to pursue opportunities in traditional markets such as Lloyd's of London or in the US, they are beginning to perceive the acquisition of existing and successful groups as offering more sustainable and secure growth.

Other challenges

Bermuda's reinsurance success story, with roots going back to the liability insurance capacity shortages of the mid-1980s, has given rise to distinct challenges. These challenges relate to continued growth opportunities in Bermuda, which is placing a premium on office space,

Bermuda: Key facts

- Bermuda is the largest reinsurance and general insurance domicile after London and New York. Bermuda is also the largest domicile for captives, containing 65% of all captives globally.
- In excess of 18,000 'exempt' or international companies are registered in Bermuda, taking advantage of Bermuda's favorable corporate tax structure and its highly professional business environment.
- Bermuda, a British overseas territory, has a respected legal and regulatory system, the latter of which is under the Bermuda Monetary Authority and a 'designated territory' under the UK's Financial Services Act.
- With a native population of approximately 70,000 and an expatriate population of roughly 10,000, Bermuda is the third-most densely populated place on earth. It has one of the highest gross domestic products in the world.
- Bermuda is located in the North Atlantic Ocean, roughly 700 miles east-southeast of North Carolina and roughly 3,000 miles west-southwest of London.

housing, and work permits. The need for local expertise is ongoing, and the fact that a degree of specialist expertise will inevitably require continued support outside Bermuda, these local issues have a direct impact on the simple expense ratios of the island's reinsurance companies. There is little doubt that Bermuda, like the rest of the world's high-cost reinsurance locales – including London and New York – will see an increased focus on outsourcing or relocating back-office and other functions to alternate lower-cost locations.

Outlook

The future continues to be bright for the Bermuda reinsurance market despite the global softening phase and other challenges. The next phase for Bermuda is likely to include:

- Increased consolidation and acquisition activity;
- Further geographic distribution and development, as well as product line diversification including the growth in the use of insurance-linked securities;

- Capital returns and dividends;
- Outsourcing, co-sourcing and increased focus on expense management; and
- Further rate deterioration and reduced/negative top line growth.

Although Bermuda reinsurance companies thrive on taking 'big-ticket' risks, those that have the resolve to walk away when technical pricing and disciplined judgment do not support such risk-taking will be rewarded. □

AUTHOR



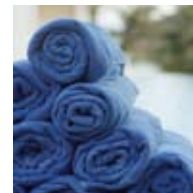
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BERMUDA REINSURANCE MARKET DEVELOPMENTS continued



Islamic insurance: A competitively priced, ethical product with potentially widespread appeal

AUTHORS: BRYAN JOSEPH AND MOHAMMAD KHAN



Takaful (Islamic insurance) is one of the fastest growing types of insurance worldwide and has potentially significant appeal beyond just Muslim populations. Bryan Joseph and Mohammad Khan describe takaful's attributes and attractions, and offer suggestions on how insurers can market it.

ISLAMIC INSURANCE: A COMPETITIVELY PRICED, ETHICAL PRODUCT WITH POTENTIALLY WIDESPREAD APPEAL

Takaful (Islamic insurance) is one of the fastest growing types of insurance worldwide. In the Middle and Far East, it has experienced growth rates of 10–20% per year, compared to an overall 9% annual rate of growth in emerging insurance markets overall and a 5% growth rate in the OECD insurance markets.¹ In addition, the return on capital for takaful products has averaged between 15% and 25%, and based on growth forecasts, remains promising. Moody's has predicted that total takaful premiums will rise to \$7bn by 2015, and some of the world's largest takaful companies envision that approximately one-third of their premiums will come from Western countries by 2020.

For North American insurers, takaful has as-yet untapped potential for future growth. In commercial lines alone, there is an opportunity for US and Canadian insurers to provide takaful insurance and reinsurance for an estimated \$1.5 trillion of infrastructure that Arabian Gulf countries are planning to construct in the next decade.² Moreover, although insurers can market takaful products to the

adult US Muslim population of 1.5 million people,³ there is a potentially far larger market that consists of every insurance-buying adult in the US who wants competitively priced, ethical insurance products.

What is takaful?

'Takaful' means 'guaranteeing each other' and is a form of mutual insurance that is similar in concept to the mutual and co-operative schemes in Europe and North America. Takaful insurance pools resources to pay for events/losses that none of the individual members of a group could afford.

Takaful's main principles include:

1. The customers (policyholders) of the takaful business agree to pool their contributions and share the liability of each policyholder. Therefore, if one policyholder has to be paid a claim, then it is paid out of the combined pool of the policyholder contributions. Because each policyholder agrees to allow his or her contributions to fulfill his/her obligations of mutual help to a

fellow policyholder should he/she suffer a defined loss, uncertainty ('Gharrar') – something Islam does not allow – is eliminated.

2. Similar to mutual insurance, the policyholders share in the profit and loss of the takaful business. The policyholders all share the insurance risk – however, they do not cede the risk to the takaful company (as occurs in a conventional shareholder or mutual insurance company). Consequently, if the takaful business makes a surplus at the end of a financial year, then it is shared among the takaful policyholders.
3. If the policyholders' fund makes a loss at the end of the financial year, then a Qard Al-Hassan (interest-free loan) from the shareholders funds the deficit; any future surpluses of the policyholders' fund are used to repay the shareholders' loan. The shareholders cannot access the surplus from the policyholders' fund except when the Qard Al-Hassan is being repaid.



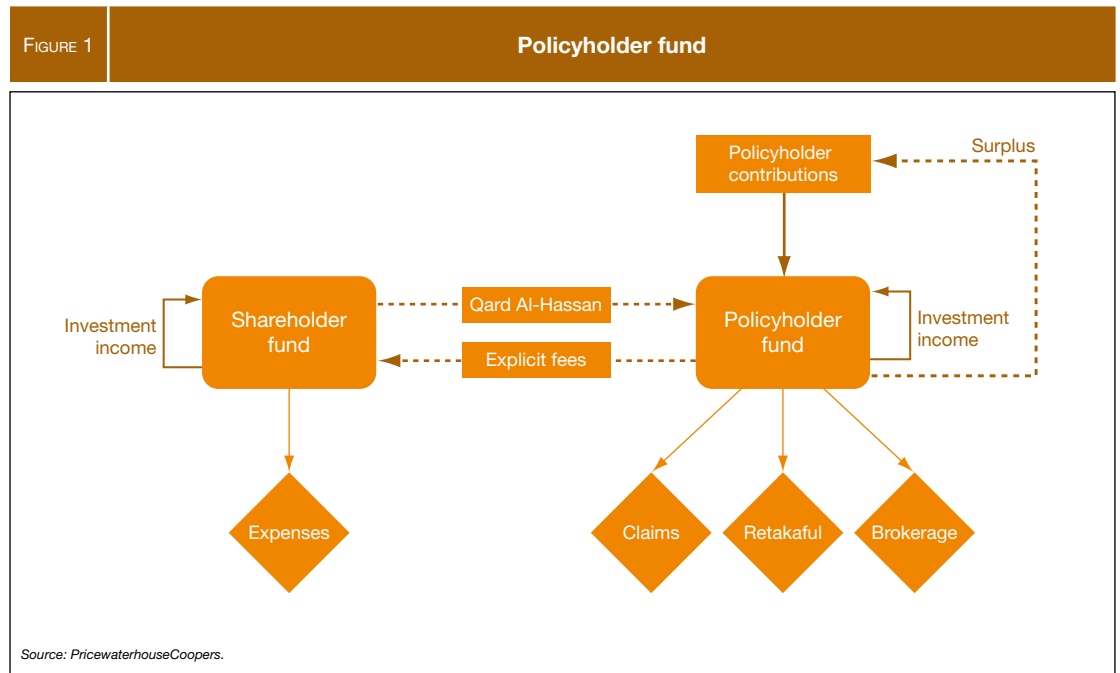
Although insurers can market takaful products to the adult US Muslim population, there is a potentially far larger market that consists of every insurance-buying adult in the US who wants competitively priced, ethical insurance products.

1 http://www.salaam.co.uk/themeofthefirstmonth/november02_index.php?l=8 and <http://www.unicorninvestmentbank.com/default.asp?action=article&ID=38>.
 2 <http://www.ameinfo.com/145251.html>.
 3 <http://news.bbc.co.uk/2/hi/americas/6680939.stm>.

4. The assets of the takaful business have to be invested in Shariah (Islamic law) compliant assets. For example, investments cannot be made in gambling institutions, businesses that make alcohol, businesses that sell weapons, or assets that pay interest ('Riba').
5. The operators of the business are paid explicit fees for setting up and running the company on behalf of policyholders. These fees cover all set-up costs, operating costs, and profit loading of the shareholders (which is the only way they are remunerated). These explicit fees are in the takaful contract that each policyholder signs with the takaful company and are fully transparent. After the fees are deducted, policyholders share any surplus from the takaful business.

Takaful's appeal includes:

- Takaful products are competitively priced against conventional insurance products. For this very reason, a significant proportion of takaful customers are non-Muslim in developed takaful markets (e.g., Malaysia);
- By definition, takaful insurance cannot invest in un-Islamic products (such as arms manufacturers, alcohol, and gambling institutions). An independent committee, the 'Shariah Board,' annually opines that the product meets all relevant ethical guidelines and that the company is operating in an 'ethical' (Islamic) manner. In the UK, continental Europe and North America, where consumers are



increasingly spending a greater proportion of their disposable income on ethical products (e.g., organic food), competitively priced ethical insurance has the potential to be just as popular with non-Muslims as it is with Muslims;

- All charges and expenses are explicit in insurance contracts, thereby making takaful products transparent to purchasers;
- If the takaful business generates a surplus, then shareholders are able to distribute it amongst themselves; and
- A takaful company is like a mutual company within a shareholder wrapper. It has the benefits of both mutuality and shareholder's capital, and shareholders manage the company on behalf of the policyholders. Under the most

common takaful structure, shareholders make their return on each takaful contract as soon as the business is written. Shareholders are paid an explicit proportion of each takaful premium that covers the expenses of running the company and the shareholders' profit margin. Consequently, the shareholders' profitability is not wholly dependent on the underwriting performance of the insurance entity. Rather, it is pre-allocated and only affected by the cost of providing an interest-free loan to policyholders, if the policyholders' fund falls into deficit.

How is takaful's structure different from conventional insurance?

A takaful company is a mutual company within a shareholder wrapper. As Figure 1 shows, the 'policyholder fund' can be

thought of as the mutual company as it receives the policyholders' contributions, pays claims, sets up reserves to pay future claims and pays brokerage and Islamic reinsurance premiums (Re-takaful contributions). The shareholder fund operates the takaful business on behalf of the policyholders and is paid explicit fees for doing so. The two main mechanisms that the shareholder fund uses for charging fees to the policyholder fund are a wakala fee (fixed agency fee applied to either contributions or investment income) or mudharaba fee (percentage of contributions or investment income). Should the policyholder fund fall into deficit, then the shareholders fund makes an interest-free loan (qard al-hassan) to the policyholders. As this is a loan and not an equity loss, it is repaid out of future surpluses in the policyholders fund.



Challenges facing takaful

Awareness

Research has found that many Muslims in the EU do not know what the word 'takaful'⁴ means. Therefore, many Muslims do not know takaful's key attributes and benefits. Accordingly, insurers' first task will be to increase awareness of exactly what takaful is and educate Muslims about how it is Shariah compliant.

Similarly, when marketing to non-Muslims, insurers will need to market takaful products in such a way that potential customers understand that they are getting both an ethical and competitively priced mutual product that returns any surplus to them.

Shariah compliance and skilled resources

The Shariah Board is independent of the takaful business and ensures that both the operation and the products of the takaful business are compliant with Islamic law. The Shariah Board normally consists of a minimum of three Shariah scholars educated in economics. The takaful industry

as a whole is struggling to find scholars and skilled resources who understand both the intricacies of Shariah law and the complexities of modern finance.

Regulatory complexity

The Shariah Board is an additional regulator of the takaful business. Takaful products are subject to not only the national and/or local regulators who ensure that policyholders are adequately protected, but also the Shariah Board that verifies if the takaful business is operating in an 'Islamically appropriate' manner.

Retakaful

Being Shariah compliant also requires that takaful businesses place their retakaful (Islamic reinsurance) programme with a retakaful company. There is currently a dearth of adequately rated retakaful companies. As of June 2008, there were fewer than 20 retakaful entities in the world, and only three retakaful companies and retakaful windows had a rating of A- or above. Takaful companies may be forced to use conventional reinsurance until more retakaful capacity becomes available.

Investment compliance

To be Shariah compliant, takaful businesses are required to invest their assets in Shariah-compliant investments. However, because it is often difficult to find a wide range of such investment products, there can be regulatory compliance challenges associated with a lack of diversified investment risk. In response to this dilemma, many companies are establishing ethical investment funds that are in compliance or can easily be made compliant with Shariah law.

Conclusion

Takaful has the potential to be a profitable, ethical business for insurers who adequately price and market takaful products, as well as marketing them compellingly to both Muslims and non-Muslims. Companies considering setting up takaful businesses will need to ensure that their processes and products comply with Shariah law, as well as all national accounting and solvency regulations. □

Insurers' first task will be to increase awareness of exactly what takaful is and educate Muslims about how it is Shariah compliant.

4 'Takaful Opportunities in UK & Europe'. Presentation by Bradley Brandon Cross, CEO, British Islamic Insurance Holdings, at the International Takaful Summit 2007.

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Contingent capital: Stepping into strategic capital planning

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Would the insurance industry be able to withstand losses arising from a crisis equivalent to the subprime crisis that is facing banks? Is now the time for critical capital planning as a component of core enterprise risk management (ERM) strategies? Larry Rubin and Xiaokai ‘Victor’ Shi review contingent capital as a key element in an insurer’s ERM strategy.

CONTINGENT CAPITAL: STEPPING INTO STRATEGIC CAPITAL PLANNING

In recent decades, a revolution in risk and capital management swept through the insurance industry. Today, the global insurance industry is actively discussing and implementing economic capital as part of its strategic financial planning. Also, alternative capital funding approaches such as insurance-linked securities and various securitizations became more popular recently when traditional reinsurance markets failed to provide sufficient capacities.

However, insurers face threats from unexpected events such as natural disasters, unusual economic fluctuations and capital market crashes. These events are called ‘paradigm shifts’ or ‘black swans’ by many practitioners. For example, the recent subprime crisis led to ‘earthquakes’ in the entire financial service industry, and some insurers also suffered.

Would the insurance industry be able to withstand losses arising from a crisis equivalent to the subprime crisis that is facing banks? Is now the time for critical capital planning as a component of core enterprise risk management (ERM) strategies? This article reviews contingent capital as a key element in an insurer’s ERM strategy.

What Is contingent capital?

For readers unfamiliar with contingent capital, the concept can be made more transparent by comparing it to some traditional capital funding methods such as lines of credit and reinsurance.

Although similar to a line of credit, contingent capital arrangements are far more complex. Contingent capital is a trigger-based financing option: Agreements are entered into by two or more entities that give the holders the right to raise capital or sell securities (at given prices) when predefined triggering events occur. The trigger events could be a natural catastrophe, significant economic events, an act of terrorism, buyer financial conditions, a liability event or another predefined condition. Contingent capital can be viewed as a put option on a company’s balance sheet, by which the buyer pays a premium (capital commitment fee) in exchange for the right to issue or sell securities at given conditions.

Although contingent capital differs from a line of credit due to its post-event nature, it will move to the balance sheet once the ‘put’ is exercised and, thus, is similar to line-of-credit agreements.

Contingent capital similarities can also be drawn to traditional reinsurance (or catastrophe bond transaction) in the sense that they both provide off-balance-sheet capital for risks. However, contingent capital differs from reinsurance because it gives the option of access to capital rather than providing indemnification. In addition, unlike reinsurance, funds raised via contingent capital must be repaid to the capital provider. Finally, contingent capital does not really transfer risks or losses to sellers, but it provides a capital injection after specified events.

Contingent capital can be provided in various forms of securities: equity, debt or some hybrids. Typical arrangements include standby credit facility, contingent surplus notes or catastrophe equity put options:¹

- **Standby credit facility** – a line of credit with the right to receive a loan upon event of a loss;
- **Contingent surplus notes** – the option to borrow or the right to issue surplus notes contingent upon triggering events;
- **Catastrophe equity put** – the right to issue shares of stock contingent upon triggering events.



Would the insurance industry be able to withstand losses arising from a crisis equivalent to the subprime crisis that is facing banks?

1 Michael W. Elliott, ‘Contingent capital arrangements,’ *Risk Management Quarterly*, Vol. 18, No. 2, September 2001.

Economic capital modelling fails to capture extreme tail events

Many will cite the standard definition of economic capital from Solvency II, where economic capital is defined as the amount that an insurance company needs so that it can absorb all losses within a one-year time horizon with 99.5 percent probability. This concept is shown in Figure 1.

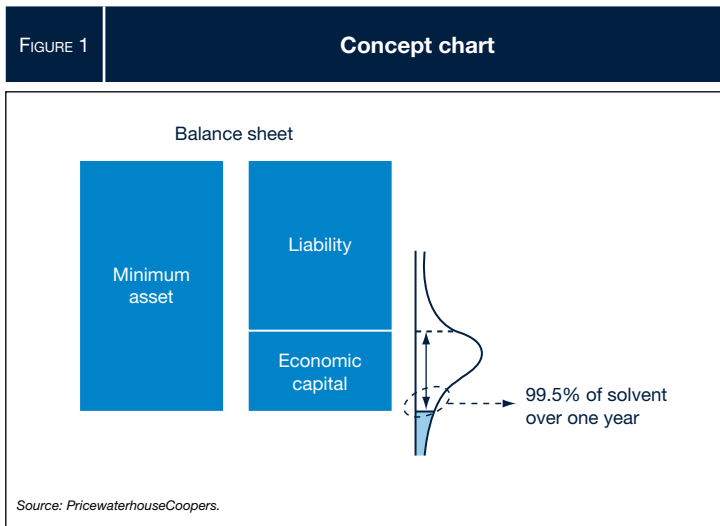
However, no matter how sophisticated a company's internal economic capital models are, they still are often built based on historical experiences (with perhaps some additional stress tests.) These models may fail to capture some 'unknown unknowns,' the so-called paradigm shifts and black swans. This is because:

- By definition, these tail events cannot be modeled based on a historical 'curve' of losses;

- The historical data set represents one of many possible outcomes; and
- More importantly, recognizing extremely unlikely events in economic capital will require insurers to hold excessive amounts of equity capital, thus lowering their return on equity.

