



ILS MARKET UPDATE

Strong Close to Year Pushes 2011 Issuance
Volume over \$4 Billion

WILLIS CAPITAL MARKETS & ADVISORY

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Willis
Capital Markets & Advisory

Q4 2011 Cat Bond Market Issuance

The fourth quarter has been an active one for new catastrophe bond issuance in recent years and was true to form again in 2011. The final quarter was also the busiest of 2011 for new issuance volume; we saw nine new non-life issues brought to market, which added \$2.0 billion of risk capital (2010: 10 new deals totaling \$2.0 billion). See our quarterly issuance chart on page 2.

Total non-life issuance in 2011 was \$4.3 billion, slightly down from the \$4.8 billion we saw in 2010. This shortfall relative to 2010 arose in the first half of the year and was driven by several factors. These factors included some sponsors accelerating issuance into the fourth quarter of 2010 and the uncertainties caused by loss activity in early 2011, coupled with a significant change to the RMS model for U.S. hurricane risk.

The new issues are summarized in the table below.

Q4 2011 Non-Life Cat Bond Market Issuance Summary

(\$ in millions)							
Sponsor	Issuer / Tranche	Issue Date	Term (Yrs)	Amount (\$M)	Coverage	Risk Premium	Risk
Argo Re	Loma Re 2011-2	12/29/11	2.0	\$100	OCC	18.00%	US Hurricane and Earthquake
Amlyn	Tramline Re Ltd.	12/22/11	3.0	150	AGG	16.75%	US Hurricane and Quake, EU Wind
SCOR	Atlas Re VI 2011-2 A	12/12/11	3.0	66 ^(a)	AGG	8.00%	European Windstorm
SCOR	Atlas Re VI 2011-1 A	12/12/11	3.0	125	AGG	15.25%	US Hurricane and Earthquake
SCOR	Atlas Re VI 2011-1 B	12/12/11	3.0	145	AGG	12.50%	US Hurricane and Earthquake
SCIF	Golden State Re Ltd.	12/08/11	3.0	200	OCC	3.75%	US Earthquake
Chartis	Compass Re Ltd. 2011-1	12/01/11	3.0	75	OCC	9.00%	US Hurricane and Earthquake
Chartis	Compass Re Ltd. 2011-2	12/01/11	3.0	250	AGG	10.25%	US Hurricane and Earthquake
Chartis	Compass Re Ltd. 2011-3	12/01/11	3.0	250	AGG	11.25%	US Hurricane and Earthquake
USAA	Residential Re 2011-II 1	11/30/11	4.0	100	OCC	8.90%	US HU, EQ, T-Storm, Winter Storm, Wildfire
USAA	Residential Re 2011-II 2	11/30/11	4.0	50	OCC	13.25%	US Hurricane and Earthquake
Swiss Re	Successor X V-F4	11/08/11	4.0	80	OCC	16.25%	US Hurricane
Swiss Re	Successor X V-X4	11/08/11	4.0	50	OCC	11.25%	US Hurricane and EU Windstorm
Munich Re	Queen Street IV	10/27/11	3.5	100	OCC	7.50%	US Hurricane and EU Windstorm
AXA	Calypso 2011	10/20/11	3.3	248 ^(b)	OCC	4.10%	European Windstorm
				Total	\$1,989		

Source: WCMA Transaction Database.

(a) €50 @ 1.3187 USD as of 12/12/11.
 (b) €180 @ 1.3791 USD as of 10/20/11.

The first transaction of the quarter was from AXA, who sponsored the second takedown from their Calypso Capital shelf facility. A single €180 million (\$248 million) tranche was placed providing just over three years of occurrence coverage against European windstorms. The notes use an EQECAT-modeled PERILS-based loss trigger and the collateral is invested in an European Bank for Reconstruction and Development ("EBRD") note which provides a 3-month EURIBOR basis for investment earnings. This transaction was competitively priced and demonstrated investor enthusiasm for pure European risk.

