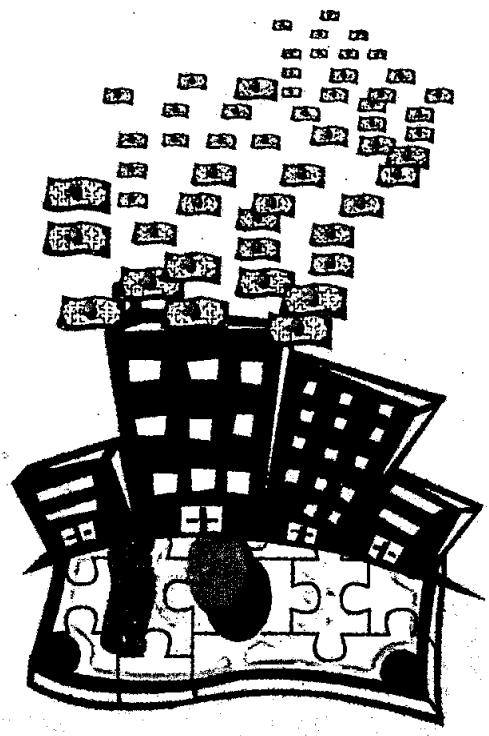
SECURITISATION AND ITS IMPACT ON BANKING BUSINESS

Kyung-Ho Lee



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Published by The South East Asian Central Banks (SEACEN)
Research and Training Centre
Lorong Universiti A,
59100 Kuala Lumpur, Malaysia.
Tel No: 03-7585600
Fax No: 603-7574616
Telex: MA 30201
Cable: SEACEN KUALA LUMPUR

ISBN: 983-9478-07-9

Printed in Malaysia by Graphic Stationers Sdn. Bhd.

FOREWORD

Securitisation is rapidly gaining acceptance in many countries as a positive development for the banking system. The trend towards the securitisation of a wide range of banking assets is opening up alternative sources of funding for banks as well as creating an avenue for strengthening their balance sheets.

Indeed, one of the key lessons that has emerged from the Asian financial crisis is the danger of overdependence of the private sector on bank lending and exposure to foreign capital funding. As a result, the governments of several SEACEN countries are according high priority to the development of the private debt securities market in their policy agenda. Steps are being undertaken to provide the necessary legal regulatory and market infrastructure to promote the growth of securitisation and at the same time to foster prudent management of the risks involved.

This collaborative project on Securitisation and Its Impact on Banking Business in the SEACEN Countries seeks to examine the objectives of securitisation and its implications for monetary management and banking supervision. It is hoped that the findings of this study will contribute to a more orderly development of the private debt securities market as well as to form a basis for further research on the subject. The project was conducted by Mr. Kyung-Ho Lee, Senior Economist seconded from The Bank of Korea, in collaboration with the researchers from Bank Indonesia, The Bank of Korea, Bank Negara Malaysia, Nepal Rastra Bank, Bangko Sentral ng Pilipinas and The Central Bank of Sri Lanka, who contributed the individual country chapters. Mr. Lee wishes to thank Dr. Delano Villanueva, Deputy Director (Research) of The SEACEN Centre, for supervising this project; Ms Seow Yun Yee for research assistance and Mrs. Kanaengnid T. Quah for editorial assistance. He is especially indebted to Mr. Owen Carney of Bank Capital Markets Consulting, U.S.A., for technical assistance and to the SEACEN member central

banks and monetary authorities for their useful comments and suggestions. The views expressed in the report are those of the authors and do not necessarily reflect those of the member central banks or monetary authorities.

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Kuala Lumpur
March 1999

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EXECUTIVE SUMMARY

Securitisation is one of the most remarkable financial innovation of the past two decades. Its rapid growth is attributable to the benefits it brings to various participants. It provides a cost-effective way of funding and better risk management for the originators of securitisation. The investors benefit from an expanded range of investment instruments with greater protection and yields. For the financial system as a whole, securitisation, if properly implemented, enhances efficiency and flexibility of financial resource allocation.

Securitisation has many objectives. One of the original aims is to circumvent the regulatory tax burden of reserve requirement and capital adequacy requirement, as well as the deposit insurance premium. It is also used as a means to diversify loan portfolio and to improve a temporal mismatch of short-term deposit and long-term loan such as mortgage loan. As securitisation essentially pools together assets of different risk exposure and spreads the pooled risks among various participants, it is argued that it offers a better way for banks to manage risk. However, this argument does not imply that securitisation eliminates or even reduces total risk in the system.

Whether securitisation is the major cause of financial disintermediation depends on how one defines the scope and coverage of securitisation. However, it is difficult to foresee that securitisation will completely replace bank lending. Commercial banks will certainly continue to have competitive advantage in screening particularly the small and information-deficient borrowers. In addition, the unpredictable cash flow of certain business activities means that demand for banks' revolving credits will continue unabated. Another important issue of concern is how securitisation impacts the effectiveness of monetary policy. It is argued that if banks increasingly rely on securitisation as a means to raise fund, monetary aggregates could become less reliable as an intermediate target while traditional monetary policy instruments such as reserve requirement and interest rate may become less effective. However, securitisation will reduce the reliability of monetary aggregates only to the extent that the monetary aggregates do not include liquidity originated from securitisation. Also, there has been no evidence that securitisation weakens the relationship between central bank's policy rate and short-term market interest rates. Lastly, whether securitisation of consumer credit will lead to high inflation depends on the proportion of consumer credit in total credit as well as how the proceeds from such securitisation are used.

Along with its various benefits, securitisation brings a potential systemic risk if it is not supported by prudent regulation and supervision, as well as appropriate legal framework and accounting standard. More importantly, it is the banks' own internal management that will be the best protection. To better manage risks, banks must have strong and competent management team, as well as independent internal audit function to provide a check and balance. The move to adopt risk-based capital requirement has been welcome by most market participants as being beneficial to the securitisation market as a whole.

The progress of securitisation in the SEACEN countries lags behind that in the industrial countries. This is partly due to the cautious attitude of some countries in recognition of the inadequate existing financial infrastructure. The recent financial crisis, which has created a high degree of uncertainty over the value of domestic assets, will be an added impediment. However, the crisis has also provided a new possibility as securitisation can be used as a means to solve the problem of non-performing loans. In addition, the potential for securitisation in these countries remains enormous. Policy makers' resolve to develop capital markets through bond and private debt securities can also lead to a spectacular growth of securitisation once the SEACEN economies are back on track.

PART I

SECURITISATION AND ITS IMPACT ON BANKING BUSINESS

Chapter 1

INTRODUCTION

The past two decades have witnessed dramatic changes in the financial environment. The most noticeable are the progress of deregulation and liberalisation and the growing importance of capital markets as financing sources in relation to traditional credit markets. Following globalisation and financial innovation, securitisation is a powerful innovation for financial suppliers to mobilise liquidity through the issuance of asset-backed securities ("ABS") and their transactions in the secondary market. Moreover, the concept of securitisation could be applied to virtually all areas of lending facilities in the banking and non-banking sectors.[1]

Begun as an attractive source of funding for residential mortgage loans in the United States, the progress of securitisation is staggering in that country. The mortgage-backed securities ("MBS") market alone has grown more than ten times in just ten years. The outstanding issuance value rose from less than U$100 billion to more than U$1.5 trillion as at the end of 1995, implying that more than two thirds of all home loans had been securitised. The underlying assets have been extended to consumer loans and commercial loans. Similarly, the non-mortgage backed securities market has grown more than 15 times over the past ten years, recording US$179 billion in 1997. Credit card loans, auto loans, and home equity loans are the major assets being securitised, representing more than two thirds of the total issuance. Specifically, 1997 was marked as the year of Collaterised Bond Obligations (CBOs) and stranded assets. The short-term instrument market, namely the asset-backed commercial paper ("ABCP"), has also shown a dramatic growth since its debut in 1983, amounting to U$152 billion as at the end of 1996.

This popularity of securitisation around the world is due to the benefits it offers to the participants. However, the growth and benefits achieved in the individual country has been uneven, depending on

1. Financial assets securitised during the past two decades include fixed-rate mortgages, adjustable-rate mortgages, second mortgages, home equity revolving lines of credit, auto loans, commercial real estate loans, credit card receivable, equipment leases, mobile home loans, marine loans, recreational vehicle loans, Small Business Administration (SBA) loans, third world debt, and junk bonds.

availability of supporting infrastructure, from effective legal and regulatory system, favourable tax treatment, good accounting practices and rating services, investor community, to culture.

In the SEACEN context, securitisation will have a direct and significant implication for banking business, because bank lending is the dominant source of funding and securitisation is still at its infant or developing stage. Its significance has now magnified many folds in view of the financial crisis experienced by many SEACEN countries since mid-1997. While there is evidence that the crisis is caused partly by the of mismanagement of the economy in these countries, it has also been argued that the crisis was mainly due to the financial institutions' snowballing bad debt originating from the bubble economies. As Krugman pointed out, the financial excess, asset bubbles and over-investment are mainly the outcome of moral hazard and implicit guarantees of bank deposits associated with poor government regulation.[2] Had the financial institutions been more prudent in extending loans and the authorities in undertaking appropriate prudential regulations, the damage to the economies as a whole could have been much less even in the face of drastic currency depreciations. The crisis also indicates the poor state of risk analysis, control, and management in the financial systems of affected countries.

Thus, the need to reform the financial system has become extremely important in the SEACEN countries' current efforts to resume their sustainable growth path. In this regard, securitisation can be a plausible option to meet this need. It enables participants to better manage and control risks which eventually leads to a more stable and less costly financial system. In addition, the decoupling of lending and funding processes enables financial intermediaries to build a competitive advantage through specialisation. Securitisation also enables them to expand their business without a corresponding increase in the capital base. Thus, financial intermediaries will have better credit management with greater transparency, which translates into reduced costs of capital and lending. Overall, securitisation will contribute to improving competitiveness of financial services in the SEACEN countries.

2. In fact, Krugman views that the currency crises are only part of a broader financial crisis and are more a symptom rather than a cause of this malady. See Paul Krugman, "What Happened to Asia?" January 1998.

In the mean time, the needs for due diligence and prudential regulation have increased more than ever. The regulatory concern whether securitisation may turn out to be a destabilising force which undermines the capital adequacy guidelines and causes moral hazard among loan originators is indeed valid. Moreover, supervisory authorities may worry about the insufficient financial infrastructure that is required for successful securitisation. However, if properly managed, securitisation would certainly allow risks to be managed more efficiently. It would also reduce low-skilled, excess lending capacity in an orderly fashion, leading to a less costly and more stable financial system.[3]

This study basically takes a pedagogical approach with a view to better understand this new financial innovation. Apart from reviewing the present status of securitisation, it assesses the impact of securitisation on the structure and stability of the financial system as well as its implications for monetary management and regulatory policy. In view of the recent financial crisis, it would also be worthwhile to examine ways to apply securitisation as a useful tool for restructuring the financial intermediaries.

3. Rosenthal, James A. and Juan M. Ocampo, "Securitisation of Credit: Inside the New Technology of Finance," McKinsey & Company, Inc., 1988, pp.13~23.

Chapter 2

OVERVIEW OF SECURITISATION

2.1 Definition

In the broadest sense, securitisation refers to a trend towards using financial assets as securities rather than loans.[4] This definition basically looks at a phenomenon of financial disintermediation. The term securitisation had been widely used in this sense in the early to mid-1980s, when sovereign entities or private corporations increasingly issued debt securities as a substitute for bank credit. Issuance of commercial papers is a typical example.

More recently, however, securitisation is used in a more narrow sense to refer to a structured process of raising funds through the issuance of marketable securities backed by future cash flow from income-producing assets.[5] It can also be defined as the process of repackaging predictable cash flows into debt instruments that are the obligations of a bankruptcy-remote borrowing vehicle.[6] Defined more technically, securitisation is a process of packaging a pool of individual loans and other debt instruments, converting it into a security or securities with credit enhancement, and offering it for sale to third-party investors.[7] Similarly, securitisation has been used to describe operations in which the cash flows from specific assets are isolated from the balance sheet of the originating institution and used to support marketable securities.[8]

Despite these subtle differences, a typical securitisation process can be described as follows. A bank which extended loans packages a pool of those loans and transfers that pool to a specially created

4. Lowell L. Bryan, "Breaking up the Bank", Dow-Jones Irwin, 1988, p66.
5. Everette D. Hull, "The Complete Story on Securitisation of Bank Assets," *The Journal of Commercial Bank Lending*, Nov. 1989, p20.
6. John Henderson, ed. "Asset Securitisation: Current Techniques and Emerging Market Applications," ING Barings, 1997, p169.
7. Leon T. Kendall, "Securitisation: A New Era in American Finance," in "A Primer on Securitisation," The MIT Press, 1996, p1.
8. John K. Thompson, "Securitisation: An International Perspective," OECD, 1995, p15.

conduit called special purpose vehicle (SPV). The loans are then used to secure the issuance of securities by the SPV, which are called asset-backed securities. Investors buy the securities and receive principal and interest payments as the loan pool is paid off.

No matter how it is defined, securitisation should involve the following elements. First, there should be a literal conversion of loans into securities; second, the securities issued are not backed by the expected capacity of a private corporation or public sector entity to repay, but by the expected cash flows from specific assets.

At the outset, we need to clarify some terminology relating to securitisation because the same terminology used in various literatures often has different meanings. In general, the term "asset securitisation" is used interchangeably with securitisation to include any financial activity that raise funds by issuing securities backed by various types of assets. "Loan sales" is another term often found in literature of securitisation. Although the two terms are interchangeably used in some occasions, a distinction should be made. First, securitisation involves alteration of cash flows as well as properties of underlying assets, whereas loan sales do not, but merely transfer the ownership of the loan portfolio from the originator to others. As a consequence, the original loans are converted into securities tradable in the capital market with securitisation, whereas loan sales refer to the transfer of the asset from one bank to another without any qualitative transformation. Second, unlike securitisation, loan sales do not usually require guarantees, insurance, or explicit credit enhancement, except that a portion of the loan retained by the originator or the recourse clause functions as credit enhancement. This is because loan sales typically involve banks dealing with each other that are capable of assessing the risks involved and ensuring adequate monitoring, while securitisation involves smaller investors who must be reassured through recourse so that adequate monitoring can be provided.[9] Nonetheless, the existence of the recourse clause in the contract significantly changes the nature of both securitisation and loan sales in the sense that loans can only be removed from the originator's balance sheet if they are 'without recourse'.

9. Stuart I. Greenbaum & Anjan V. Thakor, "Contemporary Financial Intermediation", The Dryden Press, 1995, pp. 431~436.

Similar confusion may arise in distinguishing "off-balance sheet securitisation" from "on-balance sheet securitisation" depending upon whether a particular securitisation transaction is eligible for off-balance sheet treatment. However, this distinction is only valid and useful when we distinguish traditional securitisation from narrowly defined securitisation. Traditional securitisation generally refers to mortgage-backed bonds (MBBs) and communal bonds[10] that do not employ the SPV and are typically on-balance sheet transactions. They have been in existence in many European countries, especially in Germany, for several decades. With on-balance sheet securitisation, the originator typically issues bonds backed by mortgage loans it granted and the issue is booked as liability on the balance sheet. The investors of mortgage bonds do not hold a claim against specific assets but against the issuing institutions. Hence, the originator still retains credit risks of the underlying loans, but can only avoid market risks characterised by maturity mismatch by transferring them to the investors. On the contrary, off-balance sheet securitisation generally refers to the sale of loans to the SPV, which enables the originator to significantly reduce the credit risks by transferring them to other participants including the investors and credit enhancers. The investor's claim is not on the issuer but on the cash flows of receivables securitised. Obviously, the advantage of off-balance sheet treatment, which is the major driving force behind this financial innovation, cannot be achieved in the on-balance sheet securitisation such as MBBs. However, this distinction might be misleading in the modern context of securitisation. Although securitisation in a narrow sense implies off-balance sheet securitisation, off-balance sheet treatment in reality is subject to various kinds and levels of recourse as well as accounting practices governing the recourse provisions, which differ from country to country.

In the mean time, modern banking theory often distinguishes "disintermediation or a true sale type securitisation" from "off-balance sheet type securitisation", depending upon whether the originator continues to monitor the borrowers. The former may refer to direct financing through the capital market in a broad sense, but in the securitisation context, it may also refer to loan sales without recourse. In this type

10. In Germany, the communal bonds are supported by receivables from public sector entities such as local authorities, and Federal Government entities. John K. Thompson, "Securitisation: An International Perspective," OECD, 1995, p81.

of securitisation, investors directly finance borrowers and use the bank as an agent to originate and structure the credits. Thus, a true sale type securitisation does not require further monitoring. On the other hand, the off-balance sheet type refers to securitisation in which a bank continues to service and monitor the sold loans as if they remain on the balance sheet. This type of securitisation generally involves loan sales with recourse. Although the boundary between the two types is not clear-cut, the distinction is very important because of the different empirical implications.[11]

It should be noted that the previous notion of off-balance sheet securitisation, as opposed to on-balance sheet securitisation, merely looks at the technical accounting aspects, whereas off-balance sheet securitisation, as opposed to a true sale type securitisation, focuses on theoretical aspects of a bank's role as a financial intermediary. Unless specified, the former will represent off-balance sheet securitisation throughout this study. To avoid confusion, more specific terms such as loan sales with or without recourse will be used when necessary. As will be discussed in detail later, the development and changes in accounting practices with respect to securitisation reflects efforts to accommodate the market trend as well as to address the technical issue of off-balance sheet treatment.

2.2 Basic Structure and Parties Involved

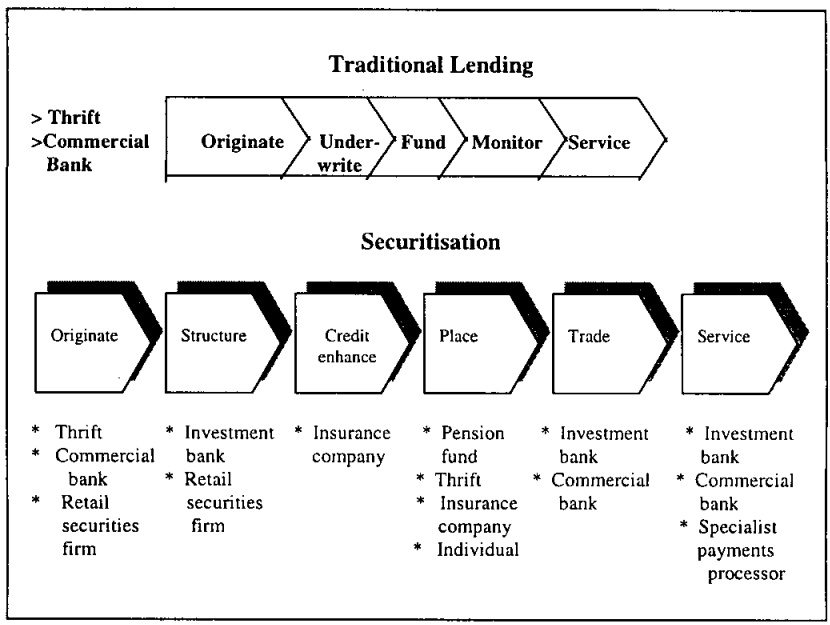
In traditional lending, the role of a lending bank encompasses origination (including underwriting), guaranteeing, monitoring, servicing, and funding. Securitisation breaks down and segregates these functions to be undertaken by many different parties. A critical departure of securitisation from traditional lending is funding. A bank may still originate loans, but will not fund them any more. It may sell off the loans from its balance sheet, or use a different mode of funding by converting loans into securities.[12] This conversion requires a careful

11. Allen N. Berger and Gregory F. Udell, "Securitsation, Risk and the Liquidity Problem in Banking," *Finance and Economics Discussion Series,* Board of Governors of Federal Reserve System, Dec. 1991, pp2-3.

12. Thus, it can be said that securitisation is a hybrid form of financing that combines the features of the traditional credit system and the securities system. Lowell L. Bryan, "Breaking Up the Bank", 1988, p66.

process of structuring, which includes the explicit underwriting and absorption of credit risk, usually through credit enhancement, and the use of SPVs. Loans originated by a bank are transferred to the SPV which is established for the sole purpose of purchasing the loans and issuing to the investors' debt securities or certificates. The issuance of debt securities technically requires placing securities with the investors, trading in the secondary market, and servicing the underlying loans, which can be undertaken by different institutions. Figure 2.2.1 shows how securitisation segregates the all-encompassing role of a lending bank into distinct functions that allow different parties to undertake.

Figure 2.2.1
Breakdown of Roles under Securitisation



Source: Lowell L.Bryan (1988), p.71.

Securitisation has also grown out of efforts to match diverse and specific financial needs of borrowers, investors, and financial intermediaries. As such, it is designed and structured to accommodate those needs. Thus, it is not easy to stylise the structure of securitisation that covers a wide range of loans and receivables. Its structure usually relies on the type of assets securitised. Nevertheless, we start with an illustration of a typical structure and parties involved as follows:[13]

The transaction starts with a financial agreement between a *borrower/obligor* and a *lender/originator*. The borrower is obligated to make payment on a receivable whereas the originator generates receivables through making loans, selling goods or services on credit, and providing financing for the acquisition of goods or services. The originator pools receivables of similar nature together and sells them to the special purpose vehicle.

The pooling is a critical part of the securitisation process in order to reach a minimum size necessary to justify the issue of public securities. Also, while the credit risks of individual receivables may remain high, their pooled portfolio tend to have lesser risks through the Law of Large Numbers.

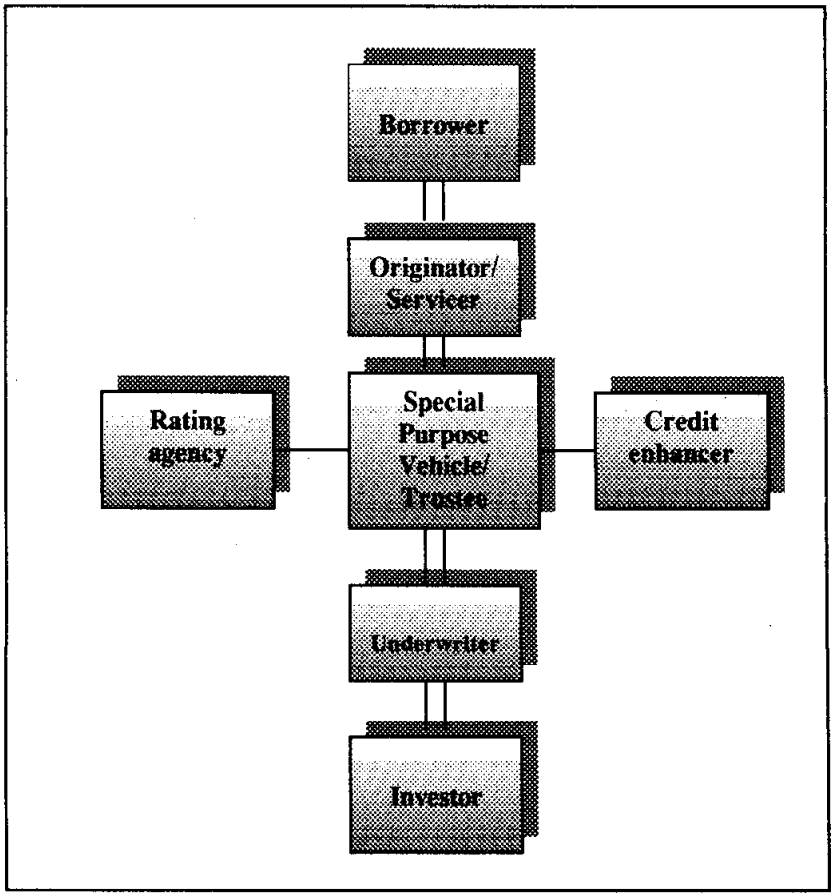
The *special purpose vehicle (SPV) /issuer* is a conduit established with limited purpose, which is generally the acquisition and financing of receivables. The SPV acquires receivables from the originator and issues and sells securities backed by those receivables. The SPV is generally not authorised to incur liabilities or engage in business except in ways that are necessary for the process of securitisation.

Since the creation of SPV is the most distinctive feature of securitisation compared to traditional loan sales or participation in which originator is directly related to the investors, this will be further discussed later in this chapter.

The *adviser/arranger/underwriter* is responsible for advising the originator, or the issuer in some cases, on how to structure the security, and for pricing and marketing it to investors. Although the term under-

13. Since securitisation is the most developed and advanced in the U.S., the analysis of its structure in this paper is modeled after the U.S. experience.

Figure 2.2.2
A Basic Structure of Securitisation



Source: Leon T. Kendall, et al (1996)

writer is often used interchangeably with adviser, it should be distinguished from an underwriter in public or private offerings of debt instruments or equity stocks in which the underwriter is obliged to accept the unsold issues on its own account. Most often, an investment bank performs this role by teaming up with legal advisers and accounting advisers. These professionals review all aspects of securitisation in order to confirm its feasibility, a usually long and costly process. The role of the adviser stands out when the structure requires repackaging of cash flows, in which the adviser tailors the cash flows of different

tranches with varying maturity to appeal to particular investor preferences.

The (third party) credit enhancer provides facilities that absorb and thus minimize the credit risks for investors. Credit enhancement is one of the most important functions involved in securitisation. With the back-up of the credit enhancer, asset-backed securities can obtain a certain level of required credit rating from rating agencies, which is critical to attract the investors. Typical credit enhancers include banks, insurance companies, government agencies, and supranational institutions. As a general rule, the credit rating of third-party credit enhancers must be at least as high as the rating sought for the security. Credit enhancement can be provided either internally or externally, or both, depending on the desired credit rating of the security issued. The letter of credit (L/C) and surety bonds are the most typical forms of external enhancement. On the other hand, internal enhancement is built into the securitisation structure, typically in the form of senior/subordinate structure.[14]

The rating agencies assess the likelihood that the security will pay principal and interest according to the terms of trust agreement. In other words, they evaluate the credit quality of the securities. It should be noted, however, that they focus mainly on the credit risk, not the market value risk arising from interest rate fluctuations and prepayments nor the suitability of an investment for a particular investor. Ratings are very important in structured financing like securitisation because investors generally use these ratings instead of conducting a due diligence investigation of the underlying assets and the servicer by themselves. Such agencies are considered to possess the expertise to evaluate the various types of underlying assets and do not have any financial interest in the security.

The investors are attracted to asset-backed securities because they not only offer a greater level of protection but also provide higher rate of return than traditional debt securities of comparable credit risk. A wide range of investors who increasingly prefer asset-backed securities include the usual investors of debt instruments (pension funds, insur-

14. This will further be discussed later in this chapter.

ance companies, commercial banks, and other investment funds and, to a lesser degree, corporate treasuries and retail investors). Indeed, securitisation has evolved in line with continued efforts to satisfy investors' preferences with respect to credit quality, yield, maturity, and instrument. The table below shows this by broadly categorising the types of instrument and maturity according to investors' preferences.

Table 2.2.1
Simplified Classification of Investor Preferences

Maturity	**Short**	**Medium**	**Long**
Average life (years)	up to 2 years	2-5 years	5-30 years
Instrument	Commercial paper Medium term note	Bank loan Notes	Notes/bonds Private placements
Investors	Banks Corporates Funds	Banks Insurance companies	Insurance companies Pension funds

Source: John Henderson (1997), p 12.

The *trustee* is a third party that administers the trust on behalf of investors as beneficial owners of the trust. Its major responsibility is to ensure that the underlying assets produce adequate cash flows to service the securities throughout the life of the transaction. In general, it receives and reviews periodic financial information from the servicer and monitors compliance with respect to obligations and performance of all parties associated with the security, particularly the servicer and the credit enhancer. The trustee is also responsible for declaring an event of default or amortisation, as well as replacing the servicer if it fails to comply with the required terms. In fact, the trustee features prominently in many financing arrangements.

The *servicer/administrator* is responsible for continuing to collect payments on the receivables, notifying delinquent obligors, foreclosing on collateral if any, performing data processing functions, preparing periodic reports to investors and rating agencies, and taking other actions to collect interests and principals from the receivables. The

originator or an affiliate of the originator usually, but not always, functions as the servicer due to its familiarity with the receivables and their obligors. The originator can maintain customer relationship even after securitising the loans they have originated through continued servicing.

Though not directly involved in the securitisation transaction, the regulators play a very important role. There are two major categories of regulators: those who supervise and regulate the originators - including the central bank and other financial supervisors and regulators; and those who oversee security market - such as the securities commissions and the stock exchanges. For the former, a primary concern is that securitisation should not undermine prudential supervision especially for capital adequacy. For the latter, disclosure of relevant information and classes of investors and securities are their major concerns.

2.3 Benefits of Securitisation

The success of securitisation, as we will see in the next section, is attributable to benefits it provides to various participants. The ***originator*** perhaps is the greatest beneficiary of securitisation. Through securitisation, the originator can (i) access a cost- effective source of funding as an alternative to the traditional sources of deposit and borrowing, (ii) eliminate the interest rate risks and thus better manage its balance sheet, (iii) utilise capital more efficiently, and (iv) enjoy a fee-based income while maintaining customer relationship.

How the originator has access to a cost-effective and an alternative source of funding can be explained from several perspectives. First, a financial intermediary whose credit risk is not as high as an AAA rating, at a single A rating for example, may hold high quality loans whose risk rating is lower than the institution's. If it funds the loans from borrowing, the borrowing cost will be assessed on the basis of the intermediary's overall credit rating, a single A in this case. However, if it pools the high quality loans and issues a well-structured security backed by them, the asset-backed security can be rated as high as AAA and hence significantly save total borrowing cost even after allowing related securitisation costs including legal fees, investment banking fees, rating agencies' fees, credit enhancement fees, and costs of communicating information to investors. Although securitisation involves

substantial set-up costs for the first time issuer, the costs will subsequently decrease with new transactions.

Second, securitisation can also appeal to originators of AAA rating by enabling them to increase lending without incurring additional capital that is costly due to capital adequacy requirements on top of dividends they have to pay to shareholders. To the extent that loans are removed from their balance sheets, they can enjoy improved returns on capital and are able to relocate the matching capital for new loans. Assume consumer loans with historical loss rate of 1 percent and the capital adequacy ratio of 8 percent. If the originator securitises the loans off-balance sheet, the actual cost of credit enhancement will not exceed 5 percent which is more than sufficient to cover the historical loss. Hence, it can significantly save on the cost of equity capital even taking into account fees incurred in the issuance of security.[15]

Third, even on-balance sheet securitisation can be more cost effective for funding than deposit. Assume a bank in need of additional fund for more mortgage loans with interest rate of 13 percent. To raise additional funding, it may have to increase the savings deposit rate from 8 percent to 9 percent. Alternatively, it could issue mortgage-backed bonds (MBBs) at 10 percent. The marginal cost of issuing MBBs may be less than that of deposit funding because the new higher interest rate will have to apply to both the new and the existing savings, while it has only to issue MBBs for the required amount.[16] This extreme example well demonstrates the idea that securitisation can be a useful tool for matching source and usage of fund.

Fourth, avoiding regulatory- or intermediary- taxes such as reserve requirement, deposit insurance premium, and capital adequacy ratio is a major factor contributing to cost saving. Since the proceeds from the sale of loans are not classified as deposit, they are not subject to reserve requirements or deposit insurance. By removing loans from the balance sheets, they no longer have to hold equity capital against the sold loans. Along with increasing competition among intermediaries for

15. Lowell L. Bryan, ibid, pp. 82~83.

16. Christine Pavel, "Securitisation," *Economic Perspectives,* FRB Chicago, 1986, p23.

deposit taking, tightening regulatory requirements have compelled banks to focus more on securitisation. Many analysts point to this as one of the major motives for banks to securitise their assets. This will be discussed further in the next chapter.

Fifth, cheaper cost of funding can result from better management of risk and new investor base with higher credit quality but longer maturity. The credit risks can be diversified through pooling of receivables, making securities backed by this pool of receivables much less risky. As such, they become more attractive to the investors as well as credit enhancers who are willing to take over those risks.

For depository intermediaries such as thrifts which source their funding from deposits with maturity of less than three years and provide mortgage loans of more than ten years maturity, securitisation enables them to eliminate or reduce interest rate risk arising from such maturity mismatch. As will be discussed later, an originator can transfer interest rate risk as well as credit risk to the investors by a pass-through structure. Some types of securitisation such as Collateralised Mortgage Obligations (CMOs) restructure the cash flows of underlying assets into several tranches with different maturity, which meet diverse investor needs, and significantly reduce interest rate risks. Financial intermediaries may purchase asset-backed securities of particular maturity in such a way that the average life of assets matches the average life of liabilities. They may securitise assets with certain interest rate and switch to other type of assets for the purpose of hedging against interest risk. They may sell off undesired assets through securitisation in order to improve the balance sheet. Thus, securitisation is a useful tool of asset-liability management.

Securitisation also enables the originators to make use of capital more efficiently because, as mentioned earlier, they can extend more loans without increasing the capital. Table 2.3.1 illustrates how securitisation enhances the efficiency of capital, measured by a ratio of debt to capital. The originator creates the SPV and provides the capital out of its own. Since the SPV has no idle asset, its has only to maintain minimum effective capital to support its yielding assets. As the originator restores the pre-securitisation debt/capital ratio in its balance sheet after securitisation, the combined debt/capital ratio of the originator and the SPV rises above the pre-securitisation level.

Table 2.3.1
Efficient Use of Capital under Securitisation

Financial institution balance sheet	Before securitisation	Post-securitisation (immediate)		Post-securitisation (with new business)	
		Balance sheet	SPV	Balance sheet	SPV
Assets	100	49	51	89	51
Debt liabilities	91	41	50	81	50
Capital	9	8	1	8	1
Debt: capital ratio	**10.1X**	5.1X **Combined: 10.1X**	50X	10.1X **Combined: 14.6X**	50X

Source: John Henderson (1997), p7.

As far as profitability is concerned, the originator can earn substantial fee income as well as maintain customer relationship by servicing the customers even after the sale of loans. Depending on the roles that banks assume, fee income from underwriting, credit enhancement, and others could offset the foregone interest rate margin. The off-balance sheet treatment could also increase returns on asset and equity. This could be done without compromising the profitability because the originating banks can increase the lending base without additional capital.

For the ***investor,*** securitisation offers an expanded range and volume of investment instruments with greater risk protection and higher yields. As securitisation develops, there will be an increasing supply of new, high-grade, liquid instruments of diverse maturity. The investors will have more AAA-rated, one-year and longer papers to choose from other than government bonds or commercial papers issued by AAA-rated companies. This will serve the diverse needs of investors, even the more conservative ones. Also, compared with traditional securities, asset-backed securities are better protected from the event risks that the originator's credit quality may deteriorate. This is made possible through deliberate structuring which includes establishment of bankruptcy-remote SPV, careful segmentation of cash flows into different tranches to satisfy diverse investor needs, and credit enhancement to achieve credit ratings higher than those of the originator. Yet, it may be argued that

this assessment is too optimistic taking into account a substantial spread between the yield the investors get and the borrowing cost the obligors bear. But the truth is that investors are willing to give up a substantial portion of the spread in return for greater liquidity, and for more transparent credit risks that are shared with other participants. Another benefit to the investors is a potential profit from trading in the secondary market.

The ***obligors,*** who are often unaware that their loans have been securitised,[17] benefit from lower cost of borrowing as well as increased availability and variety of funds. In fact, experiences from the US and elsewhere show that the spread of issuing both MBS and ABS to benchmark rates has been decreasing.[18] As a matter of fact, the benefit of lower cost to obligors roots from benefits to the originator. Since securitisation provides originators with cheaper source of funding, obligors will pay less for borrowing as well. With more assets being securitised, lenders also become capable of extending more loans without jeopardising their balance sheet positions. As the lending market environment becomes more competitive, more innovative financial products will be made available with more attractive terms. Especially for the corporate borrowers, securitisation offers greater managerial flexibility in terms of both strategic and operational planning. In comparison with traditional loan agreements under which restrictive covenants limit the discretion of the corporation and its management, securitisation does not impose such restriction.

Other participants such as credit rating agencies, guarantors, legal and accounting advisors, and structurers all earn fee income. As for guarantors, credit enhancement fee usually is a multiple of expected credit losses based on historical performance. Let's assume a commercial bank participated in a securitised deal as a guarantor instead of extending a loan itself. Given the expected loss of 1 percent for high-quality loan, a guarantee of 3 percent to 5 percent will be more than sufficient, and the bank can earn this margin without extending the

17. Whether the consent of the borrower is required to facilitate securitisation varies form one jurisdiction to another, which will be discussed later in this chapter.

18. Even in the late 1980's, the U.S. home buyers paid about 100 basis points less in interest on mortgages than they had paid in 1970's. James A. Rosenthal, et al, "Securitisation of Credit", McKinsey & Company, Inc., p12.

loan. It is noteworthy that regulators, who are not directly involved in the transaction, also benefit from securitisation. First, banks' capital tends to be deployed in a way that covers risk more efficiently. Expensive and scarce capital can be earmarked to cover segregated risks on specific assets. Second, incompetent banks that have been accustomed to low-skilled, excess capacity lending practice can no longer survive from intense competition. Third, the burden of having to allocate public capital in case of catastrophic events can be greatly reduced because the greater protection offered by securitisation comes primarily from private capital. Nevertheless, these benefits may never be realised unless securitisation is properly managed. This is quite a legitimate concern because of the moral hazard problem that the originator may be tempted to loosen credit discipline. The effectiveness of regulatory tools such as capital adequacy guidelines might also be undermined. This will be discussed further in the following chapter.

Overall, the ***financial industry*** in general can also enjoy greater efficiency, flexibility, and responsiveness through specialisation and increased competition. As the financing breaks up into discrete functions to be carried out by separate specialists, financial and non-financial institutions can sharpen their competitive advantage through specialisation. Risks, though not entirely disappear, will be shared among participants in a reasonable fashion. Financial institutions as originators will be encouraged to perform and maintain best practices through proper documentation and risk control. In sum, securitisation provides an efficient tool for risk-adjusted capital allocation.

2.4 Evolution of Securitisation

Securitisation has flourished in the past decade due to the benefits it offers. It has evolved in accordance with the market players' efforts to satisfy the needs of investors and originators as well as legal, accounting, and tax requirements. A number of new financial instruments have been innovated with the legal and regulatory framework being modified to accommodate them. Innovation is still under way to securitise assets which were once deemed impossible to be securitised, as well as to create new structures that address existing infrastructural concerns. Virtually all types of assets can be securitised in the future.

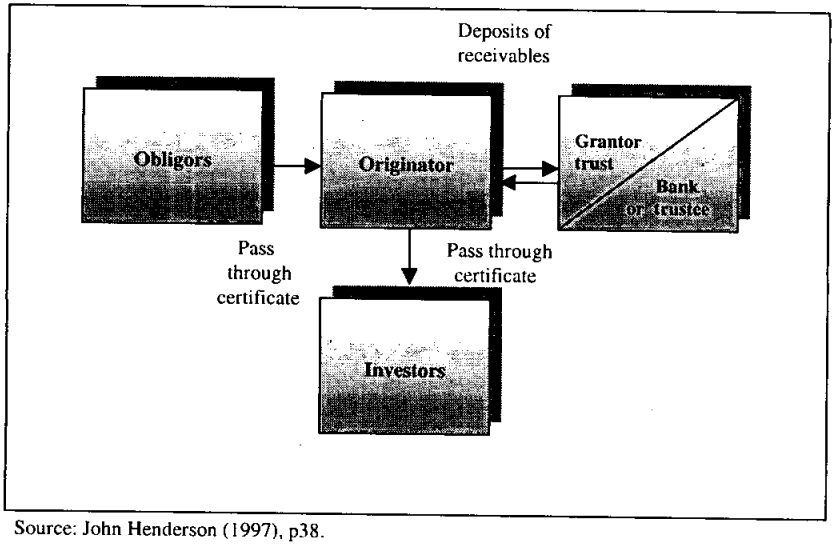
The following section will review the various types of securitisation. Broadly speaking, securitisation in the U.S. tends to evolve from the mortgage-backed securities (MBS) to the asset-backed securities (ABS) as well as from pass-through to pay-through and eventually to new structures that can accommodate both pass-through and pay-through, namely the Real Estate Mortage Investment Conduit (REMIC) and the Financial Asset Securitisation Investment Trust (FASIT).

The *mortgage-backed securities (MBS)* and asset-backed securities (ABS) are generally the commonest and broadest type. By convention, the ABS refers to any securitisation transaction backed by assets or receivables other than mortgages.[19] As more and more assets have become securitised, it might be meaningless to segregate the types of securitisation under such a broad category. An illustrative but by no means exhaustive list of asset classes includes: agricultural equipment receivables; aircraft leases; arrears mortgages; auto loans, leases, and hire-purchase(or instalment) contracts; commercial and office equipment leases; commercial mortgages; computer leases; computer service contracts; unsecured consumer loans; corporate loans; credit card receivables; floor plan loans for auto dealers; franchise loans; future export receivables; healthcare receivables; home equity loans; home improvement loans; insurance premium loan receivables; manufactured housing loans; marine loans; oil and gas contract receivables; property rental and income streams; railcar leases; residential mortgages; small business loans; student loans; timeshare loans; toll road receivables; trade receivables; and, utility receivables.[20] Existing bonds or loans can also be securitised through repackaging them into new securities, which are respectively termed as collateralised bond obligations (CBOs) and collateralised loan obligations (CLOs).

19. In the literature, however, the term ABS is occasionally used in a broader sense encompassing MBS.

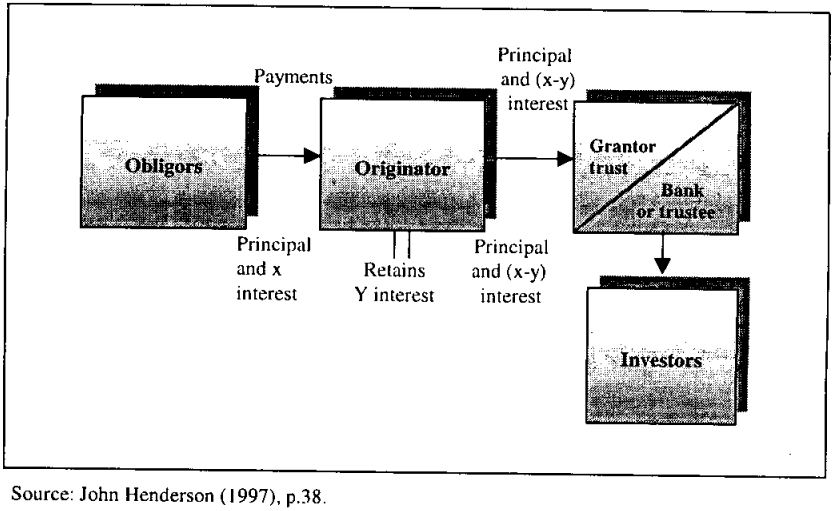
20. John Henderson, ed. "Asset Securitisation: Current Techniques and Emerging Market Applications," ING Barings, 1997, pp50-51.

Figure 2.4.1
Pass-Through Structure



Source: John Henderson (1997), p38.

Figure 2.4.2
Cash-Flow in Pass-Through Structure



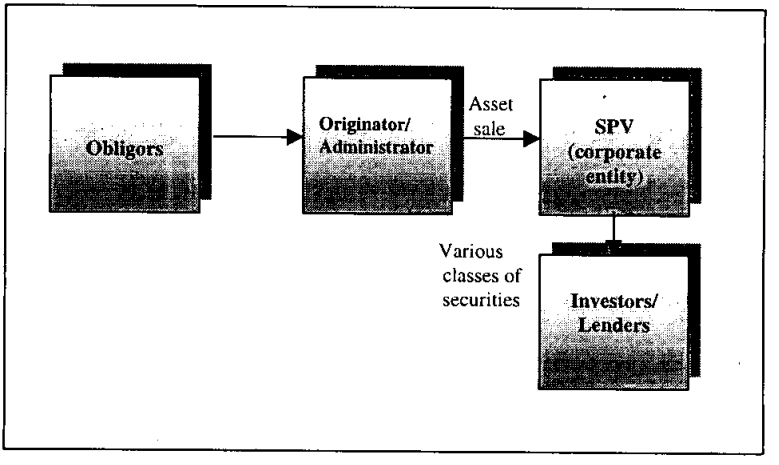
Source: John Henderson (1997), p.38.

Another popular set of classification includes a *pass-through* and a *pay-through,* depending on the nature of the instruments, i.e. equity or debt. In the pass-through structure, a loan originator constructs a portfolio by pooling them, and places it in a trust in exchange for certificates representing pro rata ownership interest or equity share of the portfolio. The trust typically takes the form of grantor trust and issues certificates to the originator. Certificates of ownership are then sold to the investors. Ownership of the underlying assets thus lies with the certificate holders, not the originator or the issuer; thus, the portfolio no longer appears on the financial statement of the originator while the subsequent cash flows belong to the investors. The originator services the portfolio and collects principal and interest, passing them on, less a servicing fee, to the investors through the trust; hence the name "pass-through."

The pay-through structure is different from the pass-through structure in many respects. First, debt securities are issued as opposed to equity shares, hence interest payments are made on a semi-annual basis. Second, the issue of debt obligation is usually divided into several classes. Third, the cash flows from the underlying asset portfolio are restructured to accommodate the needs of investors in each class. Each class of bonds retires in a sequential order from the shortest maturity to the longest. All principal payments are dedicated to the first class of bonds until they retire completely, after which the principal payments will be dedicated to the second class and so on. Typically, the legal form of the SPV in the pay-through structure can either be a corporation wholly owned by the originator or owner trust.[21] The SPV purchases the receivables, restructures the cash flows, and issues multi-class debt securities which are sold to the investors. Although cash flows from the receivables are not owned by or passed on to the investors, they are still dedicated to the investors after a proper prioritisation. On consolidation basis, the issuance of securities and underlying loan portfolio remain on the originator's balance sheet. However, the pay-through structure has advantages over the pass-

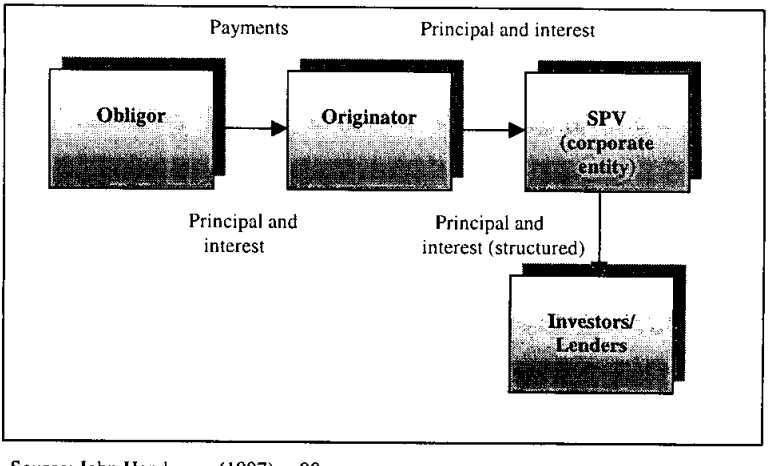
21. When the first pay-through bond called a collaterised mortgage obligation (CMO) was issued, the grantor trust status was not rendered to the SPV because it issues multi-class claims that divide the cash flows in a non-pro rate fashion. Also, the latter used to be preferred for tax purposes.

Figure 2.4.3
Pay-Through Structure



Source: John Henderson (1997), p39.

Figure 2.4.4
Cash-Flow in Pay-Through Structure



Source: John Henderson (1997), p.90.

through structure in its flexibility to issue debt securities with multiple maturity, payment ranking, and separation of principal and interest payments. Most recent securitisation transactions seem to revolve around the pay-through structure, albeit with a higher degree of sophistication.

The pay-through is often considered as a hybrid combining some features of the pass-through with some of the mortgage-backed bond (MBB)[22]: dedication of the cash flows to the investors for the former, and the issue of debt securities for the latter. The MBB is a debt obligation of the issuer, usually the wholly-owned subsidiary of the originator, collateralised by a portfolio of mortgages itself or portfolio of mortgage pass-through certificates.[23] Although the receivables serve as collateral, the cash flows from the receivables are not dedicated to the payment of principal and interest on the MBB. This is due to the nature of bond, in which the principal and interest payments from the receivables accrue to the issuer rather than to the pool of mortgage. Moreover, interests are usually paid first while the principal is not paid until the final maturity or calling of the bond.

Under the MBS category, the first **pass-through** certificates were issued in February 1970 as the Government National Mortgage Association (GNMA or Ginnie Mae) guaranteed the issues which were collateralised by the Federal Housing Administration (FHA) and the Veterans Administration (VA) single-family mortgage loans originated by commercial banks and thrifts. Ginnie Mae is a Federal Government agency established in 1968[24] for the purpose of guaranteeing principal

22. The MBBs are more of traditional debt securities than securitisation activities when securitisation is defined in a narrow sense. The advantage of off-balance sheet treatment cannot be achieved in the MBBs because bonds are issued by the originators as their own debt obligations.

23. The MBBs were usually overcollateralised because: (1) it was likely that the outstanding balance of mortgage pool might decline faster than the principal on the MBBs due to the fact that the cash flows accrue to the issuer rather than to the bondholders; (2) overcollateralisation provided better protection against default risk as well as collateral depreciation over time. Christine Pavel, "Securitisation," *Economic Perspectives*, FRB Chicago, 1986, p18.

24. The GNMA actually inherited the old Federal National Mortgage Association (FNMA) which was first established in order to facilitate the secondary mortgage market by purchasing and reselling mortgages under the National Housing Act in 1938. In 1968, the old FNMA was split into the GNMA and the new FNMA which was rechartered as a privately owned corporation. John K. Thompson, "Securitisation: An International Perspective," OECD, 1995, pp 119-120.

and interest payments on securities collateralised by the FHA and VA mortgages. Ginnie Mae's primary role until recently has been to swap certificates for loans from the originators and guarantee the resulting pass-through certificates rather than to buy loans directly. Since typical Ginnie Mae certificates were issued by the originators without recourse and solely dependent on guarantee by Ginnie Mae, the originators had no obligation for the payments of principal and interest in the event of default.[25] The Ginnie Mae certificates share the similar risk characteristics with the Treasuries, but the cash flows are significantly different from those of the Treasuries.

