STANDARD
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Global Reinsurance Highlights
2009 Edition

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2009 Edition

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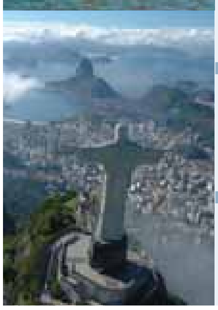

Global Reinsurance Highlights

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Maintaining The Momentum

By Rob Jones

In our foreword to last year's Global Reinsurance Highlights, we spoke of the reinsurance industry being delicately poised on the brink of either completing a transformation in its behavior, or returning to old and painful habits. We believe the industry has opted for the former, and has set an example that primary markets have yet to follow.

The progressive hardening of global reinsurance markets since November 2008 has taken place against a background of unprecedented economic uncertainty, with all the associated underwriting challenges--some that are already apparent, others that we think are yet to emerge. Our lead article "Global Reinsurance 2009: Resilience Proven, But Maintaining Momentum Will Be Key" addresses the industry's latest challenges, both underwriting and financial. "Global Economic Downturn: Headaches And Opportunities For Life Reinsurers" focuses on the challenges arising specifically within life reinsurance.

Although we believe that the panic in financial markets that prevailed until March of this year has abated, insurers—and to a lesser extent reinsurers—are still experiencing the pain. We see this reflected in their balance sheets, the market value of their equity and debt issues, and their ability to raise new finance. "Financial Flexibility For Global Reinsurers--In Search Of An Oasis" reflects on our greater focus on this area of analysis in current financial market conditions. In particular, it discusses whether the financial markets would reload reinsurer capital if a market-changing loss event were to occur this year.

We believe that global reinsurers continue to lead the way relative to primary insurers in terms of their enterprise risk management (ERM) capabilities. In our opinion, their ERM practices were a contributory factor to the hardening market. This was achieved in the absence of widespread underwriting losses, seemingly a pre-requisite of previous cyclical swings. Our article, "Raising The ERM Bar: Tighter Practices For Tougher Times," analyses reinsurers' current ERM credentials.

Solvency II is back from the brink. "Solvency II: Wounded, But Still Alive And Kicking" covers the issues which in our opinion nearly caused the Directive to founder and looks forward to the trials that lie ahead for the insurance industry and its supervisors. The future of the Insurance-Linked Securities market was also threatened over the past year, although we believe it was the failure of Lehman Brothers that was the root cause. However, the market is back, and "Insurance-Linked Securities Market Adapts To Changing Conditions" explains how.

"Interpreting Insurer Financial Strength Ratings In Light Of Improving Insurer Supervision" answers questions about our ratings that we have been asked in recent years as the modernization of insurer supervision gathers pace.

As far as reinsurers are concerned, the domicile of choice has been clear over the past decade. However, we believe that Bermuda faces new challenges and that other credible domiciles have emerged. "Domicile Of Choice: Where Is It Now?" explores the issues. "Natural Catastrophe Risk: Exposures & Risk Appetite" examines catastrophe risk and presents the findings of our surveys of rated reinsurers' catastrophe exposures in Bermuda and Europe.

Our regional articles this year focus on Brazil, Africa and Asia-Pacific. "Brazil – One Year On – What Has Changed?" examines what has happened since the opening up of the market. "Unfulfilled Potential: The Challenge Of Developing A Regional Insurance Industry For Africa's Energy Sector" looks at the impact of the oil industry on the prospects for a developing insurance market. "Weathering The Storm: Asia-Pacific Reinsurers Stand Firm Amid Financial Turmoil" considers the principal primary markets in the region and their reinsurance needs.

We think that Global Reinsurance Highlights captures the key issues facing participants in the insurance industry. We hope that you enjoy the 2009 edition and would welcome your feedback on possible enhancements for future years. ■

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STANDARD & POOR'S

Global Reinsurance 2009: Resilience Proven, But Maintaining Momentum Will Be Key

By Peter Grant, Laline Carvalho, Rob Jones

2008 provided a stringent test of the efficacy of the enhancements that global reinsurers have made to their risk-management capabilities over the past decade. Almost without exception, we believe the sector has shown an impressive level of resilience in the face of an unprecedented confluence of events. Nonetheless, Standard & Poor's Ratings Services believes that further vigilance and dexterity will be required if the sector is to continue to safely navigate the stormy macroeconomic seas ahead.

Over the past decade, the reinsurance sector has endured seven of the ten-largest insured losses in history, the stock market dislocation of 2002, not to mention the crippling impact of loss reserve deficiencies, particularly in respect of U.S. casualty business written at the depths of the last soft pricing cycle. Standard & Poor's believes that the enterprise risk management (ERM) enhancements prompted by these events partially explains the relative resilience shown by reinsurers over the past 12 months.

While there has been some downward migration in reinsurer ratings over the past year, as events exposed the fragility of some business models, the overall picture has been fairly balanced. We would expect to see a similar trend emerge throughout the remainder of 2009 and into 2010. Significantly, there have been no multi-notch downgrades within the sector over the past year. Nor have any of the downgrades been triggered by factors that we consider to be systemic. As a result, we are not expecting to see a broad-based rebalancing of our ratings within the sector as was the case earlier in the decade.

If anything, we believe that the value proposition for those reinsurers pursuing a traditional model has been reinforced by the events of 2008. The sustained trend in recent years toward the increased retention of risk by primary insurers has abated, barriers to entry have been heightened, and alternative sources of capacity curtailed. In addition, this year has arguably seen the first-ever cessation of a softening pricing trend absent material underwriting-related losses. As a consequence, our outlook for the global reinsurance sector remains stable.

As most rated reinsurers currently enjoy a stable outlook, without a truly market-changing loss event we do not expect to see a significant number of rating changes over the next 12 months. However, outlook revisions (negative and positive) remain possible as we continue to scrutinize the appropriateness of each reinsurer's response to the more challenging environment.

Our decision to retain our stable outlook on the sector reflects our assessment of the following positive factors:

- Reversal of the negative momentum in reinsurance pricing;
- Overall resilience of capitalization despite recent pressures;
- Evidence that perceived enhancements to ERM are starting to deliver tangible benefits;
- Continued robust, albeit diminished, liquidity and reserve positions;
- Relatively defensive stance on investments.

These strengths are partially offset by our assessment of the following weaknesses:

- Rate adequacy remains susceptible to the threat of a step change in claims frequency;
- Substantial erosion of excess capital would significantly heighten the reload risk were a market-changing loss event to occur over the medium term;
- Lower investment returns will represent a drag on earnings.

2008 In Review

Resilient underlying performance; offset by plummeting investment returns

On an accident-year basis, a combination of the lower rate adequacy seen since mid-2006 and the substantial insured losses related to Hurricanes Gustav and Ike hindered the sector's operating performance. These effects were substantially offset by a continuation of the material release of loss reserves held in respect of prior accident years, although this was far more pronounced for those reinsurers outside the global top 10.

The top-10 groups (which we estimate, based on figures provided in the International Association of Insurance Supervisors' Global Reinsurance Market Report 2008, account for approximately two thirds of global reinsurance capacity) produced an average combined ratio of 94.6% for 2008. This still compares favorably with the 10-year average of 105.4%, but is well above the cyclical best of 90.4% seen in 2006.

The precipitous decline seen in the return on invested assets during the year significantly curtailed overall earnings power. This is best demonstrated by the year-on-year decline in the return on revenue (RoR) for the global top 10, which fell to 11.7% in 2008 from the cyclical peak of 13.1% in 2007. This metric ignores the impact of investment gains and losses. A more economic measure of the investment yield would have provided an even starker contrast.

The majority of rated reinsurers continue to adopt highly conservative investment policies. For most, their investment portfolios are dominated by either government securities or highly rated corporate bonds. Equities and alternative asset classes generally comprise less than 5% of total invested assets. In the current environment, most reinsurers are looking to shorten the overall duration of their investment portfolios both to bolster liquidity and as a partial offset against the potential threat posed by inflation over the medium term. We consider this inherent conservatism is beneficial in terms of capital adequacy, but believe that it will place a drag on future earnings. Very few reinsurers are willing to take financial market risk on both sides of their balance sheet, which was one of the drivers of the difficulties faced by Swiss Reinsurance Company Ltd. (A+/Stable/A-1) over the past 18 months.

Excess capital withstands the extreme stress seen in global financial markets

The combination of the extreme turbulence experienced in global financial markets, and the insured losses attributable to Hurricanes Gustav and Ike, had a very material adverse effect on the level of available capital within the sector. However, somewhat fortuitously in our opinion, this unprecedented confluence of events happened to coincide with peak of the cycle capital adequacy. Table 1 shows that nine of the largest global reinsurers incurred total abnormal losses in excess of $33 billion during 2008. The net pretax losses reported in respect of Hurricanes Gustav and Ike, at $3.7 billion, were dwarfed by investment-related losses, which exceeded $30 billion. It is worth noting, however, that the sector's robust liquidity position has meant that very few reinsurers have been forced to crystallize these investment-related losses. Consequently, the majority of investment losses carried forward from last year remains unrealized. Indeed, they have begun to reverse during 2009 as bond spreads have narrowed. The combined effect of these extreme

Table 1: Extreme financial market stress coincides with peak of the cycle capital adequacy

(All values in USD millions)	Gustav + Ike Net	2008 Investment Losses/Gains			Total 'Abnormal' Losses / (Gains)	Excess Capital at 1.1.08 Vis-à-Vis the Current Rating
		via Earnings (before tax)	via S/H Equity (after tax)	Total		
Berks. Hathaway Re	879	267	13,141	13,408	14,287	N.A.
Everest Re	257	696	237	932	1,189	N.A.
Hannover Re	362	1,050	99	1,149	1,511	N.A.
Munich Re	844	(232)	4,001	3,768	4,612	N.A.
Odyssey Re	155	(692)	13	(679)	(524)	N.A.
PartnerRe	305	531	(15)	516	821	N.A.
SCOR	135	297	349	646	781	N.A.
Swiss Re	550	4,344	5,119	9,463	10,013	N.A.
Transatlantic Re	170	436	550	986	1,156	N.A.
Total	**3,657**	**6,696**	**23,493**	**30,189**	**33,846**	**25,441**
N.A.: Not Available						

events was largely absorbed by the $25 billion of excess capital (measured relative to the target level of capital consistent with each group's rating) that was available to these reinsurers, in aggregate, at the beginning of the year. Hence, when the impact of pretax operating income is taken into account, most reinsurers closed the year with a level of capital adequacy broadly in line with their current rating. As a consequence, the majority of rated reinsurers have not needed to raise additional capital over the past year.

The softening trend in pricing abates…..but is it enough?

Rather than raise capital, most reinsurers are hoping to rebuild their lost capital buffer organically through increased underwriting margins. This has led to a reversal of the broad-based decline in reinsurance pricing seen since July 2006. Towards the end of last year, Standard & Poor's predicted that average risk-adjusted rate increases in the range of 5%–10% would be necessary to enable reinsurers to rebuild their excess capital positions through earnings over the medium term. Pricing trends for the year to date suggest that the average rate increase has come in marginally below the lower end of that range, but momentum has continued to build as the year has progressed. We expect this trend to continue.

There are a couple of interesting developments that mark out the current hardening phase of the reinsurance pricing cycle from those in the past. First, the inflection point in the cycle has been reached without reinsurers either suffering a market-changing catastrophe loss or posting persistent, substantial underwriting losses. In fact, the uptick in pricing has come following a year when the industry as a whole produced an overall operating profit. In our view, this reflects both the sheer magnitude of the investment losses suffered during 2008 and, arguably of greater significance for the long term, the improved responsiveness of reinsurers' benchmark pricing to the changing macroeconomic environment. This could be indicative of the fact that the amplitude of future swings in the pricing cycle will be less pronounced than in the past. In addition, uncertainty surrounding reinsurers' ability to quickly reload capital following a major loss event, coupled with the spectre of lower investment returns going forward have in our view undeniably strengthened the resolve of reinsurers.

Second, the improvement in pricing for reinsurance is in stark contrast with pricing trends observed in the primary segment. This, in itself, is in direct contrast to developments in respect of the last soft cycle in the late 1990s where aggressively priced reinsurance capacity led pricing in the primary market down, particularly in respect of U.S. casualty lines. This emerging trend can be attributed to a number of factors including the greater concentration of global reinsurance capacity and the comparative ease of adjusting pricing in a wholesale market. One of the interesting dynamics over the next 12 months will be whether the relative discipline of reinsurers begins to positively influence pricing trends in the primary market, or if the relative indiscipline of primary writers causes reinsurers to weaken their resolve. While we anticipate the former, we acknowledge the potential threat that contagion from the primary market poses to reinsurers.

While the pricing cycle returns to an upward trajectory, the reserving cycle appears to be well past its peak. Some are predicting that the 2008 accident year will, in the fullness of time, prove to be the first of the next phase in the cycle to register an aggregate deficiency in reserves. We agree that this is a distinct possibility, and consequently expect that reserve adequacy will become far more of a focus for our analysis over the next two to three years.

2010 And Beyond

Risk aversion offers the traditional business model a temporary reprieve

For much of the past decade, structural shifts in both the level of demand for, and supply of, reinsurance capacity have put real pressure on the traditional reinsurance business model. A combination of consolidation among primary writers, and their increasingly sophisticated buying habits have continued to constrain demand. At the same time, the rate of growth of alternative forms of capacity including new entrants, insurance linked securities (ILS) and sidecars (that is, special purpose underwriting vehicles, often formed to provide capacity for natural catastrophe perils when supply in the traditional market is constrained), far outstripped the nominal rate of increase in overall demand. The events of the past 12 months have offered the main exponents of the traditional business model a partial reprieve. While Standard & Poor's considers this to be supportive of the competitive position of a number of the incumbents, we anticipate that the effects will be temporary.

The trend toward increased levels of retention among primary writers has not necessarily been reversed, but it does appear to have abated. Those primary insurers that are committed to maintaining the overall level of their reinsurance spend are often seeing catastrophe-exposed lines, particularly in the U.S., absorbing a disproportionate share of the budget. For many, this is a price worth paying as they seek to minimize the reload risk they might otherwise face following a catastrophic loss. As a by-product, we believe that reinsurers' level of exposure to casualty lines is low, and declining, relative to the levels seen at the trough of the last soft cycle in the late 1990s.

Of greater significance in enabling traditional reinsurers to redress the emerging demand/supply imbalance is the reduction in the number of substitutes for traditional reinsurance capacity. The period following the devastating 2005 hurricane season was ripe for both providers of alternative capacity, and new entrants. Liquidity was abundant, and the low-yield environment made the excess returns promised by the post-Katrina spike in pricing highly attractive to investors. In addition, persistent concerns surrounding legacy reserving issues made the prospect of investing in a start-up more attractive. Today's environment could not be more different. The handful of investors who are long on liquidity have a wide array of high-yielding investment opportunities available to them. Those who specialize in ILS are finding it difficult to raise the debt financing necessary to sufficiently gear the underlying returns to meet their stakeholders' expectations. In addition, investor appetite for complexity in general has diminished.

Furthermore, some are arguing that the tariff for entry to the global reinsurance market continues to increase. Following Hurricane Katrina, the commonly accepted price of entry was $1 billion. In the current environment, brokers and clients are likely to demand that start-ups be endowed with an even higher level of capital at inception. In Standard & Poor's view, this alone would make it highly unlikely that a "Class of 2009" would emerge should a market-changing loss occur. Our scepticism is compounded by the fact that some members of the "Class of 2005" have failed to mature and are consequently continuing to struggle to profitably deploy the excess capital that many still have available to them.

Capital adequacy: Less is no longer more

Two years ago, reinsurers couldn't return capital to their investors fast enough. The prospect of a deteriorating pricing cycle, coupled with a desire to produce returns on equity (ROEs) in line with their banking brethren, was putting demonstrable pressure on many management teams to manage down their capital positions. To some external stakeholders, maintaining material levels of excess capital was viewed as being indicative of a weak and ineffective management team. The collective mindset at that time was about optimizing the upside in terms of shareholder returns. Now most stakeholders are encouraging management to focus on minimizing their downside. Consequently, holding excess capital is now considered a key competitive strength. While Standard & Poor's believes this to be a largely rational response to the events of the recent past, if reinsurers were to allow their excess capital to undermine underwriting discipline this would be viewed adversely from a ratings standpoint.

In Standard & Poor's view, there are a number of good reasons for reinsurers to hold relatively more capital in the current environment. First, as mentioned above, this is now perceived by clients and investors alike to confer competitive advantage. Second, this is a rational response to the persistent uncertainty surrounding the price and availability of restorative capital. Third, as many reinsurers revisit the risk capital requirements and tail dependencies within their internal economic capital models based on the events of the past 18 months, they are often finding it necessary to hold more capital against the same level of exposure. Finally, the potential, albeit in our view remote, threat of an overzealous regulatory response means that the majority would rather be safe than sorry.

We view excess capital held as a hedge against the increased uncertainty posed by the current environment positively, but believe that management will be challenged to maintain underwriting discipline, particularly if this trend persists. Excess capital also reinforces liquidity, which remains a strength for the majority of reinsurers. Nevertheless, most reinsurers are paying far more attention to liquidity management and contingency planning now than in the past. Following the demise of Lehman Brothers Inc. in September 2008, a number of reinsurers have initiated detailed reviews of the nature of their agreements with banks to ensure that they would be able to quickly recover their custodial assets should the counterparty become insolvent. Some less traditional reinsurers have also incorporated banking style liquidity stress tests as part of their ERM framework.

Financial flexibility: Bring your own

The sector's financial flexibility, defined by Standard & Poor's as its level of access to capital relative to its needs, is slowly recovering having all but disappeared during the final quarter of 2008.

The good news, as noted above, is that we believe the majority of reinsurers remain sufficiently well capitalized and their ability to organically generate capital will benefit from the prospective earnings enhancement linked to the improved pricing environment. In addition, a number of reinsurers have scaled back their appetite for exposures in peak zones, thereby reducing their capital requirement for catastrophe risk.

The bad news is that the options available to a reinsurer looking to raise capital are limited and/or expensive. Retrocession capacity continues to be stretched, and investor appetite for hybrid issuance remains anaemic, despite it having demonstrably improved in recent months. In fact, volumes of hybrid capital in issue in the sector have fallen this year as many reinsurers look to crystallize gains by buying back their own subordinated debt at steep discounts. It is questionable whether those investors that have been willing to crystallize substantial losses will have much appetite to return to the sector for the foreseeable future. Investors are more likely to be amenable to senior debt issuance, but its ineligibility for regulator and rating agency equity treatment makes it highly unlikely that this will become a permanent feature of reinsurers' capital structure. In the short term, and particularly while access to the hybrid market remains challenged, some issuers might look to use senior debt as a source of funding for a part-cash-financed acquisition. Nevertheless, to the extent there is further M&A activity, we would expect the majority of it to be financed either through existing resources or equity issuance. In our view, funding constraints and general risk aversion make it highly unlikely that there will be a further

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round of wholesale consolidation within the sector. Material transactions involving the 10-largest reinsurance groups remain less likely in our view, but there may be further activity involving midsize reinsurers over the medium term.

At the time of writing, two substantial M&A transactions are awaiting completion. Validus Holdings Ltd.'s acquisition of IPC Holdings Ltd. (IPC Re) and Partner Re Ltd.'s tie-up with PARIS RE. There were circumstances unique to both IPC Re and PARIS RE that made them relatively motivated sellers. IPC was facing some succession issues following the retirement of its CEO, Jim Bryce, and we believe some of PARIS RE's private equity investors may have wanted to accelerate the timeframe for an exit. As a result, we don't expect that these two transactions should be viewed as being indicative of a broader trend toward consolidation in the sector.

We believe fundamental uncertainty continues to surround the sector's ability to raise sufficient amounts of restorative capital in the event of a market-changing loss event in the near future. This systemic uncertainty would likely lead to greater short-term volatility in ratings should a large scale catastrophic loss occur (that is, one giving rise to insured losses of more than $30 billion). Those that suffer outsized losses, struggle to raise capital, and are consequently forced to materially scale back their business plans would likely see rapid, and potentially substantial, negative movement in their ratings. Conversely, those reinsurers that emerge with their balance sheet and reputation intact could see upside potential for their ratings given the enhancement this would provide to both their competitive position and future earnings potential.

Inflationary trends--one for the future?

This time last year the most significant risk we identified for the sector was that reinsurers would fail to adjust their pricing upward quickly enough to account for what we believed could be a step change in both the frequency and severity of claims. While the sector appears to have earned a short-term reprieve from this inflationary threat, we believe it looms ever larger as a potential risk over the medium term.

As anticipated, claims frequency has been trending up as the global recession takes hold. Statistics recently released by the Association of British Insurers suggested that the number and value of claims identified as being fraudulent in the U.K. had increased by 17% and 30%, respectively, in the past year. A continued shift towards nonproportional coverage, coupled with higher retention levels among primary insurers in recent years, mean that the impact of an increase in claims frequency is expected to be more pronounced for primary writers than their reinsurers, however. We believe the risk surrounding the potential for a spike in claims severity has eased as the short-term threat posed by widespread inflation has abated. Nevertheless, the risk of social inflation remains, particularly in the U.S. and U.K., and has the potential to be aggravated by the prevailing anti-corporate sentiment.

The unprecedented levels of fiscal stimulus and monetary easing adopted by the majority of the G8 countries over the past year could give rise to substantial inflationary pressures over the medium term. This may provoke the step change in loss severity that was a risk we had identified a year ago. A number of reinsurers are proactively considering and, in some cases, responding to this emerging risk. Some are looking to hedge their exposure to inflation risk, for example, by purchasing inflation-linked securities. Others are considering ways in which to reduce their exposure to inflation either by rebalancing their underwriting profile toward short-tail lines or revisiting the terms of index clauses. As another example, Swiss Reinsurance Company has cited the medium-term threat posed by inflation as one of the factors that drove its decision to place an adverse development cover with Berkshire Hathaway. Standard & Poor's views positively the proactive approach that a number of reinsurers are adopting to the risk of inflation and believes that this provides further evidence of the progress many have made in enhancing their ERM capabilities.

One battle down, more to come

We believe that reinsurers have emerged victorious from the first battle of what is likely to be a long-drawn-out campaign.

We believe the reinsurance sector has undeniably demonstrated its resilience over the past 12 months. The majority of rated reinsurers emerged from 2008 with both their balance sheets intact and a steely resolve to arrest the decline in underwriting margins. For this reason, we are able to maintain our stable outlook on the sector despite the negative rating trends that currently characterize many other segments of the global insurance markets.

Nevertheless, upside potential for our outlook on the sector will remain remote while significant economic uncertainty persists. Doubt surrounding reinsurers' abilities to raise sufficient amounts of reasonably priced capital, should the need arise, remains a key threat and one that has the potential to cause significant volatility in ratings in the event of a $30 billion-plus insured loss in the next year. The ability of reinsurers to maintain their momentum in the face of what we anticipate will be increasing pressure from their cedants will also be a key driver of the future direction of our rating actions in the sector. ■

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Raising The ERM Bar: Tighter Practices For Tougher Times

By Hiltrud Besgen and Laura Santori

Global reinsurers continue to lead the way relative to primary insurance writers in terms of their enterprise risk management (ERM) capabilities. This is the conclusion of Standard & Poor's Ratings Services since we introduced our ERM criteria in 2005.

We cite ERM practices as a contributing factor, at a market level, to the change in momentum to a hardening from a softening market in the fourth quarter of 2008 in our main outlook article. This was achieved in the absence of widespread underwriting losses, seemingly a pre-requisite of previous cyclical changes.

Further Improvements In Quality Of ERM Programs

Since our 2008 Global Reinsurer ERM analysis ("Reinsurers Continue To Lead In Enterprise Risk Management"), we have made several changes to our ERM assessments (see table 1). We now consider AXIS group to be "strong", whereas previously we had assessed it as "adequate with a positive trend". The ERM programs of the following reinsurers have been upgraded to "adequate with a positive trend" from "adequate": Allied World Assurance Co., Korean Reinsurance Co., SCOR SE, and Transatlantic Reinsurance Co. In addition, Caisse Centrale de Reassurance's ERM was upgraded to "adequate" from "weak". We have also included regional reinsurers from the Middle East in this year's ERM overview. All of them are included in the "adequate" category. Since they are typically highly capitalized compared with their risk exposure, the implementation of a well-advanced and sophisticated ERM is less crucial, in our view, to maintaining their financial strength than most of the other reinsurers with a tighter capital management relative to their risk exposure. Of the total 42 reinsurers we have assessed, about 31% have "excellent" or "strong" ERM classifications, and about 22% are classified in the "adequate with a positive trend" category, indicating our belief that their ERM programs could become "strong" within two to three years (see table 2).

The majority of reinsurers have built up an "excellent" or "strong" risk management culture (60%) and "strong" risk controls regarding property/casualty and catastrophe underwriting and reserving (51%) (see chart 1), in our assessment. We see investment risk controls, however, as less developed within the reinsurance industry, with only 34% of the players assigned an "excellent" or "strong" score. We consider 33% of the reinsurers to have "excellent" or "strong" strategic risk management capabilities and 30% "strong" or "excellent" emerging risk management (analysing and responding to potential risks) in place. All companies with an "excellent" or "strong" ERM program classification differ from the others mainly through the implementation of what we consider as "strong" or "excellent" strategic risk management processes and "strong" emerging risk management. We distinguish "excellent" ERM programs from "strong" ones mainly on the basis of what we see as a much longer track record of efficient integration of highly advanced ERM practices into the everyday processes and culture of the organization.

Proven Resilience In 2008

The financial fundamentals of global reinsurers have remained relatively resilient to the major challenges they faced in 2008 from the capital market disruption and natural catastrophes, in our observations. We believe that this is partly the result of an evolution in ERM capabilities, which have been transformed since the events of Sept. 11, 2001, and the subsequent sharp fall in stock markets that lasted until the first quarter of 2003. Against this backdrop of extraordinary loss experiences on both the asset and liability side, and the high volatility of the business model, reinsurers began to implement ERM programs and revisited their business models by focusing predominantly on their core competencies, such as risk and return-oriented underwriting and management of insurance risks, rather than striving for outperformance by taking significant risks on the asset side of the balance sheet.

Enhanced Regulatory Practices

Regulatory incentives to embed ERM practices have grown over the past five years in the form of the U.K.'s ICAS (Individual Capital Adequacy Standards) regime,

Table 1: Reinsurance ERM Assessment

Status: 31 July 2009 (ERM assessments and ratings apply to core operating entities only)

Endurance	Excellent	A
Manulife Financial Corp	Excellent	AA+
Partner Re	Excellent	AA-
Renaissance Re	Excellent	AA-
ACE	Strong	A+
Arch	Strong	A
Aspen	Strong	A
Axis	Strong	A+
General Reinsurance Corp.	Strong	AAA
Hannover Re	Strong	AA-
Munich Re	Strong	AA-
QBE	Strong	A+
Swiss Re	Strong	A+
Allied World	Adequate with positive trend	A-
Amlin Bermuda	Adequate with positive trend	A
Catlin	Adequate with positive trend	A-
Korean Re	Adequate with positive trend	A-
PARIS Re	Adequate with positive trend	A-
SCOR SE	Adequate with positive trend	A
Toa Reinsurance Co.	Adequate with positive trend	A+

the Swiss Solvency Test, and the EU's Solvency II. Bermuda houses a number of leading ERM practitioners that regard ERM as good for business. The BMA's (Bermuda Monetary Authority's) enhancement of regulatory practices, spurred on by the desire for equivalence with Solvency II, has reinforced the importance of ERM.

Further Modeling And Underwriting Enhancements Expected

Further enhancements to ERM approaches and the models in use have been implemented since 2005, after Hurricanes Katrina, Rita, and Wilma in the U.S. led to higher-than-expected losses. We expect further modeling and underwriting enhancements as a result of Hurricane Ike, in particular in the area of offshore energy exposures. In addition, we believe that the capital market dislocation underpinned the necessity to complement the results from economic models by stress testing. These tests will better evaluate potential negative effects from extreme events. The use of multiple metrics for measuring risk is, in our view, critical to obtain a broader view of the potential risk exposure and to appropriately define the overall risk appetite. It is also our belief that early measurement and appropriate consideration of findings from effective emerging risk management, where reinsurers are the "best of breed", could help to mitigate unexpected losses.

We see that a higher risk-sensitive strategy driven by the major loss experiences of the past, along with sophisticated ERM practices have supported the adherence to underwriting discipline. However, this adherence does not appear to be observed in the behavior of non-life insurers in many primary markets around the world. In addition, due to the shift to less capital market sensitive business models, the majority of reinsurers were much less affected by the recent economic crisis than primary insurers with exposure to the life insurance sector.

