The Actuarial Profession
making financial sense of the future

Life Conference and Exhibition 2011

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Liabilities as an asset….
fad, friend or foe

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Agenda

- Liabilities as an asset class- introduction
- Use of insurance linked investments in an efficient portfolio
- Fad, friend or foe
- Summary & questions

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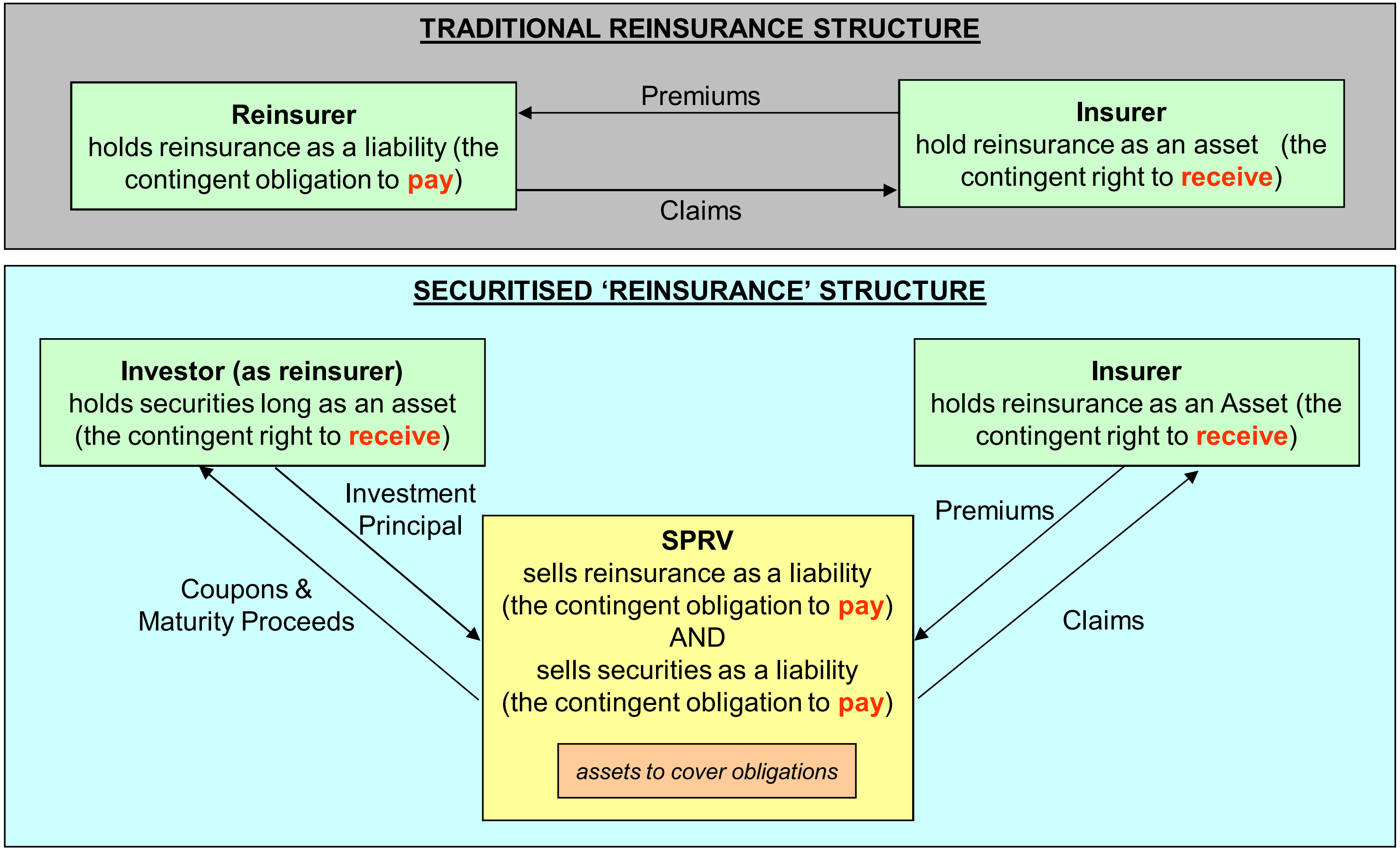
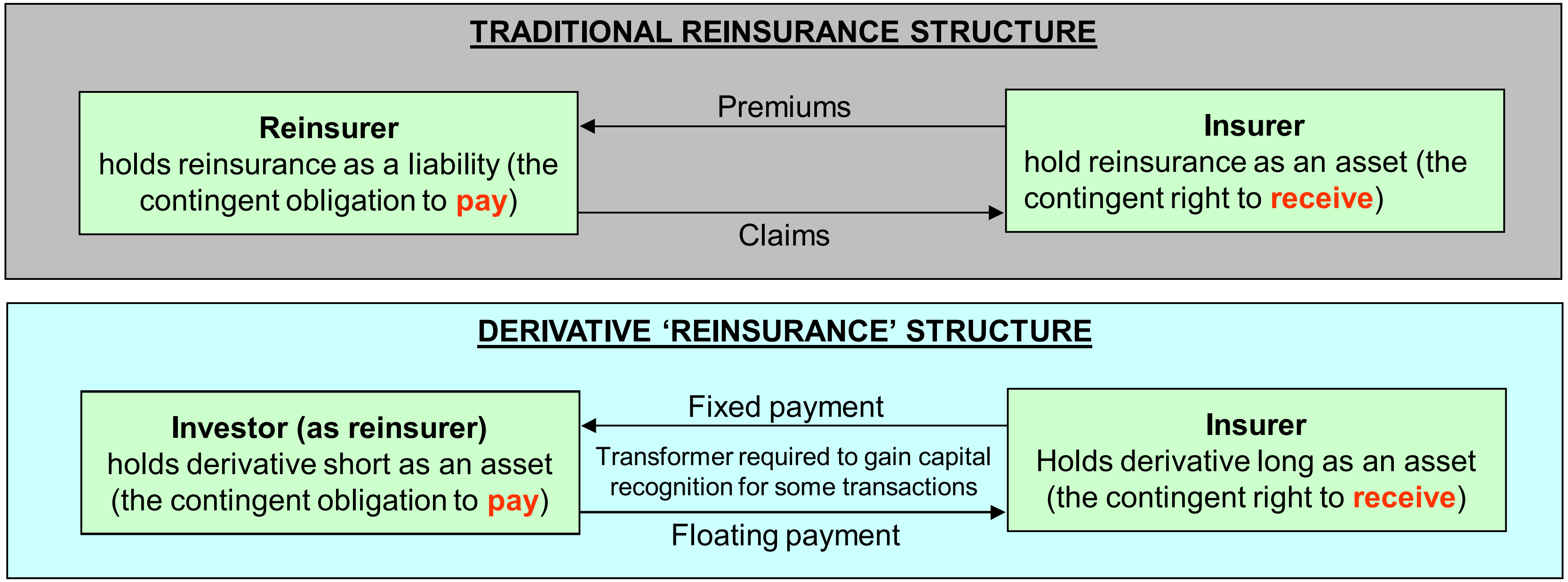
Insurance liabilities ….. as assets (Securitisation)