Mortgage-Backed Securities (MBS)

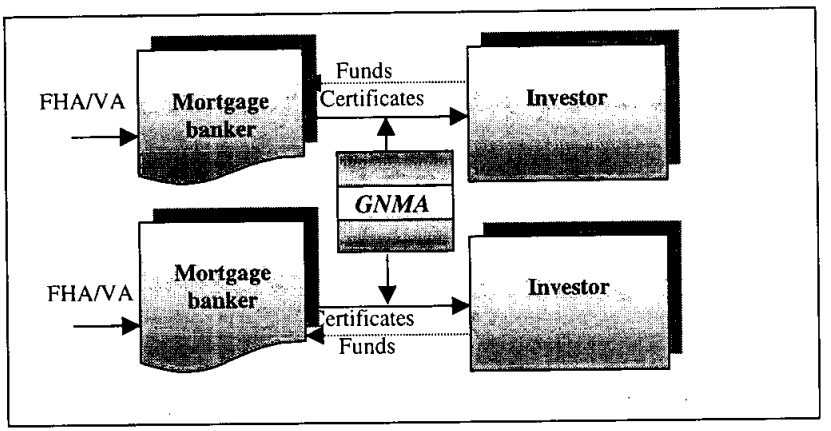
In 1971, similar pass-through certificates, known as participation certificates (PCs), were issued by an indirect agency of the federal government, the Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac), established in 1970. Unlike Ginnie Mae pass-through, Freddie Mac purchased mortgages from the originators and issued PCs collateralised by the purchased mortgages. The originators service the mortgage loans for fees. Another indirect agency of the federal government, the Federal National Mortgage Association (FNMA or Fannie Mae), issued its first MBS in 1981,[26] which is not much different from the PCs. Freddie Mac and Fannie Mae are allowed to purchase conventional loans[27] for their portfolio directly from the primary lenders as well as to swap MBS for mortgage loans with the primary lenders.

25. It requires certain conditions for the originators to be eligible for guarantee from Ginnie. For example, mortgage loans must be insured by the FHA or guaranteed by the VA, and eligible mortgages include single to four-family residential mortgages with fixed amortisation. A pool must be composed of homogeneous mortgages in terms of interest rate and type, which was, however, subsequently relaxed to include mortgages originated by various institutions with different interest rates in GNMA II pass-throughs.

26. Until this time, Fannie used to buy and hold mortgage loans, which was funded through issuing debt directly in the capital market instead of issuing MBS. "Introducing Fannie Mae," Fannie Mae, p5.

27. Refers to loans without FHA insurance or VA guarantees.

Figure 2.4.5
Structure of Ginnie Mae Pass-through Certificates



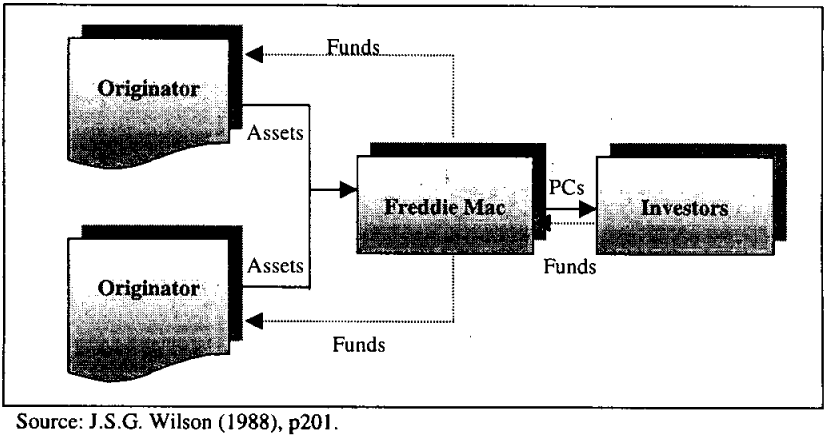
Source: J.S.G. Wilson (1988), p201.

Because of the government guarantee, investors of these securities or certificates face virtually no default risk. Furthermore, government-related securities enjoyed various tax favors. For instance, they were exempted from both registration and public disclosure requirements set under the Securities Act of 1933 and Securities Exchange Act of 1934. Initiated under the government programme, the agencies' scope of business was limited to residential mortgage markets. Their presence and key role in the secondary mortgage market, however, helped the primary lenders to obtain additional funds with which the originators were able to make more loans to home buyers. It should also be noted that the pass-through certificates issued by these agencies do not typically involve the SPV, which is evident from comparison among Figure 2.4.1, Figure 2.4.5, and Figure 2.4.6. As securitisation techniques have evolved over time, the agencies in effect purchase mortgage loans from thrifts, package them into a pool, issue and guarantee pass-through certificates, function in its capacity as trustee, and service mortgage loans.

The first private sector pass-through was issued by the Bank of America in 1977, which were backed by conventional mortgages instead of residential mortgages popular to government agencies. More

importantly, it employed the grantor trust as an SPV, because, unlike government related pass-throughs, private placement of securities required tax and legal considerations related to transfer of mortgage loans.

Figure 2.4.6
Structure of Freddie Mac PCs



Source: J.S.G. Wilson (1988), p201.

One of the significant limitations of the pass-through certificates, however, is that the payments of interest and principal for the certificates are closely or passively tied to the underlying loans' payment stream. The problem arises when the borrowers prepay their debt before the due date, which normally happens when interest rates are falling because they can refinance at the lower rate. The investors are thus exposed to prepayment risk, and it is difficult for them to accurately predict the average life of the underlying assets, which is in turn critical to the assessment of the expected yields. Another limitation is the so-called single maturity limitation especially for a grantor trust which is not allowed to allocate principal payments to different classes of certificates and thereby is unable to create securities with different maturity out of the underlying receivables.

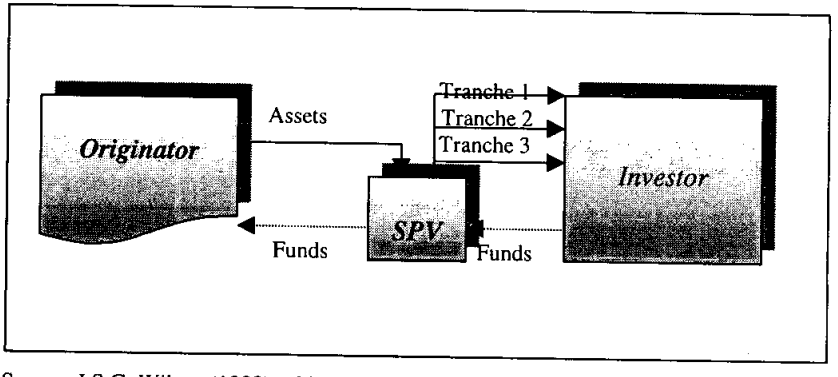
The **pay-through** structure was created for the primary purpose of overcoming the limitations of the pass-through structure. As mentioned earlier, the issuers are allowed to restructure the cash flows from the receivables into payments of several debt tranches with varying maturity for the interested investors. The market condition also contributed much to the creation of the pay-throughs. Most pass-through certificates had a maturity of thirty years in line with the underlying mortgage loans. However, only a limited number of investors would be interested in investing in such long-term instruments. More investors would be looking for securities with shorter maturity, for example two-year or ten-year. Also, the thrift industry in the late 1970s was in dire need of an alternative source of funding as they were faced with rising interest rate and decreasing deposits which went to higher yielding instruments. This is another illustration that securitisation development is mostly driven by investor preference.

The first mortgage pay-through bond, commonly known as the **collateralised mortgage obligation (CMO),** was issued by Freddie Mac in June 1983. The CMO concept looks at a mortgage pool as a series of unique annual cash flows in the entire life of mortgage loans, typically thirty years. Each CMO issue was divided into classes with different maturity. The original Freddie CMO had three classes: Class 1 bonds were repaid within 5 years of offering date; Class 2 bonds, within 12 years; and Class 3, within 20 years.[28] Class 1 bondholders were entitled to receive the first instalments of principal payments and any prepayments until the whole bonds were paid off. Principal payments were then paid to Class 2 bondholders and successively to Class 3 bondholders.[29] This is a typical sequential pay class (SEQ) structure. However, each class received semi-annual interest payment. It should be noted that the accrual class, typically known as a Z-class, does not receive interest payments until the preceding classes retire. Being able to construct classes of securities suited for the needs of various groups of investors, CMO structure has seen remark-

28. Actually, the earlier day CMOs used to have four sequential pay tranches, i.e. A, B, C, and Z. The Z tranche, known as an accrual bond, will not receive any payment of principal until all principal on earlier tranches is repaid. John K. Thompson, "Securitisation: An International Perspective", OECD, 1995, p121.

29. Christine Pavel, "Securitisation," *Economic Perspectives,* FRB Chicago, 1986, p19.

Figure 2.4.7
Strcuture of CMOs



Source: J.S.G. Wilson (1988), p202.

able development to include the planned amortisation classes (PACs), the targeted amortisation classes (TACs), the interest only class (IO) and principal only class (PO), and even the floating rate classes (FLT) and inverse floating classes (INV). More details will be discussed in the REMICs.

While the CMO as pay-though structure provided advantages over pass-through, such as flexibility to issue multiple classes of securities and debt structure, it also created additional difficulties under the prevailing laws and regulations. First, for the multi-class securities to be qualified as debt instead of funding through equity, the issuer had to maintain a certain level of real equity layer and set the payment frequency differently from the underlying receivables. This involved additional costs. Second, if the SPV took the form of a corporation, a tax problem arose as interest payments to the SPVs from the obligors were considered taxable income. Although these payments which were considered as expenses to debt could largely be deducted from the cash flows to investors, there usually remained the residual interest income (resulting from either conservative cash flow assumption or residuals to support equity layer), which was still taxable. Moreover, the residual could not be transferred freely. Third, if the SPV as a corporation was wholly or mostly owned by the originator, the balance sheet of the SPV was required to be consolidated in the parent originator, which undermined the advantage of off-balance sheet treatment. Fourth, until the REMIC legislation, the major investors of the MBS, namely the thrifts and the Real Estate Investment Trusts (REITs), had

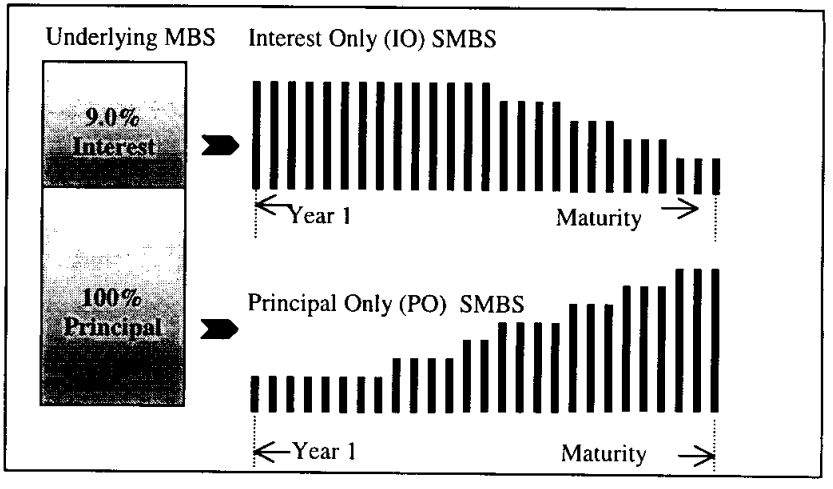
not been allowed to invest in debt securities. This limited the pool of potential investor to a certain extent. Some of these problems pertaining to the type of the SPV as a corporation could be avoided by setting up an owner trust instead. However, other difficulties remained unresolved.

The **Real Estate Mortgage Investment Conduit (REMIC)** was first introduced in 1987 as a result of the Tax Reform Act of 1986, to overcome the problems pertaining to CMO structure mentioned above. The REMIC was enacted in order to enable issuers to issue multi-class and multiple maturity securities without tax-related problems. Besides, the legislation allowed the REMIC tax classification irrespective of the legal form of the issuer or of the security. The issuer may take the form of a corporation or a trust, while still enjoy the benefits of the REMIC tax classification. The issuer may also have the option of treating the issue as sale of pass-through certificates for tax purposes even if they are actually debt. More importantly, the REMIC does not need to maintain the equity layer while the payment characteristics of the security issue can be the same as the underlying assets. After the legislation, the REMIC has replaced the CMO and, today, all CMOs are issued in the form of REMICs encompassing the pass-through structure. In short, the REMIC legislation consummated the mortgage-backed securitisation.

The REMIC incorporated all the previous development and variations of the CMO. Therefore, multiple classes of securities can also be issued in the REMIC structure. IOs and POs are classes in which the interest and principal cash flow streams are stripped apart[30] so that the principal amortisation and prepayments go to the PO class while the interest cash flow goes to the IO class. (See Figure 2.4.8.) These classes are very sensitive to interest rates change. When interest rates rise, prepayments rate slows down resulting in a reduced or decreased yield of PO classes as their average life is extended. On the other hand, when interest rates decline and prepayment rates rise faster than expected, the yield of the IO classes will decline. This is because investors in the IO classes will only receive yield when the underlying securities have outstanding principal.

30. These classes were first introduced by Fannie Mae in January 1987 and are generally called "Stripped ABS (SMBS)," and IO/POs are a form of SMBS that puts all the principal in one class and all the interest in the other. The sum of the IO and PO prices usually approximates the market price of the underlying MBS.

Figure 2.4.8
Payment Scheme of IO/PO



Another notable variation is the planned amortisation class (PAC). Instead of using the simple sequential pay structure, PAC bonds provided investors with more guaranteed stable cash flows through special tranches called companion classes or support classes (SUP) which absorb all deviation of actual prepayments from expected prepayments. As long as actual prepayment rates remain within a pre-specified range (the PAC band), the principal payments are guaranteed to continue without interruption. The idea is that any residual principal payments from the obligors are retained in the SUPs and used for uninterrupted payments to the investors in the event of prepayments. Nevertheless, the PAC cannot completely ensure uninterrupted payments as PAC's outstanding support classes might be busted due to a sustained period of fast prepayments, in which case the PAC behaves like an ordinary sequential pay class. On the other hand, when prepayments are too slow, there may not be enough cash flow to meet the PAC's scheduled payments, which result in an extension of the average life of the class and thus a negative impact on the investor's yield.

Meanwhile, the target amortisation class (TAC) is a special case of the PAC. The TAC provides protection against increasing prepayments and early retirement of investment-call or contraction risk- by securing principal payments to the investors as long as the prepayments rates are not slower than a pre-specified prepayment speed. In contrast, the PAC provides protection against both call and extension risk.

It is worth looking into the nature of the support classes (SUP), because both PACs and TACs rely on them to absorb prepayment variability which cannot be eliminated, but only be redistributed. If prepayment rate slows down, the average life of SUP extends. Conversely, the average life of the SUP shortens during the periods of faster prepayments. Any excess cash flow after paying for scheduled classes such as PACs and TACs will be used to pay the principal on the outstanding SUPs. If there is no remaining SUP outstanding, the principal cash flow is used to retire the PACs and TACs in a designated order but regardless of the schedule. On the other hand, if principal cash flow is slower than expected, the SUPs may not receive any principal.

More sophisticated variations include floating rate classes or 'floaters' in which the coupon rate is adjusted periodically by adding a certain amount of spread to a benchmark index, usually the LIBOR, subject to a lifetime maximum coupon rate, called 'cap'. Inverse floaters are structured in the same manner except that the adjustment is made in the opposite direction of the index, i.e. subtracting a spread from the cap. The yield of floaters or inverse floaters is extremely sensitive not only to the prepayment rates but also to the level of the index. However, it may not be correlated with changes in mortgage rates because of the difference in maturity.

Asset-Backed Securities (ABS)

The year 1985 set a milestone for the development of the asset-backed securities. The first sale of non-mortgage financial asset-backed securities was issued by Sperry Lease Corporation[31], involving securitisation of leases which has not been common since. It was followed by securitisation of automobile loans, and credit card loans that have flourished and remained the mainstays of the ABS market. Credit card receivables have dominated the ABS market, representing 42 percent of the total as of the end of 1997.[32] The ABS market has

31. The Sperry case is generally considered the first issue of ABS, because it is the first to be publicly issued although in the case of computer leases, Comdisco issued first, but on a private basis.

32. However, home equity loan sector has emerged as a rising star, overtaking credit card receivables in terms of issuance in 1997. "ABS Market Watch," CapMac, Vol. 7, No.12, Jan. 1998, p2.

grown so dramatically in terms of both volume and variety of underlying assets. Especially for the latter, it includes healthcare receivables, future flows such as export receivables or remittances, regulatory assets or so-called stranded costs such as electric utility, tax liens imposed on real estate for unpaid property taxes, and airline ticket receivables. Indeed, virtually all kinds of receivables can be securitised. Moreover, the recent passage of the Financial Asset Securitisation Investment Trust (FASIT) legislation, which is equivalent to the REMIC legislation in the MBS, will further encourage the development of ABS.

The securitisation of computer leases was actually pioneered by Comdisco in early 1985, followed by Sperry Corporation in March 1985.[33] The nature of Sperry's business was not only the production and marketing of computer system and software, but also leasing computer equipment. To focus its business on manufacturing and sales, Sperry decided to sell its computer lease business by establishing and selling lease receivables to an SPV, Sperry Lease Finance Corporation, which issued securities to the public, U$192 million worth of lease-backed notes with S&P's AAA credit rating backed by both the first-loss recourse provision from the originator and the letter of credit from the UBS, an AAA-rated bank.[34]

The first automobile loans securitised is known as **certificates of automobile receivables (CARs),** developed and issued by Salomon Brothers in January 1985. U$ 10 million pass-through certificates backed by a pool of automobile loans were privately placed, each of which carried its own credit insurance, and the pool was insured by a private insurer. In March 1985, Salomon Brothers issued the first public offering of U$ 60 million CARs for Marine Midland Bank that had originated automobile loans.[35] Along the development path, auto loans have used both pass-through and pay-through structure or CMOs.

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33. Christine Pavel, "Securitisation," *Economic Perspectives,* FRB Chicago, 198 , p22.

34. See James A. Rosenthal, et al, "Securitisation of Credit," McKinsey & Company, Inc., pp.157-171.

35. Originally, Marine Midland Bank was to issue the CARs with the insurance from its holding company. However, the CARs were restructured to be insured by a private insurer and to establish a trust to hold the underlying loans because of the Federal Reserve Board's intention to impose reserve requirements on the issue as well as its ruling of on-balance sheet treatment. Christine Pavel, "Securitisation," *Economic Perspectives,* FRB Chicago, 1986 , p21.

Credit card receivables entered the securitisation market a bit late as they had been considered difficult to securitise in the past due to relatively short and unpredictable maturity, small size of individual loan amount, and dramatic variance in credit loss experience. In March 1986, Salomon Brothers privately placed U$ 50 million pass-through **certificates of amortising revolving debts (CARDSTM)**[36] backed by a pool of Bank One credit card receivables.[37] The issue of CARDS represents an important landmark in the development of securitisation in that it paved a way for flourishing securitisation of credit card loans, as well as provided the basis for all future ABS. In the U.S., CARDs have been the primary funding source for many commercial banks which came under pressure to free up on capital as well as for specialised credit card banks. In addition, CARDs provide a medium-term source of funding for short-term loans.

The most salient feature of CARDs lies in its revolving structure under which two different cash flow periods, namely revolving and amortisation, are set at the beginning of the transaction. The amortisation period can be further divided into controlled amortisation, and early amortisation. This innovation reflects a distinctive nature of payment or amortisation stream of credit card loans, unlike auto loans and mortgages in which principal and interest are collected and passed directly to investors on a monthly basis. Since credit card loans repay in a relatively short period, usually 5 to 10 months, a typical amortisation schedule would result in a short average life and lumpy, unpredictable repayment to investors.

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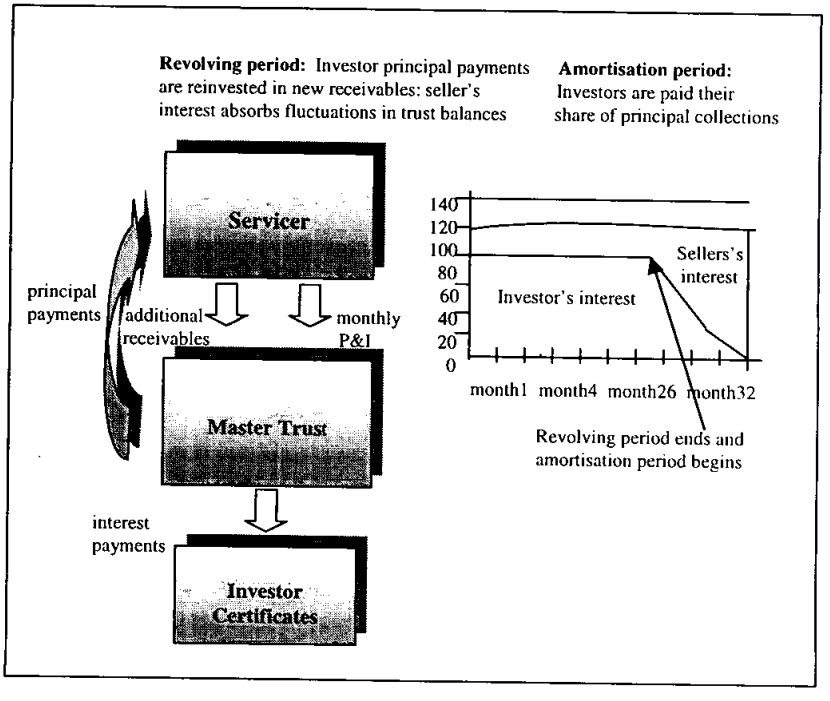
36. CARDSTM is a registered trade mark for Bank One credit card loan securitisation. In common parlance, however, "CARDs" represents ABS backed by credit card receivables.

37. The first public deal of CARDs was issued in 1987.

Figure 2.4.9
Two Stages of CARDS



Collections from the receivables are split into finance charges and principal payments. Monthly finance charges are used to pay the investor coupon and servicing fees, as well as to cover any charge-off, while principals are allocated in accordance with schedule predetermined for each period. During the revolving period, which usually ranges from 2 to 11 years, principal payments are reinvested to purchase new receivables or the originator's position if there are no new receivables, and investors will receive interest payments only. Principal payments can be made in two different modes: on an equal amortisation basis or on an accumulation and bullet payment basis. In the controlled amortisation period which begins after the revolving period, principal payments are no longer reinvested, but are paid to investors, typically on monthly basis for 12 months in order to retire the invested amount. Interests are also paid monthly on the outstanding amount. The controlled accumulation is distinguished from amortisation in that pay-

ments are deposited into a trust account until the maturity date, and a full, single payment of principal will be made (like a bullet payment in traditional bond). Meanwhile, interests are paid monthly on the total invested amount.[38]

A notable contribution of the CARDs is the introduction of new credit enhancement techniques such as excess spread or a spread account, a cash collateral account (CCA), a collateral investment amount (CIA), and subordination; and a new type of trust such as a master trust. Credit enhancement is critical to securitisation of credit card loans, because credit card receivables, as unsecured revolving debt obligations, do not provide collateral when cardholders default. The master trust is extremely useful for revolving assets because it allows an issuer greater flexibility than a typical stand-alone trust. In the stand-alone trust, a single pool of receivables from a group of credit card accounts is sold to the trust and used as collateral for a single security. Thus, if the issuer intends to issue another security, a new pool of receivables from new accounts must be designated and sold to a separate trust. In the master trust, however, the issuer can sell a number of securities at different times to the same trust. All receivables in the trust serve as collateral for all securities. Therefore, when more financing needs arise, the issuer has only to transfer receivables from more accounts to the same trust, and issue more securities. Details of credit enhancement will be discussed further in the next section.

An **asset-backed commercial paper (ABCP)** programme refers to a method of financing receivables, typically trade receivables[39], by issuing commercial papers backed by those receivables. Alternatively, it refers to an arrangement through which companies can finance their receivables through techniques mentioned above. The ABCP programme is characterised as on-going activities in which the SPV continually purchases new receivables and rolls over the outstanding commercial papers. In other words, the programme obtains fund to retire maturing CP by issuing new CP, which is called "roll-over". Unlike mortgage or credit card securitisation in which the transaction unwinds once the

38. "ABCs of Credit Card ABS,", *Fitch Research,* Fitch Investors Service, Apr. 1996, p5

39. Installment sales contracts, financing leases, noncancelable operating leases, and credit card receivables have been included in ABCP programme.

securities have been paid off, the ABCP programme does not wind down by itself after a few years in spite of a short maturity that does not typically exceed 90 days.[40] Hence, the ABCP programme provides a short-term source of funding instead of medium-term funding.

The ABCP programme can be classified in different ways, depending on either the number of sellers[41] or the degree of exposure to risks. A single-seller ABCP programme is one that finances the receivables of only one seller, whereas a multi-seller ABCP program is one which finances the receivables of many sellers. A single-seller ABCP programme is generally created by a seller as a means of financing its own receivables. A multi-seller ABCP programme is usually created by major banks as a means of providing financing services to their customers. On the other hand, a fully supported programme insulates investors from the credit and liquidity risk of underlying asset through a 100 percent support facility that typically takes the form of the letter of credit. In a partially supported programme, investors are partially protected from defaults on the underlying receivables. Although the first ABCP programmes were all fully supported programmes, they are not common today because of the introduction of "risk-based capital guidelines" for banks, under which banks can incur a capital charge equal to 8 percent of the entire size of the ABCP programme despite its off-balance sheet nature. As a consequence, the 100 percent support facility has been transformed into a separate credit enhancement and a separate liquidity facility in the partially supported programmes.

In general, commercial paper is an unsecured, short-term promissory note issued in the bearer form by a financial or non-financial company for its funding needs. Due especially to its short-maturity and uncertainty of collecting payments from underlying receivables, ABCP programmes are vulnerable to liquidity risk as collections of the underlying receivables may not be in time to pay off the maturing CP. Liquidity facility is, therefore, necessary to cover temporary shortfalls in the cash flows of the SPV that do not result from credit losses on the underlying receivables. As briefly mentioned above, however, the im-

40. Barbara Kavanagh, Thomas R. Boemio, & Gerald A. Edwards, "Asset-Backed Commercial Paper Programs", *Federal Reserve Bulletin,* Federal Reserve System, Feb. 1992, p109.

41. "Seller", which refers to a company that sells its receivables to the programme for financing purpose, is a more common term than "originator" in ABCP programme.

plication of risk-based capital requirement for credit enhancements and liquidity facilities is substantial. Under the U.S. regulations, for example, credit enhancement facility is considered as a "direct credit substitute" and is subject to a 100 percent conversion factor to convert it into a credit equivalent amount, while liquidity facility is considered as a "loan commitment" with a maturity of one year or less, which does not require to be converted. The risk factors and their allocation become more complex in a partially supported multi-seller programme because each seller of receivables has a different risk profile with respect to receivables' performance history. Thus, partially supported multi-seller programmes typically employ two layers of credit enhancement at both seller level and programme level.[42]

As a matter of fact, banks' role in ABCP programmes may include advising and providing the required credit or liquidity enhancement. By limiting their involvement to helping arrange short-term financing for corporate customers, banks can avoid making loans or purchasing assets directly, which might have a significant implication for their balance sheet and capital requirements. Banks can also remove certain existing assets from their balance sheet in its role as advisor of ABCP programme as alternative funding to corporate customers. They also earn fee income for packaging and monitoring pools of receivables as well as for providing credit enhancement and liquidity facilities. Furthermore, banks can maintain their market share by continuously meeting the financial needs of investment-grade customers in lieu of bank borrowing.

Future flow securitisation refers to the issuance of securities backed by ownership interests in future receivables such as trade receivables, export receivables, and remittances generated by traders, exporters, financial institutions, or service providers.[43] Trade receivables are often distinguished from export receivables and remittances because the latter usually involves offshore SPVs while the former can be securitised either at home or abroad. Typically, export receivables are sold to the offshore SPV so that they are structured as a legal sale. The SPV issues

42. For more details, see "Asset-Backed CP: Overview of Structures and Focus on Japan," *Structured Finance,* Moody's Investors Service, Dec. 4, 1996.

43. Credit card vouchers, royalty streams, and long distance telephone receivables also constitute the assets in this category.

a security whose repayment is based on the collection of those receivables. Obligors, as importers, are instructed to make payments to a trust collection account in which the investors hold a perfected ownership interest. Collections may be set aside in a cash reserve account for credit enhancement, and are used to pay principal and interest only after they exceed certain agreed-upon volumes. Excess collections are returned to the seller of receivables.

In effect, future export receivables securitisation provide an alternative source of export financing since proceeds from the securities are paid by the trust to the exporters as a prepayment for the receivables to be generated. It often takes place when a credit rating of the offshore buyer is higher than the seller or the seller's host country. This is the key to the attractiveness of this structure because financing can be arranged at attractive rates. Also, the commodity exported needs to have a track record of stable demand and enjoy a certain degree of monopolistic nature in the world market. As such, future flow securitisation draws special attention to the emerging markets. In Latin America, export receivables, credit card receivables, and long distance telephone receivables against the U.S. have been successfully securitised using the offshore SPV, and similar deals have been also reported in the Asian region.

It is worth stressing that the issuance of these offshore future receivables is not fully collateralised by existing receivables at the closing of the deal. While they may be substantially over-collateralised, the structures do not retain any significant amount of cash. Since the future of receivables is somewhat uncertain, viability of the deal depends on the originator's ability to generate more receivables during the life of the deal.[41] In addition, exchange rate consideration is critical as this structure typically involves swap facilities.

Securitisation of **regulatory assets,** or commonly called **stranded costs** in securitisation, was not commonplace, but is noteworthy because of its distinctive nature as well as its growing importance in recent years. Regulatory assets represent the right to collect future revenues from the customers of a utility as a result of a requirement by the regulatory authorities that customers compensate the utility in-

44. John Henderson, ed. "Asset Securitisation: Current Techniques and Emerging Market Applications," ING Barings, 1997, pp. 83-85.

vestors for unrecoverable-stranded-costs or investment through a surcharge or higher tariffs. Thus they are also called compensation rights of utilities, and provide utility-investors with benefits such as being a means of reducing leverage, replacing uneconomic obligations, and reshaping cost structure. As a matter of fact, these assets are not accounts receivable but a dedication of future revenue wherein neither the identity of the individual obligor nor the amount of obligation is known until service is rendered in the future. Several states of the U.S. and some European countries such as Italy and Spain successfully securitised regulatory assets since 1995 when deregulation broke down the monopolised utility service market.[45] As deregulation and restructuring of electric power industry proceeds in many states in the U.S., a remarkable growth in the stranded costs ABS market is projected in the years to come.

Collateralised loan obligatons (CLOs) and **collateralised bond obligations (CBOs)** were initially invented to shore up the U.S. junk-bond market in late 1980's. The issue of CBOs and CLOs has unprecedentedly increased since 1996, amounting to more than U$40 billions in annual volume. As the name suggests, CBOs are collateralised by high-yield corporate bonds, while CLOs are collaterised by high-risk bank loans. The issuer uses a diversified portfolio of these bonds and loans as collateral for a new note. Figure 2.4.12 illustrates typical structures of CLOs: a one-class structure and a two-class structure. A one-class structure consists of an investment-grade senior tranche and an unrated subordinate tranche that also constitutes the equity portion. This junior or equity tranche absorbs first-losses before the senior investors. Seeking higher yields, equity holders are the core investors who have driven the market. Against the first-loss responsibility, they expect the entire upside potential on the underlying assets as well as the economic residual of the issue at maturity. Meanwhile, senior claim holders receive pre-determined return with no upside potential. Their participation in effect enables leveraged investment of the equity holders in the high-yield portfolio.

The CBOs and CLOs provide benefits of obtaining an investment-grade rating, although the underlying assets are generally composed of either unrated or below investment-grade debts. This higher rating is

45. For more details, see "Guidelines for Rating Debt Backed by Regulatory Assets", *Fitch Research,* Fitch Investors Service, Sept. 30, 1996.

Figure 2.4.10
Structure of Future Receivables Securitisation
(Airline Ticket Sales)

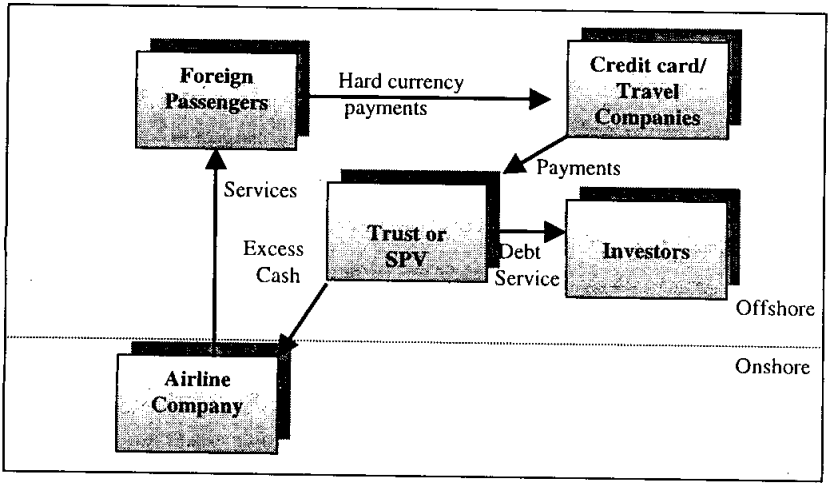
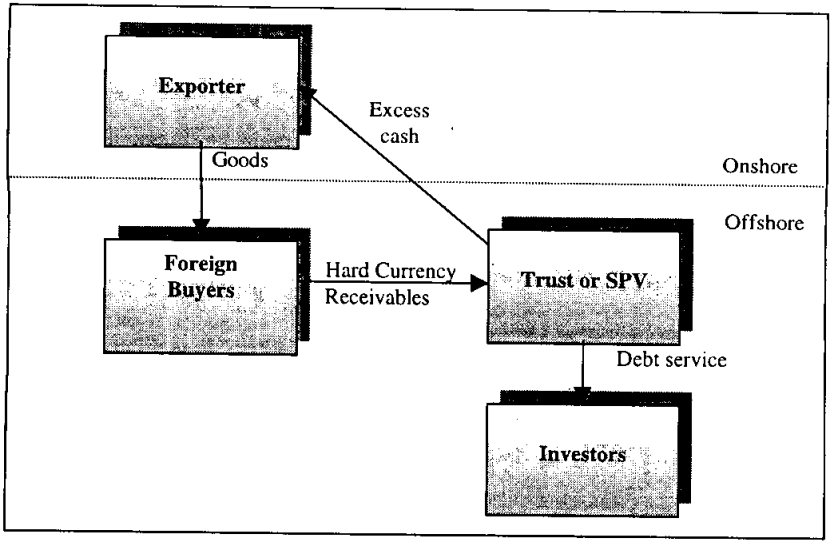
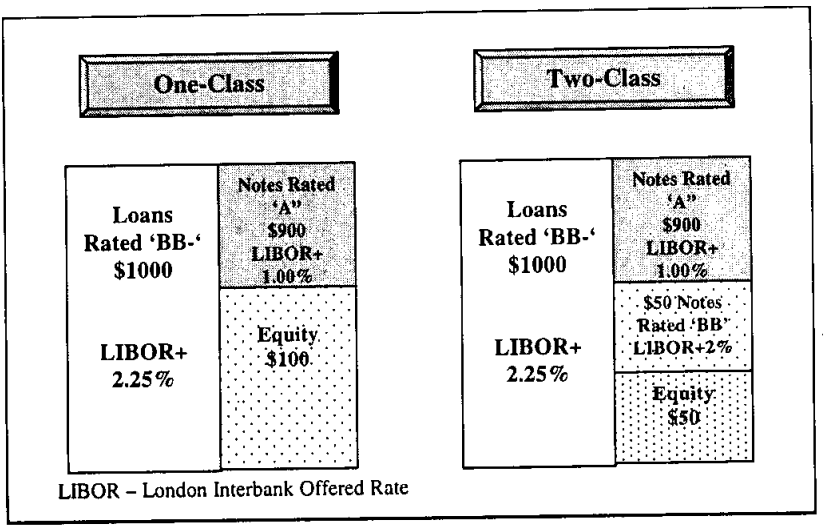


Figure 2.4.11
Structure of Export Receivables Securitisation



basically achieved through diversification and dilution because the risk of any one bond in the portfolio going bad is spread across companies and countries. CLOs can also be used to restructure banks' balance sheets, maximise capital usage, or seek arbitrage opportunities. Banks benefit by removing loans from their balance sheets to free up capital and by increased liquidity in the bank loan market. They also can take advantage of arbitrage opportunity by purchasing high-yield loans in the secondary market with low funding costs achieved by investment-grade instruments. If defaults are expected, an issuer can also realise some of this arbitrage because the assets earn a higher return than the interest paid out to investors. From the viewpoint of institutional investors, purchasing CLOs/CBOs with investment-grade ratings requires less capital than holding individual bank loans or corporate bonds under the new risk-based capital guidelines.[46] The CLOs, despite their being new in the market, are viewed as having the greatest growth potential as banks and insurance companies with corporate loans are potential issuers and emerging market debts are increasingly included in the portfolio.

Figure 2.4.12
Collateralised Loan Obligations Structure



46. "CLOs Meet Investor Appetite For Loans", *Fitch Research*, Fitch Investors Service, Sept. 23, 1996.

Although CBOs and CLOs are often termed in combination, there are fundamental differences between CBOs and CLOs. First, CLOs have shorter average life and lower exposure than CBOs because loans amortise while bonds are paid in bullet on maturity date. Loans also generally pay floating rates rather than fixed rates as is often the case with bonds. Second, recovery values on default are assumed higher for bank loans than high-yield bonds, which results in higher leverage and lower credit enhancement requirement for CLOs than CBOs. However, the distinction between CBOs and CLOs tends to become less clear, because many transactions now include both loans and bonds in the collateralised pools.

Similarly, securitisation has also been used to shore up the ailing financial institutions with huge stock of **impaired assets.** Rather than keeping bad debt for years to realise a slightly higher collection rate, a bank can now sell it and turn seemingly worthless loans into cash. Although there are technical difficulties to overcome, securitisation of non-performing loans seems to grow rapidly especially in the face of the recent financial crisis in Asia. The success of the Resolution Trust Company (RTC) which was set up to resolve the S&L's crisis in the U.S. in the late 1980's is a good example. Its experience suggests that securitisation can be used both to sell good assets held by insolvent banks as well as to dispose of impaired assets. More about this in Chapter 4.

The most recent development in the ABS market is the U.S. legislation of the **Financial Asset Securitisation Investment Trust (FASIT)** which has been effective on September 1, 1997. The FASIT is intended to facilitate securitisation of non-mortgage assets in the same way that the REMIC legislation has spurred the growth of the MBS market. Like the REMIC legislation, major concerns for the FASIT legislation include: qualification requirements for the legal form of the SPV as well as type of asset and taxation on various levels, viz. the SPV as an entity, the transfer of assets, and the interests in the FASIT. No equity layer is required in the vehicle, no entity level tax is imposed on the vehicle, and no restriction on the legal form of issuing entity. The FASIT legislation allows the issuer to issue debt instruments for tax and accounting purposes, to transfer and substitute assets with greater flexibility, and to issue debt at any time. Such revolving assets as credit card receivables and home equity loans are the most notable beneficiaries of this new legislation. In sum, FASIT offers tax certainty and structur-

ing flexibility, which may be modified to create new structured finance debt instruments. The potential of FASIT may be limited only by the barrier of the imagination, as evidenced by the ongoing innovations in the development of asset-backed securitisation. Comparison of FASIT to other structures such as REMIC is provided in Table 2.4.1.

2.5 Issues on Securitisation

As we have seen, securitisation provides a great deal of benefits to all participants. Over the years, its structure has become more complex reflecting arduous efforts to address a number of issues that include regulatory, accounting, legal, and tax concern. They are often related to each other so closely that one cannot be analysed separately from the other.

Regulatory and Accounting Issues: Sales Treatment[47]

One of the distinct benefits of securitisation is its off-balance sheet treatment[48] that allows the seller to remove the sold assets from its balance sheet. Through this off-balance sheet treatment, a bank originator in particular can avoid such regulatory taxes as reserve requirements, and capital requirements. However, this treatment has both accounting and regulatory implications. The accounting issue is to determine whether the transfer of assets from the seller to the issuer should be treated as a sale of the assets or a borrowing secured by the assets. On the other hand, the regulatory issue is whether such a transfer incurs any risk of loss after sales and how properly it is accounted for. Even if the transfer is treated as sales under the accounting practice, there could be recourse clause that may change the nature of risks involved. Sales without recourse, often termed as true or clean sales, obviously transfer credit risk of the assets from the seller to the buyers. However, sales with recourse, implicit or explicit, do not. Depending upon conditions set under the recourse clause, the seller retains some risk of loss that should be accounted for by adequate

47. For further discussion, see Thomas R. Boemio and Gerald A. Edwards, Jr., "Asset Securitisation: A Supervisory Perspective," *Federal Reserve Bulletin,* Federal Reserve System, October 1989, pp. 664~666.

48. In fact, the term "off-balance sheet treatment" might be misleading because, depending upon jurisdiction, some types of securitisation transactions and other financial derivatives can be booked off-balance sheet, but are not exempted from regulatory taxes.

Table 2.4.2
Comparison Of Main Features In Various Structures[46]

	FASIT	REMIC	Pass-through	Pay-through
Minimum Equity Requirement	None	None	N.A.	Yes
Restriction on Debt Classification	None	None	N.A.	Yes
Asset Type	Very flexible, except for operating lease	Not flexible, real estate mortgage only	No revolving assets	Reasonably flexible
Asset Transfer	Very flexible, can add assets at any time	Not flexible, cannot add assets after formation	Not flexible, cannot add assets after formation	Flexible, generally can add assets after formation
Gain Recognised on Asset Transfer	Immediately, regardless of equity interests retainment	Immediately, only to the extent equity or debt interests are sold	Immediately, only to the extent equity interests are sold	Immediately, only to the extent equity interests are sold
Loss Recognised on Asset Transfer	No	Yes, to the extent equity or debt interests are sold	Yes, to the extent equity interests are sold	Yes, to the extent equity interests are sold
Taxation	Special status, no entity level tax	Special status, no entity level tax	No tax, if grantor trust	No tax, if partnership
Eligible Equity Holders	Only a single domestic corporation	Limitation on municipalities, governmental and foreign investors	Not very restrictive	Not very restrictive
Eligible Debt Holders	Restriction on high yield regular interests, no restriction on regular interests	No restriction	N.A.	No restriction

49. Reproduced from 'Comparison of FASIT to other structures', in "Financial Asset Securitisation Investment Trust(FASIT)", Deloitte & Touche LLP, Oct. 1996, pp41-43.

capital support. Thus, the issue is two-tiered: sale or borrowing for the off-balance sheet accounting treatment; if sale, sale with or without recourse for capital adequacy requirements.

The U.S. experience in the accounting and regulatory treatment of securitisation will help to understand the difference between the two closely related issues. In general, two sets of accounting principles govern securitisation: the Generally Accepted Accounting Principle (GAAP) and the Regulatory Accounting Principle (RAP). Until January 1, 1997, the GAAP was used for public reporting purposes and administered by the Financial Accounting Standards Board (FASB), while RAP were for the Call Reports[50] and other regulatory financial reports for supervisory agencies. FAS 77[51] under GAAP permits securitisation with recourse to qualify for "sales treatment" if the seller's obligation under recourse is well identified and amenable to reasonably accurate estimation, no further obligations can be imposed on the seller, and the seller does not retain any ownership interest in the assets sold. Meanwhile, the Call Report instruction under RAP permits securitisation with recourse to qualify for "sales treatment" only if the seller does not bear any risk or loss from the assets sold. The "sales treatment" is not applicable if the seller retains any obligation resulting from performance failure by the obligor, changes in the market value of the assets, contractual relationship between the seller and the buyer, and other cause. If these criteria are not met, the transfer is considered as borrowing and should remain on the balance sheet for the Call Report (regulatory purpose), while the same transaction might be removed from the balance sheet for public report (accounting purpose).

Effective from January 1, 1997, however, the Federal Financial Institutions Examination Council (FFIEC) adopted GAAP with the introduction of a new accounting principle, namely FAS 125,[52] not only for

50. The Reports of Conditions and Income of Commercial Banks.

51. The title of FAS 77 is "Reporting by Transferor for Transfers of Receivables with Recourse."

52. The title of FAS 125 is "Accounting for Transfer and Servicing of Financial Assets and Extinguishments of Liabilities." FAS 125 is a comprehensive guideline that applies to all types of securitised assets, replacing FAS 77, FAS 122 "Accounting for Mortgage Servicing Rights," and other guidance issued by FASB. It not only concerns how to differentiate sales from financing treatment, but also describes how to properly account for servicing assets and other liabilities in securitisation transactions. OCC, "Asset Securitisation: Comptroller's Handbook," November 1997, pp. 50-51.

accounting purpose, but also for regulatory reporting purpose, especially for the Call Reports. Also, the introduction of risk-based capital requirements in 1989 significantly influenced the recognition of risk associated with securitisation.

As GAAP guidance for accounting purpose, FAS 125 is primarily concerned with differentiating sales from borrowing treatment. A securitisation transaction will qualify for "sales treatment" only if all of three following conditions are met: (i) the transferred assets are isolated from the seller, i.e., they are put beyond the reach of the seller and its creditors even in the event of bankruptcy of the seller; (ii) the buyer is a special purpose entity and the holders of debt and equity interests in that entity have the right to pledge or exchange those interests; and, (iii) the seller does not effectively maintain control over the transferred assets by a concurrent agreement that entitles the seller to repurchase, prior to maturity, the transferred assets that are not readily obtainable.[53] If these criteria are met, the off-balance sheet accounting is applicable and any gain or loss can be treated as earnings on the sale. Any recourse obligation involved in this type of transaction should be recorded as liability at fair value[54] and subtracted from the sale proceeds. If the criteria for "sales treatment" are not met, the transferred assets should remain on the balance sheet, and the transaction is accounted for as a secured borrowing without recognition of any gain or loss.

Nevertheless, not all asset transfers which qualify for "sales treatment" and can be undertaken as off the balance sheet are exempted from capital requirements under the current RAP guidance. It is clear in the case of assets transferred without recourse as they are outright sales and do not have any credit risk. Asset sales with recourse, however, are treated differently. To be exempted from regulatory capital requirements, the same criteria for "sales treatment" in RAP has to be met. Otherwise, the transaction is considered an asset "sale with recourse" and subject to risk-based capital requirements. Thus, such transactions are reported on the Call Report in schedule RC-L as "Off-

53. For further discussion, see Marty Rosenblatt, "Accounting for Securitisation under FASB 125," Deloitte & Touche, LLP, August 1996.

54. The fair value refers to the amount for which an asset could be bought or sold in a current transaction between willing parties. Quoted market prices in active market are the best evidence of the fair value.

Balance Sheet Items," and in schedule RC-R as "Regulatory Capital." The amount of capital to be maintained is calculated with risk-weights based on obligor or guarantor or the nature of collateral. Therefore, risks involved in the asset sale with recourse are effectively accounted for on the balance sheet, though such sale is booked as off the balance sheet.

Legal and Structural Issues: Bankruptcy Remoteness, Nature of SPV, etc.

Securitisation procedure typically involves the creation of an SPV so that the credit risk of the underlying assets can be separated from the general risk of the originator. In other words, the investors solely bear credit risk of the underlying assets, while protected from any other risks involving the originator. Suppose investors purchase mortgage-backed bonds issued by a mortgage bank. If the bank went into bankruptcy, the investors holding MBBs are considered unsecured creditors whose claim is junior to other senior creditors. If they purchase mortgage-backed pass-through certificates issued by an SPV, which own the mortgages instead of just having claims on mortgage bank's assets, the bankruptcy of originating mortgage bank has no adverse effect on the claim of the investors. The SPV should also be structured to be free from bankruptcy of its own by being disallowed to engage in activities that could incur debt other than the asset-backed debt. Thus, the SPV's business is typically restricted to holding and managing the receivables and issuing securities.

A basic question for bankruptcy remoteness is whether the transfer of title of the underlying assets is legally allowed. Central to the issue are the legal status of the SPV and the relationship between the originator and the SPV. The answer partly lies in a true sale treatment in that creating the SPV and transferring the assets to the SPV (which is qualified for the "true sale" treatment) would protect the investors from the insolvency risk of the originator. As for legal status, the SPV should not be governed or managed by the originator. Rather, it should operate independently in order to ensure freedom from bankruptcy of the originator. It may take such form as a grantor trust, an owner trust, a revolving asset trust - a master trust in most case, a special purpose corporation, real estate mortgage investment conduits (REMICs), and financial asset securitisation investment trusts (FASITs).

The most common form of SPV is a trust. Through a trust, the ownership of or the title to certain properties or assets can be transferred to a trustee who is obligated under the terms of the trust agreement to employ the assets for the benefit of a third-party, namely the beneficiary. In other words, it is created by a transfer of assets from the creator of the trust, i.e. the originator, to a trustee, with a stipulation that the property be held for the benefit of the beneficiary. "Perfection" is an issue of direct relevance to bankruptcy remoteness. When the trustee's property rights are legally protected from third parties who retain the rights that might impair the timely payments of debt obligation, we say its rights to or security interests in the receivables are "perfected". Simply put, perfection refers to the legal validation of the claim to the securitised assets. There might be the case that payments from the receivables by the obligors are commingled with other funds raised by the originator especially when it continues to service the loans, which would lead the investors to end up with being unsecured creditors. To avoid this, the trustee requires a legal opinion that the trust has a first-priority perfected security interest in the pledged receivables, which is typically achieved by filing appropriate documents and marking the receivables properly.

Apart from the issue of bankruptcy remoteness, the legal form and the nature of the SPV often determine the type of securities to be issued, which in turn has a bearing on the type of securitisation structure. As discussed in the previous section, a grantor trust had been used for a pass-through structure issuing certificates, while an owner trust and a corporation had been used for a pay-through structure issuing debt securities, until the legislation of REMICs and FASITs. The tax issue in relation to the legal form of the SPV will not be elaborated here as they are already mentioned in the sections on REMIC and FASIT.

Another issue related to the transfer of the receivables is whether the consent of the borrower is required under the prevailing laws and regulations. If it is required, it may weaken the incentive of securitisation due to hefty administrative costs subsequently incurred.

Domicile of SPV: Domestic or Offshore

There might be cases where domestic legal, tax, accounting and regulatory system makes it difficult to initiate securitisation, while the

law permits transfers of title. Financial institutions in the country which are in need of securitisation, may alternatively establish the SPV in an offshore center, and launch the issue for the international investors. In this case, the legal system is extended beyond establishing the SPV to include the restriction on the eligible types of assets. This transaction may involve foreign exchange hedging facilities such as currency swaps when there is a difference between the currencies in which underlying assets (collateral) and asset-backed instruments are denominated. In this way, securitisation can be initiated without major changes in domestic infrastructure. Most of the securitisation deals executed in the developing countries so far have taken this form.

Another concern relating to the domicile issue is about statistics. A foreign incorporated company operating in another country is subject to rules and regulations of the host country, which may also provide a friendly environment to securitisation. Thus, trade or export receivables held by the foreign incorporated company can easily be securitised in the host country or through offshore SPV in other country. The transactions, however, are not reported to the home country which may lead to a false perception that the country does not have experience in securitisation.

