

**Introduction to Reports of the
Securitisation of Non-Life Insurance Working Party**

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1. BRIEF INTRODUCTION TO SECURITISATION

1.1. General securitisation

Securitisation in its broadest form is the pooling, repackaging and often commoditisation of the cash-flows associated with financial assets (or less commonly liabilities) into marketable securities, so that the investors in these securities assume the benefits (and less commonly obligations) of the cash-flows.

The most widespread form of securitisation has been the development of the extensive mortgage backed securities market and that model has been broadened into other loans such as car loans, credit card loans and student loans. Under this form of securitisation, at its simplest, the investors in the mortgage backed securities have the right to (and the risks of) the interest and capital repayments on a portfolio of mortgages (as well as the right to repossession if payments are not made).

More exotic forms of securitisation have included:

- securitisation of intellectual property (the groundbreaking transaction for which was the securitisation of David Bowie's royalties),
- securitisation by football clubs of future season ticket sales (culminating in Arsenal financing the Emirates stadium through a \$250M bond),
- securitisation of governmental or quasi-governmental receivables (e.g. New York securitised future revenues from settlements with tobacco companies).

1.2. Basic concept of non-life insurance linked securitisation

Non-life insurance linked securitisation has been primarily focused on catastrophe bonds issues primarily by insurers or reinsurers. These are most easily seen as the securitisation of the liability/risk on the issuer's balance sheet of a large amount of payments from a single underlying event (usually a natural catastrophe such as a hurricane or earthquake) and effectively act as a substitute for traditional catastrophe reinsurance.

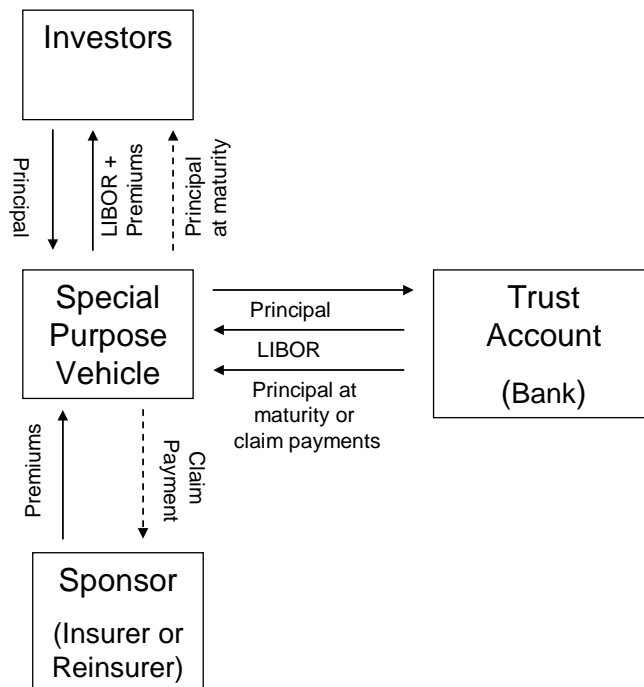
In simple terms the security is a bond issued by the sponsor to investors at a pre-defined interest rate. In the event of a defined catastrophe, the investors do not receive future payments of interest or repayment of their initial capital.

The security will normally specify: the time frame during which the catastrophic event has to occur; the specific peril(s) and region(s) covered; the trigger for payment and for exhaustion; how the trigger is calculated.

The trigger for payment and the size of payment can be:

- indemnity based i.e. triggered on the actual loss to the insurer/reinsurer (e.g. claims in excess of \$100M),
- modelled loss i.e. triggered on losses produced by applying the actual event to a notional portfolio of policies using a proprietary catastrophe model (e.g. a modelled loss of \$100 million using a representative modelled storm of the actual event, on a portfolio representing the sponsors exposure),
- index based with indices falling into two main categories – parametric triggers (e.g. an earthquake measuring 6 on the Richter scale in a defined area) or market loss index (e.g. market losses above \$5Bn as reported by PCS).

In practice, at least in the current regulatory climate, the bond is usually issued by a special purpose vehicle reinsurer who then in turn provides a conventional reinsurance contract to the originating sponsor, which leads to the following basic structure.