Still, these unknown unknowns are often the major drivers behind business failures. For decades, Bear Stearns had been recognized as one of the most sophisticated risk modelers on Wall Street. But Bear Stearns' recent failure was a direct result of the subprime meltdown that, according to its risk models, was a '9 standard deviation' event.

When a paradigm shifts or a black-swan event occurs, disastrous consequences can result (see Figure 2).

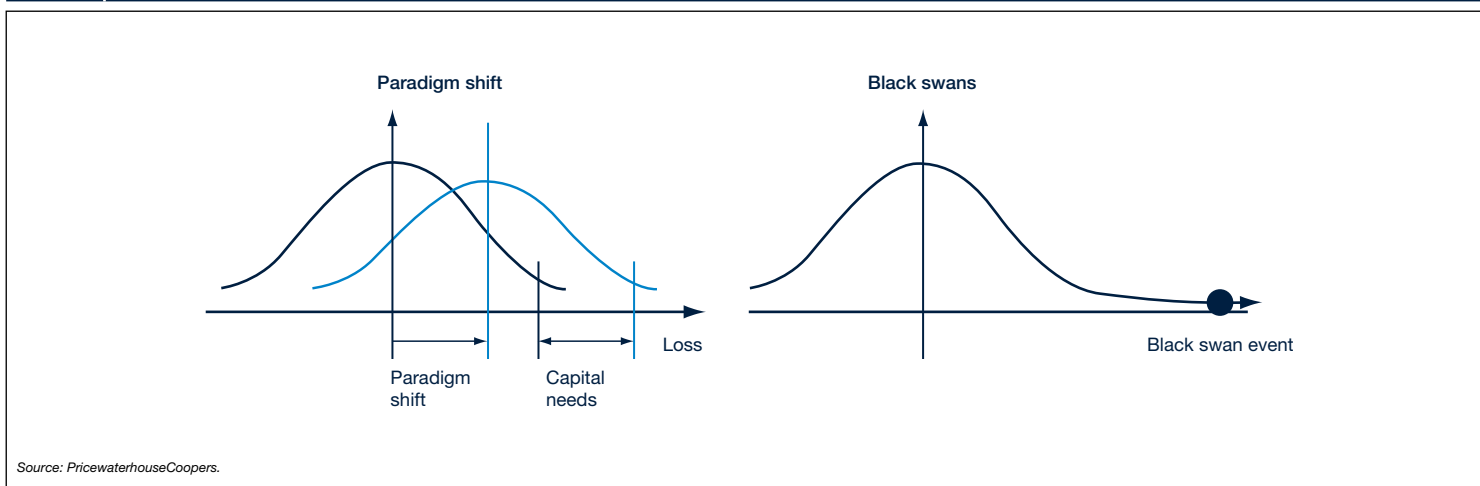


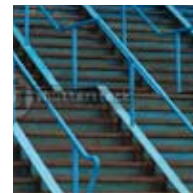
Paradigm shifts are either long- or short-term changes in the state of the world, which gives rise to significant losses to financial institutions. Examples include the low levels of interest rates experienced since 2000 (in the early 1990s, most insurance companies believed we would not see 3% interest rates in the

United States again) and long-term-care policyholder behavior. Paradigm shifts have higher impacts on insurance, compared with many other industries, due to the business nature of the 'long-term promises.' Insurance products are priced as the world existed rather than as it exists.

FIGURE 2

A paradigm shift or a black-swan event





Black swans are large-impact events that are statistically remote and beyond the realm of normal expectations. The 1987 stock-market crash, the 9/11 attacks, the burst of the Internet bubble and the recent subprime meltdown are examples of black swans. Those events pose great challenges to insurers because of their unpredictability, which is difficult for risk specialists to model.

The market appears to have included these 'unexpected' events when it assessed the risks of investing in insurance business. This could be observed from the capital adequacy rating criteria from rating agencies, (the three to five multiples of risk-based capital insurers must hold for competitive reasons). This could also be observed from some insurance-related securitizations, where capital required to execute the deal is greater than the capital that is determined by a company's economic capital model. In addition to the information disparity and frictional costs of insurance business, unknown unknowns would be one important contributor to 'redundant' capital holdings.²

Can existing techniques or future innovations help solve or mitigate this problem? If so, what strategic decisions should companies make to build healthier balance sheets?

Contingent capital as part of ERM

In addition to unexpected losses, the consequences of extreme tail events are more likely to pose liquidity problems than solvency troubles for insurers. Under the NAIC's risk-based capital requirement in the United States, leading insurers are less likely to have solvency problems because most hold far more capital than the required minimum. However, short-term liquidity troubles (as well as subsequent ratings downgrades) are major triggers to many bankruptcies and opportunistic acquisitions. In the 1990s, the failures of two prominent insurers, General American in the United States and Confederation Life in Canada, were good examples of the consequences of liquidity problems. In addition, liquidity was a contributor in the recent failure of Bear Stearns.

Contingent capital³ is a solution that should be utilized to supplement a company's economic capital. In our view, contingent capital, in conjunction with traditional risk management programs such as reinsurance, economic capital modeling and hedging, should be considered by CEOs/CFOs /CROs as part of their ERM programs. Contingent capital creates a bridge to access financing sources in cases where capital markets fail to do so.

Contingent capital arrangements have grown more common this decade. In 2000, Swiss Re marketed a contingent capital

arrangement with Royal Bank of Canada. The arrangement stated the bank could use its C\$200 million preferred shares in exchange for C\$200 million cash from Swiss Re if the bank's general reserve level for loans fell below a certain threshold. The C\$200 million preferred shares represented about 1% of Royal Bank's equity. The major incentive to enter into this transaction was that it was less expensive than general insurance. An article published in 2001 at CFO.com labeled the potential capital derived from this type of transaction as 'just-in-case capital.'

In 2006, XL Capital and its subsidiaries entered a \$350 million contingent capital arrangement with Stoneheath Re, a Cayman Islands exempted company issuing perpetual preferred securities. The structure of this transaction gives XL's subsidiaries access to capital based on covered triggering events including US wind, California earthquakes, European wind and global terrorism. Stoneheath Re solely invests in AAA assets, which will be converted into preferred shares of XL Capital if specific events occur. This structuring deal, advised by Goldman Sachs, is an innovative and successful transaction that enables XL to gain access to significant capital upon the occurrence of a tail event.

However, we have not seen many examples like XL Capital in the insurance industry that actively use contingent capital as a core

ERM strategy. The use of the contingent capital approach, as a tool to 'hedge' balance sheet risks and lock in an insurer's cost of capital, could be expanded in the capital planning and risk management decision process.

Some industry leaders have pointed out that insurers should back their economic capital (results from internal models) with their company's equity and fund other capital portions with cheaper sources such as debt or securitizations. However, funding black-swan events by accessing debt capital would be an incident of default. Most securitizations provide for holding company recourse, which would also be considered an incident of default should it be accessed. As a result, creditors would take ownership of the company and shareholders would lose all value. In contrast, accessing contingent capital – as represented in the Royal Bank and XL Capital examples – is the exercise of a contractual agreement between a company and an entity that provides the funds. Consequently, shareholders do not lose ownership (although in some structures ownership may be diluted).

Insurers should be able to leverage contingent capital as an enhancement to their claims-paying ability, which may improve a company's competitive position. Done correctly, it should lower the company's cost of capital. As these contingent risks are deemed to occur infrequently, the loss distribution should more

² See Lockerman, Polsgrove, Rubin, Shi, Tillis, 'Economic Measurement of Insurance Liabilities: The Risk and Capital Perspective,' 2008.

³ See background information at side box of contingent capital introduction to understand the basic concepts of this product.

closely resemble the loss distribution of investment-grade debt instruments and be priced accordingly (we see this with holding company debt, which is the simplest form of contingent capital, but has the downside risk of loss of control of the company). Through strategic contingent capital transactions – without significant, expensive equity ‘buffering zones’ – companies can build market confidences by mitigating the fear of tail events’ often disastrous impacts to the company.

Admittedly, contingent capital cannot remove all unknown unknowns from the balance sheet due to its nature of dealing with ‘predefined events.’ However, given certain shareholders’ risk appetites, contingent capital, in exchange for a reasonable cost, is able to help companies build both policyholder and investor confidences and to survive large

tail event losses. Capital markets, on the other hand, seek diversification opportunities and are expected to welcome some orthogonal risks that are not closely correlated with market risks. The popularity of catastrophe bonds and other various insurance-linked securities is evidence of this.

Our approach to capital structure (also shown in Figure 3) is two-fold:

- Companies should use shareholders’ equity to fund economic capital, where economic capital should be sufficient to make insurers finance themselves at market-consistent cost of equity.⁴
- Companies should utilize contingent capital to hedge out-of-the-money risks or risks that are not captured in the economic capital model.

This structure requires the company to be able to explain to the market the sufficiency of its economic capital model in order to receive contingent capital funding.⁵

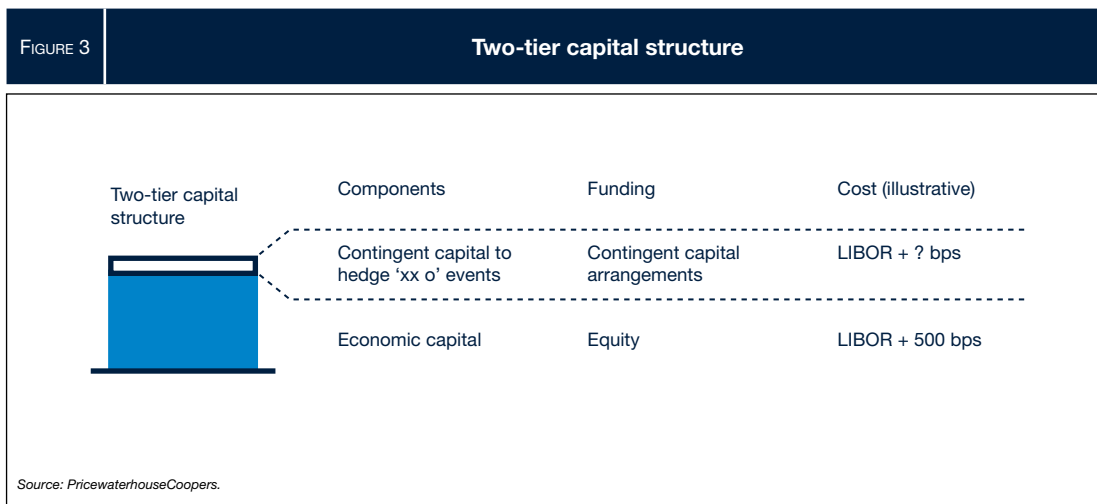
Benefits of contingent capital

Contingent capital also provides several economic benefits as alternative capital funding. First, it provides great flexibilities in capital funding and risk management. It could include triggering events that may appear in various forms. It could be one-year or multi-year period coverage based on buyers’ risk appetites and their views on potential risks. It could include actual funds raised in the capital markets, deep out-of-the-money derivatives or traditional reinsurance. There can be a variety of forms of ‘exercising triggers’ that are based on a company’s unique business problems and that are able to

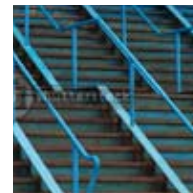
prevent insurers from suffering from different threats. For example, companies could enter some transactions with the trigger as the ‘worse scenario’ for their Guaranteed Minimum Withdrawal Benefit (GMWB) obligations in the balance sheet. Insurance companies or banks, as another example, could define their trigger event as a credit crash similar to what is currently happening.

Second, contingent capital provides a cheaper cost of capital funding relative to using equity capital for out-of-the-money risks. At certain points, insurance companies are able to lock in their cost of capital by paying reasonable ‘premiums’ (the cost of the ‘put’). If the reduction in cost of capital is lower than the ‘price’ of this put option, then insurers are creating value via this transaction.

Another significant advantage of contingent capital is effective balance sheet protection for some specified events. Uncertainties in companies’ balance sheets incur additional cost of capital and will put shareholders and policyholders in unfavorable positions if something unexpected happens. Leveraging contingent capital enables insurers to ‘hedge’ those possible losses from their corporate balance sheets without losing capital ownership under distressed situations. In addition, contingent capital provides capital with stress-free spreads under financial distress.



4 One of our separate articles, ‘Economic Measurement of Insurance Liabilities: The Risk and Capital Perspective,’ argued that the economic level of capital should be sufficient to help insurers fund losses without paying additional equity risk premiums. The implication of this view is that insurers should hold sufficient economic capital so that the capital market would be willing to fund the contingent capital.
 5 See Lockerman, Polsgrove, Rubin, Shi, Tillis, ‘Economic Measurement of Insurance Liabilities: The Risk and Capital Perspective,’ 2008.



Finally, contingent capital could also provide timely mid- to long-term liquidity support. As mentioned earlier, liquidity trouble often contributes significantly to insurance business failures. If a 'run on the bank' happens, some companies might have difficulties accessing external liquidity sources, or additional liquidity may be very expensive to obtain. Entering contingent capital transactions could effectively solve this problem if prespecified events transpire.

Regulatory implications

Surplus notes are one type of capital source that is similar to contingent capital. Surplus notes, where regulatory approval is required, have been popular in the insurance industry to raise capital, especially for mutual companies. Surplus notes are treated favorably from a regulatory perspective, and they are viewed as equity for solvency purposes. If regulators prevent a company from making coupon or principal payments on the surplus notes, the company would not be considered in default.

It might be too early to assume that regulatory pressure would come into play to hold contingent capital. But it should be a fair presumption that regulators would, at least, favor contingent capital as another vehicle to secure policyholders' benefits. If we accept that paradigm shifts and black swans will occur in the future, and that by their nature they cannot be captured in an



economic capital model, then we should expect that Solvency II, which moves in the direction of regulating companies based on internal capital models, may result in increased insolvencies in the industry.

In the short term, absent regulatory pressures, company management teams may lack enough incentives to seek contingent capital arrangements. Unlike the European view that management is maximizing stakeholders' values, US firms tend to believe that management is responsible for maximizing shareholders' benefits. Contingent capital primarily protects policyholders. From the shareholders' perspective, paying additional costs to protect policyholders may not be in their best interests, given that the result of accessing contingent capital could lead to dilution of capital or even a loss of control. Considering that extreme events are unlikely to occur during a particular term of a management team, management might avoid having to explain the additional 'underperformance' that resulted from purchasing contingent capital during their limited years in executive positions. This is because companies that hedged their overall balance sheets with contingent capital would have relative lower capital performance (assuming other factors equal) than peers that were not impacted by the cost of contingent capital. We expect the result of regulatory pressures to help financial institutions survive potential financial crises, especially in a Solvency II world.

Rating agency views

Contingent capital has been favorably received by rating agencies due to its financial flexibility and demonstration of efficient capital management.

In one of its recently published special reports, AM Best commented: 'Recently, several companies have issued contingent capital securities as part of a capital management plan ... Companies that can issue these types of securities tend to have stronger levels of financial flexibility and market acceptability.' However, AM Best also stated that it does not give credit in AM Best's capital adequacy model (BCAR), although 'they do receive a certain level of 'qualitative' credit at rating committee meetings.'

In one 2006 published commentary letter in 'Standard & Poor's Global Bond Insurance,' S&P stated, 'a bond insurer can receive 100 percent credit in the capital adequacy model for a contingent capital structure in which the invested assets meet Standard & Poor's qualifying assets guidelines.'

Limitations and future innovations

While contingent capital appears to be a good solution to many capital management problems, it also has some limitations:

- In the near term, companies might lack enough incentives to hold contingent capital. Although contingent capital would essentially make

companies immune from certain extreme events, companies would have relative lower performance than those not impacted. Before contingent capital gains popularity or regulatory pressures come into play, a CEO might have to explain to his or her shareholders why entering a contingent capital transaction is necessary;

- The existing structuring of contingent capital appears overly complex, thus increasing the transaction costs and reducing the transparency of this facility; and
- Cost-efficient pricing of certain triggering events requires more sophisticated risk measurement and technology support.

Going forward, both the insurance industry and the capital market should continuously focus on innovation. Three key aspects players need to concentrate on include increased transparency, extended coverage and more sophisticated pricing.

Transparency is the key to success for this innovative product. The major benefits for insurance companies with contingent capital arrangements stem from their enhanced ability to survive a financial crisis. The major benefits to investors are the ability to purchase investment-grade assets whose default risk is uncorrelated with the rest of the portfolio. However, unnecessary complexities or other nontransparencies could diminish this advantage as investors will automatically add risk margins on

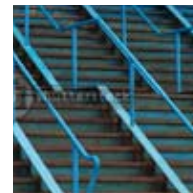
each nontransparency. In other words, investors are willing to pay for extra transparency. Increased transparency on transactions, favourable accounting treatments, and regulatory and rating agency endorsement, may well boost the future development of contingent capital as a core component of strategic capital planning.

Extended coverage of trigger events and improved pricing abilities would also add value. The capital market should be able to digest risks from issuing contingent capital options. How to correctly measure and quantify the risks is the key. Given the covered events have very low probabilities of happening, we expect that, with enhanced pricing abilities in the capital market, contingent capital will become a very cost-efficient vehicle to fund capital and to hedge the balance sheet with the advancements in product development from the capital market.

Conclusion

More and more institutions have started to feel the pain from the subprime credit crunch. Sacrifices must be made for financial institutions to return to their former secure states. But US financial service industries also need to think hard about how to enhance their risk management abilities.

Contingent capital, as an innovative vehicle in capital planning, could become a valuable component to insurers' ERM strategies. However, with a lack of regulatory pressure, it might take extra effort for US



firms to take action regarding purchasing contingent capital. Management, which is primarily responsible to shareholders, might lack incentive to maximize policyholders' benefits if shareholders were paying the 'bill.'

Looking back in history, the industry always climbed toward higher destinations as it faced more complex and riskier realities. Innovations from strategy, tools and, most importantly, people's mindsets are the drivers. We feel contingent capital is one more tool to help manage the insurance industry's inherent complexities and risks. □

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Recent developments in risk mitigation through reinsurance and capital markets

AUTHOR: CAROLINE FOULGER



Caroline Foulger focusses on key developments in the relationship between the capital and reinsurance markets, provides insight into the broader reactions of reinsurers to this new wave of capital market participation, and explores different perspectives on other changes in the reinsurance space in a softening market.