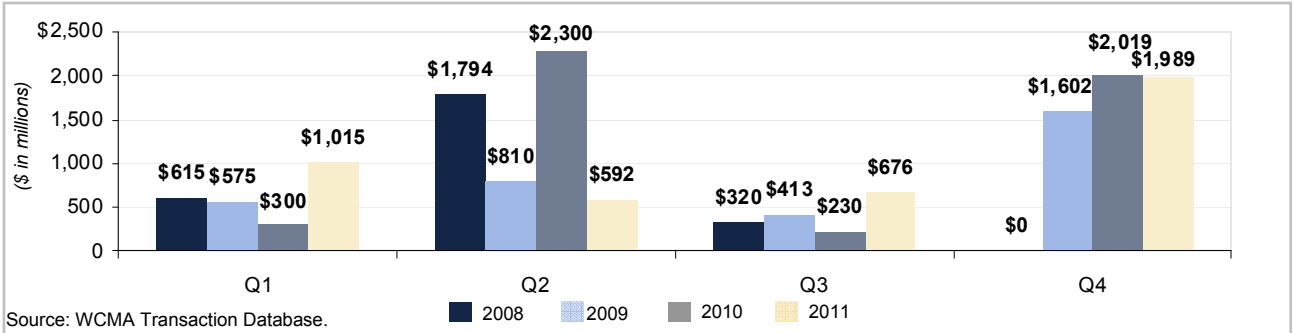
Munich Re sponsored an issuance from Queen Street IV, which provides \$100 million of occurrence coverage against U.S. hurricanes and European windstorms for three and half years. The risk analysis was performed by AIR and featured a state-weighted PCS index for the U.S. and a country-weighted PERILS index for Europe.

USAA returned to the market for a second time in 2011 to top up two of the tranches offered earlier in May. These provide an additional \$150 million of indemnity-triggered occurrence protection against U.S. catastrophe perils including hurricane, earthquake, severe thunderstorm, winter storm and California wildfire. Like the earlier 2011 placement, these tranches have a four year term.

Chartis sponsored the largest issue of the quarter, of \$575 million, from their new Compass Re vehicle. Chartis now has \$1.45 billion of bonds outstanding, or 11% of the total market, all accumulated in three deals since their first transaction in May 2010. Compass Re protects against U.S. hurricanes and earthquakes for three years, using an AIR modeled state-weighted PCS trigger. The deal provides \$500 million of second event annual aggregate coverage in two tranches and \$75 million of occurrence cover.

Q4 2011 Cat Bond Market Issuance (cont'd)

Non-Life Cat Bond Issuance by Quarter (2008 – 2011)



Swiss Re sponsored a fifth takedown of two further tranches from their Successor X program. One of which provides \$80 million of U.S. hurricane cover, the other \$50 million of U.S. hurricane and European windstorm cover. The four year occurrence covers use an AIR-modeled PCS-based trigger for the U.S. and PERILS for Europe.

SCOR sponsored a third takedown from their Atlas Re VI vehicle. Three tranches were issued: two provided a total \$270 million of annual aggregate cover for three years against U.S. hurricanes and earthquakes. An AIR-modeled, county-weighted PCS trigger is used. The third tranche of €50 million (\$66 million) covers European windstorms, also on an annual aggregate basis and uses a PERILS-based trigger. The collateral for this deal was invested in U.S. dollar and Euro denominated puttable EBRD notes that provide a LIBOR / EURIBOR basis respectively for coupon payments on the bonds.

The quarter also saw the rare combination of a new sponsor and peril with the Golden State Re transaction, sponsored by California's State Compensation Insurance Fund. Willis Capital Markets & Advisory acted as sole structuring agent and bookrunner for this deal. This innovative transaction provides \$200 million of protection for a three year period against workers' compensation claims as a result of U.S. earthquakes. Coverage is on a per-occurrence basis and the transaction features an RMS modeled loss trigger. Golden State Re is the first cat bond designed exclusively to protect a portfolio of workers' compensation exposures.

Another new sponsor to the market, Amlin, brought the \$150 million Tramline Re transaction to the market. A single tranche protects Amlin against U.S. hurricanes and earthquakes and European windstorms for three years on an annual aggregate basis. A PCS-based trigger is used for U.S. events and PERILS for European events.

