

# Insurance-Linked Securities

*Fourth Quarter Update* 2011



## Fourth Quarter 2011 Catastrophe Bond Transaction Review

The year 2011 ended strong with the closing of nearly \$2 billion of new deals for nine sponsors, two of which were first-time entrants. Several deals were upsized (some quite significantly) from their original targeted offerings, illustrating that strong investor demand was met with additional supply. Issuances coming to market during the fourth quarter represented almost \$800 million over original offering amounts. Also noteworthy is that nearly \$1 billion utilized aggregate trigger structures. The following table summarizes the terms of the deals that closed during fourth quarter:

### Q4 Catastrophe Bond Issuance

Beneficiary	Issuer	Series	Class	Size (millions)	Covered Perils	Trigger	S&P Rating	Expected Loss	Interest Spread
AXA Global P&C <sup>1</sup>	Calypso Capital Limited	Series 2011-1	Class A	€ 180	EU W	Industry Index	BB-	1.70%	4.10%
Munich Re	Queen Street IV Capital Limited			\$100	US HU, EU W	Industry Index	BB-	1.94%	7.50%
Swiss Re	Successor X Ltd.	Series 2011-3	Class V-F4	\$80	US HU	Industry Index	Not rated	6.70%	16.25%
Swiss Re	Successor X Ltd.	Series 2011-3	Class V-X4	\$50	US HU, EU W	Industry Index	B-	3.14%	11.25%
United Services Automobile Association	Residential Reinsurance 2011 Limited	Series 2011-II	Class 1	\$100	US HU, EQ, ST, WS, WF	Indemnity	Not rated	1.65%	8.90%
United Services Automobile Association	Residential Reinsurance 2011 Limited	Series 2011-II	Class 2	\$50	US HU, EQ, ST, WS, WF	Indemnity	Not rated	3.33%	13.25%
California State Compensation Insurance Fund	Golden State Re Ltd.	Series 2011-1	Class A	\$200	US EQ	Modeled Loss	BB+	0.36%	3.75%
National Union Fire Insurance Company of Pittsburgh	Compass Re Ltd	Series 2011-1	Class 1	\$75	US HU, EQ	Industry Index	BB-	1.76%	9.00%
National Union Fire Insurance Company of Pittsburgh	Compass Re Ltd	Series 2011-1	Class 2	\$250	US HU, EQ	Industry Index	BB-	1.87%	10.25%
National Union Fire Insurance Company of Pittsburgh	Compass Re Ltd	Series 2011-1	Class 3	\$250	US HU, EQ	Industry Index	B+	2.26%	11.25%
SCOR Global P&C SE	Atlas VI Capital Limited	Series 2011-1	Class A	\$125	US HU, EQ	Industry Index	B	3.95%	15.25%
SCOR Global P&C SE	Atlas VI Capital Limited	Series 2011-1	Class B	\$145	US HU, EQ	Industry Index	B+	2.83%	12.50%
SCOR Global P&C SE <sup>2</sup>	Atlas VI Capital Limited	Series 2011-2	Class A	€ 50	EU W	Industry Index	B	3.30%	8.00%
Amlin AG	Tramline Re Ltd.	Series 2011-1	Class A	\$150	US HU, EQ, EU W	Industry Index	B-	3.98%	16.75%
Argo Re Ltd.	Loma Reinsurance Ltd.	Series 2011-2	Class A	\$100	US HU, EQ	Industry Index	Not rated	5.12%	18.00%
<b>Total</b>				<b>\$1,990</b>					

Source: Aon Benfield Securities, Inc.

<sup>1</sup> 1 EUR = 1.38 USD as of Oct 20, 2011

<sup>2</sup> 1 EUR = 1.32 USD as of Dec 12, 2011

### Legend

EQ — Earthquake  
EU — Europe  
HU — Hurricane

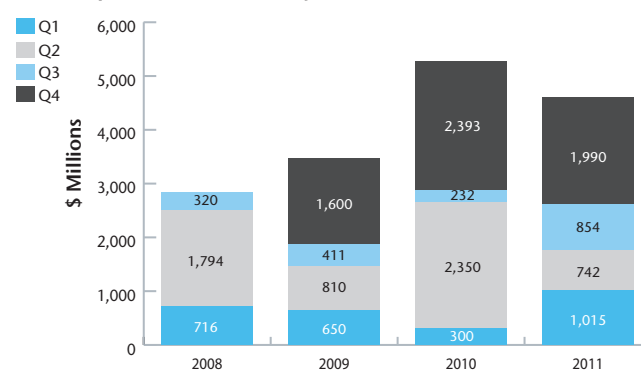
ST — Severe Thunderstorm  
US — United States  
W — Windstorm

WF — Wildfire  
WS — Winter Storm

As was the case with 2009 and 2010, the fourth quarter of 2011 proved to be the most active. Given the catastrophic losses in 2010 and 2011, demand for insurance linked securities remained strong.

