Insurance Linked Investments as an Asset Class

July 2013

Why Invest in Insurance Linked Investments?

Why Insurance?

Diversified Income Opportunity

Insurance linked investments provide investors with access to **"pure"** insurance risk through capital markets instruments such as cat bonds (ILS), private placement of reinsurance or cat swaps

Investors are exposed to **low frequency high severity risks**, such as catastrophic hurricane or earthquake risk

The ILS market has produced good quality earnings over the last few years with the following characteristics:

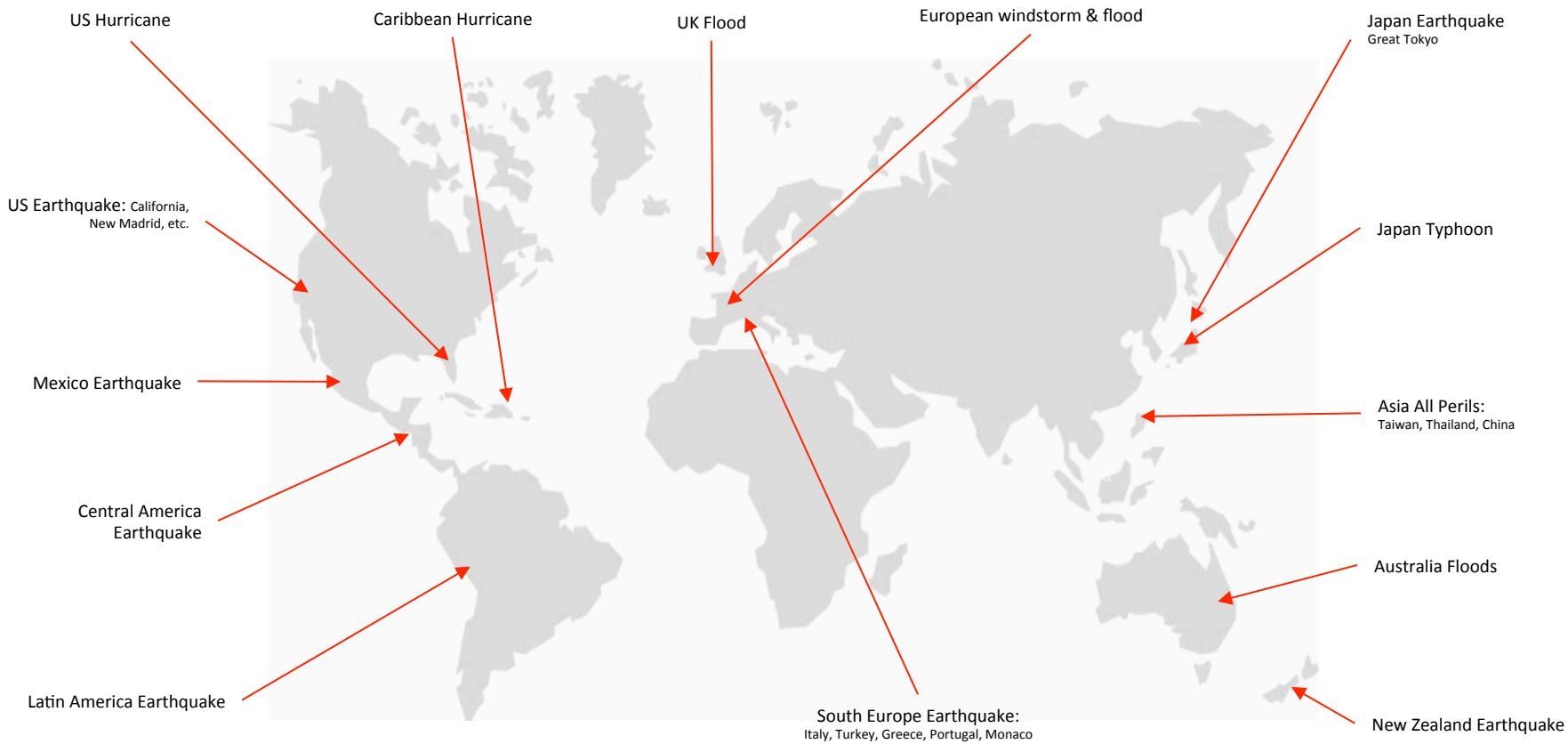
- ✓ Almost no or Relatively low correlation to fixed income, credit and equity market;
- ✓ Instruments are liquid and cash flow positive (no Private Equity "J" Curve effect);
- ✓ Instruments are self liquidating (no market timing required on exit at maturity);
- ✓ Transparent risk;
- ✓ Relatively short duration;
- ✓ Listed and quoted instruments;
- ✓ Attractive expected return with less historical volatility relative to traditional and non-traditional asset classes observed over the last 5 years

Why a specialist manager?