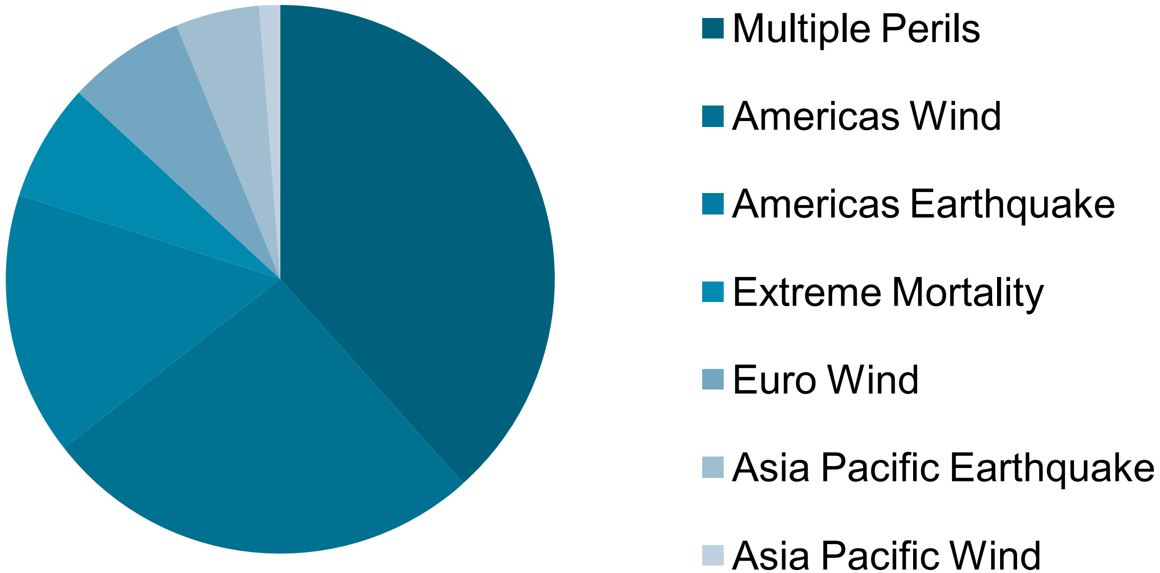
Insurance liabilities ….. as assets (Derivatives)