Table 1 continued		
White Mountains Re America	Adequate with positive trend	A-
XL Re	Adequate with positive trend	A
Deutsche Rueckversicherung	Adequate with strong risk controls	A+
Montpelier Re	Adequate with strong risk controls	A-
Transatlantic Re	Adequate with strong risk controls	A+
ACR	Adequate	A-
Arab Union Re	Adequate	BB
BEST Re	Adequate	BBB+
Caisse Central de Reassurance	Adequate	AAA
China Int. Reinsurance Co.	Adequate	A-
Everest Re	Adequate	A+
Harbor Point	Adequate	A-
IPC Re	Adequate	A-
Kuwait Re	Adequate	BBB
Lloyd's	Adequate	A+
Odyssey Re	Adequate	A-
Reinsurance Group of America Inc.	Adequate	AA-
Saudi Re	Adequate	BBB+
SCR	Adequate	BBB
Takaful Re	Adequate	BBB
Thai Re	Adequate	A-
Trust Re	Adequate	BBB

Table 2

ERM Score Count for Reinsurers

	July 2009	July 2008
Excellent	4	4
Strong	9	9
Adequate with positive trend	9	8
Adequate with strong risk controls	3	0
Adequate	17	11
Weak	0	1
Total	**42**	**33**

Strengthened Capital Bases And Built-Up Buffers Maintain Reinsurers' Resilience

Reinsurers have faced the crisis with strong balance sheets. In the years up to 2007, with a still-benign operational environment, reinsurers strengthened their capital bases and built up substantial buffers. In spite of asset write-downs and losses from Hurricane Ike, the majority of players across all regions did not experience excessive capital depletion in 2008. This is reflected in a moderate 10% decline of total adjusted equity on average across the sector. More importantly, according to our risk-based capital model, losses of most reinsurers remained within the excess capital buffers that they carried relative to their rating level. The majority of companies were able to continue to write business in 2009 without needing to raise a significant amount of capital. There were, however, two exceptions, Swiss Reinsurance Company Ltd. and XL Capital Ltd. Both reinsurers experienced considerably higher investment losses and capital depletion than peers. This led them to raise large amounts of additional funds in the capital markets and to increase retrocession usage. This worse performance relative to peers reflects, in our view, management's greater appetite for market risks (although now much reduced) in the investment portfolios. Our opinion on the strength of an ERM program does not reflect management's appetite. Risk tolerance levels and their potential impact on earnings and capitalization volatility are part of our assessment of management and corporate strategy.

ERM: Ever-Evolving, But Still Room To Grow

Overall we believe that reinsurers' high commitment to ERM will assist them in effectively managing further challenges that may arise from the ongoing difficult operating environment.

We expect to see further substantial developments over the next decade and we believe that the bar will continue to be raised. ■

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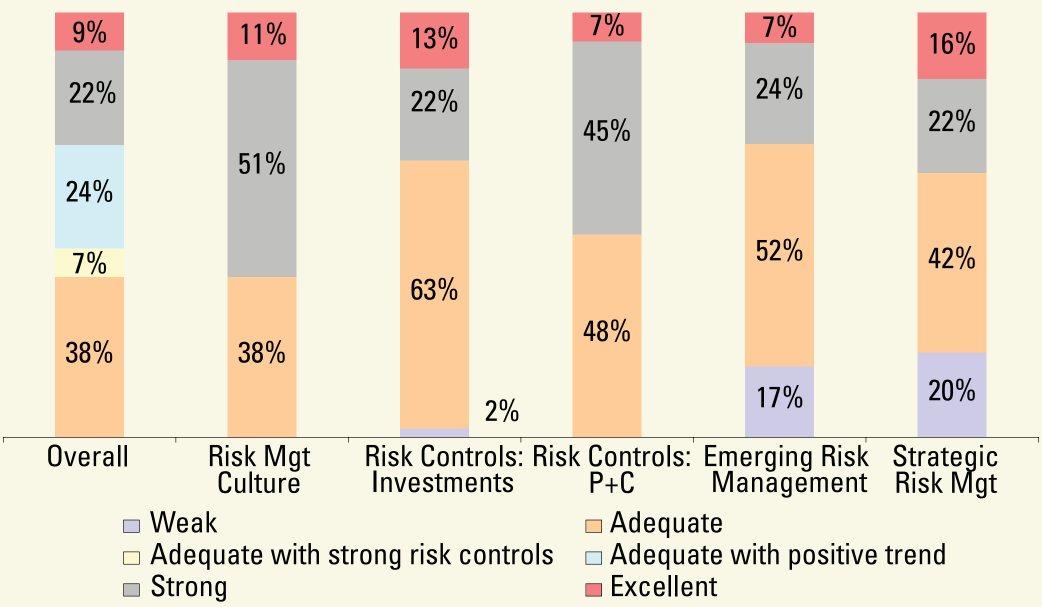
Chart 1: Reinsurers ERM Assessment Status 31 July 2009



Insurance-Linked Securities Market Adapts To Changing Conditions

By Maren Josefs, David Harrison and Dennis Sugrue

The insurance-linked securities (ILS) market has not emerged unscathed from the recent market disruptions. The collapse of Lehman, downgrades of sponsors and financial guarantee providers, and general investment losses have all had an impact. The result has been forced sales and limited new issuance, leading to an overall market contraction. Despite this backdrop, the market is beginning to re-emerge and adapt.

Standard & Poor's Ratings Services has seen improvements in structural features and better disclosure and believes this establishes stronger foundations from which the ILS market will develop and grow.

New issuance of ILS has been under pressure. Since its peak in 2007—with more than $12 billion in new securities—new issuance of ILS has slowed considerably. Several factors contributed to limited short-term growth expectations. The reinsurance market softened, disruptions in credit markets deepened, and then a few days before Lehman's collapse, hurricane Ike made landfall in the U.S., increasing uncertainty over potential losses. These events, together with the overall dislocation of bond prices (see chart 1), put a temporary halt to new issuance in the ILS market in the fourth quarter of last year.

However, 2009 has experienced a subdued recovery. In February this year, SCOR Global P&C SE was the first party to sponsor a transaction (Atlas V Capital Ltd.). Since then, issuers have launched nearly $1.4 billion of new cat bonds (of which we have rated $1.3 billion) and it's our understanding that the private market has been active as well.

Looking forward, we expect the ILS market to survive the current market difficulties and emerge stronger. We are already witnessing improvements in collateral structures and documentation disclosure, and we anticipate these will continue. As models keep evolving we expect new risk to be transferred and new players--both on the sponsor and investor side--to enter or re-enter the market. However, in the near term, we expect the recovery to remain somewhat subdued due to the broader capital market disruptions.

Concentration Of Investors In The ILS Market

We believe that the dislocation of the capital markets, coupled with the ILS market's relatively strong performance and its comparatively greater liquidity, led investors—especially opportunistic hedge fund investors—to deleverage their holdings to make up for losses in other parts of their portfolios. This may explain why the secondary market was very active during the latter part of 2008, in contrast to the dearth of new issuance. Since the beginning of this year, we believe the competition from traditional investments providing attractive returns has also reduced the need for these investors to put their money into a less well-known asset class. This has resulted in a concentration of investors in the ILS market, with dedicated ILS specialists left to make use of their knowledge of the market.

This could also be a reason why there have been fewer new cat bond issuances this year compared with earlier years (see chart 2). Ceding companies do not need to structure a public cat bond transaction to transfer their catastrophe exposure to these funds. Instead, the sponsors can enter into privately placed collateralized reinsurance or industry loss warranty agreements with an ILS fund given both parties' specialization in this space. We believe that ILS investors are aware that the reinsurance capacity in peak zones has been decreasing as players are withdrawing from the traditional reinsurance/retro market and are in a position to demand higher returns for providing additional capacity.

Concentration Of Peril Risks In 2009

To date this year, sponsors of new transactions have mainly sought protection against losses from only two perils, U.S. hurricanes and U.S. earthquakes. For investors, we understand this has created a more concentrated profile to specific U.S. perils. In compensation, we believe they are demanding higher spreads for each successive issuance. The issue spreads have generally been at least 30% higher than in previous years with the expected losses being at similar levels to previous years' issuances. Chart 3 shows the pricing levels in relation to the probability of a first dollar loss (the attachment probability). With the hurricane season now officially under way the available investment capacity is still tighter. It remains to be seen whether issues that transfer pure non-U.S. peak perils into the capital markets—such as European windstorms or Japanese earthquakes—will achieve better pricing for issuers.

Recent Lessons For The ILS Market From Lehman's Collapse

The collapse of Lehman had a direct effect on four nat cat bonds, as a result of which new transactions this year have included innovative structural changes. As the total return swap (TRS) counterparty in these four transactions, Lehman's role was to essentially replace investment risk in the collateral account and to provide cash flows that matched the bond payments to the investors and potential claims payments to the ceding insurers. However, Lehman's default brought to light certain problems with regards to the collateral, notably:

- A lack of transparency on the underlying investments in the collateral account;
- Too broad investment criteria for eligible collateral assets;
- A lack of collateral asset diversification;
- A maturity mismatch between the collateral assets and the nat cat bond;
- A lack of regular mark-to-market valuations of the collateral assets for most transactions; and
- No top-up provision for the TRS provider if the value of the assets fell below a certain threshold, or top-up provisions linked to the rating on the TRS counterparty and not the value of the assets in the collateral account.

As a result of these factors, the market value of the assets in the collateral accounts of the four affected bonds was so low that issuers couldn't find a replacement for the TRS counterparty, exposing investors directly to the investment risk related to the collateral assets. Since then, two of the four nat cat bonds have defaulted. Willow Re Ltd.'s class B notes series 2007-1 defaulted because the assets in the collateral account did not generate enough cash flow to make a full interest payment and Ajax Re Ltd.'s class A principal-at-risk variable-rate notes series 1 defaulted because funds in the collateral account were not sufficient to fully repay the principal at maturity. For further information on the two other outstanding bonds (Carillon Ltd.'s class A-1 notes and Newton Re Ltd.'s class A series 2008-1), see "Three Natural Peril Cat Bond Ratings Removed From Watch; Affirmed On Timely Interest Payments" in "Related Articles," published Dec. 22, 2008.

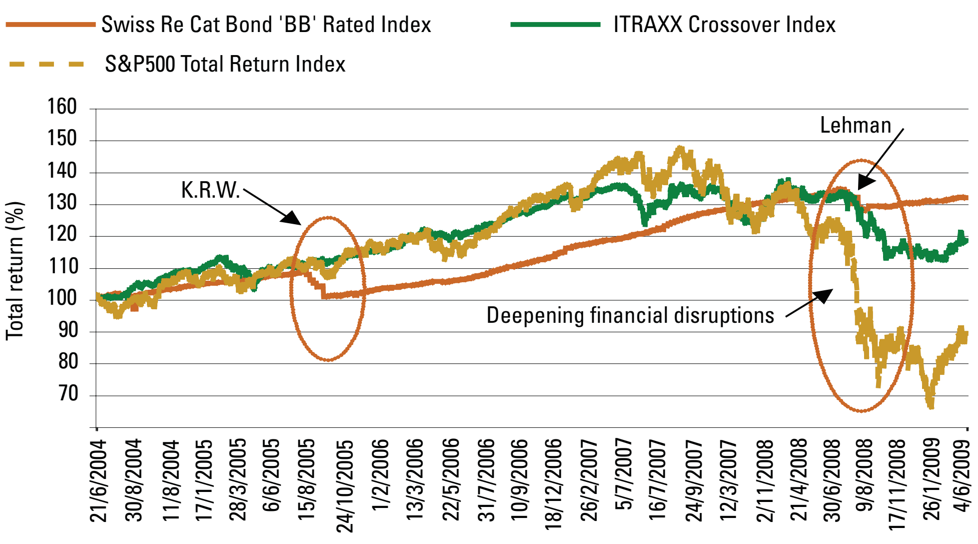
New Transactions Seek Solutions To Reduce Collateral Investment Risk

We have seen various collateral solutions in new transactions this year. In the following paragraphs we will give a short overview of these solutions. For more details on this and our rating approach, refer to "Latest Nat Cat Bond Transactions Seek Solutions For Managing Investment Risk," published June 11, 2009.

Improved collateral management when using a TRS counterparty

Most of the first nat cat bonds issued this year (Atlas V's series 1, 2, and 3, East Lane Re III Ltd.'s series 2009-I, Mystic Re II Ltd.'s series 2009-1, and Ibis Re Ltd.'s notes) used the traditional solution of contracting a TRS counterparty to guarantee the cash flow and value of the collateral assets and provide investors with a LIBOR-based return. At the same time, these TRS agreements incorporated improvements to reduce the investment risk within the collateral accounts by introducing more restricted investment guidelines, regular mark-to-market valuations, and top-up provisions tied to the value of the assets.

Chart 1: Relative Performance—Cat Bonds



 K.R.W. = Hurricanes Katrina, Rita and Wilma

Investing bond proceeds in highly rated assets

The second collateral solution employed by two transactions that we rate (Blue Fin Ltd.'s series 2 and Calabash Re III Ltd.'s series 2009-1) does not involve a TRS. Instead, all the collateral assets comprise notes issued specifically for the nat cat bond by a 'AAA' rated government-guaranteed entity or supranational institution, such as KfW or the International Bank for Reconstruction and Development. The notes have the option to be put—or sold—at par to the issuing entity on each quarterly payment date (after an initial period). The legal maturity of the 'AAA' rated notes is either the scheduled redemption date or the final extension date and they pay a LIBOR-based return.

Investing in money market funds

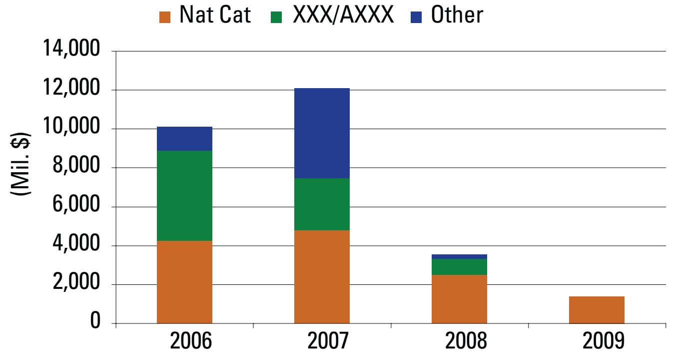
Some of the nat cat bond transactions that we rate also have a feature whereby, for example, at the bond's scheduled maturity the TRS terminates or the 'AAA' rated notes mature. The collateral assets are then reinvested in money market funds if certain events occur, such as an extension of the maturity of the notes.

One transaction (Residential Reinsurance 2009 Ltd.'s series 2009-1, 2009-2, and 2009-4 notes) has come to market without a TRS but with the collateral assets invested solely in money market funds over the whole life of the transaction.

The transaction documents limit the eligibility criteria for the money market funds to those that have a Standard & Poor's Fund Services' principal stability funds rating (PSFR) of either 'AAAmG' or 'AAAm'. In these cases, investors will receive a return based on the yield generated by the money market fund.

Charts 4 and 5 show how the distribution of different collateral solutions used in nat cat bonds has changed from 2008 to 2009. Whereas the TRS route was the favored solution in 2008, 2009 will be known as the year of new or enhanced collateral solutions. We understand that investors welcome the diversity in solutions and the diversification in terms of counterparty risk being offered. At the same time, we understand there are two broad views in the investor market: The first who seek to have financial risk removed from the structure and accept a lower yield, i.e., a treasury-based return, and the other who would like to continue receiving the LIBOR-based return albeit with a reduction in the investment risk from previously used solutions. At the moment, we consider that both are catered for with different solutions being offered to them. It needs to be seen whether any one structure will emerge the preferred long-term solution.

Chart 2: ILS Issuance By Year



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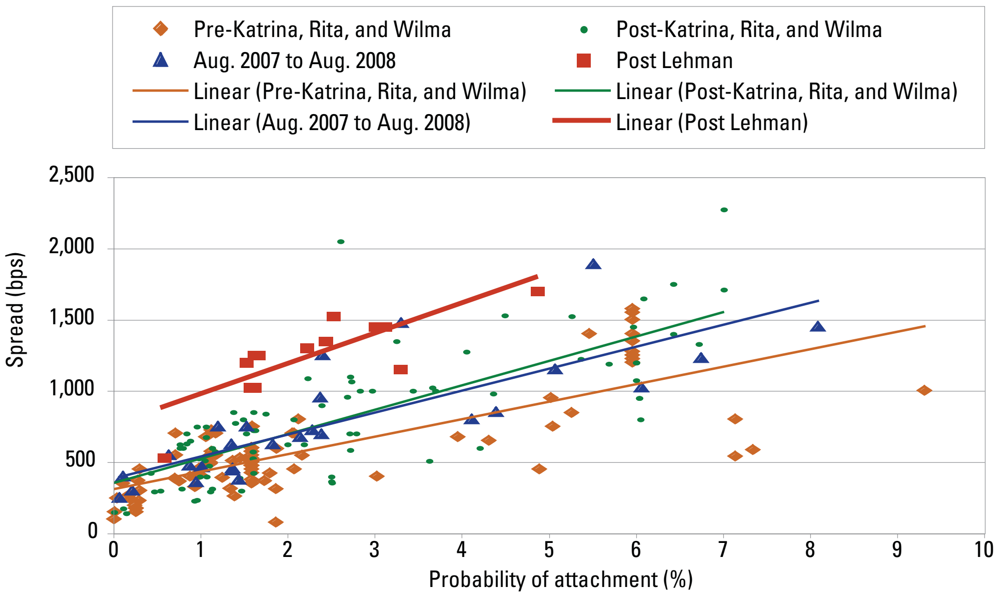
Areas For Further Improvements To The ILS Market

A focus on increasing transparency is a current feature of the ILS market. We understand that the principal transaction documents (in addition to the offering circular) are now being made available to investors prior to pricing. At the same time, information about the assets in the collateral account is now also available to investors. However, the availability and distribution of this disclosure is restricted to holders of the notes. We would anticipate that broader disclosure would enhance the liquidity and transparency of transactions. Overall, we believe that increased transparency is a positive market development.

The capabilities of service providers are under scrutiny. As the market is focusing on reducing the collateral investment risk and increasing transpar-

Chart 3: Natural Catastrophe Bonds-Initial Pricing



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ency, voices from the investor side continue to express concern about the various service providers involved in ILS transactions being able to perform their obligations in the speed expected by the market, especially following a major catastrophe. These concerns arose following Lehman's collapse when it was very difficult for investors to obtain information on the underlying assets in the collateral account.

Timeliness around disclosure following an event remains a concern. For example, publishing of loss estimates for various cat bonds in relation to hurricane Ike has taken several months, leaving investors with uncertainty about potential losses to their portfolio.

Investor representation in case of dispute appears to be limited. In the case of Avalon Re Limited, the outstanding decision on whether some of the claims are covered under the existing structure or not highlighted that no party exists in the transaction to actively represent the interest of noteholders in the case of a dispute.

The Credit Crunch And Its Effects On Specific Asset Classes

While ILS covers several insurance-related asset classes, the previous paragraphs primarily pertain to the natural catastrophe (nat cat) bond market. It has been the life securitization market that has suffered even more from the recent market dislocation, with investment losses primarily on a mark-to-market basis though there have been realized losses as well, downgrades of sponsors and financial guarantee providers

Table 1: Features Of The 2009 Nat Cat Bond Issues

Issuer	Series/ class	Sponsor	Amount	Peril	Attachment probability (%)
Atlas V Capital Ltd.	1	SCOR Global P&C SE	50	U.S. hurricane/U.S. earthquake	3.01
Atlas V Capital Ltd.	2	SCOR Global P&C SE	100	U.S. hurricane/U.S. earthquake	3.30
Atlas V Capital Ltd.	3	SCOR Global P&C SE	50	U.S. hurricane/U.S. earthquake	5.35
East Lane Re III Ltd.	2009-I	Chubb Corp.	150	Florida hurricane	1.57
Mystic Re II Ltd.	2009-1	Liberty Mutual Insurance Co.	225	U.S. hurricane/U.S. earthquake	1.53
Blue Fin Ltd.	2	Allianz Argos 14 GmbH	180	U.S. hurricane/U.S. earthquake	2.44
Ibis Re Ltd.	A	Assurant Inc.	75	U.S. hurricane	1.65
Ibis Re Ltd.	B	Assurant Inc.	75	U.S. hurricane	3.14
Resid. Re 2009 Ltd.	2009-1	United Services Automobile Assoc.	70	U.S. hurricane/U.S. earthquake	2.22
Resid. Re. 2009 Ltd.	2009-2	United Services Automobile Assoc.	60	U.S. hurricane/U.S. earthquake	4.87
Resid. Re 2009 Ltd.	2009-4	United Services Automobile Assoc.	120	U.S. hurricane/U.S. earthquake/other	1.66
Calabash Re III Ltd.	2009-1 (class A)	Swiss Reinsurance Co./ACE American Insurance Co.	86	U.S. hurricane/U.S. earthquake	2.53
Calabash Re III Ltd.	2009-1 (class B)	Swiss Reinsurance Co./ACE American Insurance Co.	14	U.S. earthquake	0.59

MMF = Money market fund. AIR = AIR Worldwide Corp. RMS = Risk Management Solutions Inc. TRS = Total return swap. Resid. Re. 2009 Ltd. = Residential Reinsurance. 2009 Ltd.

(the monoline insurers), and investors pulling back from the market.

XXX/AXXX

The regulation XXX/AXXX market was among the most negatively affected for the same reasons as are affecting the life market. Sponsors are working on finding workable solutions for both sides to resolve the current issues. In the past, investors were content for monoline insurers to take the risk on these deals. However, now that the monolines are confronted with their own financial challenges, we believe it will be more difficult for a sponsor to transfer these risks, particularly the non-financial related risks such as mortality or lapsation, to capital market investors.

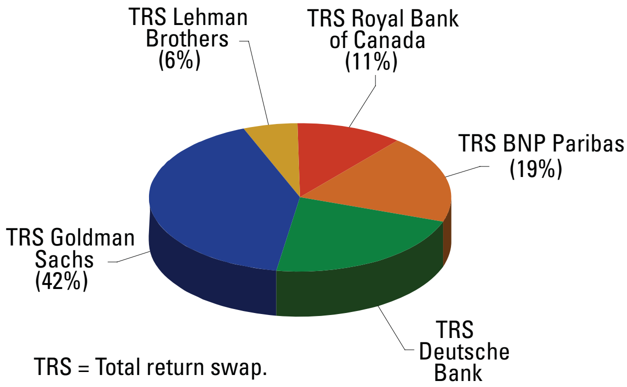
Extreme mortality

The mortality cat bond market was also affected by the downgrades of various monoline insurers. In addition, we had another flu outbreak. Although, at present, we consider that the H1N1 outbreak has had negligible effect on mortality rates in the territories, ages, and genders covered by the mortality bonds we have rated. Typically, these bonds would default only if a high mortality rate is reached, regardless of its cause. Assuming deaths are distributed evenly across the territories, ages, and genders specified in the mortality cat bonds, then the number of additional deaths (in excess of historical trends) required to trigger the bonds and cause a loss of principal ranges from about 400,000 to almost 1,100,000. For further details, refer to "Mor-

Term (years)	Yield	Spread (bps)	Rating	Modelling agency	Collateral	Trigger type	# of events to trigger	Occurrence/aggregate
3	3-month LIBOR	1,450	B+	AIR	TRS	ILW	1	Occurrence
3	3-month LIBOR	1,150	B+	AIR	TRS	ILW	1	Occurrence with inner aggregate deductible
3	3-month LIBOR	1,250	B	AIR	TRS	ILW	2	Occurrence with inner aggregate deductible
3	3-month LIBOR	1,025	BB	AIR	TRS	Indemnity	1	Occurrence
3	3-month LIBOR	1,200	BB	AIR	TRS	ILW	1	Occurrence
3	3-month LIBOR	1,350	BB-	AIR	KfW notes	Modelled loss	1	Occurrence
3	3-month LIBOR	1,000	BB	RMS	TRS	ILW	1	Occurrence
3	3-month LIBOR	1,425	BB-	RMS	TRS	ILW	1	Occurrence
3	MMF	1,300	BB-	AIR	MMF	Indemnity	1	Occurrence
3	MMF	1,700	B-	AIR	MMF	Indemnity	1	Occurrence
3	MMF	1,250	BB-	AIR	MMF	Indemnity	1	Aggregate
3	6-month LIBOR	1,525	BB-	RMS	IBRD notes	Modelled loss	1	Occurrence
3	6-month LIBOR	550	BB+	RMS	IBRD notes	Modelled loss	1	Occurrence

IBRD = International Bank for Reconstruction and Development. ILW = Industry loss warranty.

Chart 4: Collateral Solutions 2008



TRS = Total return swap.
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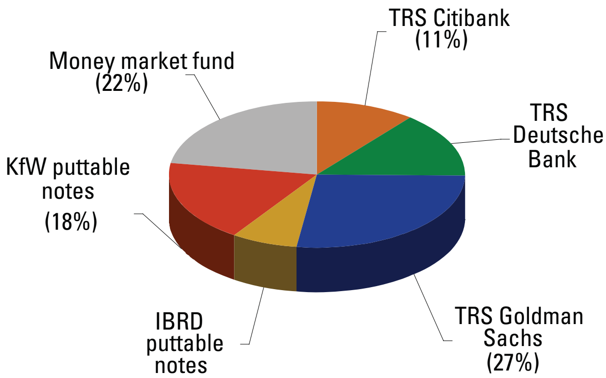
Chart 5: Collateral Solutions 2009



© Standard & Poor's 2009.
TRS-Total return swap.
IBRD-International Bank for Reconstruction and Development.

tality Catastrophe Bonds Are Currently Unaffected By Latest H1N1 Outbreak," published May 19, 2009.

Longevity

Unexpectedly, it was the longevity risk transfer market that has seen new issuance recently. To date this year, some innovative privately placed transactions transferred the risk to the capital markets. In March 2009, Norwich Union transferred £475 million of longevity exposure to Partner Re and other capital market investors. This was followed by Babcock, the first pension fund to enter into a longevity swap directly with Credit Suisse, transferring £500 million of longevity exposure over a 50-year period to the capital markets. The market sentiment is that these types of transactions will gain in popularity.

Update on other non-life ILS asset classes

In terms of other asset classes, the motor securitization transactions sponsored by AXA have come off risk (FCC SPARC – France only) or will only be on risk for another year (FCC SPARC Europe – Senior). The latter has just been reset and we affirmed our rating on the senior notes in this transaction.

Sponsors have extended the maturities of the trade credit reinsurance bond, Crystal Credit Ltd., and the casualty bond, Avalon Re, even though the bonds are not providing protection for the 2009 underwriting year. Crystal Credit has experienced adverse claims development as a result of the worse-than-expected economic downturn and Avalon Re has seen various events occur in respect of the bond: Hurricane Katrina, an explosion at the Buncefield oil depot, a steam pipe explosion in New York City, a spill at a Lake Charles oil refinery, and exposure to lead paint claims in California. As a consequence, the sponsors of both transactions have decided to extend the maturity of the bonds to allow for claims to develop. We understand that the sponsors believe that the likelihood of the bonds being triggered has increased.

Future Growth Of ILS Market Depends On "Opportunistic" Players

This year, Assurant Inc. has been the only new entrant to the market. The remaining sponsors have previously transferred cat risk into the capital markets on various occasions. In our opinion, this group of sponsors taps the market for strategic reasons, i.e., they consider it as an important alternative within their risk management strategies, rather than for "opportunistic" reasons, i.e., because the pricing and availability in the traditional market is not advantageous. Given the current pricing levels in the capital markets, especially for the peak U.S. peril, and the lower-than-expected hardening of the reinsurance market prices, we do not expect many first entrants or opportunistic buyers to the market. As the hurricane season gets under way in the U.S., we expect the market to shift its risk transfer efforts to other perils, especially European windstorms. Depending on the pricing levels for these issues, we might see a new entrant, but most likely it will be strategic issuers who are replacing their existing coverages, which are maturing.

Investors have an appetite for diversifying risks

From the investor's perspective, we understand that there is not only a demand for diversifying perils being securitized but also for other asset classes—such as motor, mortality, or longevity—to come to the market. In particular, in the life market we have seen some increased activity. In the past few months we understand a number of privately placed transactions have been completed transferring longevity risk from one party to another. This appetite is underlined by investors setting or planning to set up pure ILS life funds.

The question remains as to what opportunistic investors and sponsors will do in future

Whether or not nat cat ILS issuance for 2009 will reach the record levels seen in 2007 will depend on a number of factors. One of them is the price development for traditional nat cat reinsurance and the ability

We would anticipate that broader disclosure would enhance the liquidity and transparency of transactions. Overall, we believe that increased transparency is a positive market development.

of the ILS market to attract additional capital. If the reinsurance market continues to harden, this in our opinion will most likely attract new investors that seek to benefit from the additional returns they will be able to make. We expect that this increased capital supply will put pressure on current ILS prices and potentially close or at least reduce the pricing gap between the traditional reinsurance market and the ILS market. This way the ILS market could again become an attractive alternative for opportunistic sponsors and lead to increased issuance, in our view.

