

Issues Paper

INTERNATIONAL ASSOCIATION OF INSURANCE SUPERVISORS



ISSUES PAPER ON LIFE INSURANCE SECURITISATION

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[This document was prepared by the Securitisation Subgroup.]

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1. Overview

1. In the U.S., the first securitisations by life insurers were asset securitisations. The securitisations were designed to release the net present value of premium loadings, acceleration of commissions to agents, and viaticals. There was very little risk transfer of mortality, morbidity etc. Initially, the proceeds from these securitisations were credited to surplus. However this is no longer allowed under the codification of U.S. Statutory Accounting Principles.

2. Outside the U.S., embedded value (EV) securitisations have become popular. Embedded value is basically the present value of the future profit on in-force business. In such a securitisation, the proceeds are based on the net present value of the profits that arise from a closed block of business. In the UK for example where the concept of embedded value is well established, this can be recognised as equity on a company's balance sheet. By contrast, in the U.S., embedded value is generally not recognised for solvency purposes except on acquisitions and demutualisations. Prudential Financial securitised almost \$2 billion in embedded value arising from a large closed block of life business at the time of its demutualisation in December 2001, and MONY securitised a closed block from its demutualisation in April 2002.

2. Benefits

3. To date the embedded value and asset securitisations have improved liquidity and have enabled the recognition of future profits for solvency purposes in certain jurisdictions, although with limited transfer of risk. In the future, there may be risk transfer securitisations. Types of risk could include persistency and lapse rates, morbidity, longevity, credit risk and mortality which could also include catastrophic risk transfer. No securitisations so far are known to have included mortality risk.

4. The motivations for life securitisations include capital optimisation, risk mitigation and funding of profitable business opportunities. Life securitisations are part of a continuing trend towards combining reinsurance and capital markets techniques to achieve optimal solutions.

3. Obstacles

5. Regulatory and statutory standards must be satisfied. In the U.S., the NAIC has adopted views on both asset and EV securitisations in Statement of Statutory Accounting Principles # 33. Asset securitisations where beneficial interests in the transferred assets are received are not accounted for as sales, rather they are accounted for as an exchange of assets with no gain or loss and as such they only have an impact on liquidity, not surplus. Such is not the case in Europe, where securitisations have been treated as true sales under such circumstances. Securitisations that can be characterised as a sale of deferred acquisition costs also may not result in the immediate recognition of income or surplus in the U.S., and therefore also only have a liquidity impact. An alternative might be to use a bankruptcy remote vehicle to create a true sale. However, to date, none of the U.S. life securitisations have used such a vehicle. There remains a concern as to the level of profit that should be recognised up front in an EV transaction and the IAIS should consider whether EV securitisations should in general receive recognition in equity.

6. A company may also be constrained in issuing securitisations by rating agencies' and other analysts' views of the capital structure and adequacy of the company.

4. Forms of life securitisation

7. Three forms of life securitisation will be examined:

- Securitisation of future cash flows from a book of business
- Reserve funding solutions
- Life insurance risk transfer

A. Securitisation of future cash flows from a book of business

8. Examples:

- Value in force (VIF) securitisation.
- Closed block securitisation.

9. Transaction examples:

- American Scandia (US) – 3 transactions, US \$311 million total issue size.
- National Provident Life (UK) – 1 transaction, US \$438 million issue size.
- Hannover Re – 4 transactions L1 – 4.
- Prudential Financial (US) – US \$1.925 billion closed block securitisation.
- MONY (US) – US \$475 million closed block securitisation.

10. Product overview:

- Transactions provide for capital market financing with the repayment of principal and interest secured by future profit or earnings on the underlying book of business.
- To date, most have been wrapped by financial guarantee companies such as FSA and Ambac (which in turn are reinsured), so minimal true transfer of insurance risk to the capital markets.
- No true sale of underlying life insurance portfolio thus far due to regulatory constraints preventing the unencumbered transfer of assets and liabilities (insurance policies) to a non-affiliated special purpose issuer (in contrast to most asset-backed securitisations).

