INSURANCE-LINKED SECURITIES (ILS) MARKET UPDATE Q1 2010

ILS Round Table Monte Carlo

SAVE THE DATE…
….to discuss the state and future of the ILS market

13 September 2010 / 11.30 a.m.
The Fairmont Hotel, Salon Naïade BC
Rendez-Vous de Septembre
Monte Carlo

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Cory Anger
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Trader, Tullett Prebon Group Ltd

NN
Cat Bond Sponsor Representative

PANEL DISCUSSION

For this event, we invited major representatives from the ILS community to give their individual view on

- issuance activity in 2010
- major developments in ILS structures, pricing, cat modeling and ILS portfolio management
- how to align interests of all participants to generate a liquid and viable market and
- Outlook for 2011

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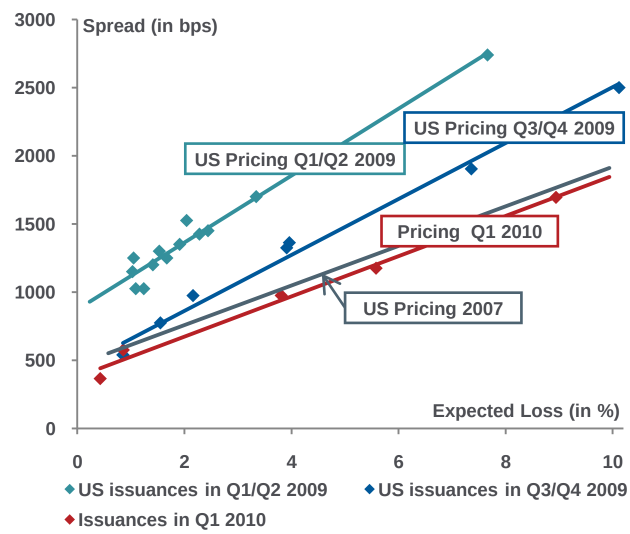
Munich RE

Q1 2010 Review

New issuances built on continued high investor demand

- 2010 kicked off with doubt whether the peak in issuance activity by year-end 2009 had fully absorbed investor demand
- Q1 issuances evidenced investors' sustainable demand allowing for a pricing at the lower end of guidance and a return to 2007 bull market levels
- Total issuance volume amounted to USD 650 mn with a strong focus on US perils (Europe Wind and Japanese earthquake only included in smaller Multi-peril tranches)
- All transactions relied on money market funds as collateral investment and underscore the emergence of a new market standard for USD denominated issuances and a shift away from LIBOR-referenced coupon bases

Risk Premiums of Q1 2010 vs. 2009 Issuances*

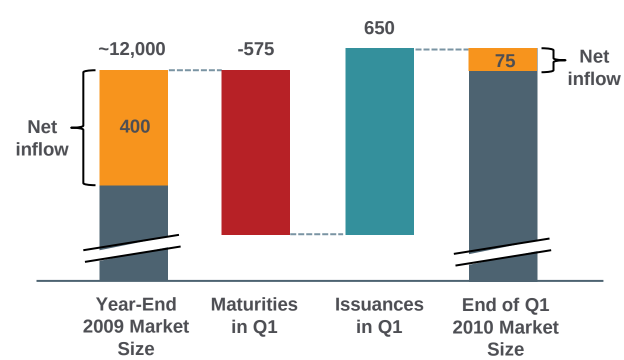


Upsizing of issuances and superior Q1 performance as new capital enters the market

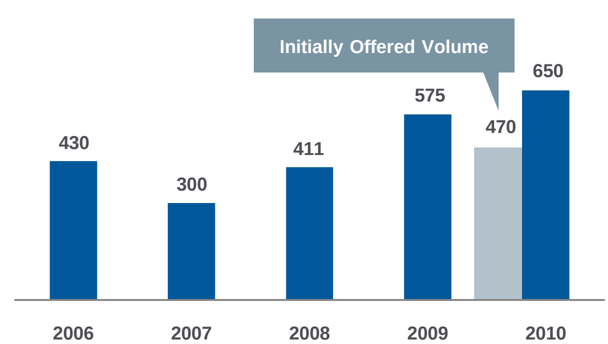
- A growth in the total volume of outstanding bonds implies demand for new issuances exceeded the re-investment need from maturing bonds and new capital has hence entered the market
- 2009 saw a net capital inflow of USD 400 mn already, and Q1 2010 affirmed the market growth trend with a further net inflow of USD 75 mn
- Following the trend in previous quarters, investor excess demand led to oversubscribed books and allowed to upsize the initially offered volumes by nearly 40% (see also p. 4)
- Upsizings pushed issuance volume above levels of previous first quarters with sponsors capitalizing on high investor demand and favorable pricing