But specialist help is needed to:

- Manage tail risk
- Understand Skewed returns
- Utilise specialist models for risk analysis
- Control Portfolio concentrations
- Source and assess relative attractions of new opportunities

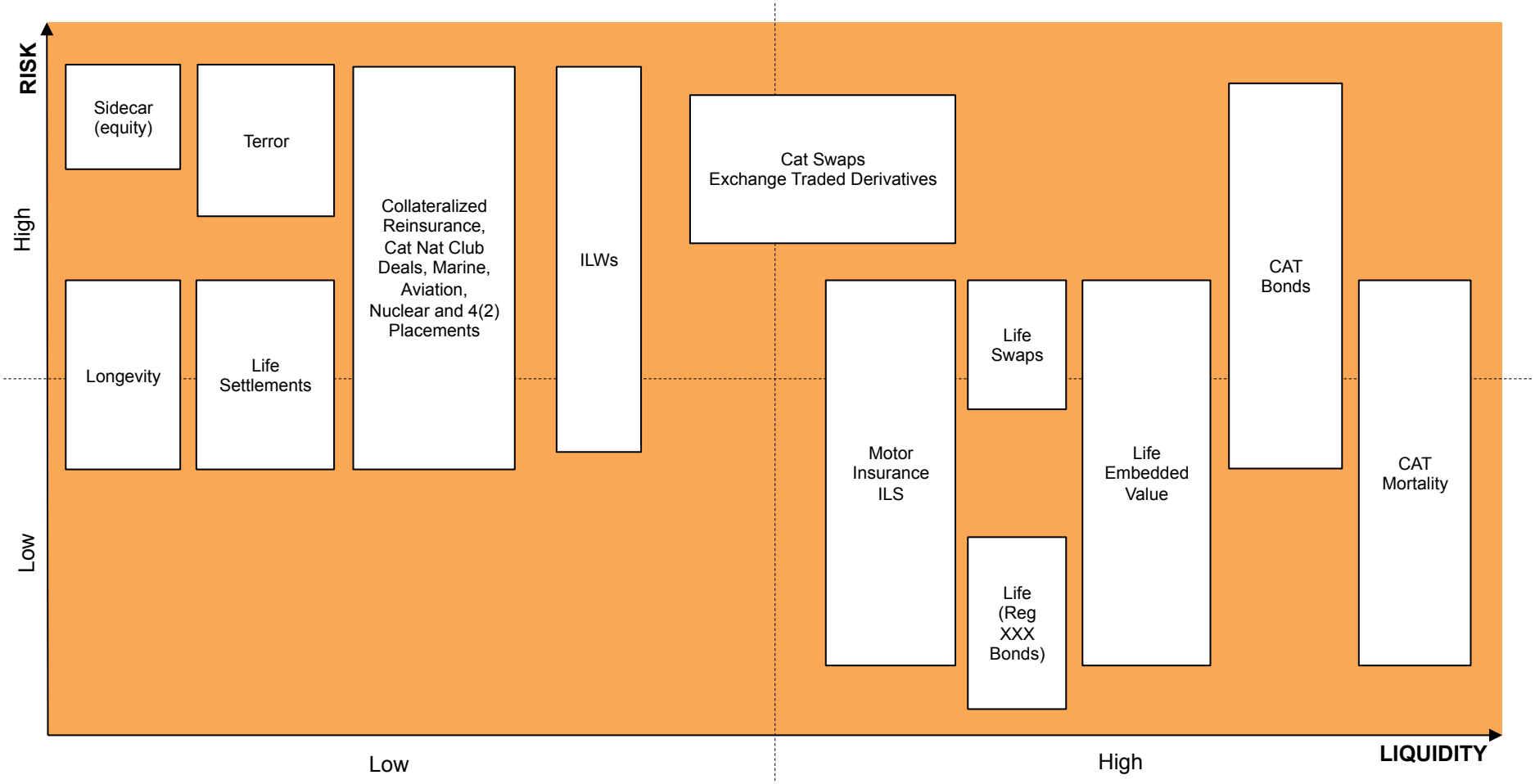
The world is full of CAT disasters but could they all happen at once?