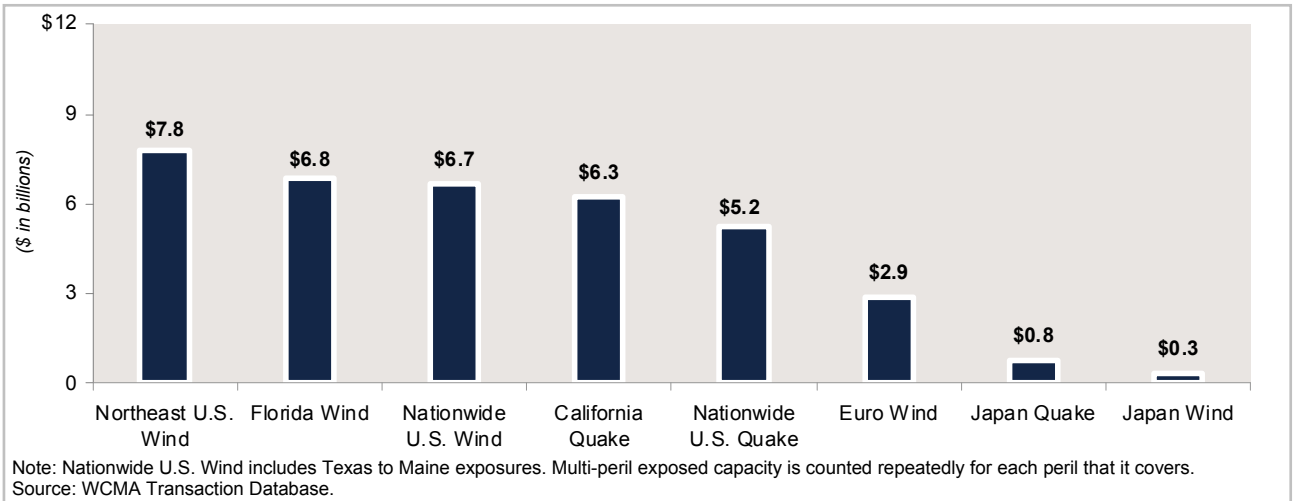
The final new issue of the year was from Argo Re. A second placement from the Loma Re vehicle provides \$100 million of occurrence protection against U.S. hurricanes and earthquakes for two years using a simple Industry Loss Warranty (ILW) structure. This transaction is interesting because of its experience during the marketing phase. In an unprecedented move for the cat bond market the collateral structure was changed after the deal was launched from a tri-party repo to a more straightforward treasury money market structure. The transaction also eventually priced at 250 basis points above the high end of the initial guidance range. This is an interesting example of the potential execution risk of the tri-party repo structure and reinforces the view that execution is likely to be better with simple, clean, transparent structures that address potential investor issues in advance.

Aside from two new sponsors and a new peril, the fourth quarter also saw an unusually large amount of limit issued on an annual aggregate basis. In total, \$990 million of coverage of this type was issued, demonstrating the appeal of protection on this basis to sponsors and the ability of the cat bond market to provide this cover on competitive terms.

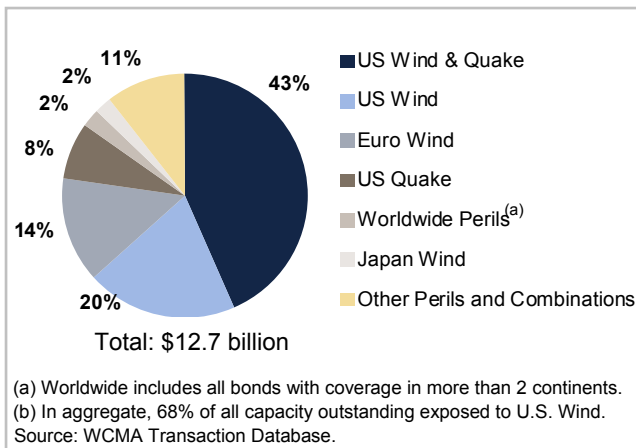
During the fourth quarter no catastrophe bonds matured (total scheduled maturities for 2011 were \$4.0 billion). The lack of maturities was largely due to the fact that there was no cat bond issuance during the height of the financial crisis in Q4 2008. Outstanding on risk-capacity has increased by ~\$300 million over the course of 2011, as maturities and new issuance levels have been similar.

After seeing \$676 million of non-hurricane diversifiers in Q3, just under \$500 million of the fourth quarter issuance of \$2.0 billion, was not exposed to U.S. hurricane. As our charts on page 3 show, U.S. hurricane risk continues to dominate the non-life market, with 68% of outstanding cat bond limit exposed to hurricane risk of some form.