11. Related reinsurance products:

- Financial reinsurance can provide benefits similar to those offered by this type of capital markets transaction.
- With reinsurers being more reluctant to enter into financing deals with longer maturities (over 10 years) and to provide the liquidity required, securitisation may emerge as an interesting alternative.

Value in force securitisation

12. Need:

Profits from in-force life insurance business are realised over an extended period of time, while a company may need liquidity now. S&P's capital adequacy model allows only 50% of the estimated value in force to be counted as capital credit.

13. Capital markets solution:

Issuance of non-recourse debt to capital markets through an SPV backed by the emerging surplus of a defined set of in-force policies.

14. Product overview:

- Non-recourse loan by a non-consolidated third party SPV to the sponsoring life insurer.
- Issuance of debt securities to the capital markets, in effect refinancing the non-recourse loan.
- A reinsurer may provide coverage for some risks in the book of business (e.g., mortality, lapse) or the securities may be wrapped (indirectly taking most of the insurance risk to the reinsurance market).
- Payment of principal and interest of the debt is subject to the emergence of surplus out of a defined life insurance book of business.

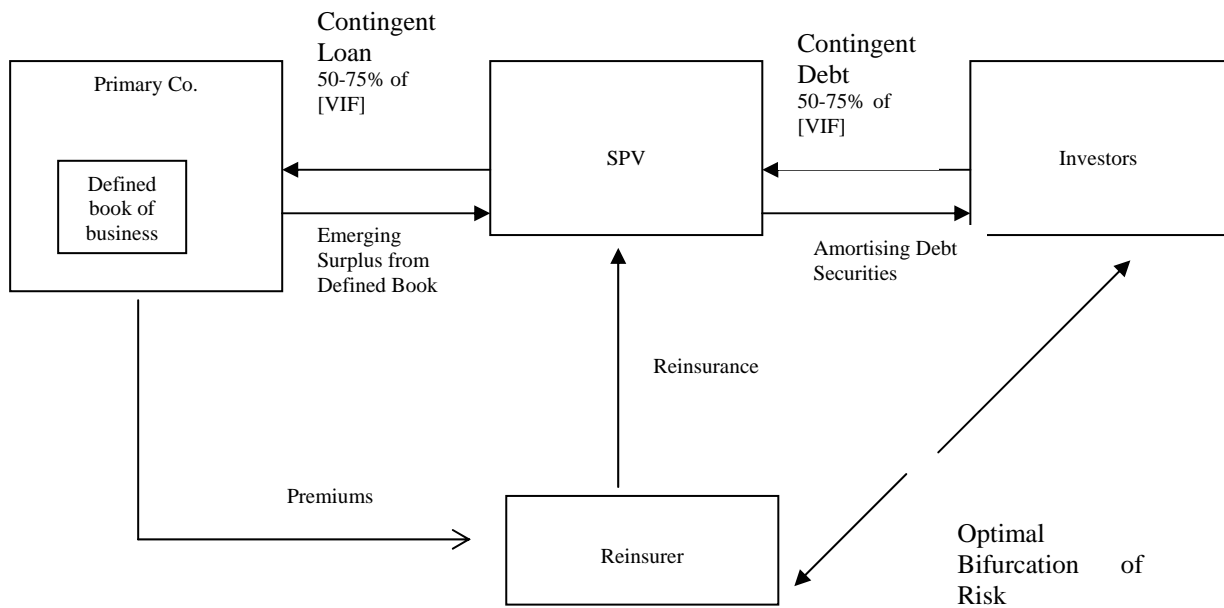
15. Pros:

- Loan would be recognised as an asset without being recorded immediately as a liability, creating additional surplus assets.
- No impact on financial leverage and interest coverage ratio.
- Monetises business in force, releasing funds.
- Capital credit under S&P capital adequacy model if the loan to value is in excess of 50% of the estimated value in force (S&P model already gives credit for 50% of the estimated value in force)

16. Cons:

- Credit risk of the sponsor cannot be eliminated because regulatory constraints prevent true sale of the underlying insurance portfolio to the SPV.

