



ILS MARKET UPDATE

Q4 2010: Strong Issuance Activity to Close
Out the Year

WILLIS CAPITAL MARKETS & ADVISORY

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Capital Markets & Advisory

Q4 2010 Cat Bond Market Issuance

The fourth quarter has historically been an active one for new catastrophe bond issuance, as sponsors put transactions in place before the key January 1 reinsurance renewal date, and so it proved again in 2010. There were ten new non-life issues totaling \$2.0 billion of risk capital (2009: \$1.6 billion) as summarized in the table below. Total non-life capacity issued in 2010 was \$4.8 billion (2009: \$3.4 billion), which makes 2010 the second largest issuance year after 2007.

The quarter was notable not only for the number and volume of issuances, but also the welcome return to the market of diversifying (i.e. non-U.S. peak cat) risks, including new cat perils and life and health-related risks. ILS investors have long been hungry for diversification and it is particularly interesting to observe how the market has responded to these issues. Of the ten non-life programs that were brought to market during the quarter, no fewer than five are exclusively diversifiers and another two included diversifying elements (see table below). Alongside these, three life and health related programs also arrived on the scene, of which two presented new risks to the market.

The quarter's activity got underway with AXA's Calypso Capital transaction, which provides Euro denominated protection against severe European windstorm events. The transaction uses PERILS European loss data as a trigger for loss payments, which records losses reported by European insurers, including AXA, and extrapolates a market loss.

Although Calypso closely followed Groupama's September 2010 €100 million Green Valley transaction, which also covered European (France only) windstorm risk, investors were still very keen to access the risk - these deals being the first pure European wind transactions since Hannover Re's Eurus II transaction in July 2009. Demand was strong enough to allow Calypso to be upsized to €275 million and price just below original guidance. This transaction uses a EURIBOR yielding tri-party repo arrangement for its collateral.

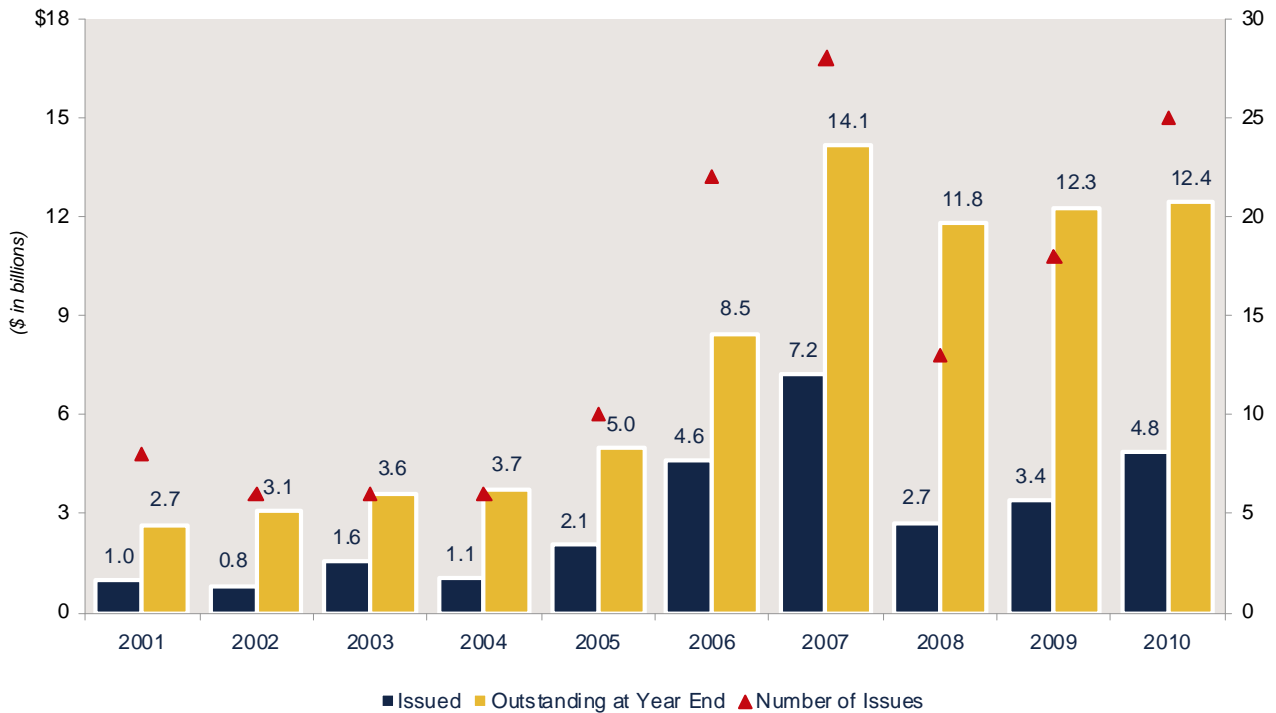
Q4 2010 NON-LIFE CAT BOND MARKET ISSUANCE