Appendix: 2009 Issuance Overview

European ceding companies (SCOR and Allianz Argos 14 GmbH) sponsored two of the U.S. peril transactions, the remainder were sponsored by U.S. companies (United Services Automobile Assoc., Assurant Inc., Liberty Mutual Insurance Co., Chubb Corp., ACE American Insurance Co., and Swiss Reinsurance Company Ltd.). In the current environment, investors seem to prefer simple and transparent structures, in our opinion. Here is a short overview of the features of the 2009 nat cat bond issues (for further details see the table below):

- A maturity of three years remains to be the standard.
- Atlas V uses an Irish special-purpose entity (SPE) whereas the rest of the SPEs are all based in the Cayman Islands.
- The transactions mainly feature first-event triggers, except for Atlas V's series 3, which has a second-event trigger.
- Most bonds were structured to be triggered on a per-occurrence basis. Two of the Atlas V classes have an "inner aggregate retention" and one Residential Re class has an "aggregate trigger."
- All of the transactions feature enhanced collateral solutions to improve the management of the investment risk inherent in the collateral trust. ■

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Financial Flexibility For Global Reinsurers – In Search Of An Oasis

By Peter Grant and Tom Upton

Financial flexibility is one of eight elements of analysis that Standard & Poor's Ratings Services evaluates when forming its overall ratings opinion, and it is arguably one of the least understood.

Over the past 12 months, the relative importance of financial flexibility in forming our overall view of an issuer's financial strength has increased. This reflects both the substantial declines in the levels of capital now available to reinsurers and the fundamental uncertainties surrounding the level of access to capital markets that would be afforded reinsurers should the need arise. We believe that this uncertainty would be particularly acute in the event of a market-changing loss over the next 12 months.

Standard & Poor's views financial flexibility as the balance between an issuer's access to capital relative to its needs. Our view of an issuer's financial flexibility is heavily influenced by the other facets of our analysis including capitalization, enterprise risk management, and operating performance. The most intuitive interaction is with our assessment of an issuer's capitalization, which encompasses three subcomponents--risk-based capital adequacy, loss reserving, and retrocession. An entity is less likely to need to raise capital if it holds significant amounts of excess capital relative to the target level consistent with its rating, if it has modest plans for future growth, and has a track record of strong earnings and conservative loss reserving. In this case, financial flexibility may well be viewed as an overall strength for the rating even if the entity in question is constrained in its ability to raise capital in its own right. In other words, we would generally only view an issuer's inability to raise capital as a negative driver for its rating if we expect that it will need additional capital to reinforce its financial strength.

In our opinion, financial flexibility need not necessarily imply access to external funding. In the current environment, organic capital regeneration through earnings is arguably the most reliable form of funding, and the one that is most within the company's control. This is one of the reasons that Standard & Poor's views positively the increase, albeit a modest one, in reinsurance pricing during 2009. We believe the earnings enhancement that these price increases should bring will provide reinsurers with a partial hedge against what we expect will be the continued unpredictability of capital markets. Another way in which a reinsurer can bolster its financial flexibility is to lower its level of required capital. For this reason, we have seen a number of reinsurers revisit their tolerances both for asset risk and catastrophe risk, particularly in peak zones, in the past year. Others have sought ways to offset their existing exposures often through increased hedging on the asset side, and/or the use of retrocession on the liability side. The general sense is that we would expect those reinsurers that incur outsized losses, relative to peers, in respect of a major future loss event (affecting either side of the balance sheet) may find themselves at the back of the queue should a wholesale round of recapitalization be necessary as

Chart 1: Price: Book Value ratio for a selection of listed reinsurers since the beginning of 2007

Data source: Bloomberg. Simple average Price:Book ratio for seven leading listed reinsurers

was the case in both 2001 and 2005.

Diversity of funding

Another critical element of our analysis relates to the diversity of funding sources. All other things being equal, the more diverse the sources of funding available to a reinsurer the better. Striking an appropriate balance between different sources is also an important consideration, however. For this reason, we would expect there to be a strategic element to the way in which a group manages its future financial flexibility. As an example, access to the debt markets, particularly for hybrid capital, is limited for all issuers at present, but far more so for those that lack a profile among investors due to their absence of a track record of successful issuance in the past. Similarly, while retrocession capacity remains tight, we would anticipate that those reinsurers that have longstanding relationships with their retrocessionaires would be granted preferential access.

Impact of the financial crisis on cost and availability of capital

The events of the past year have undeniably had a profound impact on both the cost and availability of capital. While this is true for virtually all sectors, the effect of this on reinsurers has the potential to be particularly marked given that they are often exposed to significant volatility on both sides of their balance sheet. The most prevalent sources of capital for reinsurers include core capital (that is, contributed equity and retained earnings), retrocession, and hybrids. Each of these has been materially affected by recent events.

Core capital within the reinsurance sector was significantly eroded during 2008. Most reinsurers experienced declines in their book equity of anywhere between 15%-30%. For the majority, the declines ate into the excess capital they had built during the highly profitable 2006/2007 calendar years. Consequently, very few were forced to raise capital in response.

Nevertheless, most rated reinsurers would like to replenish their capital buffer and there are a number of ways in which this can be achieved.

First, through retained earnings, although there are many forces at play here. Pricing increases, coupled with lower claims severity linked to the more moderate rate of inflation, should enhance future earnings, but this impact is not immediately reflected in reported earnings. Investment income will be lower than in the recent past, and likely more volatile. In addition, the substantial ballast provided to earnings in recent years by material releases from prior-year loss reserves is expected to persist through 2009, but diminish thereafter.

Second, through initiatives that preserve existing capital. These might include the suspension of share repurchase programs, a reduction in the dividend payout, or a recalibration of the Board's tolerance for risk.

Third, by raising additional core capital. Most reinsurers continue to trade at a discount to their book value, however. Hence the dilution (both in earnings and book value per share) that would result from a rights issue, coupled with the frictional costs and uncertainty of execution, provide very significant disincentives to new issuance. This effect is borne out by the chart above, which illustrates the extent of the decline seen in the Price:Book Value ratio for a selection of listed reinsurers since the beginning of 2007.

Consequently, with the exception of funding for M&A activity, we would only expect to see listed reinsurers attempting to raise fresh equity capital under extreme circumstances.

Retrocession capacity continues to be scarce, and is expensive. As a result, most reinsurers would rather scale back their gross underwriting than increase their reliance on retrocession. In our view, the scarcity of retrocession capacity, the availability of which has been in decline for a number of years, reflects two key factors. The first is that the large retrocessionaires also generally write reinsurance and are consequently facing the same constraints as their clients. Second, the relative lack of proximity to the underlying risk, coupled with the limitations on the timeliness and quality of data this implies, is proving to be a strong disincentive to would-be retrocessionaires. The insurance-linked securities (ILS) market has been resuscitated following the demise of Lehman Brothers, but issuance volumes for natural catastrophe bonds in 2009 are not expected to reach the peak level seen in 2007 (refer to related article entitled Insurance-Linked Securities Market Adapts to Changing Conditions). Nevertheless, we expect the level of sponsor interest to pick up as increased pricing levels for traditional capacity make the high-yield expectations of ILS investors more achievable. Similar forces are at play in the sidecar (that is, special purpose underwriting vehicles, often formed to provide capacity for natural catastrophe perils when supply in the traditional market is constrained) segment where new capacity has been very difficult to come by.

Investor appetite for hybrid instruments constrained for foreseeable future

In our view, the greatest uncertainty in respect of the future price and availability of capital exists in the hybrid equity market. For a number of issuers, particularly the large global reinsurers, hybrid equity has become a significant source of capital over the past decade.

The advantages of hybrid equity from an issuer's perspective are clear. It provides an alternative source of funding, the servicing costs in respect of which are generally tax deductible. In addition, its structural features, namely its long tenor, subordination, and the issuer's ability to defer interest historically meant that many such instruments were considered to be sufficiently loss absorbing to qualify as equity capital both for regulatory and rating agency purposes. From an investor standpoint, the incremental yield these instruments offered vis-à-vis more senior instruments seemed compelling in a benign operating environment.

Events of the past year, primarily high profile defaults in respect of banks for which this was also a common and popular form of capital, appear to have fundamentally undermined the level of investor appetite for instruments of this type. Towards the end of last year, this had a profound flow-on effect to the level of investor demand for (re)insurer hybrids, causing their prices to plummet. As demonstrated by the table below, many high profile issuers took advantage of the dislocation in the hybrid market to buy back some of their outstanding hybrids, crystallizing substantial gains in the process.

As a result, we believe investor appetite for hybrid instruments will be constrained for the foreseeable future. Over the medium term, this market would only likely be open to the largest, most highly rated issuers with a demonstrable track record of successful issuance in the past. Nevertheless, even for these privileged few, the current pricing levels for hybrid securities would likely make their issuance unattractive even when compared with the prevailing elevated cost of equity.

Table 1: Reinsurer hybrid repurchases Q4/2008 thru Q2/2009

All values in USD millions	Consideration Paid	Par Value	Discount to Par (%)
SCOR	92.5	228.2	59
Everest Re	83.1	161.4	49
Aspen	34.1	66.8	49
PartnerRe	98.4	186.6	47
Lloyd's	96.4	150.2	36
QBE	479.4	687.0	30
Munich Re	*239.3	331.7	28
Validus	37.0	45.7	19
Total	1,160.2	1,857.6	38

Source: Company reports; * Standard & Poor's estimate based on the range of repurchase prices disclosed by the company

What does the future hold?

The events of 2008 had a profound adverse effect on the availability and cost of capital for reinsurers. While financial market conditions and the availability of capital have improved since the first quarter of 2009, it remains markedly different from conditions that existed two years ago. Equity issuance remains highly unattractive at today's multiples, and both hybrid issuance and retrocession capacity are difficult to come by at any price. For these reasons, we expect capital preservation and organic capital regeneration to remain the order of the day for most reinsurers over the next 12 months-18 months. Should the "big one" strike during this time, our current stable outlook on the sector would be threatened. ■

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Domicile Of Choice – Where Is It Now?

By Laline Carvalho, Rob Jones and Thomas Upton

Bermuda has long attracted vacationers from around the world to its warm climate and pink-sand beaches. Over the past decade, the island has lured a different breed—global reinsurance writers—for different reasons.

In 2008, Bermuda-based reinsurers accounted for about $13 billion, or 9.1%, of total global net reinsurance writings of $146 billion (according to Global Reinsurance Highlights' figures). Just 10 years before, they contributed a much more moderate $3 billion, or 3.7%, of the $87 billion total.

The question now, in Standard & Poor's Ratings Services' view, is whether Bermuda can maintain its status as a key domicile of choice for global reinsurance companies (and particularly for new company formations) now that other countries, such as Ireland and Switzerland, have thrown their hats in the ring.

Over the years, the importance of Bermuda to the reinsurance industry has grown for several reasons, including the relative speed with which companies can receive regulatory approval and begin operations (in many cases a few weeks versus many months in other jurisdictions), as well as the island's favorable tax system and geographical proximity to the U.S.

The wave of new company formations following the terrorist attacks on Sept. 11, 2001, and Hurricanes Katrina, Rita, and Wilma in 2005 further accelerated the island's growth in the reinsurance sector. As investors looked to take advantage of improved reinsurance pricing following these events, they raised significant amounts of new capital in late 2001 to early 2002 and late 2005 to early 2006, not only to support existing global reinsurers, but also to help form start-up companies. With the need for the expedient establishment of these new entities to take advantage of existing market opportunities and the prospect of a more favorable tax system, Bermuda provided a clear choice.

Can Bermuda Retain Its Attractiveness?

We believe there are a number of factors that could make Bermuda less desirable to global reinsurers in the coming years. One of the biggest reasons may be the possibility that the U.S. (and possibly other countries) could change its tax treatment of U.S.-sourced business going to Bermuda and other low-tax domiciles. This could mean that (re)insurers based in these low-tax jurisdictions may be required to pay higher taxes related to business originated in the U.S. or other higher-tax jurisdictions. Although the full scope of such potential changes remains unclear, many market experts expect them—if enacted—to be most relevant to Bermuda-domiciled (re)insurers that quota-share a significant proportion of the gross writings produced by their U.S. subsidiaries to Bermuda. Given the significant uncertainty about this issue, it's difficult to fully measure its potential impact on Bermuda writers. However, the mere threat of the U.S. changing its tax treatment of Bermuda-based companies and the fact that the Group of 20 Finance Ministers and Central Bank Governors (G-20) has branded Bermuda a tax haven are unwanted distractions for current and prospective Bermudian insurers.

In addition, Bermuda has limited resources, and it's becoming increasingly difficult to obtain work visas as well as find permanent offices and living spaces and schooling for foreign workers' children. Currently, many employees from the Class of 2005 companies (Bermuda start-ups that were formed to take advantage of favorable market conditions following Hurricanes Katrina, Rita, and Wilma in the U.S.) commute to the island during the week and return to their homes in the U.S. over the weekend.

Also, upcoming regulatory changes in Europe related to Solvency II have raised the bar for (re)insurance regulation and mutual regulatory recognition with other insurance jurisdictions. However, Bermuda has responded to these changes proactively, with the Bermuda Monetary Authority (BMA) taking several steps in recent years to enhance its oversight of the Bermuda (re)insurance market, which has included the use of consolidated U.S. generally accepted accounting principles reporting and the introduction of a risk-based capital adequacy model. The BMA is also beginning to review insurers' internal capital models, well in advance of most European counterparts. Thus, the regulatory burden is increasing.

Chart 1: Global Reinsurance Market Share As Of 2008

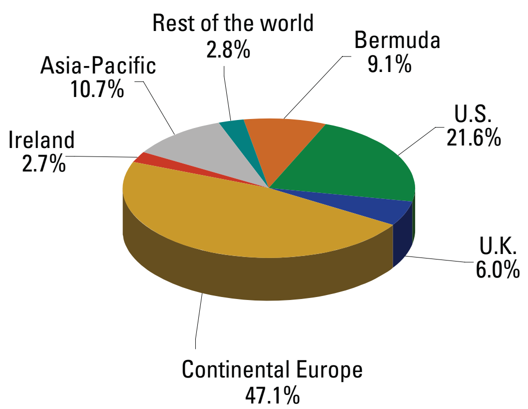
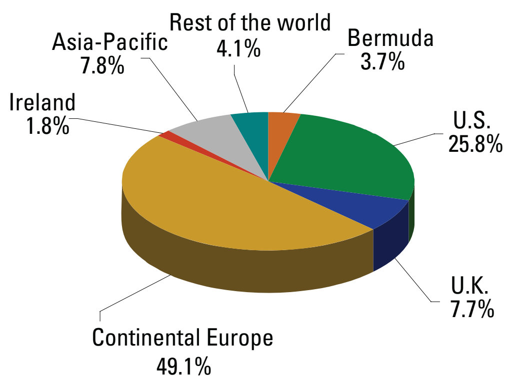


Chart 2: Global Reinsurance Market Share As Of 1998



Looking To Other Countries For Domiciling Reinsurance Business

These factors have contributed to existing players' and potential investors' greater interest in alternative domiciles for global reinsurers, such as Ireland and Switzerland. Ireland currently contributes a small proportion of reinsurance writings, with approximately $4 billion, or 2.7%, of total global net reinsurance premium production (based on companies surveyed by Global Reinsurance Highlights this year) at year-end 2008. However, these figures underestimate the growing importance of Ireland in the global reinsurance landscape. With a talented workforce, a lower cost of living (relative to Bermuda), existing tax treaties with the U.S., and the advantage of offering access to insurance and reinsurance writings with other EU countries, Ireland has seen a significant increase in (re)insurance company formations in recent years. Many of these formations are subsidiaries of Bermuda- and U.S.-based insurers and reinsurers that are looking to Ireland as their main future operating platform within the EU, such as Partner Reinsurance Europe Ltd. (a subsidiary of PartnerRe Ltd.) and XL Re Europe Ltd. (part of XL Capital group). In addition, in the case of some Bermuda-based companies, Ireland could serve as a potential country for holding company redomestication. A number of Bermuda (re)insurers have also transferred direct ownership of their U.S. (re)insurance subsidiaries to Irish intermediary holding companies, further distancing their U.S. operations from Bermuda in a defensive step against possible changes in the U.S. tax treaties with Bermuda.

Switzerland currently represents 9.3% of total global net reinsurance premium production, largely because it is the domicile of Swiss Reinsurance Co., the second-largest reinsurer in the world. Recently, the country has gained increasing attention as a potential domicile for future formations or redomestication, particularly since the redomestication of global insurer ACE Ltd. to Switzerland from the Cayman Islands in mid-2008. Switzerland is not a member of the EU and therefore does not offer the same type of access to the EU market as Ireland. However, it's conveniently located in the middle of Europe, benefits from a well-educated workforce, boasts large numbers of insurance and reinsurance professionals, and has long-standing tax treaties with the U.S., which likely will remain unchanged, even if U.S. taxation changes occur.

Other potentially attractive domiciles for global (re)insurers include Dubai, Bahrain, and Qatar, although the Middle East currently represents only a very small proportion of global reinsurance writings and only a few reinsurers have chosen to domicile there. Well-established (re)insurance domiciles such as the U.K. and the U.S. will likely regain ground on Bermuda in the coming years. Lloyd's, in particular, continues to enjoy the ongoing support of an increasingly diverse array of capital providers. An increasing number of Bermuda-based (re)insurers have obtained membership at Lloyd's through the opening of a new syndicate or the purchase of existing Lloyd's businesses as a means of diversifying business and gaining access to international business that traditionally doesn't go to Bermuda. This represents an interesting reversal from just a few years ago, when a few U.K.-based (re)insurers, including Amlin and Hiscox redomiciled to Bermuda and many others set up Bermudian operating companies.

Some reinsurers might reconsider the U.S. reinsurance market, which has experienced a continued contraction in the amount of premium writings and the number of players over the past decade, as a desirable domicile. Despite its recent contraction, the U.S. remains a significant contributor to global net reinsurance writings, with $31.6 billion in writings, or a 21.6% market share, at the end of 2008. A U.S.-based reinsurer provides the advantage of being closer to U.S. clients in one of the largest reinsurance markets in the world. Following substantial losses resulting from severely underpriced and under-reserved U.S. casualty writings in the late 1990s and after the Sept. 11 terrorist attacks, the U.S. reinsurance market was left with no independent reinsurance players. Current U.S.-based reinsurance writers are subsidiaries of European and Bermuda-based groups or are part of larger U.S. conglomerates. Two exceptions are U.S.-based reinsurer Transatlantic Holdings Inc., which recently became a fully independent player following a secondary public offering of the majority of its shares held by American International Group Inc., and U.S.-based life reinsurer Reinsurance Group of America Inc.

Global Reinsurers Are Consolidating, But They're Also Expanding Outside Bermuda

Depending on how the U.S. taxation debate is resolved, Bermuda's position as the domicile of choice for new reinsurance formations could weaken. Given the importance of the (re)insurance sector to Bermuda's economy, a significant exit of (re)insurance players, if ever to occur, would most certainly have broad ramifications for the island.

When it comes to what effect this could have on businesses, we believe that among the Bermuda (re)insurers that Standard & Poor's rates, potential changes in taxation on U.S. business would have a slight to moderate impact. This is because many Bermuda writers are global and have, over time, established a local presence in several jurisdictions around the world. They can source business from a variety of locations and most could change domiciles relatively easily if necessary or if desired for regulatory, taxation, or other reasons.

The global reinsurance sector has seen continued consolidation over the past decade, leading to a smaller number of significantly larger players in the sector, most of which offer a wide array of coverages and services on a global basis through several subsidiaries around the world. In the period following Hurricane Katrina in 2005, the reinsurance sector saw the proliferation of alternative sources of capital for reinsurance rising side by side with the Bermuda Class of 2005 formations. Among these alternative sources was the formation of a significant number of third-party funded vehicles called sidecars, designed to provide reinsurance coverage for a limited number of years through large quota-share arrangements with existing reinsurance writers. Insurers also used catastrophe bonds extensively in 2006 and 2007 as an additional source of reinsurance capacity, although their use has declined significantly over the past 18 months given difficult conditions in the capital markets.

We believe future large catastrophe events will likely lead to (re)insurance providers and investors raising fresh capital from traditional and nontraditional sources, as seen in 2005 and 2006. This probably will include the formation of new companies in a broader range of domiciles (other than just Bermuda) as well as the reemergence of sidecars or other alternative vehicles to meet market demand. ■

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Solvency II: Wounded, But Alive And Kicking

By Rob Jones, Yann Le Pallec and Wolfgang Rief

The European Parliament (EP) approved the Solvency II framework directive on April 22, 2009, and it will come into force on Oct. 31, 2012. In Standard & Poor's Ratings Services' opinion, Solvency I is no longer fit for purpose and is implemented by national supervisors in many different ways around Europe. Solvency II holds out the prospect of a radical Europe-wide modernization of insurance supervision, putting it on a much more risk-sensitive footing than most other supervisory regimes around the world.

Some commentators have cited the current turmoil in investment markets as reason to pause before embarking on Solvency II. Our opinion is the contrary; we believe that the turmoil highlights the urgency of implementing Solvency II. This opinion appears to have been shared by the authors of the report to the European Commission (EC) of the "High-Level Group On Financial Supervision in the EU," chaired by Jacques de Larosière, which stated that Solvency II should be "adopted urgently".

Solvency II remains controversial and we commented on the features that gave rise to the controversy in our article published on March 12, 2008, titled "One In Four Of Europe's Insurers Could Face Major Strategic Decisions Under Solvency II." This article updates our commentary for recent political, supervisory, and economic developments under the following headings:

- Group support
- Equity risk
- Minimum capital requirement (MCR)
- Market impact

We also comment below on:

- Annuity products in the U.K.
- Bonus reserves in Germany
- Diversification effects
- Standard solvency capital requirement (SCR) calibration
- Internal models
- Implications for ratings
- Convergence with International Financial Reporting Standards (IFRS)

Since our earlier commentary, the Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) produced its fourth Quantitative Impact Study (QIS 4) and the draft Directive was debated extensively in the EP and the Council Of Ministers. The original EP position on the Directive was supported by the EC, but proved to be unacceptable to the Council. This delayed the adoption of the Directive by six months while a compromise was developed. As we anticipated, group support proved to be the main stumbling block, although France was also concerned with equity risk. In the final Directive, the group support provisions were deleted and revisions were made to the equity risk provisions. However, group support will be revisited by the EC by 2015.

Recap on Solvency II

Solvency II is intended to completely overhaul supervision of insurance within the EU. In our view, it offers a realistic prospect of moving Europe's insurance supervision onto a modern, risk-sensitive platform far superior to that of the existing regime and most other approaches currently in use around the globe. However, many insurers are likely to find the transition challenging because the current Solvency I regime has changed little since it was instigated more than 30 years ago. Solvency II consists of three pillars:

- Pillar 1: Quantitative requirements;
- Pillar 2: Supervisory review; and
- Pillar 3: Disclosure requirements.

The EC's consultation process has included a series of quantitative impact studies (QIS) undertaken by CEIOPS, the fourth of which was reported on in November 2008. A fifth QIS is expected in 2010.

Group Support: The Main Stumbling Block

Group support was the key issue which was not adopted in the Directive in its original form. Ultimately, the provisions were simply deleted. The draft Directive originally envisaged that subsidiaries of groups would only need "local" capital sufficient to cover their Minimum Capital Requirement (MCR), with the shortfall below the Solvency Capital Requirement (SCR) potentially being covered by group support, possibly in the form of a limited guarantee. The impact would likely have been significant since the Directive will result in insurer SCRs being a multiple of between 2.2x and 4x the MCRs. Certain member states led by Poland and Spain voiced concerns about the potential significant delegation of powers to a lead supervisor in another state and a consequent loss of influence over their home insurance markets. They were also concerned about their potential role as lead supervisor and their ability to effectively supervise insurers in markets other than their own, where they may have little knowledge of local products and market practices.

While the group support provisions were deleted, the group solvency provisions remained. However, in our view, these provisions will be undermined by the absence of group support. Therefore, the computation of group solvency may be irrelevant for many groups with several subsidiaries across Europe since there would be no means to downstream the group diversification benefits (which were retained in the Directive). The diversification effect is illustrated in QIS 4 by the average group SCR being 21% lower than the sum of subsidiary SCRs. Furthermore, the proposed college of supervisors would become a less meaningful forum because each regulated subsidiary will be capitalized on a more conservative basis than was originally envisaged.

International groups are rationalizing their group structures, transferring business to branches and closing down subsidiaries wherever possible.

While there are some details to address by implementing measures, such as whether diversification benefits could be recognized between subsidiaries within any one country, we understand that insurers are preparing in various ways. In particular, international groups are rationalizing their group structures, transferring business to branches and closing down subsidiaries wherever possible. Internal reinsurance or internal hybrid capital may allow some relief, but it is possible that insurance groups will need to raise new capital purely to downstream it to their subsidiaries (whose capital requirements will typically increase under Solvency II). The absence of group support could adversely affect the fungibility of capital within an insurance group.

Equity Risk SCR: A Critical Issue For France

The provisions relating to equity risk in the original draft were also significantly amended in the final Directive. The original QIS 2 calibration had an SCR of 40% of the market value of equity investments. By QIS 3, this had been reduced to 32%. QIS 4 retained the 32% SCR, but also tested an "equity dampener" based on the notion that the percentage equity capital requirement should be reduced as equity values declined. Based on QIS 4, the effect of the equity dampener was to reduce the effective average equity capital requirement to 29% (based on year-end 2007 balance sheets, which were the subject of QIS 4). Based on 2008 balance sheets, the charge would have been considerably lower. The Directive adopted the equity dampener with a maximum reduction in the capital requirement of 10 percentage points, that is, as low as 22% using the QIS 4 calibration. According to the QIS 4 report, most companies and supervisors thought that the 32% equity SCR was too low and they questioned the credibility of the equity dampener. For the 160 insurance entities submitting an internal model, the average equity SCR was 39%. For the 15 groups submitting group internal model results, each had an equity SCR in excess of 40%.

We believe France has reservations regarding the equity SCR because of the typically high equity exposure retained by its insurers and was instrumental in the Council's compromise wording (France held the presidency of the EU during the second half of 2008). The final directive also included an alternative equity stress test for ring-fenced long-term pension business based on an "equity holding period".

Annuity Products: Concerns In The U.K.

QIS 4 results for life insurers operating in the U.K. continue to show a high proportion (greater than 20%) of companies failing to meet the SCR. We believe one of the key issues for this sector relates to annuity business. Specifically, the absence of any liquidity premium in the discount rate applied to liabilities, together with a high risk margin and onerous longevity stress, result in a large proportion of annuity writers disclosing insufficient capital to meet the SCR. Results in the U.K. are also depressed by the capital requirements for credit risk relating to often unrated intra-group reinsurers. Standard & Poor's believes there will be significant pressure from the industry to recalibrate the reserve and capital requirements for annuity business given its size and importance to the sector. The proposals as they stand are likely to significantly impact on the economics of this product line in the U.K. and may result in higher annuity rates.

The Economic Value Of Free Policyholders' Bonuses And Terminal Bonuses Is A Vital Issue For German Life Insurers

Under Solvency I, the free policyholders' bonuses (free RfB) and terminal bonuses represent the bulk of regulatory capital for German life insurers, both being viewed as Tier 1 surplus funds. Discretionary bonuses are allocated toward these surplus funds and act as a buffer between creation and distribution of profits in order to flatten annual volatility in results and to allow more stable allocations toward policyholders over time.

Under the economic view of Solvency II/QIS 4 all policyholders' outgoings are treated as--discounted--liabilities, including future surplus distributions. The future surpluses are split into shareholder and policyholder components, the split being based on the current supervisory rules for surplus participation. The policyholder part includes the so-called going-concern reserve, which forms part of the available solvency capital. The going-concern reserve is based on the notion that the profits from business in force are partly being used to fund solvency requirements. The solvency capital that is attributed to future policyholders is not a liability of current policyholders and therefore does not represent a liability. The German approach to QIS 4 assumes that this going-concern reserve equals approximately the MCR (although further refinements are expected).

It is important to note that a part of the future policyholder surplus (going-concern reserve) is included in the available solvency capital, and that the other part, although shown as a liability, still has risk-absorbing potential and reduces the SCR in stress scenarios in our view.

The German QIS 4 approach, in Standard & Poor's opinion, is a positive development as it addresses the main weaknesses of the German QIS 3 approach (total free RfB and terminal bonuses were treated as available solvency capital; the best estimate--discounted--technical reserves did not reflect requirements for options and guarantees).

Other Risks May Need Their SCRs Recalibrated

Under QIS 4, the SCR required by the standard model exceeded the SCR required by insurers' internal models for most risks, as expected. The reverse was true for equity risk where the median internal model SCRs exceeded the QIS 4 standard model SCRs by 8% (see above). This was also the case for property investment risk (7%), mortality risk (30%), and operational risk (33%). So the incentive to provide internal models is likely to be limited for certain risks if they are influential in the overall outcome. CEIOPS is expected to revisit some of these capital requirements for QIS 5.

MCR: An Unsatisfactory Compromise

The final Directive ended the extensive debate over the level of MCR. The approach involves a set of capital requirements for liability risk (referred to as the "linear method") with the result constrained by a "corridor" based on the SCR.

