Securitisation in the life insurance industry

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Abstract

Insurance industry worldwide is undergoing a transformation as new risk-management strategies are being formulated and new financial instruments are being created to supplement and/or to replace traditional (re) insurance products. This paper provides an overview of securitisation as a financial tool for life insurance and its relevance to the Indian life insurance market.

Keywords

Securitisation; Special Purpose Vehicle; Capital Strain, Value-of-In-Force; Risk Management

1. Overview of Securitisation

1.1. Securitisation is a financial technique that pools assets together and turns them into tradable securities. Securitisation typically applies to assets that are illiquid. It is very common in real estate, banking and mortgage industry. In principle any assets can be securitised so long as they are associated with a stream of cash flow.

1.2. Before discussing the application of securitisation to life insurance in detail, it is important to consider securitisation in a general context. What follows below is a general description of securitisation of Asset Backed Securities ("ABS"). Life Insurance securitisation structures differ in some aspects as compared with ABS structures; however the basic principle remains the same. The variations between life insurance securitisation structures and ABS structures have been dealt with implicitly in this paper.

1.3. A diagrammatic representation of the whole process is presented in Appendix A. Essentially, a securitisation process begins with an originator who is the participant that initiates the contracts with the customers. The cash flows generated through these contracts between the originator and the customer form the basis of the securitisation. Originators can be banks, issuers of mortgage loans, credit card companies, life insurance companies and industrial firms such as automobile and aircraft manufacturers that sell their products under various financing arrangements.

1.4. For the originator, the present value of the cash flows generated by such contracts constitutes an asset on its balance sheet, although the asset may not be recognised. So, it might be the case that the balance sheet is in a healthy position with respect to assets but those assets comprise receivables in future and not something which is liquid or available for purposes such as meeting solvency requirements. Hence it is possible that an originator is writing profitable business, has a healthy balance sheet but has its capital tied. This is where securitisation is an innovative concept.

1.5. Through securitisation, the originator can move the asset off its balance sheet by transferring the asset to an entity known as a Special Purpose Vehicle ("SPV"). It is important that the assets being transferred are homogenous in that they have consistent risk and maturity profile. Post the asset transfer, the originator may or may not retain some interest/obligation in the asset. The SPV houses the asset and issues securities to investors based on the transferred asset as the collateral. The investors in the SPV's securities hence contribute funds to the SPV, which the SPV transfers partly/wholly to the originator as the "payment" for the asset transferred. Thus the originator is able to generate ready cash in place of the tied capital. This gives the originator increased investment freedom and also encourages greater efficiency of capital.

1.6. The securities that the SPV generates are structured so as to appeal to different classes of investors like institutional investors, hedge funds and high net worth individuals. Further, the SPV often enters into a swap transaction and offers its investors a variable rate of interest even though the asset transferred to it by the originator may yield a fixed rate of interest. Other than this there usually exist credit enhancement mechanisms[1] whereby investors are protected from the risks that might exist if:

- the originator defaults on its obligations or goes bankrupt – this will only arise if the originator retains some interest post the transfer to SPV
- the originator's customers' defaults are greater than expected or some contingency leads to significant reduction in the market value of assets held by the SPV.

There also generally exists a servicing institution which provides service to customers, oversees the payments to the SPV and overall integrity of the payment process. In some cases, the originator itself acts as the servicing institution.

2. Rationale for Securitisation

2.1. Essentially, securitisation occurs because one of the fundamental assumptions of financial theory, that there exist complete and frictionless financial markets, does not actually hold. In a purely theoretical setting it does not matter how the cash flows are distributed; the value of the flows is constant. Thus securitisation does not offer any value addition in such a setting because it would be irrelevant if the securities are repackaged and issued by a different entity.