RECENT DEVELOPMENTS IN RISK MITIGATION THROUGH REINSURANCE AND CAPITAL MARKETS

Overview

Casualty reinsurance market rates declined throughout 2007, and, absent of a major catastrophe, the property market is now following suit. While underwriting and risk management activity on a global scale centers on appropriate and sustainable responses to market softening, the catastrophic corner of the global reinsurance market (worth upwards of \$400 billion) has seen significant activity from a less traditional reinsurance source: capital markets. Recent activity, although compartmentalized, highlights the continuing appetites of both the investing community and reinsurance consumers for polished and economically rewarding substitutes to conventional reinsurance.

This article focuses on some key developments in the relationship between the capital and reinsurance markets, provides insight into the broader reactions of reinsurers to this new wave of capital market participation, and explores different perspectives on other changes in the reinsurance space in a softening market.

Start-ups, sidecars, securitizations, and soft capital

Most key indicators showed an ongoing softening of property catastrophe reinsurance pricing in the first four months of 2008. But 'soft market' is always a relative term. Rather than curtail capital markets' interest in reinsurance, recent credit market events have yet again focussed the attention of hedge funds and private equity firms to uncorrelated risks through reinsurance-backed investments.

Until the 2004 and 2005 market dislocation events, investment in the reinsurance market was traditionally long term (e.g., through the provision of capital by direct shareholdings in reinsurance companies). However, global capital markets have long played a broader role in the property catastrophe reinsurance market. Recently, insurance-linked securities (including catastrophe bonds and industry loss warranties) have gained momentum, and have provided the capital markets with uncorrelated short- to medium-term investment opportunities. Investment activity in late 2005 through 2008 has cemented what now seems to be the ongoing role of hedge funds and private equity

firms in the property catastrophe reinsurance market. Below is a summary of the major avenues behind the stream (well in excess of \$10 billion) of capital market investment in the reinsurance market over the past few years.

New start-ups

Probably the most traditional form of the capital markets' involvement in reinsurance companies is by direct investment in new start-up companies. This was most evident in late 2005 (following Hurricane Katrina) with the establishment of four new Bermuda companies, each with start-up capital in excess of \$1 billion directly funded by the capital markets.¹ Activity has since continued, albeit at a reduced level, with carriers formed in both Bermuda and the Cayman Islands in 2007. Since the 'billion-dollar Bermuda babes' of 2005, there has been limited start-up activity in the property catastrophe space, with the exception of Aeolus Re.

Sidecars

Although initial versions of sidecars were created as early as the 1990s (e.g., Renaissance Re's Top Layer Re and Olympus), the Hurricanes Katrina, Rita, and



'Soft market' is always a relative term.

1 Amlin Bermuda also had start-up capital of \$1 billion, though funded principally through the Amlin Plc group.

Wilma (KRW) events and the formation of the 'Bermuda Class of 2005' companies provided the impetus for a significant inflow of hedge fund and private equity into sidecar structures, as shown in Figure 1. From 2005 through 2007, approximately \$5.5 billion of sidecar capital entered the marketplace. More interesting is that while a considerable portion of

that capital is now leaving the market, other sidecars (more closely resembling catastrophe bond structures) are being formed with different objectives. Puma Re, for example, has issued a three-year catastrophe bond for the sole purpose of financing its sponsor vehicle, Bridge Re (a new property catastrophe retrocessionaire: (reinsurer of a reinsurer).

Securitizations (catastrophe bonds and industry loss warranties)

The catastrophe bond market is probably the single largest growth area in the property catastrophe reinsurance market, attracting approximately \$12 billion of capital in 2006 and 2007. Unlike sidecars, rating agencies have demonstrated a greater inclination to rate certain bonds, which has significantly boosted this market's growth. The subprime crisis has provided a coincidental compensator for price declines, and the uncorrelated risks these products provide investors, given current market conditions, is fuelling the continued growth of catastrophe bonds.

Original Industry Loss Warranties (ILWs), traded in the 1980s, resurged in 2006, providing similar investor access to the property catastrophe market as catastrophe bonds. Many market observers see ILWs as a huge growth area, comparing them to interest rate and credit derivative markets. But the absence of recognized trading indices, structure, pricing, liquidity, and transparency (particularly in secondary trading) is somewhat stalling this growth.

Contingent capital

Contingent (or soft) capital has long been a common feature of the financial guaranty market. The significant benefit that it brings, (i.e., it is a protective option following a major catastrophic event without punitive post-catastrophe costs and capital dilution) has raised both the profile and use of these products in other

sectors in the market in recent years. Significant recent deals totaled in excess of \$1.3 billion on a combined basis. However, while confidence in these products is growing, there are still reservations both on the issuer side and by the rating agencies related to essentially unrated, off-balance sheet facilities.

Long-term versus short-term? Beneficial or adverse?

As noted above, approximately \$6 billion of sidecar capital flowed into the reinsurance market in 2005 through 2007, although that flow has slowed over the past 12 months. Several of the sidecars established in late 2005 and early 2006 are now either cut off (i.e., their potential exposures have been settled by commutation as they are expected to be minimal or nil), or in run-off. In the past, the investment of such short-term capital would have been viewed as a lack of commitment to the industry, but the market has changed in 2008. While surplus capacity and declining rates make such ventures less attractive to some capital market investors, the appeal of additional non-shareholder capital is less important to reinsurance company sponsors of sidecars, thus aligning the interests of both parties. This inflow and outflow of hedge fund and private equity firm capital in response to shifts between dislocated and stabilized reinsurance market conditions has been called the 'bellows effect.'

Among the reinsurance market's leaders, there are mixed emotions regarding the relative benefits of this large influx of investor capital.

FIGURE 1 Sidecar formations (2005 to 2006)*

Sidecar	Capital (\$ millions)	Cedant	Setup
Olympus II	\$155	White Mountains	2005
Blue Ocean	\$355	Montpelier	2005
Cyrus Re	\$550	XL Capital	2005
Flatiron	\$840	Arch Capital	2005
Monte Fort Re	\$60	Flagstone	2006
Timicuan/RPP	\$70	Renaissance	2006
Sirocco	\$95	Lancashire	2006
BayPoint	\$150	Harbor Point	2006
Petrel	\$200	Validus	2006
Sector Re	\$220	Swiss Re	2006
Helicon	\$330	White Mountains	2006
Concord	\$730	AIG	2006
Syndicate 6105	\$20	Syndicate 4020	2007
Syndicate 6104	\$35	Syndicate33	2007
Monte Gele Re	\$60	Flagstone	2007
Cyrus Re II	\$105	XL Capital	2007
Norton Re I	\$120	Brit	2006
Norton Re II	\$120	Brit	2007
Puma Re	\$180	Bridge Re	2007
Starbound	\$315	Renaissance	2007
Kaith/K5	\$370	Hannover Re	2007
MaRI	\$400	Marsh / ACE	2007
\$5,480			

*This table is for informational purposes only. Available data relating to sidecars is restricted, as much of it is not made public. The data in the table above is based on information from press releases and other public sources, and therefore there is no guarantee of its completeness or accuracy.

Source: PricewaterhouseCoopers.



FIGURE 2

How do you view the significant capital provision into the market from the capital markets (e.g. hedge funds)?



Obviously, one of the major marketplaces affected by this trend is the Bermuda property catastrophe reinsurance market. In PricewaterhouseCoopers (PwC) 2006 Bermuda Market Survey, we asked a cross section of reinsurance CEOs how they viewed the involvement of the capital markets. Figure 2 illustrates the results.

At the 2007 Bermuda Insurance Conference, sponsored by PricewaterhouseCoopers and Standard & Poor's and titled 'Global Challenge: Optimizing Capital in a Softening Market,' speaker Michael A. Butt, chairman of AXIS Capital Holdings, noted, 'Sidecar and other short-term capital are not trying to create franchise value. That is one factor that gives us hope that we may this time experience a smoother cycle. There will be many occasions in the future when we will need surplus capital for specific,

identified needs, because some elements of the market will lose their nerve.'

As some sidecars wind down and their investors depart for now, the stability they have delivered by providing capital and capacity in a dislocated market is hard to dispute, and their obvious desire not to 'hang around' when the specific short-term opportunity they targeted starts to fade is widely considered to be a positive thing. But in a soft cycle questions are being asked about the impact this short-term capital has had on reinsurance purchasers. While some sidecar capital has been returned, of the considerable capital market investment provided since KRW (conservative estimates range between \$8 billion and \$14 billion), a considerable portion remains. The length and impact of this trend on traditional reinsurance providers are widely debated questions.

Choice and complexity

Reinsurance purchasers have had an array of choices available to them through the addition of several capital market mechanisms. In the recent, harder market, all coverage has been relatively expensive, and the rapid addition of capital through sidecar structures has quickly provided capacity in response to a very complex and difficult situation. As the market softens, it essentially becomes a buyers' market for reinsurance purchasers. The stability of capital market structures has helped the more traditional reinsurance providers continue to meet the coverage needs of their customers. Following the stellar returns of two benign years, those traditional providers now have less need for the capital markets' sidecar contributions. If that capacity remains, it will worsen the impact of the soft cycle for established reinsurance franchises; by departing, it assists in smoothing the cycle.

The Bermuda Market Survey also asked a cross section of CEOs whether they viewed the involvement of the capital markets as short- or long-term. Opinions split, with those viewing the involvement negatively also viewing it as long-term (see Figure 2).

While sidecar formation has slowed, the growth of insurance-linked security issuances (i.e., catastrophe bonds and industry-loss warranties) and contingent capital facilities has not. As the knowledge and availability of these products becomes more widespread among reinsurance buyers and the investment community, these longer-term products are gathering pace. This has obviously been assisted by the outperformance of traditional bond markets by catastrophe bonds following a tumultuous period in the credit markets and a benign period in the catastrophe market.



With all this additional and potentially competitive capacity available from the capital markets, it is often reported that traditional reinsurers are becoming victims to a predatory attack on their core market. Reality is far different: the reinsurance market is agile, innovative, and at the front edge of the development of this new breed of risk mitigation techniques.

Convergence and sophistication

Although designated for investment by the capital markets, given the complexity of the risks these products cover, it is essential that they be in some way structured or at least validated by reinsurance specialists. Swiss Re is widely recognized as the pioneer of the insurance-linked securities market, initiating catastrophe bond trading since the hard markets of the early 1990s following Hurricane Andrew. Since then, its specialities and offerings have evolved, and it

now includes significant life securitizations as well. Lloyd's insurer and Bermuda reinsurer Amlin recently announced that they will form an investment management partnership that will manage funds focussed on traded insurance risk. Other companies are widely expected to follow this trend. Although the partnership is still subject to regulatory authorization in the UK, Amlin CEO Charles Phillipps has said, 'Amlin intends to be an active participant in the insurance-linked securities (ILS) market, both to enhance our capital and risk management capabilities and to generate returns from the growth and high margins available in the business.' Amlin has supplemented its team with a previous head of ILS at Swiss Re.

Aeolus Re is a start-up Bermuda reinsurer founded in 2006, and it operates as an unrated reinsurance platform that targets the property catastrophe segment of the worldwide reinsurance market. Specifically, Aeolus focusses on the industry loss

warranty (ILW) segment of the market. It has been so successful that in early 2007 its capital base was increased to over \$1 billion by a group of investors led by Warburg Pincus and Merrill Lynch Global Private Equity.

In the meantime, so-called 'traditional reinsurance' companies, including XL and Renaissance Re, were frontrunners in the formation of sidecars, and both longer-established and relatively new companies are making extensive use of contingent capital facilities.

Hedge fund and private equity firms are sophisticated and agile investors, and they will pursue market opportunities to secure uncorrelated returns. Indeed, the structured relationship between investment markets and reinsurance companies through sidecars and other shorter-term products simplistically reflects a mutual recognition of where expertise lies; hedge fund and private equity firms lack the expertise of reinsurance underwriters, just as reinsurance underwriters lack the expertise of hedge fund and private equity firms. The most significant threat to the stability of the reinsurance market usually occurs when those lines are blurred.

Other developments in reinsurance

Acquisitions – SCOR's acquisitions of Converium and, on a smaller scale, Tokio Marine's of Kiln, represent two of the major reinsurance market acquisitions in 2007. There has also been considerable activity in the Lloyd's market, particularly at

Bermuda companies (e.g. Validus' acquisition of Talbot and Ariel's acquisition of Atrium). This represents a revitalized appetite for Lloyd's following the flow of capital in the opposite direction in 2005 and 2006.

Diversification –

Increased emphasis on the 'diversification credit' that rating agencies can award has led companies to broaden their strategies respecting the breadth of their business focus rather than narrowly concentrating on one business model. In a softening market, companies that put most of their energies into developing one narrow business model can shrink disproportionately, adversely affecting both their bottom line and their market credibility. In 2007, Standard & Poor's downgraded IPC Re for 'narrow' underwriting that concentrated principally on the property catastrophe space. This diversification credit, like many factors incorporated into rating agency models, is a relatively new trend, perhaps causing some chagrin at IPC Re given their consistent practice for over a decade of underwriting. It is evident that Montpelier Re has responded to the pressure to diversify its business by expanding into the US, Lloyds, and Europe last year, earning a positive rating agency response in May 2008.

There is no doubt that diversification can yield significant benefits, ACE and AXIS being notable examples. However, the penalty for diversification perceived as beyond the core resources or experience of a company can also be damaging. In the past, companies have been



RECENT DEVELOPMENTS IN RISK MITIGATION THROUGH REINSURANCE AND CAPITAL MARKETS continued

heavily penalized for this, the writers of North American casualty reinsurance being a noteworthy example in the 1990s. It will be interesting to reflect a few years in the future on the results of the wide variety of diversification strategies now being deployed by global reinsurers, particularly in emerging reinsurance marketplaces.

Alternative risk transfer and structured reinsurance –

In the wake of a variety of industry investigations a few years ago, heightened sensitivity to structured reinsurance has led to a contraction in the availability of products in this space. However, interest in these products has increased, and a broader range of solutions are being offered to the market. Consistent with heightened sensitivity, however, the buyers of structured products seek obvious and higher levels of risk transfer. Aggregate stop-loss covers are among a wide range of products proving to be popular.

Outlook

The reinsurance market is ever-evolving as business cycles continue to revolve. In a hard market, the focus is always on capacity, capital, and pricing. In the current soft market, the focus is on developing creative product offerings and optimizing capital returns while also managing pricing challenges. The challenge for all parties – reinsurance companies, reinsurance purchasers, and the capital markets – is to continue recognizing where their expertise and value resides and where it does not. □

Glossary of terms

Insurance-linked securities

Securitization is a financial technique that pools assets together and, in effect, turns them into tradable securities. Most insurance-linked securities (in the property and casualty insurance markets) serve as collateralized protection for extreme event risk (i.e., most protection is provided in the catastrophe space). Catastrophe bonds and industry loss warranties are common examples and are described below.

Sidecar

Sidecars are special purpose vehicles (often capitalized by hedge funds) that provide capacity to existing reinsurers by assuming risk from their hosts, typically through multi-year quota share reinsurance contracts or sometimes from underwriting agency relationships. The sidecar assumes a percentage of premiums in return for assuming the risk, which is generally short-tail catastrophe reinsurance.

Catastrophe bond

Catastrophe bonds (also known as cat bonds) are risk-linked securities that transfer a specified set of risks from a sponsor to investors. They are often structured as floating rate corporate bonds whose principal is forgiven if specified trigger conditions are met. They are typically used by insurers as an alternative to traditional catastrophe reinsurance. There is generally no formal 'matching' of exposures assumed by the sponsor to the specific dollar passed to the investor.

Industry loss warranties

Industry loss warranties (often referred to as ILWs) are a type of reinsurance or derivative contract through which one party will purchase protection based on the total loss arising from an event to the entire insurance industry rather than solely on their own losses. (Some ILWs, known as dual trigger ILWs, protect purchasers based on both the total loss arising from an event to the entire insurance industry as well as their own losses).

Contingent capital

A contingent capital arrangement is an agreement entered into before any losses occur and enables an organization to raise cash by selling stock or issuing debt at prearranged terms following a loss or event that exceeds a certain threshold. The organization pays a capital commitment fee to the party that agrees in advance to purchase debt or equity following a loss. Some market observers consider all insurance and reinsurance to be a modified form of contingent capital to the purchaser.

Property catastrophe reinsurance

Accumulated loss from catastrophes such as earthquakes, hurricanes, and tornados can strain the resources of any insurance company and as a result, most insurance companies that underwrite these risks also seek to maintain a strong reinsurance program to protect them against some or all of these losses. This provides the basis for the property catastrophe reinsurance market.

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Life settlements: Investment opportunity or irrational exuberance?¹

AUTHORS: MARY BAHNA-NOLAN, LARRY H. RUBIN, STEVEN SIOW AND SELINA WANG



¹ The term 'irrational exuberance' has been attributed to Alan Greenspan, who used the term in a speech he made in Washington, DC, on December 5, 1996. It became the title of a book by Robert Shiller, and according to the author, "the term 'irrational exuberance' is now often used to describe a heightened state of speculative fervor. It is less strong than other colorful terms such as "speculative mania' ... it has acquired a meaning that refers to the mindset that occurs during speculative bubbles like that of the 1990s." Source: www.irrationalexuberance.com/definition.htm

Life settlements and stranger-originated life insurance (STOLI) are hot topics in today's life insurance industry. Mary Bahna-Nolan, Larry Rubin, Steven Siow and Selina Wang describe what life settlements are and how they came about. They also discuss how life settlements impact the business of life insurance, and what life insurance companies are doing in response to the demand for these secondary life insurance market instruments.

LIFE SETTLEMENTS – INVESTMENT OPPORTUNITY OR IRRATIONAL EXUBERANCE?

Life settlements and stranger-originated life insurance (STOLI) are controversial, but nevertheless hot topics in today's life insurance industry. In this article, we describe what life settlements are and how they came about. And more importantly, we discuss how they impact the business of life insurance and what life insurance companies are doing in response to the demand for these secondary life insurance market instruments.

