

Swiss Re



## Lehman Brothers ILS Seminar

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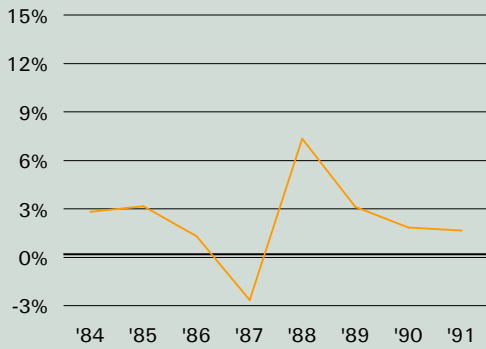
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## Commercial Banking ROE Challenge in the Late 80's

Commercial banking 1984 – 1991  
 Low ROE – high volatility



Source: Stone Point Capital

Subsequent changes in the banking industry

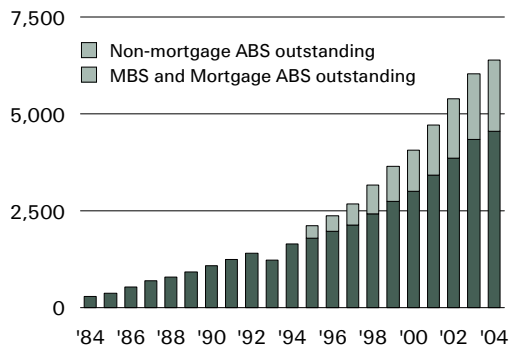
- ▶ Modernized capital adequacy models
- ▶ Accelerated balance sheet through strong growth of asset-backed securities (ABS)/mortgage-backed securities (MBS)
- ▶ Increased fee income generation
- ▶ Aggressive expense management

Source: Stone Point Capital

Low ROE and high volatility triggered transformation of the banking industry

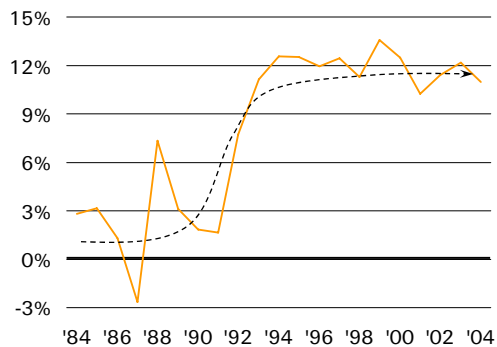
## Successful Transformation of the Banking Industry

ABS/MBS Outstanding in the US  
 in USDbn



Source: Morgan Stanley  
 Note: Non-mortgage ABS only included from 1995

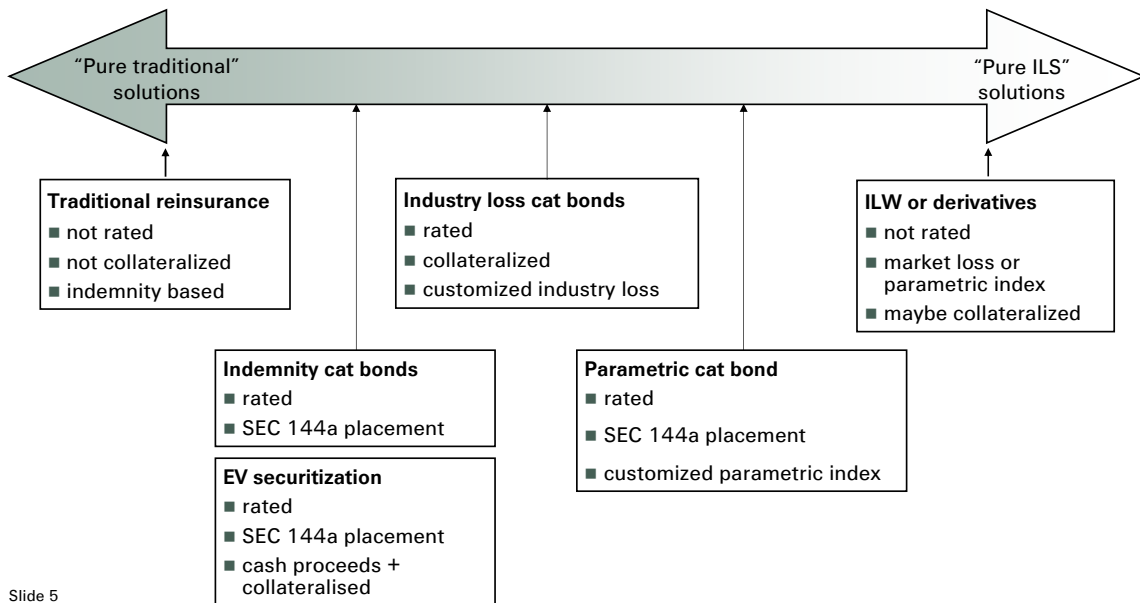
Commercial banking ROE (1984 – 2004)