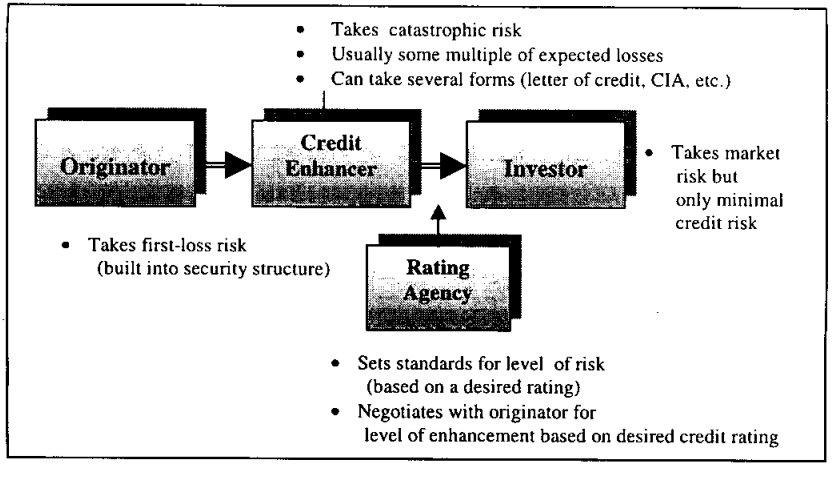
Credit Enhancement

Credit enhancement needs some elaboration because it not only deals with risk-sharing feature of securitisation, but also governs the deal structure that is subject to issues discussed above. Credit enhancement refers to various techniques employed to protect investors against credit risks. Growth of securitisation owes much to innovation in credit enhancement techniques that help to raise its credit rating higher than the originator's. The types and amount of credit enhancement generally depends on the quality of the underlying assets and the nature of security being issued. In practice, the rating agencies dictate the amount of enhancement necessary for any given security to be issued at the desired rating. They evaluate the credit quality of the underlying assets based on their historic performance and assume various disaster scenarios in order to provide different levels of rating that will meet diverse investor expectation.

Securitisation typically segregates credit risks into different tranches such that they are allocated to parties willing to or best suited to absorb

them. Generally speaking, all credit losses associated with securitisation are borne by three parties: the originator, the credit enhancer, and the investor. The originator takes the expected losses up to a certain level based on the historic performance profile of the underlying assets, which is called the first-loss coverage. The credit enhancer, on the other hand, takes catastrophic risks which exceed the expected losses and are set as a multiple of the expected losses, which is the second-loss coverage and constitutes a third-party or external enhancement. Investors are positioned at the last line of credit losses. Despite the exposure to market risks, their exposure to credit risks is minimal as they are shielded by the first-loss protection by the originator and second-loss protection by the credit enhancer. Figure 2.5.1. shows how credit risks are distributed.

Figure 2.5.1
Credit Risk Diversification



As mentioned earlier, credit enhancement can be made externally, internally, or both. Often times, particularly when the underlying assets are originated by a bank, more than one type of enhancement is associated with a given security.[55] **External enhancement** may take one or more forms of recourse to originator, third-party letter of credit (L/C), guaranteed investment contract (GIC), and surety bond. Recourse to originator, despite its simplicity, has limited usage due to on-balance sheet implication. The originators cannot enjoy off-balance sheet treatment. In addition, they may face conflicting responsibilities between the proper management of underlying assets and the well-being of its own business. Investors in this case may only face event risk. Hence, recourse provision can be found among non-bank originators who are not seeking sales treatment.

A third-party letter of credit is the most common tool of enhancement in non-mortgage pass-through[56] structure originated by a bank. The L/C may either enhance liquidity or be a form of unconditional guarantee of credit risk. Unaffiliated banks with high credit rating - at least equivalent to the rating awarded to the security - issue the L/C for fees over the life of the security. The L/C is issued for an amount which typically is a multiple of historic losses. Since it is possible, though not quite often, for the third party enhancer's credit rating to deteriorate, this type of enhancement becomes less popular.

Surety bond is a financial guarantee issued by highly- usually AAA- rated mono-line insurers.[57] They usually guarantee 100 percent of principal and interest payments, which is called 'wrap-around'. Guaranteed investment contract (GIC) is a similar debt instrument issued by an insurance company, in which the interest payments are guaranteed, while the principal is not.

55. FRS, "An Introduction to Asset Securitisation," 1990, p17.

56. In the U.S., mortgage-backed securities are mostly issued by federal or quasi-federal agencies with guarantee.

57. Mono-line insurers' sole function is to offer credit enhancement for fees. They originated from the municipal bond market in the U.S. John Henderson, "Asset Securitisation: Current Techniques and Emerging Market Applications," ING Barings, 1997, p63.

It should be noted that a third party enhancement such as L/C and surety bonds does not always get sale treatment. If an originator agrees to reimburse the enhancer for any payments pursuant to the guarantee, sale treatment cannot be awarded because such an arrangement imposes recourse to the originator. Thus, it is fair to say that each deal of securitisation should be carefully structured so that any arrangements with subtle implications for legal and accounting purpose can be properly reflected.

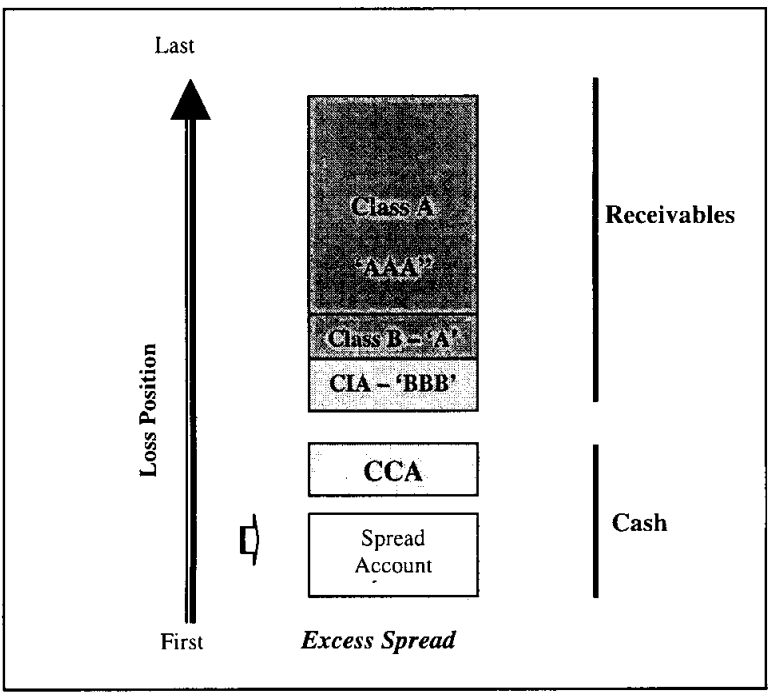
Internal enhancement may include, in order from junior to senior, over-collateralisation, reserve account or spread account, cash collateral account (CCA), collateral invested amount (CIA), and subordination (See Figure 2.5.2.). In over-collateralisation, the value of assets collateralising the security issue is greater than is needed to support the contractual payments, so that the investors are protected in the event of a shortfall in expected payments.[58] By extension, the originator does not receive cash for the full amount of the portfolio it sells to the SPV. Excess collateral is held in a subordinated tranche or a special account to which any losses will fall firstly and thereby incurring loss for the seller. Any residual is made available to pay the investors and the necessary third party payments. In this structure, the originator is commonly required to augment the collateral pool if collateral value declines below predetermined level due to defaults. Over-collateralisation is widely used to enhance MBS.

A spread account is, in essence, the first line of protection against losses. It is a mechanism whereby the originator absorbs initial credit risk without having a built-in recourse provision which would prohibit sale treatment. It captures or traps excess spread which is a residual amount of yield on the underlying receivables after deducting funding costs, servicing fees, and other enhancement fees. The balance of the spread account is predetermined to the level required to satisfy a given rating. Since monthly cash flows from the receivables accrue to build up spread account, balances may be adequate to cover losses in the early life of the security. Therefore, it is common for the originator to

58. It should be noted that the accounting treatment of the difference between the face value of the security and the collateral has a great implication for the originator. If it is viewed as a discount on sale rather than as deferred consideration, the difference may result in an unexpected charge to the originator's income statement. Ibid., p57.

advance funds to the spread account at the time of issuance so that there is some balance available to cover initial losses. Although it's main function is to cover the unexpected losses, the remaining balance, if any, may revert to the originator as profit when security dues. This feature encourages the originator, who is also the servicer in many cases, to take greater efforts in collecting delinquent or defaulted assets. Spread account is mostly found in automobile loans or credit card loans backed securities which yield large excess spread.[59] Meanwhile, the term reserve account has two meanings. One as a synonym to spread account, another as referring to 'reserve fund' retained by the SPV either for general reserve to meet credit enhancement requirement or for specific contingencies to cover tax or reinvestment risk.[60]

Figure 2.5.2
Hierarchy of Credit Enhancement



59. FRS, "An Introduction to Asset Securitisation," 1990, p16.
60. For detail, see John Henderson, op cit. 1997, p60.

A cash collateral account (CCA) is a segregated trust account funded at the beginning of the deal. It basically works in much the same way as over-collateralisation with the difference that it takes the form of a cash deposit rather than assets as collateral to cover losses. It can be drawn on to cover shortfalls in interest, principal, or servicing fees, if excess spread is reduced to zero. The initial funding is from a subordinated loan from the originator or a third party bank, and invested in a deposit with a highly rated bank that guarantees a floating rate of interest in relation to the interest cost of the security issue. This ensures supplement collections from the receivables to maintain full and timely payments of obligations. Like spread accounts, it can be repaid to the originator after holders of all classes of certificates or securities have been repaid in full.

A collateral invested amount (CIA) is an uncertificated, privately placed ownership interest in trust. Put differently, it constitutes an equity portion representing claims on the underlying assets, which is held by the SPV, not by the investors, as a cushion being subordinate to all certificate holders. It basically serves the same purpose as a CCA: it makes up for shortfalls if excess spread is reduced to zero. As illustrated in Figure 2.5.2, it is protected by the CCA and the availability of monthly excess spread. If the CIA absorbs losses, it can be reimbursed from future excess spread if available.[61]

Subordination is synonymous to credit tranching to create a senior/subordinate structure. In a senior/subordinate structure, multiple classes of securities are issued in such a way that each class of security corresponds to its credit risk and hence credit rating. The interest of senior class securities is protected by the credit support of subordinate or junior class securities which absorb defaults before the senior position's cash flows are interrupted. In other words, senior class security holders are entitled to the first priority claims in the case of default, and junior class security holders must wait until the senior class investors' claims are fully met. The originator may retain a junior tranche, while a senior tranche is sold to the investors. If this is the case, however, a question of sale treatment arises and securitised assets may not qualify for the off-balance sheet treatment.[62]

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61. "Asset Securitisation: Comptroller's Handbook," Office of Comptroller of the Currency, Nov. 1997, p23.

62. In the U.S. the entire issue – both senior and junior – will remain on the balance sheet, if it is originated by a bank. FRS, op cit., 1990, p17.

Another form of credit enhancement, often found in securitisation of revolving assets, is performance trigger, or triggered amortisation. It is designed to provide the investors with further protection against unexpected losses by increasing the spread account available to absorb losses, accelerating repayment of principal before the underlying asset pool would deteriorate to result in losses, or both. It is an option to exercise the trigger that allows all further collections to be directed toward the repayment of principal when a predetermined level of collateral performance and condition are breached.[63] Early amortisation trigger is a typical example used in securitisation of credit card receivables. Early amortisation means the repayment of principal may begin even during the revolving period. It is triggered: if not enough transfer of receivables to the trust; if not enough new receivables to reinvest in; and if originator's participation falls below the required level, etc. Once early amortisation is triggered, principal repayments to investors begin immediately.[64]

Characteristics of Securitisable Assets

Despite the benefits and its phenomenal growth, securitisation has not yet completely replaced the traditional funding mode of deposit and borrowing. This is because a number of risks remain to be addressed while not all the assets can be securitised. At the current development of financial technology, any assets with certain structural characteristics can be securitised. Hull (1989) summarised the features of assets or loan agreements that are conducive or detrimental to securitisation.[65] Positive features include:

(i) standardised loan documentation;
(ii) extensive history of payment, delinquency, and loss computed on a consistent basis;
(iii) fixed rate or yield;

63. "Asset Securitisation: Comptroller's Handbook," Office of Comptroller of the Currency, Nov. 1997, p24.

64. In the history of credit card securitisation, however, only a couple of deals are reported to have triggered early amortisation without any significant loss to investors. "ABCs of Credit Card ABS," *Fitch Research,* Fitch Investors Service, Apr. 1996, p5

65. Everette D. Hull, "The Complete Story on Securitisation of Bank Assets," *The Journal of Commercial Bank Lending,* Nov. 1989, p23.

(iv) fully amortising payment stream;
(v) geographic diversity;
(vi) age/seasoning of receivables;
(vii) standardised high-quality credit underwriting and collection policies; and,
(viii) high-quality collateral.

Negative features include:

(i) inexperienced or undercapitalised servicer,;
(ii) small number of assets in pool;
(iii) high ratio of largest assets to average asset;
(iv) balloon maturity[66];
(v) ability of obligors to change payment dates; and,
(vi) infrequent payment dates.

66. Under this, the amount of repayments gets larger as the security matures.

Chapter 3

IMPLICATIONS OF SECURITISATION FOR BANKING BUSINESS

In the previous Chapter, we have reviewed what is securitisation, how it works and has developed, and what benefits it brings. In order to examine the implications of securitisation for banking business and financial policies, however, we need to address the issue of why banks securitise their loans in the first place and are moving away from traditional lending activities which they used to have competitive advantage in. While economic benefits may have been the main motivation, they may as well be the outcome rather than the cause.

In this respect, we take note of a bank's role as a financial intermediary that has significantly changed as securitisation has developed. It can thus be inferred that the raison d'etre of banks has also been changed. As will be seen in the financial intermediation theory, the motives of securitisation are more intrinsic than simply economic benefits. Since securitisation challenges our understanding of the boundary of financial intermediation, we will also try to answer the question: "Has securitisation expedited financial disintermediation by weakening the role of banks as financial intermediaries?"

Meanwhile, it is important to emphasise that securitisation helps spread risks among more participants, not eliminate them. Risks can be shifted from one party to another, but still remain in the system. This nature of risk shifting necessitates a rethinking of the current framework and methods of bank regulation and supervision. This is important because reviewing both the motives and the limitations of securitisation would render a more balanced perspective for policy purposes.

3.1 Background: A Review of Financial Intermediation Theory

3.1.1 Financial Intermediation: Information and Risk

Loosely defined, financial intermediation is a process in which financial capital is channelled between providers and users. More strictly defined, however, there are two alternative views. In one school of thoughts, financial intermediation is a transformation process in which a financial intermediary borrows funds from a surplus unit and then lends to a deficit unit.[67] This is based on the traditional dichotomy of

direct financing and indirect financing. According to this view, financial intermediation refers to indirect financing, and a trend away from indirect financing towards direct financing is considered as disintermediation.

On the other hand, the contemporary theories of financial intermediation are generally information-based.[68] Financial intermediation is generally viewed as an organisational solution to the problems of asymmetry of information, in which lenders delegate responsibility for monitoring borrowers to a bank. Financial intermediation hence refers to a phenomenon in which the delegation of efforts to monitor borrowers is necessary. As a consequence, financial disintermediation only arises when such delegated monitoring is no longer necessary or impossible.[69]

A Delegated Monitoring Hypothesis

We live in a world of imperfect information. Borrowers usually have informational advantage over lenders because they know their own investment opportunities and financial situations better than lenders. As demonstrated by a famous case of adverse selection in the used car market, a better-informed party tends to have a natural incentive to exploit such informational advantage. Unless monitored properly, borrowers are likely to break their commitment to repay loans. The consequence is market failure: price is pushed down to zero, in case of used car market; interest rate soars to infinitum, in case of lending. Another problem is moral hazard. Borrowers have a tendency not to repay loans and/or to venture into risky business to the shareholder's advantage.[70] Monitoring is thus necessary, but can be extremely costly

67. Sealey, Jr., C.W., and James T. Lindley, "Inputs, Outputs, and a Theory of Production and Cost at Depository Financial Institutions," *Journal of Finance,* Vol.17, No.4, Sept. 1997, p.1255.

68. For comprehensive summary, see Bhattacharya, Sudipto, and Anjan V. Thakor, "Contemporary Banking Theory," *Journal of Financial Intermediation,* Vol.3, 1993, pp.2-50.

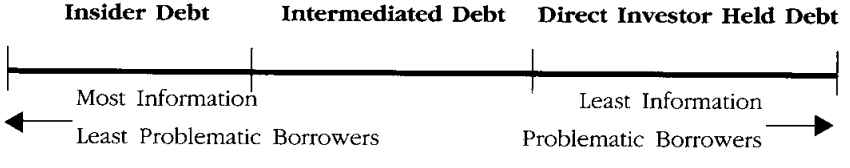
69. Diamond, Douglas W., "Financial Intermediation and Delegated Monitoring," *Review of Economic Studies,* July 1984, pp.393-414.

70. Other than this asset-substitution moral hazard, underinvestment problem sets another moral hazard problem, whereby the borrower is unwilling to invest additional funds in a project even though by doing so the total value of the project would increase. See Greenbaum, Stuart I., and Anjan V. Thakor, "Contemporary Financial Intermediation," The Dryden Press, 1995, p.231.

if done individually. Such high cost of monitoring to both the individual and society (through duplicated efforts) can be drastically reduced by delegating the risk of monitoring to a bank to enjoy economies of scale and the reusability of information. From the lenders' perspective, however, the credibility of banks as delegated monitors is a major issue of concern. For this, banks will have to incur signalling cost to convince the lenders of the value of its services. Such signalling costs are usually minimised through diversification. On the whole, financial intermediation occurs when the monitoring cost advantage exceeds the signalling costs.[71]

Based on borrower information and monitoring requirements, there are several modes of financing, namely, direct financing, intermediated financing, and insider financing. Along the information continuum as shown in Figure 3.1.1, intermediated financing lies between direct financing and insider financing. Where borrower information is sufficient to monitor borrowers with ease, direct financing dominates. Insider financing occurs where borrower information is so problematic that they cannot borrow from outsiders due to the lack of cost-effective monitoring technology. There is no room for financial intermediaries where information on borrowers is neither the most problematic nor the least problematic. However, the boundaries of these three modes of financing may change as the monitoring technology improves.

Figure 3.1.1
The Borrower – Information Continuum



Functional Approach

Meanwhile, Greenbaum and Thakor consider financial intermediation as a function of either brokerage or qualitative asset transformation

71. Berger, Allen N., and Gregory F. Udell, "Securitisation, Risk, and the Liquidity Problem in Banking," *Finance and Economics Discussion Series* 181, Federal Reserve System, December 1991, pp.5-6.

(QAT), or both.[72] A broker brings together providers and users of capital without changing the nature of the claims being transacted, whereas a QAT processes risk by altering the attributes of the claim. The broker has a cost advantage in information production, arising from his special skills in interpreting subtle signals and exploiting information reusability. Information processing is the essential element of brokerage. Information has a public good character that enables the initial information producer to reuse it. Information can be reused in two ways: cross-sectional reusability (across different users) or inter-temporal reusability (over time). The larger the size of search object, the more compelling the need for the broker. A pure broker does not get involved as a principal in the matching of borrowers and lenders. One of the main differences between brokerage and QAT is that the former does not process risks.

On the contrary, QAT is in essence a risk processing. Financial intermediaries accept some form of risks in transforming attributes of financial claim, which include maturity, divisibility, liquidity, credit risk, and currency denomination. A typical example is a commercial banking function in which deposits are taken from lenders to make mortgage loans to borrowers. Without intermediation, it would be almost impossible to match lenders to borrowers in this case. Deposits are mostly placed for the short term, thus they are highly liquid and bear little risk. On the other hand, mortgages are illiquid, long term, and have higher default risk. What the bank did is to swap deposits for loans and earn the interest rate spread as a reward for its service. The risks arising from maturity mismatch between lenders and borrowers is now borne by the bank as reflected in its balance sheet. This means financial intermediaries initially accept some forms of risk.[73] Risks can be managed through diversification, a shift to other parties, or being passively borne. In fact, risk management has emerged as a core business of financial intermediaries other than intermediation. Figure 3.1.2 shows various services financial intermediaries provide under brokerage and QAT.

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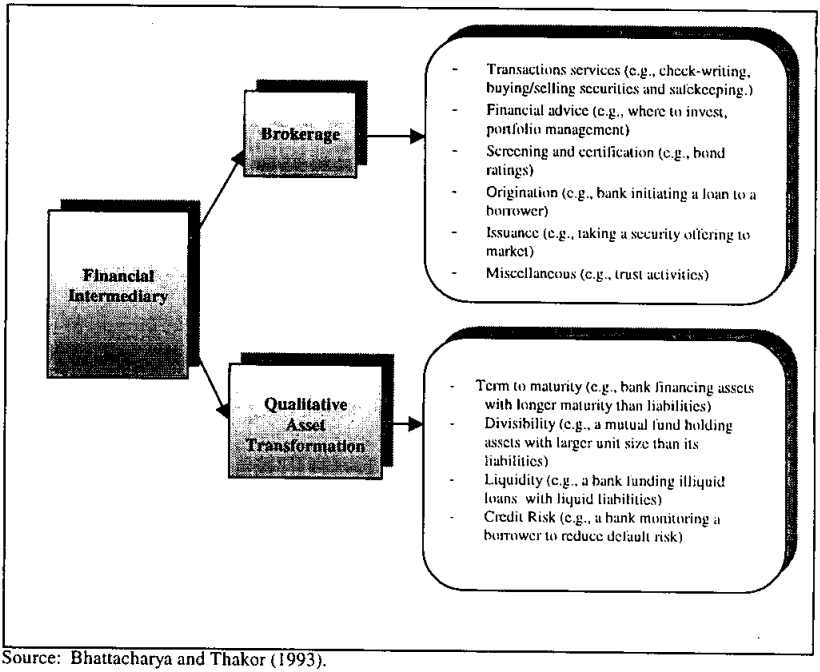
72. Greenbaum, Stuart I., and Anjan V. Thakor, ibid, pp.48- 50.73.

73. It could be credit risk since loans may default; liquidity risk as illiquid loans are financed by liquid deposits; interest rate risk if longer-term assets (loans) are financed by short-term liabilities (deposits); and exchange risk if the assets and liabilities are in different currencies.

Figure 3.1.2
Financial Intermediation Services



Source: Bhattacharya and Thakor (1993).

Following this view, therefore, it is pointless to distinguish between direct financing and indirect financing. The trend to move away from indirect financing towards direct financing is not a matter of disintermediation, but merely a shift of intermediation function from one intermediary to another. It can also be a shift from brokerage to QAT within the same intermediary, and vice versa.[74] In addition, financial intermediaries may include a long list of institutions in the financial service industry, such as commercial banks, savings institutions, finance companies, pension funds, mutual funds, insurance companies, investment banks, credit rating agencies, stock exchanges, and possibly some

74. For example, an investment bank can make underwriting contracts, either on a 'firm commitment' basis or on a 'best effort' basis. The former refers to QAT, the latter to brokerage.

government agencies. The main criterion is that these institutions intermediate the needs of borrowers and lenders in one way or another. Banks have traditionally provided both brokerage and QAT services, while other financial intermediaries tend to specialise in a narrower business spectrum.

The diversity of financial intermediaries can also be an outcome of diverse borrowers' preference towards the different sources of funding. A company in the early stage of development with few tangible assets may prefer to seek funding from a venture capital type of financing that provides not only financing and monitoring but also management expertise. As the company grows and possesses more tangible assets, it may prefer to go to commercial banks for funding and monitoring. A matured and well-established company with a good track record, may prefer to raise fund directly from the capital market, where financing is the main business and bank's monitoring is of less concern.

No mater how diverse these institutions are, what they have in common is the processing of risks and information, which is a fundamental and critical element of financial intermediation. In summary, intermediation is a response to the inability of market-mediated mechanisms to efficiently resolve the problems of asymmetric information. Financial intermediaries help to bridge this gap by processing risk and information.[75] Thus, whether securitisation aids the disintermediation process depends upon our conception of what financial intermediation is.

Problems in Banking and Regulation

The problems for banks can be classified as inherent and systemic. The inherent problems in lending include the asymmetric information and moral hazard. As mentioned above, a borrower has more information about its own credit risk. If lenders lack necessary information, market failure would result due to adverse selection. As for moral hazard, the borrowers would tend to take on additional risk as long as they can see positive return, at the expense of banks and thus, the need for monitoring.

75. Bhattacharya, Sudipto, and Anjan V. Thakor, "Contemporary Banking Theory," *Journal of Financial Intermediation,* Vol.3, 1993, p.14.

The systemic problem relates to the adoption of a fractional reserve framework and the creation of fiat money. One of the most important functions banks perform is a liquidity transformation. However, such function exposes banks to the potential risk of insolvency as they are extending illiquid loans funded by liquid deposits. While loans cannot be called back in a moment's notice, deposits are promised to be paid back on demand. Further, under the fractional reserve requirements, banks need only to set aside a fraction of liabilities to meet withdrawal of deposits on demand, the fractional reserves. As a consequence, there is always a possibility that withdrawals may exceed cash available. As a protection against this possibility, the central bank is created as a lender of the last resort. However, the arrangement of having the central bank standing behind commercial banks in times of liquidity crisis creates another sort of problem: moral hazard. This may give rise to the problems of excessive lending and loose monitoring of commercial banks. As such, there is a genuine need for bank regulation and supervision.

There is a long list of regulations on banking such as reserve requirements, deposit insurance premium, capital requirements, disclosure requirements, anti-discrimination restrictions, branching and bank holding company restrictions, loans-to-one-borrower limitations, deposit interest rate ceilings, and so on.[76] Of these, reserve requirement, deposit insurance premium where it is applicable, and capital requirement are the major concerns of this study because they typically imply additional cost of funding.

Reserve requirement is basically introduced to address a moral hazard problem that banks may lend excessively because of the lender-of-the-last-resort facility. However, it may result in less lending than otherwise would be. It could also raise interest rate higher than it should be as non-interest bearing reserve requirement increases the cost of funding.

The reasons for introducing deposit insurance arises from both micro and macro perspectives. For example, deposit insurance reduces overall monitoring costs. It also prevents money supply from shrinking

76. In the U.S., which claims to have one the most market-oriented and sophisticated banking system, for instance, there are so many regulations as to cover all alphabets from A to Z, and even more to extend to AA, BB, and CC.

in the event of bank failures.[77] There are two, not mutually exclusive, but complementary, explanations for bank runs. The "sunspots" theory argues that bank runs can result from a sudden change in individuals' perceptions of banks which are unrelated to the health of the real economy or the banking system, and thus are like a sunspot phenomena which is random in nature.[78] On the other hand, the information-based theory explains that bank runs are triggered by adverse information about banks that erroneously leads the uninformed depositors to withdraw their money. Since it is more likely that not all depositors are well informed, the uninformed ones may join the long line of bank run without knowing exactly what is wrong with the bank. Thus, it is sometimes the case that a bank that deserves to have a bank run escapes, while the one which does not deserve it suffers.[79] Deposit insurance provides a safety net for depositors while enhancing banks' confidence. Nevertheless, deposit insurance, like the lender-of-the-last-resort facility provided by the central bank, also causes a moral hazard problem. The imposition of deposit insurance premium as a solution to avoid moral hazard, in turn, incurs additional funding cost.

While liquidity or withdrawal risk has long been regarded as the primary risk faced by banks, other types of risks have drawn increasing attention recently. Financial innovation and globalisation have made banking operations more complex and necessitated a new paradigm of bank regulation and supervision. As discussed above, liquidity risk can be protected by the lender of the last resort facility and deposit insurance scheme. Other risks such as credit risk and market risk in particular should, however, be dealt with via adequate provision of capital.[80] The purposes of bank capital are to maintain the public's confidence in the bank's ability to sustain various kinds of shocks, to deal with losses so that business can continue, to cover the cost of basic infrastructure that are not suitable to be financed by liabilities. As for covering losses, capital not only provides a cushion against operating

77. Bhattacharya, Sudipto, and Anjan V. Thakor, ibid, p.467.

78. Diamond, Douglas W., and Philip Dybvig, "Bank Runs, Deposit Insurance, and Liquidity," *Journal of Political Economy,* June 1983, pp.401-419.

79. Chari, Varadarajan V., and Ravi Jagannathan, "Banking Panics, Information, and Rational Expectation Equilibrium," *Journal of Finance,* July 1988, pp.749-761.

80. The concept of capital is not unambiguous. For the sake of simplicity however, a broad concept will be used, which includes share capital, reserves, and loan capital.

losses, when revenues from assets are insufficient to service liabilities, but also enables the bank to write off non-performing assets. On the whole, bank capital is meant to protect banks from various forms of risk. One way to achieve this objective is to increase capital up to a certain level as deemed prudent by the regulatory authorities. However, such a measure will increase cost, as capital requirement in effect acts as a tax, which will eventually be transferred to bank customers.

In summary, financial intermediation is basically about risk and information, involving problems which are both inherent and systematic. Thus, the need for regulation is a natural response to them. Regulation is designed to create public confidence in the banking system in terms of safety and soundness. However, as regulations multiply, they can make the banking operations more costly and less efficient. As consumers desire both safety and lower cost of intermediation, regulators have to perform a delicate balancing act of ensuring safety while minimising cost.

3.2 Motives for Securitisation

3.2.1 Environmental Changes

The environment in which banks are operating has significantly changed over the past two decades. It is imperative to review this because environmental change has affected not only the nature and behaviour of financial intermediation but also the regulatory framework. We will briefly look at the U.S. experience, focussing on depository institutions, especially commercial banks.

Depository institutions in the U.S. have traditionally enjoyed a funding advantage over non-depository institutions as a consequence of subsidies and regulations practices: deposit interest rate ceilings, underpriced deposit insurance premium, entry restrictions, and various tax advantages. The whole banking system was in fact based on an implicit contract between depositors, bankers, and the government: depositors agree to accept lower interest rate in exchange for government guarantee; bankers agree to accept regulation in exchange for subsidies mentioned above; and government agree to accept risk exposure on its contingent liability to depositors in exchange for political gains from stability in the banking system. The scenario changed when interest rate ceilings were abolished while regulations on capital requirements

and deposit insurance premium brought down some of the depository institutions' advantages.

Other changes are also noteworthy. First, interest rate volatility in the 1980's increased the cost of capital and reserve requirement, causing banks to move away from deposit funding to other sources such as NIF and FRN. Second, a shift in measurement of bank performance from asset growth to profitability or return on equity also led more banks to engage in activities that generated fee income. Third, there was increasing concern about declined asset quality and liquidity problem. Fourth, the increasing competition among banks as well as between depository institutions and non-depository institutions further worsened the business of depository institutions which were already saddled by more restrictions imposed by the regulatory authorities.[81] All these factors forced banks to seek cheaper source of funding as well as alternative business opportunities, and explained why loan sales and securitisation began to replace traditional banking business.

3.2.2 Theoretical Explanation/Perspectives

A great body of literature has attempted to explain why banks securitise. Berger and Udell (1991) well summarised the various hypotheses that explain the rationale for securitisation, some of which are closely related to the intermediation theory. They also gave empirical evidences that relate the types of securitisation to risk and liquidity of the originator under these hypotheses. Wahidudin (1996) also conducted an extensive literature survey as well as an empirical test on various motives of securitisation. Below are some of these hypotheses.

Most analysts cited regulatory tax burden and the consequently cost of funding as common motives for securitisation. This regulatory tax hypothesis states that securitisation is a response to the burdensome regulations. The cost of holding reserves, the need to meet capital requirements,[82] and the level of deposit insurance premiums put deposi-

81. Cumming, Christine, "The Economics of Securitisation," *Quarterly Review,* FRBNY, Autumn 1987, pp.11-23.

82. Capital requirements were often distinguished from other regulatory requirements in that they should basically be determined by the market rather than imposed by regulation, and referred as market capital requirements. However, they have been more regulation-imposed than market-determined.

tory institutions at a disadvantage, compared to non-depository institutions that are not subject to similar regulatory requirements. It is true that depository institutions are able to provide some protection for depositors and have access to discount window facilities in exchange for abiding by these regulations. In most cases, these advantages allow them to attract deposits at a lower rate than they otherwise would have to offer given the risks they are taking. However, for low-risk loans, the lower deposit rate may not be sufficient to compensate for the regulatory taxes. Securitisation, especially when off-balance sheet treatment is applicable, enables them to avoid such taxes, as proceedings of asset sales are not subject to reserve requirement and deposit insurance premium. Smaller balance sheet also allows banks to reduce capital requirements. [Pavel and Phillis (1987), James (1988), Avery and Berger (1988, 1991a, 1991b)]

It is obvious that the regulatory tax hypothesis is not the sole explanation for diverse aspects and phases of securitisation. A great deal of securitisation transactions have been actively undertaken by non-bank financial institutions that are not subject to regulatory taxes. Also, the regulatory hypothesis may work only under certain conditions.[83] More recently, the benefits of avoiding regulatory tax of securitisation has been mitigated significantly under the risk-based capital guideline which requires banks to hold a certain percentage of capital against the off-balance sheet assets. This shows that there are a number of other motives that are independent of the regulatory motives. It should, however, be kept in mind that some motives are stronger when combined with other motives.

A moral hazard hypothesis also looks at regulatory taxes, but from a different perspective. Under a fixed deposit insurance regime where insurance premium need not be adjusted in accordance with the overall risk of banks, banks may be encouraged to become riskier because

83. It is found that the decision to securitise is insensitive to capital requirements, especially for a small sized financial firm. Instead, the decision is governed by the relative rate of return to securitisation, which depends upon the turnover rate of securitisation because securitisation generates fee income as opposed to interest income in the case of traditional on-balance sheet lending. Donahoo, Kathleen K., and Sherrill Shaffer, "The Impact of Capital Requirements on the Securitisation Decision," *Research Paper No.* 8820, FRB NY, August 1988, p.2.

riskier business normally reward them with greater return at the same leverage ratio. It is then rational for them to increase financial leverage and maximise subsidies provided by deposit insurance by selling low risk loans through securitisation, and maintaining only riskier ones in their portfolio. If deposits are earmarked to loans they will fund and deposit insurance premiums are adjusted in line with the risks involved, this incentive of moral hazard will of course vanish. This hypothesis implies that securitisation is positively related to bank risk, and thus, the riskier a bank is, the more likely it will securitise. [Benveniste and Berger (1987), James (1987)].

Similarly, Greenbaum and Thakor considered the issues of information and regulatory taxes most important in banks' funding modes. Under information asymmetry condition, they argued that increased regulatory taxes encouraged securitisation. Where no regulatory taxes or subsidies exist and information regarding borrowers' payoff distributions is common knowledge, banks have no preference between deposit funding and securitisation. If there is no regulation, the only difference between deposit funding and securitisation is in the underlying contracts. Since information is symmetric, securitisation does not have advantage over deposit. Risk-averse investors, who demand that the loans are secured by all bank's capital, would thus set insurance coverage as much as the bank's capital, making the securitisation contract identical to deposit funding contract. In such an extreme case, bank intermediation might not be necessary. On the other hand, when information is asymmetrical, i.e., only the borrowers know the probability of success of their investment projects, but without regulatory taxes or subsidies, the choice of funding basically depends upon a trade-off between the screening costs under deposit funding and the potential loss in risk-sharing under securitisation. The implication is that banks would prefer securitisation for their best assets and deposit funding for their worst. Where information is asymmetrical and regulatory taxes and subsidies exist, the choice depends upon regulations. If regulatory taxes are sufficiently low or there is a net subsidy, and the capital requirement is so low that even the best assets need only low insurance coverage under securitisation, deposit funding would be preferred regardless of the quality of borrowers. This implies that the banks will go for securitisation if the net regulatory tax is sufficiently high. Securitisation can be further encouraged by third-party insurers and sufficiently low information processing costs [Greenbaum and Thakor (1987)].

However, a **collateralisation hypothesis** asserts that securitisation may arise even without regulatory taxes. This hypothesis notes that many non-banks and even non-financial institutions issue collateralised claims as a source of funding. Since these institutions in general are riskier than banks, they have to offer a higher rate for deposit (if they are allowed to). It also notes the similarity in pay-off characteristics between loan sales and secured debt. Given that the payment hierarchy in the event of default starts from secured debt to unsecured debts or deposits, the secured debtors will also receive a lower rate of return than depositors. Thus, it will be to a bank's advantage to issue debt-collaterallised securities instead of deposits to finance new loans with a higher probability of default.[84] If constrained to deposit funding, banks would have to pass up a good loan opportunity due to the high cost of deposit financing. Thus, securitisation enables banks to extend low-risk loans that would be unprofitable under deposit funding. The riskier banks get, the greater incentives for securitisation.[85] [James (1987, 1988), Benveniste and Berger (1986, 1987), Stulz and Johnson (1985)]

Although the collateralisation hypothesis does not include the regulatory aspect in its explanation, the incentives for banks to securitise would increase even further when regulation such as fixed-rate deposit insurance exists. An underinvestment hypothesis, which extends the collateralisation hypothesis to include moral hazard, well demonstrates this. It notes that the ability to issue secured debts can affect a firm's investment policy. The hypothesis argues that a bank with fixed insured deposits will tend to underinvest in relatively low-risk loans and overinvest in high-risk loans. It is a kind of moral hazard arising from the fact that the yield on deposits will not adjust fully to reflect the marginal risk of the new loan to the overall risk of the bank.[86] This is because interests on deposits are fixed regardless of the risk profile of the assets they support. A solution to this underinvestment of low-risk

84. The safe assets will be sold to the risk adverse investors, while the risk neutral investors will probably purchase the bank's deposit. Without securitisation, however, banks are forced to pool the various types of depositors for both high- and low-risk loans. As a result, risk is distributed among the various groups of investors.

85. However, James argued that the riskiness of a bank does not necessarily increase with securitisation. James, Christopher, "Off-Balance Sheet Banking," FRB San Francisco, 1988, p.30.

86. Meyers, Stewart, "Determinants of Corporate Borrowing", *Journal of Financial Economics,* 1987.

loans is to hive old low-risk loans to off-balance sheet, leaving risky loans on-balance sheet so that they could be funded according to their risk profile, i.e., through securitisation. [Stulz and Johnson (1985), James (1987)]

All the above hypotheses commonly predict that low-risk assets are securitised off-balance sheet, while high-risk assets remain on-balance sheet, and thus securitisation generally raises bank's overall risk to even higher level.[87]

However, there are contrasting hypotheses as well. **A market discipline hypothesis** argues that safe banks are more likely to undertake securitisation than risky banks and riskier banks can become safer through securitisation. This hypothesis notes that loan commitment and stand-by L/C are basically uninsured future contingent claims and subordinate to other secured claims. Due to this junior nature, the values of these claims tend to be higher with the safer banks than the riskier banks. This will provide an incentive for banks to enhance their "safety" reputation and encourage the safer banks to issue more of these claims. As such, this hypothesis contrasts to the collateralisation hypothesis in that securitisation contributes to improving market discipline. [Benveniste and Berger (1986), Koppenhaver and Stover (1991), Boot and Thakor (1991)]

A **monitoring technology hypothesis** is an extension of the delegated monitoring theory to securitisation. Improvements in data processing and communication technology have increased the use of statistical techniques in credit analysis. It is now easier for investors to rate assets, and consequently informational gaps between lenders and intermediaries have been reduced significantly. As lenders can now monitor borrowers directly, some high quality loans but with information problems that used to be intermediated by banks in the past, no longer need to be intermediated. Securitisation without recourse belongs to this category. While losing some of their high quality customers to direct lenders, banks can still lend because the new monitoring technology enables them to access borrowers who used to depend on internal financing. As a result, the boundaries between different funding

87. This argument, however, requires more elaboration, because the effect of securitisation on bank's risk may vary depending upon the recourse clause. For further discussion, see Berger and Udell (1991), pp.13-14.

modes shown in Figure 3.1.1 will shift to the left. In this aspect, the distinction between off-balance sheet and disintermediation securitisation as discussed in Chapter 2 is crucial. Only the latter can be explained by this view. Since monitoring is still needed for the off-balance sheet type after securitisation, it still remains in the boundary of bank-intermediated lending. Unlike the above hypotheses, securitisation under the monitoring technology hypothesis does not affect bank's risk profile. Risky loans that require monitoring should continue to be intermediated. On the other hand, loans that no longer require monitoring should be funded directly by the investors. [Berger and Udell (1991)]

A **comparative advantage hypothesis** argues that securitisation arises due to banks' comparative advantages in certain functions such as deposit taking, and loan extension and servicing. These advantages generally stem from the economies of scale, monitoring/screening expertise, and customer relationship. In essence, they reflect differences in marginal funding costs. Not all banks are equally able to fund, lend, and service loans. They break up these distinctive functions, and specialise in what they have comparative advantage over others.

Meanwhile, a **diversification hypothesis** argues that banks sell loans in order to buy or originate other loans for their portfolio, thus increasing the level of diversification. Securitisation helps to diversify loan portfolio by reducing the moral hazard problems associated with the fixed-rate deposit insurance. Therefore it should contribute to lowering the risks of banks. According to Pavel and Phillis, their empirical tests to determine the motives for loan sales, the comparative advantage[88] is not only the primary factor but also the largest determinant on the amount of loan sales. The need to diversify their loan portfolio and the size of banks were also important factors to aid securitisation. Therefore, loan sales should continue to be an important bank activity, even if regulatory taxes were eliminated. [Pennacchi (1988), Pavel and Philis (1987), Pavel (1988)]

88. Measured as a ratio of non-interest expense to a sum of outstanding loans and securitised loans, and is expected to yield negative sign when regressed against the amount of loans sold. Pavel, Christine, and David Phillis, "Why commercial banks sell loans: An empirical analysis," *Economic Perspectives*, FRB Chicago, May/June 1987, p.6.

3.3 Securitisation and Risk

3.3.1 Review of Theory and Empirical Findings

As explored in the previous section, banks sell loans for various reasons. Also, there is no consensus in theories as to whether securitisation increases or reduces risk of the issuing bank. At one end, the moral hazard hypothesis and the collateralisation hypothesis assert that securitisation generally increases a bank's risk. At the other, the market discipline hypothesis predicts that securitisation tends to improve a bank's safety and soundness. Meanwhile, the monitoring technology hypothesis states that securitisation is risk-neutral. Empirical test results are also inconclusive. If banks sell low-risk loans on account of regulatory taxes which make such loans unprofitable, the riskiness of banks' portfolio as well as the quality of loans sold would increase. If, however, banks sell loans for diversification purpose, then loan sales would help to lower their risk. Therefore, depending on the individual bank's motivation, it is possible that loan sales could reduce the riskiness of one bank, while increase it in another bank, or has little or no impact in yet another bank. On average, the increase and decrease impact may cancel out, leaving securitisation with insignificant impact on risk.[89]

Granted that bank capital provides a protection from risks, the relationship between securitisation and bank capital poses another contradiction. Empirical tests on their causality show that capital is a positive determinant of securitisation while the quantity of securitised assets is a negative determinant of bank capital. The reason for the former is that capital reduces the probability of a bank's insolvency; for the latter, the ability to securitise assets is a favourable indication of an overall riskiness position of the bank, thus less capital is needed for higher quality issuer.[90]

89. Pavel, Christine A., "Loan Sales have Little Effect on Bank Risk" *Economic Perspectives,* FRB Chicago, 1987, pp.23-37.

90. Koppenhaver, G.D. and Roger D. Stover, "Standby Letters of Credit and Large Bank Capital," *Journal of Banking and Finance,* No.15, 1991, p.326.

3.3.2 Risks That Banks Face

Despite theoretical and empirical ambiguity of the relationship between securitisation and risks, it should be reiterated that securitisation does not completely eliminate risks. Though securitisation provides numerous benefits such as a better management of risks, there are a number of risks that banks still face in addition to the fact that securitisation itself may change a risk profile of the originating bank. The complexity, newness, and volume-driven nature of securitisation may increase the probability for banks to make mistakes and improper decisions. Therefore, the risks associated with securitisation in fact are mostly similar to those that banks face in traditional lending. The major differences are the types and levels of risks, depending upon the role that banks assume. In this light, conflicts of interest may arise out of the different functions performed by a bank in their multiple roles in securitisation.

In addition, the types and levels of risks also vary according to banks' strategies. For example, a bank's attitude toward credit risk as an investor may be opposite to that of the originator or the servicer. Since one of the primary motives for securitisation is the transfer of credit risk to investors, it is also possible that some banks overestimate the risk transfer of securitisation or underestimate the commitment and resources required to effectively manage the process. Such mistakes may prevent these banks from future access to securitisation markets. In addition, risks associated with the different types of securitisation that banks choose are also vastly different. An illustrative list of risks faced by banks includes credit risk, liquidity risk, market risk, transaction risk, reputation risk, compliance risk, and strategic risk.[91,92]

(i) As Originator

When risk is defined as a potential adverse impact that expected or unexpected events will have on earnings or capital,[93] a bank as the

91. The Basle Committee of the BIS listed credit risk, country and transfer risk, market risk, interest rate risk, liquidity risk, operational risk, legal risk, and reputational risk as the key risks faced by banks. "Core Principles for Effective Banking Supervision," BIS, Basle, September 1997.

92. OCC, "Asset Securitisation: Comptroller's Handbook," The Office of Comptroller of the Currency, Nov. 1997, pp.30-51.

93. OCC, op cit., p.35.

originator of securities still remains exposed to most of the risks inherent in the traditional bank lending business. Thus, it is the degree of risk exposure that matters.

Credit risk basically arises from an obligor's failure to meet the debt obligation or the terms of contract. In a securitisation structure, credit risk is shared among the diverse participants. Bank takes the first-loss risk, the remaining risks being transferred to credit enhancer and finally to investors according to a senior/subordinate structure. The price of security and related fees accordingly reflect the risk burdens shared among the participants. As mentioned earlier, this risk sharing feature is a fundamental motivation for banks' involvement in securitisation.

Nevertheless, some risks that are not factored into the securitisation structure remain. These risks can adversely affect the originating bank's overall credit quality in various ways. First, there is a question on the quality of assets that remain on the bank's balance sheet. As discussed in the previous section, banks tend to securitise the better quality assets while keeping the lower quality assets on the balance sheet. Thus, the bank may close a successful securitisation deal, but may eventually end up with having to hold more capital and loan loss reserves due to deteriorating asset quality. Second, banks may be subject to a moral recourse when securitising poor quality asset pools. Although it has no legal obligation, the originating bank may feel compelled to protect its reputation or to prevent its credit ratings from being downgraded, and offer financial support for sold assets that perform poorly. This will not only incur additional costs but also affect both the legal and accounting nature of the relevant securitisation transaction, i.e., sold assets may no longer be eligible for off-balance sheet treatment, subjecting the bank to additional risk-based capital. Third, the residual[94] default risk after the sales of assets may be significant. Especially in the case of revolving asset securitisation, excess spread is maintained to supplement spread account or cash collateral account for the unexpected losses, which otherwise reverts to the originator as additional profit. As charge-off rates increase, the balance of excess spread decreases, which affects

94. The term 'residual' is used because expected loan loss or charge-off is already factored in.

banks' profit. Last, but not the least, there is a concentration risk arising from risk exposure being concentrated on a particular institution, industry, or geographic area.

Liquidity risk is a bank's inability to meet its obligations of payments. It arises when a bank fails to recognise or manage changes in market conditions that affect its ability to liquidate assets in a timely and appropriate manner. It may happen when the bank relies too much on a single funding source or when revolving assets such as credit card receivables are securitised. Assume that a bank originates and securitises credit card receivables with early amortisation trigger for investor protection, and that the bank's strategy is to rely on securitisation market for the new issues. Assume further that the bank does not allocate sufficient capital to support loans, but only enough to cover the seller's participation and to supplement the pool with new receivables during the revolving period. If the economic condition deteriorated and charge-off rate soared in the revolving period, investors would trigger early amortisation for the immediate repayment on a fast pay basis. With insufficient buffer, the originating bank might be forced to hold the sold assets back on the balance sheet and to find alternative source of funding, which is a daunting task in such an adverse situation. In this light, prudent management of liquidity risk should include the monitoring of all outstanding transactions as a part of day-to-day liquidity management, and the establishing of an early warning system, a careful liquidity planning that factors in the maturity and potential funding needs, and a contingency liquidity planning based on a stringent stress test.

Strategic risk arises when a bank's strategic decision turns out to be improper or incompatible with its overall goals, or failed to factor in its long-term resource availability. Banks are exposed to strategic risk at every decision making, and thus strategic risk is potent for whatever role bank performs in securitisation. A successful sale of high-quality assets does not guarantee another success in securitising high-risk assets. Securitisation may seem like a profitable and sophisticated business, but this should not be the main reason for bank to go into it. Rather, the bank management should first identify its business expertise, and carefully formulate a strategic decision in line with its long-term internal resource planning. In a hierarchy of risks, strategic risk is in fact a cause of other type of risks.

Reputation risk arises when negative public opinion or perception develops against the performance of asset pools. It generally affects a bank's ability to establish new relationship with future customers or to securitise new asset pools. It may not only damage the franchise value, but also lead to litigation or financial losses. Since reputation risk is qualitative in nature, it is often revealed by the increased costs or availability of funds in the future deals. It should also be noted that protecting reputation by providing additional financial support to asset sold might raise the bank's credit risk as discussed above.

(ii) As Servicer

Since the originating bank usually functions as the servicer after securitising its asset pools, risks associated with this function are mostly operational.

Transaction risk arises from inefficient operations such as incorrect loan and payment processing, inefficient collection of delinquent payments, and inaccurate investor reporting. Transaction risk has adverse impact on the credit quality of receivables as well as the bank's ability to continue securitisation business. Managing transaction risk is synonymous to quality control of servicing operations, which is mainly determined by the quality of staff, skill level, trading volume, system integrity, and compliance with business standards.

Reputation risk may also arise when negative public opinion or perception develops against the efficiency of servicing. The best way to manage this risk at the operational level is to have a sound business plan and a comprehensive and effective risk management framework, which must be carried out through the whole life span of the asset pools.

Compliance risk arises when a bank violates or does not conform to laws, rules, regulations, practices, and ethic standards. It may also arise when rules or regulations are ambiguous or untested. Complexity of the securitisation structure often makes it difficult for bank staff to fully comply with relating regulations. In addition to incurring fines or penalties, compliance risk may damage franchise value or reputation of a bank, and restrain future business opportunities.

Strategic risk at the operational level typically involves human resource problem. Servicing asset pools for the first year or two out of the longer life of obligation, say 5 years, could be easy. Over a longer time span, however, it is likely that delinquency and charge-off rates rise, and investor reporting becomes inaccurate, resulting in bad publicity. This arises mostly from the lack of skilled staff or training.

(iii) As Investors

While banks have typically been playing the roles of originator and servicer, an increasing number of banks have also assumed the role of investors as part of their asset-liability management.