The linear method is much less risk sensitive given its simplicity relative to the SCR and especially because of the absence of asset and ALM risk-capital requirements. It is similar to Solvency I in these respects. QIS 4 tested a corridor of between 20% and 50% of the SCR. The shortcomings of the approach are apparent from the QIS 4 results with only 55% of insurers falling within the corridor based on the standard SCR (17% of insurers' MCRs were capped at 50%; 27% were affected by the floor). Life insurers are affected more than non-life with only 44% being within the corridor (non-life 67%). In fact, the linear method produces (uncapped) MCRs that are greater than the SCR in some cases. Thus we consider that the linear measure is flawed.

According to the Directive, the MCR will be calibrated at an 80%-90% confidence interval. By comparison, the SCR is calibrated at 99.5%. This should allow supervisors to differentiate between withdrawal of an insurer's authorization when the MCR is breached and the requirement to submit a restoration plan when SCR is breached (the "ladder of intervention").

Several supervisors favored the simpler and clearly more risk-sensitive "compact approach" based on a fixed percentage of the SCR (35%). We opined in our previous commentary that the compact approach was the only credible solution, as has much of the industry. However, many member states object because of concerns over legal certainty and the related issues of complexity and the ability to calculate SCR/MCR frequently (especially where an internal model is involved).

The Directive narrowed the 20%-50% of SCR corridor tested in QIS 4 to 25%-45%. Even the latter position will, we believe, result in a ladder of intervention that varies considerably and ultimately insurers may in practice see their authorization withdrawn at widely varying percentages of SCR.

Market Impact: A Strategic Challenge For Many Insurers

With one third of European insurance entities participating in QIS 4, and 60% by market share of premiums, this was a substantial improvement on QIS 3. Although the median SCR coverage ratios across Europe based on QIS 4 were around 200% (life 230%, non-life 193%, reinsurance 221%), approximately 11% of insurance entities failed to cover their SCR (1.2% failed to cover the MCR). This compared with 16% at QIS 3. However, it is important to recognize that QIS 4 was based mainly on 2007 year-end balance sheets. If the exercise was repeated on 2008 balance sheets, a significantly higher percentage would be expected. We formed the view based on QIS 3 that 25% of Europe's insurers would need to take strategic action in response to Solvency II (reduce scale, reduce risk, raise capital, employ more risk mitigation—such as purchasing more reinsurance—merge with other insurers, or be acquired). We see no reason to revise that view for the reason stated above and given that the 11% result referred to above did not take into account any buffer (in practice insurers will want to operate with a substantial buffer above the SCR).

The analysis above focuses purely on the balance sheet. We believe Solvency II will also have a significant impact on the competitive landscape by causing a shift in favor of large diversified groups (although this will be limited by the absence of group support). The more diversified insurers will likely enjoy large supervisory diversification benefits and this could boost their ability to compete on price. Additionally, companies that lack the resources to respond to sophisticated supervision are likely to be hard hit by the implementation of Solvency II.

In our view, these issues are likely to add to the numbers of entities that may miss Solvency II capital targets and could contribute to a progressive reduction in the number of European insurance entities. Although we believe that Solvency II is rightly radically different from the current regime and should result in more efficient markets, there will be casualties in the transition. However, Solvency II is not the "villain" in our opinion; it merely provides the transparency and incentives necessary to unleash market forces that already exist in the industry. We expect that Solvency II will rapidly escalate the pressure to consolidate that in our view already exists.

QIS 4 Diversification Effects Are Huge

Solvency I does not recognize diversification effects, but these are an important element of Solvency II. The QIS 4 calibration adversely affected insurers involved in few lines of business most, mainly because they don't enjoy high levels of diversification benefits. For legal entities, diversification provides an average 21% capital saving for non-life insurers and 38% for life insurers.

The QIS 4 calibrations place great faith in diversification, which we think is overstated.

For groups, comparing the sum of entity SCRs with the group SCR suggests that there is a further diversification credit of 21% on average (although the amount that can be realized will now be limited by the lack of group support). When you compound these effects for globally diversified groups, diversification credit could easily be 50% or more. This would give these groups a considerable pricing advantage in the market and would apply pressure on all less-well-diversified businesses.

The QIS 4 calibrations place great faith in diversification, which we think is overstated. It was tested by the recent investment market turmoil and we expect CEIOPS to re-examine the QIS 4 correlation matrix, as a consequence. By contrast, under Standard & Poor's capital adequacy model, the maximum potential diversification credit that can be achieved is 18%, a limit that is partly influenced by our concerns over tail correlation and fungibility of capital.

We expect large diversified groups to be clear winners under Solvency II supervision. Reinsurers may also fare well, particularly in Solvency II's early years of application, as they "sell" their diversification to smaller, less-diversified primary insurers threatened by the new capital requirements.

Insurers with a genuine niche product offering or with a defensible niche distribution platform may still aspire to strong ratings, although Solvency II capital requirements may exceed rating capital requirements in future (which is rarely the case today). Those with a sophisticated understanding of their risks will likely apply for supervision based on internal models, partly in response to this issue.

Internal Models Will Be Commonplace Under Solvency II

Solvency I does not allow the use of internal models for solvency purposes, but it is an important element of Solvency II supervision. Some supervisors allow internal models, but the Solvency I requirements must still be met. 710 insurers provided information relating to internal models at QIS 4. Sixty-three percent of these said they intended to submit internal models (half of them full models and half partial) to their supervisors for validation. Approximately half of the insurers currently use or are developing internal models.

Internal model validation is therefore likely to be a larger undertaking than most supervisors initially thought. We believe most of them have few resources in place to deal with this demand and it may therefore require a major investment in skilled resources over the next few years.

Half of the insurers providing information expected that it will take less than one year to meet supervisors' approval standards. These are overly optimistic assumptions, in our opinion, not just because of supervisor readiness, but because the numbers of insurers currently capable of demonstrating that their models are embedded in their business are few and far between. The U.K. FSA has indicated that development of an internal model is a medium- to long-term project (up to five years) and will be an iterative process.

Solvency II: Converging Or Diverging With IFRS?

We believe that there is a possibility that Solvency II may diverge from IFRS in important respects. When Solvency II was originally conceived, the expectation was that IFRS for insurance contracts was to be finalized by 2005. Reported IFRS equity was expected to significantly influence available capital under Solvency II, and would of course be audited for IFRS filers. IFRS was indeed implemented in 2005, but it was only a temporary fix. The final Phase 2 standard is now unlikely to be in place before 2013. Consequently, IFRS Phase 2 and Solvency II are being developed in parallel, which is proving problematical.

The valuation of insurance liabilities, most of which do not have a liquid market, is challenging for both projects. While the Directive no longer refers to "current exit value", it does refer to the notion of valuation based on a hypothetical transfer of the liability to another insurer. Having initially taken this stance in its Discussion Paper, the IASB now seems to be considering a different approach following industry feedback (fulfilment value based on the ultimate settlement of liabilities by the insurer or utilizing IAS 37).

The parallel running of the two projects is problematical in this respect and others, such as the cost of capital (prescribed at 6% under Solvency II), recurring life insurance premium, and reflecting insurers' own credit risk in valuing their insurance liabilities. The ultimate reconciliation between IFRS equity and available capital for solvency purposes may be quite complex and require highly sophisticated and flexible systems. Although general purpose financial statements and solvency measures serve different purposes, we believe that the maximum degree of convergence should be sought subject to the separate objectives being met.

Implications For Ratings

In our view, insurer supervision in Europe is becoming more qualitative and prospective. To that extent, supervisory practices will partly converge with our rating analysis. Our objective is to communicate relative financial strength globally via our ratings with the aim of providing more granular and prospective information.

To some extent, the rating process should help insurers prepare for Solvency II. Some of our processes will eventually overlap when Solvency II is implemented. Our capital adequacy model was launched in Europe in 1997 and resembles the emerging SCR in many respects. (For the latest version, see "Risk-Based Insurance Capital Model," published on Sept. 11, 2008.) More significantly, the enterprise risk management criteria we launched in 2005 is likely to be aligned with the risk management reviews under Solvency II's supervisory review requirements under Pillar 2. Furthermore, we are now introducing economic capital analysis, which will overlap with supervisors' internal model validations.

Our overall approach to rating is unlikely to change with the implementation of Solvency II. However, we will face the following issues:

- We will aim to make our assessments on the impact of the changing competitive landscape on individual insurers well in advance of the implementation of Solvency II.
- Many insurers are likely to find supervisory capital adequacy to be a more relevant constraint under Solvency II than they currently do, particularly the less diversified insurers. If so, our own capital adequacy model results may have less impact on the rating.
- We will need to consider the impact of group support arrangements (if they are ultimately implemented after 2015) in assessing the group status of rated subsidiaries.

Insurers Must Evaluate The Effect Of Solvency II Well In Advance

Dramatic changes are underway in the European insurance industry. The Solvency II project will introduce a new solvency regime with an integrated risk approach that we believe reflects the risks being taken by insurers much better than the current Solvency I regime. Although the implementation date is not until October 2012, we observe that insurers and supervisors are far from ready. We believe that many insurers have yet to evaluate its effect on them, feeling that it is not sufficiently imminent to warrant a full analysis. As Solvency II will have a profound impact, insurers must evaluate its effect on their businesses now if they are to be prepared in time for implementation. ■

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Interpreting Insurer Financial Strength Ratings In Light Of Improving Insurer Supervision

By Rob Jones, Yann Le Pallec and Thomas Upton

Standard & Poor's Ratings Services remains committed to the transparency of its ratings and the criteria used to determine those ratings. This article responds to questions we have recently received regarding our Financial Strength Ratings (FSRs) on insurers, particularly as the modernization of insurer supervision gathers pace. In Europe, Solvency II looms on the horizon. The questions are as follows:

- How does Standard & Poor's define an FSR?
- How are FSRs determined?
- Should an FSR be considered a "solvency rating"?
- Will Solvency II make FSRs obsolete?
- Most insurers have sufficient capital to pay all their known liabilities by some considerable margin. Why aren't they all rated 'AAA'?
- Why doesn't Standard & Poor's assign higher ratings to start-ups?
- What about run-offs?
- How does an insurer default?
- Are FSRs the same as Claims Paying Ability ratings?
- Do FSRs incorporate government support?
- What is the difference between an FSR and a Lloyd's Syndicate Assessment (LSA)?
- What is the difference between an interactive FSR and a public information FSR?

Frequently Asked Questions

How does Standard & Poor's define an FSR?

A Standard & Poor's insurer FSR is a current opinion of the financial security characteristics of an insurance organization with respect to its ability to pay under its insurance policies and contracts in accordance with their terms. The full definition is included as an appendix at the end of this article.

How are FSRs determined?

All of Standard & Poor's entity-based ratings start by arriving at an issuer credit rating (ICR) for each entity. An ICR is a current opinion of an obligor's (the insurer's) overall financial capacity to pay its financial obligations (its creditworthiness). This opinion focuses on the obligor's capacity and willingness to meet its financial commitments as they come due. It does not apply to any specific financial obligation, as it does not take into account the specific provisions of the obligation, its standing in bankruptcy or liquidation, statutory preferences, or the legality and enforceability of the obligation.

The senior most obligation of an insurer in most countries is to its policyholders (which we view as analogous to an "issue" of debt) or at least includes its policyholders. Where this is the case, the FSR is assigned at the same level as the ICR. Senior, subordinated, and deeply subordinated obligations are typically all junior to policyholder obligations and their ratings are therefore "notched off" the FSR/ICR, that is, lower than the FSR/ICR by one or more notches depending on the degree of subordination.

Should an FSR be considered a "solvency rating"?

With the emergence of improving risk-based regimes for insurer supervision (or regulation) around the world, such as Solvency II, we are often asked how our ratings should be compared to a supervisor's opinion on an insurer. We believe they are differentiated, but both are relevant opinions.

Although rating agencies and insurance supervisors may look at similar issues, they have different objectives. Supervisors control access to the market via their authorization processes. Having granted access, supervisors maintain financial supervision over insurers in order to ensure that policyholders are provided a minimum level of capital strength. As far as the outside world is concerned, the supervisor's opinion is a binary one: either the insurer's authorization is maintained or it is withdrawn. Although it rarely becomes information in the public domain, some

The SCR is a point in time measure of capital adequacy. In our opinion, historic capital adequacy is a poor lead indicator of insurer failure.

insurers spend time in "limbo" where the supervisor has concerns that they ask management to address. Once the insurer is authorized, a rating agency may assign a rating. Standard & Poor's provides opinions that differentiate between authorized insurers in terms of their comparative creditworthiness. Once public, ratings are subject to ongoing surveillance and therefore provide to policyholders, distributors, and others a current, transparent, and globally comparable opinion on the creditworthiness of the rated insurer.

Will Solvency II make FSRs obsolete?

Once Solvency II is implemented, it is possible that policyholders will ultimately draw greater comfort regarding their security as a policyholder from the fact that an insurer is authorized than they do currently under the Solvency I regime. Supervision will almost certainly be more sensitive to risk in the future, in our opinion.

Specifically under Solvency II, policyholders will be able to monitor the extent to which insurers cover their (risk-based) Solvency Capital Requirements (SCR). Standard & Poor's welcomes the added market transparency that this will provide. SCR coverage measures will be important (and a relevant input to our own assessment of insurers' capital adequacy). However, they will have several limitations, which include:

- Public SCR coverage will not be real time, that is, it will be a backward looking measure, published some months after the insurer's financial year end. Ratings are current, based on all the public and confidential information available at the time, and an ongoing dialogue with management.
- SCRs use a one-year time horizon. In the case of Solvency II, the SCR is calibrated such that there is a one-in-200 year likelihood on average that an insurer will fail to cover its liabilities with its assets. Our long-term ratings take a longer-term view of financial security (Standard & Poor's does provide short-term FSRs, but they are rarely requested).
- The SCR is a point in time measure of capital adequacy. In our opinion, historic capital adequacy is a poor lead indicator of insurer failure. Capital adequacy is an important quantitative element of our analysis, but it is just one feature of our overall capitalization analysis, which in turn is one of nine categories of analysis. We believe categories such as competitive position, enterprise risk management (ERM), management/corporate strategy, financial flexibility, and operating performance are better leading indicators of long-term financial strength.
- The SCR will be based on a model: the standardized model, the insurer's own internal model, or combinations thereof with all the associated potential limitations of any model.
- Publicly available risk-based capital model results have been a feature of U.S. insurance supervision since the early 1990s. However, the number of our ratings on U.S. insurers has grown substantially rather than shrunk over the period since then.

Ultimately, it is for policyholders and distributors to decide, but we believe that comprehensive analysis of the financial security of insurers will remain important. Ratings are a relevant input to policyholders' own assessments of financial security in our opinion. Standard & Poor's ratings opinions are based on analysis by experienced professionals who evaluate and interpret information received from insurers and other available sources to form a considered opinion. These opinions are primarily intended to provide investors and market participants with information about the relative credit risk of insurers and individual debt issues that we rate.

Most insurers have sufficient capital to pay all their known liabilities by some considerable margin. Why aren't they all rated 'AAA'?

Taking a short-term perspective, most insurers do indeed have sufficient capital to pay all their known liabilities by some considerable margin at this point in time, albeit to varying degrees. However, insurers are dynamic: they are exposed to the full range of life, non-life, market, and operational risk and they acquire new exposures each day. Since capital can be quickly depleted by events, our long-term FSRs recognize this and take a longer-term view of financial security. Among other things, this allows us to evaluate the insurer's ability to replenish capital post event.

The evaluation of an insurer's capital adequacy involves both qualitative and quantitative considerations as warranted to derive a complete picture of an insurer's capital position. Similarly, a broad-based analysis of an insurer's credit quality involves much more than simply looking at its level of capital adequacy. Strength or weakness in other key areas, such as a company's competitive position, management and strategy, investment risk, liquidity risk, operating performance, ERM, and financial flexibility can more than offset relative strength or weakness in capital adequacy. The areas of analysis are interconnected and their importance and influence on a rating will differ depending on company specific circumstances.

Why doesn't Standard & Poor's assign higher ratings to start-ups?

Although most start-up insurers have capital adequacy that could be consistent with 'AAA' ratings since they typically have huge capital with little or no exposure, we rarely rate them higher than the 'BBB' range. While their capital adequacy may be consistent with a 'AAA' rating over the near term, their competitive position (on which their long-term future is to a significant degree dependent) would normally be 'BBB' at best. The overall blended rating outcome would normally be limited to the 'BBB' category since we expect start-ups to meet their near-term obligations, but, in our opinion, they rarely have the competitive position to sustain themselves at the outset. In our experience, start-up companies often change their business plans, earnings expectations, and financial profile in their first few years of operations. Their earnings can be uncertain, given the competitive challenges, and experience demonstrates that their capital will erode if they are not able to successfully execute their business plan. Over time, start-ups may improve their competitive position resulting in higher ratings.

Start-ups that are rated 'BBB+' or higher are typically those that, in our opinion, have a compelling competitive position at the outset. This may be because the start-up is able to differentiate itself in some way, such as by a unique business line, tied distribution, or geographical affiliation.

What about run-offs?

For similar reasons to those related to start-ups we rarely rate run-offs higher than the 'BBB' range. Capital adequacy may be substantial, but the insurer by definition has no competitive position, and hence no new earnings stream with which to rebuild capital if it becomes depleted. Management teams in run-off often change and investment and claims management may change as a result. Consequently, the ratings on insurers that go into run-off would often be lowered to the 'BBB' category or lower. In practice, FSRs often have little value to the run-off company concerned and tend to be withdrawn. Standard & Poor's offers a separate service to companies in run-off--"Run-Off Payment Assessments" (RPA).

How does an insurer default?

According to the way that Standard & Poor's records them in its default statistics, insurers have defaulted in a number of ways:

- Its financial security may be so undermined such that the supervisor assumes control of the insurer.
- It may embark on a coercive claims commutation program with its policyholders.
- It may fail to meet policy guarantees, remove bonuses previously declared, or fail to declare bonuses that policyholders reasonably expect based on policy terms or public statements made by the insurer.
- It may fail to meet a senior or subordinated obligation.

Standard & Poor's uses the 'R' rating ('R' is derived from regulatory action) rather than 'D' (default) for its FSRs given the nature of insurance policyholder liabilities and the legal status of insurers in many countries.

Since capital can be quickly depleted by events, our long-term FSRs recognize this and take a longer-term view of financial security. Among other things, this allows us to evaluate the insurer's ability to replenish capital post event.

Are FSRs the same as Claims Paying Ability ratings?

Yes. We renamed our prior Claims Paying Ability ratings as FSRs in 1997 since we believed the terminology better described the opinion we provide. There were no associated changes to our criteria or processes.

Do FSRs incorporate government support?

Generally, no. Some insurers have been recipients of government support, although in most recent cases this was a consequence of their membership of bancassurance groups or where there was a significant related capital markets subsidiary (AIG). Aegon is the only "pure play" insurer to receive government support. Aegon utilized the support that was made available to all Dutch financial institutions (banks, and insurers). The Netherlands is unique in this respect.

In Aegon's case, the current ratings reflect the support received and the associated obligations; however, they do not anticipate future support. The same is true of all FSRs, except for the limited number of insurers designated government related entities by Standard & Poor's, such as Caisse Centrale de Reassurance (AAA/Stable/--) in France. This differs from our approach to bank ratings, which can anticipate government support more frequently given what we believe to be banks' greater systemic importance.

What is the difference between an FSR and a Lloyd's Syndicate Assessment (LSA)?

LSAs are a distinct nonrating product, which responds to the unique nature of Lloyd's. Lloyd's is a globally respected insurance marketplace where capital providers accept insurance risk on a strictly several basis through syndicates in return for insurance premiums. The financial risks to these capital providers are partially mutualized through the Lloyd's Central Fund, to which all underwriting members contribute. Because of the presence of the Central Fund, and the powers vested in the Council of Lloyd's to manage this fund, Standard & Poor's is analytically comfortable assigning an insurer FSR to the Lloyd's Market (A+/Stable/--).

Start-ups that are rated 'BBB+' or higher are typically those that, in our opinion, have a compelling competitive position at the outset.

Generally, Standard & Poor's does not believe that, under the Market's current legal and regulatory structure, FSRs on syndicates are appropriate. This view reflects the fact that syndicates are groupings of one or more capital providers, managed on their behalf by a managing agent, and are not legal entities in themselves. Furthermore, regulatory action is the main arbiter of default with regard to FSRs and, due to the mutualization of Lloyd's through the Central Fund, regulatory action resulting from concerns as to ability to meet claims would be marketwide, not syndicate specific.

With these issues in mind, in order to meet the insurance and capital markets' requests for a more specific view on syndicates, Standard & Poor's offers an opinion on a syndicate's business continuity characteristics in the form of an LSA. LSAs represent our view of the relative dependency of syndicates on Lloyd's infrastructure and the Central Fund, reflecting their ability to offer business continuity to policyholders.

What is the difference between an interactive FSR and a public information FSR?

The two forms of insurer FSR published by Standard & Poor's are "interactive" and "public information" ('pi'). Although both types of ratings use the same basic rating scale, to distinguish between the two, a 'pi' subscript is used for the latter (for example, 'Api'). The main distinguishing feature between the two types of rating is the amount and type of information our analysts receive from the company to which a rating is assigned.

Standard & Poor's interactive ratings indicate that a company has chosen to undergo Standard & Poor's complete analytical process, involving in-depth meetings with the company's senior management. For an interactive rating, the insurance company can provide confidential information to refine the analysis. However, Standard & Poor's does not engage in any consulting or structuring regarding the insurance company's business.

A 'pi' FSR is based on an insurer's published financial information and other data in the public domain. We may also receive a limited amount of confidential information from the company, which we may rely on. Standard & Poor's decision to rate a company on a 'pi' basis is influenced by market sentiment--if sufficient interest in a rating on any currently unrated entity exists in the markets then we may rate it. ■

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Appendix: Insurer Financial Strength Rating Definition

A Standard & Poor's insurer financial strength rating is a current opinion of the financial security characteristics of an insurance organization with respect to its ability to pay under its insurance policies and contracts in accordance with their terms. Insurer financial strength ratings are also assigned to health maintenance organizations and similar health plans with respect to their ability to pay under their policies and contracts in accordance with their terms.

This opinion is not specific to any particular policy or contract, nor does it address the suitability of a particular policy or contract for a specific purpose or purchaser. Furthermore, the opinion does not take into account deductibles, surrender or cancellation penalties, timeliness of payment, nor the likelihood of the use of a defense such as fraud to deny claims. For organizations with cross-border or multinational operations, including those conducted by subsidiaries or branch offices, the ratings do not take into account potential that may exist for foreign exchange restrictions to prevent financial obligations from being met.

Insurer financial strength ratings are based on information furnished by rated organizations or obtained by Standard & Poor's from other sources it considers reliable. Standard & Poor's does not perform an audit in connection with any rating and may on occasion rely on unaudited financial information. Ratings may be changed, suspended, or withdrawn as a result of changes in, or unavailability of such information or based on other circumstances.

Insurer financial strength ratings do not refer to an organization's ability to meet nonpolicy (i.e. debt) obligations. Assignment of ratings to debt issued by insurers or to debt issues that are fully or partially supported by insurance policies, contracts, or guarantees is a separate process from the determination of insurer financial strength ratings, and follows procedures consistent with issue credit rating definitions and practices. Insurer financial strength ratings are not a recommendation to purchase or discontinue any policy or contract issued by an insurer or to buy, hold, or sell any security issued by an insurer. A rating is not a guaranty of an insurer's financial strength or security.

SCOR is the 5th largest reinsurer in the world, practicing a traditional and cautious business approach combined with very conservative, cash-oriented financial management. The business strategy of SCOR is based on a twin-engine approach, SCOR Global P&C and SCOR Global Life, as well as on strong sectorial and geographic diversification. SCOR provides its clients with top-level global technical assistance whilst offering a high level of security.

Top 40 Global Reinsurance Groups

Top 40 Global Reinsurance Groups Ranked By Net Reinsurance Premiums Written

Ranking	Company	Country	Net Reinsurance Premiums Written (Mil. $) 2008	2007
1	Munich Reinsurance Co.	Germany	29,076.8	30,284.1
2	Swiss Reinsurance Co.[1]	Switzerland	24,296.0	27,706.6
3	Berkshire Hathaway Re [2]	U.S.	12,123.0	17,398.0
4	Hannover Rueckversicherung AG	Germany	10,196.3	10,630.0
5	SCOR SE	France	7,499.6	7,871.7
6	Lloyd's [3]	U.K.	6,701.9	8,362.9
7	Reinsurance Group of America, Inc.	U.S.	5,349.3	4,906.5
8	Transatlantic Holdings Inc.	U.S.	4,108.1	3,952.9
9	PartnerRe Ltd.	Bermuda	3,989.4	3,757.1
10	Everest Reinsurance Co.	Bermuda	3,505.2	3,919.4
11	Tokio Marine Group	Japan	2,778.3	2,936.4
12	XL Re Ltd	Bermuda	2,402.6	2,781.3
13	Korean Reinsurance Co.	Korea	2,226.9	2,796.8
14	Odyssey Re	U.S.	2,030.8	2,089.4
15	Transamerica Re (AEGON)	U.S.	1,928.3	1,898.5
16	Mitsui Sumitomo Insurance Co. Ltd. [2]	Japan	1,704.9	1,805.8
17	Mapfre Re	Spain	1,683.7	1,569.7
18	Sompo Japan Insurance Inc.[2]	Japan	1,660.9	1,837.3
19	Caisse Centrale de Reassurance	France	1,653.3	1,642.6
20	Toa Re Co. Ltd.	Japan	1,639.7	1,385.2
21	White Mountains Re Group Ltd.	Bermuda	1,607.2	1,752.4
22	AXIS Capital Holdings Ltd.[2]	Bermuda	1,533.0	1,537.1
23	General Ins. Corp. of India	India	1,448.0	2,085.1
24	QBE Insurance Group Ltd.	Australia	1,279.8	1,509.2
25	ACE Tempest Reinsurance Ltd.	Bermuda	1,265.5	1,484.6
26	Validus Holdings Ltd	Bermuda	1,238.3	918.4
27	PARIS RE	Switzerland	1,196.2	1,113.5
28	Arch Capital Group Ltd.	U.S.	1,148.1	1,184.4
29	Aspen Insurance Holdings Ltd.[2]	Bermuda	1,114.4	1,008.3
30	Aioi Insurance Co. Ltd.[2]	Japan	1,108.7	1,208.7
31	Platinum Underwriters Holdings, Ltd.	Bermuda	1,037.6	1,119.8
32	Deutsche Rueckversicherung AG	Germany	987.9	1,021.0
33	R+V Versicherung AG[2]	Germany	882.0	729.0
34	RenaissanceRe Holdings Ltd.	Bermuda	871.9	1,024.5
35	Endurance Specialty Holdings Ltd.[2]	Bermuda	808.8	1,051.6
36	Amlin Group[2]	U.K.	773.1	782.4
37	Catlin Group Ltd.[4]	Bermuda	756.0	740.2
38	NIPPONKOA Insurance Co. Ltd.[2]	Japan	748.4	837.2
39	Flagstone Reinsurance Ltd.	Bermuda	694.7	527.0
40	IRB-Brasil Resseguros S.A.	Brazil	652.0	900.3
	Total		**147,706.7**	**162,066.9**

Group Notes

1 Excluding non-traditional and legacy business the combined ratios would have been 97.1% and 90.1% respectively.
2 Adjusted Shareholders Funds are for the group as a whole, including both its direct and reinsurance operations.
3 Net premiums written, pretax operating income and the combined ratio relate to reinsurance business only; all other items include direct business. The data presented is based on the published pro-forma accounts for the Market, which represent an aggregation of all syndicates participating at Lloyd's. As such, some premium included for Lloyd's may also be included by other groups in this list that consolidate their Lloyd's operations.
4 Net premiums written and the combined ratio relate to reinsurance business only; all other items include direct business.