What is a life settlement?

A life settlement is a transaction in which a life insurance policyholder sells the policy to a third party, generally for more than the cash surrender value of the policy, but less than the full amount of the death benefit. An arbitrage opportunity for a life settlement transaction arises when the expected present value of future policy benefits less expected present value of future premiums is greater than the policy's cash surrender value.

Resale of life insurance policies remained rather obscure until the AIDS epidemic in the early 1990s. Because AIDS was then considered a terminal illness, a patient diagnosed with the virus who owned a life insurance policy would likely be keen to sell it for an amount greater than the policy's cash surrender value to provide for immediate medical and personal needs. The value of

a policy whose insured is in very poor health is significantly higher than the policy's state-mandated cash surrender value. Since life insurance companies are allowed to modify rates only on a class basis and are prohibited from taking post-issue impairments into pricing considerations, an arbitrage existed in what became underpriced life insurance premiums. Viatical settlements – the sale of life insurance policies by insureds with terminal illness and whose deaths are expected within 24 months or less – became common as a result of the AIDS epidemic.

Growth of the life settlement market

The discovery of the 'triple cocktail' treatment for AIDS resulted in the ultimate failure of viaticals. However, the infrastructure that had been developed for the potentially prosperous viatical market did not go to waste, as investors began to target insureds with other post-issue health impairments. The use of life insurance as a tool for financial protection became more popular, and inadvertently became a positive for the life settlement industry, because it helped to uncover a flaw in mortality rate calculations that reduced revenue for insurance companies. As investors settled more policies with post-issue impairments, which usually occur

at older ages, they discovered that some life insurance companies had been underestimating healthy mortality rates at the older ages. Companies had significant mortality experience at the middle ages (ages 45 to 55) and limited experience at the older ages. As a result, when companies priced older-age mortality they typically extrapolated their experience of the younger ages. Given that companies sold few policies for older age individuals, they did not view the extrapolation as a risk. In fact, the resultant older-age mortality rates underestimated actual mortality experience. This became apparent when the Society of Actuaries published the 2001 Valuation-Based Table (VBT). And as a result, life insurance policies for seniors were underpriced.

Another important development in the growth of the life settlement market was the advent of longevity risk insurance underwritten by Goshawk Syndicate of Lloyd's. In exchange for an up-front premium (between 4% and 5% of face value), Lloyd's assumed the longevity risks if the policyholder survived two years after the predetermined life expectancy period. Lloyd's wrote the coverage on a life expectancy estimate determined by any of Lloyd's approved underwriters. This business hit a snag, however, because the life



STOLI forces insurance companies to price their products with proper margins and helps rid the industry of those companies that would buy market share.



expectancy underwriters were in competition with one another, which put economic pressures on the underwriters to provide aggressive life expectancy estimates that may have inadvertently skewed the market. As a result, Lloyd's stopped underwriting the coverage in 2003, and Goshawk suffered losses in excess of \$13.8 million and is currently in runoff.

Despite this setback, the life settlement market continued to grow, as investors – especially hedge funds – sought alternative investments with returns that

were not tied to the financial markets. Returns on investment in life settlements are contingent primarily upon the mortality of the underlying insureds and secondarily on the credit worthiness of the life insurance company. Therefore, life settlements provide an appealing source of diversification to fund managers. In addition, a change in accounting guidance from the Financial Accounting Standards Board (FASB) favored life settlements. Previously, life settlements were accounted for initially at their cash surrender values. This meant that investors

had to incur a loss on the books at acquisition. In March 2006, FASB Staff Position FTB 85-4-1, Accounting for Life Settlement Contracts by Third-Party Investors, went into effect, allowing investors to fair value life settlements. As such, investors could record the initial purchase of life settlements at their settlement prices.

As demand for life settlements among investors grew, hedge funds became aware that only a limited number of eligible life insurance policies were available and feasible for life settlement transactions. To increase the pool of available policies, investors started to target certain individuals who would be suitable for a life settlement transaction. In these arrangements, the investor financed the premiums with the intention of settling the policies after the contestability period expired. This practice led to the rise of stranger-owned life insurance (STOLI) and premium finance insurance. Life insurance companies have generally been opposed to issuing policies to third parties initiating the purchase of life insurance because of the lack of insurable interest on the insured.

Effect of mortality and life expectancy calculations on life settlements

The arbitrage value of life settlements often hinges on the most important risk factor in the life insurance business – mortality. Investors rely on assumptions about mortality and corresponding life expectancy (LE) calculations from medical examiners (typically referred to as LE providers) to evaluate

investments in life settlements. The LE of an insured is calculated based on a mortality table that is modified by a 'mortality multiple' to reflect the insured's health condition. A 100% mortality rating applied to a mortality table suggests that, in aggregate, an insured would die in accordance with the standard mortality pattern established. A 200% mortality rating suggests that an insured would die at twice the rate of the standard pattern.

Our viewpoint is that the growth of the STOLI market has resulted from the purchasers misunderstanding the key role of a medical examiner. A medical examiner determines the relative level of mortality of individuals, and then applies this rating to a table that is considered to be standard to calculate life expectancy. The life insurance company actuaries analyze actual versus expected experience to determine the appropriate modifications necessary to estimate standard mortality. The life expectancy is merely a calculation derived from the mortality multiple given by the underwriter and the modified table as determined from the actuary's mortality study.

The life settlement market assumes, incorrectly, that the medical examiner determines life expectancy. The industry currently uses the life expectancy given by the medical examiner and recomputes the mortality rating using the Society of Actuaries' (SOA's) 2001 VBT as the industry standard mortality table. Relating the LE to the 2001 VBT establishes a benchmark from which settlements can be compared with each other.



LIFE SETTLEMENTS – INVESTMENT OPPORTUNITY OR IRRATIONAL EXUBERANCE? continued

Indeed, we believe that investors in the life settlement market seem to take the 2001 VBT as fact. And while underwriting provides the relative levels of mortality to a standard table, the life settlement market has not paid sufficient attention to the standard table being used. Life settlement providers do not often hire actuaries who are able to determine the appropriate base mortality table to be used for pricing life settlements. The lack of actual-to-expected experience analysis of medical examiners and LE providers, which is needed to determine the appropriate standard table, should raise questions on the accuracy of their LE estimates, even if their relative mortality ratings were reliable.

Increasing evidence suggests that the 2001 VBT does not reflect actual experience at the senior ages and should not be used as the standard industry table in pricing life settlements. Mortality experience at the older ages is less credible than at the younger ages because of insufficient industry data, which leads to more variance in the actual life expectancies than expected. The SOA Individual Life

Experience Committee (ILEC) determined from 2002–2004 data that actual mortality experience between ages 70 through 79 equaled approximately 81% of the 2001 VBT, but only between 68% and 74% for higher-issue amounts. This difference is evidence of mortality discounts in the larger policy face amounts that are not considered in pricing of life settlements and STOLI. In contrast, the 2001 VBT does not distinguish mortality rates by policy size. The Tillinghast Older Age Mortality Study II (TOAMS II) that was based on 2003–2005 data from 29 companies showed results similar to those from the ILEC study.

Users of the 2001 VBT in the life settlement market often do not incorporate mortality improvements in their LE calculations. This simplification could result in a significant underestimation of LE, and an overestimation of the value of a life settlement. To illustrate, consider a 75-year-old male rated at 350 with a \$1 million policy. The subject would be estimated to have an LE of 7.13 years, and his policy would be priced at \$187,000, assuming a 12% yield. If the historical 1.5% mortality

improvement factor is used, the purchase price would decline to \$107,000 and the internal rate of return (IRR) would fall to 7.2 percent. In fact, bringing forward the 2001 VBT for 10 years' improvement would result in expected mortality of around 85% of the 2001 VBT.

SOA recently issued the 2008 VBT, raising further doubts on the appropriateness of using the 2001 VBT as the industry standard in pricing of life settlements. The 2008 VBT has a significantly different slope and mortality level than the 2001 VBT, especially for females and tobacco risks. The 2008 VBT also assumed a mortality improvement rate of 1.0% per annum, grading to 0% by attained age 90. Figure 1 illustrates the impact of the new 2008 VBT on LE estimates:

The 0.6-to-1.2-year variance results in a significant difference in the calculated purchase price or rate of return. Furthermore, the resulting mortality multiple used in the life settlement market is often a factor greater than 100%, which shortens the life expectancy from 13.0 years (shown in the example above),

thus further exacerbating the difference in purchase price or rate of return.

To add further complexity to LE calculation, investors must consider that, while the 2008 VBT does reflect more recent older-age mortality experience in general, it may not reflect the mortality experience of the seniors who are the prime targets of life settlements. Life settlements often have large face values in order for the transaction to be profitable after rather high transaction costs. As a result, targeted individuals for life settlements often have higher socioeconomic status than the general older-age population. There is much evidence in published studies that points toward longer life expectancies within this cohort than the general older-age population.

Responses from the life insurance industry

In response to viatical settlements in the early stages of the life settlements market, most life insurance companies now offer accelerated death benefits (ADB) to the policyholder whose health has been impaired post-issue, if his or her life expectancy is shorter than two years. However, the current National Association of Insurance Commissioners (NAIC) nonforfeiture law precludes post-issue discrimination in pricing. Therefore, insurance companies are prohibited from offering cash values that are adjusted post-issue for conditions that were not recognized and specified in the insurance contract at inception.

FIGURE 1

The impact of the new 2008 VBT on LE estimates

For a 75 year old:

Life expectancy using 100% 2001 VBT with no mortality improvement:	13.0 years
Life expectancy using 100% 2008 VBT with no mortality improvement:	13.6 years
Life expectancy using 100% 2008 VBT with 1% mortality improvement:	14.2 years

Source: PricewaterhouseCoopers.

Other early reactions from life insurance companies included appealing to regulators for tougher regulations on life settlements. The revised National Association of Insurance Commissioners (NAIC) Viatical Settlements Model Act extended the contestability period from two years to five years in an attempt to discourage STOLI. However, only two states have adopted the NAIC model act thus far. Life insurance companies have also repriced their life insurance policies to eliminate mispricing of mortality at the older ages, such that newly issued policies are not as prone and feasible to be used in life settlement transactions. Additionally, most insurers have added life-settlement-related questions to new policy applications to use for underwriting purposes.

Recent responses from the industry appear to indicate that companies acknowledge that the life settlement market is here to stay and have decided to take a more proactive stance toward measuring and managing the impacts of life settlements on their business. Many companies have established procedures within their in-force policy services departments to identify and track policies that have become or have the potential to become life settlement policies. Assignment of policies and contact by a life settlement company regarding a certain policy are the most common ways companies can identify life settlement policies. Other criteria used to identify life settlement policies include changes to beneficiaries and premium

payors, policy characteristics (large face amounts), and demographics of the policyowner. Today, companies generally have dedicated staff to identify and monitor life settlements in their in-force business, including policies that are owned by trusts.

Life insurance companies have also tried to avoid issuing life settlement policies by tightening underwriting guidelines for older ages and high face amounts – common characteristics of life insurance policies attractive to life settlement companies. Some companies have even limited issue ages and retention amounts on certain policies. On life insurance applications, companies question the applicant and/or agent directly for intent of reselling the policy to detect the possibility of a STOLI. If the issuers find that it is STOLI, they may refuse to issue the policy or rescind the policy if it is within the contestability period.

To reduce the chances that their policyholders would settle their policies, life insurance companies are developing new product features that eliminate the reasons for settling a policy. For example, a new policy loan design allows the policyholder to take out a loan of a value exceeding the cash value of the insurance policy.² Companies are also educating their customers and agents about life settlements to help them understand some of the significant disadvantages that come with settling a life policy. Some primary disadvantages include: no death proceeds available to the beneficiary, the insured may not be able to obtain

future insurance coverage if the need arises due to a change in health status, or the insured may be reaching his or her insurability capacity (i.e., the insurance company will not issue more policies because the insured has already been insured a maximum amount of coverage, and the settlement price may not represent the true value of the policy).

Some insurance companies have even chosen the ‘if you can’t beat ‘em, join ‘em’ approach, and have decided to participate in the life settlement market directly or through partnership with life settlement providers. Phoenix Insurance Company, Transamerica, and Genworth are a few companies that have taken such an approach to the life settlement market.

Conclusion: What does the future hold for life settlements?

Are life settlements and STOLI true investment opportunities or are we in a world of irrational exuberance? Our point of view is mixed. There is a distinctly positive side to the life settlement market that focuses on post-issue impairments. This market is of significant value to the life insurance industry and offers significant societal benefits. For the individual, a life policy is now an investment asset that increases in value as health deteriorates and the need for funds to pay for healthcare increases. For the life insurance industry, being able to sell a product that has these characteristics should make the life policy more valuable and give consumers another reason to own life insurance in retirement.

However, we do not believe the same benefits exist for the STOLI market. The STOLI market represents a means to transfer capital from life insurance company investors to hedge funds (or vice versa depending on actual mortality experience). Does STOLI have a social value? Well, yes, to a certain extent. STOLI does force insurance companies to price their products with proper margins and helps rid the industry of those companies that would buy market share, to the detriment of the entire industry. However, we do not believe that relying on operational or regulatory fixes is an effective industry response.

We believe the insurance industry can implement many best practices to safeguard against a rapidly growing life settlement market. The life insurance industry could get the message out to the public and to investors that the mortality assumption that the life settlement industry uses does not reflect actual older-age mortality experience. Such a message would give investors fair warning that their expected returns on the current assumptions may not be realized. Reexamining their life insurance pricing and correcting any underpricing can also help life insurance companies discourage exploitation by life settlements. Life insurance companies can mitigate some pricing risk that results from life settlements by ensuring that the products are self-supporting across the board and pass the lapse-support test of the illustration regulation (i.e., assuming best estimate assumptions and 100%

² News: ‘Life settlements could feel heat from new product’ – *Investment News*, February 25, 2008; Volume 12; Number 8, 2008 Crain Communications, Inc.



persistence after the fifth duration) and by minimizing the amount of subsidization across issue age and issue amounts (i.e., ensuring the older issue ages and larger face amount policies are self-supporting).

Avoidance and early identification of life settlement and STOLI cases can come a long way to keep the policies in force. As such, modifying the agent compensation structure to emphasize asset retention (most life settlements and STOLI contracts pay only the amount needed to cover current charges each year), and specific training for underwriters and policyowner service personnel on how to detect life settlement and STOLI cases may also be effective. Upon the identification of in-force or potential settlement contracts, companies should consider taking action within the contestable period – when they have the right to rescind policies already issued. Reviewing claim files for policies that are settlements, but have not been previously identified, helps the company to understand the indicators of potential settlements within the in-force contracts. Last, but not least, companies should analyze and understand the financial impact of life settlements to the organization and reflect these factors appropriately in new-issue pricing.

The insurance industry and investors alike clearly see long-term viability for life settlements. We feel that through the actions outlined in this article, the industry can take a proactive approach to ensuring that the life settlement market remains fair to all parties involved. □

Recent life settlement market developments

Trading platforms

The distribution of life settlement business is traditionally performed through relationships between brokers and providers. With advancement in technology, online life settlement auction sites and exchanges have been established to facilitate the transactions. Examples include the LEXNET, which was run by Cantor LifeMarkets, and the Institutional Life Services electronic trading platform started by Goldman Sachs and National Financial Partners.

Mortality indices

Two mortality and longevity index series were developed by JPMorgan Chase (the LifeMetrics Index) and Goldman Sachs (QxX) in 2007 to track and benchmark mortality and longevity exposure. These indices can be used to facilitate the trading and hedging of mortality and longevity risks for pension funds and insurance companies.

Global interest in life settlements

Traditional investors of life settlements included investment banks and hedge funds. And international mutual funds, and especially pension funds and insurance companies, are showing increasing interest in investing their assets in the US life settlement market. The pension funds and insurance companies are considering life settlements as a hedge to longevity risk.

Litigation against life settlement providers

The viatical and life settlement industries have long been mired in litigations for fraud against policyholders and insurance companies. Recent charges of fraud against Coventry First resulted in the collapse of the first investment-grade-rated life settlement securitization that had been imminent.

Swap market for life settlements

At least one company is offering a swap option for life settlement providers. This option helps cover the risk that the individual insured will live beyond their life expectancy and pays the life settlement providers as long as the individual insureds are alive.

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Corporate restructuring: The silent revolution

AUTHORS: MARK BATTEN AND JIM BICHARD



There is a quiet revolution happening among reinsurers, including US, Bermudian and global groups, that do business in Europe. One by one, groups are restructuring and relocating their European insurance headquarters. But what has led to these movements, what are the risks, and what does the future look like? Mark Batten and Jim Bichard explain recent developments in re-domiciliation.

CORPORATE RESTRUCTURING: THE SILENT REVOLUTION

There is a quiet revolution happening among reinsurers, including US, Bermudian and global groups, that do business in Europe. One by one, groups are restructuring and relocating their European insurance headquarters.

But what has led to these movements, what are the risks and what does the future look like?

What's changed?

The changes a number of leading reinsurers have made are a response to the changing regulatory and tax landscape in Europe – the reinsurance directive in particular, which has resulted in, among other things, reinsurers being subject to supervision in relation to reinsurance business conducted within or from Europe. Under the directive, a reinsurer must now have an established European company to benefit from the freedom of services aspect of the regulation.

The traditional reinsurance group structure that served companies well for many years was to have a European-based holding company with incorporated entities wherever they wrote their reinsurance business. Many US and Bermudian companies also used branches to underwrite in Europe.

The restructuring moves made by Swiss Re and other reinsurers reflect the trend to establish a single European headquartered

underwriting company with branches in those jurisdictions where they intend to carry on business.

There are several good reasons for reinsurers to change to this type of structure, mostly related to the European reinsurance directive but also to the anticipated implementation of Solvency II.

The two regulatory developments are linked. Solvency II, like the reinsurance directive, is intended to integrate the European insurance markets under one consistent regime.

Against this background, capturing diversification benefits, improving liquidity and making capital management more flexible are among the most important motivations for reinsurers to restructure their European operations.

Flexible capital management is key. Unlike a group consisting of incorporated subsidiary companies, each with its own capital, a branch structure provides a reinsurer with access to fungible capital that can be deployed to any business opportunity within that structure. It means that wherever you are writing business in Europe, capital is available.