- Despite the similarities the derivative it is NOT insurance
  - no insurable interest
  - payments determined by reference to a proxy
  - commonly use indices or modelled / industry losses

…. but which liabilities (1)

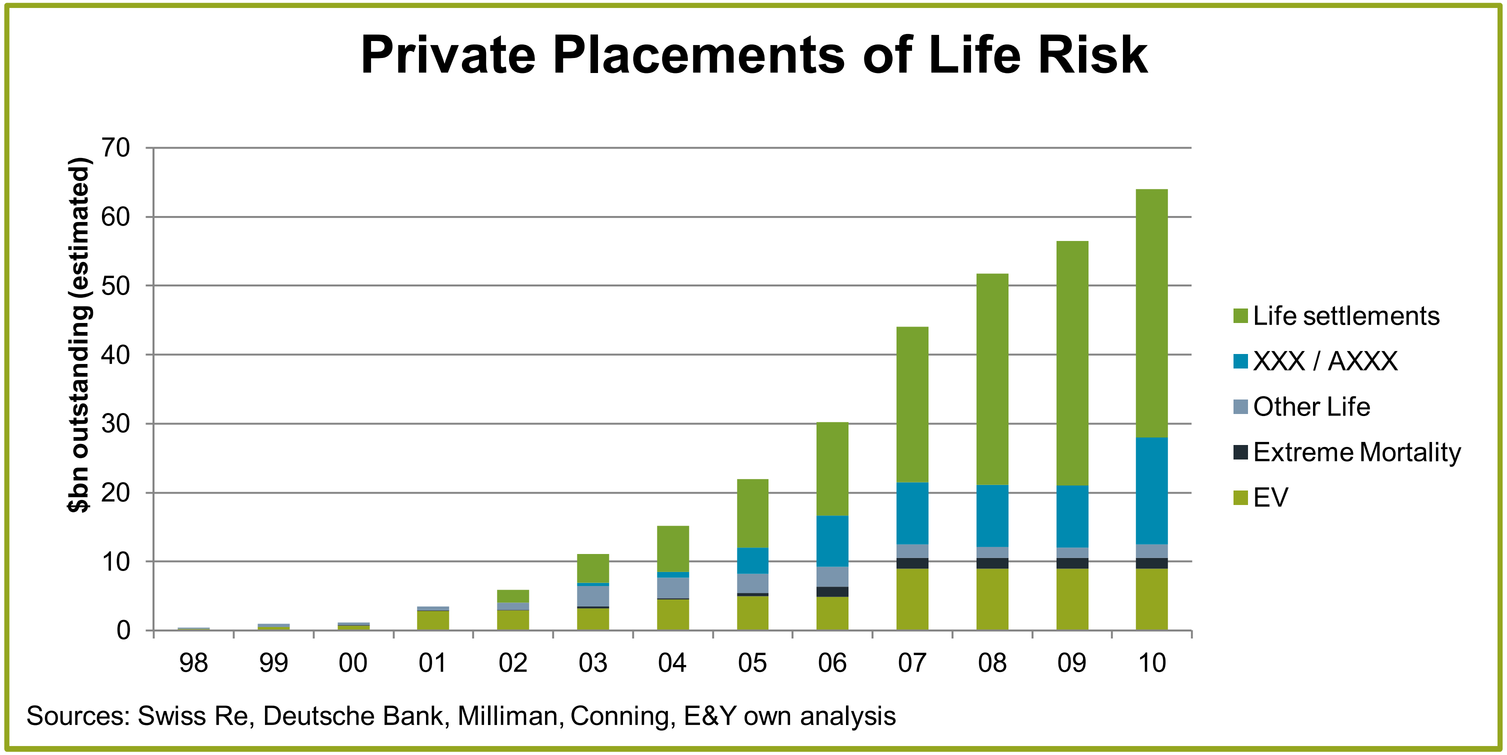
Natural Perils Securitised Since 1997 (at 31 Dec 2010)