STANDARD & POOR'S

	Pretax Operating Income (Mil. $)		Combined Ratio (%)		Total Adjusted Shareholders' Funds (Mil. $)		ROR (%)	
	2008	2007	2008	2007	2008	2007	2008	2007
	2,336.9	4,852.8	99.8	96.5	28,445.4	35,755.1	6.2	11.8
	8,152.6	4,681.8	99.3	92.3	20,266.1	29,397.4	25.6	12.4
	N.A.	N.A.	85.1	87.7	50,795.0	61,981.0	N.A.	N.A.
	428.3	1,040.4	95.5	100.3	6,636.6	7,788.2	4.0	8.6
	834.4	659.4	99.8	99.3	4,806.2	5,319.4	9.9	7.6
	1,062.2	1,577.2	83.8	81.7	20,523.9	26,849.7	13.4	12.5
	605.2	544.0	N.M.	N.M.	2,616.8	3,189.8	9.6	9.2
	428.5	586.4	98.6	95.2	3,198.2	3,349.0	9.5	13.4
	593.2	955.0	94.2	80.4	4,199.1	4,321.6	13.1	22.3
	612.2	941.7	95.6	91.6	4,960.4	5,684.8	14.4	20.0
	770.3	1,639.0	N.A.	N.A.	15,882.5	20,727.2	N.A.	N.A.
	N.A.	N.A.	89.1	84.0	N.A.	N.A.	N.A.	N.A.
	62.2	55.6	103.5	100.4	791.6	948.7	2.6	2.0
	135.2	374.1	101.2	95.5	2,827.7	2,654.7	5.8	15.3
	-529.0	185.0	N.M.	N.M.	N.A.	N.A.	N.A.	N.A.
	N.A.	N.A.	N.A.	N.A.	15,793.1	18,870.4	N.A.	N.A.
	208.0	198.5	95.4	91.6	1,047.0	1,067.4	11.9	12.6
	-289.6	530.9	N.A.	N.A.	12,096.2	16,210.8	-9.4	16.1
	1,131.8	1,131.9	44.4	53.8	4,794.1	4,067.6	60.1	51.7
	265.9	196.6	91.2	91.8	2,701.7	2,590.6	15.4	13.2
	-267.0	308.7	101.8	97.4	2,156.8	2,473.0	-17.6	14.8
	N.A.	N.A.	92.1	76.3	4,461.0	5,158.6	N.A.	N.A.
	354.4	267.8	103.0	112.8	1,519.9	1,643.3	19.9	12.8
	165.7	417.3	95.9	84.1	1,038.2	1,452.2	12.1	25.0
	623.9	773.4	75.8	75.1	N.A.	N.A.	36.0	40.7
	175.1	388.2	96.7	68.7	1,938.7	1,934.8	12.5	39.9
	192.4	322.5	102.7	90.8	2,021.8	2,202.4	13.4	23.7
	632.3	708.0	85.3	74.6	3,010.3	3,509.1	39.6	42.7
	248.5	391.7	86.1	82.1	2,779.2	2,817.6	20.7	27.6
	-737.9	-422.1	N.A.	N.A.	5,631.6	5,990.3	N.A.	N.A.
	212.8	383.4	94.1	83.5	1,809.4	1,998.4	16.4	27.6
	68.8	6.2	94.0	100.8	684.4	727.3	6.3	0.6
	349.7	348.3	98.9	100.2	4,959.3	5,379.1	28.5	32.3
	193.0	735.5	69.0	44.8	2,382.7	2,827.5	N.A.	N.A.
	146.4	560.4	90.9	76.4	2,207.3	2,512.3	14.9	38.9
	167.9	454.4	78.9	50.7	1,759.9	2,100.8	19.4	50.1
	42.3	622.3	73.7	60.4	2,469.2	3,017.8	5.3	62.6
	245.2	26.2	N.A.	N.A.	6,411.6	6,966.8	N.A.	N.A.
	110.8	190.4	89.4	72.9	986.0	1,210.5	24.4	33.8
	232.9	303.7	106.0	64.2	816.7	1,029.2	24.3	32.7
	19,965.6	**26,936.4**	**94.8**	**90.8**	**251,425.5**	**305,724.0**	**13.4**	**14.8**

Glossary of terms

Net reinsurance premiums written = gross reinsurance premiums written less reinsurance premiums ceded; relate to a group's reinsurance business only, unless where separately indicated.

Pretax operating income = underwriting profit (or loss) + net investment income + other income. Net realized and unrealized investment gains/losses are excluded from this item.

Combined ratio = (net losses incurred + net underwriting expenses)/net premiums earned.

Total adjusted shareholders' funds = capital + shareholders' reserves (including claims-equalization reserve and any excess or deficiency of market value of investments over the balance sheet value).

ROR = pretax operating income/total revenue. (Total revenue = net premiums earned + net investment income + other income.) N.A. - Not available. N.M. - Not meaningful.

Global Reinsurer List By Country

To bring you the 2009 edition of Global Reinsurance Highlights, Standard & Poor's Ratings Services sought data on around 200 reinsurance organizations from over 40 countries.

In order to ensure consistency, we requested that respondents complied with clear guidance on the definition of the financial items required. In addition, Standard & Poor's attempted to verify the veracity of the data submitted with reference to publicly available data sources, insofar as this was possible.

Our ongoing aim in producing this data is to provide market participants with an indication of the ongoing reinsurance capacity available in each market. Hence, we try to exclude intra-group reinsurances as far as possible. Companies which have not been able to exclude intra-group reinsurance are highlighted in the footnotes on page 54.

One of the challenges we have faced has been to separate reinsurance from primary insurance business, especially when the reinsurance operation is a division within a company and not a distinct operation. While, generally speaking, all the premium data relates to a company's reinsurance premiums written, in a number of cases the other metrics will also include primary business. These cases can be identified through the footnotes to the tables. In circumstances where we believe the metrics provided by the company are not sufficiently representative of its reinsurance operations we have marked the metric as "N.A." (not applicable).

The large movements seen during 2008 in foreign exchange rates between major currencies have added additional volatility to the numerical metrics. For companies that do not report in U.S. dollars, the data presented in the tables reflects a conversion of local currency data at the prevailing year-end exchange rate.

Rating As Of 06 August 2009	Company	Net Reinsurance Premiums Written (Mil. $)		
		2008	2007	Change (%)
Australia				
A+	Swiss Re Life & Health Australia Ltd.	289.8	338.7	-14.5
AA-	Hannover Life Re of Australasia Ltd.	215.7	346.7	-37.8
AA-	Munich Reinsurance Co. of Australasia Ltd.	137.9	151.3	-8.8
AAA	General Reinsurance Life Australia Ltd.	95.0	104.5	-9.1
AAA	General Reinsurance Australia Ltd.	49.1	35.6	37.9
	Total:	**787.6**	**976.8**	**-19.4**
Austria				
A-	UNIQA Versicherungen AG	878.0	731.3	20.1
	Total:	**878.0**	**731.3**	**20.1**
Bahrain				
NR	Arab Insurance Group (B.S.C.)	269.2	235.9	14.1
BBB	Trust International Insurance Co. B.S.C.	105.5	88.0	19.9
A	Hannover Re Takaful	5.4	2.0	171.5
	Total:	**380.1**	**325.9**	**16.6**
Belgium				
A	Secura N.V.	265.6	291.7	-8.9
	Total:	**265.6**	**291.7**	**-8.9**

As such, the year-on-year change will, in many cases, reflect the movement in exchange rates as well as the growth or decline in the underlying value.

Standard & Poor's has endeavoured to collect the data underlying each group or entity's combined ratio in order to calculate this metric in a comparable manner. The combined ratios presented in Global Reinsurance Highlights have been calculated as: (net losses incurred + net underwriting expenses)/net premiums earned. The combined ratio of any entity that writes purely life reinsurance has been marked as "N.M." (not meaningful), as Standard & Poor's does not consider this to be an accurate measure of a life reinsurer's profitability. For those groups or entities writing both non-life and life reinsurance business, the combined ratio reflects non-life business only. Again, movements in currency exchange rates may impact published combined ratios, in particular for those companies reporting under IFRS.

One feature of the data for this year is the high pretax operating income and return on revenue (ROR) reported by many companies, which may appear counterintuitive given the adverse impact of the turbulent global financial markets on reported investment income during 2008. This reflects the fact that our definition of pretax operating income, and hence ROR, excludes both realised and unrealised investment gains and losses. This is the definition that we have applied consistently over a number of years. We believe that this approach gives a better view of the underlying performance of a company's underwriting activities. In addition, few reinsurers were forced to crystallize mark-to-market investment losses during the year. Furthermore, our approach removes the potential for material discrepancies to emerge as a result of the divergent treatment seen among respondents of investments for accounting purposes.

The main group and country listing for each entity surveyed is representative of that group or company's total reinsurance business written, whether it be life, non-life, or a combination of both.

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	Pretax Operating Income (Mil. $)		Combined Ratio (%)		Total Adjusted Shareholders' Funds (Mil. $)			Return on Revenue (%)	
	2008	2007	2008	2007	2008	2007	Change (%)	2008	2007
	19.5	55.3	N.M.	N.M.	156.9	257.6	-39.1	5.9	14.2
	-5.8	47.1	N.M.	N.M.	132.4	147.6	-10.3	-2.1	12.9
	-5.7	23.5	N.M.	N.M.	102.1	119.3	-14.5	-3.6	13.3
	10.9	23.4	N.M.	N.M.	54.6	55.6	-1.8	10.3	20.1
	41.3	9.1	43.7	122.7	218.7	222.2	-1.6	53.0	13.1
	60.1	**158.4**	**43.7**	**122.7**	**664.7**	**802.4**	**-17.2**	**6.3**	**14.1**
	54.3	85.9	105.7	105.1	4,360.4	4,589.2	-5.0	5.4	9.7
	54.3	**85.9**	**105.7**	**105.1**	**4,360.4**	**4,589.2**	**-5.0**	**5.4**	**9.7**
	16.9	7.7	102.4	111.7	239.6	298.4	-19.7	6.1	3.2
	18.6	14.9	80.1	84.3	209.8	188.3	11.4	19.1	16.2
	0.2	0.0	102.5	135.4	7.5	7.6	-1.1	6.0	2.8
	35.7	**22.6**	**96.5**	**104.0**	**456.9**	**494.3**	**-7.6**	**9.4**	**6.7**
	47.4	38.0	98.2	100.8	289.1	298.5	-3.1	14.7	10.8
	47.4	**38.0**	**98.2**	**100.8**	**289.1**	**298.5**	**-3.1**	**14.7**	**10.8**

Global Reinsurer List By Country

Rating As Of 06 August 2009	Company	Net Reinsurance Premiums Written (Mil. $)		
		2008	2007	Change (%)
Bermuda				
AA-	Partner Reinsurance Company Ltd	2,090.1	2,305.2	-9.3
A+	Everest Reinsurance (Bermuda) Ltd.	1,575.4	1,579.7	-0.3
A	Arch Reinsurance Ltd.	1,059.6	1,090.3	-2.8
A+	ACE Tempest Reinsurance Ltd.	913.7	1,197.5	-23.7
A	XL Re Ltd	826.0	999.2	-17.3
NR	Validus Reinsurance Ltd. (Bermuda)	624.8	633.3	-1.3
A+	AXIS Specialty Limited[1]	620.2	560.3	10.7
NR	Max Capital Group Ltd	568.7	602.0	-5.5
A	Amlin Bermuda Ltd.	548.9	466.2	17.7
A-	Montpelier Re Holdings Ltd.	541.2	549.0	-1.4
NR	Hiscox Insurance Co. (Bermuda) Ltd.	431.0	397.8	8.3
A-	IPCRe Ltd.	397.3	387.6	2.5
A	Aspen Insurance Ltd.[1]	393.5	319.1	23.3
A	Endurance Specialty Insurance Ltd.[3]	384.4	422.1	-8.9
A+	ACE Tempest Life Reinsurance, Ltd.	351.8	287.2	22.5
NR	Ariel Reinsurance Company Ltd.	321.3	346.3	-7.2
AA	Tokio Millennium Re Ltd.	318.3	246.0	29.4
A-	Catlin Insurance Co. Ltd.[1]	289.5	238.7	21.3
AA-	Hannover Re Bermuda Ltd.	271.0	292.6	-7.4
A-	Harbor Point Re Ltd.	198.5	537.2	-63.0
A-	White Mountains Re	178.7	56.9	214.1
BBB+	International General Insurance Co. Ltd.	116.0	100.4	15.5
NR	Lancashire Insurance Co. Ltd.[3]	113.1	130.5	-13.3
AA	MS Frontier Reinsurance Ltd.	72.8	66.2	9.9
	Total:	**13,205.8**	**13,811.1**	**-4.4**
Bosnia and Herzegovina				
NR	Bosna Re	19.0	13.2	43.9
	Total:	**19.0**	**13.2**	**43.9**
Brazil				
NR	IRB-Brasil Resseguros S.A.	651.9	900.3	-27.6
	Total:	**651.9**	**900.3**	**-27.6**

	Pretax Operating Income (Mil. $)		Combined Ratio (%)		Total Adjusted Shareholders' Funds (Mil. $)			Return on Revenue (%)	
	2008	2007	2008	2007	2008	2007	Change (%)	2008	2007
	553.4	889.8	73.9	70.2	2,911.2	3,630.6	-19.8	24.8	34.3
	342.0	460.2	82.4	87.3	2,222.6	2,491.4	-10.8	21.0	25.3
	622.7	698.9	83.5	72.0	2,046.6	2,620.0	-21.9	41.7	45.1
	518.5	592.4	75.8	75.1	N.A.	N.A.	N.A.	39.2	37.8
	N.A.	N.A.	76.4	56.9	N.A.	N.A.	N.A.	N.A.	N.A.
	171.0	343.1	89.5	54.0	1,779.3	1,809.9	-1.7	22.6	53.2
	N.A.	N.A.	80.2	45.7	3,783.8	4,273.5	-11.5	N.A.	N.A.
	12.0	33.3	79.0	74.8	1,283.4	1,659.1	-22.6	2.4	4.1
	2.7	210.8	99.5	51.2	1,389.5	1,478.6	-6.0	0.5	41.7
	94.2	280.1	91.0	61.3	1,357.6	1,653.1	-17.9	15.3	40.0
	43.1	153.7	76.3	58.4	805.5	762.3	5.7	11.6	41.1
	262.8	319.9	49.6	42.1	1,851.5	2,127.6	-13.0	54.6	62.3
	1.4	165.8	99.6	69.4	1,197.0	1,190.6	0.5	0.4	35.6
	250.2	550.7	75.5	57.0	2,114.5	2,817.2	-24.9	52.9	85.6
	105.4	180.9	N.M.	N.M.	N.A.	N.A.	N.A.	25.8	54.4
	54.4	265.6	84.7	38.8	1,139.0	1,168.5	-2.5	14.0	70.3
	126.6	167.7	45.7	28.4	1,054.0	906.3	16.3	37.3	62.4
	57.4	62.0	75.8	62.1	3,322.1	3,099.0	7.2	11.4	20.4
	181.2	213.6	51.9	45.6	1,311.9	1,424.8	-7.9	60.3	57.3
	71.6	195.3	98.3	78.5	1,371.9	1,457.8	-5.9	15.6	31.8
	-117.5	22.2	95.4	56.3	603.0	776.5	-22.3	-249.5	59.7
	-1.0	16.5	110.3	88.8	153.0	183.0	-16.4	-1.1	19.8
	134.8	395.9	50.5	21.2	1,138.8	1,445.6	-21.2	21.8	60.0
	43.5	68.9	60.6	21.6	439.5	394.2	11.5	49.7	83.8
	3,552.4	**6,282.8**	**79.3**	**65.4**	**33,275.7**	**37,369.6**	**-11.0**	**25.3**	**41.0**
	4.4	3.5	91.3	88.0	14.4	12.2	18.3	25.2	22.9
	4.4	**3.5**	**91.3**	**88.0**	**14.4**	**12.2**	**18.3**	**25.2**	**22.9**
	232.9	303.7	106.0	64.2	816.7	1,029.2	-20.6	24.3	32.7
	232.9	**303.7**	**106.0**	**64.2**	**816.7**	**1,029.2**	**-20.6**	**24.3**	**32.7**

Global Reinsurer List By Country

Rating As Of 06 August 2009	Company	Net Reinsurance Premiums Written (Mil. $)		
		2008	2007	Change (%)
Canada				
A+	Swiss Re Life & Health Canada	558.7	706.1	-20.9
AA-	Munich Reinsurance Co. of Canada	146.3	188.6	-22.4
A	SCOR Canada Reinsurance Co.	71.5	100.2	-28.7
	Total:	**776.5**	**994.9**	**-22.0**
France				
AAA	Caisse Centrale de Reassurance	1,653.3	1,642.6	0.6
A	SCOR Global Life SE	1,603.9	1,861.8	-13.9
A	SCOR SE	1,375.6	1,575.5	-12.7
A	SCOR Global P&C SE	959.8	983.8	-2.4
A-	PARIS RE	933.8	1,095.9	-14.8
	Total:	**6,526.5**	**7,159.7**	**-8.8**
Germany				
AA-	Munich Reinsurance Co.	21,954.9	24,646.7	-10.9
AA-	Hannover Rueckversicherung AG	7,771.8	7,233.0	7.4
AA	Allianz SE[2,3]	4,032.8	3,524.7	14.4
AA-	E+S Rueckversicherung AG	2,540.8	2,627.7	-3.3
AAA	Koelnische Rueckversicherungs-Gesellschaft AG	2,325.0	2,604.9	-10.7
A+	R+V Versicherung AG[1]	882.0	729.0	21.0
A+	Deutsche Rueckversicherung AG	487.0	483.4	0.7
BBB-	Wuestenrot & Wuerttembergische AG[1]	277.5	328.2	-15.5
	Total:	**40,271.7**	**42,177.6**	**-4.5**
Hong Kong				
A-	China International Reinsurance Co. Ltd.	202.4	188.4	7.5
A	SCOR Reinsurance Company (Asia) Limited	101.2	98.5	2.7
	Total:	**303.6**	**286.8**	**5.8**
India				
NR	General Ins. Corp. of India[4]	1,448.0	2,085.1	-30.6
	Total:	**1,448.0**	**2,085.1**	**-30.6**

STANDARD & POOR'S

	Pretax Operating Income (Mil. $)		Combined Ratio (%)		Total Adjusted Shareholders' Funds (Mil. $)			Return on Revenue (%)	
	2008	2007	2008	2007	2008	2007	Change (%)	2008	2007
	75.5	71.0	N.M.	N.M.	286.2	352.1	-18.7	23.3	17.9
	49.2	61.8	83.2	85.3	229.2	305.6	-25.0	26.2	24.4
	18.0	16.9	96.0	99.0	156.3	182.4	-14.3	20.7	14.7
	142.7	**149.7**	**87.3**	**89.8**	**671.8**	**840.1**	**-20.0**	**24.5**	**19.6**
	1,131.8	1,131.9	44.4	53.8	4,794.1	4,067.6	17.9	60.1	51.7
	243.8	100.5	N.M.	N.M.	933.1	779.8	19.7	13.2	4.8
	-125.4	13.6	103.7	99.1	3,327.7	3,710.6	-10.3	-7.7	0.9
	45.1	271.7	108.6	95.1	1,247.4	1,363.5	-8.5	4.1	22.0
	77.5	87.4	102.8	89.8	893.4	965.0	-7.4	6.8	7.0
	1,372.8	**1,605.1**	**85.5**	**70.9**	**11,195.6**	**10,886.4**	**2.8**	**18.1**	**17.4**
	2,618.1	3,686.0	103.1	96.8	33,068.7	42,283.3	-21.8	10.1	12.5
	636.0	550.1	87.5	95.8	5,774.7	7,151.4	-19.3	7.5	6.6
	-8,758.4	6,000.0	90.9	86.2	84,831.0	125,136.5	-32.2	N.M.	N.M
	219.1	193.9	94.2	99.4	1,980.7	2,241.3	-11.6	7.6	6.6
	488.6	331.4	96.4	106.3	3,134.1	2,897.4	8.2	18.5	11.4
	349.7	348.3	98.9	100.2	4,959.3	5,379.1	-7.8	28.5	32.3
	38.8	3.9	94.4	101.6	605.5	654.3	-7.5	7.1	0.7
	207.4	80.5	94.9	91.9	3,825.6	3,920.7	-2.4	43.3	20.9
	-4,200.8	**11,194.1**	**97.7**	**96.6**	**138,179.7**	**189,664.1**	**-27.1**	**10.8**	**11.4**
	11.2	75.3	85.4	93.2	256.0	277.0	-7.6	5.9	29.8
	5.6	9.3	95.4	93.1	73.3	71.6	2.4	5.4	9.2
	16.8	**84.7**	**88.8**	**93.1**	**329.3**	**348.6**	**-5.6**	**5.7**	**23.9**
	354.4	267.8	103.0	112.8	1,519.9	1,643.3	-7.5	19.9	12.8
	354.4	**267.8**	**103.0**	**112.8**	**1,519.9**	**1,643.3**	**-7.5**	**19.9**	**12.8**

Global Reinsurer List By Country

Rating As Of 06 August 2009	Company	Net Reinsurance Premiums Written (Mil. $)		
		2008	2007	Change (%)
Ireland				
AA-	Partner Reinsurance Europe Limited[5]	825.4	N.A.	N.M.
A	XL Re Europe Limited	670.4	695.2	-3.6
AA-	Hannover Life Reinsurance (Ireland) Ltd.	610.8	737.3	-17.2
A+	AXIS Re Ltd	550.0	517.6	6.3
A-	Atradius Reinsurance Ltd.	468.0	469.7	-0.4
AA-	Hannover Reinsurance (Ireland) Ltd.	414.1	653.0	-36.6
AA	Mitsui Sumitomo Reinsurance Ltd.	167.6	166.6	0.5
A	SCOR Global Life Reinsurance Ireland Ltd.	102.0	111.9	-8.8
A+	QBE Reinsurance (Europe) Ltd.	99.5	54.8	81.6
AA	Tokio Marine Global Re Ltd.	83.0	73.0	13.7
	Total:	**3,990.7**	**3,479.1**	**14.7**
Japan				
AA	Tokio Marine & Nichido Fire Insurance Co. Ltd.[3]	2,778.3	2,936.4	-5.4
AA-	Sompo Japan Insurance Inc.	1,706.4	1,887.6	-9.6
AA	Mitsui Sumitomo Insurance Co. Ltd.[1]	1,704.9	1,805.8	-5.6
A+	Toa Reinsurance Co.	1,371.9	1,106.0	24.0
A+	Aioi Insurance Co. Ltd.	1,157.9	1,244.0	-6.9
A+	NIPPONKOA Insurance Co. Ltd.[6]	748.4	837.2	-10.6
A+	Nissay Dowa General Insurance Co. Ltd.	343.8	366.5	-6.2
A-	Kyoei Fire & Marine Insurance Co.[1]	176.5	188.5	-6.4
A+	Nisshin Fire & Marine Insurance Co. Ltd.[3]	167.6	176.2	-4.9
A	ACE Insurance	23.4	21.0	11.5
	Total:	**10,179.1**	**10,569.1**	**-3.7**
Kazakhstan				
BB-	Eurasia Insurance Co.	41.4	24.6	68.4
	Total:	**41.4**	**24.6**	**68.4**
Korea				
A-	Korean Reinsurance Co.	2,226.9	2,796.8	-20.4
	Total:	**2,226.9**	**2,796.8**	**-20.4**
Kuwait				
BBB	Kuwait Reinsurance Co. K.S.C.	61.1	36.7	66.3
	Total:	**61.1**	**36.7**	**66.3**
Luxembourg				
A+	Swiss Re Europe S.A.[7]	3,822.1	N.A.	N.M.
	Total:	**3,822.1**	**N.A.**	**N.M.**

STANDARD & POOR'S

	Pretax Operating Income (Mil. $)		Combined Ratio (%)		Total Adjusted Shareholders' Funds (Mil. $)			Return on Revenue (%)	
	2008	2007	2008	2007	2008	2007	Change (%)	2008	2007
	140.8	-4.1	102.2	N.A.	1,804.2	129.0	1,298.5	10.5	N.A.
	N.A.	N.A.	84.3	83.0	N.A.	N.A.	N.A.	N.A.	N.A.
	40.4	83.3	N.M.	N.M.	425.3	409.8	3.8	5.8	10.0
	N.A.	N.A.	97.5	91.9	562.7	555.9	1.2	N.A.	N.A.
	-65.1	61.5	119.4	92.7	441.9	524.6	-15.8	-14.8	11.6
	66.4	16.3	102.6	107.8	607.1	653.1	-7.1	12.8	2.2
	-3.3	-14.3	106.3	111.1	95.2	102.3	-7.0	-2.0	-9.1
	4.4	16.0	N.M.	N.M.	111.1	105.5	5.2	3.9	13.1
	54.4	55.7	51.4	63.7	281.7	295.4	-4.6	62.2	58.6
	18.0	14.0	80.8	93.3	92.0	80.0	15.0	22.0	16.9
	255.9	**228.4**	**98.6**	**94.1**	**4,421.2**	**2,855.7**	**54.8**	**7.4**	**9.0**
	770.3	1,639.0	N.A.	N.A.	15,882.5	20,727.2	-23.4	N.A.	N.A.
	-439.2	341.4	N.A.	N.A.	12,294.3	16,227.8	-24.2	-15.2	10.8
	N.A.	N.A.	N.A.	N.A.	15,793.1	18,870.4	-16.3	N.A.	N.A.
	211.4	138.7	91.8	90.4	2,592.3	2,310.1	12.2	15.2	12.3
	-712.0	-308.7	N.A.	N.A.	5,901.5	6,153.6	-4.1	N.A.	N.A.
	245.2	26.2	N.A.	N.A.	6,411.6	6,966.8	-8.0	N.A.	N.A.
	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	N.A.	N.A.	N.A.	N.A.	998.9	984.1	1.5	N.A.	N.A.
	-3.1	-105.5	N.A.	N.A.	1,297.4	1,276.2	1.7	N.A.	N.A.
	5.0	2.6	87.5	N.A.	186.4	154.3	20.7	17.8	12.1
	77.6	**1,733.6**	**91.7**	**90.4**	**61,357.9**	**73,670.5**	**-16.7**	**-5.2**	**9.9**
	23.5	66.1	61.6	47.1	176.5	162.0	8.9	45.8	227.8
	23.5	**66.1**	**61.6**	**47.1**	**176.5**	**162.0**	**8.9**	**45.8**	**227.8**
	62.2	55.6	103.5	100.4	791.6	948.7	-16.6	2.6	2.0
	62.2	**55.6**	**103.5**	**100.4**	**791.6**	**948.7**	**-16.6**	**2.6**	**2.0**
	-15.8	8.9	95.4	94.3	125.4	143.2	-12.4	-23.9	19.3
	-15.8	**8.9**	**95.4**	**94.3**	**125.4**	**143.2**	**-12.4**	**-23.9**	**19.3**
	941.1	N.A.	85.1	N.A.	1,604.8	N.A.	N.M.	46.6	N.A.
	941.1	**N.A.**	**85.1**	**N.A.**	**1,604.8**	**N.A.**	**N.M.**	**46.6**	**N.A.**

Global Reinsurer List By Country

Rating As Of 06 August 2009	Company	Net Reinsurance Premiums Written (Mil. $)		
		2008	2007	Change (%)
Morocco				
BBB	Societe Centrale de Reassurance	247.2	276.5	-10.6
	Total:	**247.2**	**276.5**	**-10.6**
Nigeria				
A-	African Reinsurance Corp.	246.1	183.8	33.9
	Total:	**246.1**	**183.8**	**33.9**
Poland				
BBB	Polskie Towarzystwo Reasekuracji S.A.	97.6	111.7	-12.7
	Total:	**97.6**	**111.7**	**-12.7**
Russia				
BB-	Unity Re (Russia)	27.3	12.4	119.6
NR	Transsib Re	25.8	25.2	2.4
NR	Munich Re Life E.E.C.A.	8.1	11.1	-26.9
	Total:	**61.2**	**48.7**	**25.6**
Singapore				
A	SCOR Reinsurance Asia-Pacific	139.9	105.0	33.3
AA	Tokio Marine Re Takaful	7.9	10.3	-23.7
	Total:	**147.8**	**115.3**	**28.2**
Slovenia				
A-	Pozavarovalnica Sava, d.d.	133.9	120.5	11.1
A-	Triglav Re[8]	83.1	74.1	12.2
	Total:	**217.0**	**194.6**	**11.5**
South Africa				
A	Munich Reinsurance Co. of Africa Ltd.	167.3	198.7	-15.8
AAA	General Reinsurance Africa Ltd.	116.2	130.3	-10.8
NR	Swiss Re Life & Health Africa Ltd.	113.2	141.0	-19.7
A	Hannover Reinsurance Africa Ltd.	91.3	92.9	-1.6
NR	Hannover Life Reassurance Africa Ltd.	84.0	92.5	-9.3
NR	Swiss Re Africa Ltd.	50.2	67.2	-25.2
NR	African Re Corp. (South Africa) Ltd.	40.9	37.0	10.4
	Total:	**663.1**	**759.7**	**-12.7**
Spain				
AA	Mapfre Re, Compania de Reaseguros, S.A.	1,683.9	1,569.8	7.3
A+	Nacional de Reaseguros S.A.	446.9	431.9	3.5
	Total:	**2,130.7**	**2,001.7**	**6.4**