Credit risk continues to be the major risk faced by investors. Despite having the risks shared and protected by the issuer and credit enhancer, the investors might still be exposed to credit risk in the event that the issuer[95] or credit enhancer may default. Strictly speaking, only securities backed by the full faith and credit of the government, such as REMICs which are guaranteed by Ginnie Mae, are virtually free from credit risk. Since there is an increasing number of private label securitisation, the investors are advised to be careful about the credit risks associated with the issuers and the methods of credit enhancements. On the whole, however, credit risk can be minimised if securitisation is well structured and properly managed, the two key factors of successful securitisation.

Market risk is the risk arising from security price fluctuations. The security price is typically a function of prevailing interest rates, its average life span and its degree of liquidity. MBS issues are more vulnerable to interest rate movements than other fixed-income instruments because interest rates directly influence prepayment behaviour, which in turn affects the average life and yield. If interest rates fall, prepayments will speed up, and investors may receive their principal sooner than anticipated. Hence, they might have to reinvest it at a lower rate. This is called "call or contraction risk". In the opposite case when interest rates rise slower than anticipated, the prepayment rate extends the average life of the security, which will deprive investors of the opportunity to reinvest in the higher yielding securities.

95. In this context, we refer to securitisation with recourse, explicit or implicit, as well as built-in credit enhancement like over-collateralisation.

This is known as "extension risk".[96] Both the call risk and extension risk are often termed as reinvestment risk.

Although prepayment means payment of all or part of debt obligation before it is due, **prepayment risk** generally refers to the chance that borrowers repay their debt obligations faster or more slowly than expected, thereby affecting the average life span of the investment and perhaps its yield. Factors affecting prepayment include prevailing interest rates, asset value appreciation, ease of refinancing process, and local economic conditions. Among others, prevailing interest rates are the most significant factor. As mentioned earlier, prepayment rates tend to increase when interest rates fall, because borrowers take advantage of these rates by refinancing higher rate mortgages with the prevailing lower rate. The development of a more sophisticated structure in securitisation owes much to the efforts to mitigate prepayment risk.[97]

(iv) As Credit Enhancer

The role of credit enhancer is to absorb some credit risks involved in lending for fee income. As discussed in the previous section, financial intermediation is about risk and information, and securitisation is about risk sharing. As such, a bank as a credit enhancer has to carefully assess the credit risk pertaining to the ABS issue and set a proper pricing on it.

3.4 Policy Implications

We have seen that securitisation was introduced and developed in response to changes in financial market conditions and regulatory environment. Now, we will discuss the reverse course. Indeed, securitisation has significantly affected the banks' role as financial intermediary and the risk profile of banks. Increasing banks' involvement in securitisation also indicates changes in banks' strategy.

3.4.1 Monetary Policy

The general framework of monetary policy involves setting the objectives, and using available instruments to achieve them. The pro-

96. "REMICs and Mortgage-Backed Securities", Fannie Mae, 1994, pp.12-13.

97. Recall the discussion of I/Os, P/Os, PACs, and TACs in Chapter 2.

cess requires the identification of the right intermediate targets, as well as the understanding of transmission channels and available instruments. Interest rates, asset prices, exchange rates, and credit availability, have been identified as the main transmission channels in modern financial economics. Credit ceilings, reserve requirements, discount rate, open market operations, foreign exchange market operations, and moral suasion are the typical instruments of monetary policy.[98] Meanwhile, monetary aggregates, interest rates and exchange rates are examples of intermediate or operating targets used to measure the effectiveness of policy measures. Therefore, to assess the impact of securitisation on monetary policy, we need to examine how it affects monetary aggregates, the effectiveness of monetary instruments, and market reaction. The analysis will be addressed from the viewpoint of the financial system as a whole, and not the individual bank.

(i) Interest Rates

With respect to interest rates, we have discussed that securitisation may provide an alternative cheaper source of funding for individual banks, and that a decline in mortgage rates has been observed after a proliferation of mortgage-backed securitisation. However, this does not imply that the interest rates on the whole will decline. It may be on the contrary, as securitisation itself is strongly influenced by interest rate changes.

How securitisation might affect the ability of monetary authority to influence interest rates is not clear. We can, however, infer from the experience of the United States where securitisation is by far the most advanced. In general, changes in the federal funds rate affect short-term interest rates through arbitrage. Despite the relative shrinkage of the banking system due to securitisation, there is no evidence that the link between the federal funds rate and other short-term market rates has diminished.[99]

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98. BIS, "The Transmission of Monetary Policy in Emerging Market Economies," *BIS Policy Papers No.* 3, Bank for International Settlements, January 1998, pp.8-17.

99. Philips, Susan M., "The Place of Securitisation in the Financial System: Implications for Banking and Monetary Policy," A Primer for Securitisation, 1996.

(ii) Availability of Credit

Since the channel of credit availability is based on the assumption that there are borrowers who exclusively rely on bank credit, changes in reserves could be used to influence the availability of credit to these borrowers. To the extent that securitisation offers direct funding source to some of these borrowers, the monetary authority may have less influence on credit availability. This view is less accepted in developed countries where the interest rate channel is more commonly used than the credit channel.

Rather, this view is more applicable to the developing countries where loanable funds rely heavily on bank credit due to the lack of well-developed capital markets. The interest rate channel will not work well for countries suffering from financial crisis, severe credit crunch and contraction in domestic demand, due to the liquidity trap. One of the possible options might be to direct credit towards particular industry sectors or companies that are deemed commercially viable. In this light, securitisation of impaired assets with public financing accompanied by restructuring and work-out efforts can be a short-term solution to the problem. However, this solution should be carefully considered in line with the broad objective of capital market development, bearing in mind that direct credit is one of the main culprits of banking problems in the first place.

(iii) Monetary Aggregates

The effective use of monetary aggregates as an intermediate target depends critically on a correct definition and coverage. Defined in the broadest sense, monetary aggregates that include liabilities of non-bank financial institutions may hardly be affected by securitisation. On the other hand, securitisation may adversely impact the reliability of narrowly defined monetary aggregates as witnessed in the course of financial disintermediation. For example, the part of M2 that move into securities or bonds are captured in the coverage of M3.

Although securitisation may replace deposits as a source of funding for individual banks, total credit availability in the whole financial system remains unchanged at a given amount of reserve base. The proceeds of loan sales (in place of deposits) of an originating bank are held in other banks or non-bank financial institutions which forego

other loan opportunities. What happens is the mere change of ownership on loans, and of funding modes, leaving the total loans and funding unchanged. Thus, securitisation does not create any new credit.

The impact of securitisation on monetary aggregates should be assessed in the context of the monetary targeting framework in the individual country. In general, we could only conclude that securitisation would reduce the reliability of monetary aggregates only to the extent that the particular monetary aggregates used do not account for the change in liquidity originated from securitisation.

(iv) Demand for Money

Although it has been argued that securitisation may lead to more frequent transactions and thus reduces the stability of money demand, the argument has yet to be supported by hard evidence. Observing the trend of velocity of money would provide some clues. The outflow of deposits into other assets such as mutual funds due to securitisation might turn out to be lower than the expected money growth defined as M2, and thus the velocity of money will rise. If securitisation causes unstable money demand, the use of monetary targeting would be problematic.

(v) Reserve and Inflation

To the extent that securitisation is undertaken to circumvent reserve requirements, the effectiveness of reserve requirement as a monetary policy instrument will certainly be weakened. This may lead to higher inflation as banks can use the extra resources to expand credit through money multiplier. There is also concern that the securitisation of consumer credit would facilitate expansion of such credit, and ultimately raise inflation.

3.4.2 Banking Supervision and Regulation

As discussed earlier, the regulatory tax hypothesis, the moral hazard hypothesis, the collateralisation hypothesis, and the underinvestment hypothesis all suggest that securitisation poses some problems concerning moral hazard, deterioration of banks' balance sheet, as well as changes in the risk profiles of banks. We have also stated that risks

inherent in banking operations still remain in the financial system. Thus, the regulators' primary concern for securitisation should be whether securitisation causes a deterioration in credit discipline of banks, and whether it may undermine the effectiveness of capital adequacy requirements as well as other regulatory tools.

Asset sales without recourse do not initially present a problem as such transactions merely transfer the risks and rewards of the underlying assets. However, investors may be concerned with both the quality of loans, an adverse selection problem, and due diligence, a moral hazard problem. On the other hand, asset sales with recourse, which are in effect collateralised borrowings, involve credit risk retained by the originator. If treated as sales, banks may underestimate the credit risks that should otherwise have been reflected on the balance sheet. Risk retention may also occur indirectly as a result of retaining a subordinated class of an ABS or by some other means.

Changes in the risk profiles of banks, along with the dramatic increase of derivative transactions that are typically booked off the balance sheet, have triggered off a change in bank regulators' perception and assessment of risks associated with securitisation. Indeed, the issue of asset quality, which is the focus of the on-going theoretical debates, is just part of the broader issue of banking safety and soundness. Instead of focussing narrowly on asset quality, the emphasis of bank regulation should be on measuring and managing risks. Despite considerable disagreement, an increasing number of regulators seems to accept the idea that capital requirement is a useful means of ensuring banks' safety and soundness and tries to implement the risk-based capital adequacy guidelines.[100]

As mentioned earlier, securitisation does not make risks disappear. Various types and levels of risks remain in the financial system and banks continue to be exposed to risks according to the type of securitisation and the roles they play. Even in the case of securitisation without recourse, the presence of concentration risks of funding source, liquidity risk, and operational risk mean that they have to be evaluated and provided for by adequate bank capital. The key point here is that all the possible risks must be recognised, quantified, monitored,

100. Greenbaum, Stuart I., "Foreword," *Journal of Banking and Finance*, No.11, 1987, p.356.

and controlled. In this respect, bank regulators and supervisors must have the authority to devise means and ways to control these risks, since they are the guardians of the banking system.

(i) Prudential Regulations and Requirements

As mentioned earlier, bank supervision with respect to securitisation should focus on banks' own recognition of related risks and their ability to manage those risks. Prudential regulations and requirements recommended under the Basle Committee's Core Principle for Effective Banking Supervision include capital adequacy, loan loss reserves, asset concentrations, liquidity, risk management and internal controls. In practice, bank examiners should assess the impact of all aspects of securitisation on the overall financial condition and performance of the institutions involved. More importantly, prudential regulations should be undertaken throughout the whole life of securitisation. The reason is that banks involved in securitisation normally pay substantial attention only at the beginning. Over time, as this attention wanes, the problems, such as rising delinquencies and charge-offs, and inaccurate investor reporting, tend to occur. The supervisors' job is to periodically review their prudential requirements and evaluate the continued relevance of existing requirements as well as the need for new ones. Regulations should not supplant management decisions, but rather to ensure that banks conduct their activities prudently.

Meanwhile, the so-called functional approach to regulation has recently been suggested as a longer-term alternative to the existing regulatory and supervisory framework. It is based on the observation that financial institutions increasingly perform disparate functions that once were bundled together. Instead of looking at the institution as a whole, regulators should look at the individual function, find the best practice to perform these functions, and prescribe consistent treatment for all the providers of this function.[101] In spite of considerable obstacles that remain to be solved, this approach is quite promising.

101. Dwight B. Crane, et al., "The Global Financial System: A Functional Perspective," Harvard Business School Press, 1995.

(ii) Risk-based Capital Requirements

In general, equity capital serves several purposes. It provides a permanent source of revenue for shareholders and funding for the bank. It bears risk and absorbs losses. It provides a base for further growth. It also helps to ensure that the bank is managed in a safe and sound manner.[102] Therefore, it is important that capital must be adequately provided to cover risk exposure. The idea of the risk-based capital adequacy requirements is that different risks should be weighted accordingly, whether they reflect the credit risks of both the on- and off-balance sheet items.

The Capital Accord adopted by the members of the Basle Committee on Banking Supervision is a reflection of the growing concerns among regulators over the importance of capital adequacy and the perception of risks involved in off-balance sheet transactions. It assigns five risk weights, 0, 10, 20, 50, and 100 percent, according to the degree of riskiness of the assets. Table 3.4.1 illustrates how different weights of credit risks are allocated to the different type of assets. However, a risk-weighting practice of securitised assets differs from country to country. As illustrated in Table 3.4.2, a 50 percent weighting is assigned to MBS in the U.S.[103] and the U.K., while a 100 percent is assigned in Germany and Australia.

Applying the risk-based capital requirements to securitised transactions, however, is not a simple task. As mentioned in the previous chapter, risk-based capital support should be provided in the case of securitisation transactions that do not qualify for sales treatment or are considered sales with recourse. If recourse or credit enhancement is granted explicitly, the seller can easily set aside the appropriate amount of capital by following the risk-based capital standards set by the BIS. If the recourse is not an explicit contractual agreement, however, it is rather a daunting task to effectively determine whether it exists and how much provision should be made.[104] The incidents of implicit re-

102. The Basle Committee, "Core Principles for Effective Banking supervision," BIS, September 1997.

103. GNMA securities, which carry a full guarantee of a US Government agency, are the exception with a zero risk weighting.

104. For an in-depth analysis on this issue, see McAllister, Patrick H. and John J. Mingo, "Bank Capital Requirements for Securitised Loan Pools," *Journal of Banking and Finance,* Vol.20, 1996, pp.1381-1405.

course may include voluntary support for securitisation by selling assets at a discount, exchange of performing loans for non-performing loans, and infusion of additional cash into a cash collateral account or other collateral account. Any action for supporting asset sales that impair the selling bank's capital is considered provision of implicit recourse. Hence, the general test of loss retention and capital impairment supplemented by periodic interpretations will serve as the most effective method of proving the existence of implicit recourse.[105]

Table 3.4.1
Risk Weights Accorded to ABS Issues in the United States

Type of Asset-Backed	Securities Risk Weight (percent)
GMNAs	0
FHLMC and FNMA securities	20
Privately issued, mortgage-backed securities collateralised by GNMA, FHLMC, or FNMA securities, or by FHA- or VA-guaranteed mortgages	20
Privately issued, mortgage-backed securities collateralised by one- to four-family residential properties	50
Stripped, mortgage-backed securities residual interests, and subordinated class securities	100
Asset-backed securities collateralised by Non-mortgage assets	100

Source: Reproduced from Boemio and Edwards, "Asset Securitisation: A Supervisory Perspective".

105. OCC, "Asset Securitisation: Comptroller's Handbook," November 1997, p.60.

Table 3.4.2

Risk Weights of MBS in the Portfolio of Resident Banks in OECD Countries

Country	*Risk Weight (percent)*
EC Members	
Austria	100
Belgium	100
Denmark	50
Finland	100
France	50
Germany	100
Greece	NA
Ireland	100
Italy	100
Luxembourg	100
Netherlands	100
Portugal	100
Spain	50
Sweden	50
United Kingdom	50
Other Countries	
Australia	100
Canada	50
Iceland	-
Japan	100
Mexico	-
New Zealand	50
Norway	100
Switzerland	100
Turkey	-
United States	50[a/]

a/ Zero, for GNMA-backed bonds.

Source: Reproduced from John K. Thompson, "Securitisation: An International Perspective".

It may be argued that the risk-based capital framework may discourage further development of securitisation, not only because the incentives of avoiding capital requirements through the off-balance sheet treatment disappear, but also because the recourse provisions and credit enhancement that have facilitated the growth of securitisation are now subject to capital adequacy requirements. However, so far there is no evidence supporting this argument.[106] Rather, the idea that the risk-based capital requirement is meant for prudential management of risks is well accepted by the market participants. They see substantial benefits of this approach to securitisation business and it appears that securitisation continues to grow.

3.4.4 Financial Intermediation

As noted earlier, securitisation has tremendously changed the landscape of financial markets by segregating the intermediation role into different specialised functions. This results in more integrated capital and money markets. Lawyers, financial structurers, specialised credit enhancers, and credit rating agencies are drawn into the business. As one of the major players, commercial banks have to operate more like investment banks, or they are involved in different capacities in the securitisation process. The climate of specialisation and competition should eventually enhance banks' ability to manage portfolios and risks as well as to generate fee income. However, many questions remain unanswered with regard to banks' role as financial intermediaries.

It is often argued that securitisation leads to financial disintermediation. The increasing participation of non-bank financial institutions in securitisation business generally indicates a declining role of banks in financial intermediation. Banks' involvement in securitisation is also seen to be a move away from bank-intermediation to market-intermediation. The question then is whether banks will sell all of the loans they originated, and whether banks will abandon traditional lending and deposit funding activities entirely. Our discussion will focus on the competitive advantage of banks and their ability to transmit information on credit quality to the market effectively.

106. The market share of securitisation as well as new products continue to increase even after the new risk-based capital adequacy guideline was adopted in the U.S. in 1989 and the recommendation of the Basle Committee Standard in 1993.

The competitive advantage of commercial banks lies in their ability to screen the borrowers and thus originating information-problematic loans. The fact that a majority of commercial papers have been issued by big companies with sizeable sales volume or balance sheet indicates that information asymmetry still exists in small companies. Given the existence of existing small companies, banks will continue to be the most effective provider of their information. The presence of these companies also represents a natural barrier to the securitisation market.[107] Although services by credit rating agencies reduce the information asymmetry and make securitisation possible, their access to small companies is far less than that of commercial banks. While it is true that banks have lost their big customers to the capital market as monitoring technology develops, it is also true that they have been able to cater to the need of new customers that previously had relied on self-financing.

A critical part of the securitisation procedure is the pooling of assets, which requires symmetric information between the borrowers and the seller about the estimated credit loss and the degree of uncertainty. The fact that certain types of loans that have yet to be securitised demonstrates that the development of the objective credit-scoring algorithm has not reached a point that can cover the full array of loans. Thus, certain types of loans will continue to be originated and held by commercial banks.

In addition, commercial banks are the most effective providers of revolving credit arrangements, especially with the loan amount set at the borrower's options and is allowed to fluctuate. This credit line facility has advantage over the term loan. First, lenders can minimise their customer's cash management problems by agreeing to lend on demand. Second, credit lines secured by receivables or inventories enable more careful monitoring of the borrower's performance and hence lenders are able to limit default risk more effectively than with the term loan. It is true that some portion of revolving credit facilities can be securitised such as credit card receivables which have dominated the asset classes in the ABS market. However, there is no substitute for originating banks' ability to absorb fluctuations in outstanding

107. Kerr, Donald E. and Jean-Louis Lelogeais, "Loan Sales: No Immediate Threat to Traditional Lending," *The Journal of Commercial Bank Lending,* February 1989, pp.11-12.

principal even in the case of credit card receivables securitisation. Without this, securitisation of credit card receivables would not have been viable.

Therefore, it is more likely that commercial banks will continue their traditional lending activity at least in the foreseeable future, although their functions will be more segregated and their activities will be more like investment banking. Even the trend away from bank-intermediation to market-intermediation can be seen as a development in which banks have taken a leading role. Banks have been the most aggressive promoters of securitisation, especially in the ABS market using credit card receivables and commercial papers as collateral. After all, securitisation can help improve the efficiency of both bank intermediation and market intermediation. Whatever the case, banks will have to shift their role according to the progress of market segmentation.

Similarly, can we imagine a world where securitisation replaces the traditional banking completely such that banks no longer hold but only originate loans, and thus neither bank liabilities nor demand for reserves exist? It is extremely unrealistic, because the public's demand for safe and liquid liabilities provided by banks will not disappear due to the increasing transaction needs that go hand in hand with economic growth. It is also because only the central banks can offer absolutely safe and final clearing of accounts among banks.[108] Central banks will continue to exist, and so will the monetary and supervisory policy.

108. Phillips, Susan M., "The Place of Securitisation in the Financial System: Implications for Banking and Monetary Policy," in "A Primer on Securitisation," 1996.

Chapter 4

DEVELOPMENT AND OUTLOOK OF SECURITISATION

4.1 Outside the SEACEN Region

This section will review the experience of securitisation in countries where securitisation has been more advanced. This will provide some clues on the future development of securitisation in the SEACEN countries. The most important lesson here will be the pre-requisites for successful implementation, keeping in mind that each country needs to have its own development strategy that will best suit the local conditions. Even among developed countries with well-developed financial infrastructure as well as securities, the performance of securitisation is still uneven, especially between the U.S. and non-U.S. countries. As will be discussed in detail below, this is due to the different perception toward securitisation, market demand, and to a lesser degree, differences in the banking system.

4.1.1 The OECD Countries[109]

In terms of off-balance sheet securitisation, the U.S. has the largest, the most liquid, the most innovative, and the most sophisticated market. As discussed earlier, securitisation in the U.S. began with the government's promotion of residential mortgage finance in the 1970s and was further developed and applied to a wide variety of assets in the 1980s.

On the other hand, traditional or on-balance sheet securitisation has been in existence for more than several decades in Europe. Germany is the origin of the mortgage bond dating back to the 18th century when Hypothekenpfandbriefe, a form of mortgage bond, was created to raise financial capital with real estate as collateral. Mortgage bonds and communal bonds are also very popular in many other European countries, with a total outstanding volume of about U$900 billion at the end of

109. For further details on individual countries' experience, see Thompson, J.K., "Securitisation: An International Perspective," OECD, 1995.

1993.[110] Despite differences in the mortgage system in these countries, it is fair to say that housing finance has topped the agenda for the financial policy makers, and the growth of the mortgage bonds market is not unrelated to the promotion of housing finance.

In Germany, mortgage institutions traditionally obtain funding through the issuance of mortgage bonds, which enables them to minimise the potential maturity mismatch between long-term lending and short-term funding sourced from deposit. The practice of universal banking is attributable to this bond-financing of commercial banks and mortgage institutions.[111] Mortgage bonds usually obtain high credit rating because the originators are subject to strict regulatory control. For instance, the asset pool of collateral is required to be at least as large as the size of the bond, and mortgage bonds may be used to fund only 60 percent of the lending value of the property. Also, mortgage bonds carry no prepayment risk, since the originator may refuse prepayment of a mortgage loan. From investors' point of view, they only bear the market risk since the issuer is responsible for the ultimate credit risk due to the on-balance sheet nature. Investors also retains recourse to the issuer.

Although an increasing number of European countries have begun to venture into off-balance sheet securitisation, it is not as phenomenal as in the U.S.. Among the non-U.S. OECD countries, securitisation business in the U.K., Australia, and Canada has been led mainly by financial institutions as well as non-financial corporations. Japan and several continental countries such as France, Spain, Italy, and Belgium have taken pro-active measures to promote securitisation in their domestic financial markets. The rest of the countries are either still at a debating stage or determined not to promote securitisation. In any case, there is no comparison with the U.S. in terms of progress. For example, in the U.K. which has the largest securitisation market outside the U.S., with a total outstanding of £16 billion of MBS and £3 billion of ABS

110. Germany accounts for more than half of total outstanding mortgage and communal bonds market in Europe. In Germany, communal bonds which used to be a supplementary business to the issuance of mortgage bonds outperformed mortgage bonds in recent years, with the total outstanding being more than twice as much as that of mortgage bonds.

111. Mortgage banks are usually the subsidiaries of commercial banks.

at the end of 1994, only about 3 percent of residential mortgages have been securitised compared with more than 50 percent in the U.S..

Securitisation is still in its infancy in Japan, despite the existence of huge primary and secondary markets as well as the major role the Japanese securities companies have played in the off-shore securitisation markets. This could be partly due to the fact that Japanese banks traditionally value a close bank-industry relationship which might be weakened by securitisation. Also, corporate lending business has been a major source of profit for Japanese banks. As a matter of fact, traditional securitisation, in the forms of loan sales and mortgage-backed bonds, has been in existence in Japan since late 1970s. The main motivation was to expand the funding facilities for housing loans and to enhance liquidity of financial institutions. Banks which provided housing loans with real estates as collateral were allowed to pool homogeneous loans and issue certificates or securities with claims on the underlying assets. Although a number of instruments similar to certificates of claims have been introduced, the market growth and acceptance have been stagnant because the investors were mostly limited to financial institutions, and the resale of these certificates in the secondary market was not allowed. In addition, the yields of these securities have been unattractive partly due to the preferentially low housing loan interest rates. However, as banks are faced with deteriorating balance sheet positions, the government has hastened the legislation for off-balance sheet securitisation in combination with the establishment of Resolution and Collection Bank. The main purpose is to restructure the balance sheet of financial institutions as well as resolve insolvent financial institutions. This will be further discussed in sub-section 4.1.3.

4.1.2 Developing Countries

(i) Latin America[112]

Securitisation in Latin America might have strong implications for SEACEN countries as the experiences there show that receivables of

112. Shah, Hemant, "Securitisation in Latin America", The World Bank, LATAD, 1994.

low sovereign rating countries could be successfully securitised and some deals have acquired credit rating that is higher than the sovereign ceiling. Securitisation in Latin America started in 1987, when Telefonos de Mexico (Telmex) securitised U$420 million future receivables generated from the international telephone system.[113] Due to the underdeveloped local capital market, most of the assets securitised at the early stage were typically denominated in hard currencies and represented the obligations of investment grade institutions located in the OECD countries. Export receivables for primary commodities, long distance telephone receivables, remittances, and oil tariffs are the major assets securitised. However, domestic assets such as mortgages, credit cards, car loans, and lease payments have also been securitised subsequently, mostly through offshore SPVs. Argentina, Brazil, Chile, Colombia, and Venezuela are the countries that are more advanced and often have more diversified sophistication of securitisation. Bank loans and debt securities were also securitised in the forms of CBOs and CLOs, which reflected the efforts to overcome the debt crisis in the region following the Mexican crisis in 1995.

Great potential for securitisation lies in mortgage loans which have sizeable outstanding over a long period of time. The outstanding of mortgage loans ranges from 3 to 13 percent of GDP in the Latin American countries, although it is lower as compared to the developed countries which is in the range of 20 to 30 percent. In Argentina, the mortgage market was estimated to account for roughly 60 percent of banking sector loans in 1993, and mortgage-backed securitisation has successfully been carried out in the domestic market. Greater acceptance as well as increasing use of credit cards has also made credit card receivables a very good candidate for securitisable assets. Mexico and Venezuela have successfully securitised credit card receivables.

The recent development in securitisation of domestic assets is partly attributable to price stability restored from a decade-long hyperinflation because a long-term debt contract is not viable for securitisation under a prolonged inflation environment. Another push factor is the government regulatory initiatives that encourage banks to

113. Henderson, John, ed. "Asset Securitisation: Current Techniques and Emerging Market Applications," ING Barings, Euromoney Books, 1997, pp.79-80.

go into securitisation business. As an emerging market, there are sufficient outstanding amounts of securitisable asset pools such as mortgages, auto loans, credit card loans, infrastructure, commodities, and export receivables.

Nevertheless, some major problems need to be addressed to further develop securitisation in the Latin American countries. In this respect, several regulatory issues stand out. First, adequate development of concept with respect to trust and fiduciary relationship, which is vital to establish the SPV, is absent in Mexico and Argentina. Second, interest rates on mortgage are often regulated. They are differentiated by loan providers in Mexico[114] and Argentina, linked to wage indexes in Uruguay and Colombia, and subsidised for low income housing programmes in Colombia, resulting in a segmentation of mortgage markets by interest rate. Third, there are certain restrictions on securitisable assets, securitising institutions, and investors. For example, the public pension fund is prohibited from investing in private securities in Uruguay. The mutual funds cannot invest in ABS because they function as SPVs while only banks can securitise in Argentina. Fourth, a number of complicated tax issues are also present. In Argentina, unlike the typical debt instrument, viz. publicly issued 'negotiable obligations' which are exempted from tax, ABS is subject to stamp duties, income taxes, VAT, and withholding tax. This partly explains why issuers turn to foreign SPVs to relieve such tax burdens. In Uruguay, banks face unfavourable tax treatment because they are subject to VAT while individual lenders are not. Fifth, transfer of assets is costly and onerous. In Mexico and Uruguay, the sellers must notify the transfer to all obligors and obtain authorisation from them, which results in 3-6 month delays in transfer. Bureaucratic inefficiency in processing also worsens the delay. High fees for registration and notary make securitisation less cost-effective.

(ii) Other Asian Countries

Securitisation in the Asian region outside the SEACEN membership has been found in Hong Kong, and China. As in Latin America, transactions were mostly conducted in the offshore market. Securitisation in

114. Dual rates are applied for mortgages and Bancomer and Banamex are two major private providers of various state-assisted loans at excessively competitive rates.

Hong Kong began with residential mortgage loans in 1994, which was followed by securitisation of credit card receivables, car loans, and commercial mortgages. Hong Kong not only has one of the most developed capital markets in Asia but also maintains a well developed legal system largely based on the English Law. In March 1997, Hong Kong set up the Hong Kong Mortgage Corporation (HKMC) to promote the secondary mortgage market. The HKMC seems to be modeled after the Fannie Mae in that it initially purchases mortgage loans from banks, and issue for funding unsecured debt securities backed by pools of mortgage loans purchased. Securities issued by the HKMC will be attractive to investors because the risk weights assigned to them are only 20 percent as compared to 100 percent for corporate issues. When the market is moving on the right track, the HKMC will issue MBS as funding source. Hong Kong has a great potential in that total outstanding mortgage loans was around U$58 billion as of March 1997.

As of December 1997, there were four securitisation of which the originators were based in China. The amount of each issue is relatively substantial, ranging from U$110 million to U$300 million, because three of them are backed by infrastructure-related receivables and the remaining one is backed by future freight receivables of a shipping company.[115] It should be noted that all of them are issued not by financial institutions but by non-financial corporations, and issued in the offshore market. This clearly shows that securitisation is a useful alternative to traditional bond financing or bank loans, especially for the emerging economies in need of substantial amount of capital for infrastructure development.

4.1.3 Securitisation of Impaired Assets

Countries faced with the problem of insolvent financial institutions or non-performing loans have utilised loan sales and securitisation as useful tools to resolve the problem. The United States is the pioneer of this technique followed by Finland, Sweden, Mexico, and Japan. As such, it is worth reviewing securitisation of impaired assets, which will shed some light on the policy implementation for some crisis-hit SEACEN countries. Indonesia, Korea, Malaysia, and Thailand have announced

115. Lam, Alex S.K., "Securitisation: Principles and Practices," a presentation paper to the International Conference on Asset Securitisation, Dec. 4, 1997, Kuala Lumpur.

the introduction of similar scheme as a means of coping with increasing non-performing loans as well as resolving the problem of insolvent financial institutions.

The Resolution Trust Company (RTC) was established to cope with savings and loans ("S&Ls" or "thrifts") crisis in the U.S. in 1989.[116] The RTC took its name from a financial term "resolve," which in bankruptcy term means to dispose of the firm's assets and settle things once and for all.[117] The RTC managed and resolved all troubled thrifts which were previously insured by the Federal Savings and Loan Insurance Corporation (FSLIC) and for which a conservator or receiver was appointed since January 1, 1989. The RTC had various funding sources: the U.S. Treasury appropriations and borrowings; a contribution from the Federal Home Loan Banks; borrowings by the Resolution Funding Corporation which issued long term debt securities; the issuance of debt obligations and guarantees; income earned on the assets of the RTC, proceeds from the sale of assets, and collections made on claims received by the RTC from receiverships.

As the receiver of insolvent thrifts, the RTC began its operation with whole bank sales, which was later modified to include the sale of securities, the sale of other assets, in form of either whole loan sales or bulk sale, (sale of assets as groups), and eventually direct securitisation. It was not until April 1992 when the RTC adopted direct securitisation as a preferred method for disposing of assets, having found that most of the sold assets were repackaged and securitised by the purchasers, mostly investment banks. Various types of loans were securitised: the highest proportion was residential mortgage loans, followed by consumer loans and commercial mortgages, which included performing, under-performing, and non-performing loans. Since the majority of mortgage loans did not conform to the Federal agency standards, the mortgage loans were typically sold as RTC private label pass-throughs or REMICs.

116. The RTC was created by the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA).

117. Seidman, L. William, "Full Faith and Credit: The Great S&L Debacle and other Washington Sages," Randomhouse Publication, p198.

Securitising the assets originated by thrifts that went insolvent was not an easy task. The difficulty arose from limited homogeneity and transferability, especially in the case of commercial mortgages, which was subsequently overcome by credit enhancement. The situation was worse for non-performing loans that required foreclosure or re-negotiation of terms, although they could be sold in bulk, mixing attractive loans at a deep discount with transfer of ownership of the underlying property for better management. Non-performing loans and real estates were typically sold in subordinated tranches, which were absorbed by single investors who wished to maintain control over the properties. The investors anticipated an appreciation in value if the assets were managed properly. Principal and interest payments on those securities mainly came from the revenue obtained from either improved servicing or liquidating the loans. Here is an example: a pool of 162 non-performing mortgages and 12 non-performing non-investment grade properties were sold to a joint venture of a financial service firm and a real estate investor. The cash price was U$507 million for the book value of U$1 billion and the appraised value of U$705 million. A successful performance of the RTC is shown in Table 4.1.1.

Table 4.1.1
RTC Securities Issued by Category of Collateral

U$ million

Single-family mortgages	Multi-family mortgages mortgages	Commercial real estate loans	Mobile home loans	Home equity	Total	
1991	7,542	2,692	0	0	0	10,234
1992	12,235	1,780	7,189	616	311	22,131
1993	1,115	0	2,130	0	0	3,245
Total issuance	20,892	4,472	9,319	616	311	35,610
Outstanding as of June 1994	10,695	3,214	6,923	332	135	21,279

Source: Federal Reserve Board, Reproduced from "Securitisation," OECD, 1995

The RTC ceased its operations on December 31, 1995 after transferring all remaining assets and liabilities to the FSLIC Resolution Fund that is managed by the Federal Deposit Insurance Corporation (FDIC). The estimated total cost for resolving failed thrifts was U$87.9 billion

as of December 31, 1995.[118] This cost is equivalent to 1.2 percent of GDP, and is obviously borne by taxpayers. The RTC closed down 747 institutions with U$402 billion in book value of assets when they first entered the conservatorship phase. The amount was reduced through sales, collections, and other adjustments by U$162 billion during conservatorship, and U$240 billion during receivership respectively. Despite the tremendous cost to taxpayers, the RTC fulfilled the government's pledge to insured depositors. It reportedly protected 25 million depositors by transferring the acquired deposit liabilities, along with required funding, to healthy institutions as well as by using asset recoveries to pay the remaining creditors. It also ensured that as many thrift violators as possible were brought to justice and funds were recovered on behalf of taxpayers through investigation, civil litigations, and criminal referrals against those violators.[119]

In Finland and Sweden, many of the major banks were decapitalised as a result of the banking crisis in the late 1980s and early 1990s. The authorities were looking into the general legal conditions for securitisation. Although the symptoms were similar, they took slightly different approaches to address the problem. Sweden, where the capital market had been well developed, seemed to focus on cross-border securitisation. Finland, where commercial bank lending had been a dominant means of financial intermediation with the bond market playing only a peripheral role, used securitisation as a means of creating a new financial system with newly-capitalised institutions, and dealing with the large stock of impaired assets.

The seven-years in a row economic decline in Japan caused financial institutions to build up non-performing and sub-performing loans. Roughly U$600 billion of distressed real estate were reportedly held by the financial institutions. Against this backdrop, the Japanese government established the Resolution and Collection Bank (RCB) in September 1996 through the

118. The total loss funds provided by the federal government was U$105 billion which included the estimated unrealised loss of U$17.1 billion. "Financial Audit: Resolution Trust Corporation's 1995 and 1994 Financial Statements," The United States General Accounting Office, July, 1996, p11.

119. Approximately U$2.4 billion was recovered from professional liability claims, and U$26 million was collected in criminal restitution. Ibid, p9.

reorganisation of Tokyo Kyodou Bank, itself a result of a merger of two failed credit unions in Tokyo, into an organisation which purchase non-performing loans from failed credit cooperatives. Modeled after the RTC in the U.S., the major shareholders of RCB are the Deposit Insurance Corporation which holds the largest share, followed by the Bank of Japan and some private financial institutions. According to a recent announcement by the Japanese government, the RCB is to raise long-term, low-interest funds by issuing asset-backed securities through a special purpose company. Legislation concerning the special purpose company that will securitise real estate will be brought forward in September 1998.[120]

In sum, securitisation of impaired assets can be viewed both positively and negatively. On the positive side, securitisation has proved to work well even for the impaired assets. The additional feature such as credit enhancement has raised the price of disposed assets higher than could have been otherwise. The RTC's experience also showed that loan sales could be expedited to limit the need for further support from the Federal government. The negative side involves the cost. A huge amount of credit enhancement was required to securitise such loans. Furthermore, the prices of impaired assets did not actually reflect the credit enhancements offered by the RTC as future losses on the underlying assets may result in further losses to the RTC. This is mainly because, for practical reasons, the assets are not removed from the balance sheet of the RTC which is effectively a government agency. Therefore, all the costs will ultimately be borne by taxpayers. More importantly, the costs of resolving impaired assets have shown to increase substantially as the resolution proceeds. In the RTC case, the initial provision of U$50 billion has escalated to reach U$105 billion. Securitisation of impaired assets also raises questions of fair valuation and effective servicing. It is a daunting task to predict the future cash flows and the value of the bad loans. In addition, servicing non-performing loans requires very different skills than servicing the more traditional asset, such as auto loans and credit cards. The market practice is to make assumptions based on the expert servicer's historical collection experience, which is unfortunately lacking in most developing countries.

120. The Wall Street Journal, Feb. 20, 1998.

4.2 The SEACEN Countries

4.2.1 Current Status

(i) Salient Features before the Financial Crisis

In general, securitisation in the SEACEN countries has been viewed primarily as an alternative funding technique with some caution, and is still at its infant stage. Despite the uniqueness and different developmental stages of the financial industry in these countries, it can be broadly categorised into securitisation with offshore SPVs and domestic securitisation. Indonesia, the Philippines, Sri Lanka, and Thailand belong to the former, while Korea and Malaysia fall into the latter.

For the offshore securitisation group, Indonesia, the Philippines, and Thailand have been active in promoting securitisation, issuing large amounts ranging from tens of millions to hundreds of millions each since early 1990s (Table 4.2.1). Instead of mortgage loans, credit card loans and receivables, car loans, and leases were the major assets securitised. Accordingly, the amount of securitised loans accounted for only a negligible fraction of total loan outstanding. Most of the transactions were initiated and arranged by foreign bank branches which established offshore SPVs for foreign investors, and thus were privately placed. This is not only because the domestic debt security market has not been developed and deepened yet, but also because of the lack of legal infrastructure that permits domestic securitisation. This also explains why official statistics on securitisation business are hard to obtain, and even if they are available, the figures differ from one source to another. Since debt security issues were aimed at foreign investors, the transactions normally followed standard securitisation structure. Most securities were also denominated in hard currency and protected by swap facility.

Meanwhile, Sri Lanka securitised leases once in 1995, with technical assistance from the International Finance Corporation (IFC).[121] Al-

121. The IFC provided assistance to promote securitisation in developing countries including Indonesia, where the IFC assisted in the use of offshore SPVs as in the case of Sri Lanka.

Table 4.2.1
Securitisation in the SEACEN Counties

Country	*Issuer/Sponsor*	*Asset Class*	*Date*	*Amount*
Offshore				
Indonesia	Citibank	Credit Card Receivables	1995	US$ 43m
	Citibank	Credit Card Receivables	1996	US$ 50m
	Power Companies	Infrasructure-Power	1996	US $ 530m
	National Electric Co.	Comm. Receivables	1996	IDR 1000bil
	Finance Companies	Auto Loans	1996	US$ 210m
	Finance Companies, etc.	Auto Loans	1997	US$ 278m
	Citra Marga	Infrastructure-Highways	1997	US$ 125m
	Bank International Indon.	Future Cre. Card Paymts.	1997	US$ 140m
	Trading Company	Future Trade Receivable	1997	US$ 200m
Philippines	Citibank	Consumer Loans	1991/1992	P 775m
	Home Dev. Mutual Trust	Residential Mortgages	1994	P 475m
	Subic Power	Infrastructure-Power	1994	US$ 105m
	Trusts	Loans/Leases	1995	P 280m
	CE Casecnan	Infrastructure-Power	1995	US$ 372m
	PFC Trust	Loans/Leases	1996	P 250m
	Phil. Airlines	Future Ticket Receivables	1996	US $ 75m
	Baurung Private Power	Infrastructure-Power	1996	US$ 85m
	Trust Co. & others	Residential Mortgages	1997	P 1000m
	Quezon Power	Infrastructure-Power	1997	US$ 215m
Singapore	SIFCO*	Diversified Bonds, Loans	1996	US$ 225m
Thailand	Thai Cars Ltd.	Auto Loans	1996	US$ 250m
	Leasing Companies	Auto Loans	1997	US$ 203m
Domestic				
Korea1/	Banks, Merchant Banks, Mututal Savings	Comm. & Trade Receiva.	1994	W 11.277 bil
		Comm. & Trade Receiva.	1995	W 10697m
		Comm. & Trade Receiva.	1996	W 9477m
		Comm. & Trade Receiva.	1997	W 12354m
Malaysia1/	Cagamas	Mortgage Loans	1987	RM 100m
		Mortgage Loans	1990	RM 2900m
		Mortgage Loans	1991	RM 2900m
		Mortgage Loans	1992	RM 5137m
		Mortgage Loans	1993	RM 5940m
		Mortgage Loans	1994	RM 9845m
		Mortgage Loans	1995	RM 11322m
		Mortgage Loans	1996	RM 15737m
		Mortgage Loans	1997	RM 21456m
Sri Lanka	Lanka Orix Leasing Co. Ltd (LOLC).	Leases	1995	Rs. 360m

* Securitisation & Infrastructure Funding Corporation.

1/ Outstanding. For Korea, the figures represent the outstanding issue of the Cover Bills.

Source: CapMac. Asia

though the transaction was seen as a watershed for the development of financial market in the country, no other securitised transaction has been reported ever since due mainly to the lack of market depth and width as well as related financial infrastructure.

Although securitisation of assets in the domestic market has been in existence in Korea and Malaysia for quite a while, the transactions are more a refinancing than a true sale type securitisation in a strict sense. Malaysia made a head start in securitising mortgage loans by establishing a special purpose entity, the National Mortgage Corporation or Cagamas, in 1986. Mortgage loans originated by commercial banks and other housing loan agencies are sold to Cagamas with full recourse, and Cagamas issues debt securities for funding the purchase of mortgage loans. Due to the full recourse nature, the originators retain the loans on their balance sheet and bear the credit risks. However, Cagamas has played a leading role in developing the domestic private debt securities (PDS) market as well as promoting greater home ownership. Cagamas papers had dominated the PDS market until 1989, and accounted for 37 percent of the market recently. The progress of Cagamas is mainly due to the government's support and a special treatment in accounting and tax.

Meanwhile, the Korean experience of securitisation took a form similar to the asset-backed commercial paper (ABCP). When commercial banks discount commercial papers collateralised by trade receivables, they pool them together and issue "Cover Bill" backed by these papers for sale in the secondary market. There is no SPV involved and the risk profile of the transactions resembles that of mortgage-backed bonds in the sense that the originators issue debt securities backed by their own assets. As such, it is not the true type of securitisation as well. However, the introduction of "Cover Bill" has significantly contributed to the widening and deepening of the debt securities market in Korea.

(ii) Securitisation after the Financial Crisis

Before the currency crisis broke out in Thailand in mid-July 1997, securitisation in several SEACEN countries was about to take off, with increasing number of market players perceiving the great potential. Also, Indonesia, Thailand, and the Philippines were in the midst of initiating necessary legislation. For example, under the auspices of the

World Bank, the Philippines has taken considerable efforts in preparing for securitisation by training relevant bank staff such as bank examiners as well as constructing necessary infrastructure such as legal framework, accounting practices, and other regulatory provisions. The main legislations were to allow banks and non-bank institutions to conduct securitisation business in May 1993 and March 1997 respectively.

The severe financial crisis and its contagion, however, faces an indefinite postponement of most of the proposed securitisation deals due mainly to the downgrading of sovereign ratings[122] and the volatile exchange rates[123]. For example, the first ever attempt for Korean firms to securitise assets including aircraft leases and foreign currency trade receivables in the international financial market in the latter half of 1997 was cancelled. Opportunity for securitisation in the crisis-affected countries seems to diminish and will return only when their economies regain stability. Despite this, Indonesia continued to promote domestic securitisation by establishing a special purpose vehicle for asset-backed securities, the Collective Investment Contract (KIK), in December 1997. The SPV for mortgages, the Secondary Mortgage Facilities (SMF), was also established in February 1998.

Securitisation has, however, drawn attention from policy-makers who were concerned with the resolution of snowballing non-performing loans. As mentioned earlier, securitisation of impaired assets has been widespreadly used with the establishment of a special agency whose sole purpose is to resolve non-performing loans. Inspired by the successful experience of the U.S. and some Scandinavian countries, Korea, Malaysia, and Thailand put up the Asset Management Corporations (AMC), which have begun their operations.

A common feature of these agencies is that they purchase non-performing loans from problemed banks in order to improve the

122. In theory, the credit rating of each ABS issue is based on the underlying assets which may differ from sovereign ratings or corporate ratings. In practice, however, it is difficult for the ABS to obtain investment grade due to a large discrepancy between the sovereign rating and the rating of individual issues, especially in the case of countries under the IMF programme.

123. In the face of volatile exchange rates, none of swap counterparties was willing to close a deal because it was almost impossible to determine the executable swap rate.

balance sheet of these banks up to the BIS capital adequacy guidelines. Removing bad loans from the balance sheet will also help banks in difficulty to resume lending to alleviate the problem of credit crunch. In fact, new loan extension to the viable companies helped to prevent the economies from slipping deeper into recession. However, as banks continued to be reluctant to extend new loans, the measure has not resulted in more lending but more liquidity in the banking system. Such an outcome is not irrational from the banks' point of view, as they themselves are under pressure to meet capital adequacy guidelines. The lesson learnt here is that macroeconomic stability or sustained recovery is hardly achievable without a sound banking system, especially in the face of financial crisis.

The establishment of AMC has larger implications than merely a vehicle to support securitisation. The AMC could choose securitisation as one of the options to use to resolve the problem of non-performing loans. However, the agency's scope of business is more far-reaching to include liquidation. Also, it is too soon to conclude whether securitisation of impaired assets will be a successful means to serve the agency's goal. One lesson from the experience of the RTC of the U.S. is that, despite some successful cases, non-performing loans are still hard to securitise.

The critical questions are as follows. Firstly, how to securitise non-performing loans at all under the current situation where the domestic debt securities market is so under- developed that even well-performing loans have not been easily securitised. Secondly, how to obtain required funds on favourable terms either internationally or domestically in the face of credit crunch and the downgrading of credit risk in the country. Thirdly, how to minimise its impact on the fiscal balance considering that the required fund is more likely to come from the public sources. It is obvious that securitisation of impaired assets in the crisis countries is government-initiated rather than commercially driven. Since non-performing loans are not likely to generate cash flows, at least in the near future, they have to be sold at a deep discount. On the other hand, the lack of adequate credit screening and rating scheme, combined with the lack of experience, might make the accurate pricing extremely difficult. The uncertainty over the economic recovery after the crisis does not help either as the prospective investors will be reluctant to participate. While the government can expect some responses from domestic sources to its bonds or government-

guaranteed bonds, the response from international investors might be extremely poor. In addition, tax payers will eventually bear the losses, whether from the deep discount or interest payments, making the process difficult from a political point of view. These questions seem more likely to remain unsolved. Therefore, securitisation of non-performing loans has a long way to go to be a feasible and effective solution.

Meanwhile, the APEC financial ministers recently reviewed the feasibility of using the collateralised bond obligation (CBO) technique as proposed by the APEC Business Advisory Council (ABAC) as a means of raising funds for the countries facing financial difficulties. In the face of domestic credit crunch coupled with slackened economic activities in the real sector, these countries are in urgent need of fresh capital. However, as the countries' sovereign ratings have been downgraded to below investment-grade, such fund-raising is not as easy as before. The CBO idea was inspired by the successful experience of the Mexican crisis in 1995. The proposal includes a provision of equity capital from cash-rich countries in the APEC membership to be leveraged from the international private debt market. An SPV will be established to issue the CBOs that are collateralised by sovereign bonds issued by countries in need. The proceeds will then be used to on-lend to strategic sectors of the countries in need. This scheme seems more viable than securitisation of non-performing loans directly by the AMC in each country. Thus, CBO may complement other sources of funding for the AMC. Similarly, collateralised loan obligation (CLO) can be considered as an alternative, since well-performing bank loans with adequate credit enhancement could be securitised in the international market. This will significantly help mobilise the needed capital as well as alleviate the burden of funding.

4.2.2 Assessment of Preconditions for the Development of Securitisation

The preconditions for successful securitisation can be assessed from two perspectives: systemic conditions and market conditions. Systemic conditions refer to the supporting financial infrastructure that includes appropriate legal, regulatory, accounting and tax framework as well as a reliable credit rating system. Market conditions include the state of the debt securities market and underlying asset market, and market demand. These two preconditions are in fact inseparable and should develop in tandem. For instance, securitisation cannot prosper

in full scale without adequate financial infrastructure, even when the market are ready. Likewise, securitisation cannot prosper without a favourable perception by market participants even if financial infrastructure is well developed, which is well demonstrated in the experience of Germany.

Until now, these conditions have been lacking in most SEACEN countries, although some of the supporting financial infrastructure are beginning to be earnestly put in place while the market players seem to show more enthusiasm. Especially for developing countries where financial market is not well developed, the governments' initiatives will go a long way in promoting securitisation.

(i) Financial Infrastructure

As far as the **legal and regulatory** environment is concerned, the establishment and legal status of the SPV is one of the key issues to be addressed. While a comprehensive legal framework allowing banks and non-bank financial institutions to conduct securitisation business is already in place in Indonesia, Korea and to a lesser degree, the Philippines, and Malaysia, similar efforts have not been evident in other countries that participated in this research project. Besides, relevant guidelines or rules on regulation and supervision have not been comprehensively formulated, except for the adoption of the risk based capital requirements set by the BIS. Even though the BIS' Core Principles cover off-balance sheet activities, it will take time for the SEACEN countries to fully comply with it, particularly in the context of securitisation because of the scant securitisation activities in these countries. In any case, it seems that most of these countries are more concerned about the introduction and implementation of securitisation rather than developing the supporting infrastructure.

In Indonesia, legislation and governance of securitisation is based on the type of assets securitised. All eligible financial assets other than mortgages, which are securitised through the KIK, are under the jurisdiction of the Capital Market Supervision Agency, or Bapepam, while mortgage loans that are financed through SMF are the concern of the Ministry of Finance. Also, a true sale type securitisation is only applicable to the KIK, while the SMF focus on issuing debt securities with full recourse. Hence, the SMF resembles Cagamas of Malaysia and the securities issued are better classified as MBBs. Assets eligible for

securitisation are broadly defined so that most loans and receivables generating cash flows can be included. The legal status of the KIK resembles a trust in the United States in that an ABS issue represents a unit participation in the SPV.