Source: Stone Point Capital

ABS/MBS issuance accelerated drastically in 1994 improving ROE's considerably

## Continuous Spectrum of Capital Market Solutions



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## Sponsors' Motivations

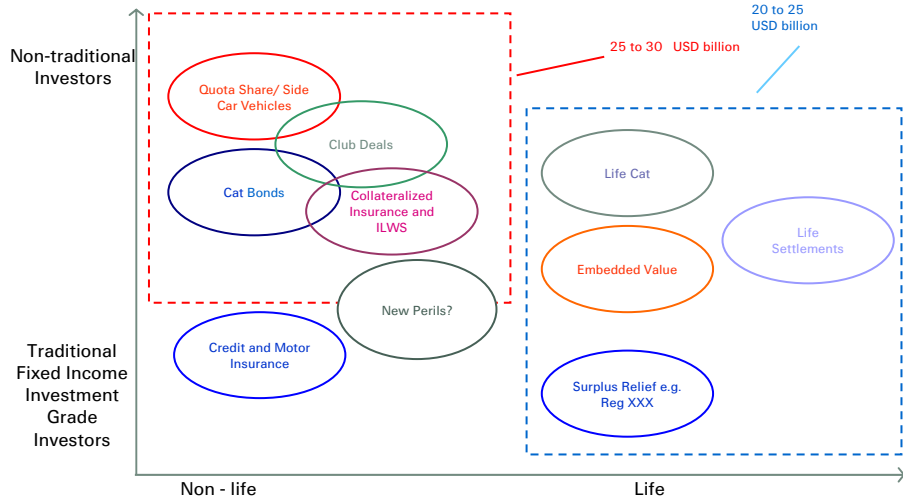
- Collateralisation
- Diversification
- Capital Access
- ROE Enhancement
- Multi-Year Cover
- Fast Claims Process

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## ILS Market: Key Trends Market Segmentation and Size

The Capital Markets are currently active in the insurance space by using a number of instruments:

- Securities
- Derivatives
- ILWs
- Side Cars

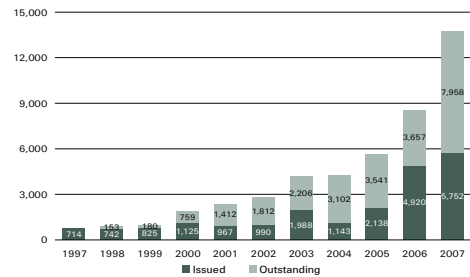


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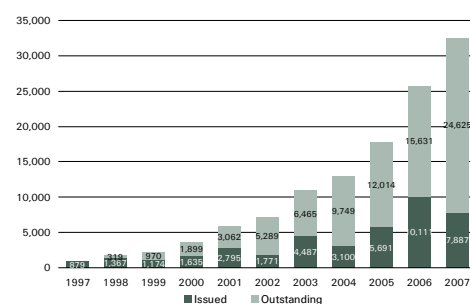
## ILS Market Capacity

- New issuance in 2007 already exceeds that of 2006 positioning the sector for another year of solid growth
- Total non-life bonds outstanding are approximately USD 14 billion
- One noticeable ILS trend in recent years is the increased activity in the life sector. 4th quarter 2006 also saw over USD 600 million in extreme mortality cover placed
- Total bonds outstanding exceed USD 32 billion