Source: Swiss Re Capital Markets

- Mainly exposed to low frequency but high severity events
- Limits to availability of diversifying risks
- Theoretically unimpacted by global macro-economic factors

…. but which liabilities (2)



- Largely used to improve regulatory balance sheets / exploit regulatory arbitrage
- Investors typically exposed to unlikely events with high impact if the event occurs

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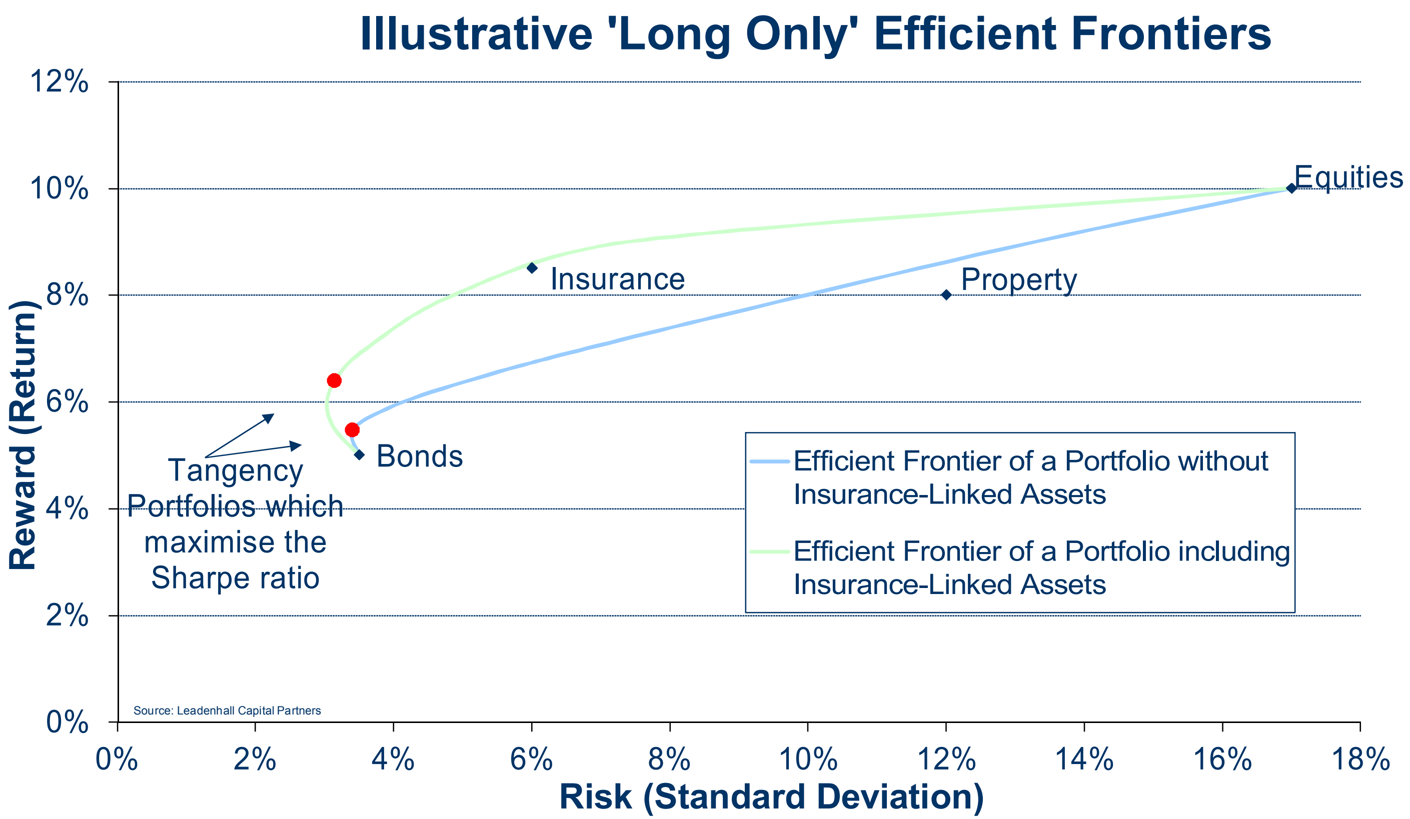
How do insurance linked investments fit in an asset portfolio