In Korea, legislation concerning standard securitisation other than the existing cover bills is contained in the Asset Securitisation Act which is effective from September 16, 1998. The Act is specifically designed for promoting securitisation in a broad scale. Since the mortgage system is not present in Korea, the term "asset securitisation" was used, but it is not necessarily confined to non-mortgage loans. Rather, it is a comprehensive definition that includes all rights arising from claims on loans, commercial sales, leases, stocks, real estate and other securities. Commercial banks, merchant banks, insurance companies, security companies, asset management companies and other government-related institutions can securitise such assets through a special purpose vehicle. The establishment of a SPV has already received the "green light" with the establishment and operation of the AMC. Previous obstacles such as the transfer of ownership titles of the underlying assets, which comes under the purview of the Civil Code, the requirement for the notification of asset transfer to the obligors and registration requirements for the transfer of real estates titles, which had made it difficult to securitise housing loans collaterised by real estate, were all resolved with the enactment of the Act . As far as the legal framework is concerned, securitisation is no longer an unviable business in Korea.[124]

In the Philippines, the issues of ABS and MBS are primarily governed by the Rules of the Securities and Exchange Commission (SEC). However, the activities related to securitisation of banks, non-banks with quasi-banking (NBQB) functions including its subsidiaries and affiliates are governed by BSP Circular 185 (issued on 8 December 1998), apart from the registration requirements of the SEC. The recent issuance of the guidelines on asset securitisation by the BSP provides for a comprehensive set of rules on the origination, issuance, sale, servicing and administration banking functions (NBQB) including its subsidiaries and affiliates engaged in allied activities, which are domi-

124. For more details, see Appendix to Chapter 6.

ciled in the Philippines. On the other hand, the draft Rules on the Registration and Sale of Asset-Backed Securities of SEC is at present, undergoing public hearings before legislation by Congress. Even with the recent issuance of the BSP Circular on asset securitisation, the authorities continue to work towards a more harmonised and strong regulatory and supervisory framework for the whole financial system including asset securitisation.

In Malaysia, the special purpose vehicle, Cagamas, was established under the Company Act, while the securities issued by the Cagamas are governed by the Banking and Financial Institutions Act (BAFIA) because the act of issuing securities is regarded as a form of deposit taking. The Cagamas bonds and notes enjoy preferential treatment compared to other debt securities in that they are exempted from the Guidelines of the central bank (Bank Negara Malaysia) as well as the Securities Commission Act, which requires all the issues of private debt securities to get an approval from the Securities Commission. This explains why the Cagamas bonds and securities take the lion's share in the private debt securities market of Malaysia.

In Nepal and Sri Lanka, there are no rules or regulations governing securitisation, although there are some laws, rules and regulations on the issuance of debt securities, the scope of financial institutions, and others. Sri Lanka faces a similar difficulty as Korea once did, in that the consent of the obligor is required for the transfer of any obligations. In this respect, it should be noted that securitisation does not always require a special law on the SPV. As long as banks are allowed to sell loans to a third party, securitisation can take place within the current legal framework, if the market participants really demand so.

In terms of supervision, the Philippines seems to have a head start as the necessary legislation is underway in parallel with the preparation for supervisory framework as well as the training of bank examiners. The World Bank has played a leading role in providing technical assistance to facilitate securitisation in the country. With the recent enactment of the Asset Securitisation Act, Korea also sets a regulatory standard conforming to the BIS standards.

Accounting is the area in which most countries have not really set their own rules yet, and thus their accounting standards mostly followed those practised in the United States, such as FAS 125 and GAAP.

A critical issue is how to define a true sale or a loan sale without recourse with respect to the transfer of title of the underlying assets from the originator to the SPV. In the case of Indonesia and Malaysia, the sales of mortgage loans to the SMF and Cagamas respectively are not removed from the originators' balance sheet due to full recourse conditions. Other than this, securitised loans or receivables are taken off from the originators' balance sheet. Without a clear definition of true sale treatment, securitisation cannot progress in full scale, even after the development of the debt securities market such as mortgage-backed bonds.[125] It would, therefore, be best in the long run to set the accounting standards that best suit the local conditions as well as the international standards.

As discussed in Chapter 2, a true sale treatment is closely related to the legal status of the SPV. The second criteria for a true sale treatment under the FAS 125 stipulates that the buyer should be a qualified special purpose entity and the holders of interests in that entity have the right to pledge or exchange those interests. However, there is no such clearly defined legal status of the SPV in the SEACEN countries, and this issue should be addressed as soon as possible.

Another area of concern with respect to accounting is the treatment of gain or loss on the transfer of assets, which is also closely related to tax issues. The importance of this accounting issue is highlighted in the FASIT legislation as compared to the REMIC. Despite its structuring flexibility, one major disadvantage of FASIT for traditional securitisation is that gain but not loss is recognised immediately upon the transfer of assets to a FASIT, whereas both gain and loss are recognised under REMIC.[126] It is not clear whether legislation equivalent to REMIC and FASIT in the United States was enacted in the SEACEN countries. As a matter of fact, the REMIC and FASIT legislation reflects

125. However, this statement should be read with some caution. In Germany, for example, eligibility for true sales treatment is clearly and extensively defined, but off-balance sheet type securitisation has not been popular for reasons other than explained in the previous section.

126. Besides, special valuation rules on certain types of assets under the FASIT make this disadvantage even greater because non-traded debt instruments such as credit card receivables and auto loans should be valued at a discount when transferred to FASITs, regardless of the market value. Donadio, Anthony, "Financial Asset Securitisation Investment Trust," Deloitte & Touche LLP, October 1996, pp.7-8.

the width and depth of the securitisation market as well as continued efforts to facilitate the progress of securitisation.

The review above indicates that much work remains to be done to prepare the SEACEN countries to go into securitisation in a big way even as many SEACEN countries has adopted FAS125. A comprehensive review and refinement of both accounting and legal aspects is urgently needed. For this purpose, perhaps an in-depth study of key legislation, such as the REMIC and FASIT will be very instructive.

Tax consequences of asset transfer is one of the most important and complicated issues in securitisation. While a detailed discussion goes beyond the scope of this study, it is suffice to say that it is a key to promoting securitisation. This is not only because securitisation was invented to avoid various regulatory taxes in the first place, but also because tax consequences could enable competitive pricing so as to draw investors' interest. However, the tax benefits offered to market participants have to be balanced with the authorities' tax objective, as the interest of these two parties are obviously in conflict. The experience of the U.S. shows that the tax issues are basically focussing on entity level taxation. Both REMIC and FASIT legislation do not impose entity level tax on the SPVs upon the receipt of assets. Also, a REMIC or a FASIT is not treated as a trust, partnership, corporation or taxable mortgage pool. As for the interest holders, however, income generated by investing in FASIT is subject to tax.

None of the SEACEN countries appears to have addressed the tax issue in depth. Since the legal status of the SPV is mostly defined as corporation, unlike in the case of the United States, the SPVs are subject to corporate tax at the entity level. Income tax and withholding tax are also imposed on the income and the revenue derived from their transactions. Only the Cagamas of Malaysia enjoys better tax benefits than the SPVs in other countries as it is exempted from stamp duties for the purchase of loans from the originators. Although tax issues may not seem critical at the introductory stage of securitisation, it could become a major obstacle later on, as seen in the experience of the United States.

Credit rating system performs one of the critical functions of intermediation by assessing and updating the creditworthiness of publicly tradable debt instruments. This service helps to raise the market efficiency by reducing duplicated efforts, saving time and improving the

quality of credit information. Pefindo and Kasnic DCR Indonesia are the two credit rating agencies in Indonesia, while RAM (Rating Agency Malaysia) and MARC (Malaysia Rating Corporation) are operating in Malaysia. These agencies have played an instrumental role in the development of the debt securities market of the respective countries. On the other hand, the role played by the rating agencies in Korea has been more limited as their ratings have been confined to selected securities. The long tradition of extending loans backed by collateral and guarantees also hindered the wide acceptance of credit ratings of these agencies.

Despite the service of credit rating agencies, the common problems faced by the SEACEN countries are: corporate accounting standards are not on a par with the international standards; reliability and accountability of financial information are not up to expectation due to inadequate disclosure system combined with the below-par accounting practices. Without addressing these issues, the domestic debt securities market, not to mention securitisation, cannot be expected to develop further.

One might argue that a domestic credit rating agency is not necessary at the early stage of development because there are internationally renowned credit rating agencies to depend on. This is true in the case of securitisation through offshore SPVs. Most of the ABSs issued by the SEACEN countries through offshore SPVs were successful because they were structured with credit enhancement by specialised credit enhancers or by the advisor. However, for a country to develop domestic debt securities market successfully, local credit rating agencies have to be in place because proximity to the market is critical even when the public disclosure system is well developed. Whatever expertise they may have, foreign-based credit rating agencies have limited information for assessing creditworthiness of the issuers, unless they set up and operate their own branch offices in the country. Therefore, the choice should be either to set up a local agency with technical assistance from the well-established foreign agencies or to form a joint venture with them.

(ii) Market Factors

Development of the debt securities market and the underlying asset market is a critical ingredient to enhance domestic securitisation,

because as a secondary market it provides liquidity, helps to benchmark the yield, and widens the investor base. The under-development of the private debt securities market is commonly pointed out as one of the obstacles to the development of securitisation in most of the SEACEN countries. There are many reasons for this under-development, such as strict regulations on the issuance and trading of private debt securities, poor investor preference, savings behaviour skewed towards deposit and short-term debt instruments, lack of long-term debt instruments available, lukewarm interest from institutional investors due to their commitment to support government papers, and low savings rate for some countries.

An unbiased interest rate structure can also play a significant role. As is often the case in many developing countries, preferential interest rates are accorded to housing loans, making securitisation difficult because yields on mortgage-backed securities are too low to attract investors. Another common problem is the absence of a benchmark for long-term yield. Since asset-backed securities are usually issued with long maturity even in the case of revolving assets of short maturity, a benchmark yield for long-term securities is a critical input to proper pricing of ABS or MBS.

4.2.3 Outlook

The outlook for securitisation in the SEACEN region had seemed bright until many countries were severely affected by the financial crisis in the latter half of 1997. Even after the crisis, the idea of securitising bad loans was enthusiastically considered as a viable solution to the bad-debt problems. However, since economic recovery is not yet fully assured, and many proposed securitisation deals were put off, one can only conclude that the outlook is not as bright as before.

Nonetheless, the SEACEN countries have a tremendous potential to develop and enjoy the benefits of securitisation. The countries' huge loan market has remained largely untapped for securitisation purpose. As high saving countries, the investors' appetite for new financial products will resume after the economies are back on track. Even as the real estate and property sector was hit hard by the financial crisis, the demand for low-cost housing is still high on top of the existing huge pools of housing loans or mortgage loans. Financing needs for auto loans, consumer credit, and such future flows as trade and export

receivables are imminent more than ever. As developing countries with strong needs for developing infrastructure, future cash flows from infrastructure projects, toll fees for example, also have great potential for securitisation. In addition, the establishment of asset management companies will certainly help to enhance securitisation among interested parties, not to mention that their successful operations will set a milestone for future growth of securitisation.

The next question is the long-term and short-term viability of securitisation, keeping in mind that there are financing needs for loans of good quality as well as for impaired ones, and whether a country should pursue securitisation internationally or domestically or both. In the long run, the market trend generally seems to head toward a full-scale securitisation both domestically and internationally. On the feasibility aspect, however, it will very much depend upon the availability of necessary financial infrastructure support as well as the investors' positive perception. As for securitisation of the impaired assets, it will not be an easy task considering that the high-yield bond market which once prospered in the late 1980's has almost vanished.

In the short run, countries affected by the financial crisis seem to accord higher priority to the resolution of non-performing loans and securitisation is proposed as one of the viable options to finance the funding need for resolving non-performing loans. As a vehicle to achieve this objective, the success of the AMC mainly depends upon the ability to set a fair price for impaired assets based on estimated future cash flow to be generated from improved servicing and management, and the willingness of the investors to buy high-yield securities under uncertain conditions. While it may not be difficult to sell non-performing loans at a deep discount in order to attract investors, it is not easy to assess the fair value of non-performing loans. In addition, finding willing investors in the distressed economic environment and the vanished high-yield bond market is a daunting task indeed.

Meanwhile, there is a suggestion that both performing and non-performing loans could be pooled together so that securities with multi-tranches can be issued to meet different investor needs. In particular, the financial experts suggest the CBO and CLO would be the most viable options to deal with the distressed debt problem, based on the successful experience of Mexico and some of the Scandinavian countries. In fact, a couple of leading investment banks have already drafted

the proposal of structuring CBO and CLO as a means of packaging risky debt into a safer bundle to cautious institutional investors. However, this suggestion has its own problem in that to obtain investment-grade rating for a top tranche of CBO, a large quantity of risky debt should be assigned into subordinate tranche and the issuer may wind up getting stuck with that debt.[127] As discussed earlier, the CBO can redistribute the high risks, but it does not do away with them altogether, a typical aspect of securitisation. After all, finding the investors for the most risky tranche of the deal still remains the key. Considering these difficulties, debt funding with government guarantee could be a more viable option as a means to resolve non-performing loans. Nevertheless, if the proposed CBO and CLO are accepted by the ABAC,[128] aided by the strong support of investment banks, liquidity in the financial markets in the region will significantly improve. The initiative will also contribute much to promoting securitisation in the region.

The short-term outlook for securitisation of ordinary assets is less promising. The authorities, except for Indonesia, Korea and the Philippines, seem to take a rather reserved position toward securitisation, although they have indicated that securitisation may be used as one of key instruments to develop debt securities market. As a matter of fact, securitisation is part and parcel of capital market development, and should be handled within the broad framework of financial restructuring. For many SEACEN countries, their concerns with respect to securitisation are the risk factors, the impact on effectiveness of monetary policy, and the resulting drastic changes in the landscape of financial intermediation system. In addition, putting financial infrastructure in place, which includes necessary legislation, accounting and tax, requires coordination of various government agencies whose interests and views might not concur with one another. As discussed earlier, securitisation will change risk profiles. While risks involved in bank lending can be redistributed, they still remain in the financial system, a fact which has strong regulatory and supervisory implications. Securitisation of auto loans and credit card receivables may also compromise the monetary authorities' commitment to control inflation. They

127. McDermott, Darren, "Investment Banks Make New Pitch to Attract Money Back to Asia," *The Wall Street Journal,* February 26, 1998.

128. APEC Business Advisory Council.

might worry about the effectiveness of monetary policy instruments when securitisation is fully phased in to replace traditional financing techniques. The issue of financial intermediation should be dealt in line with the broad issue of financial restructuring. All of these issues cannot be addressed within a short period of time. It takes time to enact necessary legislation. It may take an even longer time to adopt new accounting practices and to reform the tax system.

Another concern is the current lack of investors' interest both in the international capital market and in the domestic market. At present, it is difficult to raise fund domestically due mainly to credit crunch. Given the depressed outlook in the short run, this situation is likely to continue, although some signs of stabilisation such as more stable exchange rate and lower interest rates have emerged. At the same time, international investors do not seem to be keen on investing in the region because they also have become extremely cautious about the uncertainty of economic recovery in the foreseeable future. Due to the downgrading of sovereign ratings, these countries have also faced difficulty borrowing from the international financial market, and even the high quality borrowers from the region have to pay a higher interest rate margin. Even if there are international investors who are interested, countries keen on securitisation now have to pay higher interest rate on the issue of securities in the offshore market. Foreign capital is not as cheap as before the financial crisis.

Despite the intention of a few investment banks to resume securitisation of quality loans, no securitised deal has been reportedly concluded so far. The value of the Asian assets in general has now become an unknown quantity for international debt traders and investors as it may take a couple of years after purchasing these assets to work out what they are worth.[129] Considering the timing of economic recovery in the region as well as the preparation for financial infrastructure, it is likely that securitisation business may not reach a satisfactory level until the year 2000. However, there is little doubt that the flow of tradable loan papers in the secondary market will increase substantially even before that time. If the economies continue to show signs of improvement, there is a good chance that credit ratings will be raised to the investment grade. This will considerably ease the external

129. Warner, Alison, "East appeals to traders," *The Banker,* Jan. 1998, pp.61-62.

funding constraint and reduce the cost of external borrowing of the SEACEN countries.

4.3 Conclusion

Financial de-regulations and exponential progress of information technology are rapidly changing the banking sector's landscape. As the barriers to traditional banking business keep on tumbling down, banks have to improve services, offer competitive returns, better manage risks, and look for alternative activities to maintain profit and market share. These motivations have been the primary factor for banks, especially in the developed countries, to increasingly engage in securitisation business. This trend not only impacts banks' business strategy and operations, but also has strong implications for bank regulations and monetary policy.

Securitisation offers both opportunities and threats to banks. It enables banks to improve risk and liquidity management. Risks can be diversified and distributed to many parties while lending can increase without having to raise additional capital. For the economy as a whole, it facilitates a more efficient use of financial resources and enhance savings. On the other hand, it must be remembered that securitisation is incapable of wiping out or even reducing risks in the system. On the contrary, it may lead to excesses in various ways that increase risks and destabilise the market. As securitisation allows banks to circumvent reserve and capital requirements, banks may be under-capitalised and thus are vulnerable to changes in market conditions. The quality of their balance sheets may also deteriorate. Meanwhile, higher liquidity not only lead to more lending, but to more risky and less productive projects, which may culminate in speculative bubbles. Therefore, regulation and supervision have an important role to play in ensuring that the systemic risks of securitisation are kept under control. This is, however, not a viable substitute for prudent internal management by banks themselves. Indeed, the complex nature of securitisation, more than ever, calls for strong self-discipline, an adequate internal control system, as well as competent and efficient management.

Looking at the experience of countries that have gone far in the securitisation path, the motivation for securitisation has shifted from being used as a means to avoid regulatory taxes. In line with the move to impose risk-based capital requirements worldwide, securitisation

will be more likely to serve the purposes of asset-liability management, liquidity generation, or portfolio diversification. In the SEACEN context, bringing new financial resources into business might be the most fundamental reason for securitisation so far. If the authorities intend to adopt a gradual approach to the introduction and development of securitisation, they must figure out what are the motivations behind securitisation and assign priority of development. They will also have to identify the supporting infrastructure and assess the associated risks to the system, not just in the immediate future but also in the longer-term perspectives. In addition, securitisation has to be planned as part of the overall capital market development.

Securitisation should be viewed from a global perspective since offshore securitisation is more likely to flourish in developing countries where domestic financial infrastructure is not well developed while financing needs are high. Accounting practices and domestic legal infrastructure have to be encouraged and established in line with the international standards. Although it is commonly accepted that the market is the most efficient tool to allocate resources, the authorities should weigh carefully the choices between a laissez faire approach and an interventionist approach, depending upon the timetable they have in mind and in accordance with the general development strategies.

Efficient risk management, realistic pricing, and sound capital adequacy are some of the key issues for contemporary and future banking. Looking into the future, the development of securitisation as a useful tool of financing should thus be considered carefully so that it can contribute to the deepening, widening, and strengthening of the financial systems in the region.

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PART II

COUNTRY CHAPTERS

Indonesia
Korea
Malaysia
Nepal
Philippines
Sri Lanka

Chapter 5

SECURITISATION AND ITS IMPACT ON BANKING BUSINESS IN INDONESIA

by

Agnes Isnawangsih and Evy Rita Berliana*

5.1 Development of Securitisation

5.1.1 Background

Securitisation in Indonesia was started in 1994 by a local branch of a foreign bank. It was initiated by the International Finance Corporation (IFC), who was also the initiator of securitisation in several other developing countries. To promote securitisation in developing countries, the IFC provides assistance in several areas. The IFC assists in establishing the institution, structuring the transactions, and working with regulatory bodies related to asset backed securitisation. In Indonesia, the IFC has given assistance in utilising offshore special purpose vehicles (SPVs).

The main types of assets securitised in Indonesia are credit card loans, either actual or future receivables, and car loans. Presently, there is increasing demand from banks to securitise their mortgage loans. However, the regulations and a domestic SPV were not available until February 27, 1998. When the first securitisation transaction was introduced, Indonesia did not have specific regulations on securitisation, especially in the case of the establishment of a special purpose vehicle (SPV). Hence, all Indonesia's securitisation used offshore SPV. The flow of funds from the offshore SPV is treated as a commercial offshore borrowing, the regulations for which are in place. In obtaining a commercial offshore borrowing, the borrower, which in the case of securitisation is the originator, must report to Bank Indonesia. If the borrower is a bank, it has to fulfill additional regulations. The maximum borrowing with a maturity of up to 2 years is limited to 30

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percent of the bank's equity. Moreover, if the borrowings exceed US$ 20 million, the bank has to queue to enter the international market. The amount is also subject to a quota, which is revised yearly, of the total banking sector's offshore borrowings. Borrowings which have a maturity of more than 2 years do not have to fulfill the maximum amount as a percentage of equity rule. However, the queuing and the quota regulations have to be adhered to. With this regulation, Bank Indonesia can indirectly trace information on banks involved in the securitisation business. Due to the increasing demand for securitisation and the need to provide more accurate and timely information while maintaining prudent banking supervision, Bank Indonesia is drawing up regulations on securitisation which is scheduled to be issued in 1998.

Some new regulations related to securitisation have been recently issued. In order to promote securities activity in the domestic market, the Capital Market Supervisory Agency (Bapepam), in December 1997, issued a regulation package on asset backed securities. According to the regulation, the Collective Investment Contract (KIK) is the form chosen for the SPV. Simultaneously, another regulation was issued by the Ministry of Finance in the form of a decree on Secondary Mortgage Facilities (SMF)[1]. This decree allows the establishment of a domestic SMF. Both KIK and SMF can function as a SPV. They can issue securities to raise funds. KIK can secure financial assets from originators while SMF can give loans collateralised by mortgages to originators.

5.1.2 Market Structure

The main participants of securitisation are obligors, originators, SPVs, and investors. However, there are some other arrangements that are more complicated which involves the credit enhancer, swap counterparty, servicer, and credit rating agency.

Before the regulations were laid out for KIK and SMF, securitisation transactions were done through offshore SPVs. The investors were mostly foreigners involving foreign currency flows. Hence, swap counterparties were essential. Historically, the swap counterparties are

1. Minister of Finance Decree No. 132/KMK.014/1998 dated February 27, 1998.

offshore banks since the availability of domestic service is limited. The investors are mainly the pension funds, banks or mutual funds. The offshore SPV most often used by Indonesian securitisation transactions is a trustee. Up to the end of 1997, there has only been four recorded originators in Indonesia consisting of 3 banks and a finance company. The assets securitised were credit card receivables and car loans. The mechanisms for these transactions are reflected in Appendix 5.1 and 5.2.

Banks play important roles in securitisation since they can assume many roles. In the case of Indonesia, almost all the institutions which participated in securitisation were banks except for the SPV. Indonesian banks cannot perform as SPVs since there are liquidity risks. As mentioned before, all asset backed transactions used offshore SPVs because the regulations for establishing a domestic SPV were put in place only recently. The securitisation mechanism of transactions using a domestic SPV is similar to those using offshore ones. Appendix 5.3 illustrates the securitisation process using KIK as the SPV.

However, due to the present uncertainties in the economy, there has not been an opportunity to use the KIK as the domestic SPV because of the lack of securitisation transactions. Theoretically, securitisation is a good alternative to obtain liquidity for banks during an economic crisis. However, the tight liquidity in the economy has discouraged investors. As a consequence, the development of KIK and SMF in Indonesia remains dormant.

5.1.3 Types of Assets Securitised

The most common assets to be securitised are assets that generate a regular income stream. Examples of these are mortgage loans, consumer loans, car loans, credit card receivables, airline income, and export financing income. Currently in Indonesia, the assets securitised are credit card receivables for actual receivables or future receivables and car loans. With regulations in place for the establishment of KIK and SMF, the types of assets for securitisation may vary into a broader spectrum. The KIK can securitise assets in the form of receivables from commercial papers, leasing, trading contracts with conditions, credit payments, credit card receivables, housing loans, securities guaranteed by the government, credit enhancement, cash flows and other equiva-

lent financial assets. The SMF, on the other hand, specialises in mortgage and receivables from housing loans.

5.1.4 Size and Market Growth

Up to now, there have been seven asset backed securitisation transactions conducted by four originators using offshore SPV. In 1995, the total amount of securitisation reached US$ 245 million. It consisted of four transactions conducted by two originators. The amount of each transaction was US$ 25 million, US$ 10 million, US$ 10 million and US$ 200 million respectively. The terms of those securities range between 2 - 3 years. From the total proceeds of assets being sold in 1995, US$ 45 million were derived from credit card loans and the rest were from car loans.

In 1996, the total amount of assets securitised was US$ 180 million. It consisted of US$ 20 million of credit card loans, US$ 20 million of car loans, and US$ 140 million of future credit card receivables. The terms of maturity range from 1 - 3 years.

Although the size and market growth of asset backed securitisation before the economic crisis did not show an increasing trend, the market indicated a strong demand for securitisation transactions. This was indicated by the increasing number of banks and other financial institutions requesting Bank Indonesia's (BI) clearance for these activities. However, since the economic crisis, there has not been any request for new arrangements.

The economic crisis has not, however, affected "on-going" securitisation. This is because the "on-going" securitisation has been prudently arranged to minimize the risks. For example, if the securitisation involves exchange rate or interest rate risk, the SPV will use a swap counterparty or liquidity provider.

The development of securitisation arrangements has been greatly impeded by the financial crisis. Based on originators' information, this is due to several reasons. The sovereign rating is the main obstacle to the development of asset securitisation at present. Recently, several rating agencies have downgraded the Indonesian rating to B-. Even thought the ratings of asset-backed securities are different from either the sovereign rating or corporate rating, a very wide gap between these

ratings has made it difficult for asset backed securities to get investment grade ratings from the rating agency. The second problem is the non-availability of swap counterparties. Currently, the fluctuation of the exchange rate has discouraged swap counterparties from covering Indonesian exchange rate risk.

The above two obstacles apply to asset backed securities using offshore SPVs only. A domestic SPV (KIK and SMF), on the other hand, would not face these problems. However, as mentioned earlier, due to the volatile conditions in the economy, there have not been any investors and fund managers willing to start this activity.

Another impediment to the development of securitisation is the prevailing high interest rate. The relatively high interest rate has discouraged SPVs (domestic and offshore) from buying assets. It is understandable as the main concern of a SPV is the capability of the obligors to pay the principal and the interest.

5.2 Prospects for Securitisation

The regulations for securitisation has not been completely drawn up in Indonesia. Meanwhile, the lack of historical or meaningful performance data has made it difficult to predict the performance of the assets. The tradition in banking secrecy in Indonesia has made the access to the historical data of banks' assets difficult.

In light of the prolonged economic crisis, real sector performance has been depressed and this in turn affected the banks' assets performance. The performing assets has decreased significantly, making it difficult to find appropriate assets to be securitised. Moreover, the crisis has dampened GDP performance which in turn will decrease the demand for securities.

Despite the economic crisis which will affect the economic condition negatively for the next several years, prospects for securitisation is still relatively bright. Domestic companies will find it difficult to obtain borrowings due to the unfavourable exchange rate, the lower credit worthiness and tight liquidity in the economy. They will have to explore other alternatives for liquidity. In addition, investors are a lot more cautious since the probability of domestic companies liquidating would be higher. Investing in asset backed securities is considered safer since

it is backed by assets as collateral. In case the originator company goes bankrupt, the securities will still have enough collateral to compensate as the assets in asset backed securities are separated from the bankrupt company's assets.

5.2.1 Assessment of Preconditions for The Development of Securitisation

(i) Laws and Regulations

The securitisation of assets entails complicated legal aspects, namely, the drawing up of the legal entity for the SPV and the transfer of rights of the assets. As stated earlier, the Indonesian government introduced the asset backed securities collective investment contract (ABS-KIK) in December 1997 and issued a regulation to establish the SMF in February 1998.

The regulation, issued by Bapepam, covers the legal framework of a SPV in the form of a Collective Investment Contact (KIK)[2], the function of the fund manager[3] as well as the custodian bank[4], and the guidelines for the fund manager in issuing securities through public offering[5]. However, the accounting practice related to asset backed securities is still under consideration. There is another regulatory body, the Indonesian Accountant Association which has the authority to issue regulations on accounting practices.

The legal format of the KIK is considered the most suitable since it is flexible and built upon the free will to perform a contract. The legal structure of the KIK, which resembles a Trust in the United States, was first introduced in Indonesia in 1995 in connection with the establishment of mutual-fund activities. An ABS-KIK is not allowed to do any business other than SPV related business activities.

An ABS-KIK can issue asset backed securities. An asset backed security is defined as a unit participation in the KIK whose portfolio

2. Bapepam Decree No. 53/PM/1997. Dated December 26, 1997.
3. Bapepam Decree No. 46/PM/1997. Dated December 26, 1997.
4. Bapepam Decree No. 47/PM/1997. Dated December 26, 1997.
5. Bapepam Decree No. 50/PM/1997. Dated December 26, 1997 and Bapepam Decree No. 51/PM/1997. Dated December 26, 1997.

consists of financial assets in the form of receivables from commercial papers, leasing, trading contracts with conditions, credit payments, credit card receivables, housing loans, securities guaranteed by the government, credit enhancement, cash flows, and other equivalent financial assets. The assets, bought by the fund manager, are recorded in the name of the custodian bank on behalf of the securities holders. The contract should be accompanied by a legal opinion from a registered legal consultant to verify the rights of the securities holders. The originator should notify debtors about the transfer of the assets so that all the originator's privileges on the assets will be transferred to the securities holders.

An asset backed securities fund manager has to provide a minimum of Rp.25 billion paid-in capital. The fund manager should employ at least 2 employees with at least 6 months experience in organising, structuring and managing assets supporting asset backed securities. The fund manager has to maintain the liquidity of the securities issued and assist the securities holders in selling their securities. To maintain objectivity, the fund manager is not allowed to have any affiliation with the originator. The fund manager has to provide monthly financial statements to the securities holders and also annual financial statements audited by a public accountant to Bapepam. To preserve public interest, Bapepam has the authority to replace the fund manager if it has failed to conduct the responsibilities as stated in the regulation.

The custodian bank has to follow the fund manager's instructions according to the contract. In case the fund manager performs an activity which is against the contract or regulations, the custodian bank has the obligation to report it in writing to Bapepam.

The aim of establishing a SMF institution in Indonesia is to finance housing development by providing a substantial amount of secondary financial support with medium- to long-term loans. The loan has to be collateralised with receivables from housing loan mortgages, or other assets. Other assets can only be considered for collateral if the receivables or mortgages are not enough to cover the loans. The assets, however, cannot exceed 30 percent of the total collateral. The asset collateralised should be in a good credit performance standing. This financial support facility can only be used to finance housing loans

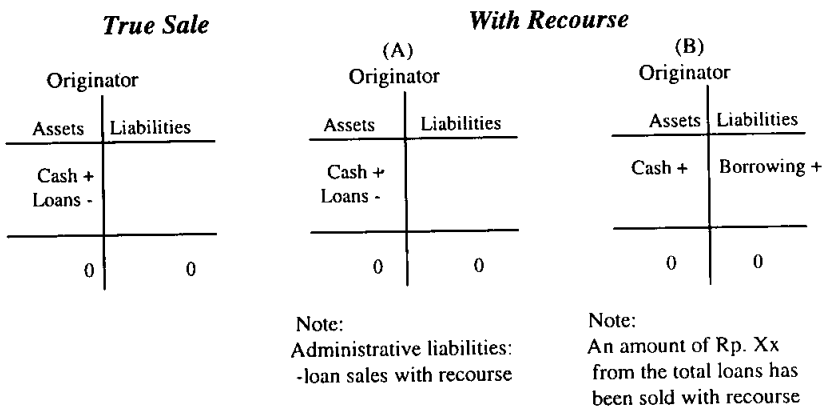
to citizens and is not allowed to finance housing development or construction loans to developers.

To obtain the facility, an originator has to be a shareholder in the SMF company. The SMF is a company (PT) with a minimum paid-in capital of Rp.150 billion and operating under a license from the Ministry of Finance. This institution is supervised by the Ministry of Finance with the assistance of Bank Indonesia. Before the SMF conducts a public offering (go public), its shareholders will be limited to Bank Indonesia, pension funds, insurance companies, banks, and international financial institutions. The SMF is not allowed to do any business other than secondary mortgage facility.

(ii) Accounting Practices

Accounting practices for securitisation depends on the type of sale transaction of the assets. If the transaction is a true sale, then the assets will be eliminated from the originator's balance sheet. If the transaction

Figure 5.1
Securitisation on Originator's Balance Sheet



is with recourse (the originator has full or part of the responsibility in the case of default), then there will be an off-balance sheet transaction on the originator's balance sheet.

(iii) Taxation on Financial Assets and SPV

The tax bracket is one impediment on the development of securitisation in Indonesia. The tax bracket related to securitisation is considered high which makes the cost to securitising high. Any institution other than a bank, either in the form of a PT or its equivalent, has to pay a a final tax of 15 percent for its accrued interest received. The tax regulation does not recognise the KIK form and thus, this institution has to follow the existing rule. All revenues received by the SPV are subject to tax, except the revenues that are paid back to the originator. The revenue will be treated as a cost for the SPV and as a result, is subject to tax for the originator. Meanwhile, the profit, including the redemption of investment units, received by KIK unit holders is not subject to income tax[6]. The tax bracket is considered burdensome for the SPV since it basically is an intermediary, similar to a bank. Interest income channeled through the originator from the obligors to the SPV is its main business gross revenue. The tax of 15 percent of this income has made the securitisation process costly.

(iv) Credit Rating System

Asset backed securities can be issued through a public offering or private placement. The issuance process involves a few parties, namely the originator as the initial creditor, Bapepam as the regulation body, fund manager, custodian bank, and some service providers. The initial creditor can provide services, for example, to administer the debtors' payment.

Securities issued through public offering has to be rated. In the Indonesian market, the rating would be issued by a registered rating agency. The aim of the rating is to provide transparent and objective information on the creditworthiness of an institution to investors who

6. Directorate General of Taxes' Circullar Letter No.: SE-09/PJ.42/1998. Dated March 16, 1998.

wish to invest their funds. Currently, there are two credit rating agencies in Indonesia, namely, Pefindo (Pemeringkat Efek Indonesia), a domestic and privately owned company, and Kasnic DCR Indonesia, a joint venture company between PT Kasnic Indotama and Duff & Phelps Credit Rating Co. (DCR).

The credit rating is not a recommendation to purchase, sell, or hold a specific obligation issued by an obligor, as it does not comment on the market price or suitability for a particular investor. The credit rating is an opinion of a credit rating agency with regard to the ability of an issuer of securities to pay its debts considering the relevant risk factors facing the issuer.

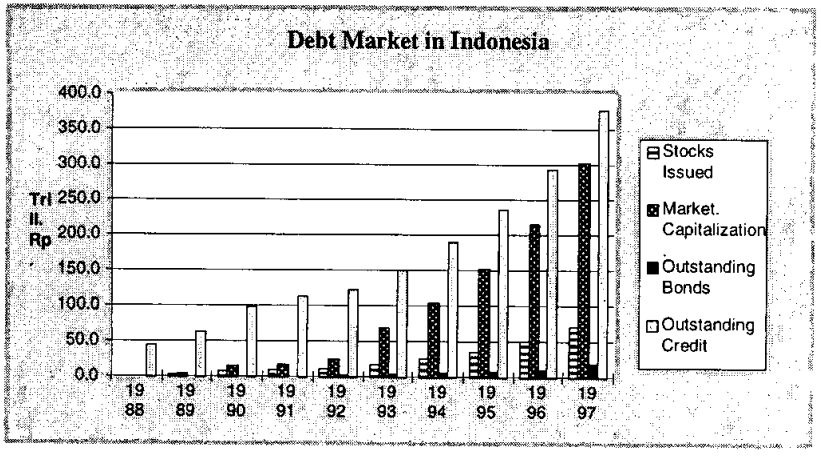
Pefindo ratings are characterised by the use of "id" prefix to underline the ratings assigned within an Indonesian context and they do not address sovereign risk. Credit ratings are based on current information furnished by the obligors or obtained by Pefindo from other sources. Pefindo does not perform any auditing and on some occasions rely on non-audited financial information. Credit ratings may be changed, suspended, or withdrawn as a result of changes in, or availability of such information, or based on other circumstances. Pefindo's debt credit ratings are based on the following considerations: (1) likelihood of payment; (2) the debt security's nature and provisions; (3) protection afforded to and relative position of the debt security in the event of bankruptcy, reorganisation, or other arrangement under bankruptcy laws and other laws affecting creditors' rights.[7]

(v) Capital Market Development

The market for debt instruments which is necessary for the development of securitisation has not been fully developed. Structural changes in the Indonesian financial market has started since the beginning of 1990's. As a result of deregulation policies, the debt market as reflected by bank credit and the stocks and bonds market, have shown significant growth (Figure 5.2).

7. General Rating Information. PEFINDO. 1997.

Figure 5.2



The average annual growth rate from 1990 to 1997 for stocks issued, market capitalisation, outstanding bonds, and outstanding credits were 64.6 percent, 81.6 percent, 116.1 percent and 25.5 percent respectively. Although outstanding bonds have shown a tremendous increase, the portion in the debt market is not significant. At the end of 1997 the value of stocks issued, market capitalisation, outstanding bonds, and outstanding credits were Rp.71 trillion, Rp.302 trillion, Rp.19 trillion and Rp.378 trillion respectively. Although the capital market has grown significantly, the market for asset backed securities has not developed since the issuers before 1998, were foreign companies which sold their securities in the international market outside Indonesia. With the introduction of KIK and SMF which will issue asset backed securities, the capital market will have another instrument.

(vi) Interest Rate Structure

In Indonesia, long-term securities are not common. The term maturity for the Central Bank securities (SBI) is up to 2 years. The market, therefore, lacks a long-term domestic yield curve which is the fundamental benchmark to set long-term rates in order to hedge interest and foreign exchange risk. In the light of this, it will be difficult for the KIK to set the price of long-term asset backed securities in the absence of a benchmark.

5.2.2 Feasibility of Developing Securitisation

In general, any asset providing a predictable stream of cash flows or which can be converted into a predictable amount of cash can be securitised. In the present situation, there are some potential assets that can be securitised. These assets can be found in banks, corporate companies and also government projects. The potential assets from banks include corporate loan obligations and mortgages; from corporate companies - trade receivables and future flows; from government projects - infrastructure projects like toll roads, etc.

To develop mortgage securitisation, the Ministry of Finance has introduced the regulation that allows the establishment of Secondary Mortgage Facilities (SMF) as institutions providing secondary financing for housing in the form of long-term borrowings. A SMF is allowed to issue long-term and short-term securities to finance its activities. To build market confidence for this new institution, it is expected that BI and the ADB will participate in the ownership of the first SMF. However, the main consideration for the government in establishing this institution is to help provide housing for citizens. It is clearly stated that SMF is not allowed to provide credit to developers. Therefore, to a certain extent, this policy is still consistent with the government's concern of preventing high credit growth in the property sector.

5.2.3 Implications for Central Bank Policies

Asset backed securities would provide the capital market with high quality medium- to long-term debt instruments. For a bank, asset backed securities can be used to fill the gap of the mismatch in funding (where the source of funds are usually short-term while the uses of funds can be in the form of long-term loans). On the other hand, the loans from the SPV can increase the ability of banks and other financial institutions to issue more credit which in turn has the possibility to overheat the economy.

The introduction of the SPV would have a slight impact on the money supply (M2). A bank is not allowed to be the issuer but it can be the originator. Since the transaction conducted between a bank as the originator and the KIK as the issuer is a true sale, money supply will not affected. In the case where the transaction is conducted through a SMF in the form of borrowings, it will then increase money supply

since cash and therefore the bank's assets increase. This in turn will increase credit. In this case, the money supply will increase through the expansion in the money multiplier. The impact on M2 will be greater if BI is an investor in a SMF. The base money (M0) will increase by as much as the amount invested and thus will increase the money supply. However, BI's investment cannot exceed 10 percent of the total paid-in capital or exceed Rp.15 billion. This amount is considered negligible considering the size of the base money and money supply (0.03 percent of the base money or 0.004 percent of M2).

In accordance with the introduction of the asset backed securitisation regulations, Bank Indonesia (BI) as the central bank should issue a general accounting practice for banks if they are acting as the originators. As of today, a bank interested in asset securitisation has to consult with BI and the accounting practice implemented has been based on individual cases. Most of the securitisation conducted so far have been true sales.

5.3 Conclusion

The securitisation process in Indonesia started as a result of market demand. Before the government issued the related regulations, offshore SPVs were used for securitisation activities. The demand for asset backed securitisation increased significantly and prompted the government to consider the necessity of regulating this process.

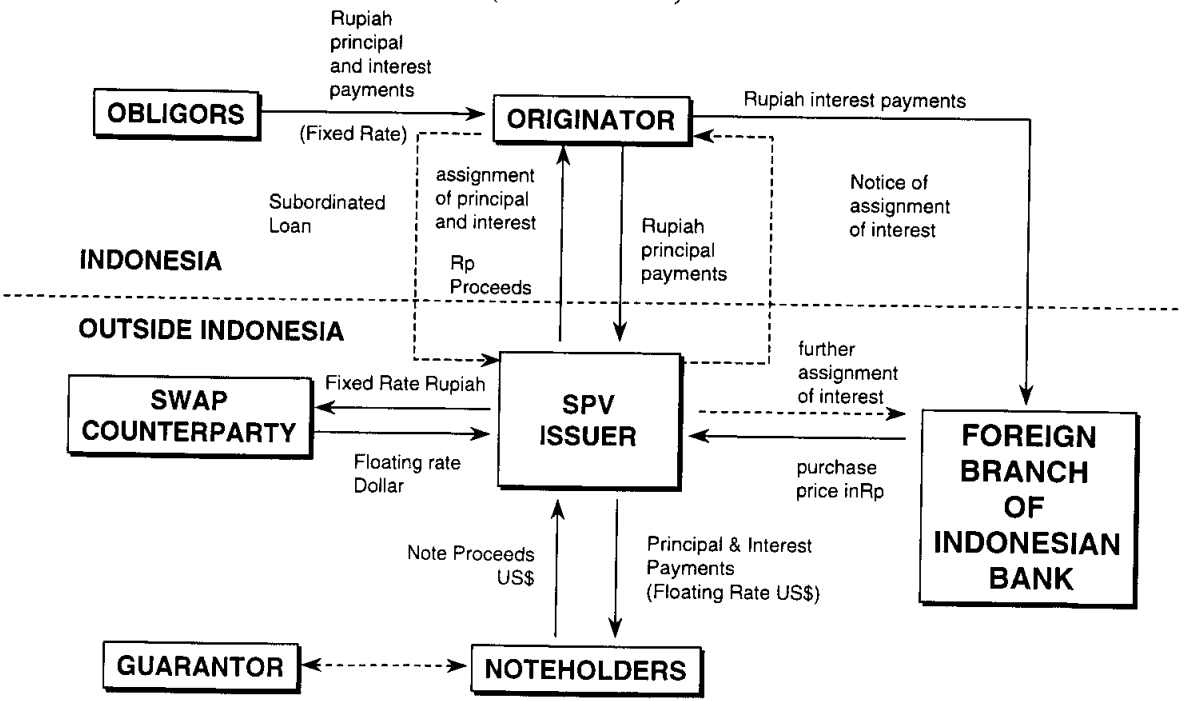
At the end of 1997, the government introduced the domestic institution for SPV in the form of the Collective Investment Contract (KIK). To provide housing for citizens, the government promoted a financing alternative through the introduction of the SMF in February 1998.

Indonesia has the potential to develop asset backed securities However, investors have difficulties in understanding the risks and benefits in the current environment. In the meantime, the regulations are not complete. The introduction of KIK as the SPV has raised some new issues in accounting and tax practices. Although a KIK is a contract and not a PT, it is treated as a PT in tax practices.

In accordance with the introduction of the asset backed securitisation programme, Bank Indonesia as the central bank should issue a general accounting practice for banks whenever they are involved in a securitisation process. Meanwhile, it needs to establish prudent regulations for the new institutions for the purpose of supervision and a monitoring system to support monetary policy.

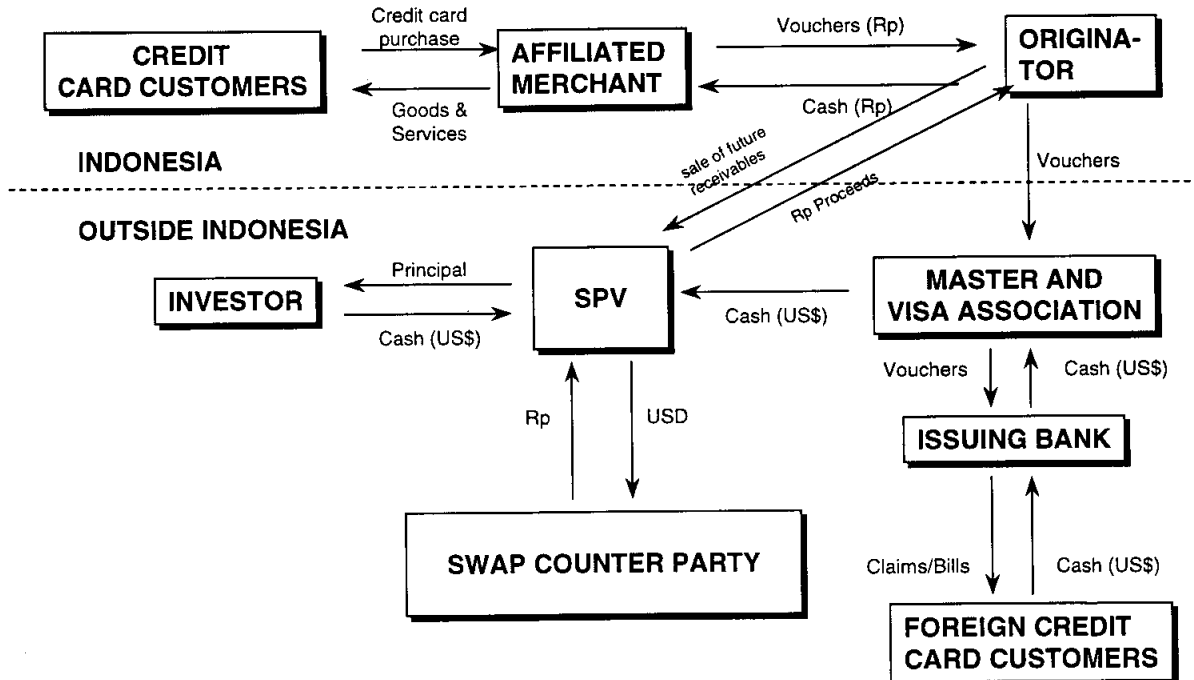
Appendix 5.1

INDONESIAN SECURITISATION STRUCTURE (CAR LOAN)



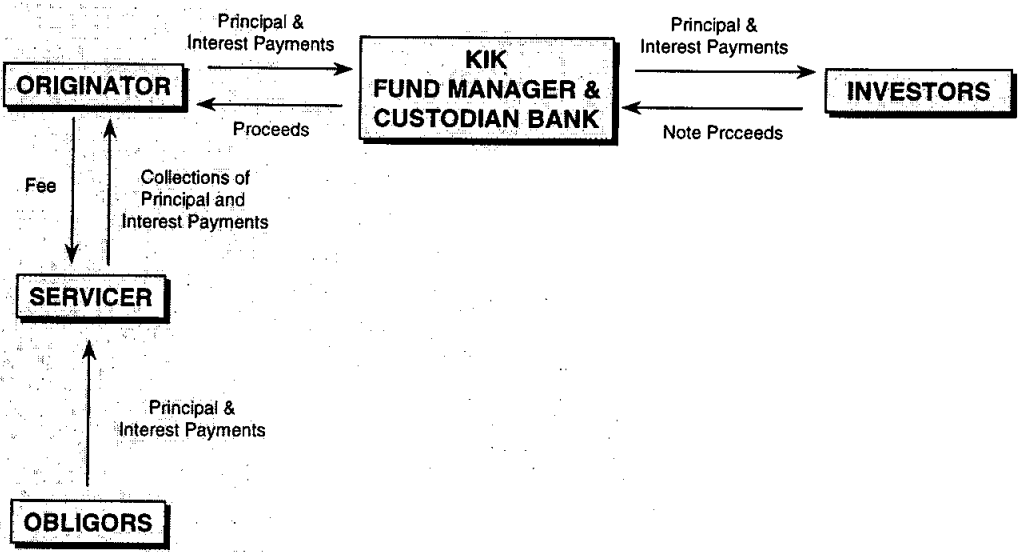
Appendix 5.2

INDONESIAN SECURITISATION STRUCTURE
FUTURE OR ACTUAL CREDIT CARD RECEIVABLE



Appendix 5.3

INDONESIAN SECURITISATION STRUCTURE
COLLECTIVE INVESTMENT CONTRACT (KIK)



Chapter 6

CURRENT STATUS OF SECURITISATION IN KOREA AND TASKS AHEAD

by

Ilhwan Kim*

6.1 Current Status of Securitisation in Korea

In Korea, there is as yet no formal framework for the process of securitisation similar to that of developed countries. However, cover bills, a type of asset-backed security (ABS), under which financial institutions issue new bills backed by commercial trade bills or factoring receivables have been in active use since 1989.

Recently, there has been lively discussion on issuing ABS against the collateral of the non-performing assets of the Korea Asset Management Corporation in connection with the restructuring of the corporate and financial sectors[1].

6.1.1 Cover Bill System

(i) Description

Under the cover bill system, financial institutions issue new bills (termed 'cover bills') collateralised by commercial and trade bills discounted or by factoring receivables (subsequently, 'original bills') for their own account.

Since financial institutions may freely adjust the issue conditions of cover bills (maturity, amount, etc.) within the range of the original bills, they can meet investors' requirements more effectively through the sale of cover bills rather than direct sales of the underlying commercial and trade bills, which should be in line with the conditions when they were discounted.

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1. The basis for issuing ABS by the Korea Asset Management Corporation and Korean financial institutions was made possible with the enforcement of the Act concerning Asset Securitisation in September 1998 (see Appendix 6.1 for more details)

(ii) Issue Conditions

The maturity of cover bills is determined by financial institutions within the remaining period to maturity of the original bills. However, the minimum maturity of a bank-issued cover bill should be more than 30 days and the maximum maturity of a merchant bank-issued cover bill should be less than 1 year.

Restrictions on the value of cover bills that may be issued differ among banks, merchant banks and mutual savings and finance companies (thereinafter, 'mutual savings companies') in view of the different business character of those financial institutions:

- For banks, the value of commercial and trade bills discounted should be less direct sales of commercial and trade bills.
- For merchant banks, it is the value of trade bills discounted and held plus factoring receivables.
- For mutual savings companies, the lesser of five-times equity capital and the average value of commercial bills discounted as at the tenth day, the twentieth day and the final day of the preceding month.