Total non-life bonds outstanding, by year\*



Total ILS outstanding, by year\*



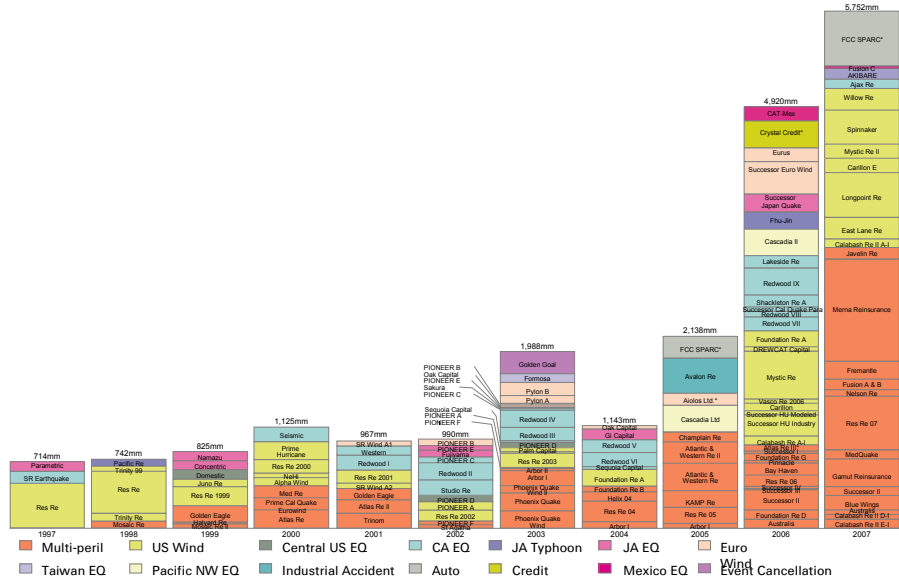
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As of July 31, 2007  
 Source: Swiss Re Capital Markets

# New Issue Volume – Non-life

In 2007, Swiss Re Capital Markets placed USD 2.3 billion out of total non-life issuance of approximately USD 5.7 billion over the same period

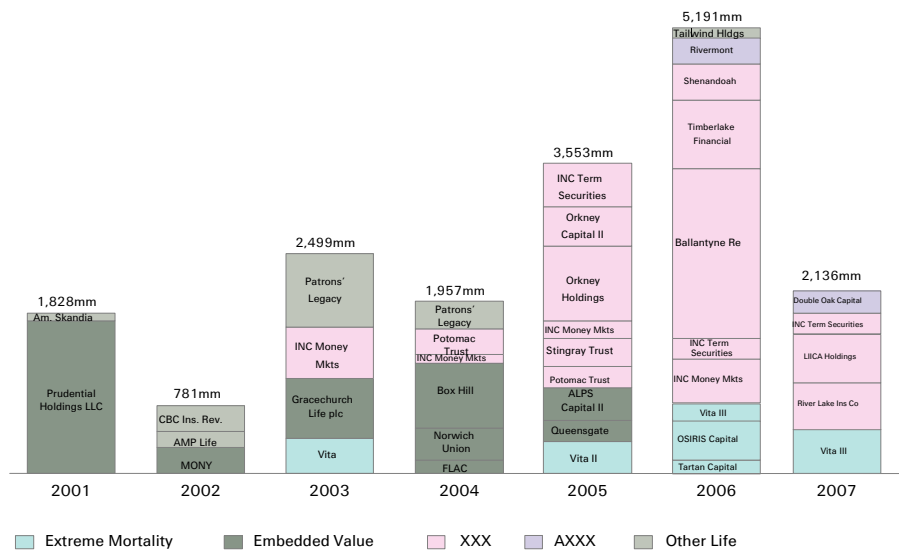
The successful execution and placement of these risks have underlined Swiss Re's strong leadership position in the Insurance Linked Securities (ILS) sector



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\* Converted to USD from EUR / As of July 31, 2007  
 Source: Swiss Re Capital Markets

