Securitization as a complement to reinsurance, An illustration on AXA strategy

Rendez-Vous Monte Carlo, September 2008

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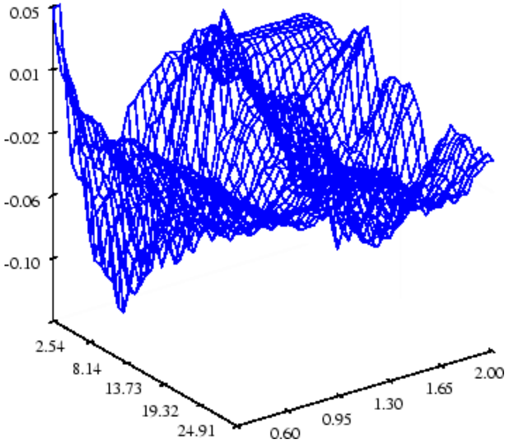
From warehousing to understanding risks

- Insurance business model based for ages on **warehousing risks :**
  - Risks first taken from policyholders
  - Then pooled and borne by the insurers
  - Traditional reinsurance programs
- Requiring a relatively **large amount of capital**, not always efficiently used

- Thanks to financial techniques, it evolves towards **management & intermediation of risks :**
  - Risks pooled and structured by the insurers
  - Then externalized through reinsurance and financial markets
- Requiring a relatively **moderate amount of capital** with appropriate capital management



Securitization : a risk / capital management tool

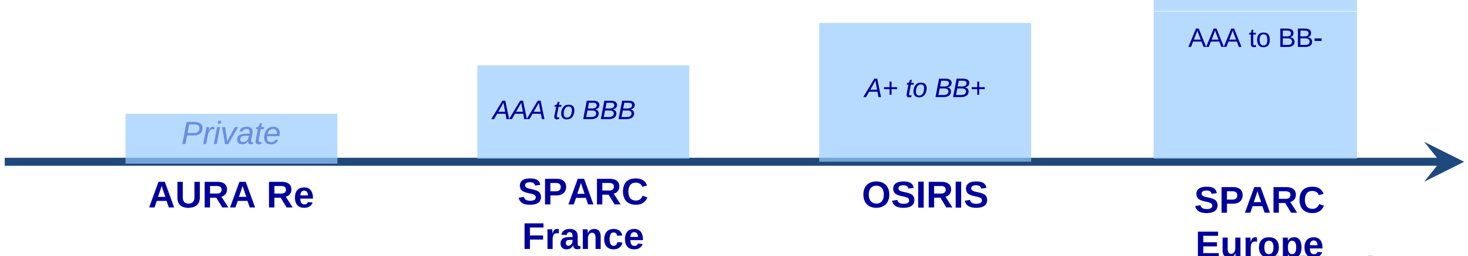
- Capital markets have significantly greater capacity than insurance markets
- Better pricing in some cases where insurance market has a limited number of providers
- Removes counterparty credit risk
- Increases the diversification of protection sources and offers multi-year protection
- Improves the cost of capital, i.e. the reduction in the cost of capital achieved through securitisation is greater than the cost of servicing the securitisation structure

- ➔ There is a considerable potential market for ILS, as the need for risk transfer from insurance companies matches the desire for diversification from investors as insurance risk is an decorrelated new asset-class

Recent examples at AXA's level

- **Securitization** and **dynamic Asset Liabilities Management** are the new tools for risk management and capital management, aiming to :
  - Improve capital utilization in the insurance industry
  - Broaden the range of available tools for risk management and balance sheet optimization
  - Diversify reinsurance sources away from traditional reinsurance market while eliminating counterparty risk
  - Develop Insurance Linked Securities as a new asset-class for investors

- **Examples of AXA's innovative Life & P&C insurance-linked securities (ILS) transactions**
  - AURA Re (2005): European storm Cat bond (€68m)
    - Protects the group against low frequency-high severity European Windstorm events
  - SPARC France (2005): 1st securitization of a motor insurance portfolio (€200m)
    - Transfers the risk of deviation above a certain threshold of the loss ratio of the securitized portfolio
  - OSIRIS (2006): 1st extreme-mortality risk coverage program from an insurance company (€300m)
    - Protects from a sudden jump in the mortality rate in 3 countries (France, Japan, US) which would accelerate payments on our term life policies
  - SPARC Europe (2007): 1st securitization of a multi-jurisdiction motor insurance portfolio (€450m)
    - Transfers the risk of deviation of the loss ratio on a diversified portfolio of motor books in Germany, Belgium, Spain and Italy