ILS can offer attractive returns for one simple reason: Insurers are willing to pay substantial premiums to hedge the risk of a major, but unlikely, catastrophe that could jeopardize their continued survival. Investors on the other hand, provided they diversify, are in a position to take on this risk. This is what an ILS funds are all about where the fund invests in a basket of ILS triggered by different kinds of catastrophes which are unlikely to happen simultaneously.

The Insurance Linked Investments Market

Many instruments are being used to transfer insurance linked risk to the capital markets and all of them have a role in a portfolio strategy to ensure liquidity, profitability and growth



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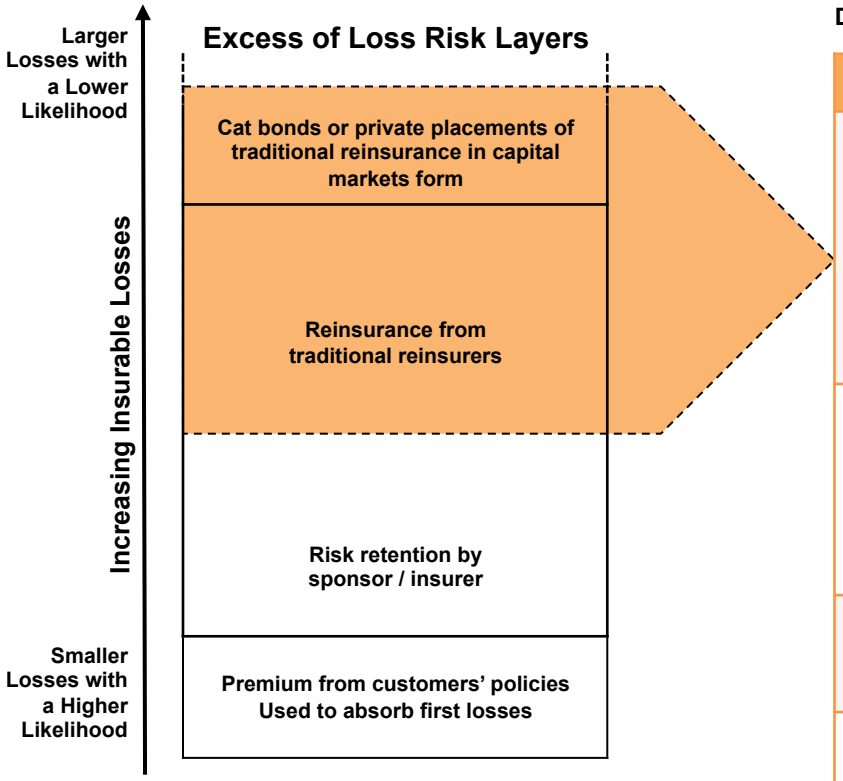
The Dynamics of the Reinsurance Market



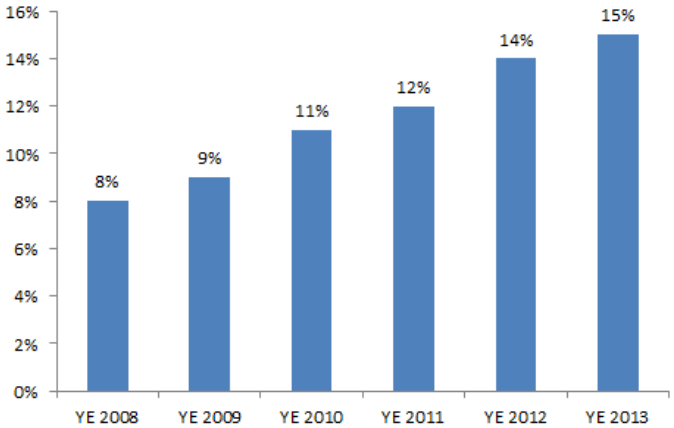
- Investments sourced from public and private markets provide access to in excess of USD$ 300 bn of risk;
- Short tenor contracts which revert to cash at maturity, subject to no insured event;
- Portfolios are primarily constructed from building blocks with different and complementary characteristics;
- Portfolios include a range of original (re)insurers, contract types, perils and territories

Description of public & private markets for non-life insurance linked investments

Retrocession	Reinsurance	ILW	Cat Bond
Reinsurers protect themselves by packaging up their reinsurance exposures and buying retrocession	Primary insurers protect themselves by packaging up their direct exposures and buying reinsurance	A range of counterparties protect their loss exposures by buying protection based on industry wide losses	A range of counterparties protect their loss exposures by sponsoring the issuance of securities
Beneficial to boost portfolio return subject to carefully assessing additional risks	Beneficial to build a portfolio of diversified regional exposures	Beneficial to add simple, standardized assets which complement a portfolio	Beneficial for adding liquidity to the portfolio
1 year contracts held to maturity	1 year contracts held to maturity	1 year contracts brokered OTC	3 year bonds actively traded
Based on ultimate net losses from a portfolio of reinsurance	Based on ultimate net losses from the primary insurer	Based on industry losses aggregated by an independent source	Based on a variety of loss quantification methods
Low transparency of exposures with fluid underlying risk exposures	Transparent and stable risk exposures with higher model certainty	Simple structure with transparent risk exposures	Constant and transparent risk exposures