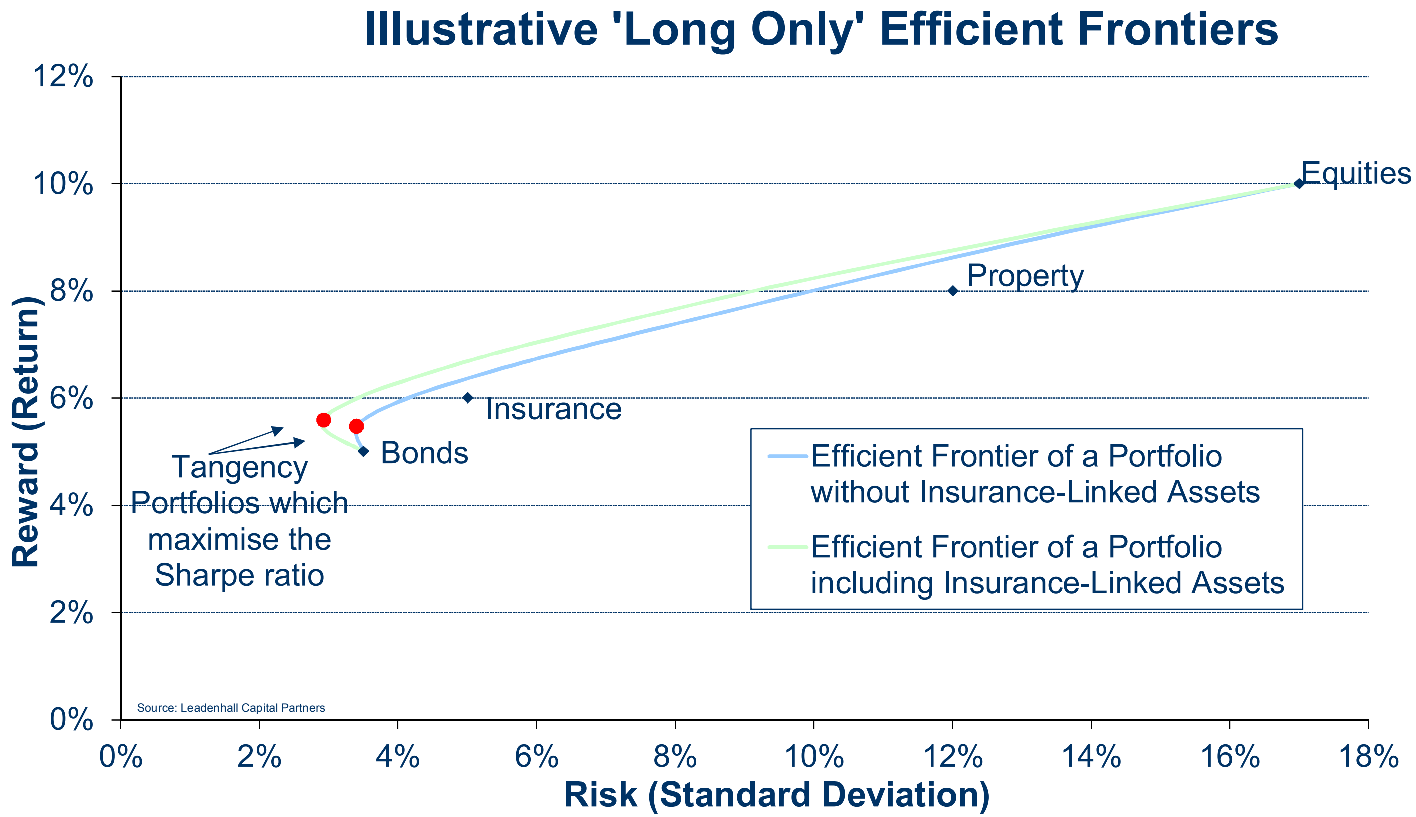
Insurance linked assets can improve portfolio risk adjusted return



Adding an asset class which sits outside the existing efficient frontier should always improve the efficiency of the portfolio

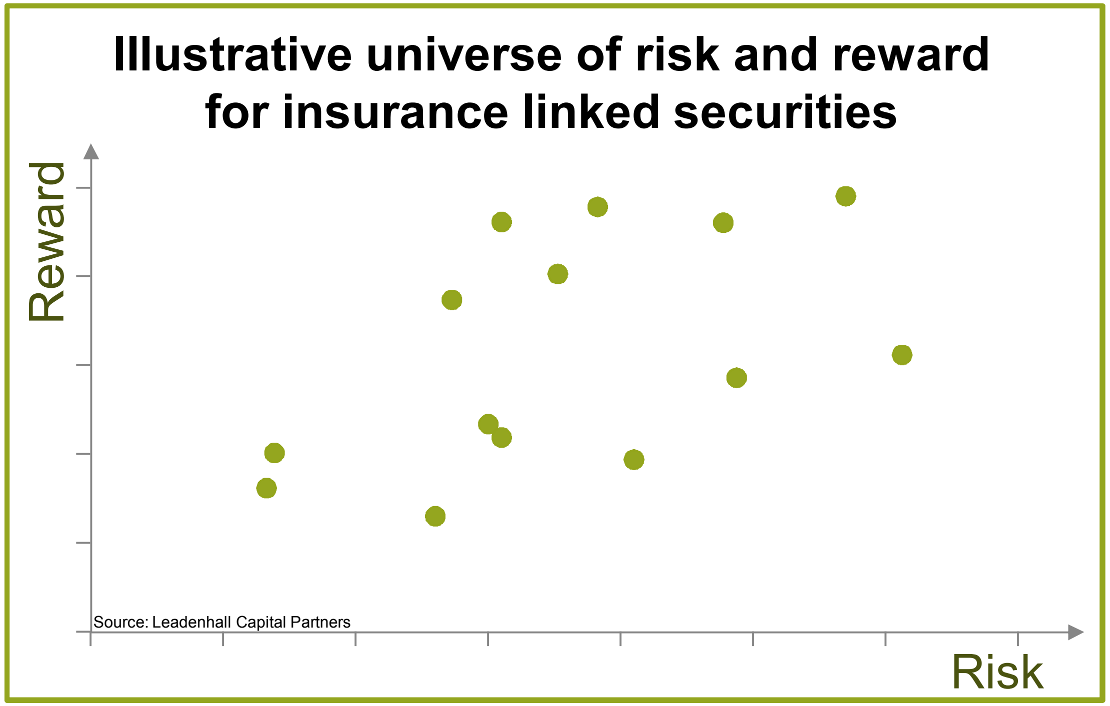
How do insurance linked investments fit in an asset portfolio