By the end of 2011, both sponsors and investors successfully overcame formidable obstacles to finish the year on a high note. This bodes well for the market's continued growth. The first quarter of 2012 is expected to be active with a strong pipeline of new deals. Additionally, we expect the secondary market to keep its resiliency at or above the 2011 trading volume.

### Catastrophe Bond Issuance by Quarter



Source: Aon Benfield Securities, Inc.

## Aon Benfield ILS Indices

The Aon Benfield ILS Indices are calculated by Thomson Reuters, using month-end price data provided by Aon Benfield Securities<sup>3</sup>. Each ILS index posted increases for the fourth quarter of 2011. The All Bond and BB-Rated Bond Indices were up 1.58 percent and 1.71 percent, respectively, while the U.S. Hurricane Bond and U.S. Earthquake Bond Indices were up 1.68 percent and 0.73 percent, respectively. The indices ended the quarter slightly lower than comparable returns for the same period in the prior year as further mark-to-market losses impacted the All Bond Index. In addition, the market experienced hardening (increase in spreads), thus reducing mark-to-market increases.

For the full year in 2011, all indices posted gains. The Aon Benfield All Bond and BB-rated Bond indices posted

returns of 1.87 percent each, which trailed comparable returns for the prior year period due to the full loss of three catastrophe bonds in 2011 — Muteki Ltd. Series 2008-1 Class A, Mariah Re Ltd. Series 2010-1 and Series 2010-2. The U.S. Hurricane and U.S. Earthquake Bond indices posted returns of 4.81 percent and 4.26 percent respectively. They also fell behind comparable returns for the prior year period because the market did not experience mark-to-market increases seen in 2010. We expect index returns in the first half of 2012 to be driven by coupons, rather than mark-to-market gains. In the absence of a severe catastrophic event, index returns in 2012 are likely to be higher than that in 2011, when the hardening of rates caused by global catastrophes as well as the loss of the three aforementioned catastrophe bonds affected the gains.

### Aon Benfield ILS Indices

Index Title	Index Value				Return for Quarterly Period Ending Dec. 30		Return for Annual Period Ending Dec. 30	
	12/30/2011	9/30/2011	12/30/2010	9/30/2010	2011	2010	2011	2010
<b>Aon Benfield ILS Indices</b>								
All Bond	240.40	236.67	235.98	230.01	1.58%	2.60%	1.87%	10.89%
BB-rated Bond	229.68	225.82	225.47	220.14	1.71%	2.42%	1.87%	10.55%
U.S. Hurricane Bond	240.32	236.36	229.29	224.00	1.68%	2.36%	4.81%	10.24%
U.S. Earthquake Bond	203.69	202.21	195.36	192.53	0.73%	1.47%	4.26%	7.65%
<b>Benchmarks</b>								
3-5 Year U.S. Treasury Notes	322.50	320.18	302.72	307.62	0.72%	-1.59%	6.53%	5.77%
3-Year U.S. Corporate BB+	382.54	377.28	370.34	363.43	1.39%	1.90%	3.29%	10.28%
S&P 500	1257.60	1131.42	1257.64	1141.20	11.15%	10.20%	0.00%	12.78%
ABS 3-5 Year, Fixed Rate	345.25	343.78	325.81	327.53	0.43%	-0.53%	5.97%	10.57%
CMBS Fixed Rate 3-5 Year	265.05	255.53	247.44	245.67	3.73%	0.72%	7.12%	16.18%

Source: Aon Benfield Securities Inc., Bloomberg

<sup>3</sup> The 3-5 Year U.S. Treasury Note Index is calculated by Bloomberg and simulates the performance of U.S. Treasury notes with maturities ranging from three to five years.

The 3-Year U.S. Corporate BB+ Index is calculated by Bloomberg and simulates the performance of corporate bonds rated BB+ on a zero coupon basis. Zero coupon yields are derived by stripping the par coupon curve. The maturities of the BB+ rated bonds in this index are three years.