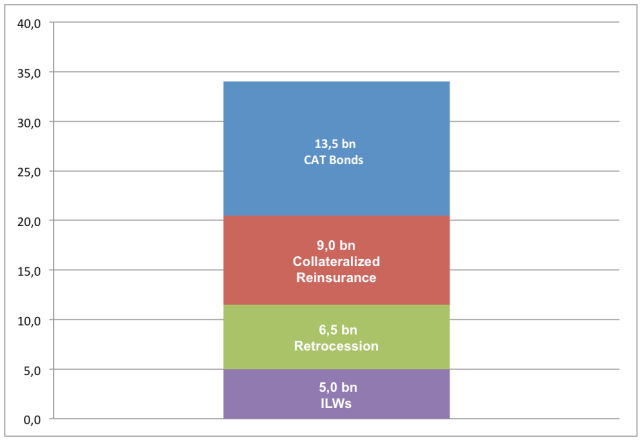
Non-traditional Reinsurance Market Capacity

Alternative capacity as % of global property CAT reinsurance limit



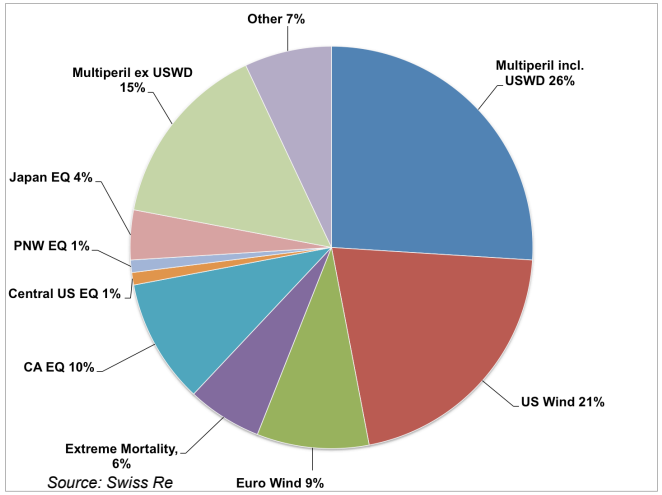
Source: Guy Carpenter

Non-Traditional Market Capacity composition (mid 2012)