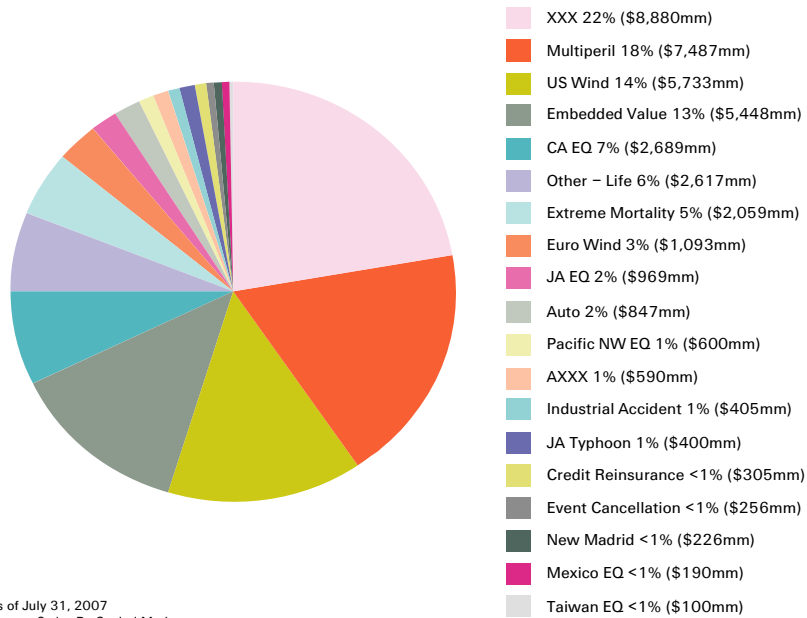
# Issuance – Life Sector



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As of July 31, 2007  
 Source: Swiss Re Capital Markets

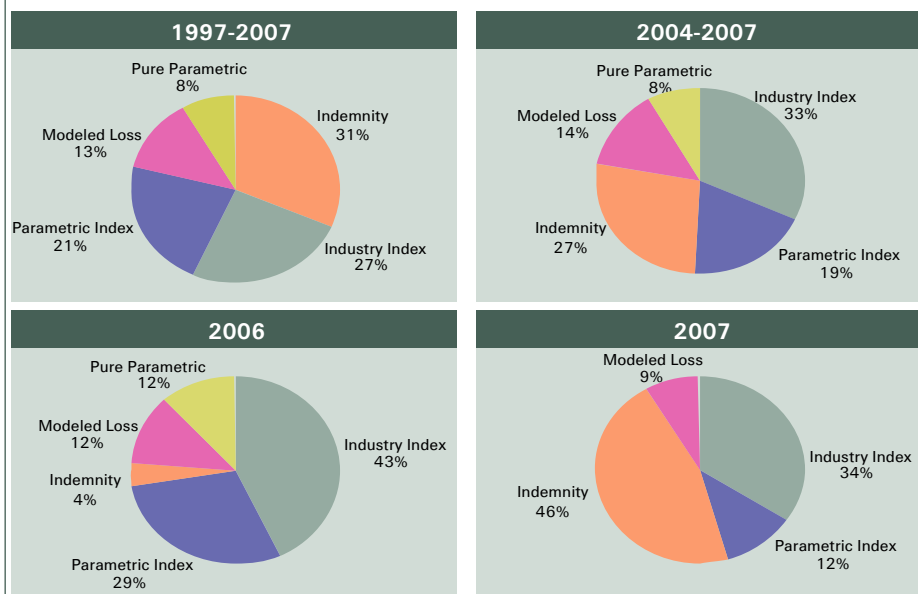
## Risks Securitized Since 1997



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As of July 31, 2007  
 Source: Swiss Re Capital Markets

## Catastrophe Bond Trigger Breakdown\*



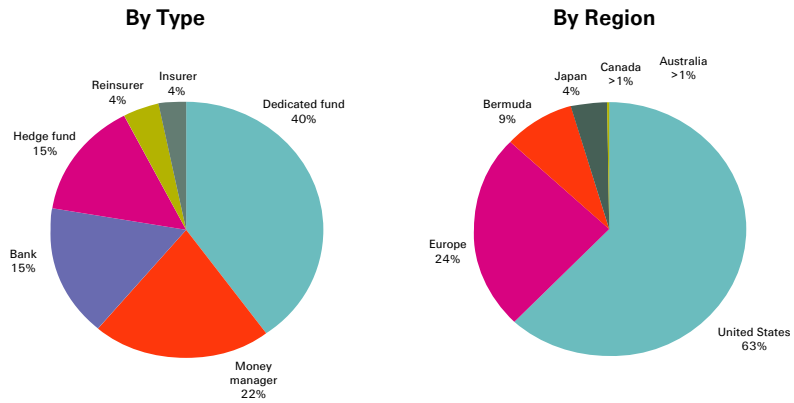
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Source: Swiss Re Capital Markets.  
 \* As of July 31, 2007 with percentages calculated based on notional amount