The S&P 500 is Standard & Poor's broad-based equity index representing the performance of a broad sample of 500 leading companies in leading industries. The S&P 500 Index represents price performance only, and does not include dividend reinvestments or advisory and trading costs.

The ABS 3-5 Year, Fixed Rate Index is calculated by Bank of America Merrill Lynch (BAML) and tracks the performance of U.S. dollar denominated investment grade fixed rate asset backed securities publicly issued in the U.S. domestic market with terms ranging from three to five years. Qualifying securities must have an investment grade rating, a fixed rate coupon, at least one year remaining term to final stated maturity, a fixed coupon schedule, and an original deal size for the collateral group of at least \$250 million.

The CMBS Fixed Rate 3-5 Year Index is calculated by BAML and tracks the performance of U.S. dollar denominated investment grade fixed rate commercial mortgage backed securities publicly issued in the U.S. domestic market with terms ranging from three to five years. Qualifying securities must have an investment grade rating, at least one year remaining term to final maturity, a fixed coupon schedule, and an original deal size for the collateral group of at least \$250 million. The performance of an index will vary based on the characteristics of, and risks inherent in, each of the various securities which comprise the index. As such, the relative performance of an index is likely to vary, often substantially, over time. Investors cannot invest directly in indices.

Past performance is no guarantee of future results.

## ILS Sales and Distribution

Strong investor demand for diversifying risks continued into the fourth quarter. Calypso Capital Limited Series 2011-1 was upsized to €180 million from a €100 million launch size, and closed below the initial price guidance. This was consistent with the trend started in the third quarter, when three diversifying bonds—Queen Street III Limited, Embarcadero Reinsurance Ltd. Series 2011-I and Pylon II Capital Limited were placed and achieved similar results. As this demand continued, several investors realized a quick gain on the bonds by selling them at higher price levels. The diversification that these bonds provided prompted a number of investors to pay higher prices (assume lower spreads) than the original issuance levels.

Both Mariah Re bonds began the fourth quarter trading at large discounts as the record year for severe thunderstorm took a bite out of the aggregate retentions. Further loss development throughout the fourth quarter led to a full limit loss for both the Series 2010-1 and Series 2010-2 notes.

Both primary and secondary markets were very active throughout the fourth quarter. As we have stated in prior reports, the primary market tends to be the main

catalyst for secondary trading. The fourth quarter was no exception. Almost \$2 billion of insurance-linked securities were brought to market during this period, representing 43 percent of the total issuance for the year. Nearly \$1.5 billion of this quarter's issuance was exposed to U.S. hurricane risk. Therefore, it came as no surprise that the secondary market was dominated by similar trading activities. A good percentage of the trading came in short-dated notes as investors looked to free up capital for new transactions.

In addition to short-dated trading, several investors who had secured new mandates for fresh capital utilized the secondary market to source bonds. While the heavy primary pipeline prompted many investors to budget for new issues, there was no shortage of investors willing to sell bonds and rebalance portfolios for this new capital at year end.

The last transaction to come to the market was the \$100 million Loma Reinsurance Ltd. Series 2011-2. It was the second issuance of the year for Loma. In order to achieve the desired \$100 million capacity sought for Loma, the interest spread was revised upward from the original guidance.

## European Collateral Solutions

The recent volatility and uncertainty in Europe has led to increased focus on the underlying collateral solutions used in catastrophe bonds. Sponsors and investors are still concerned about credit risk and some are increasingly worried about the widening yield differential between Euribor-based solutions and money market funds.

The spread differential is best illustrated by the significant increase in recent months of the EURIBOR-OIS spread—the difference between central bank funding rate (overnight) and the level at which banks are willing to lend to each other. Historically, the three-month EURIBOR-OIS spread has been around 10 basis points, but has jumped to over 95 basis points, representing a material level of returns that investors can ill afford to miss.

The available yield pickup highlights the importance of a Euribor-linked reference rate through the use of either a Tri-Party Repo or Medium Term Note (“MTN”). There has been an increase in popularity for Euro denominated MTNs issued by Supranationals such as the European Bank for Reconstruction and Development (“EBRD”). However, the Tri-Party Repo solution has fallen out of favor and under increased scrutiny due to investor and sponsors aversion to bank counterparty credit risk, and also to concerns with the lack of available assets to back the Tri-Party Repo structure that meet the strict eligibility criteria.