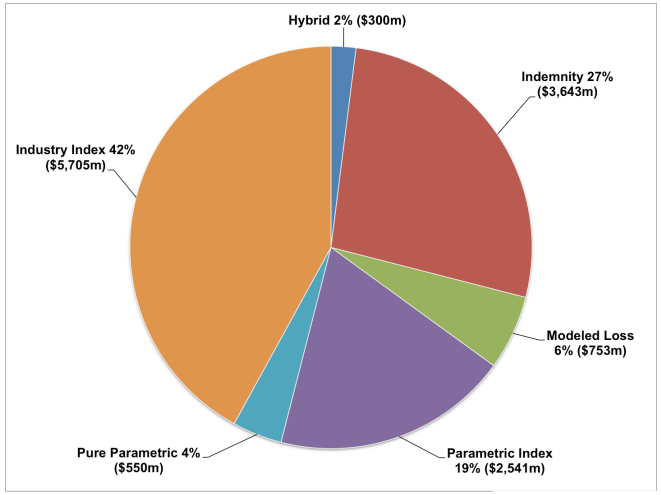
Source: Guy Carpenter

Risks securitized since 1997



Source: Swiss Re

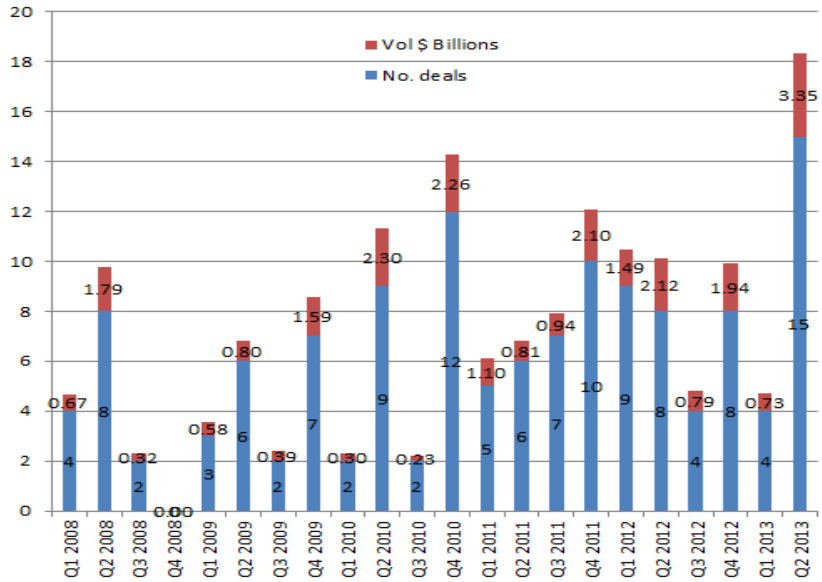
Triggers used by catastrophe bond transactions



Source: Swiss Re

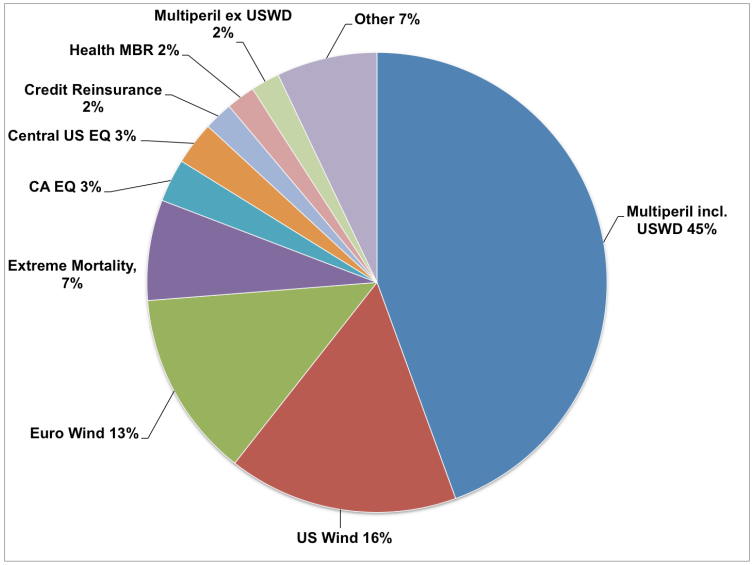
Non-traditional Reinsurance Market Capacity

Catastrophe Bond issuance by Quarter, to end of Q2 2013



Source: Guy Carpenter

Outstanding catastrophe bonds by peril (as of 9 January 2012)



Source: Swiss Re

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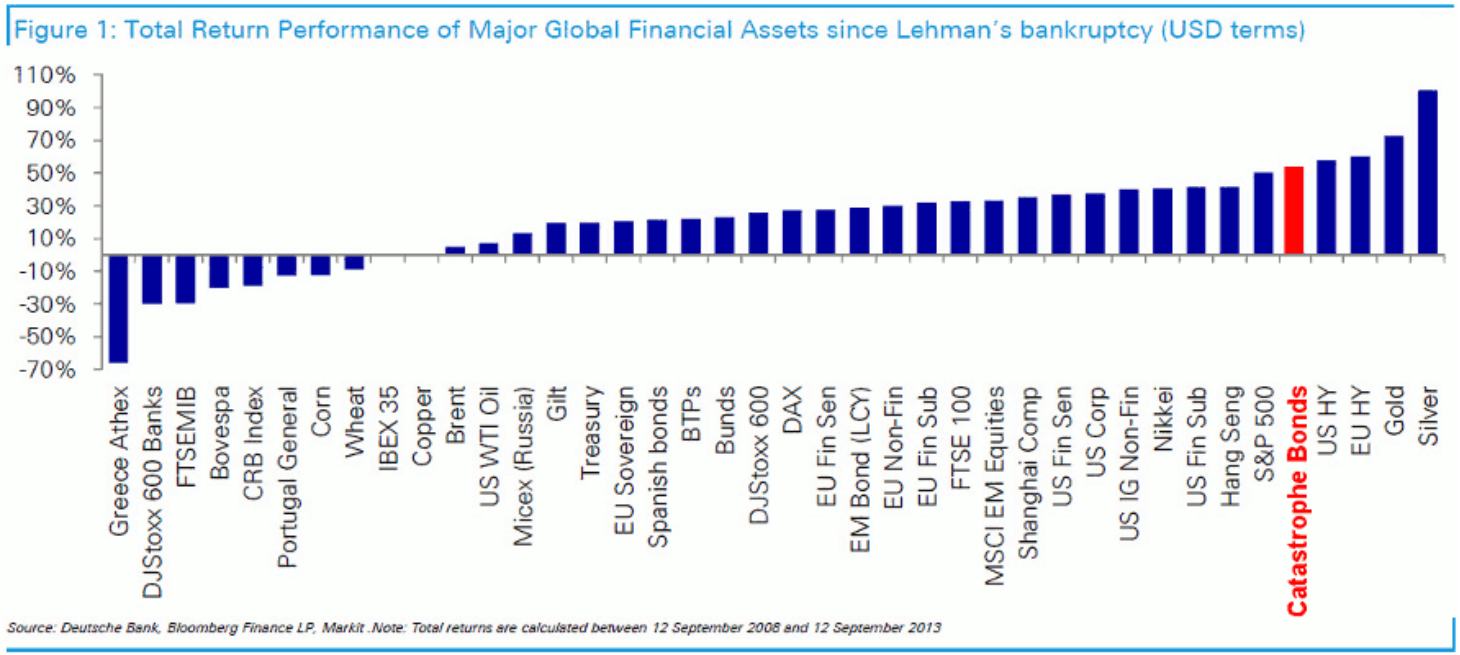
Comparative overall CAT Bonds performance