Freedom of services in European reinsurance means that when a reinsurer based in the European

Economic Area (EEA) (including, for example, the EEA operations of US or Bermudian groups) is considering possible expansion into new European markets, it can do so without having to incorporate a company (or indeed a branch) at the outset.

The simplified structure allows a reinsurer to reduce its compliance costs and to remove management layers. At the same time, it may reduce regulatory capital requirements and improve liquidity, as cash is held in one entity.

The uncertainty that surrounds Solvency II is itself one motivating factor for reinsurers to restructure around a branch network. If a reinsurance group stays as a network of incorporated entities, it is still not entirely clear how much capital that reinsurer will have to hold locally and/or centrally under Solvency II regulations. Establishing a branch structure provides a defensive position against potentially adverse developments yet to come out of Solvency II.

Other reinsurers may rationalize their move in a more positive light. After all, Solvency II should allow a pan-European reinsurance group to operate more seamlessly than if it were a collection of individually incorporated businesses. And it should enable reinsurers to benefit from risk diversification.



While Bermuda has been the undisputed world champion for re-domiciliation over the past decade, there are now serious European contenders.

Risks in restructuring

There are risks associated with changing existing structures. After all, reinsurance groups originally put those structures into place for good reasons. Reinsurance groups wanted their companies to have different legal entities to insulate them: it put firewalls between different businesses and operations.

It follows that, if a reinsurer goes down a (restructured) branch office route, it will place all its underwriting into one entity – with the consequential risk of bad underwriting in the mix. So, contagion risk does exist with the branch office model, emphasising the need for universal good risk

management and governance to ensure that risks – especially catastrophe exposures – are well managed, with the necessary controls in place.

There are also cultural risks related to breaking down existing structures. Senior managers like to have control of their operation, to have autonomy. But in a branch structure, their operations necessarily have to be more transparent, with their activities open to scrutiny. Capital allocation, for example, is likely to become a more transparent and active process; branches will have to justify and bid for their capital allocation every year.

Relocation brings with it practical considerations (for example employment law considerations) as well as migration of accounting systems and consolidation of IT platforms.

Access to the appropriate skills and labour is an important criterion and decisions related to the location of high value operations may also be driven by tax considerations. Should high value activities like underwriting be located in a low tax environment, for example?

Relocation needs careful research and planning, as there are risks as well as opportunities attached to choosing a domicile.

Restructuring may well produce tax efficiencies. But that only applies if the reinsurer is clear about from where its profits are derived. Properly allocating profits at Head Office is essential to ensure that tax is not overpaid. Migrating to the desired structure is unlikely to be straightforward and is likely to need careful planning and consultation.

Tax regimes can change. Ireland and, to a lesser extent, Luxembourg have become relocation hotspots. Proposed changes to tax rules elsewhere in Europe may add further to their appeal as the European domicile of choice for global reinsurance companies.





Restructured future

Reinsurers will continue to restructure in advance of Solvency II to take advantage of the relative benefits offered by the reinsurance directive and existing solvency regulations, but always with one eye on how Solvency II will play out. They won't necessarily wait for Solvency II: there are real benefits to doing it now.

One of the aims of Solvency II is to bring standard supervision that is consistently applied. In theory, that ought to make a level playing field in Europe for jurisdictions. But in reality, countries will continue to compete among themselves post Solvency II – on the basis of tax, ease of employment, access to skills and expertise, for example.

Luxembourg, for example, has made itself into an attractive jurisdiction with favourable double tax treaties with other countries and low key, pragmatic regulation, which may lead to direct tax benefits. The rules relating to the admissibility of assets in calculating solvency in Ireland and Luxembourg are less onerous than in the UK for example.

Other countries may take similar steps to enhance their appeal, ahead of Solvency II.

Tax will be used to differentiate jurisdictions and will influence the choice of domicile. Tax isn't

necessarily the most important criterion in choosing a domicile but it is worth noting that the corporation tax differential between the UK and Ireland, for example is 15.5%.

If all goes according to plan, we will have a clearer idea in 2009 of the implications of Solvency II, as by then the primary legislation should have been passed. If it does go ahead, Solvency II could give impetus to mergers and acquisitions among reinsurers.

Consolidation in the sector could in turn add momentum to the restructuring wave among large reinsurance corporations. However, it is worth noting that Basel II did not provoke as much consolidation among banks as initially expected. But it did make banks focus harder on capital management.

In this respect, the emergence of insurance special purpose vehicles (ISPVs) to provide risk financing, and how different jurisdictions treat ISPVs, will further influence restructuring decisions.

One thing is clear: While Bermuda has been the undisputed world champion for re-domiciliation over the past decade, the next few years may well usher in new European contenders. □

Recent activities

- **Swiss Re** is reorganising its legal entity structure in the European Union by forming two companies based in Luxembourg that will serve as risk carriers for its European reinsurance and primary insurance business respectively.

Swiss Re made the decision to alter its legal structure in light of the upcoming implementation of the European reinsurance directive. It believes the new structure will result in more efficient capital management, administration and reporting.

The new companies will be based in Luxembourg but will operate via branches in the rest of the EU. Swiss Re aims to have the new structure in place by mid-2009, and started with the conversion of the first locations this year.

- Bermuda-based **PartnerRe Ltd** announced this year that its wholly-owned subsidiary Partner Reinsurance Europe Ltd, based in Dublin, would be the principal reinsurance carrier for PartnerRe's business underwritten through branches in France, Ireland, Switzerland and Canada.

Partner Re established its Dublin-based subsidiary soon after the European reinsurance directive came into force. By setting up Partner Re Europe, the group will be able to operate in all EU member states under a single regulatory framework, it said.

- **ACE** completed its move to Dublin last year. ACE European Markets Insurance Ltd and ACE European Markets Reinsurance Ltd now trade under the business name of ACE Bermuda International (ABI). ACE said the restructuring would allow it to align the company more strategically with its parent company, ACE Bermuda.
- **XL Capital** was ahead of the curve. It announced two years ago that it had received approval for a new fully licensed European reinsurance company. XL Re Europe Ltd, based in Dublin, is now the Bermuda group's European reinsurance platform.

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Improving budgeting and forecasting: Linking financial planning with strategic direction

AUTHORS: RANDY BROWN AND GREG GALEAZ



Randy Brown and Greg Galeaz explain how, as financial planning becomes a central strategic contributor to companies' success, it is critical that insurers look for ways to improve their budgeting and forecasting processes. In doing so, they review the results of an International Data Corporation (IDC) study that uncovers correlations between leading practices and overall satisfaction with financial planning processes and examines both established financial planning practices and emerging trends.

IMPROVING BUDGETING AND FORECASTING: LINKING FINANCIAL PLANNING WITH STRATEGIC DIRECTION

Excellent customer service and strong risk management are not the only factors that drive an insurance company's success. Increasingly, effective financial planning – particularly budgeting and forecasting – is becoming a critical component of effective business strategy. This shift is leading to new challenges for insurance companies that seek to foster collaboration within business operations and build finance functions with strong links to strategic initiatives.

To gauge how well insurance companies are responding to these new challenges, PricewaterhouseCoopers engaged IDC to research large organizations' budgeting and forecasting practices. The survey respondents included 200 large, complex organizations with annual revenues greater than \$2 billion. The study aimed to uncover correlations between leading practices and overall satisfaction with large organizations' financial planning processes, and examined established financial planning practices as well as emerging trends.

The survey's key finding is that organizations are dissatisfied with inefficient financial planning processes. As financial planning becomes a central strategic contributor to insurance companies' success, it is critical

that they look for ways to improve their budgeting and forecasting processes. Specifically:

- **The link between strategy and operations is critical.** Organizations clearly recognize the importance of strategic alignment. The study found that 56% of respondents view the objective of creating closer links between strategy and operations as one of their top two priorities.

Similarly, nearly 72% of respondents believe that the strategic relevance of budgeting and forecasting will increase over time, bolstering the case for improvement.

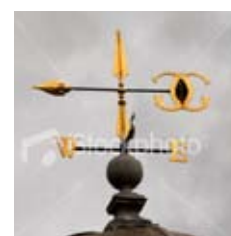
However, only 28% of executives said that they think their budgeting process is highly aligned with actual performance, and just 12% of respondents said they were 'very satisfied' with their company's current budgeting process.

- **Inefficiencies and low-value activities hinder strategic alignment.** While many issues contribute to a lack of satisfaction, operational inefficiencies are a major factor. Studies show companies spend 55% of budgeting and forecasting efforts on tactical, non-strategic activities; this

hinders the ability of the organization to leverage the finance function as a strategic asset. As a result, many organizations dedicate valuable resources to low-value activities, such as data collection and consolidation, reviews, approvals and report preparation.

Meanwhile, companies face the challenge of complex, time-consuming budgeting and forecasting processes that often produce outdated information. Approximately 65% of respondents report that the budgeting and forecasting process takes over three months to complete, and an overwhelming 89% claim they are either 'not satisfied' or only 'somewhat satisfied' with the allotted budget cycle. With a lengthy budget and forecasting process that requires resources to focus on low-value activities, it is difficult to achieve more strategically aligned goals, such as target setting and ongoing analysis.

While management now recognizes the benefits of making finance a strategic business partner, one question remains: How can organizations transform the financial planning function into a forward-looking, strategic partnership? The answer is in the approach.



As financial planning becomes a central strategic contributor to insurance companies' success, it is critical that they look for ways to improve their budgeting and forecasting processes.

Tackling budgeting and forecasting improvements

Creating a strategically aligned model for budgeting and forecasting is complex. Typically, organizations do not have a single system that enables both general users and decision makers to combine financial analysis with strategic decision making. It is also difficult to completely replace existing systems because companies have made significant investments in existing solutions, from both monetary and process perspectives.

However, it is possible to better link financial planning with strategic direction. Through research and experience, PricewaterhouseCoopers has identified a series of financial planning enablers that consistently result in budgeting and forecasting improvements. These enablers, which reduce cycle times, increase accuracy and develop an acute focus on value-added planning activities, include:

- **Focus on strategic alignment:** Management should ensure that financial planning targets match organizational strategy and value drivers. Without this connection, the budgeting and reporting process becomes a financial exercise instead of an effective management tool to drive strategic decisions. The first step to realizing strategic alignment is to identify business drivers and incorporate them into the budgeting and forecasting processes.

How to do it: Companies can greatly benefit from a formal target-setting process that

results in the generation of premium, loss, commission and departmental expense targets for the year. With proper guidance, the target-setting process can also significantly reduce the number of iterations required to complete the budgeting process.

- **Leverage driver-based concepts:** Top companies are migrating toward driver-based budgeting and forecasting in an effort to align the processes around measurement of value drivers. These companies focus on the critical drivers that affect their performance, as opposed to hundreds of detailed line items. Driver-based planning also assists in the cause-and-effect analysis required for proactive decision support.

How to do it: Using business drivers encourages management to talk, think and manage the budgeting process through the key business metrics, such as retention, policy count, average premiums, price or rate impacts, claims inflation and other factors. Once incorporated into the management culture, the budgeting process will allow the company to become more agile and quickly respond to changing market conditions that often are visible sooner in operational data than financial metrics.

- **Reduce the level of detail:** Many companies track their budgets at the line-item level, which adds complexity and cost to the budgeting process. Top companies align the level of granular information with the detail required to report on their key business metrics; doing so

usually reduces the number of line items in their annual budget submissions.

How to do it: Focus analysis on critical information related to measuring progress against the business strategy. Alignment between business strategy and key drivers is critical to gaining buy-in for a reduced level of budget and forecast detail.

- **Increase organizational collaboration:** Optimal budgeting and forecasting processes include regular interaction between finance, operations and business unit managers. Finance is uniquely positioned to leverage periodic budgeting and forecasting processes to drive a better understanding of the business and make planning activities part of the corporate culture.

How to do it: Break organizational silos by using the budgeting and forecasting function as a way to increase collaboration between finance and operations. Finance can play a role in creating operational models and, with a greater understanding of business drivers, move into value creation roles. It is important to note that effective and lasting financial planning changes must be driven by – as well as provide value to – business unit stakeholders.

- **Simplify and standardize:** Budgeting and forecasting processes, as well as systems and data models, must be capable of navigating the rapid changes of today's business climate. They also must deliver precision while remaining flexible

enough to accommodate changes in organizational structures due to realignments, divestitures and acquisitions. Standard models, tools and processes allow for greater agility and information sharing.

How to do it: Consider consolidating business unit or product line planning models into standard models for premiums, loss and expenses. Standard models that leverage consistent assumptions reduce the complexity of the planning process, minimize planning model administration costs and produce more predictable results.

- **Reduce/eliminate spreadsheets and align systems:** Spreadsheet-based budgeting and planning processes are manually intensive, error prone and time-consuming. Leading companies have systematically eliminated spreadsheet-based modeling and reporting as they migrate toward new technology solutions. Leading insurance companies look for overall alignment within a corporate performance management (CPM) suite of applications. The integrated CPM view includes holistic functionality for financial planning, consolidation, reporting and business analytics.

How to do it: Leverage CPM applications that support flexible, multi-dimensional reporting tools and support the financial consolidation, planning and management reporting processes.



IMPROVING BUDGETING AND FORECASTING: LINKING FINANCIAL PLANNING WITH STRATEGIC DIRECTION continued

- **Standardize and automate data:** Leading companies look for ways to pre-populate internal and external data sources that feed into the budgeting and forecasting process. Without automated data population, financial planning resources spend significant time on lower-value data gathering, validation and reconciliation activities. A common data model and dimensional structure and chart of accounts will allow for more efficient budgeting and forecasting processes.

How to do it: Shift the focus of budgeting and forecasting processes from data collection and reporting to target setting, analysis and ongoing measurement. Incorporate aligned data models and minimize the manual intervention required to achieve reporting requirements. As part of the reengineering of any financial planning process, management must address the key aspects of data governance and standardization.

- **Introduce a continuous rolling forecast:** In our experience, companies that forecast beyond the end of their fiscal years have more streamlined annual budget cycles. The survey indicates that 52% of companies are using rolling forecasts to plan beyond the end of the fiscal year; other companies are piloting the concept of rolling forecasts and continuous-planning capabilities to eliminate the annual budget process altogether.

How to do it: Standardize data collection and consolidation across the organization to reduce the budgeting cycle time and shift the focus of the forecasting process away from detailed data capture and toward target setting, analysis and ongoing measurement. Leading companies take this concept further and are capable of generating a new financial forecast in fewer than 24 hours. This rapid forecasting ability is the result of a combination of factors, including automated data population; high use of driver concepts; and the fact

that forecasts are updated – not rebuilt – each period. Forecasts that focus on key performance indicators and line items can be produced more quickly, allowing time for value-added analysis and insight from finance.

Significant rewards await

The finance functions within today's insurance companies are at a crossroads. Financial planning increasingly is becoming a key strategic contributor to companies' success, and they must work to align their budgeting and forecasting processes accordingly.

While transforming these functions is challenging, the potential for improvement is worth the risk because doing so:

- Fully integrates budgeting and forecasting processes with strategic planning and day-to-day operations;
- Standardizes data collection and consolidation, resulting in shorter budget cycles and improved forecasting accuracy;

- Extends forecasting through rolling forecasts, reducing the dependency on manufactured deadlines;
- Increases focus on value-added initiatives, such as target setting, analysis and ongoing measurement;
- Improves collaboration between finance and operations; and
- Results in flexible methodologies that allow agile responses to changing business processes, technology, organizational structure and data.

In short, the transformation of budgeting and forecasting to a strategic differentiator is practicable and promises significant payoffs, most notably through the finance function's ability to play a leading role in an organization's strategic direction by providing a means to rapidly assess and adapt to changing markets. □

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Global insurance and reinsurance tax developments

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Several recent taxation modifications in the US and UK can affect global insurers' and reinsurers' operations. Rick Irvine examines these modifications and their potential ramifications.

GLOBAL INSURANCE AND REINSURANCE TAX DEVELOPMENTS

A number of recent taxation modifications may affect the operations of global insurers and reinsurers. The following is a summary of these changes:

US developments

US Federal Excise Tax: Revenue Ruling 2008-15 and Announcement 2008-18

The Internal Revenue Service (IRS) recently issued Revenue Ruling 2008-15 and Announcement 2008-18, which provide guidance with respect to the applicability of the US federal excise tax under section 4371 on insurance premiums paid to a foreign insurer on transactions between foreign insurers and reinsurers.

The revenue ruling describes the insurance excise tax consequences under section 4371 of insurance premiums paid by one foreign insurer (foreign insurer) to another (foreign reinsurer). In particular, the ruling addresses the excise tax consequences of such payments, in which a foreign insurer is eligible for an exemption from the excise tax by an income tax treaty with the US, but the foreign reinsurer is not. The ruling addresses both types of insurance excise tax exemptions that may be provided by a treaty.

Revenue Ruling 2008-15 describes the following situations:

- **Situation 1** – Foreign Insurer, a foreign corporation incorporated in Country X, issues casualty insurance policies to US Corporation, a domestic corporation, with respecting hazards, risks, losses, or liabilities wholly or partly within the United States. Foreign Insurer is not engaged in a trade or business within the United States and Country X does not have an income tax treaty with the United States.

Foreign Insurer enters into a reinsurance agreement with Foreign Reinsurer, a foreign corporation incorporated in Country Y, whereby Foreign Reinsurer agrees to indemnify Foreign Insurer against all or part of the loss that Foreign Insurer may sustain under the policies it has issued to US Corporation. Foreign Reinsurer is not engaged in a trade or business within the United States. Country Y has an income tax treaty with the United States that does not exempt insurance premiums from the excise taxes imposed by section 4371.

Conclusion – In Situation 1, the premiums paid by US Corporation on the policies of casualty insurance issued by Foreign Insurer are subject to the 4% excise tax imposed by section 4371(1), because

the policies were issued by Foreign Insurer, a foreign corporation, to US Corporation, an 'insured' for purposes of section 4372(d). In addition, premiums paid by Foreign Insurer on the policies of reinsurance issued by Foreign Reinsurer with respect to the foregoing insurance policies are subject to the 1% excise tax imposed by section 4371(3) because section 4371(3) imposes an excise tax on reinsurance policies issued by a foreign reinsurer with respect to risks covered by contracts described in section 4371(1).