(\$ in millions)

Sponsor	Issuer / Tranche	Issue Date	Term (Yrs)	Amount (€M)	Amount (\$M)	Risk Premium	Risk
Groupama/ Swiss Re	Green Fields Capital A-1	12/31/10	4.0	€75	\$98	3.50%	France Windstorm
Swiss Re	Successor X R-3	12/30/10	3.0		65	12.75%	US HU, CA Quake, Australia Quake
Swiss Re	Successor X S-3	12/30/10	3.0		50	14.50%	US HU, CA Quake, Australia Quake
Swiss Re	Successor X T-3	12/30/10	3.0		55	16.00%	US HU, CA Quake, Australia Quake
Flagstone Re	Montana Re 2010-1C	12/22/10	3.0		70	11.90%	US HU / Quake
Flagstone Re	Montana Re 2010-1D	12/22/10	3.0		80	16.40%	US HU / Quake / Cayman HU
Flagstone Re	Montana Re 2010-1E	12/22/10	3.0		60	9.50%	US HU & Quake / EU Wind / JP EQ & Typhoon
Chartis	Lodestone 2010-2 CL-A1	12/20/10	3.0		125	6.00%	US HU / Quake
Chartis	Lodestone 2010-2 CL-A2	12/20/10	3.0		325	7.25%	US HU / Quake
American Family	Mariah Re 2010-2	12/16/10	3.0		100	8.50%	US Thunderstorm
Swiss Re	Vega 2010 CL-C	12/13/10	3.0		43	N / A	N. Atlantic HU, EU Wind, CA & Jap Quake and Typhoon
Swiss Re	Vega 2010 CL-D	12/13/10	3.0		64	5.65%	N. Atlantic HU, EU Wind, CA & Jap Quake and Typhoon
SCOR	Atlas VI	12/09/10	3.3	75	101	10.50%	Euro Wind & Japanese Quake
USAA	Res Re 2010 CL-1	12/01/10	2.5		210	6.25%	US HU & EQ, Severe T-Storm, Winter Storm & Wildfire
USAA	Res Re 2010 CL-2	12/01/10	2.5		50	7.25%	US HU & EQ, Severe T-Storm, Winter Storm & Wildfire
USAA	Res Re 2010 CL-3	12/01/10	2.5		40	10.75%	US HU & EQ, Severe T-Storm, Winter Storm & Wildfire
American Family	Mariah Re 2010-1	11/15/10	3.2		100	6.25%	US Thunderstorm
AXA Global P&C	Calypso	10/29/10	3.2	275	383	3.50%	Euro Wind
Total					\$2,018.8		

Source: WCMA Transaction Database.

CAPACITY ISSUED AND OUTSTANDING BY YEAR (at December 31, 2010)



Source: WCMA Transaction Database.

Q4 2010 Cat Bond Market Issuance – Continued...

Calypso was closely followed by another diversifier, Mariah Re. This was a debut transaction for a new catastrophe bond sponsor; American Family Mutual, and offered a peril not seen in pure form before in the market. The \$100 million deal provides protection against severe thunderstorms in the U.S. on an annual aggregate basis and uses a modified PCS trigger. Despite the unusual single peril and less familiar modeling, investor demand for a diversifying risk was strong. The transaction was well oversubscribed and priced 100 basis points inside the initial price guidance. American Family came back to the market in December and successfully placed a second \$100 million tranche, with a higher modeled expected loss, for an aggregate layer immediately below the first offer.

Two December deals offered additional alternatives to the U.S. cat staple-diet, but were perhaps not as easily digestible. Vitality Re provides Aetna with \$150 million of annual aggregate indemnity cover for a portfolio of commercial group health insurance policies. Vitality Re evolved from the index-based extreme mortality bonds but used an indemnity trigger. Kortis Capital provides Swiss Re with \$50 million of longevity risk cover based on a Longevity Divergence Index derived from the differential improvement for older UK males versus younger U.S. males. Both transactions appeared challenging to complete: for example, the completed Vitality tranche up-sized from \$125m to \$150m, but priced above its guidance range, and a second higher expected loss tranche was dropped altogether.