Figure 1: Value in force securitisation example



17. Comments:

- In markets where the embedded value is not recognised for surplus and solvency purposes the use of embedded value securitisations is limited (liquidity impact only; consideration for surplus and solvency purposes only under certain conditions).

Closed block securitisation

18. Need:

A newly demutualised company is encumbered by the requirement to hold excess regulatory capital tied to its closed block of participating policies of the former mutual company.

19. Capital markets solution:

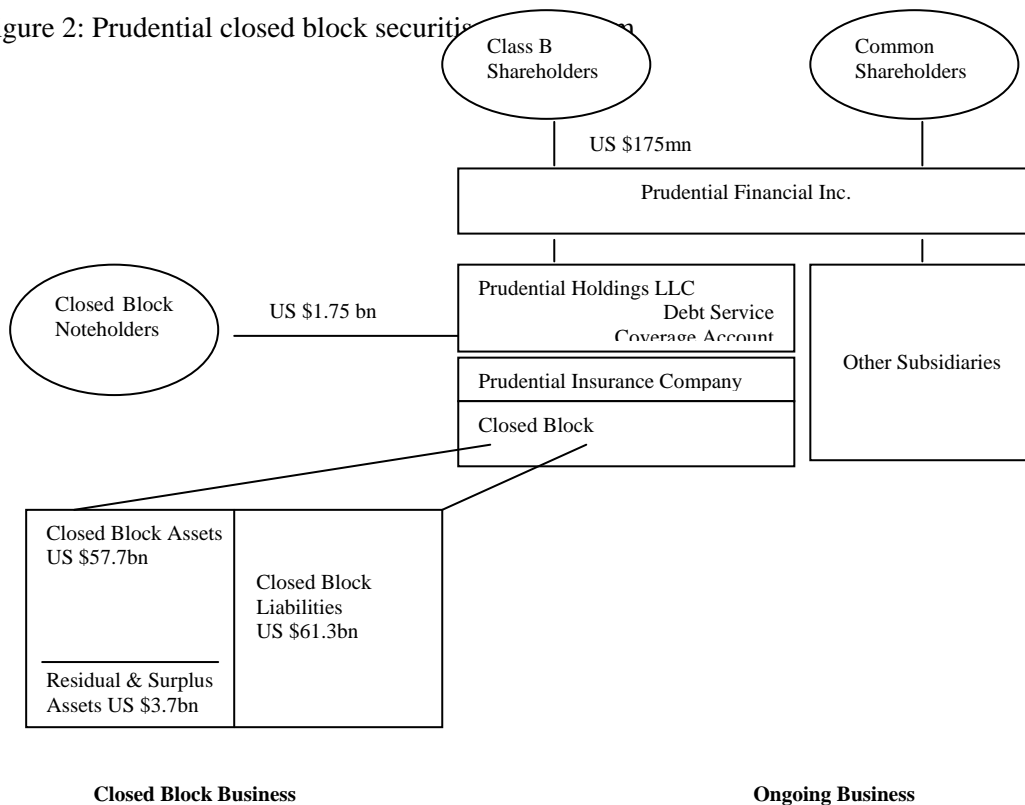
Debt issued through an intermediate holding company backed by emerging surplus and other assets tied to the closed block.

20. Product overview (see Prudential example illustrated in Figure 2):

Establishment of the closed block:

- In accordance with regulation, the closed block is formed to satisfy the reasonable expectations of policyholder-owners of the former mutual company who wish to continue their participation as if the company had remained mutual
- For purposes of the securitisation, the closed block is comprised of specified liabilities and assets associated with these policies and held within the operating life insurance company. The closed block includes surplus and residual assets (SR&A) that are not intended to fund policy payments except in extreme scenarios
- As the closed block runs off over time, the S&RA requirements decline and the assets are released, providing a relatively stable stream of cash flows that can be securitised.