2.2. However, markets are seldom perfect. Below is some of the ways securitisation offers value creation.

- Bankruptcy costs: An institution facing difficult times financially may find it difficult to raise fresh capital because it would most definitely be suffering from lower credit ratings. Further, there will be increased regulatory demands on it given its deteriorating condition. Here, the institution can enter into a securitisation arrangement and generate much needed capital for itself through asset transfer.
- Interest rate risk: An institution that has short-term liabilities but owns long-term assets is vulnerable to interest rate risk. An example is a bank holds large demand deposits as its liabilities but has long-term mortgages as assets. The bank can transfer the

[1] These can be measures such as over-collateralisation whereby the value of assets transferred to the SPV is larger than the amount of securities issued to investors. Also there can be other mechanisms like surety bonds and letters of credit from financial institutions.

mortgages to the SPV, in turn generate cash whose liquidity profile matches that of its liabilities, and avoid the interest rate risk.

- Informational asymmetries: There exist significant information gaps between financial institutions and investors regarding the asset portfolios of the institutions. Through securitisation, pools of relatively homogenous assets can be separated and transferred to SPV so that investors in SPV securities are more informed. This transparency also raises the credit rating of SPV securities benefiting the originator as well.
- Agency costs: Unresolved agency costs always exist because the investors in a company may not be sure if the manager of the funds actually pursues the goal of maximising firm value or the scale of the firm[2]. Securitisation can overcome these costs because the sole purpose of a SPV is to hold the assets and it is also isolated from the other "managed" activities of the originator. Thus investors can invest with greater confidence.
- Regulatory costs: For some institutions, regulatory requirements are a big drain on the capital resources. Banks and insurance companies are typical examples of these institutions. Through securitisation, these institutions can move those assets that require the maximum regulatory capital off their balance sheets and free up the capital for other activities.

2.3. Apart from overcoming the above mentioned market imperfections and costs, another benefit of securitisation is that it creates new classes of securities that are normally not available in the market. These securities can, for example, be based on catastrophes, mortality and longevity risk. These risks are not generally covered in the instruments traded in the market. Also these securities are expected to have a low covariance with the market risk and hence can be valuable for diversification purposes.

2.4. Also, with the securities that are traded on the market, securitisation helps by enabling the investors to invest only in a particular component of asset's cash flow because the SPV un-bundles and re-bundles the cash flows according to investors preferences.[3]

3. Life Insurance Securitisation

What is life insurance securitisation?

3.1. It is a process through which an insurer or reinsurer accesses the capital markets through the issue of asset-backed securities that are backed by cash flows from a defined block of insurance contracts.[4]

[2] The existence of employee stock options may dilute these costs to a certain extent but agency costs still exist.

[3] For instance, if an investor buys an ITC stock, he faces the risk of all operations of ITC, even though he might be interested only in the hospitality sector. Through securitisation, the ITC cash flows can be un-bundled and he can invest just in the SPV security that has hospitality as the underlying asset.

[4](1) Adapted from "Life Insurance Securitizations" a presentation by Steven Lash at the SOA Annual Meeting, November 2005

3.2. Using actuarial terminology we can define life securitisation as the repackaging of insurance-type cash flows into security-type cash flows.

3.3. In other words insurance securitisation is a financial methodology which

- transforms underwriting cash flows into tradable financial securities
- transfers underwriting risks to the capital markets through the trading of those securities.

3.4. Securitisation is a relatively new concept in the insurance industry. Life Insurance securitisation was developed in order to find more efficient methods for funding capital strain and transferring risk. The following are the six main reasons for securitising life insurance:

Financing the new business strain

3.5. New business strain is a function of the total initial expenses, commissions, premium income and supervisory reserves relating to the new business sold. For most life insurance products the level of expense, commission and reserve held is often more than the premium income in the early period.

3.6. Globally, the insurance market is evolving and insurance companies are moving away from traditional insurance products to newer product designs having lower capital requirement; however consumer pressures act in the other direction.

3.7. In particular, with variable life insurance products the initial premiums are credited to the policyholder's investment account with initial expenses and commissions being recovered later from fee income and deferred sales charges. The margins for such products are low due to increased competition which leads to slower recovery of initial expenses and commissions. This provides a motivation for securitisation.

Realising embedded economic values and freeing up funds to invest in new products

3.8. The business in force or the Value-of-In-Force ("VIF") of a life insurer is expected to produce a stream of future income. Life insurers can raise capital secured on future profits expected to arise from VIF through securitisation. Here, the "unmarketable" embedded value of the block of business is converted to marketable and tradable securities and securitisation provides cash to the life company. The cash, thus generated can be used to fund new business and capital can be deployed in a more efficient manner.