The quarter also saw the return of a number of market regulars. USAA returned to the market for a second time in 2010, with another Residential Re 2010 offering, as did Chartis, with another two tranches from its Lodestone Re vehicle. USAA, who placed \$405 million earlier in the year, placed a further \$300 million in three tranches, achieving significantly better pricing than they obtained for the same layers back in May. The improved pricing reflects several factors; the reduced annualized expected loss as a result of this being a 2.5 year deal with two wind seasons rather than 3 years with three wind seasons, the capacity squeeze that USAA experienced going into the 2010 hurricane season by being at the back of a long line of U.S. hurricane exposed issues and also the attractive current market conditions, where investor demand for new risks has outstripped supply of new issues.

Q4 2010 Cat Bond Market Issuance – Continued...

These Res Re 2010 layers use an indemnity trigger and cover U.S. hurricane, earthquake, thunderstorm, winterstorm and wildfire risk on a per occurrence basis. Chartis placed another \$450 million in risk capacity to add to the \$425 million placed in May. The new Lodestone deal is very similar to the earlier version and provides protection against U.S. hurricane and earthquake risk on an occurrence basis with a modified PCS trigger.

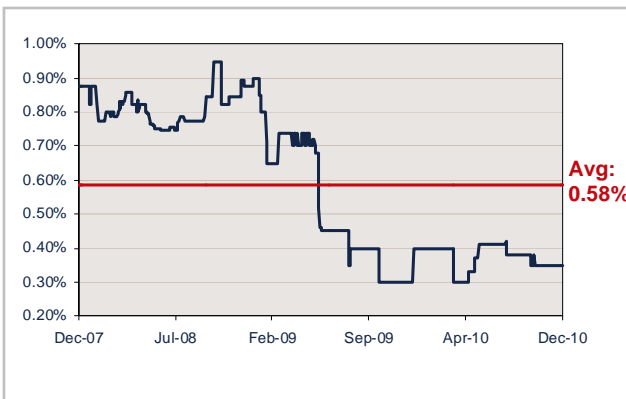
Reinsurers were also back in the market: Swiss Re, Flagstone and SCOR all continued their involvement in the market with further issues from existing programs. Swiss Re sponsored a further takedown from Vega Capital, which provides \$106.5 million of coverage against the five global peak perils on a three year term aggregate basis with annual aggregate contribution limits per peril. Swiss Re also issued a further three tranches, totaling \$165 million, from their Successor X facility, which provide coverage against U.S. hurricane, California earthquake and Australian earthquake on a per occurrence basis. Flagstone Re secured a total of \$210 million in capacity, all at relatively high expected loss levels, thus offering higher yields to investors. Two of the tranches provide per occurrence coverage against U.S. hurricane and earthquake risk with one of these tranches also including exposure to Cayman Islands hurricane risk. The third tranche provides annual aggregate protection to second and subsequent events to all five global peak perils. All three tranches use a parametric index as a trigger. Meantime, SCOR issued another €75 million tranche from its Atlas VI shelf program. The deal protects against European wind and Japanese earthquake events using parametric indices as triggers. This offering was well received as it is both a diversifying risk and offers a higher yield to investors. As with the Calypso Euro denominated deal, the collateral was invested in a tri-party repo structure producing a EURIBOR return.

2010 was rounded off, appropriately, with another non-US deal. Green Fields Capital was the second offering of the year from Groupama. Like Calypso Capital, which began the quarter, Green Fields uses PERILS loss data as a trigger. The deal provides Groupama €75 million protection against French windstorm events on a per occurrence basis. As with Groupama's Green Valley deal earlier in the year, this transaction uses a puttable EBRD note as collateral.

The fourth quarter saw a good mix of perils for investors, with several opportunities to satisfy their demand for diversifying risks. It also saw a number of tranches with a relatively high modeled expected loss which presented opportunities for greater yield for investors.