The main parties involved and their interests are:

- The sponsor makes premium payments to the Special Purpose Vehicle and in the event of a loss collects a reinsurance payment from the Special Purpose Vehicle. The reinsurance contract is fully collateralised from the issuer's standpoint (due to the investors' initial investment in the Special Purpose Vehicle) and so effectively removes their credit risk.
- The investors make an initial investment equivalent to the contract limit into the SPV. Investors then receive interest payments from the Special Purpose Vehicle on a regular basis. This payment is made up of two parts: LIBOR (London Interbank Offer Rate) on the principal and a risk premium. If, at the end of the period of the catastrophe bond, the bond has not been triggered then the investors receive their principal back. A triggering event therefore acts like a credit default on a conventional corporate bond.

- The Trust Account takes custody of the principal on behalf of the Special Purpose Vehicle and arranges investment/swaps to receive a return at LIBOR. This investment return is then paid to the Special Purpose Vehicle at the agreed times. If a claim occurs, under the definition of the contract, then the Trust Account will return the principal to the Special Purpose Vehicle. If no claim occurs during the term of the contract then the Trust Account will return the principal to the Special Purpose Vehicle at the end of the contract term.
- The Special Purpose Vehicle is established at the start of the Securitisation and acts as the “middle man” for all of the cash flows described above. They are normally domiciled in a tax efficient environment.
- The Special Purpose Vehicle needs a credit rating and this is done by the standard rating agencies.
- Catastrophe models are used to help understand the financial impact of proposed covers and triggers. If modelled losses are the basis of the contract then this work is obviously critical to the whole enterprise.

Finally, as an aside, it is also possible to describe catastrophe bonds more analogously to mortgage backed securities, as the securitisation of a single notional loan to the sponsoring insurer (or reinsurer) where neither the capital nor interest is repayable to the insurer in the event of a defined catastrophic event.

2. STRUCTURE OF THE WORKING PARTY

The topic of Non-Life Insurance Linked Securitisation was the subject of three successive GIRO Working Parties for the 1997-1999 conferences but has not been covered by a Working Party since.

The size of the 2008 Working Party meant that we were able to split into a number of sub-groups and were able to produce a series of stand-alone but complementary papers. Our aim is that each paper functions as a concise discussion of one area of this wide topic.

The first paper covers the “**History of Securitisation**” which is a review of the initial concept and subsequent development of non-life insurance linked securitisation, including a retrospective review of a series of predictions made for this development in the 1997 and 1999 papers.

One of the key drivers of non-life insurance linked securitisation was the claim that the resulting securities would be uncorrelated with conventional equities and bonds; however this assumption remains largely untested. The “**Zero-Beta**” paper aims to provide a review of various ways of testing this assumption.

In contrast a potential risk of non-life insurance linked securitisation is the additional basis risk it brings between the issuing insurers liabilities and the asset it receives by securitising these liabilities. The “**Basis Risk**” paper seeks to give a definition of basis risk and set out a methodology (including an accompanying spreadsheet) that can be used to estimate basis risk (and which has wider applications than just securitisation).

2007-8 will be a pivotal period for the concept of securitisation due to the pivotal role played by mortgage-backed securitisation in the sub-prime crisis and resulting credit crunch. The “**Lessons from Sub-Prime**” paper examines the implications of this crisis for non-life insurance linked securitisation as well as some wider implications of the credit crunch for non-life insurers (besides the basic issue of reserving which is covered by a separate Working Party).

One of the factors slowing the development of non-life insurance linked securitisation has been unfavourable capital regimes (in contrast to say US life insurance securitisation which has been driven by regulatory considerations). The “**Regulatory Regimes**” paper reviews this topic and in particular the potential for more neutral treatment of non-life insurance linked securitisation under Solvency II.

If Solvency II treatment is favourable (or at least neutral) towards non-life insurance linked securitisation, then this may well lead to its expansion beyond simply the securitisation of peak catastrophic liabilities via catastrophe bonds, which has hitherto dominated the market. The “**Other Non-Life Risks & Assets**” paper examines the possibilities for securitising other liabilities as well as assets of non-life insurers.