- **Situation 2** – Foreign Reinsurer A, a foreign corporation incorporated in Country W, issues policies of reinsurance to Domestic Insurer, a US corporation, that cover casualty insurance contracts issued to or for, or in the name of, an insured as defined in section 4372(d). Foreign Reinsurer A enters into a reinsurance agreement with Foreign Reinsurer B, incorporated in Country Y, whereby Foreign Reinsurer B agrees to indemnify Foreign Reinsurer A against all or part of the loss that Foreign Reinsurer A may sustain under the policies it has issued to Domestic Insurer. Country W and Country Y have income tax treaties with the United States



Several recent taxation modifications can affect global insurers' and reinsurers' operations.

that do not exempt insurance premiums from the excise taxes imposed by section 4371.

Conclusion – In Situation 2, the reinsurance premiums paid by Domestic Insurer to Foreign Reinsurer A, covering casualty insurance contracts issued by Domestic Insurer, are subject to the 1% excise tax imposed by section 4371(3), because the policies of reinsurance cover contracts described in section 4371(1). The premiums paid by Foreign Reinsurer A to Foreign Reinsurer B are also subject to the 1% excise tax imposed by section 4371(3) based on the same analysis.

- **Situation 3** – The facts are the same as in Situation 1, except that there is an income tax treaty in force between the United States and Country X (the US-X Treaty) that has a limited excise tax exemption. Foreign Insurer is a resident of Country X for purposes of the US-X Treaty and satisfies the requirements of the limitation on benefits article in that treaty.

Conclusion – In Situation 3, the premiums paid by US Corporation on the policies of casualty insurance issued by Foreign Insurer would generally be exempt from the section 4371(1) excise tax under the US-X Treaty. However, the US-X Treaty also provides that such premiums are not exempt to the extent that the risks covered by such premiums are reinsured with a foreign reinsurer not entitled to the benefits of a treaty that provides an exemption from insurance excise taxes. Therefore, because the risks

are reinsured with Foreign Reinsurer, who is not entitled to the benefits of a treaty that provides an exemption from insurance excise taxes, the insurance premiums received by Foreign Insurer from US Corporation are subject to the 4% excise tax as of the date the reinsurance premiums are paid by Foreign Insurer to Foreign Reinsurer. In addition, premiums paid by Foreign Insurer to Foreign Reinsurer on the policies of reinsurance covering contracts described in section 4371(1) are subject to the 1% excise tax imposed by section 4371(3), because Foreign Reinsurer is a resident of Country Y, which has an income tax treaty with the United States that does not exempt insurance premiums from the excise taxes imposed by section 4371.

- **Situation 4** – The facts are the same as in Situation 1, except that Foreign Insurer is a resident of Country Z and there is an income tax treaty in force between the United States and

Country Z (the US-Z Treaty) that contains a comprehensive limitation on benefits article. Foreign Insurer satisfies the requirements of the limitation on benefits article in that treaty. In Situation 4, the treaty is an anti-conduit treaty where the excise tax will not be imposed on residents unless there is an anti-conduit arrangement.

The IRS assumes for purposes of this revenue ruling that Foreign Insurer has not entered into such policies with US Corporation as part of a conduit arrangement.

Conclusion – In Situation 4, the insurance premiums paid by US Corporation on the policies of casualty insurance issued by Foreign Insurer are exempt from the section 4371(1) excise tax after application of the US-Z Treaty because Foreign Insurer satisfies the requirements of the limitation on benefits provision of the US-Z Treaty and the policies were not entered into as part of a conduit arrangement. However,

the premiums paid by Foreign Insurer to Foreign Reinsurer on the policies of reinsurance issued by Foreign Reinsurer are subject to the 1% excise tax imposed by section 4371(3), because Foreign Reinsurer is a resident of Country Y, which has an income tax treaty with the United States that does not exempt insurance premiums from the excise taxes imposed by section 4371. The fact that the original insurance premiums paid by US Corporation to Foreign Insurer are exempt from the excise tax after application of the US-Z Treaty does not preclude imposition of the excise tax under section 4371(3) on premiums paid by Foreign Insurer to Foreign Reinsurer. Such reinsurance premiums are paid on policies of reinsurance covering contracts described in and capable of being taxed under section 4371(1).





Announcement 2008-18

In conjunction with the issuance of Revenue Ruling 2008-15, the IRS also issued Announcement 2008-18. The announcement introduces a voluntary compliance initiative intended to encourage certain taxpayers that may have failed to pay or withhold excise taxes due under section 4371, or failed to disclose that he or she has claimed a waiver from the taxes pursuant to an income tax treaty, to become compliant with its obligations. In general, if a taxpayer participates in this initiative in accordance with the terms specified in Ann. 2008-18, the IRS states that it will not conduct examinations covering insurance excise tax liabilities arising under the four situations set forth in Rev. Rul. 2008-15, or any similar fact pattern, to the extent that premiums are paid or received by the participating taxpayer during any quarterly tax period prior to October 1, 2008.

The issue of whether there is a cascading excise tax has been debated for a number of years (see TAM 9621001). The issuance of Revenue Ruling 2008-15 and Announcement 2008-18 indicates that the IRS is taking a position on the federal excise tax based on a literal reading of the statute and the application of the differing 'limitation of benefits' provisions found in US income tax treaties. In Revenue Ruling 2008-15, the IRS has now clearly announced its position that the excise tax is imposed on every insurance or reinsurance transaction involving US risk, even those involving two foreign parties. The IRS cites

United States v. Northumberland Insurance Co., Ltd., 521 F. Supp. 70 (D. N.J. 1981), where the court held that the premiums ceded for a reinsurance policy issued by a foreign reinsurer are taxable if the underlying policy is issued to an 'insured' as defined in section 4372(d), and there is no requirement that the reinsured qualify as an 'insured' to be subject to the excise tax. It is unclear how the IRS will enforce these rules; however, it is possible that it would attempt to obtain information from the US insured, US broker or US insurance company as the case may be. Conceivably in some cases it may also attempt to impose a tax obligation on the US party as a withholding agent.

Protected Cell Companies: Revenue Ruling 2008-08 and Notice 2008-19

The IRS issued Revenue Ruling 2008-08, which provides the first significant guidance with respect to transactions between 'cells' of a protected cell company and potential insureds.

In the ruling, the IRS analyzed two transactions involving related party insureds (i.e., 'participants') and 'cells' of a Protected Cell Company.¹ Key facts stated in the ruling include:

- A Protected Cell Company is a legal entity that has established multiple accounts or cells;
- The cells are not treated as a legal entity distinct from the Protected Cell Company under the laws of Jurisdiction A;

- The sponsor owns all of the common stock of the Protected Cell Company;
- All of the nonvoting preferred stock associated with each cell is owned by the cell's participant or participants;
- Each cell is funded by its participant's capital contribution and by premiums collected from the insureds and is adequately capitalized relative to the risks assumed;
- The participant has not provided any guarantee of the cell's performance;
- Each cell has the ability to pay out claims with respect to contracts to which the cell is a party;
- The income, expense, assets, liabilities, and capital of each cell are accounted for separately;
- The assets of each cell are statutorily protected from the creditors of any other cell and from the creditors of the Protected Cell Company;
- The participant is entitled to a return of the assets of the cell in which it participated (subject to any outstanding obligations of that cell);
- The cell enters into a one-year contract whereby the cell 'insures' professional liability risks of the participant;

- In all respects the cell and the participants conduct themselves consistently with the standards applicable to an insurance arrangement between unrelated parties;
- The cell does not loan funds to the participants; and
- The cell conducts no other business other than with the participant.

Under the first transaction, Cell X is owned by X, a domestic corporation. X is the only insured. The IRS applies the definitional tests for insurance as set forth in *Helvering v. LeGierse* (e.g., risk shifting and risk distribution) and historical case law and rulings dealing with a 'parent/subsidiary' insurance relationship (*Ocean Drilling & Exploration Co.*, 24 Cl. Ct. 714, 731 (1991) aff'd per curiam, 988 F.2d 1135 (Fed. Cir. 1993); *AMERCO, Inc. v. Commissioner*, 979 F.2d 162 (9th Cir. 1992); Rev. Rul. 2002-89, 2002-2 C.B. 984. The IRS asserts that, 'The same principles apply to determine the insurance contract status of an arrangement involving a cell of a protected cell company as apply to determine the status of an arrangement with any other issuer.'

The IRS concludes that the arrangement between X and Cell X is akin to an arrangement between a parent and its wholly owned subsidiary, which, in the absence of unrelated risk, lacks the requisite risk shifting and risk distribution to constitute insurance and X may not deduct

¹ The IRS collectively referred to a Protected Cell Company to include a protected cell company, a segregated account company or segregated portfolio company.

amounts paid pursuant to the arrangement as 'insurance premiums' under §162 (a).

Under the second transaction, Cell Y is owned by Y, a domestic corporation. Y owns all of the stock of 12 domestic subsidiaries. Each of the subsidiaries operates in a separate state where the subsidiary provides professional services. The subsidiaries operate on a decentralized basis; however, the general categories of the professional services

rendered by each of the subsidiaries are the same throughout the Y group. Together the 12 subsidiaries have a significant volume of independent, homogeneous risks and no subsidiary represents liabilities for less than 5% or more than 15% of the total risk insured by Cell Y. Cell Y retains the risk that it insures from the subsidiaries. Once again the IRS applies the definitional tests for insurance as set forth in *Helvering v. LeGierse* (e.g., risk shifting and risk distribution) and historical case

law and rulings dealing with a 'brother/sister' insurance relationship (*Humana, Inc. v. Commissioner*, 881 F.2d 247 (6th Cir. 1989); *Kidde Industries v. U.S.*, 40 Fed. Cl. (1997); Rev. Rul. 2002 90, 2002 2 C.B. 985).

The IRS concludes that the arrangements between Cell Y and each subsidiary of Y are insurance contracts for federal income tax purposes; amounts paid pursuant to those arrangements are insurance premiums, deductible under §162(a).

IRS Notice 2008-19

In conjunction with Revenue Ruling 2008-08, the IRS also issued Notice 2008-19 addressing the insurance company characterization and the availability of certain federal tax elections associated with cell captive insurance arrangements. The notice requests comments on further guidance to address issues that arise in cell company arrangements which do constitute insurance, specifically (a) the status of such a cell as an insurance company within the meaning of §§ 816(a) and 831(c), and (b) some of the consequences of a cell's status as an insurance company.

The notice provides 'proposed guidance,' which would treat a cell as an insurance company separate from any other entity if:

- The assets and liabilities of the cell are segregated from the assets and liabilities of any other cell and from the assets and liabilities of the Protected Cell Company; such that, no creditor of any other cell or of the Protected Cell Company may look to the assets of the cell for the satisfaction of any liabilities, including insurance claims (except to the extent that any other cell or the Protected Cell Company has a direct creditor claim against such cell); and
- Based on all the facts and circumstances, the arrangements and other activities of the cell, if conducted by a corporation, would result in its being classified as an insurance company within the meaning of §§ 816(a) or 831(c).





The effect of the insurance company treatment at the cell level would be as follows:

- Any tax elections that are available by reason of a cell's status as an insurance company would be made by the cell (or, in certain circumstances, by the parent of a consolidated group) and not by the Protected Cell Company, of which the cell is a part (e.g., §953(d) or §831(b));
- The cell would be required to apply for and receive an employer identification number (EIN) if it is subject to US tax jurisdiction;
- The activities of the cell would be disregarded for purposes of determining the status of the Protected Cell Company as an insurance company for federal income tax purposes;
- The cell (or, in certain circumstances, the parent of a consolidated group) would be required to file all applicable federal income tax returns and pay all required taxes with respect to its income; and
- A Protected Cell Company would not take into account any items of income, deduction, reserve, or credit with respect to any cell that is treated as an insurance company under this proposed rule.

The proposed guidance would be effective for the first taxable year beginning more than 12 months after the date the guidance is published in final form.

The IRS has requested comments given that the statutes under which Protected Cell Companies

are chartered differ among various jurisdictions, and cell arrangements differ among taxpayers due to variations in contractual terms. In order to ensure that entity classification and federal tax elections for Protected Cell Companies are both legally correct and administrable in all cases, the IRS requests comments on the proposed guidance described in this notice. In particular, the IRS has requested comments on:

- What transition rules may be appropriate or necessary for Protected Cell Companies, or cells of such companies;
- If a Protected Cell Company is not currently following the proposed rule, or if a cell of such a company qualifies as an insurance company for some taxable years but not for others;
- What reporting, if any, would be necessary on the part of an individual cell to ensure that a Protected Cell Company has the information needed to comply with the reporting of income and expense of the cell and the Protected Cell Company;
- Whether different or special rules should apply with respect to foreign entities, including controlled foreign corporations;
- Whether further guidance would be needed concerning the proper treatment of Protected Cell Companies and their cells under the proposed rules regarding consolidated returns; and

- What guidance, if any, would be appropriate concerning similar segregated arrangements that do not involve insurance.

The separate entity treatment set forth in the proposed rules may bring into play unintended tax consequences to the owners of cells, in particular, the application of the controlled foreign corporation rules to cells versus the protected cell company.

UK developments

Section 107 repealed

Following the Finance Act 2007, UK insurers will no longer be required to produce a Section 107 interest calculation (discounting calculation of technical provisions) but will also no longer be able to make disclaimers of technical provisions in periods ending after the date of Royal Assent (which occurred on 19 July 2007). For a December 31 year-end company, the 2006 tax computation will be the final period which requires a Section 107 interest calculation.

The disclaimer has been used widely within the industry to help groups manage their tax loss positions, and as a concession to the industry, HMRC has allowed a final Section 107 disclaimer to be made, which cannot exceed more than 10% of net technical provisions.

The s107 regime is likely to be replaced by a 'back stop' provision which seeks to strike down the proportion of technical provisions that are considered to be excessive (by HMRC and independent actuaries). The back-stop legislation is currently only in draft and has not yet been finalized.

Change in UK corporation tax rate

The Finance Bill 2007 introduced a corporation tax rate of 28%, which applies from April 1, 2008 (previously 30%). For a December 31 year-end company, this would have an impact on the level of deferred tax that is recognized on or after December 31, 2007. Companies would need to revalue their deferred tax balances as at December 31, 2007, and restate those balances at the new rate of 28%. For deferred tax balances that are expected to be released in the year ended December 31, 2008, a blended tax rate of 28.5% may be applied to reflect the fact that the new tax rate only applies to the period after April 1, 2008. The impact of the change in the tax rate will be a movement in the 2007 profit and loss account as either a deferred tax charge or credit as appropriate. □

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Fair value measurement: The fallout and the future

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Insurers have invested significant resources and analysis to implement fair value implementation standards and assess opportunities for fair value elections.

Donald Doran, David Scheinerman, Mary Helen Taylor, Amie Thuener, Anne-Lise Vivier, and Sergey Volkov describe several insurers' experience measuring fair value, and confirm the need for ongoing vigilance in the breadth and depth of analysis to support requirements, weigh assumptions, and document policy and practices.

FAIR VALUE MEASUREMENT: THE FALLOUT AND THE FUTURE

Regulatory agencies and accounting standard setters are revising rules against a backdrop of turmoil in the financial markets. Further complicating the current environment is the emergence of FAS 157 and 159 – standards that have come into effect amidst growing globalization, uncertain economic times, declines in real estate values, and the convergence of liquidity and credit crunch concerns. Change is in the air, but there is uncertainty as to where and when it will end.

**FAS 157 and 159:
A fair solution?**

FAS 157 and 159 have debuted to mixed results. The new standards' establishment of fair value – or some version of it – as the prevailing measurement for financial assets has met with acceptance, but the numerous implementation consequences and issues have proved less welcome. For example, FAS 157 is expected to affect more than 40 existing accounting rules and upward of 150 definitions within existing Financial Accounting Standards Board (FASB) guidelines.

Fair value implementation has the potential to affect most companies' financial statements and requires substantial judgment. In response, insurers have invested significant resources and analysis to implement the standards, or, in the case of FAS 159, to assess opportunities for fair value elections.

A key time, a key opportunity

Most US insurance companies adopted the FAS 157 fair value standard and FAS 159 fair value option as of January 1, 2008, although there were some early adopters. Public companies, which were required to report for the first time under FAS 157 in the first quarter of 2008, have done most if not all of the necessary work. But the implementation programs of some non-public companies are less advanced.

With first-quarter reporting complete, PricewaterhouseCoopers convened a group of more than 30 executives representing 15 leading US insurance companies to discuss newly available public information and to illuminate the impacts of adoption. The resulting exchange between key accounting and actuarial representatives provides insights into the range of judgments insurers have made and the issues, lessons, range of results, and next steps these adoptions imply. The implementation experiences and the apparent similarities and differences in the companies' reported results are highlighted here. (Further discussion and elaboration follow this brief snapshot of key themes.)

Key themes at a glance

- Companies were generally comfortable with their implementation. This

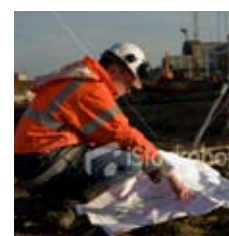
was especially true for investments, but less so for insurance liabilities;

- Most were also comfortable with the status of implementation (e.g., systems, process, and control updates), as they had invested substantial time and commitment to incorporate changes appropriately; and
- Companies devoted significant effort to assess pricing services, with lingering questions centering on disparities in price levels and potential SEC comment letters.

Key challenges and determinations

The most significant challenges and tough calls reported by participants pertained to:

- Determining classifications for investments between Level 2 and Level 3, especially based on concerns about the implications of Level 3 valuations;
- Analysis and decision-making related to broker quotes;
- Risk margins for insurance liabilities, including methodologies, initial levels, and ongoing updates; and
- Non-performance risk, particularly for insurance liabilities and derivatives.



FAS 157 and 159 have come into effect amidst growing globalization, uncertain economic times, declines in real estate values, and the convergence of liquidity and credit crunch concerns.

Key work ahead

- Implementation for non-financial instruments, such as goodwill and other intangibles, in fiscal years starting after November 2008;
- Updating of FAS 107 disclosures for 10-Ks, expected at the end of 2008 for most companies;
- Developing analogous disclosures for pension assets, as required by FSP 132 (R);
- Having a process to maintain current analysis and documentation for fair value determination and hierarchy classification, and continuing the operationalization of the processes, systems, and controls surrounding the FAS 157 and FAS 159 valuations and disclosures in the business-as-usual activities (such as embedding

FAS 157 and FAS 159 for election decisions for new instruments); and

- Integrating potential new guidance from the FASB or SEC.