## Investor Segmentation

*Capital market investors now dominate the ILS investor base, including large institutional money managers and many funds dedicated to the sector*

- Dedicated cat funds, money managers and hedge funds have increased their participation in the sector in recent years

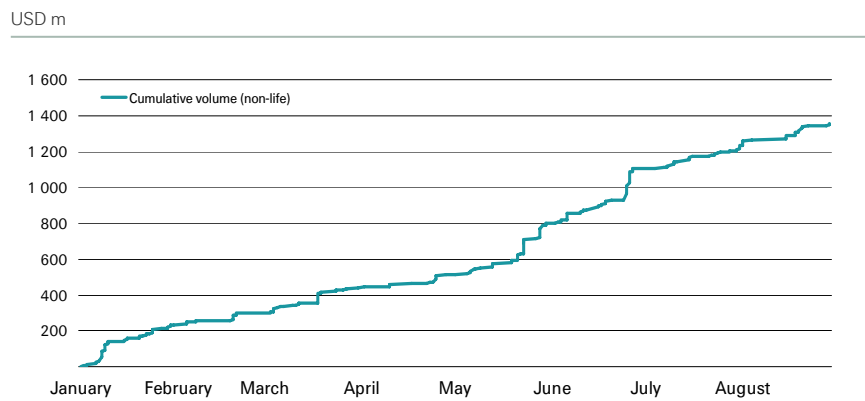


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As of July 31, 2007  
 Source: Swiss Re Capital Markets

## Securitisation market has weathered capital market turbulence

Nat cat Swiss Re secondary trading volume (2007)



→ Swiss Re traded about USD 1.3bn between 1 January 2007 and 31 August 2007

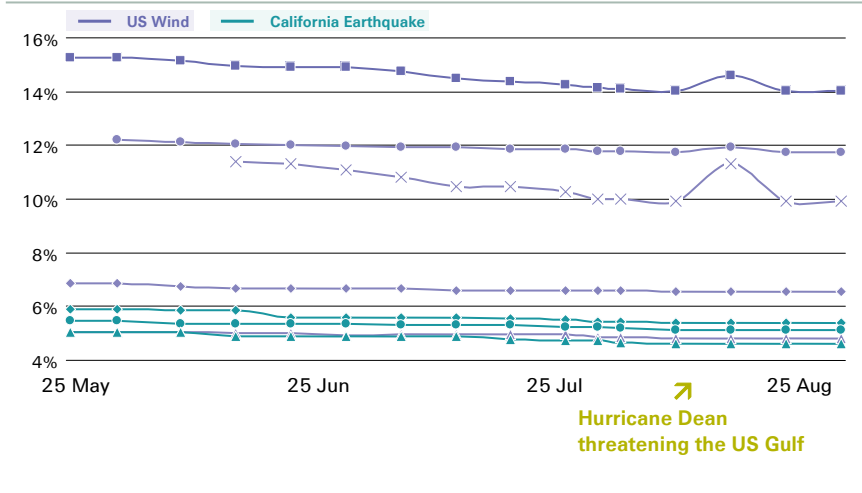
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Source: Swiss Re Capital Markets

## Secondary Cat Bond Spreads\* didn't widen...

- No widening of cat bond spreads in secondary markets in response to current fixed income market turmoil
- Spread widening for a few US wind bonds in response to hurricane Dean
- As Dean's track steered away from a US landfall, spreads went back to pre-Dean levels

Secondary cat bond spreads (unnamed sample - 2007)