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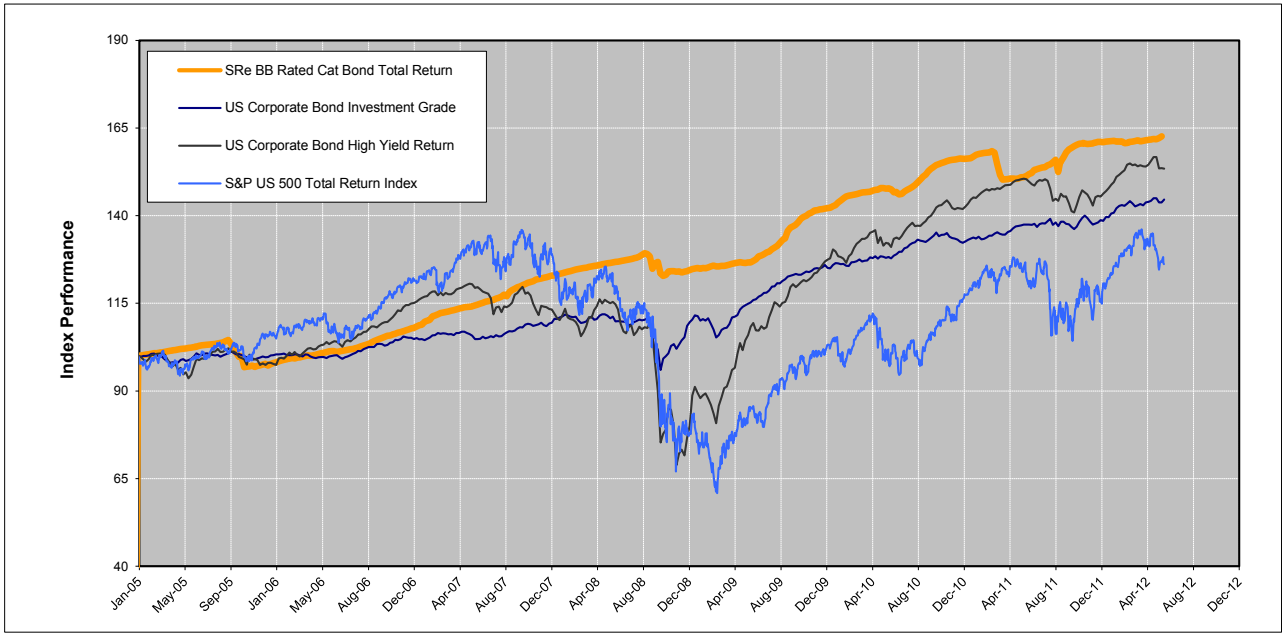
ILS vs Traditional Asset Classes