Key lessons

Issues attendant to fair value implementation hold relevance for a broad range of business matters. Successful change navigation on a large scale can be rife with pitfalls, but also opportunities. Keys to success noted by roundtable participants for the implementation of FAS 157 and FAS 159 included:

- Promote and provide executive sponsorship;
- Implement careful project management;
- Maintain thorough documentation;

- Monitor developments consistently;

- Provide input to policy makers; and

- Use the lessons yielded by the experiences and findings of others.

With the prospect of IFRS implementation – and its proposed current value accounting for insurance contracts – on the horizon, these initial FAS 157 findings may well serve as the appetizer on a dinner table that has yet to be set in full.

Other observations and implications

Implementation issues at this early stage were largely related to translating the new standards and applying them across asset classes and insurance-embedded derivatives. Producing disclosures

has been another key area, with more to come for year-end disclosures under FAS 107.

Most roundtable participants indicated that they have adapted to FAS 157 by developing processes, drafting strong documentation, and updating their controls. Only a handful of companies reported electing the fair value option under FAS 159.

Those who have adopted FAS 159 cite benefits such as closer alignment between accounting and economics and assets and liabilities, and the elimination of the need for hedge accounting. Insurers who elected not to introduce fair value measurement under FAS 159 may be concerned about volatility; the cost/benefit of ongoing identification, valuation, and maintenance; deviating from the approach of industry peers; and implementing fair value measures prematurely and without full internal vetting.

Initial impact

Some companies experienced measurement impacts, generally for certain free-standing derivatives and embedded derivatives. For other companies, the effect of fair value implementation was for the most part immaterial or limited to new disclosures.

Going forward

We anticipate broader fair value application as FASB completes open projects that may impact areas that are not currently accounted for at fair value, such as certain non-financial assets, potentially opening new areas for interpretation and likely creating a need for additional guidance.





FAIR VALUE MEASUREMENT: THE FALLOUT AND THE FUTURE continued

Investments

Fixed maturities – When it comes to determining hierarchy classification, the trend among insurers appears to be toward tagging fixed income investments as Level 2. These instruments often include corporate and municipal securities, which companies sometimes deem Level 2 or 3, depending on availability of market observable inputs. Treasury securities comprise the bulk of Level 1 securities, though some companies peg them at Level 2.

Securities classified as Level 3 typically include those for which prices were obtained through broker quotes, when companies were unable to obtain transparency for the inputs used in the valuation, or otherwise corroborate the prices using market inputs. Also falling within Level 3 are prices obtained from third-party pricing services on fixed income securities for which insurers might have challenged pricing service estimates, and those that have limited market observable inputs (for example,

liquidity adjustments, especially on certain subprime and other securitized instruments).

Although some participants noted instances of price dispersion between pricing vendors and brokers, the underlying causes of the dispersion remain unclear. Some participants speculated that broker quotes may reflect their unwillingness to make market in a given security due to current market conditions. Others speculated that dispersion may result from a gap between when market events occur and when

these events are reflected in the prices provided by pricing vendors. Some companies are performing additional procedures to corroborate broker quotes with market data, including backtesting and benchmarking.

Most companies we have observed have concluded that multiple unobservable inputs do not result in an observable (Level 2) measurement. We are, however, aware of some companies that believe multiple broker quotes can cross-corroborate and result in Level 2 inputs.

FIGURE 1

Roundtable participants categorized most first-quarter assets at fair value as Level 2.

Classification of total assets reported at fair value – 2008 Q1 data (amounts in millions)

Total assets at fair value

	Total \$	Level 1	Level 2	Level 3
Company 1	43,407	16%	80%	4%
Company 2	21,457	16%	75%	9%
Company 3	37,554	23%	77%	0%
Company 4	623,763	17%	76%	7%
Company 5	112,633	16%	63%	20%
Company 6	15,299	26%	73%	1%
Company 7	135,304	72%	26%	3%
Company 8	19,319	10%	81%	9%
Company 9	69,972	17%	75%	7%
Company 10	216,337	64%	30%	7%
Company 11	147,053	0%	96%	4%
Company 12	32,634	2%	75%	22%
Company 13	410,835	31%	62%	7%
Company 14	388,550	23%	70%	7%
Company 15	65,324	4%	95%	1%
Average	155,963	26%	67%	7%

Source: PricewaterhouseCoopers.

FIGURE 2

The trend among insurers appears to be toward tagging fixed income investments as Level 2, based on first-quarter reporting.

Classification of total portfolio income securities reported at fair value – 2008 Q1 data (amounts in millions)

	Total \$	Level 1	Level 2	Level 3
Company 1	35,579	3%	96%	2%
Company 2	15,159	7%	89%	4%
Company 3	33,290	26%	74%	0%
Company 4	404,862	0%	96%	4%
Company 5	85,782	1%	75%	24%
Company 6	9,692	0%	98%	2%
Company 7	34,878	1%	91%	8%
Company 8	12,033	0%	94%	6%
Company 9	53,031	0%	91%	9%
Company 10	44,211	1%	71%	27%
Company 11	55,624	0%	92%	8%
Company 12	28,406	3%	77%	20%
Company 13	244,088	3%	88%	10%
Company 14	179,116	0%	98%	2%
Company 15	64,492	3%	97%	0%
Average	86,683	2%	91%	7%

Source: PricewaterhouseCoopers.



Private equity funds and net asset value (NAV) – Most companies surveyed tend to rely on net asset value (NAV, sometimes, but not always, adjusted) as a primary fair value input. Still, diversity is sufficiently significant in practice that the American Institute of Certified Public Accountants' (AICPA) Investment Companies Expert Panel plans to review the matter; the FASB has said to date that it will not issue guidance.

Hedge funds – The use of NAV for hedge funds is more consistent. Some have made an adjustment for restrictions with the adjustment initially flat but subsequently becoming more tiered; the restriction adjustment may decrease as it nears expiration, according to one roundtable participant whose company adjusts the NAV for periodic withdrawal restrictions.

Separate accounts – Companies now face new challenges in determining the unit of account for the fair value hierarchy assessment of separate accounts. Some insurers said they perform strict due diligence to identify the assets of the underlying funds if their companies and separate accounts own more than 50% of the funds. In these cases, some companies make fair value hierarchy classifications based on the valuation of the individual assets within the fund. For companies that have separate accounts that hold many funds, this can be an arduous and time-consuming task. In an alternative approach, one roundtable participant focusses on assessing underlying real estate assets, which are typically



classified as Level 3. (If the underlying assets and the fund level are Level 2, the unit of account would typically not make a difference.)

Mutual funds – Many participants indicated performing due diligence for volume and restrictions to classify open-ended, actively traded mutual funds as Level 1. But practice varies on the level of due diligence and whether policies are defined. Some participants also classified open-ended mutual funds as Level 2, on the belief that mutual fund share sales represent redemptions, rather than third-party transfers.

Cash equivalents and short-term investments – Only one third of filers whose results were reviewed at the roundtable included a cash and cash equivalents line in their hierarchy tables, where cash equivalents are listed as Level 1 or Level 2. Few companies presented qualitative disclosures.

Although companies may indicate that the cost of their cash equivalents or short-term investments approximates fair value, the distinction is irrelevant to the question of whether an investment falls within the scope of FAS 157. The legal form of the instrument and the US GAAP reporting requirement (at fair value or amortized cost on the balance sheet) dictate the need for the FAS 157 hierarchy disclosure. An instrument that falls within the scope of FAS 115, for example, is included in the fair value hierarchy.

SEC weighs in on vendor issues

As insurers disclose their valuation methodology within the financial statements, some have referred to pricing service and broker pricing used in the valuation process. Several participants noted receiving SEC comment letters related to the reference of third-party experts in the financials. While pricing services may meet the SEC definition of ‘expert,’ it remains unclear at what point in the pricing policy disclosure the SEC would require a company to name the pricing service and obtain a consent.

It appears that most companies who mention the use of pricing services in Management’s Discussion and Analysis (MD&A) have expanded their disclosures to describe the ways in which they have taken ownership over the pricing process and to delineate the controls they performed over third-party valuations.

Certain companies that have disclosed in MD&A that they are relying on pricing services for fair valuing certain instruments have received comment letters from SEC staff, asking them to name the pricing service they used and to obtain consent from the service as an expert if disclosure is part of a Securities Act of 1933 (‘truth in securities law’) filing; these appear to echo the SEC staff view on actuarial references.

Still, early experience points in several directions. Some companies say the SEC has asked them to remove references to pricing services. Vendors have been unwilling to provide such consent. And at least one company indicated receipt of a comment letter concerning the degree of validation for its broker quotes.

Pricing vendors – Participants confirmed that it is important for management to have confidence in the asset valuations and type and extent of due diligence performed.

Most roundtable participants indicated that they went beyond obtaining vendor documentation, performing ‘deep dives,’ such as developing independent price verification processes. Companies will need to decide how frequently to apply various due diligence tools, most of which participants reported they used within the context of FAS 157 implementation:

- Vendor interviews;
- Vendor documentation gathering;
- Backtesting data;

- ‘Deep dives’ and in-house valuation on samples;
- Portfolio, asset manager, or front office feedback;
- Comparisons between price changes and movements in corresponding benchmarks (such as Lehman indices, ABX, CDX); and
- Obtaining additional vendor and/or broker pricing.

Although most vendors have not provided reports to their customers based on Statement on Auditing Standard No. 70 (SAS 70), this avenue may be considered going forward. (Participants note that one frequently used service has some SAS 70s, but not across all investment classes or directly applicable to FAS 157.)

Free-standing derivatives

Notably, the key concern with derivatives pertains to counterparty credit and own credit (non-performance) risk. With little FASB guidance to date on credit adjustments for derivatives and other liabilities, we have some indication of future direction, but no clear markers.

A significant showing of roundtable participants perform qualitative assessments in determining how credit risk affected the valuation of derivatives, focusing on the company’s own credit rating and on level of collateral. This would seem to align with FASB’s focus as it deliberates on the proposed FSP FAS 157c. But the matter remains unresolved, with critics of applying FAS 157 to non-performance risk concepts maintaining that credit adjustments are only hypothetical and can’t be realized.

Those that use a credit ratings-based or historical transaction rate analysis say spreads based on credit default swaps (CDS) exceed actual default rates and therefore overstate risk. Those that rely on CDS-based spreads say the rates are higher because they appropriately capture liquidity risk, which is an element of non-performance risk.

Insurers at the roundtable indicated they rarely assess potential future exposure when measuring credit risk. Rather, they reported applying a top-side credit adjustment based on current exposure. Participants point out that certain financial entities such as investment banks, with their long history

of assessing non-performance risk and far larger exposures, are significantly more likely to weigh the impact of potential future exposure.

Insurance products

Variable annuity (GMXB) risk margins post-FAS 157 – Some roundtable participants had adjustments to fair value estimates, several of which were large enough to warrant financial statement disclosure. Most adjustments concerned risk margins, reflecting market participant assumptions about what those margins might be. Roundtable companies apply various approaches for these estimates, including product

pricing and cost of capital approaches. Other adjustments related primarily to longer term capital market assumptions.

GMXB risk margins pre-FAS 157

– Some participants did not include market risk margins in fair value estimates for embedded GMXB derivatives. Others may have included some amount of risk margin, but may have tried to reflect risk primarily by applying more conservative assumptions for some inputs (policyholder withdrawal behavior, or assessing margins as the difference between expected benefit costs and explicit rider fees).

Non-performance risk insurance products for GMXB, other embedded derivatives – All companies reported that they considered non-performance risk, although the range of approaches and impacts was considerable.

Some companies add credit-based spreads to the London interbank offered rate (LIBOR) through a variety of means:

- Apply the credit-adjusted rate only to insurer cash outflows (benefit payments);

- Apply an insurer-adjusted rate to cash outflows and a different credit-adjusted rate to cash inflows (fees received from policyholders); or
- Apply credit adjustments to the net position (fees less benefit payments).

In the absence of product-specific credit spreads or the use of LIBOR, some companies start with the holding company's spread and make adjustments to derive a rate.

One participating insurer, which initially looked at credit default swap rates for its holding company debt, ultimately used rating agency default and recovery rates to determine its credit spread adjustment, in deference to the particular nature of the product and its differences from holding company debt (such as insurance regulatory requirements for policyholder liabilities and the longer-term nature of the liabilities).

Also reported was the view that the fair value risk margin reflected the company's non-performance risk.



SEC and Level 3

Soon after FAS 157 went into effect, the SEC wrote to 30 CFOs, guiding companies to present materials explaining Level 3 status determinations for the period in their MD&A. One of the required disclosures calls for the presentation of gains and losses associated with measurements that are transferred into Level 3. As a result, many roundtable companies implemented a policy of using transfers in and out of Level 3 at the beginning of the period in the Level 3 reconciliation (roll-forward) disclosures to achieve consistency between financial statement disclosures and MD&A.



FAS 107 disclosures

FAS 107 requires only annual disclosures, but SEC rules on quarterly reporting discuss the potential need for updated FAS 107 disclosures in subsequent quarters if material changes occur in those estimates. Only one of the companies surveyed included updated FAS 107 in the first quarter of adoption. Overall, insurers say they performed some degree of analysis in assessing potential FAS 107 impact, supporting decisions not to update their disclosures as of Q1, 2008. Some companies appear to have performed more detailed, quantitative calculations than others.

In reviewing FAS 107 disclosures, companies have been reevaluating whether some of the instruments they hold (such as policy loans and premiums receivable on insurance contracts, or their balance sheet components) are subject to such disclosures.

Fair value measurement: Viable, if complicated

While fair value measurement has its challenges, many believe it is the best practice for measuring financial assets when managed in conjunction with proper disclosure. At this important moment in practice development, FAS 157 and FAS 159 are likely to continue to challenge those who prepare and use financial statements, particularly regarding the potential for significant diversity in how companies determine hierarchy classifications

and fair value for Level 3 holdings, and whether they elect the fair value option.

The early experiences of our roundtable participants confirm the need for ongoing vigilance in the breadth and depth of analysis to support the FAS 157

requirements, weighing assumptions and documenting policy and practices. With the standards' full effects still in question, insurers and the rest of the financial services industry will have a great deal to ruminate on in the months and years ahead. □

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Is your ERM delivering?

AUTHORS: PAUL HORGAN AND NICK RANSON



Does ERM matter? Enterprise risk management in the insurance industry (available at www.pwc.com/insurance), PwC's recent global study¹ of over 50 insurers, has found that many insurers' enterprise risk management (ERM) programs may be failing to keep pace with mounting risks, escalating commercial challenges and more exacting stakeholder demands. Paul Horgan and Nick Ranson look at how better integrating ERM within the business can help to deliver the anticipated benefits of a more informed and assured basis for decision-making and strategic execution.

IS YOUR ERM DELIVERING?

Insurance is a business built around risk. Yet, is risk management developing quickly enough to meet the demands of the insurance industry in an increasingly complex and uncertain risk environment? Events ranging from the record hurricane losses of 2005 to the continuing turbulence in the financial markets in 2008 highlight the increasing pressures to manage risk faced by insurers. These challenges are being compounded by capital constraints, the softening of non-life premium rates and the slowdown in the economy.

In response, many insurers have been developing a more systematic and holistic, enterprise-wide approach to risk management aimed at strengthening control and providing a more incisive risk-adjusted basis for strategic evaluation. In today's tough risk and commercial environment, the potential benefits include reduced losses, more effective allocation of capital and the ability to pinpoint and swiftly capitalize on what may be limited and often hard to identify opportunities.

However, ERM cannot work in a vacuum; it needs to be relevant and integrated within every aspect of the business to make a difference. The need for effective embedding of risk management

What makes ERM work?

- Effective alignment of strategy and risk appetite
- In turn, effective alignment of risk appetite and risk tolerances implemented within day-to-day processes across the business
- Timely, reliable and consistent risk identification, measurement and monitoring
- Effective communication of risk to decision-makers and appropriate escalation of issues for action
- Understanding of risk concentrations, correlations and their potential implications, based on effective risk analytics and underpinned by regular validation, calibration and adjustment
- Ability and readiness of senior management to understand and, where necessary, challenge underlying risk assumptions
- Consistent implementation of risk management practices and standards across businesses and geographies
- A culture that builds risk considerations into performance objectives and management in key areas such as business unit targets and individual incentives

practices has been amply demonstrated by the banking sector's recent experience of the credit crisis. It is notable in particular that many institutions which had developed what they believed were robust and sophisticated ERM capabilities still suffered severe losses. What marked out companies that largely avoided these

problems was the timely, rigorous and consistent identification, communication and consideration of risk across the decision-making and risk-taking chain (see box 'What makes ERM work?'). For insurers, a similar commitment to making risk integral to the business is likely to be critical in realizing the full commercial value of investment in ERM.



ERM cannot work in a vacuum; it needs to be relevant and integrated within every aspect of the business to make a difference, and needs to be embraced by risk-takers rather than just risk professionals.

¹ 'Does ERM matter? Enterprise risk management in the insurance industry', a study published by PricewaterhouseCoopers on 6.24.08. To download or order a free copy, please visit www.pwc.com/insurance.

Raising the bar

The effectiveness of insurers' ERM programs has been brought into sharp focus by its growing importance within rating agency financial strength evaluations. For companies with European operations, further impetus for the development of ERM is coming from the move to risk-based prudential regulation under EU Solvency II. Analysts and investors are also taking an ever keener

interest in the risks insurers are running and the risk-based measures that indicate how well these risks are being managed and translated into rewards. Alongside the demands of a tougher risk climate, increasing stakeholder expectations are raising the bar for ERM, including the depth of risk understanding, rigor of control and extent to which risk considerations are embedded into business planning and capital allocation.