The recent flight to quality by capital market investors flocking to the safe haven of AAA government money market funds has further compounded the collateral debate, causing some of the larger Euro Government Money Market Funds either to close or place restrictions on new subscriptions.

## Asia

In view of a hardening market due to the unprecedented scale of losses during the Great East Japan Earthquake in March 2011 and the flooding in Thailand in October 2011, Japan insurers are addressing the next traditional renewal season much earlier than usual. These events have severely impacted both insurers themselves and reinsurers.

Impact Forecasting<sup>4</sup> estimates that total insured losses for the Great East Japan Earthquake will be \$30 billion to \$40 billion<sup>5</sup>, with around \$20 billion attributed to personal lines losses<sup>6</sup>. The recoveries from reinsurers are expected to remain around \$10 billion, which is a lower amount than expected for an event of this magnitude. This was due to the payout by Japanese Earthquake Reinsurance (JER) along with coverage provided by the Japan government. In Thailand, the Office of Insurance Commission released a preliminary insured loss estimate of THB200 billion (\$6.5 billion), though some industry estimates suggest that losses from the flooding may approach and exceed the THB309 billion (\$10 billion) threshold<sup>7</sup>.

The most recent Japan sponsor to come to the market was Tokio Marine & Nichido Fire with their third quarter issuance of Kizuna Re. A number of potential Japan issuers continue to study potential offerings. Due to the recent catastrophic losses, Japan insurers are more likely to draw down their catastrophe reserves and purchase additional excess of loss covers. Meanwhile reinsurers have been reducing capacity or even ceasing to provide capacity due to recent losses throughout 2011.

<sup>4</sup> Impact Forecasting and Aon Benfield Securities, Inc. are both wholly-owned subsidiaries of Aon Corporation

<sup>5</sup> Includes Japanese Earthquake Reinsurance losses

<sup>6</sup> Source: Impact Forecasting "Tohoku Earthquake & Tsunami Event Recap Report", August 30, 2011

<sup>7</sup> Source: Impact Forecasting "November 2011 Monthly Cat Recap", December 6, 2011

## An Interview With Andre Perez, CEO of Horseshoe Group

### 1. *Could you give us an overview of your firm and its services?*

Horseshoe Group was established in 2005 by a group of seasoned insurance and reinsurance professionals. The main impetus for forming the Horseshoe Group was the lack of sophisticated service providers for complex reinsurance structures. Bermuda and Cayman have always been thriving captive domiciles and as a result have very capable captive managers operating in that space. However, those captive managers had very little “on the ground” reinsurance market experience. Their background is essentially related to accounting. While Horseshoe needed to have a strong accounting platform, our talented individuals have extensive actuarial, underwriting, investment banking and claims experience and have worked for reinsurance companies and investment bankers. We do not manage captives. So ILS is one of our core businesses.

We have the capabilities to manage complex reinsurance structures in a very active manner. We get involved early on in a transaction to provide feedback on the structure as well as various documents. Since we end up managing these structures, we need to make sure that the intent of the parties is very clear. There will always be some grey areas and this is where we step in and where our experience in the reinsurance market is invaluable. We can offer cradle to grave services, from helping with the formation of the company, managing the company, providing underwriting assistance, actuarial analysis, claims review, all the way through liquidating the company when it is no longer needed.

The Horseshoe Group is essentially divided into three core competencies:

- **Managing insurance companies (including transformer, sidecars and cat bonds)**—  
We are licensed both in Bermuda and Cayman, and will have our license in Ireland imminently.
- **Transforming services through Horseshoe Re**—  
We provide investors the opportunity to invest in the reinsurance space without setting up their own company.
- **General insurance advisory services**—  
We provide general consulting servicing such as actuarial, claims and due diligence reviews.

### 2. *What has surprised you the most about the ILS sector since your formation in 2005?*

In general, the growth of the ILS market has surprised us the most. Compared to total property cat reinsurance premiums, ILS is a significant ratio.

The year 2005 was a critical time for the ILS space with several high-profile hurricanes, such as Katrina, Rita and Wilma. We then saw a number of sidecars being formed by a number of investors who were new to the reinsurance space. Since then, we have seen a number of new ILS funds being set up. A few of them are even larger than some commercial reinsurers.

The year 2005 was, in my opinion, a game changer in our industry. It proved the speed at which new capital can enter the reinsurance market. This new-ish capital source is now quite familiar with this space and is comfortable bypassing equity investment, investing into all form of underwriting structures, either directly or via an ILS fund. We have seen that first hand with the tremendous growth of our own transformer, Horseshoe Re.