Attractive pricing accompanied by upsizing of volumes illustrates how the market has gained momentum towards long-term demand and pricing stability

Market Inflows and Outflows (in USD mn)



Q1 Issuance Volumes (in USD mn)



*Pricing of Q1 issuances was only benchmarked against US issuances in previous time periods seeing that Q1 issuances were heaviliy concentrated on US perils.
Source: Munich Re Trading Desk

Market Outlook

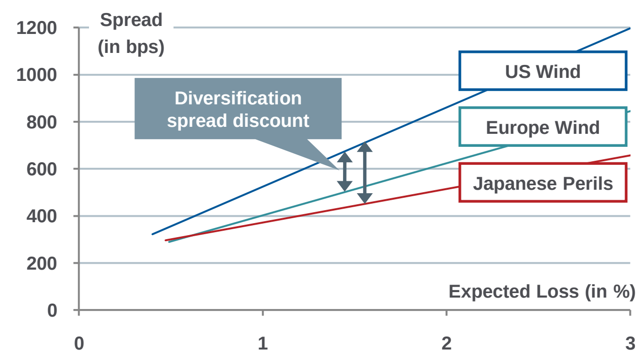
Pipeline indicates strong issuance activity in Q2 with a focus on US wind

- Various sponsors are currently preparing the launch of transactions during Q2 in view of the upcoming hurricane season and the need to renew significant maturing cat bond capacity
- Seeing that USD 1.4 bn of Q2 maturities are in the 0.5 – 2.5% expected loss range (market sweet spot), issuances are expected to meet sufficient reinvestment demand

Upcoming non-US issuances expected to be honored with diversification discount

- Only 9% of the overall issuance volume in the past five months covered non-US perils
- Substantial overhang of US perils has seen European windstorm and Japanese risks become non-peak perils for ILS investors
- Secondary market spreads reveal that investors with a diversified portfolio approach – which represent the core group of the investor base - honor non-US perils with a discount in spread

Secondary Market Pricing (as per March 29, 2010)[1]

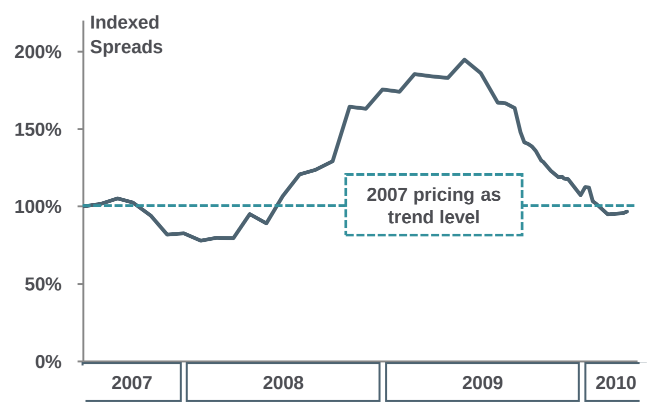


Pricing reaching floor after steady spread tightening since mid 2009

- Q3 and Q4 in 2009 saw pricing return to 2007 bull market levels after collateral concerns were tackled and demand among ILS investors was restored
- Further drop in spreads unlikely seeing that:
  - ILS remain a niche investment and as such have to offer a spread advantage compared to mainstream assets with similar risk profile
  - Cat bonds are equivalent to multi-year covers by AAA-rated reinsurers and hence justify a higher risk premium

Perfect timing within the next months to lock in attractive pricing for a multi-year term

ILS Spread Index July 2007 – March 2010[2]



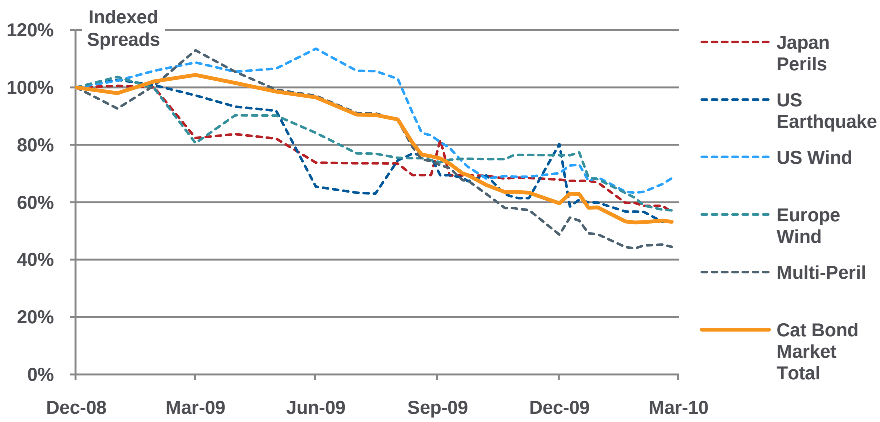
Interaction between sponsoring activity, product innovations and capital allocation by investors is crucial for long-term prospect of the market