The issue interest rate and the minimum scale of an issue of cover bills are set by each financial institution at its discretion. Meanwhile, although merchant banks and mutual savings companies can repurchase before the day of maturity, cover bills that they themselves have issued, banks may not do so. There is no effective secondary market as yet for banks' cover bills.

(iii) Issue Procedure

The process of cover bill issue by financial institutions is as follows.

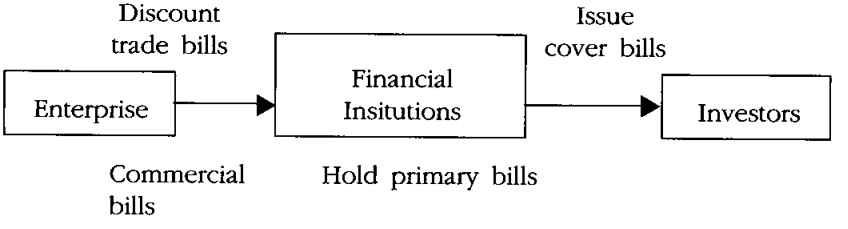
(a) Financial institutions hold original bills (commercial and trade bills discounted by them or factoring receivables) at the request of enterprises.

(b) Financial institutions bundle groups of original bills to provide collateral for the issue on a discount basis of cover bills tailored to meet investors' needs.

(c) When financial institutions sell cover bills, delivery may be in book-entry form at the individual investor's request.

(d) Cover bills are paid at face value at maturity when presented for payment.

Figure 6.1
Issue Procedure



(iv) Transaction Scale

While the volume of cover bills issued by banks and mutual savings companies have increased, those by the merchant banks has greatly decreased. The outstanding amount of cover bills issued by banks increased from 2,252 billion won at the end of 1994 to 9,524 billion won at the end of 1997.

The scale of this growth resulted as a consequence of important measures such as the raising of the ceiling on the issue of cover bills (November 1995, February 1997), the placing of reserve requirements on CDs issued (February 1997), etc. The outstanding amount of cover bills issued by merchant banks has shrunk sharply. It declined from 9,025 billion won at the end of 1994 to just 568 billion won at the end of 1997. This contraction was attributable to the tightening of regulations[2] on the cover bills' issuance ceiling after the conversion of investment and financing companies into merchant banks and the business suspension or cancellation of the licenses of merchant banks[3] after the foreign exchange crisis of late 1997.

2. Though the total debt ceiling (five times equity capital) was maintained, various other ceilings (the amount of bills issued by a merchant bank: 100% of its equity capital; payment guarantees on debentures; 500% of its equity capital, debentures issued by a merchant bank; 500% of its equity capital) were all abolished in May 1996. At the same time, the restriction on the amount of cover bills issued was changed to include the amount under the total debt ceiling.
3. As at the time of writing, 25 May 1998, the licenses of 14 merchant banks have been cancelled and 1 merchant bank has had its operations suspended.

The outstanding amount of cover bills issued by mutual savings companies has increased greatly, from 483 billion won at the end of 1995 to 2,261 billion won at the end of 1997, taking up the slack left by the shrinkage of merchant bank operations after the currency crisis.

Table 6.1
Trends in the Issue of Cover Bills
(End of Period)

(billion won, %)

Year	Banks	Merchant Banks	Mutual Savings	Total
1994	2252.0 (20.0)	9024.9 (80.0)	-	11279.9 (100.0)
1995	3414.6 (31.9)	6798.9 (63.6)	483.4 (4.5)	10696.9 (100.0)
1996	6099.1 (64.3)	2676.5 (28.2)	701.7 (7.5)	9477.3 (100.0)
1997	9524.0 (77.1)	568.4 (4.6)	2261.3 (18.3)	12353.7 (100.0)

Note: The figures in parenthesis refer to the share of cover bills issued as a percentage.

The market share of cover bills had been decreasing until the end of 1996 (from 15.4% at the end of 1994 to 7.3 percent at the end of 1996), but the trend reversed itself from the beginning of 1997 to register a 9.1 percent share at the end of 1997.

Table 6.2
Comparison of CDs, CPs, RPs and Cover Bills
(End of Period)

(billion won, %)

Year	Cover Bills [1]	CDs [2]	CPs 3	RPs 4	Total
1994	11276.9 (15.4)	21408.6 (29.1)	36063.6 (49.0)	4805.5 (6.5)	73554.6 (100.0)
1995	10696.9 (10.8)	28693.2 (28.6)	53693.2 (54.3)	6173.2 (6.3)	98892.9 (100.0)
1996	9477.3 (7.3)	31013.4 (23.9)	81198.0 (62.7)	7929.1 (6.1)	129617.8 (100.0)
1997	12353.7 (9.1)	25499.8 (18.7)	74624.2 (54.8)	23689.0 (17.4)	136175.7 (100.0)

1/ total amount of cover bills issued by banks, merchant banks and mutual savings and finance companies.
2/ amount issued.
3/ remaining amount discounted.
4/ remaining amount sold.
5/ figures in parenthesis are percentages of the share of the total.

(v) Appraisal

The introduction of the cover bill system has given financial institutions a new instrument for fund-raising and opportunities for investors for the utilisation of their funds. However, the beneficial effects normally associated with securitisation such as the improvement of the capital adequacy of financial institutions are unlikely to be felt.

Cover bills are issued on the basis of commercial and trade bills discounted as new financial institution debt. There is, therefore, a possibility that banks' BIS capital adequacy ratios will be worsened because no changes can occur in bills discounted on the asset side while the cover bills represent an additional liability.

6.1.2 A Recent Plan for Introducing ABS[4]

(i) Background

Since the second half of 1997, there has been widespread recognition that the non-performing loans of financial institutions need to be cleared for the effective pursuit of financial industry restructuring. Consequently, a Non-Performing Asset Resolution Fund of 8 trillion won[5] was established in November 1997 and the non-performing assets[6] of financial institutions have been purchased by the Fund.

Since the total amount of non-performing assets still held by banks and merchant banks is estimated at more than 40 trillion won, there are compelling reasons to enlarge the scale of the Fund through

4. See Appendix 6.1 for more details.

5. This consist of:
borrowings from the Bank of Korea: 2 trillion won
bonds issued: 5 trillion won
borrowings from the Korea Development Bank: 500 billlion won
contributions from financial institutions: 500 billion won.

6. As at the end of April 1998, the Fund has bought non-performing assets with a book value of 13850 billion won (asset collateralised 6670 billion won, non-collateralised 7180 billion won) for a total discounted price of 7552 billion won.

its access to additional fund-raising sources. As the disposal of real estate taken over by the Korea Asset Management Corporation has become difficult because of the recent slump in the real estate market and restrictions on foreigners' purchase of real estate, a plan is being actively considered for the issue of ABS collateralised by such real estate.

The Korean Government announced that it planned to introduce an ABS issuance system as one item in its "Financial and Corporate Sectors Structure Reform Measures", to be unveiled on 14 April 1998. In addition, it gave notice that on 25 May 1998, it would introduce legislation governing ABS.

(ii) Main Details of the Plan for the Issue of ABS

The main details of the ABS issue system, preparation of which is now underway, are as follows:

(a) ABS Issue Procedure

- The Korea Asset Management Corporation and banks are to, sell real estate collateralised and held by them to domestic or foreign-registered Special Purpose Vehicles (SPV) after bundling it.

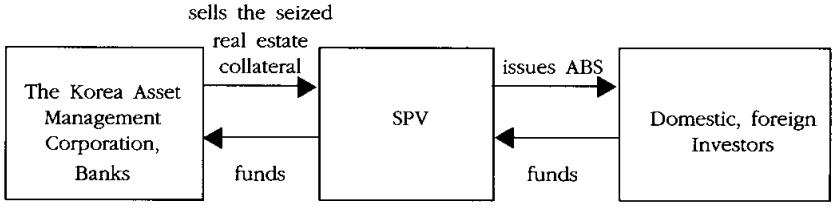
- SPV is to issue ABS backed by the purchased pooled real estate and to sell them to domestic and foreign investors.

- Issue conditions of ABS such as the interest rate and volume are to be determined after the assessment of the value of the underlying real estate value and credit appraisal.

- The maturities of the ABS are to be set from 5 to 10 years and the funds for redemption of principal and interest are to be prepared through the disposal of the seized real estate collateral.

- As demand for ABS in the domestic market is not anticipated to be strong, efforts will be made to attract foreign investors.

Figure 6.2
ABS Issuance Mechanism



(b) Action Plan

The enactment of a special law allowing the issue of ABS and an amendment of the Act on the Acquisition of Lands by Foreigners and Their Management and the Foreign Exchange Control Regulation to allow foreigners' acquisition of real estate is expected to be completed by the beginning of June 1998.

ABS will be classified as securities under the Securities and Exchange Act so that securities companies may underwrite them. Meanwhile, the Korea Asset Management Corporation will make its first issue of ABS in July 1998. For that purpose, it is now negotiating with foreign investment banks,

(iii) The Effect of the Introduction of ABS

The Korea Asset Management Corporation may resolve its holdings of non-performing assets more quickly and enlarge the scale of the Non-performing Asset Resolution Fund due largely to the introduction of ABS. If the flotation of ABS by the Korea Asset Management Corporation is concluded successfully, the restructuring of the financial sector will be accelerated.

However, considering the current slowdown of the general economy and Korea's still low sovereign rating, it is unlikely that either domestic or foreign investors will have a great demand for Korean ABS. In addition, the collapse of the price of the underlying real estate could cause difficulties in pricing the issue. Another potential problem is that the stream of principal and interest payments could be erratic due to the delay in the disposal of the underlying real estate.

6.2 Main Constraints on Securitisation

6.2.1 Underdevelopment of Related Systems[7]

Not only has no systematic mechanism been prepared but the regulations on the transfer of claims, which are an essential part of the securitisation process, are applied very strictly. The legal basis for the issue of ABS backed by claims held by financial institutions is still not properly in place.

The Civil Code stipulates that when a creditor wants to transfer a nominated claim such as the loan of a financial institution, he must notify the debtor advance and obtain his consent. However, for a financial institution, it is very complicated in practical terms to notify all debtors about the intended transfer of claims on collateral and get their agreement when it wants to initiate a securitisation programme. In the case of mortgages, not only is it impossible to separate the financial claim and the lien on the property according to the stipulations of the Civil Code but also registration is needed to give the mortgage transfer legal effect. Therefore, mortgage-backed securities are not practicable under the current legislation.

Meanwhile, as ABS are not included in the scope of securities as defined in the Securities and Exchange Act, it is also impossible to bring about their trading in the secondary bond market by having them listed on the Exchange.

6.2.2 Underdevelopment of the Bond Market

It is expected that the smooth issue and circulation of ABS will be difficult because of the weakness of demand for long-term bonds and the inadequate disclosure provisions concerning information on bonds. Considering the current bond market term-structure, which is skewed toward short-term bonds, it is likely that the demand for long-term ABS will not be very high. In the years between 1994 and 1997, short-term bonds, those whose maturities are below 3 years, made up 84 percent of the total value of bonds issued.

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7. Most restrictions on securitisation were removed with the enforcement of the Act concerning Asset Securitisation (see Appendix 6.1 for more details).

Long-term bonds are sold mainly for the purposes of license acquisition or tax reduction rather than the formation of an asset portfolio or capital gains.

Table 6.3
The Current Status of Bonds Issued by Maturity
(Amount Issued)

(100 million won,%)

Year	1~3 years	4~5 years	> than 5 years	Total
1994	350622 (84.7)	38450 (9.3)	24865 (6.0)	413937 (100.0)
1995	378916 (80.6)	49217 (10.5)	41854 (8.9)	469987 (100.0)
1996	461164 (83.0)	49798 (9.0)	44729 (8.0)	555691 (100.0)
1997	544419 (87.3)	43805 (7.0)	35474 (5.7)	623698 (100.0)
1994~97	1735121 (84.1)	181270 (8.8)	146922 (7.1)	2063131 (100.0)

Note: Figures in parenthesis are a percentage of the total.

No system of disclosure concerning kinds of bonds, their issue conditions, etc., has been developed and information on bond yields cannot be acquired in real time. In addition, there are still several obstacles[8] to the development of the bond market based on market principles.

6.2.3 Weakness of Credit Appraisal Function

For a smooth process of securitisation, a well-developed credit appraisal system is essential. However in Korea, credit rating companies are poorly placed to support the operation of securitisation.

Given the long-standing financial habit of conducting transactions supported by collateral and guarantees, the necessity and importance of credit appraisal has not been recognised sufficiently. Corporate

8. For example, issuers of bonds commonly seek to issue them at rates below the prevailing market interest rate by virtue of their superior status. On the other hand, the institutional investors, especially trust companies, securities companies and investment and trust companies, prefer to settle issuance interest rates through indivdual negotiation rather than by more transparent means.

accounting standards, which form the basis for credit appraisal are not on par with internationally accepted levels and the transparency of financial information is still wanting.

Currently, the usefulness of credit appraisal findings is so limited that they are used only for the issuance of a few securities like non-guaranteed and non-collateralised CP[9] or bonds.

6.2.4 Lack of Securitisation Techniques and Specialised Manpower

Financial institutions and enterprises lack the specialised man-power and technical know-how to gauge the feasibility of any specific securitisation how much risk is acceptable on a specific securitisation and how the appropriate interest rate should be calculated.

6.3 Tasks Ahead in Securitisation

6.3.1 Developing a Framework for Securitisation[10]

A legal basis for the establishment and operation of financial institutions specialising in the issue of ABS such as SPVs should be prepared.

An SPV should be established in the form of a joint stock company. However, specific business legislation rather than the Commercial Code will be prepared so that the SPV may be allowed some special treatment in terms of capital scale, number of directors, establishment procedure, tax, etc. The business scope of the SPV should be restricted to the acquisition of assets to be securitised, the issuance and sale of asset-backed securities, and other associated business.

In order to prevent conflicts of interest between the original creditor and the SPV, original creditors should not be allowed to hold equity in the SPV. When an original creditor sells a nominated claim to the

9. An enterprise wishing to issue non-collateralised CP and intermediary bills should acquire more than a B-grade from at least two credit appraisal companies and an enterprise wishing to issue non-guaranteed bonds or convertible bonds should hold a grade higher than BBB from at least two credit appraisal companies.

10. Most of the legal framework for securtisation was prepared with enforcement of the Act concerning Asset Securitisation. (see Appendix 6.1 for more details).

SPV for the purpose of securitisation, he should be allowed to omit the procedure requiring notification to the debtor and the obtaining of the latter's consent to the claim transfer, the stipulation of the Civil Code notwithstanding.[11]

Bonds' issued in the process of securitisation like ABS should be included in the scope of securities stipulated in the Securities and Exchange Act. Meanwhile, in order to prepare for possible default by original debtors as a result of which the securitised assets would become non-perfoming, the scope of investors' right to receive repayment should be stipulated in related laws.

6.3.2 Encouraging Securitisation

Some tax breaks will be given on interest income accruing from holdings of securities such as ABS having longer then a specified maturity. ABS should be added to the range of assets that can be invested in by institutional investors such as banks' trust accounts and investment and trust companies, and institutional investors will be allowed to set up funds chiefly for investment in ABS.

ABS are also to be included to the range of assets in which official funds such as postal savings and insurance, pension funds and various other funds may invest. It is worth studying a programme in which ABS would be issued in subordinated form and underwritten by the government or official institutions.

6.3.3 Strengthening the Function of the Bond Market

A secondary market for ABS will be established and the disclosure system for bond transactions improved. Obstacles in the way of the desirable development of the bond market on the basis of market principles such as window guidance concerning bond issuance and trading will be abolished.

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11. In case of the Korea Asset Management Corporation, it is considered to have complied with the notification and agreement procedure stipulated in the Civil Code if it completes registration of mortgage transfer in accordance with the stipulation (Article 44) of the Act on Efficient Disposal of Financial Institutions' Non-performing Assets and Establishment of the Korea Asset Management Corporation.

6.3.4 Developing Securitisation Techniques

Various techniques involved in securitisation need to be acquired such as the estimation and analysis of the cash flow of assets and the associated risk so as to find out whether the securitisation of a specific type of asset is possible, and the setting of appropriate coupon rates on bonds. The function of credit appraisal should be strengthened so that its findings may be actively used as indicators in investment decision-making.

The corporate accounting system and the disclosure system which are the basic elements for adequate credit appraisal should be brought in line with international standards. The scope of securities for which credit ratings should be obtained prior to issue needs to be enlarged in order to include all marketable debts including ABS.

International credit ratings agencies such as Standard and Poor and Moody's should be allowed to enter the domestic market so that a competitive environment for credit rating services may be encouraged. Details of credit rating standards and explanations on the result of credit appraisal of companies should be open and the credibility of the rating agencies should be strengthened through obligatory disclosure of the ratio of default at each credit appraisal grade.

6.3.5 Strengthening Prudential Regulation of Financial Institutions

If a troubled financial institution pursues securitisation through disposal of sound and income-yielding assets, its asset portfolio will be further worsened. In order to prevent such deteriorations of the balance sheet, prudential regulations concerning securitisation need to be established. Supervision standards for securitisation are to be set up and will be kept under constant watch.

A study needs to be carried out in order to minimise potential conflicts of interest between financial institutions' current business and the operation of securitisation. Prudential regulation of the SPV will be enforced in order to protect investors. Also, a disclosure system will be prepared concerning the details of assets to be securitised and the issue conditions of ABS such as interest rates, maturities, and repayment methods.

Passing of the Act Concerning Asset Securitisation

The Act Concerning Asset Securitisation, which came into effect on 16 September 1998, was drawn up to provide efficient support for economic restructuring. It provides a systematic framework for the securitisation and sale of assets to investors held by financial institutions, the Korea Asset Management Corporation, etc.

6.1 Main Details of the Act

6.1.1 Assets Eligible for Securitisation and Types of Asset-backed Securities, and Original Asset Holders

Assets eligible for securitisation (hereinafter, "securitisable assets") are rights arising from claims concerning loans, sales and leases, beneficiary certificates, stocks and other securities, real estate, etc. The kinds of securities issued as a result of securitisation (hereinafter, "asset-backed securities") are classified into equity-type securities issued in the form of investment certificates, bond-type securities issued in the form of bonds and bills, and beneficiary certificates issued by banks' trust accounts, Original asset holders who may securitise their assets in Korea are the Korea Asset Management Corporation, government-invested institutions, and financial institutions such as the Korea Development Bank, the Export-Import Bank of Korea, the Long-term Credit Bank, the Industrial Bank of Korea, commercial banks, merchant banking corporations, insurance companies, securities companies, credit-specialised financial companies, etc. However, non-financial companies other than government- invested institutions are, excluded.

6.1.2 Companies Specialising in Securitisation

Companies specialising in securitisation act as vehicles for the securitisation process by acquiring assets from original asset holders, issuing asset-backed securities, and selling them to investors. They thus resemble the special purpose vehicles (SPVS) set up in advanced countries. Companies specialising in securitisation pay investors their principal and interest, or a performance-related dividend arising from the management and disposal of the asset-backed securities.

A company specialising in securitisation may be set up only in the form of a limited liability company under the Commercial Code. Such a company specialising in securitisation may be established with only one member. Meetings of its general members and of its board of directors may be replaced by a written resolution. In addition, a bank's trust account may handle all operations related to the securitisation process.

6.1.3 Regulations Concerning Companies Specialising in Securitisation

The business scope of a company specialising in securitisation is limited to (i) conveyance and transfer of securitisable assets, or the holding in trust of such assets; (ii) issuing and redeeming asset-backed securities, concluding contracts (including borrowings from financial institutions) for implementation of an asset securitisation scheme; (iii) management and disposal of assets securitised under an asset securitisation scheme; and, (iv) investing surplus funds under an asset securitisation scheme.

For investor protection, very strict restrictions apply to the dissolution of a company specialising in securitisation. The merger and acquisition of (M&A) a company specialising in securitisation and its conversion to another form is prohibited. Cases in which a company specialising in securitisation could be dissolved are (i) expiry of the period provided for its existence as a going concern, or the occurrence of certain circumstances prescribed in its articles of incorporation or in an asset securitisation scheme; (ii) completion of the redemption of its asset-backed securities; (iii) a resolution for its dissolution approved by more than 2/3 of the holders of its asset-backed securities (provided the consent of the Financial Supervisory Commission is obtained.); and, (iv) bankruptcy.

The Financial Supervisory Commission and the Financial Supervisory Services are responsible for supervising companies specialising in securitisation. The Financial Supervisory Commission may ask companies specialising in securitisation to submit business reports and, if necessary, impose various sanctions such as orders to improve their business, suspending their business, and cancelling their registration. The Financial Supervisory Services carries out examinations of companies specialising in securitisation.

6.1.4 The Procedure of Asset Securitisation

First of all, a company specialising in securitisation should register each individual asset securitisation scheme with the Financial Supervisory Commission. Registration details should include (i) the maturity of the asset securitisation scheme; (ii) the total amount and breakdown of the claims along with other matters concerning their issue and redemption; (iii) details concerning acquisition, management and disposal of assets eligible for securitisation; (iv) matters concerning asset administrators; (iv) other items as stipulated by the Presidential Decree.

When an original asset holder transfer assets eligible for securitisation to a company specialising in securitisation under an asset securitisation scheme, it should make a public announcement and register with the Financial Supervisory Commission. A company specialising in securitisation may entrust the administration of the assets underlying its issue of asset-backed securities to the original asset holder or a third party. In both cases, the trustee should administer the entrusted property separately from that of his own account.

A company specialising in securitisation sells asset-backed securities to general investors and transfers the funds raised to the original asset holder. The original asset holder, where entrusted with the administration of the underlying assets, should continue to collect principal and interest from the original debtor.

6.1.5 Special Cases Concerning Asset Securitisation

Special provisions have been put in place concerning the requirements for opposing transfer of nominative claims, and concerning the transfer of the ownership of claims in order to facilitate asset securitisation. If an original asset holder makes a post-facto public announcement of the transfer of his asset to a company specialising in securitisation under an asset securitisation scheme through at least two daily newspapers and registers the details with the Financial Supervisory Commission, he is considered to have fulfilled the requirements[12]

12. Civil Code, Article 450 (Requisite for Setting Up Assignment of Nominative Claim against Obligor): (1) The assignment of a nominative claim cannot be set up against the obligor or any other third person, unless the assignor has given notice thereof to obligor or the obligor has consented thereto. (2) The notice or consent mentioned in the preceding paragraph cannot be set up against a third person other than the obligor, unless it is put in writing with a certified fixed date.

for an asset transfer as stipulated in the Civil Code under the asset securitisation scheme from the day of registration against a third party other than the original debtor. If notification and registration concerning the transfer of securitised claims are made, the necessary procedures concerning property rights offered as collateral in relation to assets taken over from the original asset holder are deemed to have been fulfilled from the day of registration, the stipulations[13] of the Civil Code notwithstanding.

A company specialising in securitisation may, even though it is a limited liability company, issue debentures like a joint-stock company. Furthermore, the limit on the issue of debentures[14] stipulated in the Commercial Code does not apply to companies specialising in securitisation.

Trust companies to which assets have been entrusted or transferred under an asset notwithstanding, issue beneficiary certificates without obtaining the specific approval of the Financial Supervisory Commission.

6.2 Effects of the Passing of the Act Concerning Asset Securitisation

The enforcement of the Act Concerning Asset Securitisation is expected to have the following effects:

First, sales of assets held by the Korea Asset Management Corporation and financial institutions, such as the large amount of real estate and rights over claims concerning loans, will be accelerated, helping to improve the liquidity of financial institutions' assets. From the standpoint of financial institutions, their holdings of low-risk assets will be increased relative to their high-risk assets such as rights over claims concerning loans, thereby promising an improvement in their capital adequacy. Second, the cash flow problems of financial institutions will be eased through the reduced mismatch of maturities and term structures. This should decrease their exposure to liquidity risk and interest

13. Civil Code, Article 186 (Effect of Changes in Real Rights over Immovables): The acquisition, loss of, or any alteration in, a real right by a juristic act over an immovable takes effect upon its registration.

14. Under the Commercial Code, a company may only issue debentures within four times its net current values.

rate risk. Third, sale of their loan assets offers financial institutions the opportunity to operate the recovered funds more profitably and to increase their earnings through fee income by engaging in various ancillary business such as collecting and transferring payments of principal and interest. Fourth, the issue of asset-backed securities should be accompanied by credit appraisal of the underlying assets so that financial institutions will have to try to improve the soundness of their assets. Meanwhile, a wider portfolio of assets will be available to investors.

Following the entry into force of the legislation, several installment credit companies are preparing to issue ABS on the basis of their rights to claims over installment payments. Banks are also preparing to issue asset-backed securities supported by their foreign currency claims arising from syndicated loans and shipping loans and by aircraft leasing finance receivables.

Chapter 7

MALAYSIA

by

Tang Hsiao Chink*

7.1 Introduction

In Malaysia, securitisation is synonymous to securitisation by Cagamas Berhad or the National Mortgage Corporation. In view of this, all discussion in this chapter focuses on the securitisation by Cagamas Berhad. Securitisation in Malaysia is that of mortgage-backed securitisation where Cagamas buys housing loans from mortgage originators or primary lenders and issues bonds backed by these loans. Residential housing loan is the predominant type of asset being securitised in Malaysia. Nevertheless, since April 1997, industrial property loan has also been securitised by Cagamas.

7.2 Development Of Securitisation

7.2.1 Background - Cagamas Berhad

The need for an establishment of a secondary mortgage market was mooted as early as 1979 when under the leadership of Bank Negara Malaysia, representatives from the commercial banks, merchant banks and finance companies formed a technical committee to study its viability. Nevertheless, due to the inappropriateness of the financial conditions prevailing at that time, its establishment was postponed. In February 1986, the technical committee was reconvened. The committee was given the mandate to:

(i) explore the feasibility of establishing a secondary mortgage market in Malaysia;
(ii) propose viable secondary mortgage instruments; and

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* The views expressed in this chapter are solely that of the author's and they do not necessarily represent those of the Bank. Mr. Tang Hsiao Chink is Senior Executive in the Economics Department of Bank Negara Malaysia.

(iii) determine the essential requirements for the incorporation and operation of an institution to act as an intermediary between primary lenders of housing loans and investors of long-term funds.

The committee made its recommendations in November 1986 when it felt that it was opportune to establish the secondary mortgage market. The notable recommendations made by the committee are as follows:

(i) a National Mortgage Corporation is to be set up to perform the function of an intermediary between the primary lenders and investors of long-term funds, and to play the role of a credible issuer of mortgage papers;
(ii) the corporation is to be owned by the banking institutions and Bank Negara;
(iii) the corporation is to be the only institution allowed to issue mortgage-backed papers;
(iv) the mortgage-backed papers are to be designated as trustee stocks (to enable pension and provident funds and other trust funds to invest);
(v) exemption from stamp duty is to be granted for the transfer and/or charge of mortgages to the corporation, and the issue and transfer of mortgage-backed papers (to minimise the costs involved in the creation of mortgage-backed papers); and
(vi) the corporation is to be designated as a prescribed corporation.

With that, *Perbadanan Cagaran Malaysia Berhad* or euphonically abbreviated as Cagamas Berhad was born. Therefore, the establishment of Cagamas is to meet the twin objectives of promoting home ownership in Malaysian as well as the development of the domestic bond market. To achieve the first objective, Cagamas is expected to assist the liquidity management of primary lenders by helping them to narrow the difference in the maturity mismatch of their sources of funds and the maturity of their loans. Cagamas is also expected to alleviate the interest rate risk of the primary lenders arising from the difference between the cost of funds and the returns obtainable from the loans. Such a situation is particularly relevant for loans where the banking institutions are required by the regulator to charge only a maximum interest rate to their customers and especially, in the period of rising interest rates. Additionally, as a major issuer of private bonds, Cagamas is expected to spur the development of the domestic bond market.

The ownership structure of Cagamas has remained the same since its initial establishment. Bank Negara is the single largest shareholder in the company holding 20 percent of its issued and paid-up capital while commercial banks, finance companies and merchant banks as a group, each holds 45 percent, 25 percent and 10 percent of the company's paid-up capital respectively. Since Bank Negara is the largest shareholder, the Governor of Bank Negara is also appointed the Chairman of the company while other members of the Board of Directors are leaders in their own organisations nominated by the respective Association of Commercial Banks, the Association of Finance Companies and the Association of Merchant Banks. Naturally, this unique structure of ownership allows all Cagamas papers to be accorded the highest ratings by both the Rating Agency Malaysia Berhad (RAM) and Malaysia Rating Corporation Berhad (MARC).[1]

7.2.2 Securitisation Process

The securitisation process can be briefly explained as follows. First, the primary lenders such as commercial banks, which grant housing loans to the house buyers, sell these loans to Cagamas. Second, Cagamas then raises funds from the market to finance these purchases by issuing debt securities in the form of the longer-term Cagamas Bonds and the shorter-term Cagamas Notes. Cagamas only purchases loans originated by selected organisations essentially the commercial banks, finance companies and the Treasury's Housing Loan Division.

The selling institutions act as the servicer, trustee and custodian for Cagamas upon selling their loans. As servicer, they are responsible for collecting monthly housing loan installments and remitting them to Cagamas. Nevertheless, the actual amount remitted is not the entire housing loan installments but what is known as Cagamas Installment.[2] In the case where the entire amount of the housing loan installment after deducting for service and recourse fees is greater than the Cagamas Installment, the selling institutions will retain the excess as an addi-

1. This is not the only reason because more importantly, loans sold to Cagamas are on a full recourse basis to the sellers.

2. Cagamas Installment is basically the agreed amount of housing loan installment required by Cagamas and is to be remitted by the selling institutions as set out in the Revised Master Sale and Purchase Agreement.

tional recourse fee. On the other hand, if the housing loan installment after deducting for service and recourse fees is less than the Cagamas Installment, the selling institutions will have to top up the shortfall in the housing loan installment.

Generally, Cagamas purchases only loans which are sold in a block where information on each borrower is not revealed and thus, the consent of the borrower is not required. Alternatively, loans are usually purchased if a provision to transfer the charge or assign the rights of the selling institutions to a third party is already found in the mortgage agreement.

(i) Structure of Mortgage Purchase Facility

The structure of the mortgage purchase facility is based on the Revised Master Sale and Purchase Agreement. The agreement sets out the general terms and conditions governing the sale of loans to Cagamas, and incorporates a declaration by the selling institutions that they are holding the loans purchased by Cagamas, mortgage instruments and all monies received but not paid to Cagamas in trust for Cagamas. Charges over the property used to secure the loans continue to be registered in the name of the selling institutions or the assignee of the rights to the property is the selling institution. In addition, the selling institutions also execute a Purchase Contract by which they sell and assign the mortgage loans to Cagamas. All this implies that the only beneficial ownership of loans is passed to Cagamas as opposed to the outright transfer of ownership and credit risk as well as the rights to the cash flows of the loans from selling institutions to the bondholders practised in most cases of mortgage-backed securitisation. In this regard, the bondholders do not directly own the loans and hence, they do not directly bear the credit risk, which remains with the primary lenders. This is a unique characteristic of the securitisation process which largely explains the highest rating accorded to Cagamas papers. In fact, the existence of sale with recourse has led some to argue that Cagamas is actually not a true case of securitisation.

Since the sale of loans to Cagamas is done with full recourse to the selling institutions, the selling institutions are required to repurchase any loans which are subsequently found to fall short of the quality specified by Cagamas. These include loans with the following eligible criteria:

(a) the loans are for the finance or the refinance of the purchase, construction or renovation of residential properties costing not more than RM150,000 (for industrial property loan where the size per loan is not more than RM20 million);
(b) fully disbursed;
(c) not more than three months in arrears at the time of sale;
(d) with remaining life which expires on or after the review date; and
(e) secured by a first charge or assignment of rights over the mortgaged property.

(ii) Types of Mortgage Purchase Facilities

Cagamas offers five types of purchase facilities to the selling institutions: the fixed rate mortgage facility; the floating rate mortgage facility; the convertible rate mortgage facility; the industrial property loan facility; and the Islamic house financing facility. Essentially, Cagamas purchases loans either at a fixed, floating or convertible Cagamas Rate.[3] A fixed rate purchase means that the transaction is based on the Cagamas Rate that is not adjustable during the review periods of three, five or seven years. Under the floating rate purchase facility, Cagamas purchases loans based on the Rate that is pegged to the three-month or six-month Kuala Lumpur Interbank Offer Rate (KLIBOR). The interest chargeable on such purchases is, thus, reset at three or six-month intervals during the review period of three to seven years. The convertible facility means that the selling institutions can only sell their loans for a period of three years in which they can switch from a fixed to a floating rate or vice versa at prescribed future dates during that time. Under the industrial property loan facility, a similar arrangement of a price review period of three, five and seven years at fixed or floating rate is available. In addition, interest free housing loans granted under Islamic principles can also be sold to Cagamas based on the principle of Bai al-Dayn (debt trading) with the price review periods of three, five and seven years.

For all these facilities except the convertible rate facility, the selling institutions which sell their loans have the option to repurchase the

3. Cagamas Rate is Cagamas' required rate of return and it forms the basis for the calculation of Cagamas Installment.

loans from Cagamas if they deem the interest rate quoted by Cagamas at the end of the review period to be unacceptable.

(iii) Types of Cagamas Papers

Cagamas issues four types of debt securities to fund its mortgage purchase facilities. The different types of bonds and notes mirror closely the type of mortgage purchase facilities offered by Cagamas. They are fixed rate and floating rate Cagamas Bonds, short-term discount Cagamas Notes and Cagamas Mudharabah Bonds which are interest-free bonds issued under the Islamic principle of profit sharing. Fixed rate Cagamas Bonds are straight bonds issued at par and redeemed at par at maturity with fixed semi-annual coupon payment. Floating rate Cagamas Bonds are also issued at par and redeemed at par at maturity with the coupon rate being reset quarterly or half-yearly based on the three or six-month KLIBOR rate. Both have an original tenor of two to seven years. Cagamas Notes are of original maturity of less than a year, issued at a discount but redeemed at par at maturity. Cagamas Mudharabah Bonds are issued at par and redeemed at par at maturity, paying dividend to the bondholders semi-annually at a predetermined ratio. They have an original tenor of three to seven years.

7.2.3 Special Attributes Of Cagamas Papers

Tier 1 Cagamas papers, among other instruments, are classified as liquid assets for the purpose of compliance with Bank Negara's Liquid Asset Requirement (LAR). Cagamas papers can be categorised into two groups depending on the assets which back them; Tier 1 papers comprise bonds and notes backed by the purchase of conventional housing loans and Islamic housing loans, while Tier 2 papers comprise bonds and notes backed by the purchase of industrial property loans. This classification, inevitably, has the effect of enhancing demand among the financial institutions for Tier 1 papers, thus lowering their coupon rate and yields. This concession is given by Bank Negara as an incentive to make end-financing for houses more affordable. In addition, Tier 1 Cagamas papers are also classified as permitted investments of institutional investors such as insurance companies to fulfil their statutory requirements. Thus, the yield of Tier 1 bonds is usually lower than Tier 2 bonds by about one percent.

For the purpose of calculating the Risk Weighted Capital Adequacy Requirement (RWCAR) of financial institutions, investment in Cagamas papers is given a risk weighting of 10 percent for commercial banks and finance companies and 30 percent for discount houses. This compares favourably with the 50 percent weighting on housing loans. In addition, the proceeds received from the sale of housing loans to Cagamas are allowed to be totally deducted from the eligible liabilities (EL) base which form the basis for the calculations of the Statutory Reserve Requirement (SRR) and LAR. For the sale of industrial property loans, 50 percent of the total proceeds are included as part of the EL base for the calculation of SRR, while all proceeds are allowed to be totally deducted from the EL base for the calculation of LAR. This is advantageous to the selling institutions as they are able to source funds at a more competitive rate than the traditional deposits.

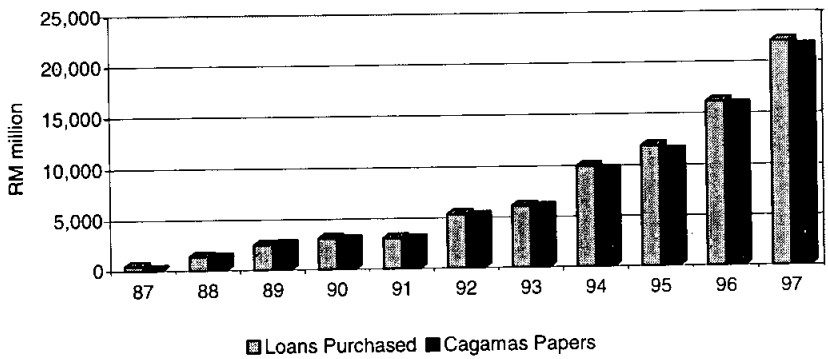
Cagamas securities which are traded through the electronic clearing house or Scripless Securities Trading System (SSTS) are issued scripless and traded electronically in book-entry form. Cagamas papers are issued via the Principal Dealers appointed by Bank Negara through competitive bidding or tendering based mostly on yields through the Fully Automated System for Tendering (FAST). Both of these systems are operated by Bank Negara and also used for the trading, clearing, settlement and bidding of other SSTS instruments such as Malaysian Government Securities, Treasury Bills and Bank Negara Bills.

Several other special attributes of Cagamas papers are derived from the various legislative exemptions given to its issues. All issues of Cagamas papers are done without the accompaniment of a prospectus as the Registrar of Companies has given it the status of a prescribed corporation. Cagamas papers are also exempted from complying with the Guidelines on the Issue of Private Debt Securities (PDS) issued by Bank Negara. Nonetheless, approval for any subsequent new product or new form of securitisation will have to be sought from Bank Negara. In addition, the Securities Commission has also given its prior approval to Cagamas for the issue of its papers. All this enables Cagamas to issue its papers expediently and at a low cost, a privilege not enjoyed by other issuers of PDS. The Ministry of Finance has also given the stamp duty exemption on the purchase of all loans by Cagamas which again benefits Cagamas in the form of lowering its transaction cost.

7.2.4 Size of the Secondary Mortgage Market

Cagamas issued its maiden RM 100 million fixed rate bond in 1987 and as at end-1997, the total outstanding issues of Cagamas papers stood at RM 21.5 billion representing an annual growth of 71 percent. This significant growth is reflected in the marked increase in the total outstanding loans purchased by Cagamas which has increased from RM407 million in 1987 to RM22 billion at the end of 1997 (see Chart 7.1).

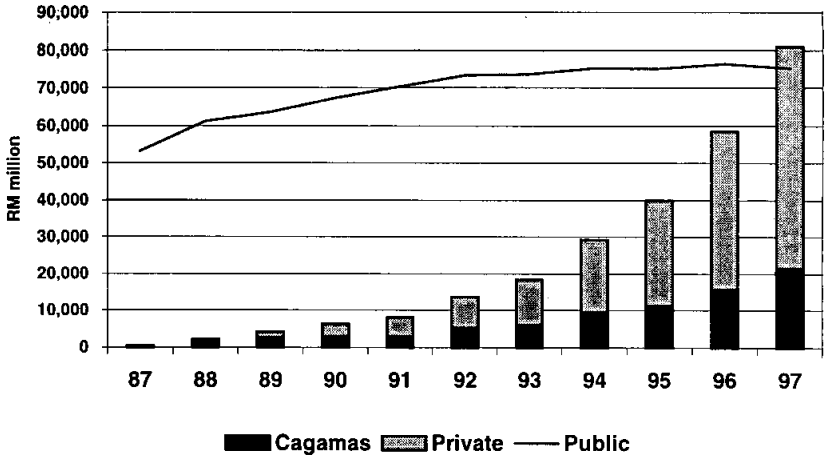
Figure 7.1 Total Outstanding of Loans Purchased and Total Outstanding of Cagamas Papers



In relation to the domestic bond market, Cagamas is by far the single largest private ssuer of PDS in the market. In the earlier years, its share over total PDS outstanding issues was pronounced, reflecting the infancy of the PDS market (e.g., at 57 percent and 60 percent in 1988 and 1989, respectively). But over the years, there has been a greater awareness among other private corporations to source their financing through the issue of bonds. Hence, in recent years, its share has declined and has hovered at around 37 percent.

The bulk of the Cagamas papers issued are that of fixed rate Cagamas Bonds. As at end-1997, they comprised 68.6 percent of total Cagamas papers outstanding. In recent years, there has been a notable increase in the issue of Cagamas Notes, representing 21.9 percent of

Figure 7.2 Outstanding of Public, Private and Cagamas Papers



total outstanding issues at the end of 1997. Such an increase was attributed to the high interest rate environment prevailing in the economy over the last few years, whereby through the issue of shorter-term Cagamas notes, Cagamas could avoid locking into high coupon payments over a longer period of time.

The profile of Cagamas investors has not changed much over the years largely because of the liquid asset status accorded to Cagamas papers. Cagamas papers are mostly held by the banking institutions (76.3 percent of total outstanding issues at the end of 1997) while the rest are held by insurance companies, pension and provident funds and foreign investors (22.3 percent) as well as discount houses (1.4 percent). Thus, in part because of this, the yield of Cagamas papers is only marginally higher (0.2-0.3 percent) than that of Malaysian Government Securities.

7.2.5 Regulatory, Accounting and Tax Issues

There is no specific regulatory framework governing securitisation activities in Malaysia. Nevertheless, since the issue of bonds is regarded as a form of deposit taking, it indirectly falls under the purview of the Banking and Financial Institutions Act (BAFIA) 1989 regulated by Bank Negara. Arising from this, Bank Negara drew up the Guidelines on the Issue of PDS which came into effect in 1989. Although Cagamas papers

are regarded as PDS, they are, however, exempted from the requirements of the Guideline. Under the Securities Commission Act, 1993, all issue of securities by a public company, listed or unlisted, require the approval of the Securities Commission (SC). Nevertheless, a similar exemption is also given the issues of Cagamas papers.

Table 7.1
Cagamas Papers, Amount Outstanding (RM million)

As at end	Islamic	Fixed Rate	Floating Rate	Cagamas Notes	Total
1987	–	100	–	–	100
1990	–	2,900	–	–	2,900
1991	–	2,900	–	–	2,900
1992	–	2,900	1,365	872	5,137
1993	–	2,980	2,035	5,60	9,485
1994	30	6,860	2,035	5,60	9,485
1995	30	8,432	850	2,010	11,322
1996	60	11,207	1,960	2,510	15,737
1997	84	14,712	1,960	4,700	21,456

The accounting treatment of loans sold to Cagamas is contained in a circular issued by Bank Negara. Basically, it requires the loans sold to be treated as a off-balance sheet items but the amount has to be disclosed as a Contingent Liability because loans sold to Cagamas are made on a full recourse basis.

There is no special tax applicable to Cagamas. Its income from securitisation will be subject to corporate tax rate. Interest expense can be netted off against interest income but bond issue expenses are not tax deductible. Cagamas is exempted from any stamp duties for the purchase of loans from the selling institutions.

For resident individuals, interest income earned from investment in Cagamas papers is tax exempted, similar to treatment given to the holder of all PDS. For resident corporations, interest income is taxable. For non-residents, it is subject to withholding tax. Capital gains, however, are not taxable for all resident and non-resident investors.

7.3 Current Success and Other Developmental Issues

There is little doubt that Cagamas has been successful in meeting its twin objectives of allowing greater home ownership especially among the poorer Malaysians and developing the PDS market. For instance, most housing loans granted now are of tenure of 25 to 30 years, whereby previously they were usually of 15 years. Indeed, this is an important achievement as it makes house purchases more affordable by reducing the amount of monthly installments since by selling their loans, the banking institutions can better reduce the maturity mismatch between their assets and liabilities. Moreover, since the banking institutions can now securitise their loans and obtain liquidity from them, they are also now more prepared to grant more of such similar loans. This inadvertently creates greater competition in the market which should ultimately benefit the consumers. In fact, through the fixed rate mortgage purchase facilities offered by Cagamas, some of the institutions are now able to offer fixed rate housing loans to their customers apart from the traditional package based on the adjustable base lending rate (BLR) plus margin.

The success of Cagamas in helping to develop the PDS market is often recognised. Prior to the establishment of Cagamas, the PDS market was non-existent. What the authorities have created is the awareness among corporations of the possibility of raising funds through PDS, thereby reducing the over-reliance on bank borrowing and the stock market. This is reflected in the growth of the gross funds raised in the PDS market, from a low of RM1.9 billion in 1988 to more than RM19.5 billion in 1997. Nevertheless, the development of the PDS market has been impeded by several problems.[4] Recognising the potential for the development of the PDS market, the authorities have undertaken various initiatives.

Although Cagamas has been successful in attaining its objectives, there remains several hindrances and problems which incidentally have been largely the result of the unique characteristics of Cagamas' securitisation process.

4. For a more deatiled discussion on the problems facing the PDS market, please refer to the Ministry of Finance's Economic Report 1995/96, Feature Article 7.

7.3.1 Inadequate Supply of Cagamas Papers

This problem has been exacerbated by the liquid status given to Cagamas papers. The launch of Tier 2 Cagamas papers, however, aims to partially offset this problem, but as of now, the issues of Tier 2 papers have remained small. A deeper problem could be the lack of liquid assets available in the market considering that the bulk of the liquid assets, MGS, have not been in great supply due to the surplus position of the Federal Government.

7.3.2 Short Dated Bonds

As the bulk of housing loans purchased by Cagamas is for a price review period of three years, and given the fact that most selling institutions prefer to repurchase their housing loans at the end of this period, most bonds issued by Cagamas are, therefore, of a tenor of three years. The problem lies with the primary lenders as they do not usually take a long-term view on the interest rate position and prefer to keep their options open by selling at a short tenor to Cagamas. This arrangement, if unresolved, would impinge on the further development of securitisation involving true or outright sale of loans.

7.3.3 Low Response from the Primary Lenders

Since most housing loans granted are at BLR plus a certain margin, primary lenders can always afford to pass the interest rate risk to their customers. Hence, some primary lenders are less interested in selling their loans to Cagamas.

7.3.4 Small Investor Base

There is a need to encourage the more active participation of investors in the like of pension funds, unit trust funds and high net worth individuals to invest their surplus funds in Cagamas papers other than in fixed deposits and shares. Towards this end, there is a need to make the present bond issuance and trading process more accessible to these investors. Nevertheless, as long as the supply of Cagamas bonds remains inadequate particularly among the banking institutions, this problem will persist.

7.3.5 Low Secondary Trading of Cagamas Papers

Active secondary trading ensures liquidity in the market place. High liquidity gives the comfort to investors that there is always a willing buyer or seller on the other end. This further ensures the realisation of the objectives of their trade. Such success boosts confidence and, in turn, generates higher liquidity in the market. The problem with low turnover is common among all the public and private debt instruments in Malaysia. There are several reasons attributed to this and they are linked to some of the problems mentioned above. The lack of supply of bonds implies that most investors prefer to hold them rather than to trade, for fear of not being able to buy them back subsequently. The small investor base does not encourage active trading because it lacks the sufficient number of buyers and sellers in the market. The ability to price an instrument is an important ingredient in any market, more so for the issue and trading of bonds. In Malaysia, this is a well-known problem. Recognising this, the authorities have started with the issue of the benchmark Khazanah bond, the first being in September 1997. In addition, to improve the access to, and transparency of, information on the primary and secondary bond market, Bank Negara launched the Bonds Information Dissemination System (BIDS) in October 1997. BIDS is basically a computerised and centralised database system on the domestic bond market.

7.3.6 Legal Complication

There still exists a restriction in many house titles where the transfer of the right to charge, deal or dispose of the property by the borrower to a third party, requires the approval of the relevant land authority. This is a complex and time-consuming procedure and in a securitisation exercise where hundreds or thousands of loans are involved, such a requirement will actually render the exercise infeasible. Thus, Cagamas has so far only securitised loans without such a restriction in the transfer of charges.

7.4 Implications for Policy Makers

Some of the issues, which have slowed down the development of securitisation, have been elaborated above. As a recognition of these problems, the Deputy Prime Minister, in his speech on 24 March 1998 on Measures to Stabilise the National Economy specifically identified

the development of a deeper and broader bond market including a greater degree of securitisation as an important means to pave the way for reduced reliance on the banking institutions for financing and intermediation. This essentially sets the backdrop for the development of a comprehensive framework on securitisation comprising legal, accounting, tax, regulatory and prudential issues.

For Bank Negara, the formulation of policy will always have to be made in relation to its other objectives, among others, that of attaining sustained economic growth with price stability as well as against the background of the current and anticipated economic and financial conditions. Arising from the need for such a policy balance, there may be times when the authorities are particularly watchful on the development of a segment of the market. Such close vigilance is inevitable as the mandate and responsibility of the authority lies beyond the development of any single sector of the economy and financial markets. A case in point is the experience in the mid-1990s when Bank Negara was particularly concerned with the active development of securitisation as it would lead to greater credit creation and hence, higher inflationary pressures in the economy. Such a concern was justifiable on the ground that proceeds received from the sale of loans could be easily lent out especially for consumption and less-productive purposes. This would further exacerbate the inflation situation as lending to these sectors was already on the increase at the same time when asset prices were spiralling.

With the onset of the Asian financial crisis, benefits of securitisation have become more evident, particularly in improving the liquidity position of the banking institutions and shifting the over-concentration of risks away from the banking system. In addition, securitisation with high rated asset-backed bonds can complement the existing Government securities available in the market to meet the growing needs of investors such as pension and provident funds, and insurance companies. Recognising these benefits, implications of securitisation on monetary policy will need to be assessed together with other accounting, legal and tax issues.

7.4.1 Monetary Policy

The impact of securitisation on monetary policy is of great interest to Bank Negara. Two specific issues of importance are the effectiveness

of the current monetary policy instruments and the accuracy of the measurement of monetary aggregates. We will first examine the current impact of securitisation involving Cagamas and later, outline some general observations in the context of a broader case of securitisation.

Among the various monetary policy instruments available at the disposal of the central bank, the SRR and direct interbank borrowing and lending remain the most used instruments. An increase in the SRR has a contractionary effect on the creation of money and hence, the economy and vice versa. The SRR is calculated as a percentage of the EL base. Thus, an increase in SRR implies that more funds are being locked with the central bank rather than being circulated in the system. This, in turn, implies that there are less funds available to the banking institutions to on-lend. Since the sale proceeds of housing loans are allowed to be deducted from the EL base, an increase in SRR will lead to a smaller degree of contraction than otherwise would have occurred without securitisation, at least with regard to this unique incentive given to the banking institutions. To put it differently, securitisation in the existing framework has made the SRR less effective. Nonetheless, its overall impact is still marginal to render the SRR totally ineffective because securitisation still represents a very small portion of the total lending by the banking institutions. Total loans sold by the banking institutions to Cagamas stood at only 4.6 percent of total outstanding loans of the banking system at the end of 1997.