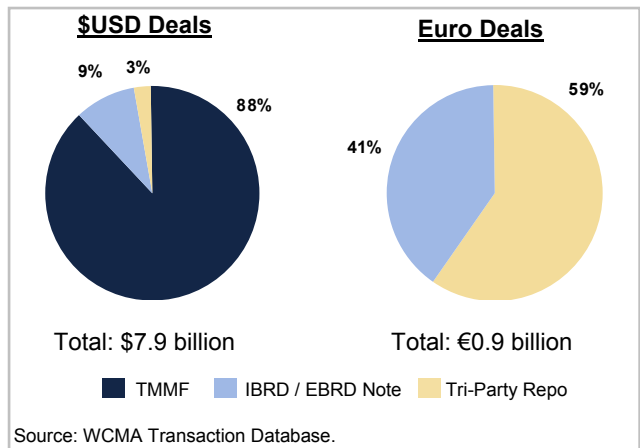
On-Risk Capacity by Peril (\$ In billions)



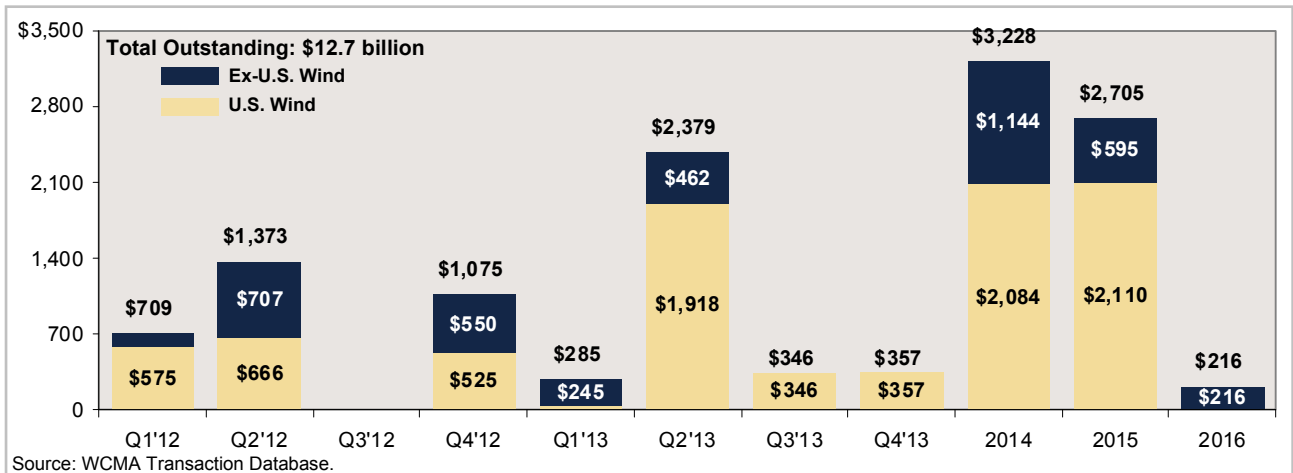
On-Risk Capacity by Peril (Dec 31, 2011)