- Long-term goal of more competitive pricing will require to broaden the investor base and enable mainstream investors a transparent and more direct access to ILS
- Mainstream investors are only able to benefit from the diversification potential of ILS and will only honor it (by requiring less risk premium) if there is sustainable and sufficient offered volume to diversify larger portfolios
- Long-term sweet spot of the market are instruments that allow insurers to lay-off peak tail-risks (expected loss ~1%) at adequate premiums which in return will attract a larger, more stable investor base (e.g. pension funds)

1 Adjusted for seasonality effects. Source: Munich Re Trading Desk
2 Index consists of all outstanding cat bonds (excl. life/mortality bonds) and is weighted by issuance sizes. Source: Munich Re Trading Desk.

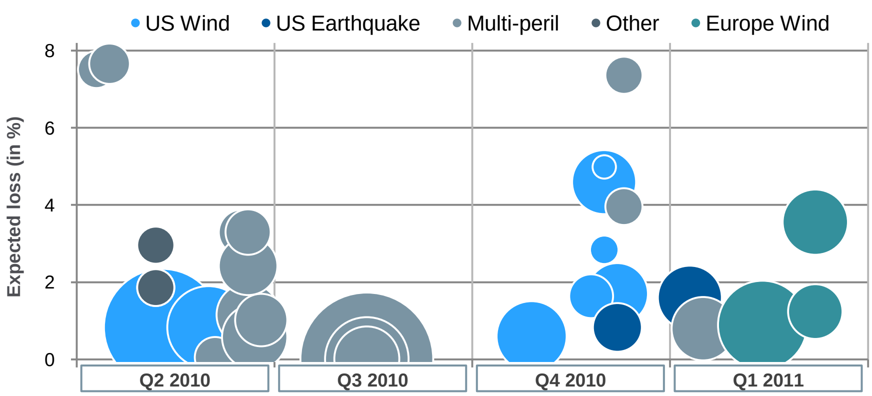
ILS Market Factsheet

Secondary Market Pricing – Breakdown per Peril[1]



- Secondary market spreads reflect current return requirements by investors for individual perils
- Spread tightening is evident in all perils
- Forthcoming hurricane season has led to a slight upturn in US hurricane spreads

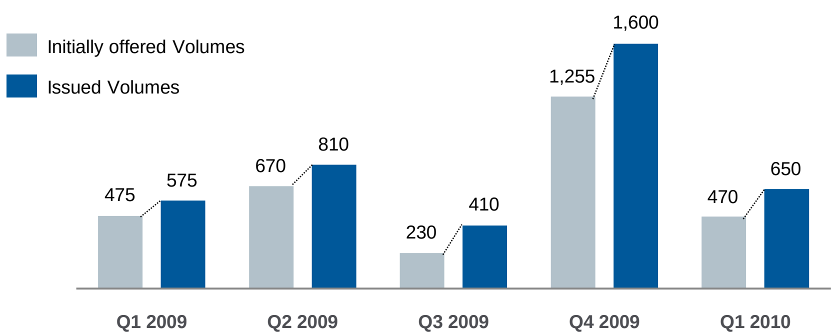
Upcoming Maturities (in USD mn)[2]



Q2 2010		Q3 2010		Q4 2010		Q1 2011	
Other	100	Multi-peril	1,059	EQ US	88	EQ US	150
US Wind	750			US Wind	588	Multi-peril	147
Multi-peril	1,035			Multi-peril	100	Eur. Wind	553
Total:	**1,885**	**Total:**	**1,059**	**Total:**	**776**	**Total:**	**850**

- Roughly USD 4.6 bn is maturing within the next 12 months
- USD 2.6 bn of this upcoming liquidity lies in the 0.5 – 2.5% expected loss range (market sweet spot)
- With a large share held by dedicated funds, freed up capital will be allocated to new issuances

Issuance Volume and Upsizing Q1 2009 – Q1 2010 (in USD mn)