Insurance linked assets can improve portfolio risk adjusted return



Adding an asset class which sits within the existing efficient frontier can still have incremental benefit if it has a low correlation

Where do insurance linked investments fit in the risk-return space



- Wide range of risk-reward opportunities available in insurance linked investments
- Likely that a portfolio of insurance linked assets could lie outside an existing efficient frontier …
- … if not the low correlation of insurance linked assets should mean their inclusion can improve portfolio efficiency in any case

But …. returns are not always normally distributed

- MPT assumes normality (or symmetry) of the return distributions
- Insurance linked assets tend to have a skew and/or fat tail
- Insurance linked allocations may be less than MPT might suggest

	iBoxx liquid corporates total return index (€)	FTSE100 total return index	S&P global property index total return	Swiss Re cat bond total return index	Swiss Re US wind cat bond total return index
Average return	4.3%	9.4%	8.0%	7.7%	8.6%
Standard deviation	3.8%	17.8%	18.4%	2.8%	5.8%
Sharpe ratio (R_f=0%)	1.1	0.5	0.4	2.8	1.5
Ratio of TVaR 99.5 to VaR 99.5	1.4	1.8	1.3	1.3	3.3

Source: Bloomberg; Leadenhall

Some portfolios can have ‘fat tails’

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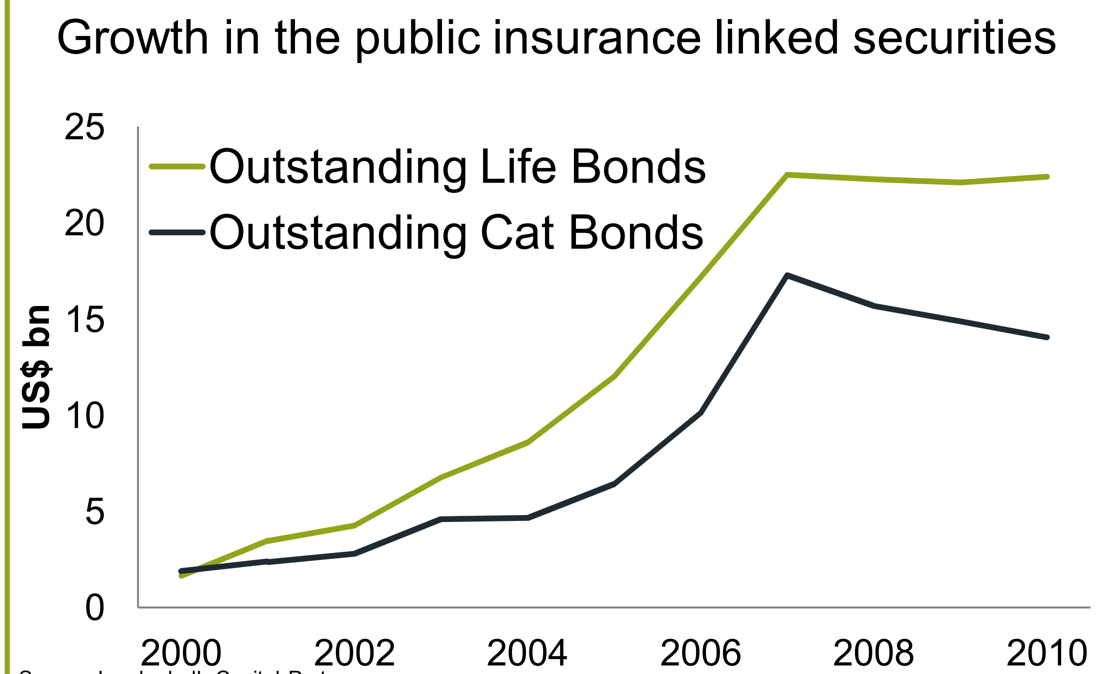
Fad