Above all, what I find the most fascinating was the meteoric growth of the collateralized reinsurance. It is rare to find a cedant who would not accept collateralized reinsurance these days. It is somehow the ultimate security. Of course, it does not cover the full spectrum of traditional reinsurance needs due to various limitations but if anything, the importance of collateralized reinsurance is a change that is here to stay and will increase in importance.

### 3. *How has the role of the Administrator evolved over the past several years?*

I have to admit, I hate the term “Administrator” as it somehow has the pejorative connotation of a paper-pusher. That may be the first thing we need to do away with in the ILS market! We prefer the designation, Insurance Manager, which is more reflective of the work we do.

To be honest, I don’t think the role of the “Administrator” has changed at all. In our view, there are companies out there which have taken on this role and are being appointed with little experience handling complex

reinsurance structure and even less with property cat. There is this misconception that cat bonds are on “auto-pilot” and minimal intervention is needed from the Administrator. From the Lehman debacle, we can see that this is not the case. With indemnity transactions, there are various structural features which need to be overseen effectively by the Insurance Manager. Who is watching over the reset agent, the calculation agent, the claims reviewer, and the loss reserve specialist? While these are all professional providers, the Insurance Manager has the duty to ensure that their work is conducted appropriately. To do that, you need to have an Insurance Manager who has actual reinsurance, actuarial and cat modeling expertise on board. We need to do away with the “auto-pilot” concept and start putting more emphasis on the value provided by the Insurance Manager.

Of course, when things go smoothly, we tend to take the Insurance Manager’s role for granted because everyone gets the expected payouts and goes home happy. However, it is when things do not run as planned, we have come to see the real value of having an experienced Insurance Manager.

#### *4. How do you view your role and what steps have you taken to differentiate yourselves?*

We are lucky to have a great team at Horseshoe. We have such a broad range of talent covering the whole spectrum of insurance expertise including accounting, actuarial, underwriting, and claims.

The Horseshoe Group is fully independent in ownership and affiliation from any insurance underwriter or broker, investment bankers, accounting firm, or law firm or other service providers. We are able to act with impartiality and without conflict of interest when advising our clients, managing their affairs, and working with any third party service provider engaged by our clients.

Since we entered the ILS space in 2005, we have made our first inroads in the sidecar space. We have quickly become the leading independent sidecar manager and received excellent feedback from investors on the way we managed their sidecars.

In 2007, we formed our transformer, Horseshoe Re, which has grown significantly since then. Our transactions are done differently in that space. We take an active role in the underwriting process and monitoring of the accounts.

We entered the cat bond space in 2009. This was a natural extension to our business model. At that time, we had just completed Globe Re (which was an Aon Benfield transaction) and my good friend Henning Ludolphs at Hannover Re encouraged us to enter the cat bond space because he thought it could use a hands-on Insurance Manager like Horseshoe.

Since we entered the cat bond space we have been involved in some significant and innovative transactions such as Embarcadero Re for the CEA, Oak Leaf Re which was a private cat bond and first cat bond lite transaction in Bermuda and Hoplon which is a jackpot cat bond.

#### *5. Looking forward, what issues in the ILS market will need to be addressed from the Administrator's side of the business?*

We need to educate sponsors and investors, helping them fully understand the importance of having an Insurance Manager with actual reinsurance expertise.

Another issue is related to the question of who effectively controls the Issuer. The Insurance Manager needs to be able to stand on its two feet and prove that they have the required level of skills and expertise and that they are the ones controlling the Issuer. Otherwise, the sponsor may run the risk of consolidation, which is the last thing they want to see it happen.

Furthermore, with CEIOPS/EIOPA guidance on Special Purpose Vehicles (although only Level II guidance at this stage), there will be a lot more requirements for the Administrator/Insurance Manager to be considered “fit and proper” under Solvency II.

**Aon Benfield**

200 E. Randolph Street  
Chicago, Illinois 60601  
t +1.312.381.5300  
f +1.312.381.0160  
aonbenfield.com

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As one of the most experienced investment banking firms in this market, Aon Benfield Securities offers expert underwriting and placement of new debt and equity issues, financial and strategic advisory services, as well as a leading secondary trading desk. Aon Benfield Securities’ integration with Aon Benfield’s reinsurance operation expands its capability to provide distinctive analytics, modeling, rating agency, and other consultative services.

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