	Q1 2009	Q2 2009	Q3 2009	Q4 2009	Q1 2010
Upsizing in %	21	20	78	28	38

- The cat bond market has seen substantial investor excess demand in the past 15 months
- As demand in excess of issued volumes are carried-forward, Q1 2010 issuances also resulted in significant oversubscriptions

1 Source: Munich Re Trading Desk

2 Cat Bonds with an expected loss above 8% not shown in this graph (missing bonds are multi-peril with a total notional of USD 100 mn)

ILS Issuances Q1 2010

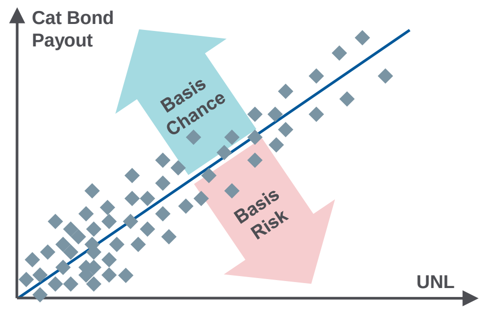
Transaction		Cedant	Size (USD mn)	Covered Perils	Expected Loss	Pricing (bps)	Maturity	Collateral
Merna Reinsurance II Ltd.		State Farm	350	Earthquake Midwest	0.43%	MMF + 365	April 2013	US Money Market Funds
Successor X Ltd.	**Class II BY3**	Swiss Re	40	US Wind, Europe Windstorm	8.94%	MMF + 1,695	April 2013	US Money Market Funds
	Class II CL3		35	US Wind, Europe Windstorm	5.58%	MMF + 1,175	April 2013	US Money Market Funds
	Class II CN3		45	US Wind, Europe Windstorm	3.81%	MMF + 975	April 2013	US Money Market Funds
Foundation Re III Ltd.		Hartford	180	US Wind	0.86%	MMF + 575	February 2014	US Money Market Funds

ILS Knowledge Box: Basis Risk

Exploring deviations between the cat bond‘s payout and the actual losses of the sponsor

Derivative nature of non-indemnity cat bonds implies a potential mismatch between the payout of the cat bond according to its trigger and the actual ultimate net losses (UNL) of the sponsor/cedant

On a pre-event basis, plotting the modeled results of the cat bond payout against the modeled ultimate net losses of the sponsor illustrates a split between “downside” basis risk and “upside” basis chance



Basis Risk: The UNL is higher than the payout of the cat bond

Basis Chance: The UNL is lower than the payout of the cat bond

While pre-event basis risk assessment is merely possible on a probability distribution basis and goes along with modeling uncertainty, actual basis risk becomes evident from a post-event standpoint

Actual Cat Bond Loss	**True basis risk:** Difference between actual cat bond loss and actual UNL of sponsor	Actual Ultimate Net Loss	**Post-event basis risk definition**
Model risk (cat bond uncertainty): Difference between modeled and actual cat bond loss		**Model risk (UNL uncertainty):** Difference between modeled and actual UNL of sponsor	**Non-modeled basis risk**
Modeled Cat Bond Loss	**Modeled basis risk:** Difference between modeled UNL of sponsor and modeled cat bond loss	Modeled Ultimate Net Loss	**Pre-event basis risk definition**

Accuracy of basis risk assessment and pricing increases with the quality and detail level of the information available as more sophisticated mathematical models can be applied

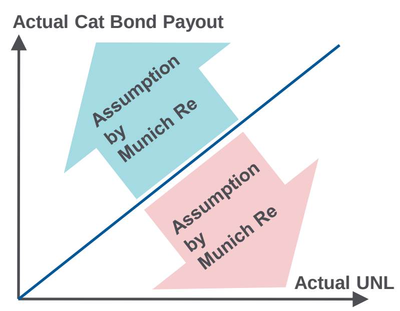
Munich Re’s ILS platform is fully dedicated to work out basis risk solutions for cat bond sponsors

Our actuarial team has gained extensive expertise on assessing and pricing basis risk to optimize the cat bond cover:

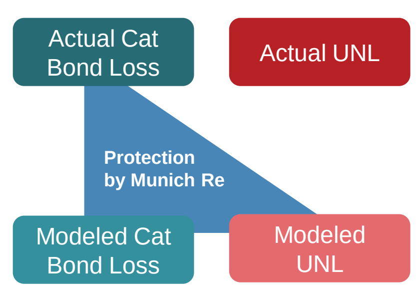
Trigger Development

- Bundling of geoscientific and actuarial know-how allows to develop a best-fit trigger and to achieve max. mitigation of modeled basis risk
- Best-fit trigger provides for optimized basis risk price

Basis Risk Wrap



Integrated Basis Risk Solution



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