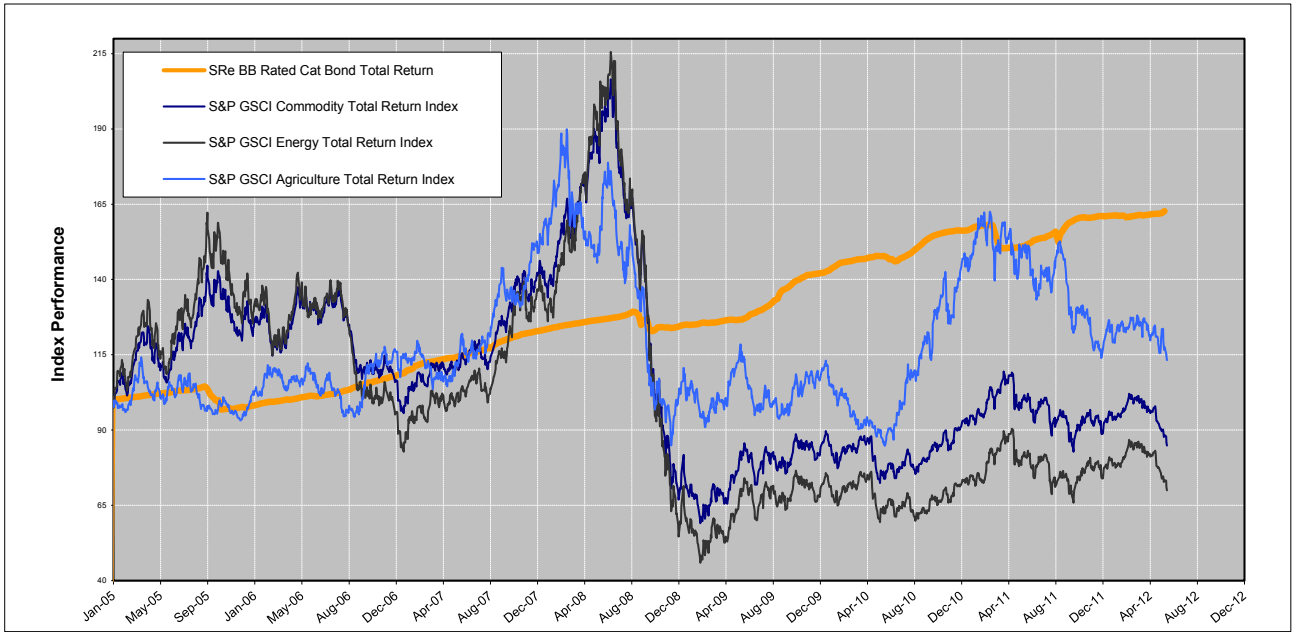
Insurance linked securities ("ILS") have performed remarkably well - both the historical performance and current yields of the securities make them an attractive diversifying element of the bond and/or alternative asset portfolios of institutional investors. High relative value, high non-correlated returns, resilience in market downturns.



Source: Bloomberg

Benchmarks	*Returns from*	*01/01/2009*	*01/01/2007*	*01/01/2005*
	To	*01/06/2012*	*01/06/2012*	*01/06/2012*
SRe BB Rated Cat Bond Total Return		**30.35%**	**50.11%**	**62.47%**
Bloomberg ticker:	SRBBTRR Index			
US Corporate Bond Investment Grade		31.00%	37.61%	44.90%
Bloomberg ticker:	NBBITR Index			
US Corporate Bond High Yield Return		72.92%	32.86%	53.91%
Bloomberg ticker:	NBBHTR Index			
S&P US 500 Total Return Index		87.00%	6.88%	42.84%
Bloomberg ticker:	SPTR Index			