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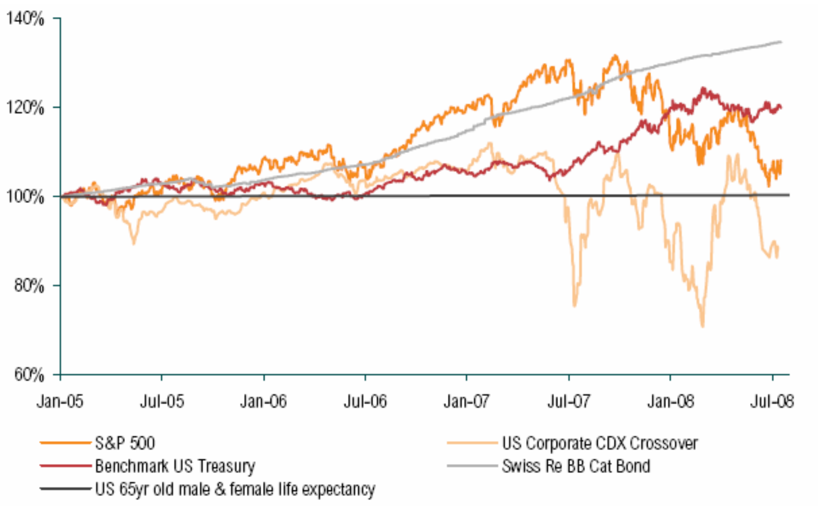
ILS : decorrelated new asset-class

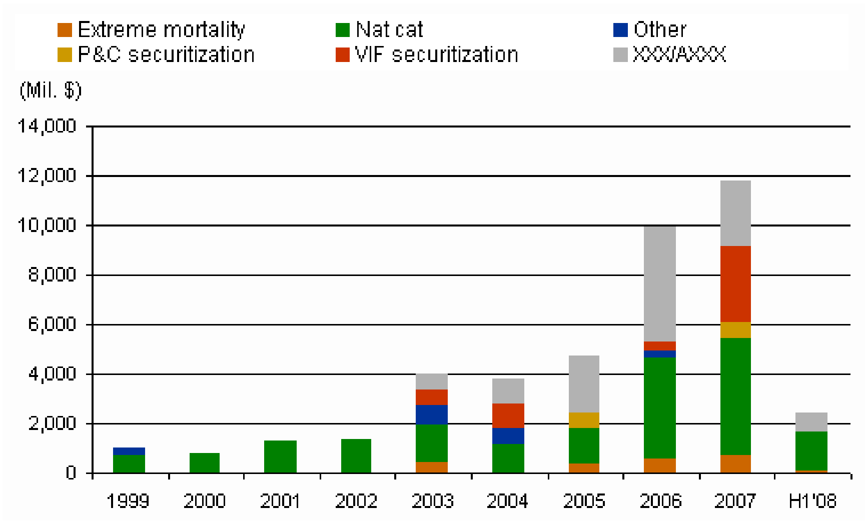
- Few lessons of current market turmoil :
  - Financing securitization, which allows to raise funds at reduced capital cost, has been severely hurt (liquidity crisis) -> main issue for banks; but it is completely different with risk transfer (externalize risks to reduce capital requirements).
  - Nat Cat bonds (the main ILS asset class) so far appearing to be immune to the market's disruptions -> decorrelated new asset-class;
  - Investor's appetite for ILS asset class intact (cf. demand far surpassed offer for the last cat bond placements)

Insurance Linked Assets – low correlation with traditional assets



Source : RBS

S&P rated ILS transactions



Source : S&P

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All risks can not be securitized

- **Securitization is a complement to reinsurance,** as it is far more constraining than traditional reinsurance :

  - Need for data (accuracy, histories, database, etc.)
  - Need for transparency (confidentiality issue)
  - Need for short term return for investors (early commutation)
  - Need for minimal size (huge structuring cost at launch)

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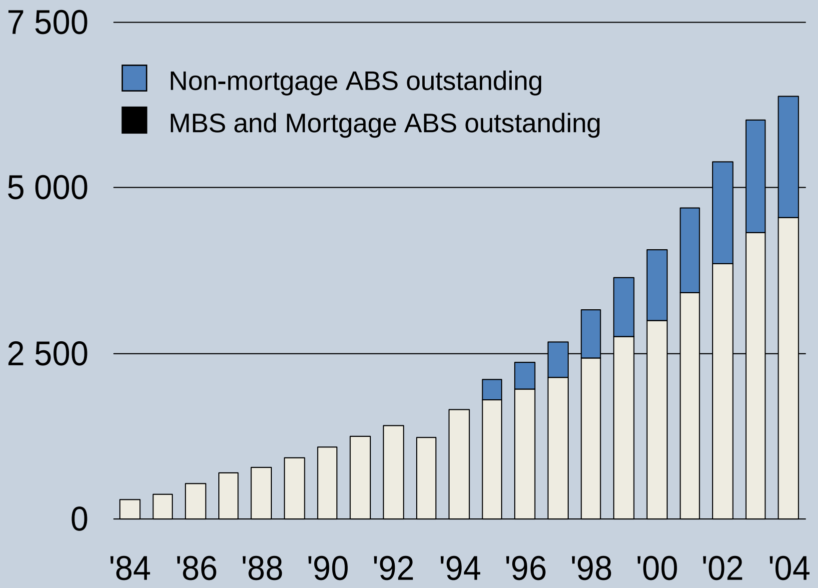
Banks in advance since the 80'