\*US wind seasonality adjustment has been removed

Source: Swiss Re Capital Markets

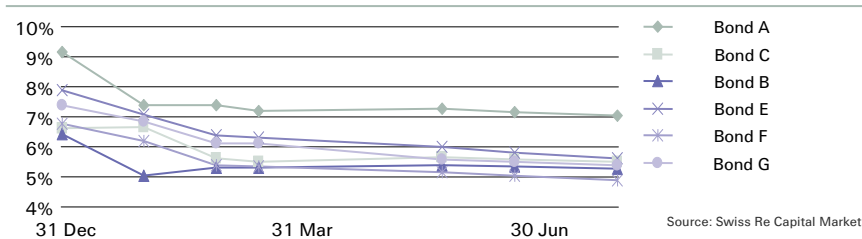
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## ...Even Evidence for Spreads of some US Cat Bonds tightening

Selected cat bonds

Programme	Peril	Issuance spread (bps)	31 August 07 spread (bps)	Spread tightening
Bond A	US Wind	850	702	-17%
Bond B	US Wind	700	515	-27%
Bond C	US Wind	675	547	-19%
Bond D	US Wind	1530	1196	-22%
Bond E	CA EQ	725	560	-23%
Bond F	CA EQ	675	482	-29%
Bond G	CA EQ	800	534	-33%

Secondary market spreads for selected cat bonds



Source: Swiss Re Capital Markets

Data as of 31 August 2007

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## Implications for Alternative Capacity and the Renewals

- Product transparency is essential to avoid the market drying up in a crisis
- More standardisation of products and product structures, better information about underlying hazards, loss histories and price histories is needed
- Liquidity will be improved by a broadening of suppliers and investors
- Short term, there is little risk that ILS, ILW and collateralised quota share and side car capacity will dry up – investors will be more sensitive to price
- Trend towards securitisation will continue

→ Lower capacity increase, high uncertainty and more price conscious alternative capacity will foster discipline in next renewals

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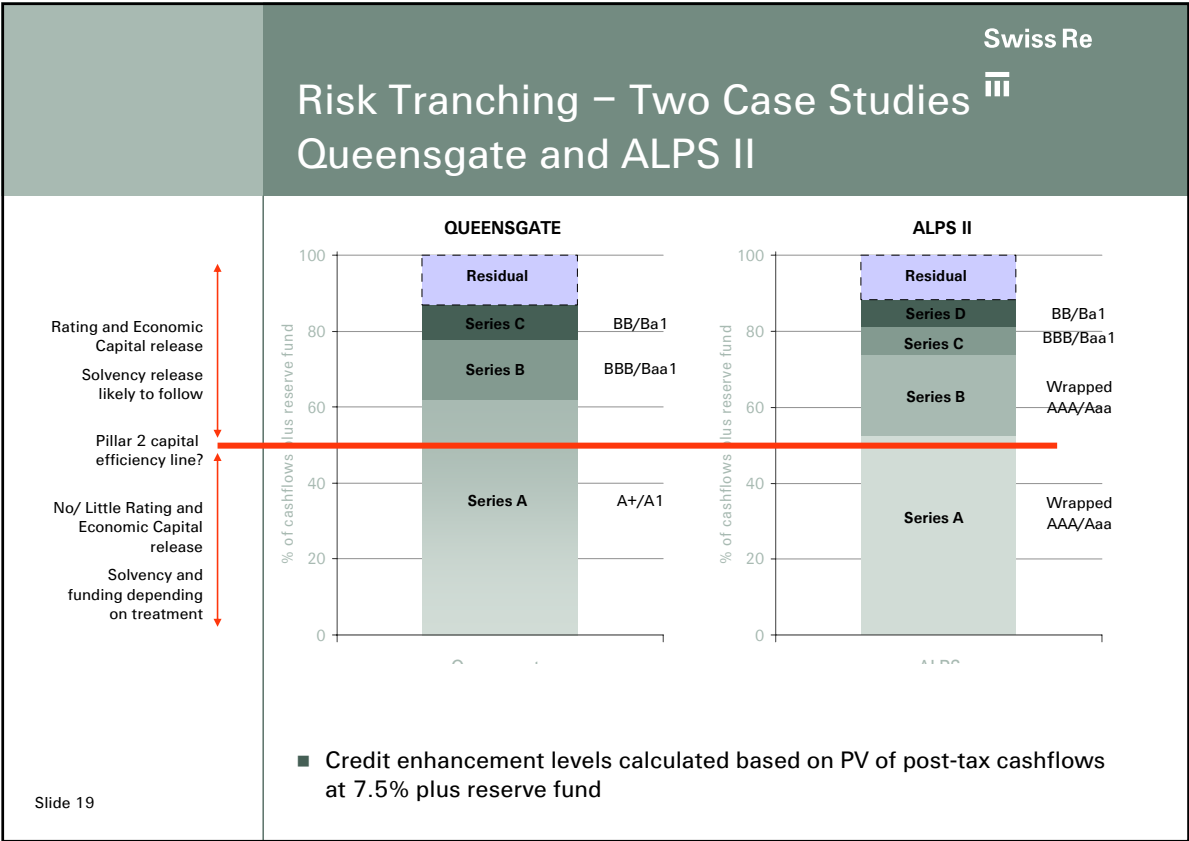
## Life Insurance Securitisation