3.9. There have been a few examples (refer to Appendix B) of life insurers raising capital through the securitisation of the future profits expected from a block of in-force business.

Funding regulatory capital requirements

3.10. Securitisation can help restructure the balance sheet and meet solvency and asset admissibility requirements. The future profits from existing business constitute a hidden asset and are usually not allowed for regulatory purposes. However, securitisation provides

(2) In life insurance context, the following contracts could be securitised (a) Term assurance (b) Unit-linked (c) Annuities (d) With-profits (e) Equity release mortgages (f) Conventional -Mortgages

an opportunity to convert these future profits into cash assets and satisfy or meet regulatory requirements.

3.11. It is generally necessary to have an open dialogue with the regulator and alignment of the securitisation structures to regulator requirements.

3.12. With the evolution of reserving and risk-based capital standards regulatory costs are likely to increase which can be partially mitigated through securitisation.

Achieving greater diversification in asset sources

3.13. Securitisation can allow insurers access to an alternative and enormous capital base. New investor groups can be tapped who are interested in securities issued by life insurance companies. The sheer size and opportunistic nature of the capital markets are such that risk capital can be provided at times when other forms of financing (e.g. reinsurance) are in short supply.

3.14. This may also provide insurers an opportunity to reduce asset-liability mismatch and hence be used as a risk management tool.

Lower cost of capital

3.15. Insurers can obtain capital at a lower cost by securitising. This is because the credit rating of the securitised structures are often more favourable than the credit rating of the issuer (i.e. originator). The assets of the SPV may not be linked to the issuer's credit risk and hence market could demand a lower risk premium.

Transfer of catastrophe risk

3.16. Securitisation can provide a way of transferring extreme risks to the capital markets. For example, securitisation can be used to issue mortality bonds. If mortality develops as expected the interest is returned to the investors along with the principal at the bond's expiration date. However, if mortality increases substantially the investor may loose both the interest and the principal. Similarly securitisation can also help in transferring longevity risks to investors.

Life Insurance securitisation structures and major securitisation deals

3.17. Depending on the purpose for which securitisation is to be carried out, different securitisation structures can be implemented. In theory, both the asset side and the liability side of the balance sheet can be reviewed for securitisation to the capital market. Although this paper does not discuss any life insurance structures in particular the most common structures are: Closed Block Securitisation, Value-of-In-Force securitisation, securitisation of Deferred Acquisition Cost ("DAC") on the asset side and mortality/longevity related securitizations and catastrophe related securitisation on the liability side. Annuities (longevity risk) and with-profits (contractual complexity of bonus structures and asset allocation changes) products are arguably the most challenging from a securitisation perspective.

3.18. Securitisation is relatively new in life insurance with the first deals being struck in early 1990s. A list of prominent deals globally, till 2006, has been given in Appendix B.

3.19. Globally, it has been observed that most regulators are open and supportive of the use of securitisation, especially in case this helps the market to become more transparent and helps companies to manage their risk profiles better.

4. Life Securitisation in the Indian Context

Overview of securitisation in India

4.1. There have been a few instances of securitisation in India in the recent past and many are in the pipeline at the moment. The first securitisation deal in India occurred in 1990 when auto loans were secured by Citibank and sold to the GIC mutual fund. The dominant player in Indian securitisation market is ICICI Bank, and this bank issues more than 60% of all securitised papers in India and arranges all its own deals. However, at present securitisation in India is focused mainly on automobile and consumer finance; the mortgage-backed securities are relatively underdeveloped and the market for life insurance securitisation is virtually untapped with no securitisation deal to date.

4.2. Though there is no authentic data available on securitisation in India, it is believed that the market has picked up in recent years and shown an increase in the number of transactions. But, the volumes have not been equivalent to those witnessed by some of the developed economies, due to the obstacles that issuers have to face in the Indian markets. This paper attempts to outline the reasons why securitisation can be a very important funding tool in the Indian life insurance market, and the main impediments to securitisation in India.