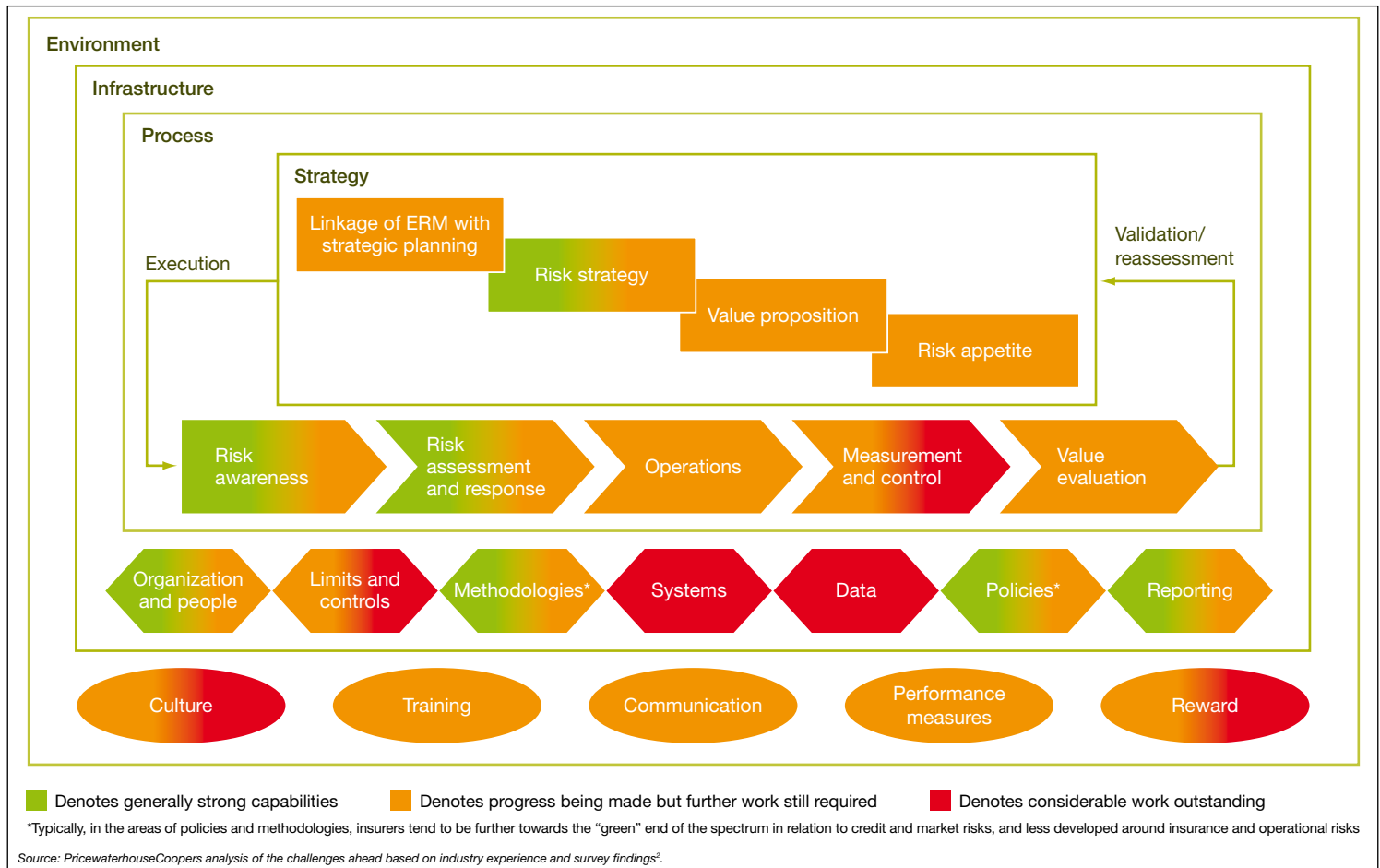
Is ERM fit for purpose?

To help judge how effectively insurers' ERM programs have developed and where further work may be required to meet this rising bar, PricewaterhouseCoopers recently carried out one of the most detailed studies of ERM ever performed in the insurance industry. The follow-up to an earlier report published in 2004, the latest study draws on an in-depth global survey of over 50

insurers, some 60% of whom have operations in North America and around a third of whom are based in the US or Canada. The sample brought together a balance of life, non-life and multi-line companies, along with a selection of reinsurers. What emerges from the findings is that while ERM is an increasing Board-level priority, further development is likely to be required in a number of significant areas (see Figure 1).

FIGURE 1

How good are insurers at ERM?



2 'Does ERM matter? Enterprise risk management in the insurance industry', a study published by PricewaterhouseCoopers on 6.24.08



Progress since 2004

Based on the results from our 2008 and 2004 studies, we have summarized below the areas where respondents indicated there had been strong, some/mixed or limited progress.

Areas in which strong progress appears to have been include:

- Stature and mandate of the CRO (47% of North American respondents now have a CRO in place who is responsible for designing and monitoring ERM, compared with 30% in 2004)
- Development of risk organization has improved (50% of North American respondents now believe they have a fully effective ERM structure in place, compared with 20% in 2004)
- 70% of North American respondents strongly (35%) or slightly (35%) agree that they have clearly defined their risk appetite

Areas where there has been some progress include:

- Linkage between ERM and decision-making has improved (45% of North American respondents strongly agree that ERM is embedded into strategic and ongoing business planning compared to 10% in 2004), though progress in how ERM is integrated into operations on the ground is mixed
- 70% of North American respondents strongly (45%) or slightly (25%) agree their ERM program enables them to convey a portfolio view of risk to senior management, though most accept that further development of aggregation monitoring will be required
- Modeling capabilities have improved, both by major risk category and overall capital modeling. However most respondents indicate that it will take time for the business to understand and accept model results, particularly in relation to insurance risk and capital modeling. This process will require time and effort
- Most North American respondents expect that their economic capital models will provide increasingly valuable input into decisions relating to M&A, capital allocation, and product development and pricing. To facilitate this and ensure credibility of outputs, most accept that they will need to significantly strengthen their model control and validation frameworks

Areas where limited progress appears to have been made since 2004 include:

- Clarity of understanding around ERM (only 21% of North American respondents believe that the roles and responsibilities relating to ERM are clearly understood within their organization, only a slight improvement from 2004)
- The ERM unit is responsible for setting firm-wide standards for risk management within only 35% of North American respondents, which may limit the consistency of application and make it difficult to leverage the risk management capabilities that already exist within the organization
- Links between risk appetite and risk limits on the ground (business units within 80% of North American respondents do not base their risk tolerances on the broad risk appetite set by senior management)
- Only around 30% of North American respondents have early warning systems to detect when volumes are approaching a maximum risk threshold and less than 40% have processes for identifying and analyzing why limits are breached
- Few North American respondents report that key risk indicators are available to the Board at regular reporting intervals, in line with 2004. Furthermore, less than 10% believe that the correlation between indicators and losses is clearly understood and that lead indicators are used in predictive analysis. However, progress is planned on all these fronts
- Integration of self-assessment activities across risk and compliance, including internal policy and regulatory compliance and audit, is often limited. This is surprising given the high demand for such integration by business leaders. In our experience, the lack of progress in this area is often related to not having the appropriate sponsorship for the initiative



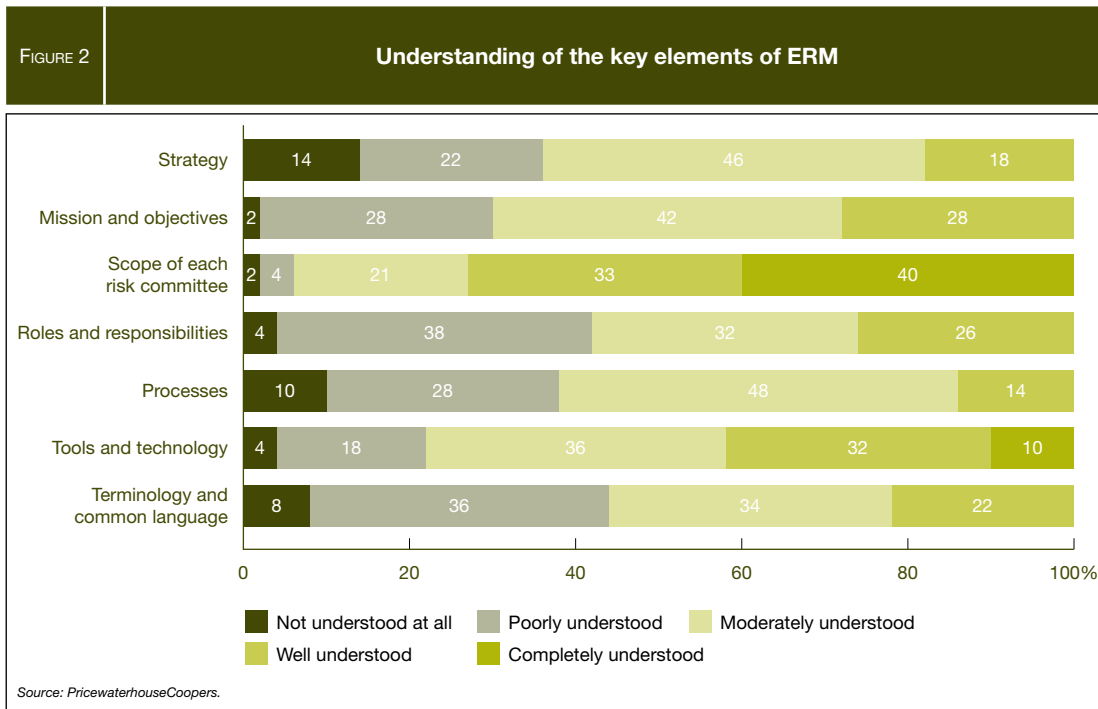


Meeting evolving demands

The box 'progress since 2004' outlines some of the key areas of progress since our previous study in 2004. While overall, we believe that insurers have made significant strides, developments may not have been fast or deep enough to meet the rising bar of stakeholder expectations.

Most notably, the extent to which risk considerations are incorporated into frontline decision-making is still surprisingly limited. In particular, the survey revealed a marked lack of alignment between the corporate risk appetite and risk-taking on the ground. The articulation and application of risk appetite are critical in defining and enforcing the amount of risk a business is willing to accept in the pursuit of reward and are therefore key cornerstones of the effective embedding of ERM.

The sound operational application of ERM also demands that limits and controls are rigorously monitored and enforced. However, less than a quarter of North American participants believe that their procedures for limit monitoring and exception approval are up to speed and 70% accept that the enforcement of limit thresholds is not operating as effectively as intended. The communication, escalation and risk learning procedures for breaches in limits may also be insufficiently proactive and systematic. Only around 30% of North American participants have early warning systems to detect



evaluation and escalation procedures. It could also help to make better use of the risk management activities that are already in operation across the business. However, only around 40% of North American participants report a high level of interaction between risk and business teams in the definition and monitoring of key risk and performance indicators. In addition, there appears to be insufficient interaction in how risk limits and objectives are set and enforced. Poor collaboration between a risk program and its partners in the business can create confusion about who 'owns' risk and how it should be managed. More broadly, it may mean that risk management is seen as someone else's job and that ERM is not really relevant to those in the business.

when volumes are approaching the maximum threshold and less than 40% have processes for identifying and analyzing why limits are breached.

Is ERM integral to the business?

The position of CRO is now firmly established within many North American insurers, although the percentage of participants who have a CRO in place with responsibility for designing and monitoring ERM (47%) is notably some way below Europe (64%) and Bermuda (88%). The relative influence of the CRO within the top table of business decision-making is likely to prove increasingly critical in effective

governance and strategic management. In particular, the CRO cannot be a shadow officer. The CRO needs to be an action-oriented position, with stature and a strong voice within the executive committee and the ability to debate and, where necessary, challenge key decisions and risk positions.

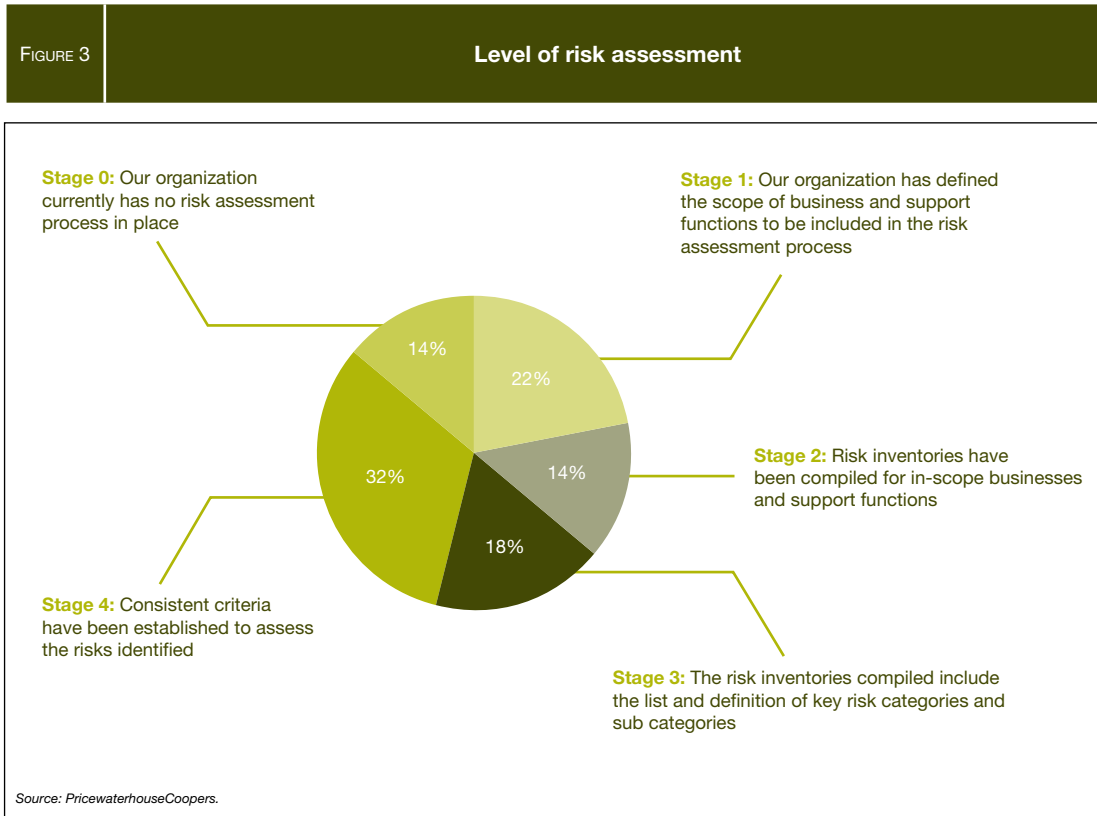
Although ERM has consolidated its position as a leading Board-level priority, it would appear that it has yet to take root within the wider business at many insurers. This is evident from the general lack of clarity and understanding around the roles and responsibilities, terminology and tools relating to ERM (see

Figure 2). Training is essential in developing the necessary understanding. However, only around 20% of North American participants have established risk management training programs, with only a small percentage of these operating effectively. Without buy-in and understanding, ERM programs may simply be perceived as an additional layer of bureaucracy within the business, rather than being seen as integral and beneficial to how it is run.

Closer interaction between risk and business teams could help to break down risk management silos and enhance the consistency and co-ordination of enterprise-wide monitoring,

Are insurers adequately informed?

Underlying problems include the often poor quality and reliability of risk information and analysis. Less than 40% of North American respondents believe that their risk systems are good and none rated them as excellent. Less than half believe that their risk data is good (42%) or excellent (5%). Only 20% strongly agree and 30% slightly agree that their risk information supports their risk objectives and only 15% believe that the communication and escalation of risk information across the organization is very effective.



As Figure 3 highlights, only around 30% of survey respondents report that consistent criteria are in place to assess identified risks. The development of a coherent portfolio view of the threats and opportunities facing the business is likely to be difficult without such assessment. Moreover, while 85% of North American respondents now have a process to identify emerging risks, only around half are quite confident and none fully satisfied that it is operating effectively. The ability of respondents to identify and respond to emerging opportunities is called into question by the fact that less than 10% have a process in place to align their assessment of emerging opportunities with their risk appetite. However, it is notable that 80% use risk/reward considerations in making decisions about whether to seize opportunities, a long way ahead of European respondents (50%) and hence a potential source of competitive advantage.

The way forward

Naturally, we would not expect to see fully mature ERM programs at this stage. ERM is still a relatively young management discipline and key components ranging from risk modeling to operational risk management present challenging new frontiers for many organizations. Through their self-assessments within the survey, North American participants generally appear realistic about where further work is required. The survey also underlines participants' strong commitment to the further

The general lack of confidence in model outputs is also especially noticeable. Less than a third of North American respondents discern that their economic capital modeling provides substantial value in defining their risk appetite or improving strategic planning. Two-thirds do not believe that their economic model output has gained full acceptance from business units or influences day-to-day decision-making. This is especially surprising as this buy-in will be critical in meeting rating agency expectations.

Building confidence in the model analysis requires credible data and a reliable infrastructure of governance, operation and validation. However, 80% of North American respondents believe that the control environment surrounding data quality and the use of their models is no more than moderate or weak. Again, the rigor of model governance is a key rating agency evaluation criterion.

In today's risk environment, there is clearly a danger that poor information or 'blind reliance' on complex models could generate false confidence and encourage a

company to accept too much risk. Equally, limited risk insight could lead to an over cautious approach in which an insurer assumes too little risk or ties up capital that could be better invested elsewhere. The key tests of an organization's ability to deal with these challenges include the quality, timeliness and reliability of its risk assessment; the effectiveness of its aggregation monitoring and its ability to use its risk analysis to identify commercial opportunities. Our survey highlights that further work may be required across all of these areas.



development of their ERM programs and confidence in the ability of ERM to enhance value in the future. For example, most participants expect to achieve better allocation of capital and changes in strategic direction as a result of implementing economic capital modeling and aligning it more closely with decision-making, if they have not done so already. It is notable, moreover,

that 70% of North American respondents recognize the importance of ERM presentation in their interaction with investors, regulators and rating agencies and more than 80% have set ambitious target ERM ratings of 'strong' or 'excellent'.

As our survey underlines, to meet these aspirations in the face of escalating risk pressures,

commercial challenges and stakeholder demands, ERM needs to be embraced by risk-takers rather than just risk professionals. Embedding ERM into day-to-day decision-making and risk-taking activities is likely to be a tough challenge for many companies, demanding important changes in the way they formulate their strategy and judge, reward and communicate their performance.

While the tone from the top is critical, effective ERM cannot be imposed by the Board or senior management. Business teams need to be convinced that it can help them make more informed decisions and enhance their ability to create value if it is to be relevant to them. □

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