*The ILS market includes catastrophe and life bonds  
 To date, most life bonds have focused on risk financing*

*Mortality risk was first securitised in 2003*

- The life side of insurance companies began to utilise the capital markets to increase capital efficiency with embedded value monetisations (or the monetisation of future cashflows from a closed block of life insurance policies)
- As with other securitisation techniques, “embedded value” deals provide leverage to a life insurer’s equity investors, enabling the insurer to conserve capital and boost return on equity
- In the US market, XXX securitisations are increasing. Regulation XXX requires US life insurers to hold certain statutory reserves that are usually considerably more than “economic reserves”. Securitisation in this space has allowed life insurers to finance the difference between the economic reserves and the statutory reserves, thus freeing up capital to increase capital efficiency and accelerate the balance sheet
- In recent years, though, we have seen deals, which, similar in structure to a cat bond, protect against sudden, extreme rises in mortality such as a pandemic or a large terrorist attack

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## Mortality Bonds – Closed Transactions

	VITA CAPITAL	VITA CAPITAL II	TARTAN CAPITAL	OSIRIS CAPITAL	VITA CAPITAL III
Sponsor	Swiss Re	Swiss Re	Scottish Re	AXA	Swiss Re
Arranger	Swiss Re	Swiss Re	Goldman Sachs	Swiss Re	Swiss Re
Closing Date	December 2003	April 2005	May 2006	November 2006	January 2007
Risk Period	4 Years	5 Years	3 Years	4 Years	4 & 5 Years
Program Size	USD 400 Million	USD 2,000 Million	USD 500 Million	EUR 1,000 Million	USD 2,000 Million
Notes outstanding	USD 400 Million	USD 362 Million	USD 155 Million	EUR 345 Million	USD 700 Million
Issuance currencies	USD	USD	USD	USD & EUR	USD & EUR
Index calculation	Single calendar year	2-years moving average	2-years moving average	2-years moving average	2-years moving average
Index ref period	2002	2002/2003	2004/2005	2004/2005	2004/2005
Tranches issued	1	3	2	3	2
Ratings	A+/A3*	BBB-/Baa2 to A+/Aa2*	BBB/Baa3 to AAA/Aaa*	BB+/Ba1 to AAA/Aaa*	A/A1 to AAA/Aaa*
Monoline(s)	nil	nil	FGIC	CIFG	MBIA, FSA, CIFG
Modelling Firm	Milliman	Milliman	Milliman	Milliman	Milliman
Redemption Date	1. January 2007	1. January 2010	7. January 2009	15. January 2010	1. January 2011/2012
Extension Period	Up to 24 Months	Up to 24 Months	Up to 30 Months	Up to 30 Months	Up to 30 Months
SPV domicile	Cayman Islands	Cayman Islands	Cayman Islands	Ireland	Cayman Islands
Country components	US, UK, FR, IT, CH	US, UK, DE, JP, CAN	US	FR, JP, US	US, UK, DE, JP, CAN

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(\*) Standard & Poor's, Moody's



## Osiris Capital plc Transaction Overview

- Osiris is the Mortality Bond shelf programme to the benefit of the AXA Group, supported by Swiss Re as arranger and lead manager
- First catastrophic mortality transaction for a direct insurer
- First catastrophic mortality transaction with main exposures in Europe (60% France)
- First catastrophic mortality transaction with risk layers below investment grade (below BBB)
- Transaction was very well received by the market