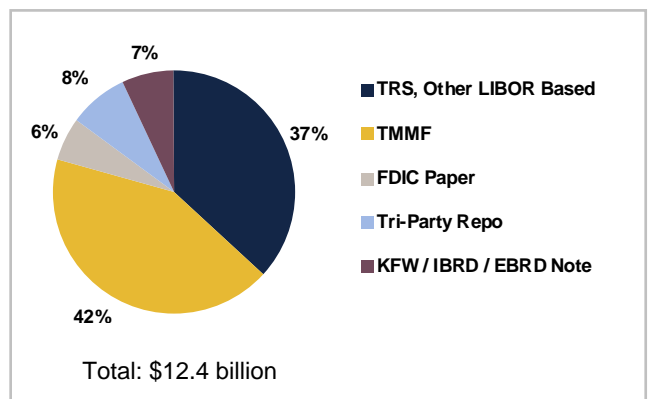
The quarter also saw some variety in collateral arrangements, partly because three of the issues were denominated in Euros. Two of the Euro deals opted for a tri-party repo structure with a diversified highly rated underlying asset portfolio, the third deal using the puttable EBRD note. Among the U.S. dollar denominated deals there were three exceptions to the recently dominant treasury money market collateral option. One was Flagstone's use of a tri-party repo. The others were the Swiss Re deals; which both use a puttable IBRD note. The chart below shows the outstanding non-life deals by collateral type. The TRS (total return swaps) relate to the older pre-Lehman bankruptcy transactions. The second chart below shows the cost of a 3 year T-Bill / LIBOR swap which is still only 35 basis points, one of the drivers behind the wide use of treasury money market funds in 2010 deals.

3-YEAR T-BILL LIBOR SWAP



Source: Bloomberg.

PAR OUTSTANDING BY COLLATERAL TYPE



Source: WCMA Transaction Database.

Secondary Market Trading

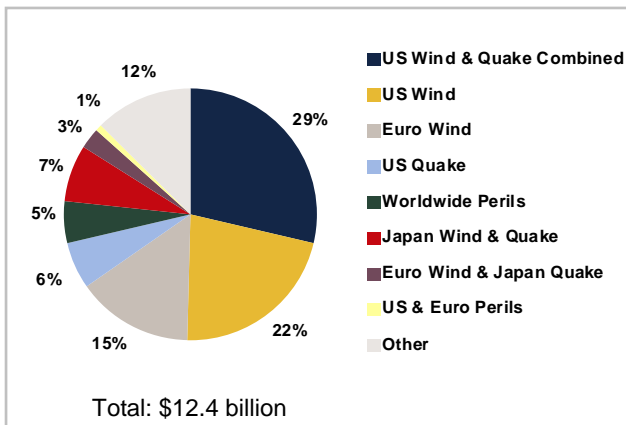
The third quarter ended on a positive note, giving investors their long sought after diversifier in Green Valley II. By the end of the fourth quarter a dozen new ILS issues (including the life and health bonds) were vying for investors' investment capital.

With the U.S. wind season winding down in the final quarter of the year, the U.S. hurricane exposed bonds drifted up in price. There was some light trading in these bonds as investors adjusted positions to accommodate cash flows arising due to maturities, new investor in/out flows, and the upcoming new issue pipeline.

The main point of interest for investors in the quarter was all the primary market activity. Investors appeared thrilled to see a smorgasbord of transactions to choose from. The road shows came fast and furious; many offering diversifying perils, relatively high expected loss options and diverse triggers. The impact of all this primary activity was felt in the secondary market where pressure on spreads receded somewhat as investors with cash to spend looked to the primary market rather than putting out bids to the secondary traders. Many investors faced the challenge of managing cash flows, the result of which should continue to be seen in the secondary market as investors shift out of their shorter term maturity notes to accommodate new issues and rebalance their portfolios after the new issues are digested.

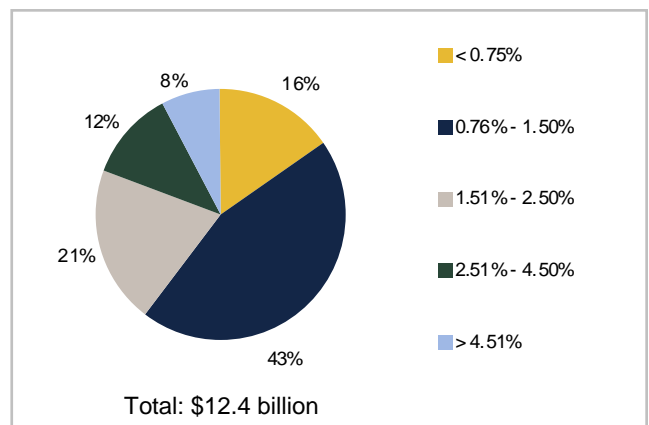
In the recent past, higher expected loss diversifying risks (e.g. Multicat Mexico) were in demand. One result of the quarter's activity is that new issues have largely satiated this higher yield demand for the time being. Investors have also been challenged to consider new perils such as severe thunderstorm, life longevity and medical health insurance risk.