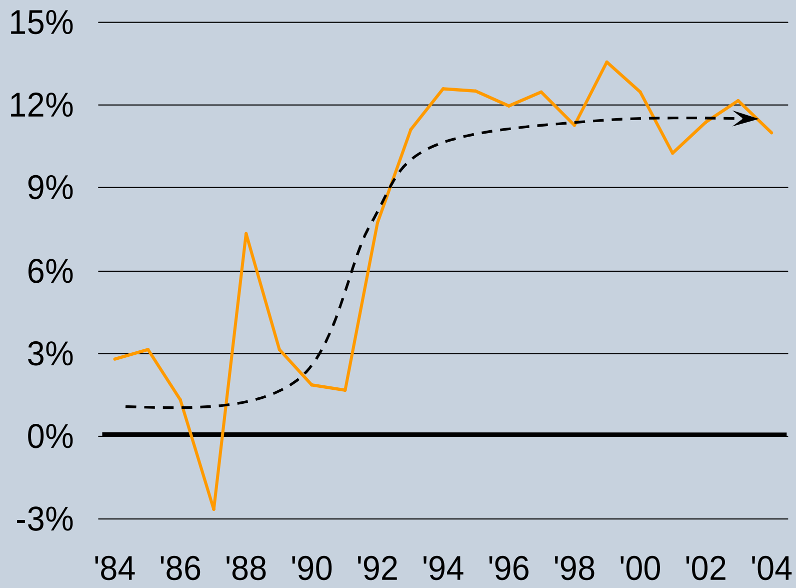
- Banks use actively securitisation since the 80' as a risk / capital management tool:
  - acceleration in the early 90' when Basel I acknowledged regulatory benefit
  - boost in the ROE of banks

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

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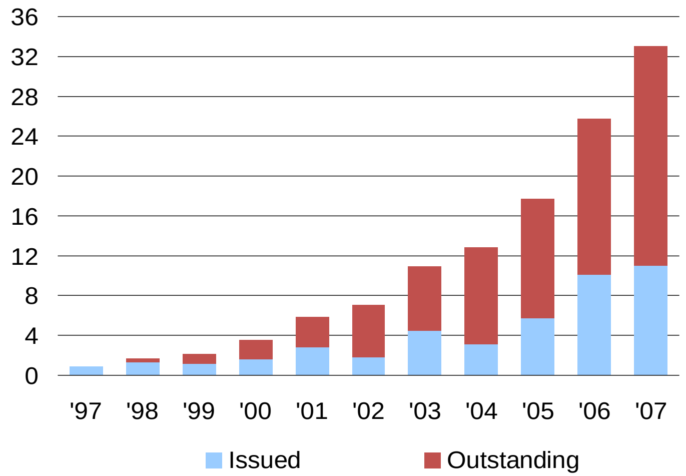
Insurance sector still lagging

- Securitisation of insurance risk is a recent phenomenon
  - beginning slowly in the mid 90’ with the issuance of the first catastrophe bonds
  - continuing in the 2000’s with some securitisations of embedded value.

- Most recently, risk securitisation continued to expand with some innovative transactions:
  - Mortality risk (Vita I in 2003 from Swiss Re ; Vita II in 2005 ; Osiris from AXA and Tartan from Scottish Re in 2006 ; Vita III in 2007)
  - P&C insurance risk (Sparc France in 2005 and Sparc Europe in 2007 on AXA’s motor portfolio)

Total ILS outstanding, in USDbn



Source : Swiss Re

In 2006, for the European banking sector : € 450bn new issues for ABS/CDO vs $ 9bn for worlwide Insurance Linked securities ($ 12 bn in 2007)

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How to develop further ILS market ?