	Pretax Operating Income (Mil. $)		Combined Ratio (%)		Total Adjusted Shareholders' Funds (Mil. $)			Return on Revenue (%)	
	2008	2007	2008	2007	2008	2007	Change (%)	2008	2007
	59.4	50.1	102.6	110.7	190.7	180.7	5.6	18.4	16.2
	59.4	**50.1**	**102.6**	**110.7**	**190.7**	**180.7**	**5.6**	**18.4**	**16.2**
	26.7	28.8	93.4	78.2	221.5	227.1	-2.5	10.6	14.0
	26.7	**28.8**	**93.4**	**78.2**	**221.5**	**227.1**	**-2.5**	**10.6**	**14.0**
	-5.4	2.1	105.7	97.3	39.0	66.3	-41.2	-6.0	1.8
	-5.4	**2.1**	**105.7**	**97.3**	**39.0**	**66.3**	**-41.2**	**-6.0**	**1.8**
	8.9	4.5	66.3	74.4	18.1	19.4	-6.8	40.8	21.3
	-0.3	1.7	88.5	83.4	9.6	9.6	-0.6	-1.3	6.2
	-0.9	-0.5	N.M.	N.M.	11.6	14.3	-18.7	-12.7	-8.5
	7.6	**5.7**	**77.4**	**79.8**	**39.2**	**43.3**	**-9.4**	**18.2**	**12.8**
	9.3	15.3	122.0	99.7	80.0	97.3	-17.8	6.2	12.1
	0.7	0.7	N.M.	N.M.	16.4	15.9	3.6	9.2	7.8
	10.0	**16.0**	**122.0**	**99.7**	**96.4**	**113.2**	**-14.8**	**6.3**	**11.8**
	-7.0	9.9	102.5	95.4	216.6	214.3	1.1	-5.2	8.0
	5.8	5.9	92.9	91.9	40.4	49.8	-18.7	7.0	7.8
	-1.1	**15.8**	**98.7**	**94.1**	**257.1**	**264.1**	**-2.6**	**-0.5**	**7.9**
	23.0	40.3	110.1	92.7	148.8	168.9	-11.9	12.3	17.9
	21.6	29.0	92.0	N.A.	60.0	47.2	27.2	16.4	19.8
	38.8	54.2	N.M.	N.M.	74.0	105.7	-30.0	26.8	28.6
	17.2	17.9	91.4	100.3	71.9	81.4	-11.7	16.8	16.9
	7.5	10.3	N.M.	N.M.	25.4	23.4	8.5	8.6	10.3
	16.3	31.9	84.9	69.8	37.0	48.4	-23.6	25.4	42.0
	0.8	5.3	110.6	103.8	18.4	25.4	-27.4	1.7	12.6
	125.1	**188.7**	**99.0**	**91.8**	**435.4**	**500.3**	**-13.0**	**16.4**	**21.3**
	148.2	196.2	95.6	91.8	1,008.2	934.0	7.9	8.8	12.4
	41.8	37.4	94.5	92.5	270.3	281.1	-3.9	9.9	9.4
	190.0	**233.6**	**95.3**	**91.9**	**1,278.5**	**1,215.2**	**5.2**	**9.1**	**11.8**

Global Reinsurer List By Country

Rating As Of 06 August 2009	Company	Net Reinsurance Premiums Written (Mil. $)		
		2008	2007	Change (%)
Sweden				
A-	Sirius International Insurance Corp.	873.8	855.3	2.2
A	Sweden Reinsurance Co. Ltd.	200.3	189.8	5.6
	Total:	**1,074.1**	**1,045.1**	**2.8**
Switzerland				
A+	Swiss Reinsurance Co.	8,878.4	8,365.2	6.1
A	SCOR Switzerland AG	1,796.1	1,560.3	15.1
AA-	New Reinsurance Co.	1,023.6	1,046.0	-2.1
A+	DR Swiss, Deutsche Rueckversicherung Schweiz AG	500.4	536.7	-6.8
NR	Glacier Re[8]	441.8	350.8	25.9
A+	European Reinsurance Co. of Zurich	424.6	451.5	-6.0
A	XL Re Latin America Ltd.	207.2	196.6	5.4
NR	Flagstone Reassurance Suisse SA[9]	186.5	N.A.	N.M.
A	SCOR Global Life Rueckversicherung Schweiz AG	103.1	90.4	14.1
	Total:	**13,561.7**	**12,597.5**	**7.7**
Taiwan				
A-	Central Reinsurance Corp.	422.5	401.3	5.3
	Total:	**422.5**	**401.3**	**5.3**
Thailand				
A-	Thai Reinsurance Public Co. Ltd.	97.8	98.0	-0.2
	Total:	**97.8**	**98.0**	**-0.2**
Tunisia				
BBB+	B.E.S.T. Reinsurance Co.	227.2	162.0	40.2
	Total:	**227.2**	**162.0**	**40.2**
Turkey				
trA	Milli Reasurans T.A.S.	522.3	647.0	-19.3
	Total:	**522.3**	**647.0**	**-19.3**
United Arab Emirates				
BBB	Takaful Re	33.3	19.6	69.9
	Total:	**33.3**	**19.6**	**69.9**

	Pretax Operating Income (Mil. $)		Combined Ratio (%)		Total Adjusted Shareholders' Funds (Mil. $)			Return on Revenue (%)	
	2008	**2007**	**2008**	**2007**	**2008**	**2007**	**Change (%)**	**2008**	**2007**
	174.5	210.6	86.6	87.1	1,019.0	1,166.7	-12.7	18.4	21.3
	21.1	22.9	N.M.	N.M.	88.3	91.2	-3.1	10.0	11.3
	195.6	**233.5**	**86.6**	**87.1**	**1,107.3**	**1,257.9**	**-12.0**	**16.9**	**19.6**
	3,111.6	4,274.7	91.1	91.6	21,416.5	28,887.9	-25.9	13.9	20.5
	30.8	89.8	97.9	89.7	1,426.4	1,407.0	1.4	1.5	4.9
	49.8	207.2	100.6	86.6	933.5	834.9	11.8	4.6	18.1
	34.8	6.4	99.0	101.8	211.1	190.2	11.0	6.3	1.2
	26.0	72.4	99.6	83.1	496.0	465.3	6.6	5.9	24.2
	954.0	536.3	89.3	69.4	1,409.0	1,578.9	-10.8	23.9	6.8
	N.A.	N.A.	117.8	111.8	N.A.	N.A.	N.A.	N.A.	N.A.
	78.7	N.A.	64.2	N.A.	1,420.7	N.A.	N.M.	57.5	N.A.
	6.8	2.0	N.M.	N.M.	49.2	43.2	14.1	7.0	2.1
	4,292.6	**5,188.7**	**91.8**	**85.7**	**27,362.4**	**33,407.4**	**-18.1**	**13.9**	**14.2**
	68.9	66.4	87.5	86.2	340.0	370.7	-8.3	15.4	15.5
	68.9	**66.4**	**87.5**	**86.2**	**340.0**	**370.7**	**-8.3**	**15.4**	**15.5**
	13.7	11.5	87.1	89.1	55.2	77.1	-28.4	13.7	11.1
	13.7	**11.5**	**87.1**	**89.1**	**55.2**	**77.1**	**-28.4**	**13.7**	**11.1**
	5.4	11.0	93.1	93.5	119.7	125.0	-4.2	2.6	7.1
	5.4	**11.0**	**93.1**	**93.5**	**119.7**	**125.0**	**-4.2**	**2.6**	**7.1**
	108.5	80.6	103.5	104.6	437.7	600.2	-27.1	20.5	10.6
	108.5	**80.6**	**103.5**	**104.6**	**437.7**	**600.2**	**-27.1**	**20.5**	**10.6**
	2.7	2.3	102.6	105.9	119.2	138.2	-13.7	8.4	11.3
	2.7	**2.3**	**102.6**	**105.9**	**119.2**	**138.2**	**-13.7**	**8.4**	**11.3**

Global Reinsurer List By Country

Rating As Of 06 August 2009	Company	Net Reinsurance Premiums Written (Mil. $)		
		2008	2007	Change (%)
U.K.				
A+	Lloyd's[10]	6,701.9	8,362.9	-19.9
A	Aspen Insurance U.K. Ltd.	720.9	689.2	4.6
NR	Kiln Group Limited	467.7	N.A.	N.M.
AA	Tokio Marine Global Ltd.	157.6	187.8	-16.1
AA-	Hannover Life Reassurance (UK) Ltd.	116.4	127.9	-9.0
AA-	Great Lakes Reinsurance (U.K.) PLC	114.8	42.9	167.5
A	SCOR U.K. Co. Ltd.	96.1	100.2	-4.1
AAA	General Reinsurance UK Ltd.	93.1	117.0	-20.5
A+	QBE Insurance (Europe) Ltd.	89.2	103.6	-13.9
AAA	Faraday Reinsurance Co. Ltd.	88.6	127.0	-30.2
A	Endurance Worldwide Insurance Ltd.	70.5	121.8	-42.1
A	SCOR Insurance UK Ltd	22.4	37.3	-39.9
	Total:	**8,739.1**	**10,017.7**	**-12.8**
U.S.				
A+	Swiss Re Life & Health America Inc.	4,605.8	4,660.4	-1.2
AAA	National Indemnity Co.	4,468.0	3,395.2	31.6
A+	Transatlantic Reinsurance Co.	3,488.9	3,430.7	1.7
A+	Swiss Reinsurance America Corp.[11]	3,050.8	3,513.3	-13.2
AA-	Munich Reinsurance America, Inc.	2,454.9	2,715.3	-9.6
A-	Odyssey America Reinsurance Corp.	1,702.4	1,692.6	0.6
AA-	Munich American Reassurance Co.	1,278.0	1,164.5	9.8
A+	Berkley Insurance Co.	1,232.3	1,525.3	-19.2
AAA	General Re Corp.	1,150.6	1,269.1	-9.3
AAA	General Re Life Corp.	1,086.1	1,055.8	2.9
A+	Reassure America Life Insurance Co.[12]	1,068.7	3,922.7	-72.8
A+	Everest Reinsurance Co.	838.8	1,978.9	-57.6
AA-	Hannover Life Reassurance Co. of America	788.3	295.5	166.8
AA-	Partner Reinsurance Co. of U.S.[13]	760.7	711.7	6.9
A	XL Reinsurance America Inc.	613.6	799.2	-23.2
A-	White Mountains Re America	554.9	840.2	-34.0
A	Endurance Reinsurance Corp. of America	445.5	366.2	21.7
A	SCOR Reinsurance Co.	388.0	196.8	97.2
A+	Axis Reinsurance Company	362.8	459.2	-21.0

(continued overleaf)

STANDARD & POOR'S

	Pretax Operating Income (Mil. $)		Combined Ratio (%)		Total Adjusted Shareholders' Funds (Mil. $)			Return on Revenue (%)	
	2008	2007	2008	2007	2008	2007	Change (%)	2008	2007
	1,062.2	1,577.2	83.8	81.7	20,523.9	26,849.7	-23.6	13.4	12.5
	204.1	258.0	79.4	84.5	918.3	1,601.0	-42.6	26.3	27.8
	-170.4	N.A.	114.8	N.A.	234.9	N.A.	N.M.	-23.1	N.A.
	4.7	38.8	93.5	76.5	243.6	311.8	-21.9	2.7	23.6
	-15.3	32.1	N.M.	N.M.	74.2	95.9	-22.7	-11.0	21.3
	81.6	33.9	69.2	158.4	430.2	477.7	-10.0	58.3	25.3
	0.6	22.2	113.0	93.6	89.4	141.9	-37.0	0.7	16.5
	100.1	137.6	42.2	40.5	441.4	550.4	-19.8	73.1	74.1
	23.3	53.5	104.1	96.3	271.0	447.0	-39.4	17.8	31.9
	50.4	69.5	93.8	90.9	293.1	334.1	-12.3	36.3	36.9
	-24.3	39.5	94.7	65.2	185.4	238.6	-22.3	-28.8	19.9
	9.7	-0.5	123.5	135.0	90.4	130.8	-30.9	26.0	-0.8
	1,326.6	**2,261.9**	**85.6**	**79.4**	**23,795.8**	**31,179.1**	**-23.7**	**12.6**	**14.8**
	455.3	318.0	N.M.	N.M.	1,788.0	1,640.2	9.0	14.7	10.1
	317.2	1,486.4	94.1	63.3	27,613.1	35,582.0	-22.4	5.6	37.9
	448.8	532.3	99.2	95.8	3,534.1	3,368.8	4.9	11.4	14.2
	229.0	561.0	108.3	110.3	4,153.5	4,065.0	2.2	9.7	21.7
	2.9	435.7	119.3	100.2	3,546.6	4,321.6	-17.9	0.1	15.7
	213.0	314.8	97.5	90.7	2,951.3	2,922.8	1.0	11.4	16.9
	-45.8	55.1	N.M.	N.M.	649.2	673.0	-3.5	-3.0	4.0
	296.0	573.3	93.6	88.6	2,036.6	2,210.1	-7.9	18.5	28.6
	519.4	971.7	107.3	87.6	8,936.8	9,887.6	-9.6	39.5	62.0
	41.4	-23.7	N.M.	N.M.	466.6	440.2	6.0	3.6	-2.0
	170.9	254.8	N.M.	N.M.	520.4	496.1	4.9	15.2	25.7
	292.1	438.9	105.3	94.6	2,342.4	2,886.6	-18.9	21.1	18.3
	-4.7	28.4	N.M.	N.M.	128.1	136.6	-6.2	-0.7	14.0
	65.2	96.5	109.5	99.5	608.3	677.1	-10.2	7.3	12.0
	N.A.	N.A.	91.8	95.2	N.A.	N.A.	N.A.	N.A.	N.A.
	-311.2	99.0	126.8	108.5	877.0	1,137.5	-22.9	-65.3	9.5
	45.8	41.8	96.5	90.6	592.8	592.9	0.0	9.2	10.6
	33.9	5.9	107.3	133.5	503.6	491.7	2.4	9.6	3.3
	N.A.	N.A.	104.5	101.3	519.7	607.1	-14.4	N.A.	N.A.

Global Reinsurer List By Country

Rating As Of 06 August 2009	Company	Net Reinsurance Premiums Written (Mil. $)		
		2008	2007	Change (%)
U.S. (continued)				
A-	Harbor Point Re Ltd.	308.3	30.7	902.9
A+	Toa Reinsurance Co. of America (The)	244.3	267.4	-8.7
A+	QBE Reinsurance Corp.	209.4	122.1	71.5
A+	Putnam Reinsurance Co.	183.6	180.6	1.7
A	SCOR GLOBAL LIFE US RE Ins Co.	132.5	78.6	68.6
A	Arch Reinsurance Co.	83.5	94.1	-11.3
AAA	Berkshire Hathaway Life Insurance Co. of NE	57.4	96.2	-40.3
NR	SCOR GLOBAL LIFE US RE Ins. OF TEXAS	31.2	48.7	-36.0
	Total:	**31,589.3**	**34,911.0**	**-9.5**
	Grand Total:	**145,913.6**	**150,252.0**	**-2.9**

Company notes:

1 Adjusted Shareholders' Funds are for the company as a whole, including both its direct and reinsurance operations.
2 The company writes predominantly intragroup reinsurance on an arm's length basis.
3 Net premiums written and the combined ratio relate to reinsurance business only; all other items include direct business.
4 The relevant reporting period ends 31 March.
5 On January 1, 2008, Partner Reinsurance Europe Limited assumed substantially all of the business, assets and liabilities of PartnerRe SA, the Canadian non-life branch of PartnerRe SA and the Swiss branch of Partner Reinsurance Company Limited.
6 Net premiums written relate to reinsurance business only; all other items include direct business.
7 The business of Swiss Reinsurance Co. U.K. Ltd. (U.K.) was transferred into Swiss Re Europe S.A. on 1 January 2008. Swiss Re Germany AG (Germany) and Swiss Re Frankona Rueckversicherungs Aktiengesellschaft (Germany) will merge into Swiss Re Europe S.A. in July 2009, with retroactive effect to 1 January 2009.
8 Figures presented are for the group on a consolidated basis.
9 Flagstone Reinsurance Ltd. (Bermuda) merged into Flagstone Reassurance Suisse SA in September 2008.
10 The data presented is based on the published pro-forma accounts for the Market, which represent an aggregation of all syndicates participating at Lloyd's.
11 Merged with GE Reinsurance Corporation effective 1 January 2007.
12 Merged with Valley Forge Life Insurance Company effective 30 September 2007. The higher premiums in 2007 are driven by the reserve transfer associated with the acquisition of Conseco.
13 Includes the combined results of Partner Reinsurance Company of the U.S. and its affiliate, PartnerRe Insurance Company of New York.

STANDARD & POOR'S

	Pretax Operating Income (Mil. $)		Combined Ratio (%)		Total Adjusted Shareholders' Funds (Mil. $)			Return on Revenue (%)	
	2008	2007	2008	2007	2008	2007	Change (%)	2008	2007
	12.5	1.9	106.9	N.M.	530.3	517.3	2.5	8.7	33.9
	79.2	48.5	90.3	101.1	434.5	488.1	-11.0	24.7	14.1
	12.1	34.3	108.1	101.6	538.8	569.2	-5.3	7.1	20.8
	24.5	29.3	99.2	95.8	165.9	151.7	9.3	11.8	14.7
	27.8	34.5	N.M.	N.M.	162.9	125.5	29.8	14.1	23.3
	8.6	9.1	107.9	106.4	963.7	889.1	8.4	8.3	8.3
	-82.2	-99.5	N.M.	N.M.	810.4	858.1	-5.6	-34.3	-35.8
	-5.3	-7.2	N.M.	N.M.	41.5	42.6	-2.6	-12.8	-12.2
	2,846.5	**6,240.8**	**102.3**	**91.7**	**65,416.1**	**75,778.3**	**-13.7**	**8.8**	**20.0**
	12,290.3	**36,926.0**	**94.0**	**88.0**	**381,562.8**	**471,301.9**	**-19.0**	**12.8**	**16.8**

Glossary of terms

Net reinsurance premiums written = gross reinsurance premiums written less reinsurance premiums ceded; relate to a company's reinsurance business only, unless where separately indicated.

Pretax operating income = underwriting profit (or loss) + net investment income + other income. Net realized and unrealized investment gains/losses are excluded from this item.

Combined ratio = (net losses incurred + net underwriting expenses)/net premiums earned.

Total adjusted shareholders' funds = capital + shareholders' reserves (including claims-equalization reserve and any excess or deficiency of market value of investments over the balance sheet value).

ROR = pretax operating income/total revenue. (Total revenue = net premiums earned + net investment income + other income.)

N.A. - Not available.

N.M. - Not meaningful.

Natural Catastrophe Risk: Assessing Reinsurers' Exposures And Risk Appetite

By Mark Coleman and Taoufik Gharib

Risk and uncertainty are the (re)insurance industry's raison d'être, yet following every major weather-related loss, there is much debate about the use of and reliance on catastrophe models.

The wide variation in modeled versus ultimate losses, the quality of the exposure data, and the belief that companies will heed the lessons they learned when the next renewal season comes around are widely discussed. Yet one financial quarter after the initial loss estimates were reported for Hurricane Ike, we observed widespread significant upward revisions in loss estimates— many using the same grounds for re-estimation. This underlines the difficulties that the industry and its stakeholders are facing.

Since the late 1990s, given major catastrophes' ability to impair financial strength, Standard & Poor's Ratings Services has embedded a property catastrophe capital requirement into the analysis of reinsurers. We have also on occasion revised our criteria to better reflect scientifically observed trends of rising frequency and severity of weather-related events. In 2005, prior to the unprecedented losses from Hurricanes Katrina, Rita, and Wilma, we moved to an annual aggregate-based requirement for reinsurers from an event-based one, and in November 2005, we extended this requirement to primary insurers. In addition, we have analyzed and reflected in our ratings the influence of property catastrophe business within earnings performance, enterprise risk management, and business models where it is significant.

In 2009, we further enhanced our detailed survey of the reinsurance sector to:

- Assess the consistency of the assumptions that issuers are using to derive the Standard & Poor's property catastrophe capital requirement.
- Better assess how sensitive capital and earnings are to different weather events at several points along a distribution curve and how modeled peak losses compare with actual experience over time.
- Improve our understanding of some of the more qualitative aspects of the catastrophe risk-management process.

The main conclusions we have observed are:

- For the purposes of our capital-adequacy analysis, the weighted mean property catastrophe requirement constituted about 15% of Standard & Poor's total adjusted capital (TAC). The highest among the companies responding was 55%, and the lowest was 6%.
- Market capitalization is currently much more vulnerable to catastrophe losses than TAC. On average, the impact was about 83% higher as of June 30, 2009, for the European companies and about 53% higher for the ones based in Bermuda. In some cases, the impact was more than double for certain reinsurers because of their low stock price relative to book value.
- Reinsurers based in Bermuda are 2x-3x more exposed to catastrophe losses than their European counterparts, from both capital and earnings perspectives.
- The Standard & Poor's 1-in-250-year annual exceedance probability (AEP) requirement is a material capital stress, being more than 20% above historical peak losses.
- A Southeast U.S. windstorm, specifically a Florida

windstorm, is the largest single-event exposure. Modeled results suggest that the sector could lose 25% of its capital to an event with an occurrence probability of 0.4%, which is a 1-in-250-year event.

- Catastrophe losses have, on average, added about 15 percentage points to the combined ratio over the period studied.
- Data quality varies widely. We observed that about one-half of risks were geocoded to street address, and more than 90% of total insured values had a replacement value.
- The weighted mean annual loss estimate (or annual catastrophe budget) for 2009 is about 35% of the worst catastrophe loss year and 95% of average annual catastrophe losses incurred during the period observed.
- There is no consistent measure of risk appetite in the sector from which stakeholders can assess relative balance-sheet or earnings volatility.

The results indicate that capital adequacy in the sector can reasonably withstand historical and modeled natural catastrophe losses. Even at extreme levels of severity, such as a 1-in-500-year modeled loss, this gives rise to a loss equivalent to about one-quarter of the sector's capital (ignoring any premium credit). However, not all risk profiles are homogeneous, and some balance sheets are clearly more exposed, either by design or because of recent asset devaluations. If a catastrophe of the magnitude of Katrina were to happen again, we would normally expect to see entities that have a well-established franchise and a proven track record raise capital to profit from a pricing upturn or to replenish any eroded capital. Today, with access to new capital easing but still restricted, and with liquidity at a premium, we view catastrophe risk as a greater threat to the financial strength of the reinsurance industry than at any time since post Katrina. This is notwithstanding a near-normal Atlantic hurricane season forecast for 2009 (according to the U.S. National Oceanic and Atmospheric Administration). As a result, if a market dislocation were to occur, we believe that investors would be very selective in their choice of companies in which to invest.

Chart 1: Net Aggregate Probable Maximum Losses As A % Of Total Adjusted Capital

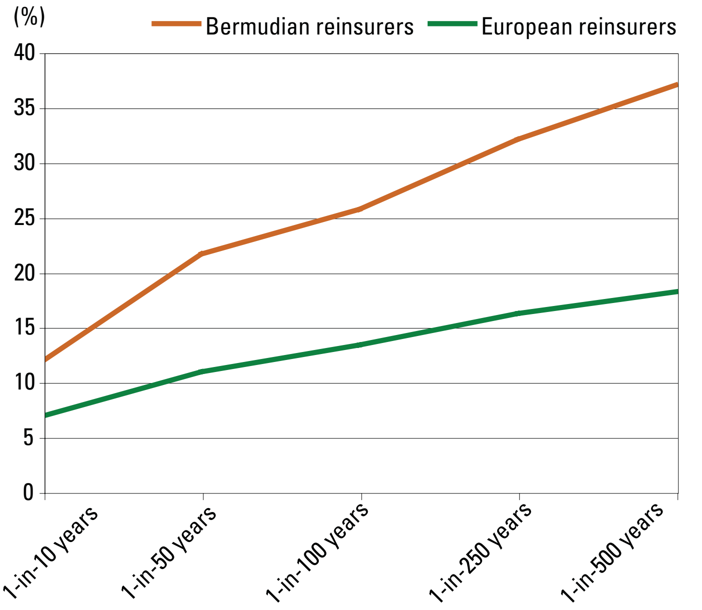

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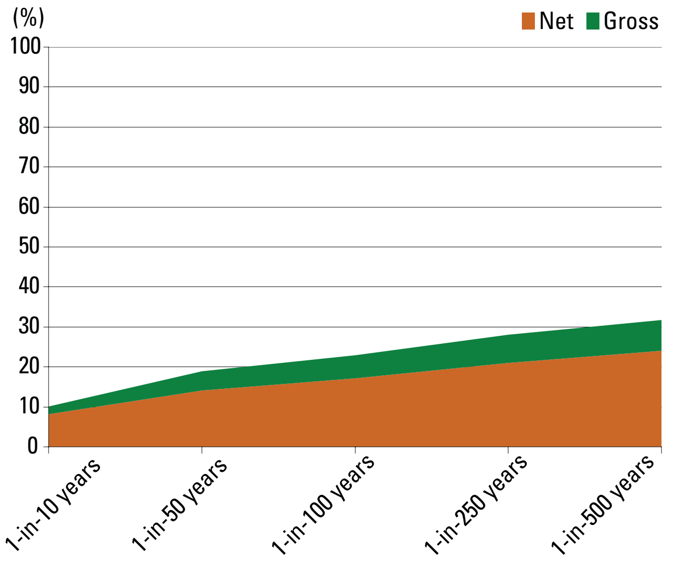
Chart 2: Annual Exceedance Probability Curve As A % Of Standard & Poor's Total Adjusted Capital, Ignoring Any Premium Offset Credit



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Frequently Asked Questions

How much capital is at risk?

For the purposes of our capital analysis, the weighted average aggregate probable maximum loss (PML) with an occurrence probability of 0.4% as a percentage of TAC is about 15%. Bermudian capital was 3x more exposed to catastrophe risk than that in Europe. The sensitivity of capital to catastrophe risk varied significantly among reinsurers, however—from as low as 6% to a high of 55%.

Chart 1 shows a probabilistic range of property catastrophe modeled losses on an aggregate basis (that is, multiple occurrences of loss events per year) as a percentage of TAC. The two curves are a weighted average PML of European reinsurers compared with those of their Bermudian counterparts. These modeled losses exclude any benefit from the related premium income received, which we would normally take into consideration in accordance with our published criteria. The results show that the PML of the Bermudian reinsurance sector as a percentage of TAC is about double that of Europe at most points along the curve. This differential underscores Bermuda's

Chart 3: Company A: Annual Exceedance Probability Curve As A % Of Standard & Poor's Total

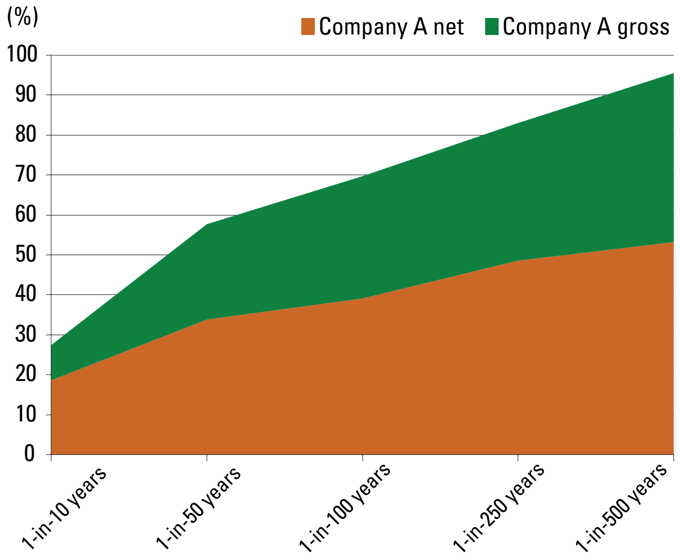
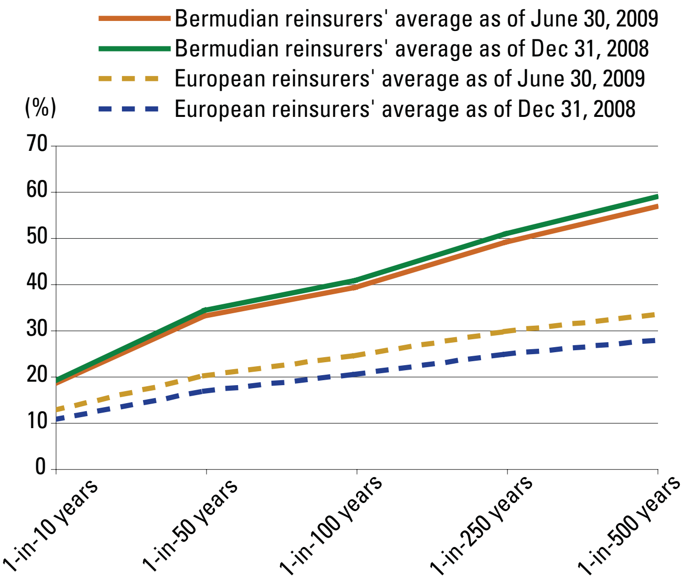


Chart 4: Net Aggregate Probable Maximum Losses As A % Of Market Capitalization



established position as a property catastrophe underwriting hub in addition to the more diversified business models of the Europeans with a greater geographical spread and writing a more balanced mix of short/long tail lines and life/nonlife products.

Chart 2 further illustrates this point. It depicts the weighted average gross and net exposure of the sector on the same bases as described above. By contrast, Chart 3 shows the exposure for one company that we rate. The difference, and the implied volatility relative to the sector average, is significant.