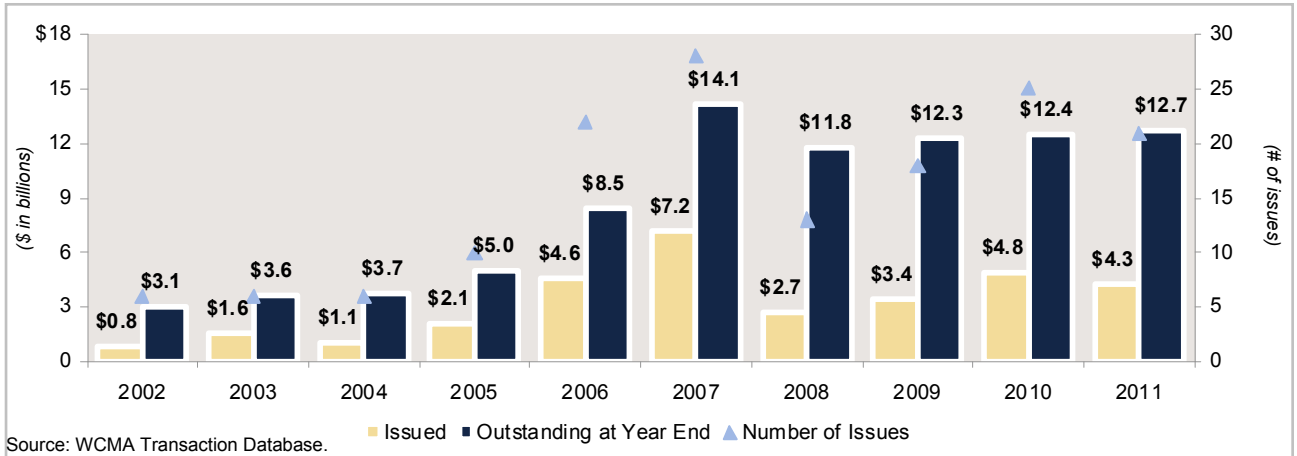
2010 & 2011 Issuance By Collateral Type



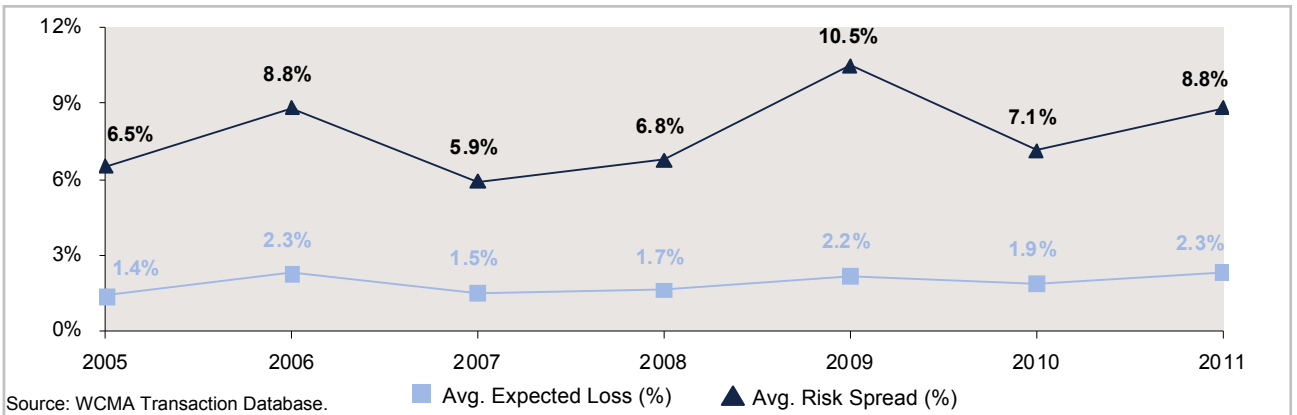
On-Risk Capacity by Maturity Date (\$ In millions)



Capacity Issued and Outstanding by Year



Average Expected Loss and Risk Spread for non-Life Catastrophe Bonds Issued Each Year



Risk / Return Profile of Market

The chart above shows the overall expected loss and risk spread of the total annual issuance for 2005 to 2011. These overall numbers hide many pricing factors that are relevant on a deal by deal basis, such as peril and trigger type, but the chart demonstrates several interesting issues. It shows that while the risk profile (expressed as the overall expected loss) has been fairly consistent over time; there has been an increase in recent years as investors have become comfortable with increased modeled loss profiles and keen to access some higher yielding risks. The figures for 2006 are something of an exception, as the large Successor program in that year included some very high yield tranches that appealed to a section of the investor market at that time. The greatest margin between average risk spread and average expected loss occurred in 2009. The first half of that year saw very wide spreads being demanded as a result of the turmoil of the financial crisis of 2008/2009.

The movement between 2010 and 2011 is worth noting. The risk profile of the market has increased slightly, while the overall risk spread has increased more dramatically. Net capital inflows into the investor market combined with slightly reduced cat bond issuance has not produced the reduced risk spreads for cat bonds that basic economic theory predicts. This is due to several factors; including the availability of alternative product forms as a way to deploy capital, the continued impact of recent catastrophe model changes and the inability of investors to continue to take on U.S. hurricane exposed transactions when the market is saturated with this peril.

In our view, this has been a missed opportunity for the catastrophe bond market to stimulate growth in new issuance by increasing the relative attractiveness of their pricing while traditional reinsurance alternatives become more expensive (see our following piece on the January renewals). It will be interesting to see if recent pricing for U.S. hurricane risk in cat bond form will persist into the first half of 2012 or is a temporary trend caused by issuance volume late in 2011.