4.3. The legal framework for securitisation in India has been laid down by the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Act 2002. This Act, defines securitisation as "acquisition of financial assets by any securitisation company or reconstruction company from any originator, whether by raising funds by such securitisation or reconstruction company from qualified institutional buyers by issue of security receipts representing undivided interest in such financial assets or otherwise".

4.4. Life Insurance Corporation of India ("LIC") has traditionally dominated the Indian life insurance market but with the policy of liberalisation and financial sector reforms starting from early 1990s, the Insurance Regulatory and Development Authority ("IRDA") Act of 1999, opened the insurance industry for private sector participation. Since then, 17[5] private companies have entered the life insurance industry in India. India has a substantial insurable population, which acts as an incentive for all private sector companies to enter the insurance business. This increased competition will lead to a greater demand for capital in the industry.

Life insurance securitisation in India

4.5. The life insurance industry is currently in need of regular capital inflow since it is in its growing phase. The level of the capital that a company has determines its scale of operation and expansion, and the kind of products it sells. The need to maintain regulatory solvency margins creates need for additional capital in the insurance industry. As competition increases in India, it may force insurers to introduce policies which have lesser margins in order to generate more business. This can be yet another factor for the increasing demand of capital in the insurance industry.

[5] As on 04 January 2008

4.6. Greater solvency margin requirements, though necessary from the point of view of providing a safety net to the customers, can create hurdles in the growth of an insurer. The legal structure in India only allows for 26% foreign equity in an insurance company, hence foreign investments cannot be used as a source of capital to the desired extent. It is likely that in such a situation the insurer may not function in an optimal and efficient manner. Hence, securitisation is one of the most practical options for insurance firms to raise capital for investing in new products and expanding business.

4.7. Traditionally, Indian insurers cover their risks with a reinsurer. However, only transfer of non-financial risks is allowed by the IRDA and reinsurance cannot be used as a source of capital. Also, the increasing cost of certain types of traditional reinsurance may lead life insurers towards considering securitization as an alternative solution. Moreover, reinsurance may not be as effective as securitisation since only a percentage of risks are underwritten by the reinsurer, and the insurer continues to be exposed to the majority of the risks associated with the business, and may have exposure to reinsurer credit risk.

4.8. Securitisation can either be used as an alternative to reinsurance wherein the entire risk is transferred to the capital markets, or it can be used as an additional funding layer over traditional reinsurance.

4.9. Therefore, securitisation can be exploited by life insurers in many ways such as, bringing in liquidity using the high cost illiquid assets, monetization of the embedded value of a defined block of business, reducing exposure to a volatile block of business and transfer of risk.

4.10. Since securitisation is a very recent phenomenon it is yet to be accommodated within the regulatory framework. There are also a number of legal factors which may concern Indian authorities with respect to securitisation. As India is an emerging economy it has to face many hurdles to facilitate securitisation and particularly in the life insurance industry. Therefore, while securitisation has been recognised as an important funding tool, the policy of the government has still not been modified to facilitate the smooth adoption of securitisation.

4.11. A working group of Reserve Bank of India ("RBI") and the Institute of Chartered Accountants of India both issued guidance notes in this regard; and recommended the enactment of a separate legislation for securitisation, which is yet to be enacted. At present, a securitisation transaction is governed by a plethora of legislations like the Companies Act, Indian Trusts Act, Transfer of Property Act, and Indian Stamp Act and so on.

4.12. One of the biggest problems is that the tax treatment of the transactions involved in securitisation is not clearly defined in the Income Tax Act. There is ambiguity about whether the gain/loss in the transaction should be treated as business gain/loss or capital gain/loss. This would depend on whether there has been a legal transfer of property in the assets being securitised i.e. has there been a transfer of the asset itself or merely a transfer of income during the securitisation transaction?

4.13. There is also debate regarding the tax treatment of the income derived by a SPV during the transaction. This depends on the organisation of the SPV. In its different roles (as a conduit, a trust and a separate legal entity) a different law is applicable to the SPV.