ILS vs Non-Traditional Asset Classes



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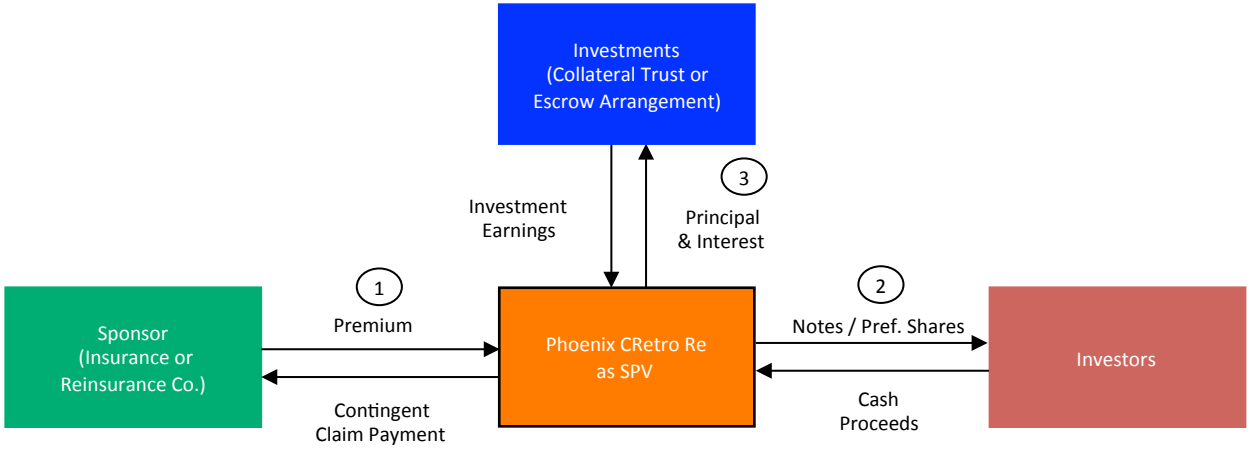
SRe BB Rated Cat Bond Total Return		**30.35%**	**50.11%**	**62.47%**
Bloomberg ticker:	SRBBTRR Index			
S&P GSCI Commodity Total Return Index		11.38%	-15.16%	-16.87%
Bloomberg ticker:	SPGCCITR Index			
S&P GSCI Energy Total Return Index		7.55%	-21.94%	-32.48%
Bloomberg ticker:	SPGCENTR Index			
S&P GSCI Agriculture Total Return Index		5.61%	2.59%	13.42%
Bloomberg ticker:	SPGCAGTR Index			

Cat Bond and Private Placements of Reinsurance. Typical Structures



1. The Sponsor buys protection on a natural catastrophe from a Special Purpose Vehicle (SPV)

2. The SPV collateralizes the cover by issuing Notes or Preferred Shares to investors in the capital markets

3. Proceeds from the Notes or Preferred Shares are invested in high quality securities and held in a collateral trust

Sample ILS Funds performance

More Diversification - less risk

- Lower risk insurance linked investments with up to 20% Life but no longevity, no life settlements;
- Target return of floating rate base + 6-7% per annum net of fees in current market (absent claims);
- Current portfolio used for targeted return with expected loss of approx. 2.5%;
- Exposure concentration limits apply;

Less Diversification – bigger profits

- Higher risk higher return investments only in non life insurance linked risk;
- Concentrating on most attractively priced risks (such as US Wind and US Earthquake);
- Target return of floating rate base + 12-14% per annum net of fees in current market (absent claims);
- Current portfolio used for targeted return with expected loss of approx. 5.5%;

Fund Structure

- Irish corporate structures (“QIF”), listed on the Irish Stock Exchange;
- Management Fee payable monthly;
- Performance Fee subject to HWM (High Water Mark);
- Preferred terms for sizable investment offered;
- Quarterly redemption profile with 90 days for the January and July redemption dates and 120 days for the April and October redemption dates;
- Valuations calculated independent Administrator and verified by Custodian;

ILS as Reinsurance

Assembling a portfolio of **cat bonds** can be done without broker commissions, the high overhead of a fronting office, or the risk of adverse development in old accident years. Compared to operating an insurance company, both loss costs *and* expenses are lower :

5-year Loss & Operating Expense Ratios

		2007	2006	2005	2004	2003	Average
Ren Re	Loss & LAE - Reinsurance	25.2%	15.2%	132.2%	79.0%	25.9%	
IPC Re	"	31.9%	14.7%	237.0%			
Partner Re	"	50.8%	54.8%	87.3%	65.6%	65.6%	68.1%
				Comparable figure for cat bonds			**11.7%**
Ren Re	UW Expense	19.6%	19.3%	16.5%	16.1%	18.0%	
IPC Re	"	18.2%	17.5%	14.8%			
Partner Re	"	29.6%	29.6%	29.0%	29.0%	27.8%	21.9%
				Comparable figure for ILS Fund			**2.0%**

Lower operating costs lead to higher profits with less risk….

Sample ILS Funds performance

ILS pay a much higher return per quanta of risk. The profitability of the spread over LIBOR is analogous to reinsurance premium, and can be used in measures of underwriting profitability:

	Loss Ratio	Expense Ratio	Total	Underwriting Profitability
Reinsurer	68.1%	21.9%	90.0%	10%
ILS Portfolio	11.7%	2.0%	13.7%	86%

ILS investing is low leverage – $1 invested is $1 at risk. Reinsurers take on over $2 of risk for every $1 of capital. Debt and "side cars" both increase leverage and present risk returns as service fee income.

	Leverage	Post-Leverage Returns
Reinsurers	2.00	20%
ILS Portfolio	0.30	26%

A $1 of risk pays ILS investors $6.32 while reinsurers get $1.11

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