January 2012 Renewal Season - Willis Re 1st View Summary

Our colleagues in Willis Re release a brief report commenting on key renewal issues and pricing levels at important renewal dates. The “1st View” report for the January 1st, 2012 renewal season, titled “Change is in the Wind”, was released December 30th. We reproduce summary extracts from the report below, covering pricing and commentary on property catastrophe reinsurance renewals in several territories of particular interest to the catastrophe bond market. A full copy of the report is available on the Willis Re website (www.willisre.com).

Property Catastrophe Reinsurance Rate Changes

Territory	Castastrophe Loss Free % Change	Castastrophe Loss Hit % Change
<u>Property Rates</u>		
U.S. Nationwide	+ 2.5% to + 10%	N/A
U.S. Regional	- 2.5% to + 5%	Various
Europe	+ 1% to + 4%	N/A
France	+ 0% to + 3%	N/A
Germany	+ 0% to + 5%	N/A
Non-Marine Retro	+ 10%	+ 25% to + 50%

U.S. – Nationwide

A number of the larger national carriers are retaining more risk to offset pricing increases while de-risking their underlying portfolios. Risk adjusted rate changes are broadly in line with those experienced at mid-year 2011. A few reinsurers are reducing capacity, however overall market capacity remains adequate.

U.S. – Regional

Many reinsurers are attempting to underwrite accounts individually and differentiate cedants and regions. Regional carriers with significant losses in recent years may be paying materially more on certain layers and/or experience changes in terms and participants. January pricing indicates that reinsurers continue to discount RMS V11 model change to varying degrees; however this has resulted in some pressure on Texas and Northeast exposures. Increases in top end pricing are more noticeable as minimum rates on line come under pressure from model changes. 2011 Tornado/Hail losses mean that aggregate pricing and attachments are increasing and some markets have withdrawn from this line.

Europe

The multi-territory peak zone catastrophe excess of loss market was stable with only modest risk-adjusted prices in spite of the worst international catastrophe losses on record. Adequate capacity available with few exits or new entrants but the market tightened noticeably during December. The new RMS V11 model for European Wind produced volatile results, but was released too late to be taken into consideration for the January 1st renewals.

France

Catastrophe excess of loss priced either flat (on a risk-adjusted basis) or slightly higher. Capacity from European reinsurers stable, but down from Bermudian and Lloyd’s markets as prices did not meet their expectations.

Germany

Impact of RMS model change limited with a few exceptions. Impact of international catastrophe losses has had a limited effect in Germany.

Non-Marine Retrocession

Both traditional and collateralized capacity unchanged if pricing acceptable. Limitations on territorial scope with named territories and named perils coverage increasingly required to obtain capacity. Take up of RMS V11 patchy with a variety of approaches being used, but model change is underpinning rate increases. Some de-risking of international retro market as primary reinsurance writers reduce their international exposures. Limited ILW trading occurred up to year end, but upward pricing pressure seen; main trading likely to take place post January 1, 2012.

Market Outlook

Specialist investors continue to gather assets to deploy in insurance event risk. The pace of inflows may have slowed temporarily due to macro economic issues, particularly in the Euro zone, but will likely persist. This bodes well for the broader convergence market including collateralized reinsurance, catastrophe bonds, ILWs and related products. More capital should ultimately translate to more deals.

How this incremental capacity gets deployed is less clear. Investors (and sponsors) are increasingly agnostic to form between different convergence products. In the first half of 2011, some of the specialist investors were struggling to deploy capital in catastrophe bond form, as bond issuance could not keep pace with capital inflows. This led many investors to consider alternative product forms to deploy their capital. The relative attractiveness of different product forms can shift quickly. Fundamentally, relative pricing determines demand for convergence capital and how that capital gets deployed.

We continue to see the potential for innovation in the market: new perils, new structures, and different forms of risk taking. Innovation is a potential key driver of growth in the market, as capital remains on the sidelines waiting for appropriate relative value opportunities.

We believe the convergence sector will be increasingly influential in 2012. How much of this activity will be seen in new catastrophe bond issues is difficult to predict, but we may see total non-life issuance break the \$5 billion mark this year for the first time since 2007.

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