The charts also highlight the marked difference among reinsurers in the use of and reliance on retrocession, including the reinsurance that protects the primary business written by some reinsurers. On a weighted-average basis, retrocession reduces the sector's net exposure by less than 10% at any point along the curve compared with a peak of about 40% for the company in Chart 3. Interestingly, the differential between gross and net exposures increases at higher return periods, which suggests reinsurers are principally buying protection at high attachment points.

Is Standard & Poor's property catastrophe capital requirement a material capital stress?

Yes, we believe so.

The aggregate 1-in-250-year PML charge in the capital model is, on a weighted-average basis for the sector, more than 20% higher than the worst catastrophe loss year each reinsurer has experienced since the start of the decade or, in the case of some of the more recent start-ups that we rate, since they began trading. In our view, this indicates that in aggregate, our capital analysis adequately stresses catastrophe risk given that this period includes two of the four largest insured natural catastrophes recorded.

We have further benchmarked our capital requirement against peak losses from historical single events, and our charge exceeds this number by 80% on a weighted-average basis.

We do have some concerns, however, about the comparability of modeled results among our interactively rated reinsurers. Whereas for one reinsurer the PML was more than 3x its worst catastrophe loss year with no proportionate change in its 2009 risk exposure, some other reinsurers provided a modeled result that is less than one-half of actual losses. When there is a significant difference between the modeled capital requirement and actual historical losses that we cannot rationalize, or when it looks unreasonable relative to peers, we could reflect this in our analysis on a qualitative basis or by applying a capital load.

Could reinsurers use the capital markets to replenish capital following a major catastrophe?

Chart 4 shows the more pronounced impact of a 1-in-250 year PML when measured against the sector's market capitalization rather than TAC. As of Dec. 31, 2008, the mean impact was about 52% (83% as of June 30, 2009) higher for the Europeans and about 58% (53% as of June 30, 2009) higher for the Bermudians. However, in some instances, the impact was more than double for certain reinsurers because of their low stock price relative to book value. We believe that this could hinder recapitalization efforts post a major event. In addition, the differential between TAC and market capitalization has increased in Europe during the six-month period beginning on Dec. 31, 2008, mainly because of the drop in the market cap of both Swiss Re and Munich Re. Conversely, the improvement in XL's valuation has had a positive effect on the total capitalization of Bermudian reinsurers. As most of the Bermudian and European reinsurers' stock prices have somewhat recovered through the first week of August 2009, the net aggregate PMLs as a percentage of market capitalization have improved but are still more pronounced relative to reinsurers' TAC.

What is the largest peak event?

A Southeast U.S. windstorm, specifically a Florida windstorm is, unsurprisingly, the peak catastrophe event for the European/Bermudian reinsurance sector. A windstorm with an occurrence probability of 0.4% would result in a loss equivalent to nearly one-quarter of this sector's TAC based on the modeled results.

How sensitive are earnings to catastrophe losses?

Our analysis reveals that:

- Bermudian reinsurers' reported earnings are 3x more sensitive to catastrophe losses than those in Europe.
- Catastrophe losses have, on average, added about 15 percentage points to the combined ratio since 2001 or since more recent entrants began trading.
- Catastrophe losses reduced pretax earnings by about 55% in 2008.
- The mean 2009 weighted average annual loss estimate (the annual catastrophe budget) for the sector is 35% of the worst catastrophe loss year since 2001 and 95% of average annual catastrophe losses incurred during this period. It is also one-third of our 1-in-250-year net catastrophe capital requirement and 45% of losses from the largest single event on average.
- Since 2001, losses from the largest single natural catastrophe event (which is specific to each reinsurer) constituted about one-half of peak earnings for the sector. We have assumed the peak to be the average of pretax earnings in 2006 and 2007, given the level of catastrophic activity and pricing adequacy in these years. By including 2008 earnings (and therefore losses related to Hurricanes Ike and Gustav and investments), this ratio increases to about 80%. This measure does not allow for any change in risk profile over the period, but it does include Hurricane Katrina, which generally resulted in a subsequent reduction in risk appetite and exposure.

How sensitive is capital to modeling risk?

Our analysis shows that even when looking at extreme events in the tail of a distribution (that is, a 0.2% probability of occurrence), on average, peak gross modeled single events (with the exception of a Southeast U.S. windstorm) do not exceed one-quarter of the sector's TAC. However, the effect is significantly amplified (nearly double) when considering total insured values. We looked at gross figures because with more extreme events, a reliance on retrocession recoveries could be a concern.

Chart 5: Net Probable Maximum Losses Of Peak Events As A % Of Total Adjusted Capital

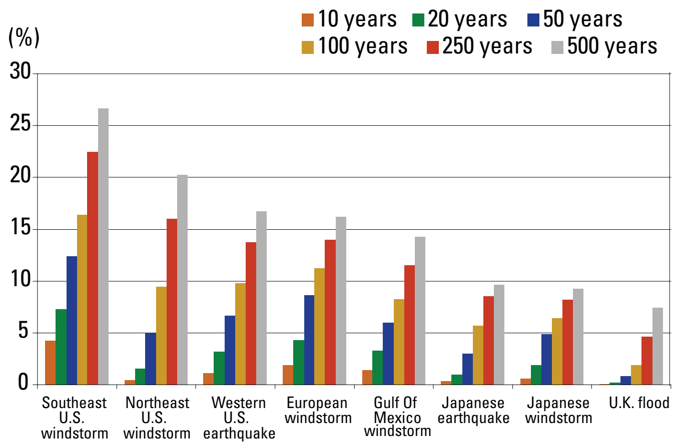


Chart 6: Gross Probable Maximum Losses Of Peak Events As A % Of Total Adjusted Capital

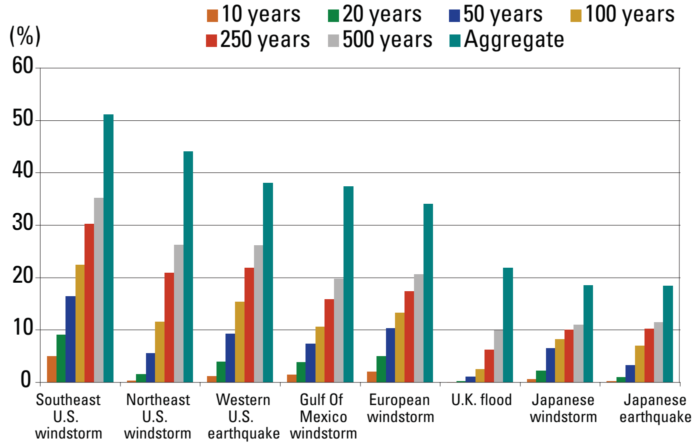
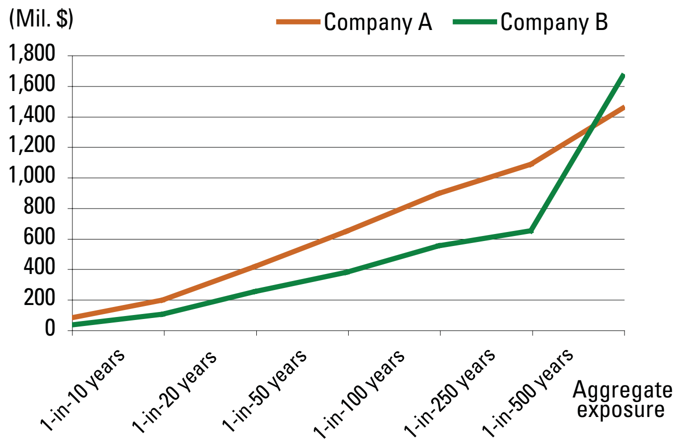


Chart 7 shows a very different view of Western U.S. earthquake risk, mostly driven by California exposure, for two groups with a similar total gross aggregate exposure. The results could indicate that Company A's modeling assumptions are more conservative than Company B's. Alternatively, the difference could be specific to Company's B's underwriting portfolio—such as its participation on different layers of a risk or the quality, location, or number of risks it underwrites. In any case, Company B's modeling risk is much higher when looking at events in the tail of a distribution. At a 1-in-500-year severity, Company A has reached 75% of its gross aggregate compared with 40% for Company B. In dollar terms, the difference between the two companies' estimate at this confidence level is $400 million.

Chart 7: Western U.S. Gross Occurrence Exceedance Probability Curve



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How good is data quality?

Data quality concerns the resolution, completeness, and accuracy of a property's valuation, location, structure, and occupancy, all of which will affect the expected loss. The implications of poor data quality include inaccurate exposure modeling as well as inefficient pricing and reinsurance purchasing. Missing and inaccurate exposure data were identified as critical to many of the (re)insurance industry's failings related to Hurricane Katrina. We are not in a position to adjust the modeled exposures that the issuer we rate provides when we have concerns about the reliability of the output related to data-quality issues. However, these concerns will generally influence other, more qualitative assessments—such as the quality of the company's risk management (including its modeling), the quality of its underwriting, and financial flexibility.

According to the results of our survey, about one-half of all risks in terms of total insured value were geocoded to the street-address level, with a further 30% having full zip or postal code resolution. An analysis by AIR Worldwide Corp. ("AIR Currents," February 2009) highlighted the significance of having address-level geocoding. The study calculated the expected loss of a property using both the exact address and just the location of the city center. The difference was in excess of 70%.

The geocoding resolution of our respondents would place them in the bottom quartile of the industry if we were to benchmark them against the results published in 2007 by Towers Perrin ("The Role of Catastrophe Modeling in Insurance Rating, "Emphasis Magazine," March 2007). It is not possible for us to draw any definitive conclusions from this comparison, but the results are surprising, especially because most believe that data-quality standards have improved in the last few years and because our results include the major global reinsurers. For one respondent, we observed that location-level data was much weaker outside of the U.S., which might account for some of the difference. More than 90% of risks by total insured value had a replacement value, but we were not able to ascertain how much of this data had been validated, and relatively few respondents completed this part of our survey. Key underwriting attributes—such as construction and occupancy type—were documented for at least two-thirds of risks by total insured value. We could make no reliable distinction between the quality of data held for private versus commercial properties.

Can Standard & Poor's measure relative risk appetite?

We have not observed a consistent measure of catastrophe risk appetite within the industry that stakeholders can use for the purpose of investing, lending, buying reinsurance, ensuring good corporate governance, or otherwise assessing credit risk. We can benchmark exposure data as a proxy, but this does not set a maximum tolerance for the amount of catastrophe exposure a company is willing to accept. Risk appetite is typically formulated as a percentage of capital, but comparisons are either difficult to make or will otherwise compound already complex assumptions. This is because management will usually set risk tolerance according to how it manages the business financially (including how advanced its modeling capabilities are) and strategically, with transparency for investors a secondary consideration. As a consequence, risk appetite can be expressed at any number of confidence levels, risk metrics (value at risk and tail value at risk), and on different bases (annual exceedance probability and occurrence exceedance probability).

We see best practices evolving toward defined limits relative to some measure of economic capital and earnings, at different levels of confidence. This provides increased transparency that would better allow investors to tailor their investment decisions according to their own tolerance for risk.

Ratings Remain Vulnerable To Catastrophes

A major catastrophic weather event, or a series of them, could bring about a more precipitous change in ratings than the current stable sector outlook implies if we believe there could be any material capital impairment. Sources of capital are limited and expensive, and reinsurers no longer have the benefit of operating in a benign financial environment where the ability to reload capital after an event is normal. As a result, ratings are more sensitive to catastrophic activity, but multi-notch downgrades are unlikely given that our capital requirements incorporate an AEP stress that, in most cases, exceeds actual catastrophe losses over time. ■

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STANDARD & POOR'S

Global Economic Downturn: Headaches And Opportunities For Life Reinsurers

By Robert A Hafner and Stephen Hadfield

Companies in virtually every sector have felt the strain of the global economic downturn, and the insurance industry is no exception. But for life reinsurers in particular, the news hasn't been all bad, as the market turmoil also appears to have created some opportunities.

Life reinsurers' capitalization and operating performance have suffered from investment market volatility and reduced premium volumes. In addition, the slowdown in the primary traditional life markets has meant less business for life reinsurers. However, we expect that the reduction in capital across the life insurance and reinsurance industry will increase life reinsurers' pricing power. In addition, life reinsurers will likely expand into new markets and new products, though the difficulties some companies have had with variable annuities could temper some of the enthusiasm for new risks.

The Slowdown Continues In Traditional Markets

The decline in life reinsurance cessions in the largest life reinsurance market globally—the U.S.—continued in 2008, albeit at a reduced rate. According to the most recent Society of Actuaries study, recurring ordinary reinsurance assumed declined 3.7% in 2008 compared with a 34% decline over the previous three years. Recurring assumed business of $658 billion (insurance in force) in 2008 is now 39% below the peak of $1.08 trillion in 2002. The decline occurred primarily because reinsurers raised their prices from very low levels in the early part of the decade, and primary insurers' improved capitalization enabled them to increase retention levels. The lower activity levels of primary insurers during the economic downturn will likely extend the trend of lower reinsurance premiums.

The Reduction In Capital Across The Industry Might Present Opportunities

Although the economic downturn is reducing premium volumes, market conditions could result in increased opportunities in traditional mortality markets because cedants' reduced capitalization might drive up demand for capital relief through reinsurance.

For example, this shift is apparent in cedants' preference in recent years for excess yearly renewable term reinsurance over first-dollar coinsurance. This trend is showing signs of reversing temporarily because of the greater capital relief possible with coinsurance. It is unlikely that the reversal of the trend will be permanent, but any reversal will likely benefit life reinsurers. The cession rate (the proportion of new life risks ceded to reinsurers) is stabilizing after some years of decline, but the drop in direct insurers' new business could cause a comparable decline in recurring premium business for reinsurers, which portfolio reinsurance business increases could offset.

Standard & Poor's Ratings Services believes the scarcity of capital for both cedants and reinsurers will increase the pricing power of reinsurers for both recurring business and one-off portfolio transactions. However, life reinsurers will need to manage scarce capital resources and ensure they are able to cover their mainstay regular premium business before deploying capital for block transactions.

Expansion Beyond Core Markets

Standard & Poor's expects that the lower reinsurance cession rates and slow long-term growth of the dominant but mature mortality markets (primarily the U.S. and U.K.) will increasingly cause life reinsurers to seek out nontraditional risks and expand into less-saturated markets to sustain growth. The growth opportunities in traditional mortality risks will likely wane as the economic turmoil subsides. In addition to the mortality and retirement savings segments, the life reinsurance sector is more actively supporting long-term care, critical illness, longevity, and health care risks. As the proportion of retirees increases in populations in the developed markets, we believe that these segments will provide a significant growth opportunity for the sector.

Variable Annuity Experience: A Cautionary Tale

Life reinsurers' foray into nontraditional equity-linked minimum guarantee risks on variable-annuity (VA) products resulted in unexpectedly volatile liabilities that added to the drain on capital. Consequently, life reinsurers have generally stopped accepting new equity-linked VA risks and have closed most open treaties.

As the poor results from VA minimum guarantee reinsurance demonstrate, these areas of emerging interest for life reinsurers are less well understood and less predictable than are their traditional mortality risks. If strong risk management and astute risk selection don't offset the increased uncertainty, the change in risk profile could erode the financial profile of the life reinsurance sector.

The Market Remains Concentrated

The life reinsurance sector remains highly concentrated, with Swiss Reinsurance Co. Ltd. (Swiss Re) and Munich Reinsurance Co. (Munich Re) writing more than half of the global life reinsurance premiums. RGA Reinsurance Co. (RGA) stands out as the most significant of the few remaining life-only reinsurers. RGA is the only noncomposite reinsurer with a meaningful and expanding international footprint and consistently holds a top-three new business market share in the U.S. and Canada.

Scottish Re Group Ltd. (SRGL), once the third-largest life reinsurer in the U.S. by insurance in force, ceased accepting new business in 2008 and began selling portions of its organization to help preserve long-term solvency. SRGL sold most of its ING-related business and significant operating assets to the composite reinsurer Hannover Rueckversicherung AG (Hannover). In our opinion, Hannover is well positioned to become a force in the U.S. and global life reinsurance markets.

Excluding the Hannover transaction, just five reinsurers controlled 75% of new reinsurance business in the U.S. We believe that Hannover is now positioned to accrete a solid, double-digit new business market share in the U.S. within one or two years. Facilitating this growth is cedants' desire for a broader panel of high-quality life reinsurers to diversify counterparty exposure and increase competition.

Although in our view Hannover has substantial competitive advantages, the group lacks an extensive facultative underwriting capability. This has proven to be a critical competitive advantage for the established market leaders. Consequently, we believe that the life reinsurers most at risk of losing market share to the ascendant Hannover are the less-established second-tier life reinsurers that also have not developed this critical offering and lack Hannover's greater financial strength. It should also be noted that market share for the leading life reinsurers typically hovers at about 20%-25% and is probably not sustainable much above 25% for any one company.

Illiquid Capital Markets Increase Collateral Funding Costs

The credit market stress in 2007 and 2008 dramatically reduced liquidity, greatly slowed securitization activity, and increased collateral funding costs in the U.S. for new funding arrangements for redundant XXX reserves on term insurance and redundant AXXX reserves on universal life insurance with secondary guarantees. Insurers and reinsurers increasingly relied on long-term letters of credit (LOCs) to fund collateral needs. The ensuing market shock and economic turmoil shut down collateral financing through securitization and LOCs. This forced primary insurers to warehouse their excess reserves, which existing capital resources must fund. To conserve capital, reinsurers have increased their pricing for reinsuring redundant reserves and reduced its availability.

Complete regulatory relief from redundant reserves, which the industry widely considers to be uneconomic, is still over the horizon. However, regulators are taking a renewed interest in comprehensively developing more economic reserve standards because of the increasing need to allocate capital to true economic risks. A revival of the securitization and LOC collateral funding markets will be necessary if life reinsurers are to fully resume their role of intermediating securitization of redundant reserves in the U.S. Eventually, though, the regulatory reserve standards must evolve to reduce the inefficiency of redundant reserves.

Flu Pandemic Highlights Mortality Risk

On June 11, 2009, the World Health Organization (WHO) raised the worldwide pandemic alert level to Phase 6, indicating that the WHO believes that a global pandemic is underway. As of July 27, the WHO was reporting that the outbreak of H1N1/09 (more commonly known as swine flu) had spread to more than 130 countries and infected about 135,000 people. Although there have been relatively few fatalities (approximately 800) so far, the increasing spread of the disease raises concerns about, and heightened awareness of, pandemic risk. Because the outbreak has spread so widely, many countries have ceased testing and reporting individual cases, so the number of reported cases will increasingly understate the extent of the pandemic.

Insurer and reinsurer mortality exposure is significant. In the U.K., the gross sums at risk (that is, the amount insurers would pay, in excess of reserves held, in the event of a mortality claim) is about £2.1 trillion, according to 2008 year-end U.K. Financial Services Authority statutory returns. Approximately half of the 2008 U.K. exposure is reinsured (net sums at risk of £1.1 trillion). In the U.S., gross sums at risk exceed \$18 trillion, with more than 40% of the exposures reinsured.

Other than reinsurance, insurers' options for managing mortality risk include the issuance of annuity contracts (to imperfectly hedge mortality exposure across the whole insurance portfolio) and the issuance of mortality catastrophe bonds (MCBs). MCBs are a relatively new tool that allows insurers with large mortality exposure to transfer the risk of higher-than-expected mortality experience on part of the insured portfolio to the capital market. Both insurers and reinsurers have issued MCBs to protect themselves from extreme mortality risk, generally pandemic risk, but to an extent, MCBs also protect these issuers from terrorism events and significant adverse changes in mortality trends. Issuance of MCBs slowed in 2008, but the ongoing pandemic could spur further issuance as insurers and reinsurers seek to actively manage their risks.

At present, we believe that the latest H1N1/09 outbreak has had negligible impact on mortality rates in the territories, ages, and genders covered by insurance. As a result, the impact on life insurers and reinsurers has not yet been significant. In addition, the H1N1/09 outbreak has not triggered any MCBs. Typically, these bonds would default only if a high mortality rate (regardless of its cause) was reached. Assuming deaths are distributed evenly across the territories, ages, and genders specified in the MCBs rated to date, then the number of additional deaths (in excess of historical trends) required to trigger the bonds (and therefore cause a loss of principal) ranges from about 400,000 to almost 1,100,000.

In our opinion, one of the main risks with the current H1N1/09 outbreak is that this first wave of disease will not be the only incidence of infection and that the disease could lie dormant—or continue to cause relatively few casualties—before returning in a much more potent form. Dr Margaret Chan, Director General of the WHO, said on May 4, 2009, "Historically, influenza pandemics have encircled the globe in two, sometimes three, waves. During the previous century, the 1918 pandemic, the most deadly of them all, began in a mild wave and then returned in a far more deadly one. In fact, the first wave was so mild that its significance as a warning signal was missed." The WHO also noted in its July 16, 2009, Global Alert and Response update that "the 2009 influenza pandemic has spread internationally with unprecedented speed. In past pandemics, influenza viruses have needed more than six months to spread as widely as the new H1N1 virus has spread in less than six weeks."

The development of a pandemic, even one causing relatively few fatalities, could still result in significant social and economic disruption and could worsen the current global economic downturn. Significant uncertainty remains as to the ultimate course of the H1N1/09 outbreak and when the needed quantity of vaccine doses will be available. The WHO is concerned with the amount of vaccine from the first series of vaccine strains tested, which only yielded 25%-50% of normal quantities. To accelerate vaccine production, Dr. Marie-Paule Kieny, Director of the Initiative for Vaccine Research, WHO, indicated on July 13, 2009, that "the WHO laboratory network is again trying to generate new vaccines viruses from wild type virus isolated from patients."

In addition to the current H1N1/09 outbreak, experts continue to fear an outbreak of H5N1 (known as avian or bird flu) because of its ability to mutate rapidly.

Reinsurers Cautious On Older-Age Mortality

Estimating insured mortality for lives much older than 70 is still problematic compared with estimates of mortality for younger ages, which are based on vast historical data. The increased number of retirees in developed markets materially increases the importance of accurately estimating older-age mortality for both primary and life reinsurers because of the increasing proportion of older insured lives. The shape of the mortality curve at older ages is less stable than at younger ages. Recent studies of U.S. experience suggest that the mortality curve might be steepening, which would result in earlier claims than expected and reduced profitability on life insurance and reinsurance. Until sufficient volumes of data allow the industry to observe and predict mortality trends with greater certainty, life reinsurers will likely continue to evaluate these risks cautiously.

The emergence of at-issue and post-issue investor-owned life insurance (IOLI) has intensified the uncertainty regarding older-age mortality. Such policies involve older insured lives, usually with high sums insured. IOLI investments appeal to investors seeking higher returns uncorrelated with other investments. But the investment is predicated on a belief that the investor knows something bad about the insured life that the insurer does not. Investors profit when they correctly estimate earlier mortality by collecting death benefits earlier than the insurers assumed in their pricing. Insurers that do not accurately factor this into their pricing could see accelerated insured mortality claims erode their profitability (see "What Is Investor-Owned Life Insurance?" March 6, 2009, RatingsDirect).

The Longevity Market Continues To Develop

The economic downturn has increased the cost and decreased the availability of capital, resulting in a diminished appetite for a bulk buyout of liabilities by both primary insurers and bulk-buyout specialists. Standard & Poor's believes that corporations and pension schemes remain keen to reduce longevity risk, though it remains uncertain whether it is reinsurers, capital markets, or specialist vehicles that have the most appetite for longevity risk.

A lot of the activity in the longevity market is occurring in Europe, with the U.K. in particular leading the market development. There have been several transactions in 2008 and 2009 between primary insurers and the capital markets, including:

- JPMorgan set up longevity risk derivatives covering £500 million of Canada Life's U.K. annuity book. This is a long-duration swap, under which Canada Life will pay a series of fixed payments to JPMorgan and receive floating payments that reflect actual benefit payments made by Canada Life on a closed portfolio of about 125,000 annuitants. At the same time, JPMorgan entered into a number of equivalent swaps with capital markets investor-counterparties, passing on the longevity risk of the portfolio.
- Aviva Life & Pensions U.K. Ltd. (Aviva), formerly Norwich Union Life & Pensions Ltd., entered into a longevity swap with The Royal Bank of Scotland PLC (RBS) and Partner Reinsurance Co. Ltd. The transaction enables Aviva to transfer the longevity risk on a £475 million book of older U.K. annuitants until 2018 and reduces the risk to Aviva of U.K. annuitants living longer than expected.

Increased Financing Transactions

In 2008, there was an increase in reinsurance financing transactions, as insurers increased capital-management activities during the economic downturn. The following examples all occurred with Swiss Re in 2008:

- Irish Life Assurance (ILA) entered into a stop-loss reinsurance arrangement that is expected to reduce strain from its new business over the next three years. As a result of this treaty, ILA's capital requirements for 2008 decreased by €125 million, and there will be a further reduction in ILA's capital requirements (of up to €100 million) over the next three years.
- Scottish Equitable PLC (SEPLC) entered into a stop-loss arrangement to reinsure a portion of the pensions annuities in payment. The treaty results in an undischarged obligation of SEPLC of £120 million. The obligation is reflected as a reduction in the liabilities of annuity business, and the reduction will decrease over the next four years, depending on the rate of emergence of surplus on a specific block of business.
- Aviva entered into a time-deferred stop-loss arrangement, where the recapture of the liability is contingent on future shareholder surplus. The company has not disclosed the size of the liability.

Life Reinsurers' Financial Strength Slips, And Uncertainty Grows

We believe that although the life reinsurance sector has heightened risk, it is generally well positioned to weather the economic downturn. This is because the increased demand for reinsurance to relieve cedants' capital stress presents an opportunity to enhance profitability. In some cases, the current investment cycle has hurt the financial strength of life reinsurers that are members of composite groups more than it has life-only reinsurers. This is primarily because life reinsurers' expertise is in taking mortality risks, and they tend to be relatively conservative when taking investment portfolio risks. By contrast, when a life reinsurer is a member of a composite group, the characteristics of the composite group as a whole affect the life reinsurer's financial strength.

Contracting cession rates limit the long-term growth prospects of the life reinsurance sector while more reinsurers are jockeying for market share. We believe that after the current stress subsides, reinsurers will likely resume pursuing newer, less-well-understood, and potentially more volatile products to sustain long-term growth and profitability. The sector benefited by being reluctant to provide extensive reinsurance for variable annuity equity-linked minimum guarantees. This limited the impact from the equity market decline and also raised awareness of reinsurers assuming nontraditional nonmortality risks. But even mortality risks are presenting new challenges as the industry tussles with H1N1/09 and H5N1 pandemic threats and tries to build a critical mass of older-age mortality data.

We believe life insurance-linked securitization transactions continue to have a wide potential scope. As the capital markets thaw, we anticipate that life reinsurers will have an important role in this market. Reinsurers will likely continue to issue insurance-linked securities and intermediate capital-management solutions for cedants because reinsurers' specialized and broad knowledge of the life insurance market will facilitate issuance. ■

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STANDARD & POOR'S

Weathering The Storm: Asia-Pacific Reinsurers Stand Firm Amid Financial Turmoil

By Patrick Ho, Connie Wong, Michael Vine, Andy Chang, Ayako Nakajima and YuMee Oh

Standard & Poor's Ratings Services expects the outlook for rated reinsurers operating in Asia-Pacific to remain stable through 2009. This reflects our view on--albeit increasingly volatile--underwriting results, potential regional market growth, and capitalization, which we consider commensurate with rating levels.

However, in our opinion, some markets in the region are experiencing continued softening of pricing conditions driven by profitable primary markets, ample reinsurance capacity, investment market volatility, increasing catastrophe and emerging risks, and exposure to some reinsurers expanding in the region.

The global financial turmoil has dented the balance sheets of most insurers and reinsurers through investment losses and write-downs. We expected the resultant weak operating results in 2008, which led to a renewed focus on underwriting profitability, to be a key trigger for reinsurance pricing improvement in 2009 in the Asia-Pacific region. Unsurprisingly, this materialized in the more mature markets such as Japan, Korea, and Australia. The reinsurance terms and conditions for the 2009 renewal season in most of the remainder of Asia still appear to be softening, in particular for the profitable property and casualty lines, although excluding catastrophe and long-tail business.

We believe that the continued softening of pricing reflects the competitive primary marketplace in which insurers' operating profitability has been under pressure owing to the market turmoil and economic slowdown. At the same time, this softer pricing reflects the ample reinsurance capacity provided by both regional and international reinsurers, and even primary insurers themselves, as they pursue risk diversification and growth strategies.

Reinsurance pricing diverges among markets in the region, depending on market maturity and sophistication, from harder pricing in the more mature, technically driven markets such as Australia and Japan, to soft pricing in most of the other Asian markets, driven more by the bargaining power or underwriting profitability of cedants.

Asia-Pacific

This revival in demand has come about following an unprecedented series of flood, storm, and bushfire events in Australia.