Figure 2: Prudential closed block securities



The intermediate holding company:

- To effect the securitisation, an intermediate holding company (IHC) is established below the group parent company and above the operating life insurance company where the closed block resides
- The IHC exists for the sole purpose of issuing limited recourse closed block (CB) debt securities

The closed block debt:

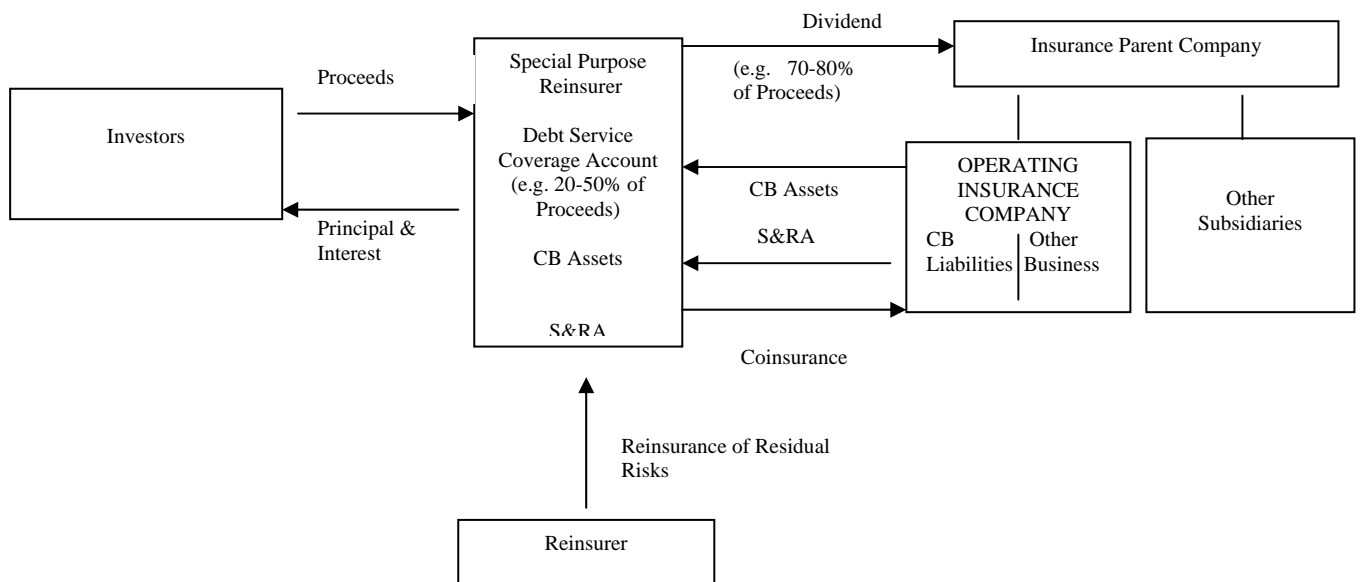
- CB debt is senior to other obligations of the IHC
- Residual interest in the IHC may be sold as equity or tracking stock (as in the case of Prudential)
- The debt typically has a term in the range of 20-25 years depending on the makeup of the underlying life insurance portfolio
- The bulk of the proceeds of the debt issuance (typically 75-80%) are paid out as a special cash dividend to the group parent company for use in general corporate purposes
- Interest and principal of the CB debt are to be repaid out of the cash flows from the earnings on and release of S&RA over time as the CB business matures
- A sophisticated collateral system is put in place to ensure the timely payment of principal and interest
 - Debt Service Coverage Account in an amount of 20-25% of the proceeds of the debt issuance
 - Security interest in the operating life insurance entity
- Due to the inherent complexity of the risk exposure (actuarial risk, credit risk, operational risks), large amounts of the past issues were wrapped by monoline insurers and reinsured in order to reduce the risk for investors and enhance the rating of the debt issue

21. Pros:

- Establish a more efficient capital structure.