With regard to the measurement of monetary aggregates, securitisation has the effect of reducing M3 since credit to the private sector as a part of the determinant of M3 excludes housing loans sold to Cagamas in its calculation. Although this is somewhat offset by the inclusion of the investment of the banking institutions in Cagamas Notes and Bonds, the overall impact is that of a lower M3 than it would otherwise be mainly because Cagamas papers are not entirely held by banking institutions (see Table 7.2). Note that the banking institutions hold 76.3 percent of all Cagamas papers outstanding as at the end of 1997. This means that 23.7 percent or RM5.1 billion of the outstanding Cagamas papers is not being captured under M3. However, since this amount represents only 1.3 percent of M3 at the end of 1997, the reliability of M3 is not reduced significantly.

The above discussion on the impact of securitisation on monetary policy focuses on the current state of securitisation involving Cagamas. As greater securitisation is encouraged by the authorities and gains popularity among market participants, the effects of securitisation will become more far-reaching. Bank Negara will then make the necessary adjustments to the conduct of monetary policy, taking into account these implications.

Table 7.2
Factors Affecting M3

Credit to the Private Sector	xxxx
Of which: Loans and *Advances**	*xx*
*Securities***	*xx*
Net Claims on Government	xxxx
External Sector	xxxx
Net Other Influences	xxxx
Total M3	xxxx

* Excluding loans sold to Cagamas Berhad.
** Including Cagamas papers held by banking institutions.

Securitisation will lead to the disintermediation of funds away from the banking system if non-bank institutions invest in the securities issued by the special purpose vehicle (SPV). This disintermediation will have the following implications on monetary policy:

- Erode the reliability of the monetary aggregate, M3, used as a guide for monetary policy since M3 does not capture the activities of non-bank institutions (e.g. pension funds, insurance companies and corporations). The experience in the United States shows that the traditional monetary aggregates have lost much of their usefulness, as they no longer reflect the underlying economic activities. In fact, they have become less useful not merely because of the increase in securitisation, but more generally because of greater financial disintermediation and the institutionalisation of investors. Thus, alternative indicators developed to guide the formulation of

monetary policy would have to include developments in the activities of non-bank financial institutions viz., their holdings of debt securities.

- Securitisation may also mitigate the effectiveness of monetary policy through the quantity channel. For example, in the event that there is a need to complement conventional monetary measures (through interest rates) with more direct measures such as credit ceilings imposed on banking institutions, such measures would only have the effect in curbing the amount of credit extended by the banking institutions. Other non-bank originators can still securitise their assets to raise funds. Consequently, the effectiveness of monetary policy via credit control is only limited to contain bank financing.

- The constraint on the effectiveness of direct monetary measures such as credit control elevates the importance and relevance of transmitting monetary policy through the price channel (interest rates) in the age of securitisation. Since 1994, Bank Negara has moved towards interest rate targeting in its conduct of monetary policy. As such, in order to ensure that the intended effects of monetary policy are more expediently and efficiently transmitted to all areas of the economy, it is imperative that movements in the intervention rate of Bank Negara have an impact across the spectrum of interest rates, from retail interest rates to yields of securities. In this regard, the active promotion of the development of the bond market in general, and securitisation in particular, has a unique role to play to ensure a more efficient transmission of monetary policy.

7.4.2 Other Considerations

Other issues which will have to be considered include:

(i) Legal

- The isolation of assets sold or assigned to the SPV from the originator for accounting and regulatory purposes;
- The exemption of additional taxes and stamp duties on the SPV; and,
- The bankruptcy remoteness of the SPV.

(ii) Accounting

- Off-balance sheet treatment;
- Profit and loss recognition; and,
- Accounting standards which specifically address securitisation.

(iii) Tax

- Taxability on gains from the disposal of assets by originators to the SPV and deductibility on loss from the disposal;
- Taxability of the SPV's income; and,
- Taxability of income received by bondholders.

(iv) Regulatory and prudential

- The availability of specific guidelines to cater for securitisation;
- The establishment of a one-stop approving agency;
- The legislative constraints – confidentiality of individual's identity and information under the Banking and Financial Institutions Act;
- The quality and appropriateness of loans to be securitised; and,
- The lack of market awareness and knowledge.

7.4.3 Securitisation in the Current Financial Crisis

Securitisation has received great interest in the on-going financial crisis because it presents an alternative approach for banking institutions and corporations alike to raise funds to ease their tight liquidity position. Thus, work is being expedited to develop a securitisation framework to encourage greater securitisation activities. Notwithstanding this, an alternative and pre-emptive approach to address the impact of the crisis has been taken by the Government through the setting-up of an asset management company known as Pengurusan Danaharta Nasional Berhad (Danaharta).

Although the Malaysian banking system has remained resilient throughout the current economic and financial crisis, the rising non-performing loans (NPL) of the banking system will preoccupy the banking institutions with the business of managing their assets rather than on lending and strategic planning. This will, in turn, slow down

the economic recovery process. The Government, therefore, set up Danaharta to acquire the NPL of the banking institutions so that the banking institutions can then better focus on their lending business. Danaharta will subsequently maximise the value of the acquired assets by improving the overall stewardship of such assets.

Danaharta will operate based on international best commercial practices to ensure a high level of transparency and disclosure. All Danaharta's transactions will be carried out based on market terms and at an arm's length. All NPL acquired by Danaharta will be subject to all registered claims and interests disclosed to the company. Any undisclosed claims will remain the responsibility of the selling banking institutions. Subsequent to the acquisition of the NPL, asset management activities will include supporting and encouraging informal debt restructuring, managing businesses and assets through formal debt restructuring and finally asset disposal through a number of exit strategies such as management buyout, listing, securitisation and liquidation.

Danaharta is a limited liability company under the Companies Act but is given statutory backing by way of an Act of Parliament. This unique structure is imperative given the peculiar and wide functions of an asset management company encompassing the acquisition, managing, financing and sale of the NPL and other assets. The company is given two special powers to ensure the efficient performance of its tasks: (i) the ability to buy assets through statutory vesting which ensures the purchase of assets with the certainty of title; and (ii) the ability to appoint special administrators to manage the business of the distressed companies with features akin to those in Australia, the United Kingdom and Chapter 11 in the United States. Indeed, such special powers conferred to Danaharta are common to those given to all asset management companies around the world.

The ownership of Danaharta will initially be that of the Government. This is similar to the arrangement in most other countries essentially because the government usually initiates its establishment. In the case of Danaharta, the Government will provide the initial capital of RM250 million. However, the bulk of the funding will come from the private sector in both the domestic and international markets. The involvement of the private sector in the funding activities will ensure commercial discipline in the operations of

the company. Private participation will be sought after the company establishes a track record.

7.5 Conclusion

Securitisation in Malaysia or more specifically, mortgage-backed securitisation by Cagamas Berhad has come a long way since its humble beginnings in 1986. Prior to the emergence of Cagamas, there was virtually no issue of PDS while home ownership was more difficult arising from a shorter loan repayment period. Since then, Cagamas has kick started the development of the PDS market, with gross funds raised steadily increasing over the 10-year period from RM100 million to RM19.5 billion in 1997. Meanwhile, an increasing amount of loans has also been purchased by Cagamas over the same period of time, reflecting the greater awareness among banking institutions on the benefits of securitisation as well as an increasing demand for housing loans. While the achievements of Cagamas are well recognised, the potential for the further development of securitisation in Malaysia holds many promises especially in the area of non-mortgage backed securitisation. In fact, in the area of mortgage-backed securitisation, it may be timely now to move towards the process of securitisation without recourse.

As for the next phase of development, implications for monetary policy will be assessed and issues relating to accounting, legal and tax will have to be addressed in the efforts to expedite and facilitate greater securitisation. This coupled with the more expedient development in the overall bond market would likely lead to a change in the financial landscape of better risk sharing among a larger number of market participants, and the establishment of more efficient financial markets.

Chapter 8

SECURITISATION IN NEPAL

by
Lok Bahadur Khadka*

8.1 Development of Securitisation

8.1.1 Socio-economic Background

Economically, Nepal is the ninth smallest country in the world, with a per capita income of US$ 200 in 1995 (World Development Report 1997). The economy grew on average by 2.4 percent during the last decade from 1985-1995.The Nepalese economy is characterised by an agrarian structure. More than 80 percent of the population is employed in the agricultural sector which contributes 40 percent to GDP. More than nine-tenths of the national income is consumed while investment does not exceed one quarter of the gross national product. About 10 percent of the national income is saved and the difference has been met by foreign savings.

The population grew on an average of 2.1 percent annually during 1981-91. More than 90 percent of the population live in rural areas where agriculture is the main occupation for most of the people. About 60 percent (1991 census) of citizens are illiterate with the illiteracy rate more pronounced among the women.

8.2 General Financial Background

Though the financial system of Nepal has substantially expanded in recent years in terms of number and types of financial institutions as well as the magnitude of assets, it is still dominated by commercial banks in general. The two government-owned banks in particular, hold about two-thirds of the deposits and assets of the banking system. A considerable part of the population still does not have easy access to the financial system. Thus, a large part of the economy is still not under the monetary system and more than two-thirds of the total credit

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demand in rural areas is met by the informal sector. In addition, it is estimated that less than half of the gross domestic savings is in financial forms. Hence, a greater portion of the savings must be in the form of real assets.

Due to the underdeveloped state of the domestic capital market and traditional intermediary nature of their functions, banks and non-bank financial institutions have relied heavily upon deposits (deposits account for nearly 70 percent of total sources of fund).

Table 8.1
Nepal: Macroeconomic Indicators
(Fiscal Year ended Mid-July)

	1994/95	1995/96	1996/97
1. Real GDP (Growth in %)	3.45	5.68	4.40
2. Money Supply (M1) (Growth in %)	15.70	10.65	6.25
3. Inflation (CPI base 1983/84=100)	7.60	8.10	7.80
	As Percentage of GDP		
4. Gross Domestic Sacings	14.81	13.83	12.81
5. Total Investments	25.20	27.33	25.09
6. Total Government Expenditure	16.10	17.10	16.50
7. Total Revenue	10.70	10.80	10.50
8. Current Account Deficit	-5.38	-8.65	-5.88
9. Govt. Budgetary Deficit	-4.81	-5.55	-5.12
10. Total Debt Outstanding	66.80	66.40	61.30
	Of Which		
Domestic	15.30	15.00	14.20
External	51.50	51.40	47.10
External Debt Service	5.00	5.40	4.10

Source: Basic Socio-Economic Indicators, NRB, Nov. 1997,
Quarterly Economic Bulletin, July 1997, NRB.
Economic Survey 1997/1998, Ministry of Finance

Table 8.2
Financial Indicators*
(As at Mid-July 1997)

	As % of Total GDP	As % of Total Deposits	As % of Total Fund	As % of Total Assets
Total Deposits	29.1	-	80.7	-
Total Credit	24.5	84.3		68.0
Total Assets	36.0	-	-	68.0
Bank Capital	-	-		3.4#
Private Sector Credit	-	-	-	66.1
Liquid Assets	-	37.2	-	-
Time Deposit	-	81.7	66.0	-
Cash Reserve	-	15.7	-	-
Loans and Advances	-	85.8	-	69.2

* Commercial Banks only.
\# Excluding Other Reserves
Source: Quarterly Economic Bulletin, July 1997, Nepal Rastra Bank

The objectives of financial policy have changed since the mid-1980s, from the development of financial services to the development of a financial system which relies more on market forces and operate on a commercial basis. With the increased number and types of financial institutions and hence, relatively broadened financial market, the central bank's role has also been shifting from that of a controller to more of a regulator, promoter, monitor and an agent of stabilisation. The central bank's policy measures have focused more on the stability and soundness of the financial system.

By and large, Nepal Rastra Bank (NRB) has left it to market forces to determine the number and quality of banks and non-bank financial institutions required to sustain the economy as well as the financial system. NRB has provided the broad policy framework under which financial institutions have to operate and could be absorbed by the system in accordance with the optimum behaviour of market mechanism. In this regard, NRB has prescribed general and area specific capital requirements for the establishment of new banks.

Certain policies are put in place to ensure that Nepal's financial institutions fulfil some of their social obligations and at the same time, maintain their commercial existence in a competitive environment. In this context, commercial banks have to extend 40 percent of their outstanding credit to the productive sector, of which 12 percent must be lent to the priority (agriculture, cottage industry and small business) sector. In addition, they must lend up to 3 percent (variable between banks) of their outstanding credit to the deprived community. In failing to meet these selective credit management norms, they have to pay a penalty of the highest rate of interest they charge on their credit. This arrangement is in conformity with the social needs which the banks are supposed to fulfil in addition to their usual commercial and economic functions.

In order to encourage commercial banks to harness the potentialities that exist in rural areas, the central bank would only grant permission for a commercial bank to open a branch in the urban area after it has opened a rural branch. This policy is a result of the demand for credit in the rural economy.

8.4 Financial Reform

8.4.1 The First Phase

The history of deregulation and liberalisation of Nepal's financial system is short, as the first phase started only in early 1980's with the allowance of the private sector to establish commercial banks and the granting of limited freedom to commercial banks to fix interest rates on deposits. The financial system was further liberalised in May 1986 with the allowance of banks to offer higher rates on deposits than the minimum rates prescribed by the central bank. Finally, interest rates were fully deregulated in 1989.

With the amendment made to the Commercial Banking Act 1974 in 1983, banks were allowed to extend long-term credit to the industrial and agricultural sectors. The entry barrier was further relaxed to include other financial institutions with the enactment of the Company Act and the Finance Company Act in 1985.

Similarly, the amendment to the Provident Fund Act has expanded investment options by allowing freedom in the Provident Fund's invest-

ment portfolios to include assets over and above those on government securities and time deposits. The Security Exchange Centre which was established in 1977 to provide liquidity for financial instruments in the secondary market was converted into the Nepal Stock Exchange (NEPSE) in 1993 with the enactment of the Securities Exchange Act 1983. It has been operating its trading floor since 1994. The Finance Company Act 1985 paved the way for the establishment of finance companies in the country.

As the pace of financial liberalisation and deregulation in the financial market of developing and emerging economies has been accelerating, an increased degree of integration of financial markets called for further reforms in Nepal as well. In this context, the developments in the financial system which were reflected in terms of competitive environment, increased investment opportunities and instruments, private and foreign participation had to be consolidated through further reforms. In light of this, the second phase of financial sector reforms, aimed mainly at promoting competition and savings in the financial system and deepening of the financial market, shifting towards indirect monetary regulation, started in the latter part of 1980s mostly through the IMF's Structural Adjustment Programme (SAF). Enhancing the market's role in financial services, gradual deregulation of the interest rate regime, loosening of the credit ceiling and liquidity requirements, timely revision in reserve requirements and refinance rate facility and entrusting the market in the determination of interest rates were the main thrusts of liberalisation efforts of the second phase.

8.4.2 The Second Phase of Reforms

The second phase of financial liberalisation was started with the completion of interest rate deregulation in 1989, initiated since 1984. With the complete deregulation of the interest rate structure of the financial institutions, commercial banks and other term lending financial institutions are free to determine their borrowing (deposit) and lending rates. Similarly, the statutory liquidity requirement on commercial bank's deposit liabilities was also lifted so that they could optimise their investment portfolio and reduce the spread between deposit and lending rates. From 1989 onwards, the central bank withdrew the ceiling on credit. This heralds the start of an indirect stance of monetary management. The central bank has been, therefore, relying more on Open Market Operations (OMOs) and secondary market transactions of

government securities. In order to meet the short-term fund needs of the commercial banks, a Call Money Market was introduced in FY 1988/89 at the initiative of the central bank.

Commercial banks have been directed to increase their capital fund to total deposit liabilities. Similarly, they were asked to meet the capital adequacy norm as prescribed by the Basle Committee on Banking Supervision on the basis of their assets in risk and off-balance sheet liabilities. The single borrower limit has been revised and linked to the fund and non-fund based transactions of the commercial banks. Commercial banks have been allowed to open their branches on the basis of commercial viability in contrast to the earlier practice of mandatory opening and running of their branches according to central bank directives. Nepal Rastra Bank has also revised the policy with regard to the opening and closing of commercial bank branches. Banks are now free to close and merge loss–making branches with prior approval of the central bank. Nepal Rastra Bank will not compensate for the closure of loss-making bank branches. It would, however, continue to compensate those which were established on recommendation of the central bank.

As part of a package of measures towards indirect monetary management, Nepal Rastra Bank has restructured the earlier provision of automatic refinancing into three facilities - each would be made available taking into account the liquidity situation in the economy in general and the bank in particular. In September 1989, the earlier provision of the statutory reserve requirement of 9 percent to be maintained by commercial banks and depository institutions was revised upward to 12 percent. Of this, 8 percent must be maintained in the form of unremunerated deposits at the central bank and the rest of the 4 percent must be kept in their own vault in cash. Effective from 13 April 1998, Nepal Rastra Bank has revised the cash reserve requirements to 10 percent of which 7 percent (weighted average of the types of deposits) must be at the central bank and the remaining 3 percent in their own vault as cash.

As part of the rehabilitation programme recommended by the Commercial Bank Problem Analysis and Strategy Study (CBPASS), two of the largest government-owned banks were authorised to close loss-making branches. In addition, the differences between their subsidised and market interest rate for priority sector lending would be covered

by budgetary appropriation. A number of programmes in the area of bank management were initiated. A significant amount of non-performing outstanding loans issued against government guarantee, had been securitised through the issuance of government securities in favour of these banks. In accordance with the CBPASS Report and norms prescribed under the Basle Accord, Nepal Rastra Bank requested and authorised the two largest government-owned banks and one foreign joint venture bank to raise the authorised, issued and paid-up capital. To supply the necessary information on credit defaulters to member banks, a Credit Information Bureau was established in May 1989 under the initiative of Nepal Rastra Bank and the aegis of the Nepal Bankers' Association.

8.5 Structure and Regulation of the Financial System

The results of the reform and liberalisation measures undertaken in the two phases since the mid-1980s to early 1990s were seen in following years in terms of the development in the number of financial institutions, financial products, money and capital market as well as the improvement and deepening of the country's financial indicators.

As a central bank, Nepal Rastra Bank for more than two decades, had concentrated on efforts to promote institutional development in line with the 'Supply Leading Finance Doctrine' advocated by development economists. Under its direct investment and support, a number of financial institutions have come into existence in the financial system. As stated earlier, the bank's policy has shifted towards market driven private sector participation for more than one and half decades. Following this, the Bank has been relying more on indirect controls with the focus shifting to the soundness and stabilisation of the financial system. The oligopolistic nature of the financial sector calls for policies on free entry although this may induce unhealthy competition. On the other hand, restrictions on entry may worsen oligopolistic practices. Maintaining a balance between these two possible options and extremes has been a challenging job for the central bank.

The development of financial institutions in Nepal can be categorised into the pre-liberalisation era until 1983 and post-liberalisation period from 1984 onwards to mid-July 1997.

Table 8.3
Structure of Financial System

Financial Institutions	Until 1983*	As of Mid-July 1997	Remark
1. Commercial Banks	2	11	
2. Development Banks	2	2	
3. Regional Rural Development Banks	-	5	
4. Finance Companies	-	41	
5. Cooperative Societies (With limited banking authority)	-	17	
6. Non-governmental Organisation (With limited banking authority)	-	24	
7. Employee's Provident Fund	1	1	
8. Insurance Companies	3	13	
9. Securities Marketing Centre	1	1	Converted into SEC in 1984 & to Nepal Stock Exchange Ltd. in 1993.
10. Postal Savings Offices	75	75	District Level
11. Citizen Investment Trust	-	1	

* Preliberalisation

Source: Nepal Rastra Bank.

The financial sector has been one of the fastest growing sector of the Nepalese economy in recent years. It is composed of the banking, non-banking, and quasi-financial institutions. Commercial banks, development and rural development banks come under the banking system while the non-banking financial system comprising mainly the finance companies, depository institutions like insurance companies and provident fund, co-operative institutions, non-governmental organisation (NGOS), postal saving offices, and the Nepal Stock Exchange Ltd. The co-operatives and non-governmental organisations conduct limited banking activities. The Credit Guarantee Corporation (organised under the Insurance Board) and the Citizen Investment Trust are termed as quasi-financial institutions. The operation of the Credit Guarantee Corporation, established in 1974, is mainly confined to guaranteeing and compensating losses for commercial bank's lending to the priority sector. The Provident Fund which was established under the Employee's

Provident Fund Act 1962, solely covers the fund collected through the mandatory (10 percent) contribution by public sector employees and an equal contribution by the government. The Postal Saving System was introduced in 1977, aimed mainly at promoting the saving habit in rural areas where the small savers are and who are usually reluctant to approach the banks. The Citizen Investment Trust was established in 1991 to mobilise savings initially from the public sector employees' mandatory contribution of 5 percent, which later was made voluntary. It also got expanded access to sources of funds from any citizen wishing to save in it. Non-bank finance companies established under the Finance Company Act 1985, are authorised to collect savings and fixed deposits and lend to the sectors prescribed by the central bank. As models of the Grameen Bank philosophy of Bangladesh, the Rural Development Banks established under the Commercial Banking Act, with one each in the five development regions of the Kingdom, lend mainly to groups of poor women without any collateral and collect compulsory savings each week. These banks are also involved in social awareness activities in the rural areas.

The Agriculture Development Bank (ADB) and the Nepal Industrial Development Corporation (NIDC) were each established under separate Acts in 1959 and 1968 respectively. Of the 11 commercial banks, two are government-owned while the rest are joint ventures with the private sector.

Nepal Rastra Bank regulates the activities of commercial banks, development banks, finance companies, co-operatives and non-governmental organisations undertaking limited banking transactions. The insurance companies including the Credit Guarantee Corporation and the Stock Exchange Ltd. are governed by the Insurance Board and Securities Board respectively. The Employee's Provident Fund and Postal Saving Offices are directly administered by the government. The Citizen Investment Trust, which offers higher returns to investors is now instituted as a separate entity governed by a board of directors.

8.5.1 Securitisation in Nepal

Following the innovations in the financial and capital markets of USA since the 1970s, securitisation has become a popular banking activity throughout the developed and emerging markets of the world. However, the degree of success may vary according to the availability

of the necessary infrastructure including laws and regulation, tax, accounting systems and credit rating. Moreover, the status of the domestic capital market, state of financial system, degree of competition and deregulation, investment climate and culture are other factors equally accounting for the differences in success across the countries.

The term 'securitisation' is not a familiar concept in Nepalese banking and financial communities. However, some small steps have been made in terms of the issuance of bonds by the government against overdraft from the central bank. Similarly, the government had issued bonds to the two government-owned banks against their government guaranteed overdue loans to public enterprises. To date, three industrial corporations have issued debt securities backed by their fixed assets (plant machinery, building and land) to the retail investors (Table 8.1). However, the securitisation of assets like corporate loans, consumer loans, receivables and cash flows has not taken place.

8.5.2 Features of the Securities Issued

Securities issued by the government against government guaranteed overdue debt of public enterprises were transferable and renewable. Thus, the Nepal Bank Limited sold (renewable with 1 year maturity) securities worth Rs 1473.5 million issued to it by the government, to the Provident Fund Corporation in fiscal year 1994/95. Asset backed debt instruments (debentures) issued by the three industrial corporations were redeemable on maturity but could not be traded in the secondary market due to the lack of registration in the Nepal Stock Exchange Ltd. Some of the issues against overdrafts to government by the central bank have longer maturities with comparatively lower interest rates and hence all of them have been held until maturity by the Bank itself.

8.6 Prospects for Securitisation

8.6.1 Assessment of Precondition for the Development of Securitisation

(i) Laws and Regulation

Although the necessary provisions and reforms made in the laws and regulations concerning the financial system are in line with the

evolving requirements stemming from the policy of liberalisation and deregulation, laws governing securitisation are lacking in Nepal. In the course of liberalisation and deregulation of policies, regulations concerning new financial transactions and instruments have been incorporated in related laws taking into consideration the stability and soundness of the financial system.

There is no separate or special for act the transfer or sale of assets or security pledged. The Civil Code of Conduct, which applies to institutions only in the absence of special acts governing the respective institution, makes reference to the transfer of security pledged, not exceeding the amount lent. The debtor can recover his/her property transferred, on payment of principal and interest of debt taken.

Commercial banks, development banks and finance companies are governed by their respective Acts and come under regulatory framework of the central bank. There are separate acts governing the Agriculture Development Bank and the Industrial Development Corporation, which are also regulated by the central bank. The Provident Fund, insurance companies, Stock Exchange, Citizen Investment Trust operate under the guidelines of their respective boards and are governed by separate acts. Banks, non-bank finance companies, co-operatives and non-government organisation with limited banking business are registered in the Company Registrar's Office under the licence of the central bank. Companies other than finance companies, come under the regulative purview of the central bank in matters of interest rate and instruments while raising fund from the capital market.

The lack of clear, well defined procedures and guidelines as well as the absence of specific laws has been an impediment to the development of securitisation in Nepal. Similarly, the absence of trust laws has also been an obstacle. The respective acts and regulations of each individual institutions has to be gleaned through for the protection of the investors in case of liquidation and off-balance sheet activities.

According to the Commercial Banking Act, 1974, commercial banks could establish subsidiary companies (on central bank's approval) for the improvement of banking business and industrial development, or to manage trusts or assets in the form of trusts. Accordingly, the banks are allowed by the Act to adopt appropriate measures for the proper

management of their assets including the sale or leasing of their assets. However, the Act makes no mention of the transfer or sale of loan assets while borrowers are abiding to the loan agreement. Similarly, the Act allows commercial banks to transact in off-balance sheet activities on approval by the central bank up to a ceiling of 50 percent of the total capital of the bank. However, the banks have to maintain at least 8 percent capital fund and make provisions for contingent liability on the basis of weighted risk and magnitude of their off-balance sheet activities. Off-balance sheet transactions come under the definition of non-fund based activities.

Banks have to maintain a reserve fund within the range of 20 to 100 percent of their contingent liability in accordance with the guidelines prescribed by the central bank. The Commercial Bank Act allows banks to extend credit on individual or collective guarantee up to an amount determined by the central bank. Banks can extend credit, taking appropriate movable property as collateral in their possession and rights. However, they cannot guarantee or lend to a company or individual exceeding their capital funds. In addition, the Act also allows commercial banks to guarantee and underwrite primary issues of shares and debentures of any organised institution. Servicing is also a function the banks could initiate.

There is no provision in the Commercial Banking Act to transfer or sell loan assets or collateralised security prior to the termination of the loan agreement. The Act allows banks to demand extra assets as collateral if the borrower forgoes his/her rights over the security and if the price of the pledged security depreciates. If banks cannot have extra collateral, they can recover their principal and interest of loan by auctioning the security pledged or any other measures deemed necessary. If the principal and interest of the bank cannot be recovered with the auction of security pledged, banks can recover their due amount by auctioning other properties of the borrower, if available. If borrowers do not keep to the agreement, banks generally notify borrowers to repay the loan. After the expiry of tenure of notice (generally 35 days), banks can start the process of the auctioning of the property pledged without the approval or presence of court or court officials or the borrowers. The rights on property could be transferred to and registered by the agreed party after auction. If there are no takers, the ownership of the property is fully transferred to the banks which must dispose of the property within seven years. Borrowers

could retain their property by paying their dues with the banks, up to even the last moment of auction.

On liquidation of banks, the Act puts the interest of depositors and other lenders first rather than the investors'. The investors' claims would only be met after meeting expenses on liquidation, workers' and employees' wages and remuneration, liabilities to depositors, and claims of Nepal Rastra Bank.

The Act allows for the exchange of credit information between banks and other financial institutions on condition that confidentiality be kept between the said institutions. This information pertains to bank-clients relation, the position of bank account, asset quality and performance of borrowers' repayment schedule.

The Finance Company Act governs the operation of non-bank finance companies. Nepal Rastra Bank prescribes guidelines on issues that fall within its legal domain. The Bank's regulation allows finance companies to conduct mortgage finance, leasing finance and to lease movable assets. The Act prevents the finance companies, unlike commercial banks, from extending credit only on the guarantee of directors or the chief executive, or without taking any collateral against loans. According to the central bank directives, such companies can borrow up to 80 percent of their performing loans pledged in the commercial banks. Similarly, registered finance companies are allowed to raise funds, in the form of deposits (other than demand deposits), issue of debentures and other debt instruments through the capital market up to a maximum of 10 times of their total capital. They also can underwrite the debt securities issued by other institutions. They cannot, however, like the commercial banks establish subsidiary companies or trusts. The finance companies are also not allowed to lend more than 50 percent of their total advances to one sector or sub-sector. The Act puts the interest of shareholders of the companies first in that should there be a liquidation, the liability to the share holders other than deposit liabilities of the company will be met first.

Companies, other than finance companies registered in the Company Registrar's Office, are also allowed to raise capital through the issuance of debt instruments in the capital market. The amount of issued securities backed by fixed asset should not exceed the value of the asset backed while in the case of non-asset backed bonds, the

amount issued should not be more than 50 percent of company's capital. The underlying asset should be registered against the securities issued, which is not allowed to be sold before the redemption of the issued securities. However, companies have to clearly state the reason, programme and budget for the exercise and they will have to notify the Company Registrar's Office. The Company could appoint or establish a trustee for raising debt or debenture. The Act has no provision for raising debt against movable assets or any other assets other than fixed assets.

From the investment side, insurance companies, mutual funds, the Citizen Investment Trust, finance companies and the Employees Provident Fund are the institutional investors in the financial system in Nepal. Apart from these institutions, private and government commercial institutions, government non-profit organisations, non-profit organisations in the private sector are also included in the organised investment community.

There is no specific law governing the investment decisions of financial institutions as well as individual investors. For the financial institutions under the regulative purview of Nepal Rastra Bank, certain guidelines have been prescribed for investments. The bank has fixed the investment limit for financial institutions at 50 percent of their capital in debentures of all organised institutions, but not more than 10 percent of debt instruments of an organised institution. Outside the central bank regulation, governing Acts as well as the board of each institution prescribe guidelines for the investment portfolio of each individual entity keeping in mind the basic investment principles of security, liquidity, and yield. Further, the institutions regularly revise their investment guidelines in line with the interest rate structure, liquidity position, and situation in the capital market.

In this context, the Employees Provident Fund Act has allowed the fund to invest up to 25 percent of total investment in debentures issued by a registered company or organised institution. Similarly, as per the investment guidelines prescribed for the NCM First Mutual Fund 1993, the fund can invest up to 90 percent in shares, debentures and bonds. The remaining 10 percent of the fund should be allocated for short-term investment. The fund should not invest more than 10 percent in a company. Total investment in equity, debentures and other instru-

ments should not exceed 25 percent of total assets of the issuing company.

Likewise, as stated in the Citizen Unit Trust Scheme 1995, initiated by the Citizen Investment Trust, the unit capital fund would be invested in securities of an organised institution up to 15 percent of the total capital of the issuing company or not more than 10 percent of total unit capital, whichever is lower. However, the regulation of the Scheme grants leeway for investment of the required amount in government bonds, money market instruments recognised by the central bank or secured debt instrument or debentures of organised institutions. Foreign investors are allowed to invest in the capital market up to 25 percent of the issued capital or 40 percent of total capital of the issuing institution. However, they are not allowed to invest in money market instruments. Despite the above provisions made in the Acts and investment policy, the largest institutional investors like the Employee Provident Fund (EPF) continued to invest in fixed deposits of commercial banks and government bonds. As at mid-July 1997, the EPF invested 56.5 percent and 27.3 percent of the total financial resources at its disposal in fixed deposits of commercial banks and government bonds, respectively. Similarly, the second largest institutional investor (a group of 13 insurance companies) also invested most of their funds in fixed deposits and government bonds during the same period.

(ii) Accounting Treatment

Despite provisions made in the Commercial Bank Act for the establishment of subsidiary companies to manage trusts or assets in the forms of trust, the Act and central bank guidelines do not provide for the accounting treatment of the trust and assets in the originator's balance sheet. Though the Act allows commercial banks to manage assets, sell or lease them besides auctioning mortgages or collateral on breaching of agreement, the measures have not been invoked due to the lack of clear guidelines.

Furthermore, the banks are allowed by the Act to perform off-balance sheet activities on prior approval and the limit is fixed by the central bank. Commercial banks can conduct non-fund based activities like letters of credit, guaranteeing, banks' acceptance, commitments and others up to 50 percent of the total capital of the bank. Such activities are to be treated as off-balance sheet activities with contingent liability

of which the reserve fund to be maintained range between 20 to 100 percent commensurating with the degree of risk associated. Nepal Rastra Bank has given clear directives to commercial banks with respect to the provision for loan losses of their assets at risk. Further, they cannot treat unearned interest of three months as interest income in their portfolio. This should be included under the interest suspense account.

(iii) Taxation on Financial Assets

Financial assets in Nepal comprise mainly of savings in the form of deposits with saving institutions, banks and finance companies. A small part of the savings are in the forms of saving certificates, certificates of deposits, bonds and shares. A considerable proportion of savings are kept in non-financial forms. Owing to the lack of banking access, currency continues to be the main (about 70 percent) medium of payment. In addition, due to the low level of savings of the people and the underdeveloped state of the domestic capital market, the demand for investment instruments has not been high enough to develop the financial assets base in the country.

Though liberal, the tax system in Nepal is so narrow that it applies only to limited activities and a small population. To promote savings in the form of financial assets and thus encourage the development of the capital market, the government has either levied nominal taxes or exempted income of financial savings from tax.

Capital gains are taxed indirectly as transfer tax at the time of ownership transfer of the physical capital in the form of registration fee levied on the basis of value determined by the tax official. The registration of the transfer of securities in the form of mortgages and collateral is necessary in the case of loan provisions to industry, business, and consumer sector by the commercial, development banks and finance companies. However, no registration fee is charged for the transfer of collateral in the banking and financial sector. Similarly, stamp or documentation duties are also exempted in the registration of the transfer of ownership of asset in banking business.

Value added tax is levied at the rate of 10 percent on taxable goods and services with an annual turnover of more than Rs 2.0 million. The above rate is applicable only to tax payers registered in

the value added tax office. Non-registered tax payers are to pay a rate of 20 percent. Thus, financial and insurance services at present are largely exempted from the value added tax. Similarly, the banking and insurance services have been exempted from sales tax which is to be replaced by the value added tax as of the effective date of application.

Banks, finance companies and other financial institutions have to pay income tax on aggregate at a rate of 30 percent of their net income. In the course of determining the net income, reserve funds and amounts kept aside from net profit are not deductible. The amount provisioned for loan losses equal to 3 percent of loans to be realised and amount kept in interest suspense account are deductible from taxable income. Corporate companies other than financial companies have to pay income tax on their net income at a rate of 25 percent. Tax on interest income is to be deducted at source as withholding tax at a rate of 5 percent. Interest payable on bank deposits are taxed at a rate of 5 percent. Similarly, interest payable on taxable government and NRB bond, and other interest income are taxable at source at a rate of 5 percent. However, interest income from other debt instruments, certificates of deposits and promissory notes, bonus and dividends from shares are not taxable. Income from commissions including commissions from the brokering of securities is taxable at 10 percent. Payments on all other income are subject to a withholding tax of 10 percent. However, net income from a trust or the trust itself is exempted from income tax.

Foreign companies which are affiliated to the parent companies abroad receive the same treatment as domestic companies with regard to their net income for tax purposes. Unlike nationals, however, foreign nationals are not entitled to exemptions on their income and thus have to pay 20 percent additional tax (surcharge). Nevertheless, the Income Tax Act provides some room for flexibility in the tax treatment so that double taxation on the same income of the same company or individuals could be avoided.

Insurance premiums, bonuses and received insured amounts are not taxable. Similarly, savings at the Employees Provident Fund and their interest, savings in the Citizen Investment Trust or investment in unit trusts and mutual funds are also exempted from tax.

(iv) Credit Rating System

Credit rating is an essential part of securitisation and of capital market activities in developed and even in emerging financial markets. Nepal is still lagging in this particular area. The underdeveloped state of the securities and capital market can be attributed to the lack of basic financial infrastructure like a credit rating system which the government has started laying the groundwork for. In its 1997/98 Budget, the government initiated preliminary work for the legal and other infrastructural arrangements for the development of the financial market.

Unlike in developed and emerging financial markets, there are no legal provisions for credit rating in Nepal. The Securities Act, which governs the activities of the capital market, has not made securities rating a requirement for the primary issuance and secondary trading of securities. However, the Securities Board and Nepal Rastra Bank have separately prescribed certain directives to be followed by the issuer for the protection of the investors. Legally, prior approval from the Securities Board and registration in the Board is necessary before the issuance of securities. Similarly, securities issued by entities other than the government and Nepal Rastra Bank, must be listed in the stock exchange for secondary trading. The Stock Exchange lists securities only after scrutinising the number of investors, issued amount, mode of transfer and the financial position of the issuing entity. In line with central bank directives, institutions including financial institutions (other than Nepal Rastra Bank) can issue asset backed securities to the extent of the value of asset, while in the case of non-secured securities, the amount issued must not exceed 50 percent of the total capital of the issuing institution. Nepal Rastra Bank's approval is needed for the interest rate offered, which is generally maintained at a rate that is above the 2 years time deposits at the commercial banks.

In the absence of a credit rating system, investors themselves, whether institutional or individuals, have to measure and bear the credit risk inherent in securities issued by the private sector. This is a problem as investors may not have the analytical knowledge about the risks involved and they have limited access to information pertaining to the financial system and the issuing agency. Moreover, the lack of credit enhancement of securities, insurance, guarantee as well as the inherent higher corporate risks in the absence of transparency in

operations have induced investors in Nepal to invest in safer, lower yielding securities such as government securities. This can be seen in a recent case of an under-subscription of the debt (convertible) securities issued by an industrial corporation. Thus, institutional as well as individual investors primarily prefer government securities, which have lower credit risk and higher liquidity. Otherwise, they invest their savings in even lower yielding fixed deposits rather than investing in higher yielding, less liquid (due to the non-transferable nature and fixed maturity) debt securities of the private sector.

The absence of a credit rating system in the country has resulted in higher interest costs to the industrial sector as well as the commercial corporation, which ultimately result in an economy run at a higher cost. There is, therefore, the need to develop securitisation and before this can be done, the necessary infrastructure such as the development of the securities and capital market and a credit rating system must be in place.

(v) Interest Rate Structure

As stated earlier, interest rates of the banks and non-bank financial institutions have been completely deregulated since 1989. Commercial banks and other financial institutions are free to fix their deposits and lending rates. However, the objectives of freeing interest rates have not been fully met due to oligopolistic nature of the banking system. Oligopoly among the banks has result in cartelling and in a wider interest spread (Table 8.2). Nepal Rastra Bank has attempted to trim the spread to 6 percent through moral suasion.

The Refinance Rate, which is also known as the Bank Rate is an indirect instrument for credit control. Its revision has an impact on the liquidity situation and hence internal and external stability of the economy. It was revised upward to 13 percent in 1986 in light of the vulnerable external stability. This was lowered to 11 percent in mid-1993 and further to 9 percent in early 1998. The rediscount rate of the central bank has been fixed at 3 percent above the rate determined in the latest auction of treasury bills.

As the central bank has abolished the tradition of interest subsidies on selected credit extended by the commercial banks, a relatively lower interest is being charged on credit to the deprived sector. In the case

of the priority sector, credit can be extended up to the following ceilings: (i) Rs. 2.0 million to agriculture and service, (ii) Rs. 2.5 million to cottage industry and (iii) Rs. 5.0 million to export oriented industries. The government provides subsidies on interests charged on credit extended by the Agriculture Development Bank to certain priority activities such as Bio-gas, cardamom farming, etc.

After the introduction of an auction system to sell treasury bills in November 1988, the interest on short-term government papers is set by the liquidity position in the financial system. Nepal Rastra Bank has issued its own bonds through the auction system since 1991 to mop up excess liquidity from the economy. Even though interest rates of the financial system has been fully deregulated, there is still an interest cap on corporate debt instruments which is generally fixed by the central bank at a rate above the fixed deposits rate of the commercial banks.

(vi) Financial Products/Instruments

Financial instruments in Nepal do not have a very long history. It started with the issuance of the shares of Biratnagar Jute Mills and Nepal Bank Limited (first commercial bank in Nepal) 61 years ago. With the issuance of the government bond in 1964, an avenue for government securities was opened. Since then, the government has been issuing various types of securities with varying maturity and interest rates. In 1966, the Land Reform Saving Bond was issued with the aim of mobilising savings from the farm sector. Likewise, the issuance of debentures by ADB/N and NIDC was a step forward in the development of financial products.

Till the beginning of the first phase of financial liberalisation in mid-1980s, deposits and travellers cheques, to a limited extent, were the main financial instruments available in the banking system. Insurance policies and pension funds were other financial products outside the banking system.

With the implementation of financial liberalisation, the financial system has expanded considerably with the introduction of new financial instruments such as unit trusts, mutual funds, negotiable certificates of deposits (CD and NCD), and credit cards. NRB Bonds were also a money market instrument available to financial institutions. The

auction of treasury bills, Open Primary and Secondary Market Operation of government securities, bonds and stocks, shares and equities have enhanced the gamut of financial products available to the financial system as well as to the savers.

(vii) Money Market

The money market in Nepal is very shallow with very few instruments. Its activities are mostly concentrated in the issuance and trading of treasury bills. The money market instruments which have been issued and available currently are the refinance and discount facility, treasury bills, negotiable and bearer's certificates of deposits, unit trusts, mutual funds, and NRB bonds.

The central bank has no provisions for making available the overnight or intra-day unsecured funds to financial institutions. It only has the refinancing facility which is classified into three windows - selective, rediscounting and lender of the last resort windows. The selective rate is based on the basic rate (which has been 9 percent since early 1998) and is applicable to export, pre-export and priority sector credit of the commercial banks. The rediscount facility is made available at a rate which is 3 percent higher than the latest auction rate, against the discount of treasury bills with a maturity of 45 days or less. The lender of the last resort rate has been pegged to the highest lending rates of the commercial banks to encourage banks to rely more on the interbank or call money market for their short-term credit needs. However, in spite of the central bank's efforts and encouragement, development in the call money or interbank money market has not been as envisaged.

With the enactment of the Public Debt Act in 1961, treasury bills were first issued in 1964. Until late 1988, the amount as well as the interest rate on treasury bills were dictated by the government. The introduction of the treasury bill auction system in late 1988 has seen the rapid development of treasury bills and they have become the most popular money market instrument to banks and other financial institutions for balancing their portfolio mismatches. About two thirds of the bills issued are held by the commercial banks. The secondary market for treasury bills has also been introduced and is managed by the central bank itself.

Nepal Rastra Bank started issuing its own bonds as an instrument of monetary policy from end-1991. By July 1994, NRB bonds worth Rs 5338 million were issued through the open market operation mechanism.

A recent development in the financial system is the issuance of negotiable or bearer's certificates, in limited amounts, by a few commercial and development banks (NIDC). Under the management of the NIDC capital market and the Nepal Arab Bank as a custodian and banker, a mutual fund scheme was started in 1993. This Fund known as the "NCM First Mututal Fund 2050" had a face value fixed at Rs 10.00 per unit. A total of 5250 thousand units were sold amounting to Rs 52.5 million with an open-ended term. In the long-term, a 19 percent return was committed to the investors. The funds raised from this issuance was channelled into corporate shares. In the wake of the stock price crash, investors begun selling their units which ultimately resulted in the failure of the scheme. To revive the scheme, Nepal Rastra Bank and NIDC have injected Rs 45.0 million and Rs 15.0 million into the Scheme respectively.

Similarly, a Citizen Unit Trust Scheme was started in 1995 with an open-ended term and a commitment of 11 percent interest to investors. Nearly Rs 7.5 million was raised from this Scheme.

(viii) Status of the Capital Market

Capital market activities were not institutionalised in Nepal before the establishment of the Securities Marketing Centre in 1976. Capital market activities were limited to the primary issuance of shares. The secondary trading of the stock had to take place over the counters of respective institutions. The Security Marketing Centre which was confined mostly to the marketing of government bonds was converted into the Security Exchange Centre in 1984. The Centre's mandate since then, has expanded to managing public issue, brokering, underwriting, and secondary trading of corporate shares. In an attempt to reform the capital market, the government enacted the Stock Exchange Act in 1983 which transformed the Centre into the Nepal Stock Exchange in 1993 which opened its trading floor in early 1994 to its licensed members and market makers. It has also licensed dealers for the primary and secondary markets for bonds and stocks.

According to the Act, shares and securities have to be listed in the Stock Exchange for secondary trading on the floor. As of mid-July 1997, altogether 95 companies have listed their 99 shares including preference and bonus shares which have a market capitalisation and paid-up value of Rs. 12698.0 and Rs. 4476.5 million respectively. During fiscal year 1996/97, turnover amount of shares accounted for 9.2 and 3.3 percent of the paid-up and market capitalisation value respectively. Commercial banks have the largest transactions in shares as a percentage of total trading (55.5 percent) followed by the manufacturing and processing industries (29.6 percent) in fiscal year 1996/97.

The Nepal Stock Exchange has an 'open cry-out' system of transactions. Contracts between brokers and market makers conclude after matching bid and offer price on their own board before starting on the floor. The Stock Exchange rules that the opening price of any day should not be more or less than 10 percent of the closing price of previous day. However, prices in each consecutive transaction can be changed within a limit of 5 percent. The settlement of transactions should be carried out within 5 working days (T+5 system) on the basis of cash or other modes of payment.

The Nepal Stock Exchange has appointed members to act as intermediaries in the buying and selling of government bonds and listed corporate securities. The centre has also issued licenses to primary dealers for managing issuance and underwriting while secondary dealers operate as portfolio managers. Trading on the stock exchange floor is restricted to listed corporate securities and government bonds. The centre charges a minimum fee for listing based on the capital of the listed company.

(ix) Debt Security Market

In order to mobilise savings from the agricultural sector and divert it to the industrial sector, the first debt instrument of the government, the Land Reform Saving Bond, was issued in 1966. Since then, the government has issued other bonds such as saving certificates, Development Bonds, and Special Bonds. To mobilise idle savings of non-banking institutions and individuals, the government since fiscal year 1983/84, has been issuing National Saving Certificates of varying maturity with interests payable every six months.

Table 8.4
Capital Market Indicators
(As of Fiscal Year 1996/97 ending Mid-July 1997)

	Amount Rs Million	As % of Total	No.
Turnover	412.3	100	-
Commercial Banks	228.9	55.5	-
Manufacturing & Processing	121.9	29.6	-
Insurance & Finance	29.4	7.1	-
Trading	24.9	6.1	-
Average Daily Turnover	1.7	-	-
Number of Listed Company	-	-	95
Number of Scripts Listed	-	-	99
Paid-up Value of Listed Shares	4476.5	-	-
Market Capitalisation of Listed Shares	12698.0	-	-
% of Turnover to Paid-up Value	-	9.2	-
% of Turnover to Market Capitalisation	-	3.3	-
Nepse Index (Feb.12,1994=100)	-	-	176.31

Source: Trading Report, Vol.3, Nepal Stock Exchange Ltd.

Special Bonds were issued to increase the capital of government owned banks at the interest rate of 14 percent. The outstanding domestic debt of the government at the end of fiscal year 1996/97 amounted to Rs. 35890.8 million which accounts for 12.85 percent of GDP of that year. The maturity of these securities, excluding special bonds, ranges from 5 to 25 years. The interest rates of saving certificates range between 9 to 15.5 percent. The interest rate of development bonds is fixed at 3 to 12 percent while the maturity of special bonds was fixed at one year. The primary issuance of medium- and long-term bonds is carried out through open market operations since 1988/89. In terms of the ownership pattern of government securities, Nepal Rastra Bank and commercial banks holds 50 and 34 percent respectively of the outstanding development bonds as at mid-July 1997 while about 30 and 23 percent of national saving certificates are held by individuals and

financial institutions. More than two thirds of special bonds are owned by the central bank.

Secondary marketing of the government's medium- and long-term securities are by the market makers appointed by the central bank which include mostly finance companies and investment trusts.

Apart from government debt securities, the Agriculture Development Bank and NIDC have issued saving bonds and debentures (on the prior approval and interest rate cap of the central bank). Nepal Rastra Bank has also allowed four other private sector industrial corporations to issue debentures at an approved interest rate of 14 percent which is higher than the 2 year's fixed deposit rates. Among them, three industrial corporations have issued asset backed debt instruments. Due to the lack of a credit rating system and underwriting capability, the secondary market for debt instruments is generally non-existent.

8.7 Feasibility of Developing Securitisation

Though the process of true securitisation of assets is unfamiliar in Nepal, some basic framework for the introduction of the process have been evolving gradually. After the introduction of liberalisation policies in the mid-1980s, the base of the financial system has broadened considerably with increased participation of the private sector. With the opening of the financial system for foreign investments, a competitive environment has been fostered in the financial market together with an increased access to global financial technologies. Liberalisation efforts and indirect policy measures of the central bank has generated additional impetus for the banks and financial institution to be more innovative and competitive.

Securitisation offers an attractive alternative to banks and non-banks alike. With increased competition for deposits from a limited market, banks and other non-bank financial companies are hard pressed to look for alternative sources of fund. Moreover, non-bank financial companies have not been able to gain the confidence of savers and are eager to search for other reliable sources of finance. Deposit insurance, which is under consideration, will add extra costs as premium on deposit funding. Furthermore, the asset/

liability (balance sheet) mismatches arising from the short-term nature of deposit and generally medium- and long-term maturity of assets have been putting pressure on banks and non-bank financial institutions to manage their portfolio prudently. In addition, the magnitude of non-performing assets (NPA) is estimated to be quite considerable so that the capital to be set aside in non-interest bearing form as reserve funds is also large. The regulatory capital requirement on deposit liability as cash and statutory reserve in non-yielding state is another factor to look into securitisation as an alternative source of funds.

Fully deregulated interest rates, which is one of the preconditions for securitisation, has only been in place since 1989. To monitor for possible distortions and imperfections, commercial banks have been directed to clearly state the interests on deposits for maturities of one year and below. Deposits which are more than one year are fixed on negotiation with depositors. However, the difference in rates between depositors should not be more than one percent. Similarly, interest rate differentials on loans between borrowers should not be more than one percent. Furthermore, banks are not allowed to fix interest rates by cartel. Due to the high administration cost and risks, the interest spread of commercial banks in Nepal is generally higher and the banks are persuaded to reduce the interest spread to less than 6 percent.

The yield on treasury bills (with maturity of 91, 180 and 364 days) is determined by the market since the introduction of the auction system in late 1988. Banks and financial institutions are the main determinants of the treasury bill rate which has also become one of the indicators of liquidity position of the economy. Returns offered in debt securities issued by the private sector are above the time deposits rate of commercial banks. As the banks and other financial institutions are not allowed to raise funds externally, they have to rely solely on the domestic market for funds, which induces them to search for other (than deposits) sources of fund.

The traditional nature of the banking system has resulted in the concentration of risks of banking assets to a few sectors or sub-sectors. Accordingly, the banks and finance companies are in search of measures which would be helpful in diversifying their various risks.