The 2008 underwriting performance of local reinsurers in the region was generally steady in our view, reflecting the growing top-line and limited catastrophe losses for the regional markets in recent years. However, we expect underwriting performance to experience some volatility over the next one to two years, owing to potentially higher claims frequency amid sluggish economic conditions, inadequate pricing and reserving, and potential catastrophic losses in some markets. We expect regional reinsurers' overall profitability, including investment profits, to improve in 2009 compared with 2008, when most investment books were weakened due to market conditions. We also expect rated reinsurers in the region to remain profitable over the next one to two years, albeit at a lower level than in 2007, supporting their respective rating levels.

Markets such as Japan, Australia, and Taiwan are seen to be subject to significant catastrophe risks, and catastrophe risk coverage is generally placed with more sophisticated reinsurance markets using appropriate risk assessment processes and tools. However, we think that markets such as China and India--which have increasing catastrophe exposure due to urbanization, limited capacity, quality of data, and sophistication of risk management practices--may find the catastrophe risks inadequately protected, for example, the recent snowstorm risks in China. Due to the higher occurrence and size of natural catastrophes recorded in the Asia-Pacific region in recent years, reinsurers have shifted their attention toward natural disasters there. Up to now, insured losses have been minimal given the level of underinsurance.

Against the backdrop of the global financial turmoil, and with uncertainty surrounding potential economic recovery prevailing, both regional and international reinsurers are focusing on repairing balance sheets. However, we expect that whether the tough talking on rate hardening will eventually translate into reality will depend on whether ample reinsurance capacity stabilizes or continues to grow.

Australia/New Zealand

The Australian and New Zealand markets continue to be viewed by global reinsurers as offering good geographic and seasonal diversity away from key northern hemisphere risks, as well as access to a well-regulated and mature, yet growing, primary market.

Reinsurance is placed with major European and U.S.-owned players, often through local subsidiaries and branches. Practically no indigenous Australian reinsurers remain in the market. Over recent years, the non-life insurance cession ratio has steadily increased from 25% of the A$28.1 billion gross premium in the year ending March 2006 to 27% in 2008, only to reduce to 25% of the A$29.9 billion gross premium in 2009. The reduced spend in 2009 resulted, in part, from higher retentions after industry consolidation, the use of captives, group reinsurance programs, and tighter capacity.

Pricing conditions are hardening and demand for cover rising, demonstrated by the gross premium of Australian domiciled reinsurers increasing by 17.4% in the year to March 2009. This revival in demand has come about following an unprecedented series of flood, storm, and bushfire events in Australia. In turn, this has dented 2008 and 2009 results and reduced capital ratios in the primary market. With the local reinsurance sector moving to an underwriting loss in the year to March 2009, pricing hardened and risk selection tightened in what was considered a reinsurance sellers' market.

The direct market's loss ratio increased throughout the year and resulted in a combined ratio of 104% for the year as calculated and reported by the Australian Prudential Regulation Authority (APRA). Although A$1.8 billion in gross reinsurance premiums written are reported locally by APRA, the non-life sector cedes more than A$7.5 billion in outward reinsurance, comprising largely intergroup reinsurance arrangements, as well as external reinsurance placed both locally and offshore. Although the direct market has faced difficult underwriting conditions, the sector's financial strength has remained stable, assisted by supportive investment returns with little equity exposure, selective capital raising, and stronger pricing conditions. Equally, we see that the local life sector remains stable with solid growth, supportive investment-linked product features, and mostly strong and committed ownership.

Japan/Korea/Taiwan

As highly industrialized economies and catastrophe-prone markets, the reinsurance needs of Japan, Korea, and Taiwan are tied to their large individual and catastrophe-related risks. Similarly, the three markets are placed in the more mature market category with lower growth rates compared with the rest of Asia, particularly in the property and casualty business lines. The three reinsurance markets have one domestic reinsurer each, providing reinsurance protection to local companies in addition to the co-insurance arrangement among local players and re/insurance pools, and from the global reinsurance markets. However, pricing trends differ among the three markets: Japan and Korea reported hardening pricing, although at a level that was lower than expected, while Taiwan's pricing remains soft.

We expect that the underwriting performance of the local reinsurers will remain steady, with combined ratios of less than 100% in the coming year. However, we expect overall operating performance to be lower than years prior to 2008, reflecting the investment market turmoil. In our view, the capitalization of rated insurers remains a supportive factor for their ratings.

In terms of technical underwriting, we consider Japan as the most sophisticated of the three countries, while Taiwan relies heavily on reinsurance. The Korean market is relatively less catastrophe-risk prone compared with Taiwan and Japan. Its only reinsurer, Korean Reinsurance Co. (Korean Re; A-/Stable/--), captured about 65% of market share compared with Toa Reinsurance Co.'s (A+/Stable/--) 20% market share in Japan and Central Reinsurance Corp.'s (A-/Stable/--) 20% in Taiwan.

Reinsurance capacity in Japan is technically driven, and has significant participation from international reinsurers. This reflects its high level of catastrophe risk exposure. The pricing cycle is therefore more tied up with global reinsurance market trends compared with other markets in the region. As we expected, the 2009 renewal season saw increased reinsurance rates on catastrophe lines of business, such as windstorm and earthquake. However, 2008 results for most companies' reinsurance treaties were what we consider as strong for all lines, including natural catastrophe perils. As a result, price increases were modest despite the reinsurers' capital reductions from the global financial crisis and their restricted capacities partly due to the yen appreciation.

Following the series of merger and consolidation announcements by Japanese insurers in the first quarter of 2009, we believe that competition is likely to intensify amid declining growth in the Japanese non-life insurance market. This may also alter the reinsurance landscape in the medium term, as the newly formed insurance groups will likely redesign their retention and reinsurance strategies, potentially resulting in fewer and larger reinsurance programs being placed in the market.

In our view, the Korean reinsurance market in fiscal year 2009 will develop in tandem with the global hardening of the reinsurance market. However, there were lower premium rate increases at Korean Re than at global players because no natural catastrophes occurred in Korea over the past two years.

We see the competition in the Korean reinsurance market as relatively limited, due to Korean Re's dominant market position with a 65% market share. We expect this market structure to persist in Korea, as the emergence of new reinsurance companies is unlikely, owing to market saturation and Korean Re's strong relationship with primary insurers.

We expect reinsurance market conditions to be favorable over the next one to two years, supported by the continued expected premium growth in the non-life market, as well as the improved underwriting performance of auto insurance lines. In addition, we expect increasing demands for reinsurance support, as small to midsize primary non-life and life insurers attempt to enhance their capitalization under the newly implemented risk-based capital (RBC) solvency measure.

Pricing trends differ among the three markets: Japan and Korea reported hardening pricing, although at a level that was lower than expected, while Taiwan's pricing remains soft.

In Taiwan, the non-life reinsurance rates remained soft, owing, we believe, to the favorable underwriting results of most primary insurance companies since 2002. In addition, the premium rate in primary markets also continued to drop, reflecting market competition and the relatively low market discipline. Taiwan's non-life insurance premium has trended down since 2006 and we expect this to continue given the economic slowdown. In addition, Taiwan's non-life insurance market entered a new stage of premium rate deregulation in April 2009. Although we expect 2009 to be a challenging year for the primary non-life insurers in terms of them maintaining satisfactory underwriting results, we also expect reinsurers' performance to be subject to greater volatility.

The Rest Of Asia

We see that the soft pricing conditions for the rest of Asia persist in the noncatastrophe reinsurance business, although some hardening of rates was evident during the 2009 renewal season. We believe that the global financial crisis has eroded the balance sheets of both domestic and internal reinsurers, but at the same time, there is no shortage of reinsurance capacity in the region. Given the reported underwriting results for most primary markets, most reinsurance contracts have been renewed at expiring terms. The underwriting performance of reinsurers in the region remains favorable compared with international reinsurers, thanks to the relatively lower reported catastrophe claims. The domestic reinsurers, such as Thai Reinsurance Public Co. Ltd. (A-/Negative/--) and China International Reinsurance Co. Ltd. (A-/Stable/--), reported a rating-commensurate underwriting result in 2008, although we expect some deterioration in the coming years, reflecting a potential increase in claims as a result of market competition and a sluggish economy. As most of the international reinsurers in the region operate as branches, underwriting performance is consolidated with that of the group and is therefore not publicly disclosed. However, we expect that most reinsurers in the region will remain profitable overall, although they have been exposed to some emerging risks, for example, the China snowstorm for some international players.

The continued growth of developing markets such as China, India, and some markets within the Association of South East Asian Nations (ASEAN) has attracted increased reinsurance capacity both regionally and internationally, as reinsurers pursue

As there is increasing urbanization in most of the developing markets in the region, we think the potential insurance losses due to catastrophes could be significant in the future.

their risk diversification and growth strategies. We believe that this has supported continued soft reinsurance market conditions in 2009 so far. Although some key international reinsurers intended to tighten terms and conditions, a few aggressive and less dominant players have seized the opportunity to increase their market share through keen pricing. Domestic coinsurance, pooling, and major international reinsurance companies remain the major providers of mass-market reinsurance capacity. Local reinsurers still mainly provide capacity to their home markets, but are increasingly participating in regional programs in order to diversify their risk profiles. New reinsurance capacity has emerged in Singapore in recent years, in which Lloyd's syndicates have played a major role.

We expect the underwriting performance of the rated reinsurers in the rest of Asia to remain steady, with the average combined ratio for the region not exceeding 100%. We expect that whether the tough talking on rates hardening will eventually translate into reality will depend on a combination of the aggressive nature of capacity in the region, and the speed with which the insurance and reinsurance markets recover from financial turmoil. As the extent of investment losses has been less severe for domestic reinsurers because of what we see as their generally prudent investment attitude, we expect bottom line profits in reinsurance to remain favorable, albeit at a lower level. Despite the increased focus on profitable underwriting, we have only observed a tightening of renewal terms and pricing for those contracts with persistent loss performance in the recent past or in long-tail liability lines.

The higher occurrence of natural catastrophes in China and Southeast Asia in recent years has increased the awareness of natural disasters in the region. For example, in 2008: the earthquake in Sichuan, snowstorms in China, cyclone Nargis that hit Myanmar, India, Sri Lanka, and Bangladesh, and typhoon Fengshen that affected the Philippines, China, and Hong Kong. Up until then, however, insured losses had been dwarfed when compared with the overall economic losses following these disasters. In our observations, the financial impact on reinsurers has therefore been minimal, reflecting the underpenetration of insurance in certain areas within the respective countries. As there is increasing urbanization in most of the developing markets in the region, we think the potential insurance losses due to catastrophes could be significant in the future. We see that as a large portion of regional catastrophe exposure is placed with international reinsurers, the pricing and terms of catastrophe reinsurance cover is hardening, mirroring the global trend. ■

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STANDARD & POOR'S

One Year On – What Has Changed?

By Ricardo Brito and Angelo Sacca

After seven decades of government monopoly, ten years of debate, and much expectation, the opening of Brazil's reinsurance industry in April 2008 appears to have done little to change the status quo.

IRB-Brasil Resseguros S.A. (IRB-Brasil Re, unrated), the state-owned reinsurer that held the monopoly on the industry until last April, is still the leader and commands the large majority of business.

Since April 2008, the Superintendencia de Seguros Privados (SUSEP), which regulates the insurance and reinsurance industries, has licensed 58 reinsurers to operate in the country under one of three categories defined by the new legislation:

- Local reinsurer: a reinsurer domiciled in Brazil, organized as a stock company to exclusively carry out reinsurance and retrocession (a sharing of reinsured risks among reinsurers) transactions.
- Admitted reinsurer: a reinsurer domiciled in a foreign country with a representative office in Brazil. The company must have been in the reinsurance business for at least five years, have minimum capital of US$100 million, and a credit rating of at least 'BBB-'.
- Eventual reinsurer: a reinsurer domiciled in a foreign country with no representative office in Brazil. The company must have been in the reinsurance business for at least five years, have minimum capital of US$150 million, and a credit rating of at least 'BBB'.

Of the 58 newly licensed reinsurers, 53 were registered as admitted, and five as local. The five classified as local reinsurers are: IRB-Brasil Re; J.Malucelli Resseguradora S.A., which is part of a Brazilian group with interests in different areas including banking and insurance; and the international players XL Resseguros Brasil S.A.; Mapfre Re do Brasil Companhia de Resseguros S.A.; and Munchener Ruck do Brasil Resseguradora S.A.

Even though IRB-Brasil Re is still the leader, Standard & Poor's Ratings Services expects that the reinsurance industry's opening will be transformational. IRB-Brasil Re is adapting itself to a more competitive

Since April 2008, the Superintendencia de Seguros Privados (SUSEP), which regulates the insurance and reinsurance industries, has licensed 58 reinsurers to operate in the country

business, and newcomers are innovating to compete with a well-established player. In the end, all should benefit: Increased transparency, competitive prices, and better products should create a more developed market.

Optimism And Overcrowding

The opening of so many new reinsurers in Brazil in the past 15 months indicates that these players are positive about the prospects of the local industry. However, considering the small size of the market and the dominance of IRB-Brasil Re, it suddenly looks very crowded. In 2008, total reinsurance premiums in the market were Brazilian reals (R$) 3.9 billion (US$2 billion), and IRB-Brasil Re booked R$3.2 billion (US$1.6 billion)--a massive 82% of the total.

In our view, Brazil has attracted new entrants for various reasons, including the country's large economy, favorable economic prospects, currently low penetration of primary insurance products, and the lack of natural catastrophe exposure. Entrants can also benefit from a well-established industry and clear regulations. Brazilian GDP totaled US$1.2 trillion in 2008, a 15% increase since 2005, which places the country among the world's 10 largest economies. SUSEP projects that the Brazilian insurance industry will grow at a compound annual growth rate of almost 10% between now and 2012. We believe this projection is based on expectations of heavy government and private investments in infrastructure. For example, the government's growth acceleration program (Programa de Aceleração do Crescimento, or PAC) foresees investments totaling approximately US$258 billion in logistic, energy, and social areas over four years. This, in our view, is just one reason for Brazil's relative resiliency to the global financial and economic turmoil.

Nevertheless, low insurance penetration rates somewhat offset the potential that the country's sizeable economy offers. Premiums to GDP were a low 3.3% in 2008, and SUSEP's projections indicate growth, but still at a low rate of 3.4% in 2009 and 2010. These ratios are in line with or in some cases slightly above other Latin American countries, but are still far below those of developed countries.

The Primary Problem For New Reinsurers

The biggest obstacle is figuring how to compete with IRB-Brasil Re. It has been in the market for several years and has the advantage of knowing all the local insurers and being familiar with their insurance portfolios and their underwriting practices. As a result, local insurers are used to working with IRB-Brasil Re and know the technical data regarding their underwriting criteria and portfolios that IRB-Brasil Re expects to receive. International players generally tend to ask for more information than local insurers are used to providing, so to place risks with foreign reinsurers, insurers that cede some coverage to reinsurers ("cedants") are likely to improve their disclosure and reporting to meet international standards. These improvements are likely to take some time to implement.

In addition, the Brazilian reinsurance market has made extensive progress toward liberalization, but it is not yet an entirely free market. SUSEP regulations require that cedants have to offer the right of first refusal to local reinsurers for at least 60% of premiums ceded until January 2010, and 40% for three years after that.

We believe SUSEP's timing also played a role in IRB-Brasil Re's dominance because it opened the market and licensed new entrants in the middle of the global economic crisis, which likely curtailed a faster expansion by international reinsurers. Taking a conservative approach, the domestic cedants were cautious about ceding risk to new partners while the turmoil was hurting some reinsurers worldwide. This reluctance put IRB-Brasil Re in a privileged position because it is perceived to enjoy a support from the Brazilian government if needed. (The Brazilian Department of Treasury owns 100% of its voting shares.)

The Benefits Appear Clear, But They Won't Happen Overnight

Despite the slow pace of change since liberalization, we believe that the opening is likely to be beneficial to the Brazilian reinsurance industry. These are still the early days of liberalization, and most contracts have renewed only once since April 2008. As contracts mature, insurers are likely to explore the alternatives. New entrants to a market generally introduce new products, new practices, and innovation. IRB-Brasil Re will likely have to evolve to match the newcomers' agility and innovation. And it may have to fight to maintain its relationship with the country's strongest insurers, which are probably better prepared to handle direct negotiations with the international players.

Domestic primary insurers are also likely to benefit from the need to improve their internal controls and procedures to be in line with the expectations of international reinsurers. In addition, regulatory issues such as the introduction of new solvency requirements are expected to result in an increase of insurers' capitalization levels and/or their reinsurance needs. However, we don't expect these changes to happen overnight, and we could even see a decrease in the number of registered reinsures in the future if the market doesn't expand to accommodate such a large number of players. ■

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STANDARD
& POOR'S

Unfulfilled Potential: The Challenge Of Developing A Regional Insurance Industry For Africa's Energy Sector

By Matthew Day and Kevin Willis

In Standard & Poor's Ratings Services opinion, future oil production in Africa will become increasingly important for the global economy.

In 2008, according to the Statistical Review of World Energy 2009, 12.4% of global proven crude oil reserves were on the African continent (see Table 1), and we feel this figure may be even higher as the rate of discoveries within Africa is among the highest worldwide.

Throughout the 20th century, oil discoveries were made across the African continent, with Algeria, Angola, Egypt, Libya, and Nigeria currently the largest producing countries. During this period, however, the local insurance--and reinsurance--industries have, in our opinion, failed to provide adequate capacity, expertise, or security to participate in the economic boom that the discovery of oil inevitably brings. Instead, oil companies in Africa have had to rely on the London, European, and North American markets, leading to a steady outflow of funds from the continent.

Given the stronger economic role Africa will be playing prospectively in the provision of energy, the local insurance markets have historically failed to provide a meaningful level of participation.

The local insurance and reinsurance markets for the oil sector in Africa remain relatively undeveloped; however, we believe the potential for economic gain will drive their development in the near future. That said, local carriers are likely to face a number of key challenges if they are to successfully establish themselves in this sometimes difficult market.

An Undeveloped Market

Although compulsory insurance acts across the continent encourage--and indeed in our opinion should enforce--the use of local capacity when insuring oil production risks, for years these laws have often been waived, or simply ignored. We believe the main reason

for this is the challenge of reconciling the oil companies' risk appetites with the profiles of the local insurers and reinsurers, with which a proportion of the premium should be placed. We think the reasons for this mismatch are the low, absolute levels of capital held by the local companies, the lack of expertise in underwriting the complex risks of oil production, and the limited availability of appropriate reinsurance capacity due to minimum financial strength ratings demanded by the oil industry. Second, we have observed that the insurance and reinsurance companies in the region are currently unwilling to expose their balance sheets to the large risks offered by the oil industry.

In our opinion, the reinsurance market structure of most African countries remains generally inefficient and uncompetitive due to the legacy of public sector monopolies, and a reliance on the pan-African reinsurers, including African Reinsurance Corp. (A-/Stable/--) and CICA Re (not rated). Insurance premiums, as a measure of market size, give an indication of the relatively small size of most African markets, apart from South Africa, which is the 26th-largest non-life market globally (see Table 2). We see the small size as a proxy for the lack of capacity and lack of expertise to write the energy business without the support of the international markets.

Opportunities Abound, But So Do The Challenges

We believe that clear opportunities now exist for local carriers, particularly reinsurers, to start providing meaningful capacity within the oil and energy insurance markets. In Nigeria, for example, following the enforced recapitalization of the insurance industry--which raised the minimal capital required to Nigerian naira (NGN) 3 billion (about $21 million) for non-life insurers, and

Table 1: Global Oil Production

Global Oil Production Thousands barrels daily	1998	2007	2008	Change 2008 over 2007	Change 2008 over 1998	2008 share of total
Nigeria	2,167	2,356	2,170	-8.0%	0.1%	2.7%
Angola	731	1,720	1,875	9.1%	61.0%	2.3%
Libya	1,480	1,848	1,846	-0.1%	19.8%	2.2%
Algeria	1,461	2,016	1,993	-1.3%	26.7%	2.2%
Egypt	857	710	722	1.3%	-18.6%	0.9%
Sudan	12	468	480	2.6%	97.5%	0.6%
Equatorial Guinea	83	368	361	-2.1%	77.0%	0.5%
Rep. of Congo (Brazzaville)	264	222	249	12.3%	-5.8%	0.3%
Gabon	337	230	235	2.2%	-43.6%	0.3%
Chad	-	144	127	-11.5%	NM	0.2%
Cameroon	105	82	84	2.3%	-25.2%	0.1%
Tunisia	85	97	89	-8.9%	4.5%	0.1%
Other Africa	63	59	54	-8.5%	-15.2%	0.1%
Total Africa	**7,644**	**10,320**	**10,285**	**-0.4%**	**25.7%**	**12.4%**
Total Middle East	22,964	25,168	26,200	4.0%	12.4%	31.9%
Total Europe & Eurasia	14,199	17,819	17,591	-1.3%	19.3%	21.7%
Total North America	14,182	13,638	13,131	-3.8%	-8.0%	15.8%
Total Asia Pacific	7,641	7,862	7,928	0.9%	3.6%	9.7%
Total S. & Cent. America	6,908	6,636	6,685	0.6%	-3.3%	8.5%
Total World	**73,538**	**81,443**	**81,820**	**0.4%**	**10.1%**	**100.0%**

NGN10 billion ($69.3 million) for reinsurers--the oil companies are starting to see the capacity that the market could offer (when supported by the local reinsurers, the African Oil & Energy Pool, and by African Re, the pan-continental reinsurer). However, we think that as the local retention introduced in Nigerian law is currently set at 45%, and, as we understand, is set to rise to 70% by 2011, the market is still significantly behind the financial strength required to service this level of risk.

We see a need throughout the continent for further increases in local market capitalization, aided by similar improvements in the level of absolute capital of African reinsurers. In our opinion, the reinsurers, often operating across the continent, would need to be at the forefront of this development to enable them to provide the expertise and support which the local market requires, and ultimately to aspire to the level of financial security required by the oil companies and the financiers of deals--typically an 'A-' rating as a minimum. Historically, a number of local companies have provided "fronting" to the international reinsurance markets, or to the oil companies' own captive insurance companies. We understand, however, that while earning the local company some commission income, this practice of fronting does not meet the requirements of the local retention policy.

We feel that improving the enterprise risk management (ERM) abilities of the reinsurance companies, and indeed of the oil companies, across Africa might improve the companies' acceptability to the insureds. However, we consider good ERM alone as insufficient while basic capital and underwriting capacity are lacking, given the potential risk profile. From a rating perspective, we generally take into account the extent to which, in our view, the risk controls in place support a successful understanding and then mitigation of the peak exposures.

We believe that increased retention of premium within the local market would clearly benefit the economic development of the nation concerned. However, as losses inevitably have to be paid where premiums are earned, we see this is a key challenge for the market. Major oil production claims outside of the Gulf of Mexico have been relatively low. However, in the event of a severe loss, the local market and reinsurers would face having to service both the loss, which potentially could top $150 million, and the other losses incurred through normal business such as property or motor insurance for the local population.

Striving For A Solid Insurance Service

We believe that the insurance industries' economic participation in the energy sector, coupled with the maintenance of a secure, reliable insurance service for the local population, are key challenges facing insurers across Africa. Standard & Poor's believes one of the keys to overcoming these challenges would be the establishment of a strong regional reinsurance market. By offering strong reinsurance protection to the primary market, we believe that primary insurers would continue to provide retail insurance services, while also acting as a conduit to the reinsurance market on the more volatile energy risks. Reinsurers would likely need to be financially secure to both offer this protection, and to satisfy the demands of the oil companies. Reinsurers would also, increasingly, need to accept risk from across the continent, or at least their local region, to diversify their risk profiles, and mitigate potential volatility, we think.

By working with the national governments, and regulators, we expect African reinsurers will strive for a solution that will satisfy the demands of all parties adequately. We consider this a challenging project, given the potential economic benefits, as well as potential losses. Furthermore, we feel that a compromise between utilizing local capacity and mitigating the peak losses via retrocession across the continent or into the international markets would be necessary. The development of the insurance and reinsurance markets across Africa is to be expected; however, in our view, the international markets will clearly play a large role in this development given the growing risk profile emerging from the energy and oil business. ■

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Table 2: Non-life Premium Volume

	2007 ($m)	2008 ($m)	2008 (%)
Morocco	1,437	1,692	0.10
Nigeria	793	1,045	0.06
Algeria	725	948	0.05
Egypt	574	754	0.04
Tunisia	621	692	0.04
Kenya	460	576	0.03
Mauritius	125	161	0.01
South Africa	8,345	7,990	0.45
Other Africa	2,959	2,990	0.17
Total Africa	**16,038**	**16,847**	**0.95**
Total North America	714,090	719,751	40.45
Total S. & Cent. America	53,621	64,044	3.60
Total Asia Pacific	252,476	276,288	15.53
Total Europe	649,538	702,260	39.47
Total World	**1,685,762**	**1,779,316**	**100.00**

Insurer Financial Strength Ratings

A Standard & Poor's Insurer Financial Strength Rating is a current opinion of the financial security characteristics of an insurance organization with respect to its ability to pay under its insurance policies and contracts in accordance with their terms. Insurer Financial Strength Ratings are also assigned to HMOs and similar health plans with respect to their ability to pay under their policies and contracts in accordance with their terms.

This opinion is not specific to any particular policy or contract, nor does it address the suitability of a particular policy or contract for a specific purpose or purchaser. Furthermore, the opinion does not take into account deductibles, surrender or cancellation penalties, timeliness of payment, nor the likelihood of the use of a defense such as fraud to deny claims. For organizations with cross-border or multinational operations, including those conducted by subsidiaries or branch offices, the ratings do not take into account potential that may exist for foreign exchange restrictions to prevent financial obligations from being met.

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Insurer Financial Enhancement Ratings are based on information furnished by the insurers or obtained by Standard & Poor's from other sources it considers reliable. Standard & Poor's does not perform an audit in connection with any credit rating and may, on occasion, rely on unaudited financial information. Insurer Financial Enhancement Ratings may be changed, suspended, or withdrawn as a result of changes in, or unavailability of, such information or based on other circumstances. Insurer Financial Enhancement Ratings are based, in varying degrees, on all of the following considerations:

- Likelihood of payment capacity and willingness of the insurer to meet its financial commitment on an obligation in accordance with the terms of the obligation;
- Nature of and provisions of the obligations; and
- Protection afforded by, and relative position of, the obligation in the event of bankruptcy, reorganization, or other arrangement under the laws of bankruptcy and other laws affecting creditors' rights.

Insurer Financial Strength Ratings

An insurer rated 'BBB' or higher is regarded as having financial security characteristics that outweigh any vulnerabilities, and is highly likely to have the ability to meet financial commitments.

AAA

An insurer rated 'AAA' has EXTREMELY STRONG financial security characteristics. 'AAA' is the highest Insurer Financial Strength Rating assigned by Standard & Poor's.

AA

An insurer rated 'AA' has VERY STRONG financial security characteristics, differing only slightly from those rated higher.

A

An insurer rated 'A' has STRONG financial security characteristics, but is somewhat more likely to be affected by adverse business conditions than are insurers with higher ratings.

BBB

An insurer rated 'BBB' has GOOD financial security characteristics, but is more likely to be affected by adverse business conditions than are higher rated insurers.

An insurer rated 'BB' or lower is regarded as having vulnerable characteristics that may outweigh its strengths. 'BB' indicates the least degree of vulnerability within the range; 'CC' the highest.

BB

An insurer rated 'BB' has MARGINAL financial security characteristics. Positive attributes exist, but adverse business conditions could lead to insufficient ability to meet financial commitments.

B

An insurer rated 'B' has WEAK financial security characteristics. Adverse business conditions will likely impair its ability to meet financial commitments.

CCC

An insurer rated 'CCC' has VERY WEAK financial security characteristics, and is dependent on favorable business conditions to meet financial commitments.

CC

An insurer rated 'CC' has EXTREMELY WEAK financial security characteristics and is likely not to meet some of its financial commitments.

R

An insurer rated 'R' is under regulatory supervision owing to its financial condition. During the pendency of the regulatory supervision, the regulators may have the power to favor one class of obligations over others or pay some obligations and not others. The rating does not apply to insurers subject only to nonfinancial actions such as market conduct violations.

NR

An insurer designated 'NR' is NOT RATED, which implies no opinion about the insurer's financial security.

Plus (+) or minus (-)

Ratings from 'AA' to 'CCC' may be modified by the addition of a plus or minus sign to show relative standing within the major rating categories.

CreditWatch highlights the potential direction of a rating, focusing on identifiable events and short-term trends that cause ratings to be placed under special surveillance by Standard & Poor's. The events may include mergers, recapitalizations, voter referenda, regulatory actions, or anticipated operating developments. Ratings appear on CreditWatch when such an event or a deviation from an expected trend occurs and additional information is needed to evaluate the rating. A listing, however, does not mean a rating change is inevitable, and whenever possible, a range of alternative ratings will be shown. CreditWatch is not intended to include all ratings under review, and rating changes may occur without the ratings having first appeared on CreditWatch. The "positive" designation means that a rating may be raised; "negative" means that a rating may be lowered; "developing" means that a rating may be raised, lowered, or affirmed.

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