- Monetise future cash flows.
 - Increase liquidity.
22. Cons:
- Investors lose if CB assets are not sufficient to provide for the guaranteed benefits under the CB liabilities.
 - The absence of a legal separation of the CB business and the ongoing business may allow creditors to have claim on the S&RA, thereby impeding the ability to make payments due on the notes.
 - Determination of policyholder dividends at the discretion of the issuer which may reduce funds available for payments due on the notes.
 - Unfavourable performance of ongoing business may impair ability to make payments under the notes.
 - Rating agencies view the closed block as a stable (if not profitable) source of income and may react negatively if proceeds are used for less stable business
23. Comments:
- The credit of the closed block debt has thus far been constrained by the credit of the operating life insurance company where the closed block resides.
 - To avoid investors' credit concerns, the closed block assets would need to reside within an entity unaffiliated with the sponsoring company.
 - An attractive alternative from this perspective would be a coinsurance agreement with a special purpose reinsurer, which would hold the S&RA (illustrated in Figure 3).
 - In most jurisdictions, this structure would require the special purpose reinsurer to have the applicable licenses and regulatory approval, which to date has been viewed as a prohibitively costly and cumbersome process.

Figure 3: Closed Block securitisation through a special purpose reinsurer



B. Reserve funding solutions

24. Examples:
- Regulation XXX reserve fund.

- Products to address reserve requirements for Guaranteed Minimum Death Benefits (GMDB) policies.
25. Related products:
- US life insurers have the following options to cope with the additional Regulation XXX reserve requirements:
 - Reinsurance
 - Letter of Credit (LOC)
 - Changed product design
 - Changed rates
 - Increase of statutory capital
 - External financing (capital markets)
 - Reinsurance has been the most commonly used solution and has thus far provided superior economics over LOC and capital markets solutions in most cases.
 - LOC's are usually provided on a year-by-year basis in spite of the long duration of life insurance contracts.
 - Capital markets may provide a promising alternative in the event LOC capacity becomes unavailable and reinsurers' budgets are exhausted.
 - Pure capital markets hedging strategies (e.g., buying puts on an equity index, selling index futures) can be used to offset some GMDB exposures.
 - GMDB losses may also be mitigated through mortality reinsurance.

Regulation xxx reserve fund

26. Need:
The recent NAIC model regulation XXX in the US requires increased reserves for term life insurance policies with long term premium guarantees. Offshore reinsurance requires a letter of credit or other qualifying collateral in the amount of the increased reserves even if the excess reserves are not accounted for in the balance sheet of the offshore reinsurer.
27. Capital markets solution:
An alternative solution replacing the need for an LOC with collateral funded by investors through a SPV that achieves a favourable rating because of the strength of the underlying business (which may be enhanced by reinsurance).
28. Product overview:
- The NAIC model regulation XXX requires life insurance companies to post additional statutory reserves in particular for term insurance with long term premium guarantees.
 - The reserves are based on very conservative valuation assumptions and typically build up and disappear over the premium guarantee period (known as a "humpback" reserve pattern).
 - Several possible structures have been discussed to fund XXX reserve collateral through the capital markets
 - Investors would purchase amortising bonds, the proceeds of which would fund a special purpose company
 - Funds held by the special purpose company in the amount of the excess reserve requirement would be pledged as collateral backing the underlying insurance policies
 - As statutory reserve requirements decline over time (due to the performance of the underlying book of business), these funds would be released to investors as principal and interest on the amortising bonds
 - Residual risks may be reinsured or retained by the sponsoring life insurance company

29. Pros:
- Off balance sheet financing (repayment of debt contingent on the realisation of excess reserves).
 - No impact on debt and interest coverage ratio if financing is off balance sheet.
 - No use of internal funds (liquidity aspect).
 - Increase of business.
30. Cons:
- Costs.
 - Not tested in the market.

Products to address reserve requirements for guaranteed minimum death benefits (GMDB) policies

31. Need:
Compliance with the US regulation requiring life insurers writing GMDB policies to post additional reserves to offset declining equity markets.
32. Capital markets solution:
Contingent capital.
33. Product overview:
The issuance of capital market instruments (e.g., hybrid capital, surplus notes, or preference shares) under pre-arranged pricing and terms is triggered by the occurrence of certain triggers; such as a pre-defined threshold of additional reserve requirements in conjunction with a pre-defined decline of an equity market index.
34. Pros:
- Increase of capital.
 - Liquidity improvement.
 - Possibly more economical and better tailored than traditional hedging strategies.
35. Cons:
- On balance sheet solution (with respect to capital markets products issued under the program).
 - Possible negative effects on debt and interest coverage ratio.
 - Requirement to repay funds provided after a trigger (i.e. minimal transfer of economic risk).