- Has growth in the asset class plateaued?
- Will investor interest in Alternatives wain?
- Might a large insurance loss in a portfolio scare off existing and new investors?
- What impact will Solvency II have on demand and alternatives?

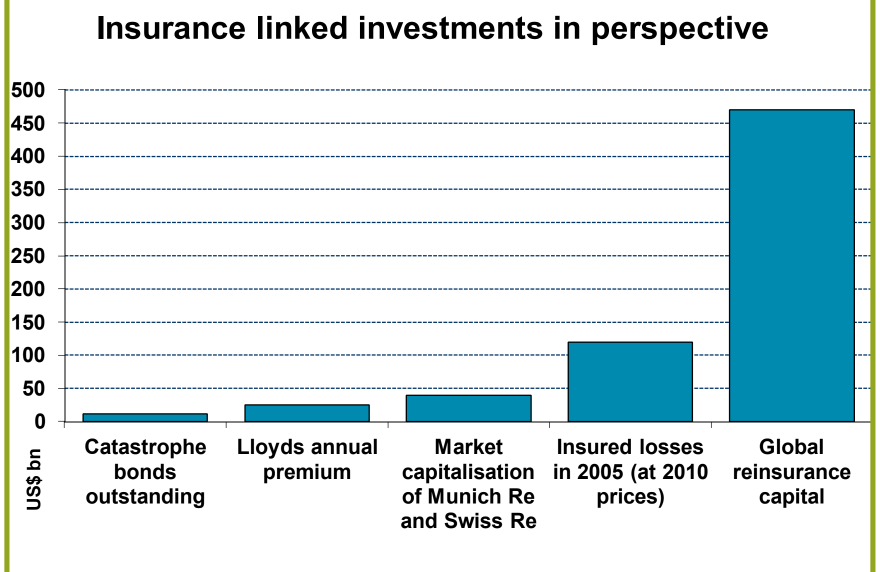


Source: Leadenhall Capital Partners

The attraction of public deals is limited and the private market continues to grow strongly

Foe

- Reduced barriers to entry
- Alternative capital competing for a limited suppy of risk
- Reduced investor interest in insurer equity if alternative available
- Disintermediation of (re)insurers
- Balance sheet impact of a liquid market in liabilities
- Changing business mix and possible adverse selection



Source: Estimates from Leadenhall Capital Partners

A 2% allocation to the asset class from all UK pension funds would provide around US$30bn of capacity

Friend

- Provides a way for insurers to divest of peak risks with high marginal cost of capital
- Opportunity for insurers to easily access diversifying risks and to take capital benefits
- (Fully) collateralised solutions (eliminate) reduce counterparty risk compared to reinsurance
- Could reduce/eliminate market cycles as capital flows in/out more quickly
- Improved regulatory treatment in Solvency II compared to Solvency I
- Outlet for newly identified risks as capital markets seek diversification
- Allows for more flexibility and innovation in capital and balance sheet management

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Questions or comments?