ON-RISK CAPACITY BY PERIL (December 31, 2010)



Source: WCMA Transaction Database.

ON-RISK CAPACITY BY EXPECTED LOSS



Source: WCMA Transaction Database.

Peril Diversification

The cat bond market has become dominated by specialist ILS Funds managing money for investors attracted by the diversifying, uncorrelated nature of the asset class.

ILS Fund managers typically seek an additional layer of diversification within their portfolios by assuming exposures to a range of insurance-linked risks. This desire for diversification is unsurprising: a fund manager naturally does not wish all of its eggs to be in one basket and diversification can support leverage within the fund.

Achieving diversification has, however, been difficult over the last couple of years. A soft traditional reinsurance market, supported by an excess of capital, has been able to absorb most global catastrophe risks at prices well below those sought in the cat bond market. As a consequence, ILS supply has been dominated by the peak U.S. perils of hurricane and earthquake, where traditional reinsurance supply is more limited. Only approximately 35% of total limit on-risk at the mid-point of 2010 was not exposed to U.S. hurricane – leaving many investors with an unquenched thirst for other perils.

More than 60% of the limit brought to market in the last quarter of 2010 covered perils other than the peak U.S. risks. While this includes the European wind peril which, in years gone by, may not have been considered a diversifier, it also includes a number of perils not previously seen in the market (as discussed earlier).

Peril Diversification – Continued...

Given the pent-up demand for diversifying perils, it is interesting that there is evidence to suggest that investors have been prepared to be more flexible in both the assessment and pricing of these risks than might otherwise have been the case. For example, two large European wind deals were based on the new, and relatively untested, PERILS loss estimates and two U.S. severe thunderstorm deals introduce a peril which might have created challenges in the past. In each case these deals closed at the bottom or below their guide pricing range and a number were upsized. It is not all smooth-sailing, however. The two health/longevity-related transactions brought to market in the quarter have been less well received, pricing within or above range and, in one case, downsizing.

Nonetheless, the fact that in most cases these deals have closed at terms which, from a sponsor's perspective, exceed expectations and compare favourably with peak-peril deals, suggests that investors will continue to demand, and remain receptive to, any new peril, provided the transaction is well structured and modelled.

2011 Market Outlook

The fourth quarter finished with a buzz of excitement and optimism about the possibilities the future holds for this asset class.

Building on a strong 2010 performance, 2011 could prove to be a banner year for quantity and variety of issuances in the ILS market. For peak zone U.S. hurricane risk, cat bond capacity can be cheaper than the traditional reinsurance market alternative before considering any of the additional benefits, such as collateralization and multi-year duration. Pricing on other cat perils on an individual and combined basis has become much more attractive too.

Current and potential cat bond sponsors increasingly focus not on "what is the price?" in isolation, but instead on "how does this affect the pricing, terms, and conditions of my program as a whole?"

Market growth in 2011 may resemble 2007 with capital markets participation in catastrophe risk increasing materially over 2010. This participation should continue to take various forms including cat bonds, ILW's, and collateralized reinsurance. Market participants can be expected to strive to innovate where it adds value for sponsors, transparency and liquidity for investors, or addresses obstacles arising from changing regulation. As a consequence, we believe total cat bond issuance may reach \$6 billion or more in 2011. As in 2006 and 2007, much of the cat bond growth over prior years will likely come from new sponsors and in particular increased issuance from non-U.S. insurers. The re-emergence of life ILS deals in 2010 could portend more of the same in 2011, along with the return and expansion of ILS to other perils.

What if a large catastrophe event occurs in 2011? We would likely see an influx of new capital into the ILS market attracted by improved pricing in an environment of scarcer capacity. Cat bond issuance would likely accelerate as sponsors seek out what capacity is available. A tighter capital position could also stimulate cat bond and other ILS sponsorship from reinsurers. For example, after the investment success of the post-Katrina sidecars, we may see investors rapidly deploy sidecar capacity to support reinsurance balance sheets.

The bottom line is that we expect 2011 will produce growth and innovation that should benefit sponsors with valued coverage and more capacity and investors with more opportunities to put their capital to work.

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