4.14. The status of the SPV itself is indefinite; hence a new legislation is needed which can classify the SPV as either an insurance company or an investment company. The nature of the securities issued by the SPV also should be determined by a new legislation, which categorises them as either securities or insurance obligation. These issues need to be sorted out before any insurance company can undertake a meaningful securitisation transaction; since the definition of the SPV and its securities can drastically alter the laws which will govern the transaction.

4.15. The possibility of life insurance securitisation has been largely unexplored in India since the development of an innovative class of assets in securitisation has been ignored by the governing authorities. The Securitisation Act in India is primarily in place to control the non performing assets of a financial institution through the creation of SPVs; and not to address the issues of securitisation. The SPVs under this Act are called 'reconstruction companies'. There are other issues with the Act, for example, it makes the process too cumbersome. Under the legislation, all SPVs have to register with the RBI and only qualified institutional buyers are eligible to buy the schemes floated by the SPV.

4.16. Another risk in life insurance securitisation (and securitisation in general) is the high transaction costs and time involved in India. There are very high stamp duties in the country with every state having its own stamp duty structure. In some states it can reach as high as 8%-12% of the value of the transaction. As the underlying assets in a securitisation deal are an immovable property, it requires compulsory registration. The elaborate procedures make securitisation deals even more expensive in the country and high duties become a burdensome payment for participants in the transaction.

4.17. Keeping in mind the ample benefits that could accrue to the economy in general and the financial sector in particular through securitisation, there should be a dedicated legislation in place which caters to the needs of the life insurance securitisation and the participants in these transactions. Without a supportive regulatory environment, only the very large companies are capable of bearing the costs involved in securitisation transactions. India could benefit from the example set by the advanced economies and suitably amend its Securitisation Act.

4.18. The Act should be broadened to include different asset classes and the emphasis of the Act should be refocused from recovery of capital from defaulters to shifting of risk from the insurance companies to the capital markets. And most importantly, the definition of a financial institution should be expanded to include life insurance companies.

4.19. All this means that there are inherent inadequacies in the current legislations and a substantial degree of reform is required in the laws and regulations relating to securitisation before it can be really expected to develop as an important financial tool in Indian markets.

4.20. Both insurers and investors should be educated about the benefits of securitisation and imparted with proper knowledge. Securitisation transactions require a proper understanding of two markets: insurance market and capital markets. Lack of investors' knowledge on insurance risks in itself can be an added obstacle in carrying out life insurance securitisation transactions.

Role of actuaries in securitisation

4.21. Actuaries have a significant role to play in securitisation transactions. The main areas where actuaries may be involved are:

- design of the structure of the transactions;
- modelling of the underlying risks including the correlations between risks;
- modelling of the pattern of investment returns which may be expected by investors in such instruments;
- design of alternative reinsurance and other capital structures, including the use of stochastic asset liability modelling techniques;
- considering the reserving implications of the securitisation;
- monitoring and reporting on the securitisation cash flows annually following issue, to determine whether loan and interest payments should be made and other financial aspects.

Conclusion

4.22. Securitisation will form an important capital and risk management solution for life insurers in the coming years. As the insurance industry in India continues to expand and the capital markets become more mature and stable, Indian markets may also witness the advent of securitisation to reap its benefits. It is likely that monetisation of the future profits and embedded value of a block of policies will be one of the first candidates to be contemplated for life insurance securitisation. However, there are many hurdles to be overcome to securitise insurance risks in India. An important element of this is to provide a legislative and regulatory framework which can set the stage for facilitating securitisation in the insurance industry.

4.23. Securitisation is inherently a costly procedure due to substantial management and system costs, in addition to this are the legal fees, the rating fees and ongoing administration. It may, therefore, not be cost-efficient for the small and medium transactions. The costs may reduce as number of securitisation deals increase, but it will likely be more expensive than traditional reinsurance thus challenging its own feasibility.

4.24. There may be deterioration in the quality of the portfolio if the good quality risks are securitised out. Hence, there has to be careful evaluation of what risks the originator decides to securitise.