From traditional reinsurance to capital market solutions

"Pure traditional" solutions

"Pure ILS" solutions

Traditional reinsurance
- not rated
- not collateralized
- indemnity based

Indemnity securitization
- rated
- public placement

EV securitization
- rated
- public placement
- cash proceeds + collateral

Industry loss securitization
- rated
- collateralized
- customized industry loss

Parametric securitization
- rated
- public placement
- customized parametric index

ILW or derivatives
- not rated
- modelled loss or parametric index
- maybe collateralized

Source : Swiss Re

How to develop further ILS market ?
Main challenges

Regulators :

- Need to fully recognize risk transfer and allow capital relief
- Not differentiate b/w reinsurance, ILS or derivatives at equal risk transfer
- Accept SPVs as valid counterparties not subject to stringent solvency requirements
- No restrictions on institutional ILS investments

Rating agencies :

- Need to fully recognize risk transfer and allow capital relief
- Value securitization and other forms of risk transfer in their assessment of quality of risk management
- Increase transparency on process for rating notes

Capital markets :

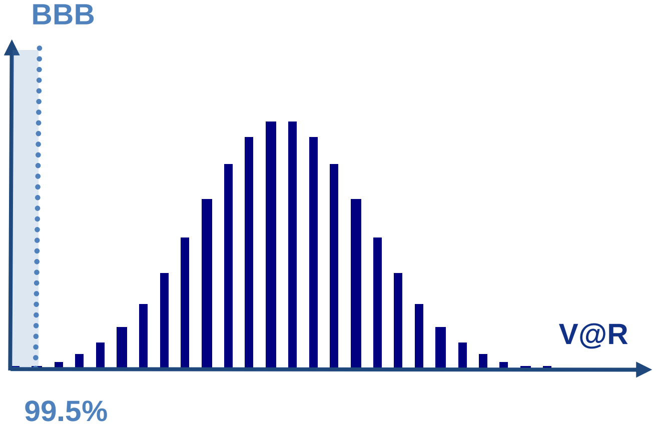
- Education of market participants to transfer and to accept more and more insurance risks
- Increased transparency on modelling, documentation, data (standardization of contracts, SPVs, triggers)
- ILS indices to develop derivatives and secondary market

How to develop further ILS market ?

Solvency II : a short term issue

- Today (Solvency I) capital management transactions focus on portfolios where regulatory capital requirements are significantly higher than economic capital

- Under Solvency II, this differential should decrease, or even disappear with the use of internal models :
  - Select risks that bear high regulatory capital requirements
  - Increase risk transfer
  - Issue and sell lower rated tranches: BBB, BB, and potentially B
    - More expensive but costs are tax deductible
    - Comparison between cost of capital and cost of selling lower rated tranches



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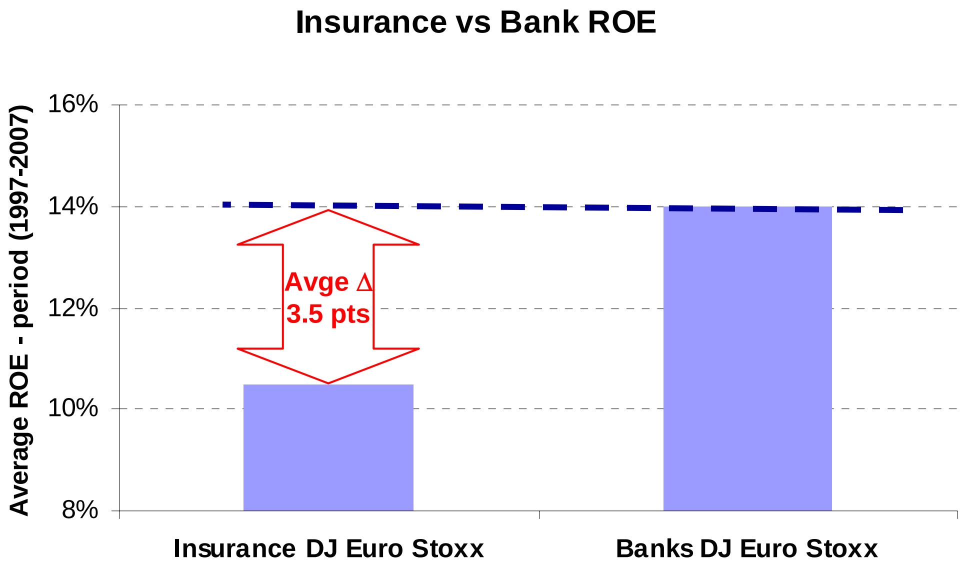
Securitization benefits still there

- Recent adverse developments on banking securitizations should not question the necessary development of the insurance securitization market

- The gain expected of securitization (boosted ROE) for the attractiveness of insurance industry as an asset class



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