C. Life insurance risk transfer

36. Examples:
- Securitisation of catastrophic mortality risk.
 - Longevity index bonds/derivatives.
 - Life insurance risk embedded in other products such as closed block securities or life settlements.
37. Product overview:
- Alternative coverage for insurance risks (as opposed to investment risks), provided by capital market investors.
 - Slow development thus far due to lack of expertise among capital markets investors in evaluation and pricing of life insurance risk.
 - Reinsurance offers a well-developed and robust market for these risks.
 - Catastrophic mortality securitisation:

- Wide discussion of growing demand for catastrophic mortality securitisation in the group market to manage the concentration of risks
- However, most potential cedants have shied away from the market due to economic considerations
- Longevity products:
 - Longevity is a concern for pension funds and annuity providers for aging populations of increasingly long-lived participants
 - Multiple impact of a change in longevity on pension and annuity products
 - Higher-than-projected payouts
 - Depleted funds backing higher payout requirements
 - Impact affects current and future periods
 - Products such as index-linked longevity products described below have been discussed as potential solutions to longevity exposures

Longevity index products

38. Need:
Pensions and annuities may be exposed to significant longevity risk – if, on average pensioners and annuity holders live longer than anticipated, the funds backing such pensions and annuities could be depleted before all obligations have been paid out.
39. Capital markets solution:
An index-based note or derivative with returns linked to a specified longevity index.
40. Product overview:
- Bond or derivative product in which payments depend on the performance of a longevity index.
 - Ceding company would be pension or annuity provider with longevity exposure correlated with index.
 - Payment to the ceding company if longevity develops faster than expected and defined (i.e. lower than expected mortality).
41. Pros:
- Pension/annuity providers can reduce longevity exposure while retaining idiosyncratic risk (benefits of superior underwriting).
 - Index allows transparency and marketing to multiple ceding companies at once.
 - Possible pricing advantages of index-based deal.
42. Cons:
- Significant basis risk.
 - Potential difficulty in aligning the hedge with the PV impact of a permanent (i.e. portfolio-wide for all future periods) shift in longevity.
 - Longevity may be volatile at higher ages.

D. Funding agreement backed notes

43. During the first half of 2003, Standard & Poors rated US \$15.5 billion of funding agreement backed notes.
44. Since 1997, S&P has rated a total of US \$112.4 billion of funding agreement/GIC backed notes and certificates.

45. The most prolific issuers have been:

US\$ (billions)	Since Inception	1H'03
SunAmerica Life Insurance Co.	34.8	3.3
John Hancock Life Insurance Co.	13.2	1.1
Monumental Life Insurance Co.	9.2	1.4
Principal Life Insurance Co.	8.2	2.1
Jackson National Life Insurance Co.	7.5	0.5

46. Issuer benefits include:

- Access to a new investor base to complement traditional 401(k), municipal and institutional investors
- Programs enable insurers to issue different liability structures, thereby managing assets and liabilities effectively

47. Investor benefits include:

- Stable value
- Safety: higher recovery rates compared senior secured bank loans
- Slightly more yield compared to corporate bonds

5. Future life securitisations

48. One of the questions for the future is how a risk transfer life securitisation would work. No examples exist as yet, but the issues need to be examined. For example in UK, some smaller life companies may need to delineate their life business as closed blocks – regulators may be able to lead the market if regulatory issues are solved to enable these blocks to be securitised. However, the residual obligations remain a problem after the repayment of the underlying security.

49. The overarching regulatory issue is to ensure that a regulated insurer is available to pay policyholders. There may also be an issue with the possible unlicensed business of insurance if the purchaser is not an insurer, unless the problem with residuals mentioned above can be solved.

50. A further issue for consideration is the likely impact of any future fair value accounting on life securitisations. It is likely that any such change in accounting may reduce the incentive to undertake value in force and closed block type securitisations.