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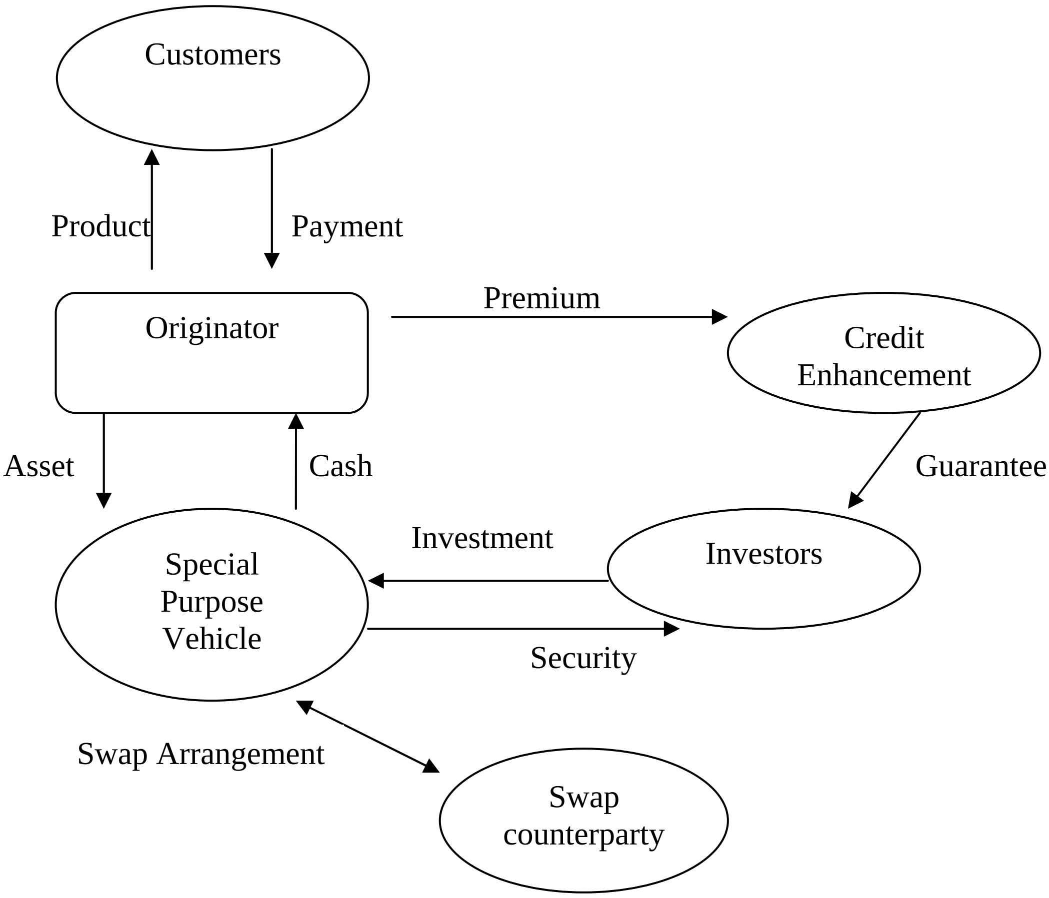
A] Structure of Asset Backed Securitisation



B] Major life insurance securitisation deals till 2006

Insurer	Year	Purpose of Securitisation	Capital Raised (million)
American Skandia	1996-1998	Liquidity/ M&E Securitisation	US$900+
National Provident Institution (NPI)	Apr 1998	In-force business	£260
Prudential (US)	Dec 2001	In-force business	US$1,925
Norwich Union	2001-2005	Equity Release	£1,751
MONY	Apr 2002	In-force business	US$745
Hannover Re	1998-2002	DAC Securitisation	€731
GE Financial	July 2003	Regulatory Financing	US$1,300
Barclays Life	Nov 2003	In-force business	£400
Norwich Union	Oct 2004	New Business Strain	£200
Banner Life	Nov 2004	Regulatory Financing	US$600
Friends Provident	Dec 2004	VIF Monetization	£380
GE Financial	Dec 2004	Regulatory Financing	US$850
Forthought	Dec 2004	Embedded Value monetisation	US$280
Scottish Re	Feb 2005	Regulatory Financing	US$850

Source: Cowley and Cummins (2005); Presentation by Paul Stanworth (RBS) to the Institute of Actuaries during 2005 Life Convention

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