From the legal point of view, some provisions, though not adequate, have been made in the respective Acts and regulations of commercial banks, finance companies and other companies to raise debt through the issuance of securities backed by fixed assets. Investors' interests are protected from liquidation of the issuer with the prevention of the sale of the underlying assets. The Acts have provided for the ownership, selling or transferring rights on collaterised assets to the lender if the borrower does not keep to the agreement or default in the payment of the principal and interests. The central bank's regulations allow commercial banks to conduct off-balance sheet activities up to 50 percent of their capital. In accounting, the liabilities on such activities are to be treated as non-fund based contingent liabilities and reserve funds have to be set aside to hedge the associated risks. Though registration has to be made in the transfer or sale of collateralised assets, no registration and stamp duty is levied for banking transactions. Banking services are also exempted from value added tax as are dividends and interest income from securities issued by the private sector.

Apart from the above base for securitisation, the introduction of computer technology has been an added infrastructure built in the banking system. Access to information on credit worthiness and performance of debtors is available, though confidential, to financial institutions. The establishment of the Credit Information Bureau has been an additional advantage. The financial infrastructure has improved with the appointment of market makers, dealers and brokers. The strong commitment and support of the government and the central bank to the broad based development of the domestic capital market, irrespective of political change, could be considered as a guarantee to the stability of policy.

However, the lack of relevant legal provisions and regulations is still been a major obstacle to securitisation in Nepal. There are no specific rules and regulations pertaining to the transfer or sale of assets and liabilities of the financial as well as non-financial system. The existing laws and regulations do not define processes and procedures of selling (transferring) loans and receivables and are inadequate to protect the rights of the investors in the face of bankruptcy or liquidation of issuer. The present laws and regulations applicable to banks and finance companies do not provide full authority to lenders for selling or transferring assets pledged or collateralised prior to the breach-

ing of agreements by the borrowers. Even if the borrowers breach the contracts, the lenders could auction or accept the pledged asset only after prior notice to the borrowers. Moreover, there are still many regulations which would render securitisation difficult. For example, commercial banks are required to obtain prior approval from the central bank to perform off-balance sheet transactions. Central bank regulations on interest rate still exists for the issuance of debt securities. In addition, foreign investors are not allowed to invest in government bonds and corporate securities. Commercial and development banks can lend up to a certain limit to the deprived sector without any collateral, depending only on the collective guarantee of the borrowers. The absence of credit rating services has been an infrastructural hurdle in the development of bonds, securities and the capital market as well. Consumer credit such as credit cards, auto loans and home mortgages, which are acceptable forms of finance, are not widespread in the banking system. Due to the relatively undeveloped domestic capital market, the secondary market for securities issued by the private sector is almost non-existent.

In the recent past, the commercial banks have excess liquidity due to the lower credit demand as a result of a slowing down of the economy. Banks have generally invested their funds in lower yielding government treasury bills rather than investing in risky but higher yielding ventures. In addition, banks are reluctant to invest in new instruments and generally avoid committing their resources in new financial innovations.

The demand for credit, which generally used to be one of the motives for the banks and financial institutions to generate loanable funds, has been low, due at least in part to the slowdown in economic growth which has resulted ultimately in the vicious circle of low per capita income, savings and investments. Due to the low savings of the population, the base of the investors has been confined mostly to the institutional investors which are bound by the investment guidelines of respective boards and the central bank. Thus, the market demand for the securities is so small that the debt securities issued by institutions other than the government have mostly been undersubscribed.

Less than half of the gross domestic saving in Nepal (estimated at not more than 10 percent of GDP) are in financial form. Most of

the savings are kept mostly in the form of cash (as currency comprise of 70 percent of total money supply), or real assets. Thus, the existing investment culture is an obstacle to securities market development. However, with the development and expansion of financial market access, this may see a gradual change.

8.7.1 Securitisable Assets

Although the financial system of Nepal has expanded considerably in terms of size of assets, it still lags far behind those of the developed and emerging financial markets. With the private and foreign participation in financial systems as a result of liberal and deregulated policies, the product lines of the commercial banks and other non-bank financial institutions have increased considerably. Modern banking services like underwriting, brokering, factoring, merchant banking and offshore services have been undertaken by the banking and non-banking sectors. Credit cards have also been one of the new banking service provided (though not in common use) by a few joint venture banks.

Although true securitisation has not occurred in Nepal, various forms close to it have taken place. For example, the securitisation of overdraft credit to the government by the central bank, overdue debt of commercial banks to the public enterprises and fixed assets of the corporations. Though the securitisation of loans, leases, receivables, and cash flows has not been undertaken in Nepal, the types of securitisable assets available in the banking and non-banking system could be listed as follows:

Personal loans	Home mortgages
Consumer loans	Commercial mortgages
Auto loans	Export receivables
Credit card receivables	Insurance premium receivables
Hire purchase loans	Residential mortgages
Corporate loans	Real estate loans

8.8 Conclusion

As a popular and widely used financial technology in the developed financial markets, securitisation in its true sense is still a very new concept in Nepal. Though the foundation for the process has

gradually evolved to some extent with increased banking competition and deregulation, there are still many obstacles to true securitisation. The lack of specific and clear laws and regulations is one of the main obstacles to the introduction of the mechanism. The lack of a credit rating system and the rudimentary state of the domestic capital market are additional infrastructural impediments. Further, the demand for credit and financial instruments has not been encouraging over the years in Nepal. Hence, the investor base is small and the investment climate is not so conducive for the introduction of new financial instruments.

Benefits to be gained from securitisation for the originators, issuers, investors and capital market are certainly promising. However, the inherent risks to different institutions involved in this process should be assessed in advance, taking into account the state of the capital market and the possible impact on the stability of the monetary and financial system. The right investment climate, culture and a large investor base has yet to evolve in Nepal. Nevertheless, it is hoped that the financial system would develop in the years to come to be able to support financial innovations including securitisation.

Securitisation in Nepal

Fiscal Year	Issuer	Issued To	Type of Securities	Assets Securitised	Amount (Rs. Mil)	Maturity	Interest (Percent PA)
1989/90	Government	Nepal Bank Ltd.	Development Bond	Overdue Loans to PES	200.0	10 Yrs	8.00
1989/90	Government	Rastriya Banijya Bank	Development Bond	Overdue Loans to PES	200.0	10 Yrs	8.00
1990/91	Government	Rastriya Banijya Bank	Special Bond	Overdue Loans to PES	1519.7	1 Yr	14.00
1990/91	Government	Nepal Bank Ltd.	Special Bond	Overdue Loans to PES	1509.4	1 Yr	14.00
1991/92	Government	Nepal Bank Ltd.	Special Bond	Overdue Loans to PES	29.5	1 Yr	14.00
1991/92	Government	Rastriya Banijya Bank	Special Bond	Overdue Loans to PES	27.1	1 Yr	14.00
1993/94	Government	Nepal Bank/Rastriya Banijya Bank	Special Bond	Overdue Loans to PES	186.9	1 Yr	9.00
1991/92	Jyoti Spinning Mills	Retail Investors	Debenture	Fixed Assets	20.0	4 Yrs	14.00
1987/88	Government	Nepal Rastra Bank	Development Bond	Overdraft Loan to Govt.	1509.4	20 Yrs	3.00
1993/94	Government	Nepal Rastra Bank	Promissory Note	Overdraft Loan to Govt.	3785.1	Open Ended	4.00
1995/96	Government	Nepal Rastra Bank	Special Bond	Overdraft Loan to Govt.	785.5	7 Yrs	8.47*
1995/96	Bhrikuti Pulp & Paper Mills	Retail Investors	Debenture	Fixed Assets	75.5	4 Yrs	13.00
1996/97	Shriram Sugar Mills	Retail Investors	Debenture	Fixed Assets	93.0	4 Yrs	14.00

* Auction Rate of Treasury Bills

PES - Public Enterprises

PA - Per Annum

Source: Annual Report, Nepal Rastra Bank, Various Issues.
Banking Operation Department, Nepal Rastra Bank.

Structure of Interest Rates

	Mid-July								
	1989	1990	1991	1992	1993	1994	1995	1996	1997
Govt. Securities									
Treasury Bills	5.1	7.2	8.8	9.7	10.4	6.2	8.5	12.8	5.6
National Savings Certificates	13	13-15.5	12.5-15.5	12.5-15.5	12.5-15.5	9-15.5	9-15.5	9-15.5	9-15.5
Development Bonds	3-10.5	3-10.5	3-10.5	3-10.5	3-10.5	3-10.5	3-10.5	3-10.5	3-12
Nepal Rastra Bank									
Refinance Rate*	11	11	13	13	13	11	11	11	11
NRB Bond Rate	-	-	-	9.6	11.2	6.2	8.2	12.8	-
Call Money	-	-	-	-	-	-	-	9.95	4.57
Commercial Banks									
Savings Deposits	8.5-9.5	8.5-9.5	8.5-9	9-10	9-10	7-7.5	7-8	7.5-8	7-8
1 Year Time Deposits	12.5	11.5-12	11.5-12	11.5-12.5	11.5-12.5	8.5-9	8-9.5	9.5-11	9.5-11
2 Yrs & above Time Deposits	13.5-14	12.5-12.75	12.5-12.75	12.5-13.5	12.5-13.0	ng.	ng.	ng.	ng.
Lending Rates									
Industry	15-18	16-18	16-18	16-21	16-21	13-17	14-18	14-17.5	15.5-17.5
Agriculture	15-16	15-16	15-16	16-20	16-19	13-15	13-15.5	14.5-16	14.5-16
Export Bills	15-16	15-16	15-16	16-20	15-20	12-14	12-16	13-16	14.5-16.5
Commercial Loan/ Overdraft	17-21	18-21	18-21	17-21	15-21	13.5-18	12-19	14.5-20	14.5-20
Financial Institution									
ADB/N									
To Cooperatives	13-18	13-18	13-18	16-18	14-18	14-16	12-15	12-15	12-15
To Others	15-20	15-20	15-20	18-20	16-20	16-18	14-17	14-17	14-17
NIDC	16-18	16-18	16-18	16-18	18-19	15-16	15-16	15-16	15.5-18

ng - negotiable

ADB/N- Agricultural Development Bank

NIDC - Nepal Industrial Development Corporation

Source: Annual Report, Nepal Rastra Bank, Various Issues.

Government Finance Division, Research Department, Nepal Rastra Bank.

Chapter 9

ASSET SECURITISATION IN THE PHILIPPINES

by

Maria Digna Paraso*

9.1 Development of Securitisation

9.1.1 Background

The market for asset securitisation in the Philippines remains relatively thin. The first asset securitisation in the Philippines was undertaken by a local branch of a foreign bank, the Citibank, in 1992. The Citibank acted as a seller and servicer to two sets of issuances of mortage backed securities in the form of Floating Rate Investor Certificates in 1992 and 1993.

Since the first issue of mortgaged backed securities (MBS) in 1992, the market for asset backed securities (ABS) and MBS has proceeded quite cautiously. A thrift bank pursued a securitisation project of a real estate mortgage pool. Another commercial bank was granted authority by the Monetary Board to sell mortgage loans selected from its mortgage portfolio. Each of these banks acted as a seller/originator/servicer to the issue of ABS/MBS under their respective securitisation programmes.

Non-bank securitisation has likewise been limited. This includes the recent securitisation of a property insurance financing corporation, a financing corporation and a real estate development firm. The property insurance company's securitisation involved the securitisation of a pool of real estate mortgages while that of the real estate development firm consisted of the sale of an asset pool of its various property development projects. A case of non-mortgage securitisation was undertaken by a local airline firm involving credit card receivables-payments due from credit card companies for their members' travel. The corresponding securities were issued abroad.

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However, data on the total number of companies which have undertaken asset securitisation in the Philippines, the volume of assets securitised as well as the outstanding ABS/MBS issued could not be established with certainty due to the absence of a centralised monitoring system.

While the market for securitised assets in the Philippines is still limited, the securitisation efforts of selected banks and a few big corporations indicate a potentially large stock of mortgages in the country. The relatively narrow market can be traced to the lack of information on the mechanics and other infrastructural arrangements, associated transaction costs as well as concerns on the quality and risks of asset backed securities, as financial instruments. These are among the major issues which underscore the need for a well-defined and responsive regulatory and legal framework for securitisation in the Philippines.

9.1.2 Market Structure

The process of securitisation involves a series of steps involving various participants, namely the originator/seller/servicer, Special Purpose Vehicle (SPV)/issuer; guarantor, credit rating agency and investors, among others. As illustrated in Chart 9.1, the steps in a typical securitisation are as follows:

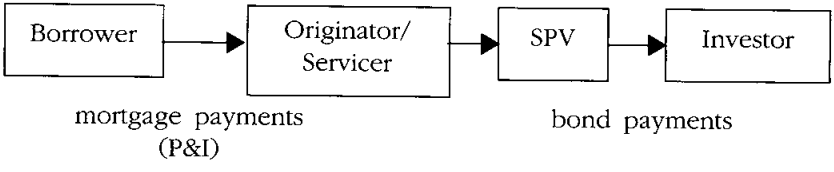
(i) Originator Identifies Assets that can be Used to Raise Funds

A corporation that wants to secure financing through asset securitisation begins by identifying unencumbered assets that can be used to raise funds. In most cases, these assets represent rights to repayments at future dates for goods that have already been delivered for services that have already been performed and are generally classified as "Receivables" in the books of the corporation. The corporation that originated the assets or Receivables by selling the assets or performing the service is referred to as the Originator.

In the case of banks seeking to undertake asset securitisation, the originating bank must secure prior approval from the Bangko Sentral ng Pilipinas (BSP) for the proposed securitisation programme which would include details of the volume of assets to be originated/sold; the

term structure of securities to be issued; and the nature and extent of liabilities of the originator/seller and issuer or the Special Purpose Vehicle, among others.

Figure 9.1
Securitisation Process: A Simplified Transaction Flow Chart



(ii) Originator Sells and Transfers a Pool of Assets to an Entity - the Special Purpose Vehicle (SPV)

After identifying the assets for securitisation, the Originator irrevocably sells or transfers a discreet pool of assets to an entity called the Special Purpose Vehicle (SPV) which has been specifically formed for the purpose of securitisation. The SPV in turn, appoints an entity, the Servicer to perform the administrative functions associated with the assets sold or the Receivables which include the collection of payments due from the original borrowers, the management of funds before they are distributed to investors and foreclosure or other similar proceedings.

(iii) SPV Sells/Issues Asset Backed Securities (ABS) Based on Receivables to Investors in the Capital Market and Pays Proceeds to the Originator

Concurrent with Step 2 above, the SPV issues asset backed securities (ABS) in the capital market in order to raise funds required to purchase the Receivables. However, securities to be issued by banks and non-banks must be registered with the Securities and Exchange Commission (SEC) except for those issued or guaranteed by agencies and instrumentalities of the Philippine government. The securities sold are usually in the form of floating rate certificates which offer a variable rate of return to investors and have a fixed term depending on the rate of repayment of the underlying Receivables. Investors may include both institutional and retail investors. In practice however, securitised financial products are purchased by institutional

investors such as insurance companies, pre-need funds, pension funds and mutual funds.

(iv) Originator Uses Proceeds for New Lending or Business Activities

The proceeds from the sale of Receivables can be used for any purpose by the Originator. For banks and other financial institutions involved in mortgage lending, the proceeds can be used for relending, i.e., to generate new mortgages. Simplifying for other factors, the ability to generate new funds can bring down the cost of funds. In contrast, loans receivables which are spread over long maturity periods lock in the funds, which imply an opportunity cost on the part of the originating bank. With the recycled funds, securitisation can, therefore, improve liquidity financing and enable the originating bank to charge lower mortgage rates.

(v) Original Borrowers Now Make Payments on Receivables to Servicer.

With the completion of securitisation, the original borrowers make their payments to the Servicer. The sale of the Receivables does not extinguish the obligation of the original borrowers to make payments required under the agreements contracted with the Originator.

9.1.3 Types of Assets Securitised

In general, assets which generate a steady stream of income can be securitised. Under existing rules on the registration and sale of asset backed securities of the Securities and Exchange Commission (SEC), the eligible assets for securitisation is defined as "loans and receivables originated in the ordinary course of business of a corporation, including but not limited to mortgage." The largest volume of assets securitised were real estate mortgages. Other assets which have been securitised included cash-backed loans and credit card receivables.

9.1.4 Size and Growth of the Market

Since the first issuance of asset backed securities, securitisation has proceeded quite cautiously, particularly with respect to banks, as

originators or sellers of assets. There is however, no centralised monitoring of asset securitisation in the Philippines. The confidentiality of the specific elements of the securitisation transactions also constrains efforts to secure data on securitisation. Based on the available data on the securitisation of two banks and 2 non-bank corporates involving about seven sets of issuances of ABS, the total volume of assets originated or sold for securitisation since 1992 was estimated at P3.0 billion.

9.2 Prospects for Securitisation

9.2.1 Assessment of Preconditions for the Development of Securitisation

(i) Legal Framework

(a) Rules of the Bangko Sentral ng Pilipinas (BSP)

At present, the rules and regulations on the origination, issuance, sale, servicing and administration of asset-backed securities of any bank or non-bank with quasi-banking functions (NBQB) including its subsidiaries and affiliates engaged in allied activities, which are domiciled in the Philippines are defined under BSP Circular No. 185 (issued on 8 December 1998). Prior to this, asset securitisation is broadly governed by BSP Circular No. 1392 issued on May 1993 which provided that these papers are registered with the Securities and Exchange Commission (SEC). However, unregistered commercial papers may be sold, discounted, assigned, negotiated by banks to financial intermediaries performing quasi-banking functions.

(b) Rules of the Securities and Exchange Commission (SEC)

The Rules on the Registration and Sale of Asset-Backed Securities (effective 25 March 1997) under Rule 3 of the Revised Securities Act (RSA) provides for the rules and regulations governing the sale of asset backed securities of a corporation or other businesses.

In general, the issuance of commercial papers, bonds and other securities including asset backed securities of a private corporation or other business entity must be registered with the SEC. However, Sec. 4(a) of RSA also provides that any security issued or guaranteed by

any agency or instrumentality of the Philippine government shall be exempted from the registration requirement of the SEC. In the case of banks, proposals for securitisation projects must also seek the prior approval of the BSP, apart from the registration requirements of SEC.

The SEC has drafted revised Rules and Regulations for the Registration and Sale of Asset-Backed Securities. At present, the draft Rules is undergoing public hearings prior to legislation by Congress. Even with the recent issuance of BSP Circular on asset securitisation, both agencies continue to coordinate closely towards a consistent and harmonised set of rules and regulations; standardisation of documentation; borrowers/issuers' criteria; asset selection criteria; and, monitoring, reporting and supervision procedures.

(ii) Accounting Practices

At present, there are no explicit accounting standards that are devoted specifically to the treatment of securitised products in the Philippines. In practice, the accounting treatment to book various entries involved in a securitisation process are based on the generally accepted accounting principles (GAAP) of U.S. or international accounting standards. To reflect the concept of "true sale" under securitisation, the originating/selling bank removes the assets identified for securitisation from its books by crediting the said asset account and debiting the form of assets received as payment. The assets sold are then, transferred to the trust account of the Issuer/Special Purpose Trust/SPV. However, the absence of such standards raises issues on the correct accounting treatment of transfers of assets that would qualify as "true sales".

Consistent with the design and formulation of an overall regulatory framework, a standardised accounting treatment of transactions and products involving asset securitisation based on international standards is essential to the development of an active securitisation market in the Philippines.

(iii) Tax Structure

(a) Indicative Taxes on ABS Transactions

A differential tax treatment applies at each step of a typical securitisation process, as shown in Table 9.1. Among the major taxes

imposed on various instruments and transactions that constitute securitisation are the income tax, capital gains tax, gross receipts tax (GRT), final withholding tax on interest income and documentary stamp taxes (DST).

(b) Tax Treatment of Parties in a Securitisation

- *Originator.* The originator of an ABS is subject to the regular corporate income tax at 34 percent of net taxable net income which includes income realised from the sale of assets, for ordinary assets or assets used in the ordinary course of business such as loans receivables and other types of receivables Sec. 27(A) of the National Internal Revenue Code (NIRC).

- *Servicer.* The taxation of the servicer whether operating also as the originator or as a separate entity is subject to the regular corporate income tax at 34 percent (Sec. 27(A), NIRC).

- *Special Purpose Vehicle.* Under Sec. 61 of the NIRC, the Trust Fund is a taxable trust subject to the taxes imposed on individuals at rates ranging from 5 - 34 percent of taxable net income for a given taxable year. In the determination of taxable net income, the Trust Fund may deduct the amount of Trust Fund income which is distributed to the Investors-Certificate holders during the year that such income was earned. This implies that the income of the Trust Fund is taxable on that portion of the trust income not distributed to the Investors-Certificate holders.

- *Investors/Certificate-holders.* The income of the Trust, as the SPV which is distributed to Investors or Certificate holders of ABS/MBS issues is taxable directly in the hands of Investors or Certificate holders. Should the Certificate holder be a Filipino citizen, a resident alien or a resident foreign corporation, the returns on the Certificates would be subject to the 20 percent final withholding tax (Secs. 24(B)(1), 25(A)(1) and 27(D)(1), NIRC). If the Certificate holder is a non-resident alien not engaged in trade or

business in the Philippines, the applicable final withholding tax is 25 percent on gross income while a non-resident foreign corporation will be subject to a 34 percent tax on gross income (Secs. 25(B) and 28(B)(1)).

- *Issues on the Taxation of Securitisation.* Various issues have been raised on the present tax regime of the financial sector in the Philippines such as arbitrage opportunities on differential taxation of income from financial instruments; the cascading impact of turnover taxes such as the GRT; sequential imposition of DST as well as the consequent impact on the cost of financial intermediation and the promotion of specific market instruments. Apart from the relative complexity of the tax treatment of the transactions and parties involved in a securitisation process, the successive imposition of DST at each stage of the securitisation process adds to transaction costs which could dampen any gains from securitisation. In the case of asset securitisation, the existing statutory provisions on the taxation of financial products and transactions are not well-defined causing a certain degree of confusion and uncertainty on the appropriate tax liability of various parties involved in an ABS undertaking which include the mortgagee, mortgagor, originator, SPV, and investors.

(iv) Credit Rating System

There is no formal credit rating agency for securitisation of banks and non-banks in the Philippines. The availability of a credible rating agency is an important element in the development of securitisation in order to provide an independent assessment of the relative safety or risk of particular issue. Without an independent rating agency, institutional investors in ABS/MBS issues therefore, rely on their own ability to conduct due diligence investigation to determine the viability of a given issue. Among various considerations, the track record of the institution originating the sale of assets and the issuer provides a strong influence on the market acceptability of a particular ABS/MBS issue.

Table 9.1
Indicative Tax Treatment of ABS Transactions and Related Securities

Steps in the Creation/ Issuance of ABS	Taxable Base	Type of Tax Applicable	Tax Rate
1. Constitution of Real Estate Mortgage			
a. Mortgage of Real Property to the original seller	Appraised value of mortgage property	Capital gains tax DST Municipal Taxes Register of Deeds	5% 1.5% max.-0.5% variable
b. Constitution of Mortgage by the Mortgagor to the Mortgagee Bank	Loan value of appraised property	DST	0.2%
2. Transfer of assignment of loans secured by real estate mortgage	Loan value of appraised property	DST	0.2%
3. Issuance of ABS against mortgage real estate loans			0.25%
a. Issuance of certificates of profits or interest in property or accumulations	Face value of security instrument	DST	0.25%
b. Interest income on said securities	Interest income	Final withholding tax	20%
c. Secondary issuance of certificates of profits or interest	Face value of security instrument	DST	0.25%

Sources: World Bank, Draft Housing Finance; Reforming Public Provision and Promoting Private Participation, June 1997.
Department of Finance, Working Papers on DST, Sub-Committee on Taxation of Financial Market, Presidential Task Force on the Comprehensive Tax Reform Package, January 1991.

(v) Notes on the Philippine Capital Market

By far, the most dominant and active debt market in the Philippines is the market for fixed income government securities, particularly, the Treasury bills. Given the significant share in the market, the interest rate for the 91-day Treasury bills has remained the money market benchmark. On the other hand, bank loans still comprise the largest source of private debt financing. In addition, Philippine corporate debt in the form of commercial papers have been raised in the offshore market such as that of Philippine Long Distance Telephone Company (PLDT). There has been no other notable debt instrument which has been created or introduced domestically since 1984 with the exception of the market-oriented Fixed Rate Treasury Notes (FXTNs). Another source of private corporate financing is the equities market through the initial public offerings (IPOs).

By way of comparison, outstanding Treasury bills as of end-1997 reached P231.4 billion; commercial bank loans (end-1997), P1,416 billion; private euro-debt (1993 -1995), P113.8 billion; IPOs (1992 -1996), P 87.8 billion; and commercial paper (1993-1995), P19.2 billion.

(vi) Interest Rate Structure

In practice, the interest rate on ABS which may be referred also as the Investor Certificate Rate is determined as a specific investor margin over the Treasury bill rate of a given tenor as of a given determination date. The 91-day Treasury bill rate is the market benchmark interest rate in the Philippines. A particular securitisation programme provided for the issuance of Investor Certificates can have interest rates ranging from 1.5 percent to 2.5 percent, depending on the type of investment over the 91-day Treasury bill rate on a given auction date.

9.2.2 Feasibility of Developing Securitisation

The large pool of housing loans and other consumer loans, particularly auto loans, credit card receivables and other financial products and innovations amid the continuing liberalisation of the financial markets, indicate a potentially large base for asset securitisation. The size of housing mortgages and future mortgages, in particular pro-

vides an indicative measure of potential asset pool for securitisation. Based on the outstanding loan portfolio of commercial banks amounting to P1,416 billion as of end-December 1997, real estate loans are estimated at about P184.0 billion. This amount represents a potential pool of securitisable assets of commercial banks.

(i) Securitisable Assets

Under the proposed guidelines for securitisation by BSP, assets eligible for securitisation refer to "financial assets, either fixed or revolving with an expected cash payment stream, originated in the ordinary course of business of a corporation or other business." Based on this definition, the term assets include, but is not limited to mortgage loans, personal loans, trade receivables, lease receivables, credit card receivables, and financial derivatives instruments."

(ii) Benefits and Costs of Securitisation

Securitisation offers various benefits to the different parties involved, as articulated in the literature. On the part of the originator/seller of assets, securitisation provides liquidity financing and therefore, diversifies the sources of capital for the corporation. Based on the concept of "true sale," this approach also mitigates any possible concentration ratio constraints, particularly of banks. Securitisation could reduce the cost of capital over the medium-and the long-term, given an efficient structuring program. As the investor market gains familiarity with asset-backed securities, spreads are expected to improve which could translate into lower mortgage or lending rates over the long-run. From the asset management perspective, the scheme provides a lever of interest rate and asset maturity management.

However, securitisation is not without cost. It is a complex procedure involving a series of documentation and steps which entail costs such as those for various documentation, legal fees, other administrative costs, taxes as well as the standard overhead and transaction costs. The pricing structure of the ABS would also determine the net benefits from securitisation. An efficient structuring arrangement would enable the parties to optimise the gains taking into consideration the associated costs of a given securitisation programme.

(iii) Implications for Central Bank Policies

Under certain conditions, securitisation allows a corporation to remove certain assets from its balance sheets. As pointed out, securitisation provides an alternative source of liquidity for corporate financing. In the process, securitisation can boost capital ratios and generate new loanable funds from the proceeds of the securities sold to investors. The sale of loan receivables or other receivables for cash, marketable securities and other more liquid assets would reduce the amount of risk assets of the originating bank. Risk assets consist of loans and other less liquid assets of banks. More formally, risk assets is defined as total assets less cash on hand, amounts due to the Central Bank, government securities, deposit-backed loans, and other non-risk items authorised by BSP. With the same amount of capital, the reduction in risk assets resulting from asset securitisation would therefore, raise the bank's capital-adequacy ratio, measured by the ratio of net worth to risk assets. Under existing BSP rules and regulations, the combined capital accounts of a commercial bank must not be less than 10 percent of its risk assets.

From the perspective of central bank supervision, securitisation allows for a diversification of credit risks and eases concentration ratios of banks. It may be well to point out however, that while credit and other risks can be spread over a wider base, the risks remain still within the financial system. This underscores the need for an organised information system on the credit standing of firms/banking institutions. A centralised monitoring agency on asset securitisation should also be initiated.

On the other hand, securitisation may prejudice the quality of the remaining assets of a bank. The tendency to securitise performing loans relative to less performing assets could weaken the bank's asset quality. As an originator/seller of ABS, bank policy must ensure that its securitisation programme would remain consistent with the general financial soundness of the remaining asset mix. In principle, the BSP maintains that banks which plan to undertake a securitisation of its asset portfolio must formulate an asset securitisation programme which would ensure a sound and adequate mix of the remaining assets in its portfolio. Section 3 of BSP Circular 185 (Series of 1998) prescribes specifically for the need to maintain management oversight. The Circular provides that the originator/seller must have the securitisation

programme approved by its Board of Directors. This programme should be integrated into the firm's corporate strategic plan and that the Board of Directors should ensure that any specific asset securitisation is consistent with the programme. This highlights the need for heightened vigilance on BSP's role in banking supervision and examination. As regulator of the banking system, BSP should intensify efforts in monitoring, measuring and assessing the risks, particularly those related to the growth of contingent accounts and off-balance sheet transactions of banks such as asset securitisation.

Banks which securitise better quality assets while keeping lower quality assets on the balance sheet may be required to hold more capital and loan loss reserves for assets that remain on its books. This however, has implications on the integrity of loan loss reserve analyses that are based on historical performance and consequently, on the financial position of a bank. With the growing complexity of the financial markets, prudential regulations and supervision must be constantly assessed to guard against systemic risks, protect investors and in general, ensure a sound financial system.

9.3 Conclusion

Asset securitisation offers opportunities as well as challenges. For bank originators, securitisation enhances liquidity financing, thus, providing an alternative source of capital while managing the costs of deposit insurance and reserve requirements. In addition, the transformation of risk-assets such as loans and other receivables into more liquid assets eases the concentration ratios of banks as well as improve capital adequacy of banks. An efficient asset securitisation programme could reduce the cost of capital and improve the rates of return over the long-run. However, banking supervision and examination must constantly be on guard against the risks associated with the growing complexity of financial transactions and products in order to ensure that asset quality of banks remains sound. This underscores the need for BSP to intensify efforts towards monitoring, measuring and assessing the risks associated with contingent accounts and off-balance sheet transactions such as asset securitisation.

The potential for asset securitisation based on the market's assessments is large given the large pool of banks' mortgages. To optimise the benefits from securitisation, the policy agenda should

address the current concerns. Foremost of these is the development of a well-defined legal and regulatory framework; improved information, reporting and monitoring mechanisms; and, the rationalisation of the tax structure. The proposed revision of the rules and guidelines for asset securitisation of the SEC comprises one of the major reforms to strengthen the legal and regulatory structures, reduce costs and address other constraints in line with the development of an efficient capital market.

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Appendix 9.1

Terms and Conditions of an Issuance of Mortgage-Backed Securities: An Illustration

Securities Offered	Investor Certificates
Total Volume of Issuance	Approximately P 350 million
Minimum Denomination	P 1 million each
Expected Term	20 months
Issuer of Certificates	The Trust Fund formed pursuant to the Agreement
Servicer	Originating Bank
Distributions on the Certificates	Distributions on investments to each Certificate-holder will be made as follows: a. monthly on the returns b. monthly on the investments
The Certificate Rate	A certain premium over a Government Security e.g., 91-day Treasury Bill plus 1.5-2.5 percent
The Servicing Fee	1/4 of 1 percent over the loan rate applied to interest collections
Trustee Fee	1/32 of 1 percent of the average outstanding Certificate Investment Balances payable to the Trustee on each Investment Distribution Date
The Mortgage Loans	The Mortgage Loans are secured by first mortgage on real estate properties originated by the Bank in the ordinary course of its lending business. (A description of the mortgage properties is presented in terms of location, outstanding balance, term maturity, details on payment schedule and other relevant information.)

Source: Preliminary Prospectus of a Mortage-Backed Security Issued by a Sample Bank and Various Briefing Materials on Securitisation.

Chapter 10

SECURITISATION AND ITS IMPACT ON BANKING BUSINESS: SRI LANKAN EXPERIENCE

by

Swarnalatha Gunaratne*

10.1 Introduction

Securitisation in a broader sense refers to the process of disintermediation whereby borrowers by-pass the traditional intermediation process by going to the investor community directly in the capital market through issuing their own securities. It enables the originator to convert loans, or receivables into new, liquid negotiable instruments. It is a process through which securities are created, issued and repaid on the basis of anticipated cash flows arising from the underlying financial assets. Through a well structured securitisation transaction, the originator could achieve a number of benefits:

(i) Funds could be raised at a lower cost than conventional financing if securities are issued by a company which has a high credit rating.

(ii) A fee income could be obtained from the SPV (a Special Purpose Vehicle which is set up for the purpose of securitisation) by servicing the asset portfolio which has been used for the securitisation.

(iii) Originator can convert its illiquid assets into liquid assets and improve the asset - liability management.

(iv) When assets are transferred to the SPV without recourse, such assets could be removed from originator's balance sheet and also in calculations of capital adequacy ratios.

However, the success of securitisation depends on a number of pre-conditions such as the availability of credit rating facilities, existence of a stable long-term yield curve, investor awareness, favourable

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tax and legal conditions, a developed debt securities market, availability of homogeneous asset base to be pooled and a developed secondary market for such instruments. The securitisation of loans was first started in the United States in the early 1970's where most of these pre-conditions had been fulfilled. Since then it has been used by many developed countries like Japan, the United Kingdom and Germany. However, in most Asian countries including Sri Lanka, securitisation is still at the infant stage. Slow development of securitisation in many developing countries is attributed to the lack of the necessary pre-conditions or their caution in developing securitisation, as it would create an environment where monetary management would be difficult. Therefore, an attempt has been made in this study to examine the feasibility of developing securitisation in Sri Lanka. In this respect a sample survey was conducted covering 13 financial institutions representing commercial banks, development banks, merchant banks and leasing companies. Ten institutions have responded to the questionnaire and their views have been used in assessing the prospects for securitisation in Sri Lanka (the questionnaire appears as the Appendix 10.1).

This study is in three sections. The first section of the study outlines the background to the development of securitisation in Sri Lanka and the present market structure. The second section presents the pre-conditions for securitisation, securitisable assets in the banks and other financial institutions in Sri Lanka, a cost benefit analysis for securitisation and the implications of securitisation on Central Bank policies. The third section concludes the study.

10.2 Development of Securitisation

10.2.1 Background

The financial market in Sri Lanka has been expanding since the liberalisation of the economy in 1977. Among the major policy reforms which contributed to this development were the opening up of the financial sector to domestic and foreign competition, facilitating a market determined interest rate regime, expansion of primary and secondary treasury bill markets, moving towards a more market based system of monetary management and strengthening the legal and administrative framework for improving the soundness of the financial system by way of enactment of debt recovery laws and introducing prudential regula-

tions for banks compatible with BASLE (Banking Regulations and Supervisory Practices Committee) guidelines. These policy measures contributed to the expansion in the money and capital markets, both in terms of the number of participants and the available instruments. (See Appendix 10.2 for the structure of the financial system in Sri Lanka.)

Following the developments in international financial markets, considerations have been given by some institutions in Sri Lanka to use methods of direct financing as an alternative to traditional bank credits. The introduction of the commercial paper was an important step in this regard. Commercial papers were first introduced in 1993 in Sri Lanka and since then more than forty institutions have utilised this short-term method of direct financing. Even though many developed countries have gained considerably from securitisation for long-term direct financing, Sri Lanka is still a beginner in this field as are most other countries in the region. However, there is evidence that a number of institutions in the financial market in Sri Lanka are planning to use securitisation as a source of obtaining liquidity at a lower cost compared with the traditional credit facilities provided by banks.

When comparing these private debt securities with bank borrowings there are three aspects specific to the commercial banks that need to be highlighted. These are the intermediation cost, the asset liability maturity mismatches and the capital adequacy requirements of the commercial banks.

(i) Intermediation Cost

The intermediation cost of banking institutions in Sri Lanka is considered relatively high. One of the major reasons for this situation is the dominance of two state commercial banks in the banking business. These banks operate with a large network of branches, employing a large labour force but not all branches are running at a profit. This has contributed to the high administrative costs of these banks. Moreover, there have been certain political influences directed towards lending in large amounts. Quite often, these politically directed loans have had to be written off as bad debts or a large sum of money has to be spent by banks on legal action to recover non-performing loans. Due to these reasons, the operational cost of banks are high and hence interest rates for lending have to be kept at a high level. In the past,

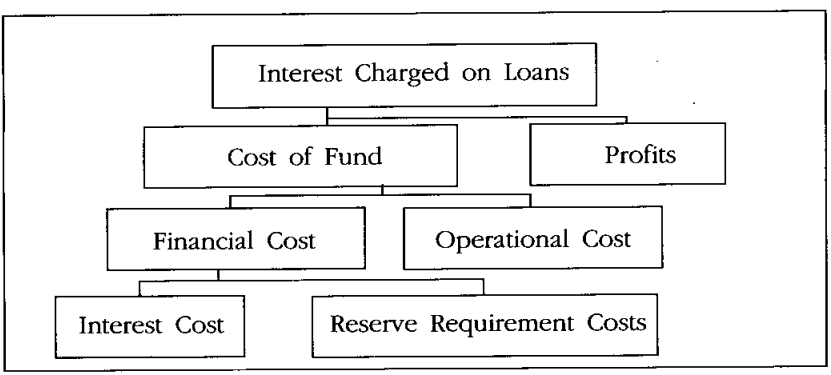
the lending rates had gone up to as high as 30 percent. Since these two state commercial banks account for 60 percent of the total assets and 60 percent of total deposits and advances of commercial banks, they play a major role in the determination of interest rates in the market.

The interest charged on loans by commercial banks constitutes two major components i.e., the cost of funds and the profits. The cost of funds constitutes financial costs and operational costs. The financial costs are the interest costs and the cost of maintaining the statutory reserve requirements with the Central Bank. The operational costs include personnel and administrative costs. The profit of the commercial banks in general terms is therefore interest receipts minus the cost of funds.

(ii) Interest Spread

The interest spread is defined as the difference between the average lending rate and the average cost of funds. This spread was about 8.7 percent in the commercial banking sector in 1996. The interest spread in Sri Lanka's banking sector is high when compared with the other countries in the Asian region, viz., Malaysia (3.4 percent), Thailand (3.9 percent) and Philippines (5.4 percent) in 1996. The reasons for the high spread have been the high operating cost and the poor performance of the loan recoveries. The higher intermediation cost is detrimental to the financial system as it distorts the resource allocation process in the economy.

Figure 10.1
Intermediation Cost



As indicated in Figure 10.1, the profit margin of the banks could be expressed as the difference between the interest charged on loans and the cost of funds. Therefore, the lending rate consists of the deposit rate, cost of reserve requirements, operational cost of the bank and the profit margin. The following table displays the composition of cost of the funds plus profits of commercial banks in general.

Table 10.1
The Interest Spread and The Cost Of Funds Of Commercial Banks
(Percentage)

End of Period	A WADR[1]	B WALR	C Spread	D SRR	E Res. Req. Cost[2]	F Financial Cost (A+E)	C-E Operat'l Cost + Profit
1990	13.5	18.7	5.2	15.0	2.03	15.53	3.17
1991	14.3	19.3	5.0	13.0	1.86	16.16	3.14
1992	14.0	19.5	5.5	13.0	1.82	15.82	3.68
1993	13.8	20.8	7.0	15.0	2.07	15.87	4.93
1994	12.8	19.7	6.9	15.0	1.92	14.72	4.98
1995	13.4	20.7	7.3	15.0	1.92	14.72	4.98
1996	12.3	21.0	8.7	15.0	1.85	14.15	6.85
1997	10.0	20.5	10.5	12.0	1.20	11.20	9.30

Source: Central Bank of Sri Lanka

It could be observed from the above table that the spread between the Weighted Average Deposit Rate (WADR) and the Weighted Average Lending Rate (WALR) has steadily increased over the past few years. This spread has increased even in 1997 despite the reduction of reserve requirements by 3 percent in early part of the year. Even though the Central Bank relaxed its tight monetary policy by reducing reserve requirements in order to reduce cost of funds, and through that the lending rates of commercial banks, those rates declined only marginally. Table 10.1 shows that the 'operational costs + profits' have

1. WADR (Weighted Average Deposit Rate) and WALR (Weighted Average Lending Rate) are considered as banks' average deposit and lending rates.
2. Reserve Requirement Cost = (WADR*SRR)*100

increased over the years. As a result, borrowers have to incur high intermediation cost. Therefore, raising funds by issuing debt securities will be cheaper for companies as it enables them to avoid the intermediation cost.

(iii) Asset Liability Mismatches

Asset and liability mismatches restrict long-term lending by banks. Most bank deposits have a short maturity. Most often the maximum maturity of a deposit is two years with the majority of deposits having a maturity period of well under two years. In this context, long-term lending exposes the banks to funding risks and liquidity concerns. The funding risk arises due to the negative gap in the banks' assets and liabilities. With its longer term assets (lending) the bank locks itself into a situation where it receives for a long duration a fixed interest income based on an agreed rate, while the short-term liabilities entail payment of frequently changing interest rates to the depositors. When interest rates are falling in the short-term, the banks' margin increases, while rising interest rates reduce the margin.

The liquidity concerns of a bank are that it has to be prepared to satisfy withdrawals of funds by depositors and to provide loans to customers. Moreover, banks have to maintain liquid assets to satisfy regulatory requirements such as the statutory reserve requirement and liquidity ratios. Hence, the capacity and the inclination of a bank to lend long-term is much limited.

With the on-going privatisation of state enterprises, and the increasing demand for infrastructure development, the requirement for long-term debt to finance their investment programmes has increased tremendously. The banking system will not be able to provide long-term loans in such a large scale due to the above mentioned constraints.

(iv) Capital Adequacy Requirements of Commercial Banks

The Monetary Board of the Central Bank of Sri Lanka, in Section 102 of the Monetary Law Act, has stipulated a minimum capital adequacy requirement for commercial banks. Accordingly, all commercial banks are required to maintain a minimum core capital ratio of 4 percent of risk weighted assets and a minimum supplementary capital

ratio of 8 percent of risk weighted assets[3]. Risk weighted assets have been classified with weights ranging from 0 percent to 100 percent (see Appendix 10.3). Loans and advances which do not have a guarantee from a reputed institution are categorised under the 100 percent risk weight. Thus, the risk-weighted capital adequacy requirement has strained the banking system's ability to meet the long-term financing needs of deficit units.

Hence, the commercial banks are unable to meet the increasing long-term financing needs of the private sector on the one hand, due to the limitation arising in maintaining the minimum capital adequacy ratios and their asset-liability maturity mismatch and on the other, due to the high intermediation costs which have made bank borrowings expensive. Small- and medium-scale companies and new companies find the process of obtaining long-term facilities from a bank tedious. Often, a lengthy period is taken to carry out credit analysis and to process the facility. Moreover, collateral by way of immovable assets is required for such loans. Hence, unless a company enjoys a long standing relationship with a bank, obtaining a long-term facility would be fairly time consuming, tedious and costly. Financing by way of debt securities, therefore, would be cheaper if structured properly, and will be a source of obtaining immediate liquidity in comparison to borrowings from banks. Even though asset securitisation is still in its infancy in Sri Lanka, it would be an attractive source of funding in the future if the necessary pre-conditions are satisfied.

10.2.2 The Present Status of Securitisation in Sri Lanka

Lanka Orix Leasing Company Ltd. (LOLC) is the first and thus far, the only institution which has issued asset backed securities in Sri Lanka. In fact, it is the first leasing company in Sri Lanka. Its main business is the leasing of plant, machinery, and equipment. Forty six percent of LOLC shares are held by foreigners while the balance is held by domestic share holders. The Company had Rs.90 million of share capital as at end-1995. LOLC's net profit in the financial year 1994/95 was Rs.161 million while the return on capital was 25

3. Core capital (Tier 1) consists of paid up capital, reserves and retained profits while supplementary capital (Tier 2) consists of core capital plus loan capital including long-term debentures and revaluation profits.

percent. In 1995, LOLC raised Rs.366 million through securitisation backed by its leases. The technical assistance for this was provided by the International Finance Corporation (IFC). From this transaction, LOLC was able to raise additional funds by converting its illiquid assets into new liquid negotiable instruments. LOLC could also diversify its funding sources to lower its cost of funding and to improve asset liability matching. The process of this transaction is outlined in the flow chart and could be elaborated in detail as follows:

(i) Establishing a SPV

With the purpose of issuing lease receivable backed notes and for lending the proceeds of such issues to its parent company, LOLC Funding One Ltd. a limited liability company (known as Special Purpose Vehicle for the purpose of securitisation) was established. This is a wholly owned subsidiary of LOLC.

(ii) Selection of Trust Property

The trust property includes 688 lease contracts comprising 722 new or reconditioned vehicles and the lease receivables there on. The value of the principal amount of these leases was Rs.416 million.

(iii) Trustee

The leased assets and receivables thereon were mortgaged to the trustee, Jacey & Company to be held in trust for the benefit of the investors in the notes which are issued by the SPV.

(iv) Issuing Mortgage Backed Securities

The SPV issued Rs.395 million of aggregate principal amount of asset backed notes in minimum amount of Rs.1 Mn. and integral multiples of Rs. 1 Mn. at a discount to par value of 3.5 percent. The notes issue was made through the custodian bank while the note holders register was maintained by the same bank. The rate of interest for notes is 17.5 percent payable on quarterly basis and the principal on maturity in four years time. The amount raised from investors was only Rs.366 million and this amount was loaned to LOLC.

(v) Collection And Servicing Of Lease Receivable

As lessor of record, LOLC retained responsibility for servicing, managing and making collections on the lease rentals for a fee to be received from the SPV. The servicer deposits such collections the same day in an account held in the joint names of the servicer and the issuer (collection account) and transfers immediately to an account in the sole name of the trustee (the investment account) in the custodian bank.

(vi) Interest Rate Spread

The weighted average interest rate on the pool of leased assets was 25.3 percent. The interest payments to note holders was 17.5 percent per annum.

(vii) Credit enhancement

(a) A provision of 10 percent of the principal value held by the Trustee.
(b) Insurance coverage of vehicles.
(c) The parent company, LOLC undertakes to meet any deficit in the amount required to meet interest and capital repayment.

(viii) Investment of Monthly Collections of Lease Rentals

The monthly collections of lease rentals which were deposited in an account in the custodian bank, were invested in Government's Treasury bills until the money was used to make payments to the note holders. A return of 13 percent per annum has been guaranteed by the investment manager, the Deutsche Bank. When all the obligations of payments were met including a fee to the SPV any balance amount in the investment account should go back to the originator.

(ix) Secondary Market

A liquidity facility agreement has been entered into between the trustee (on behalf of the issuer) and the bank. Accordingly, the bank provides a liquidity facility up to Rs.118 million or 30 percent of the total issue, whichever is lower, and is obliged to make a market in the notes up to this amount at agreed rates at any time after the issue on a first-come first-serve basis.

(x) Tax Status

Investors were subject to 15 percent withholding tax (reduced to 10 percent in 1997). The rate of corporate tax applicable to LOLC and the issuer was 35 percent plus surcharge of 15 percent, the total tax liability being 40.25 percent. In addition both companies paid a turnover tax of 6 percent (at present it is 1 percent). However, in view of accelerated allowances to which LOLC is entitled, LOLC has not paid corporate taxes in the past and will not be subject in the future for some years to corporate tax.

10.3 Future Market for Securitisation

Two other institutions in Sri Lanka, the State mortgage and Investment Bank (SMIB) and the Housing Development Finance Corporation (HDFC) are planing to issue mortgage backed securities on their housing loans. The purpose of this is to increase the pool of capital funds available for increasing the low income housing loan portfolio.

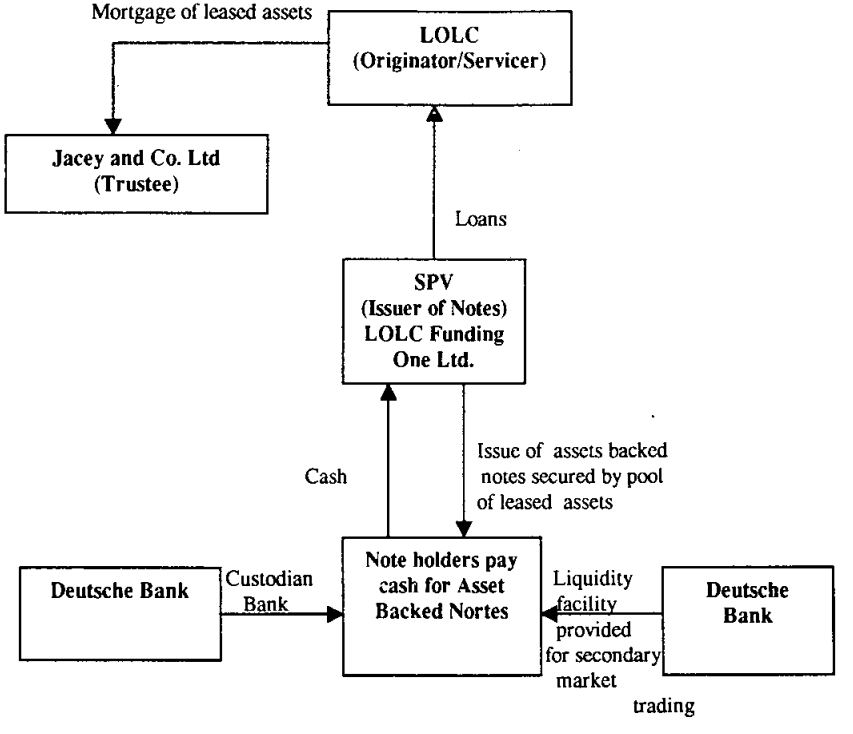
It was revealed in the survey carried out for this study that four out of ten institutions responding to the survey are considering the prospect of securitising their assets. Lease receivables are the assets planned for securitisation by a majority of them. In addition, consideration has been given to use housing loans and credit card receivables for this purpose.

Since securitisation has to follow a comprehensive procedure and there are many impediments in the financial market in Sri Lanka for successful securitisation, some other arrangements for low cost funding like private placements and loan arrangements with banks backed by their assets or mortgages have been used by many institutions in Sri Lanka.

10.4 Prospects for Securitisation

Historically the largest, most liquid, innovative and sophisticated debt market is the United States market. European economies like Germany and United Kingdom also have used securitisation widely as a source of funding. There are a number of similarities in the debt markets in these countries. They have sophisticated and relatively free financial markets, large and diversified investor bases and broad debt

Figure 10.2
LOLC Securitisation



markets. The growth in securitisation has been concurrent with these developments.

For the development of securitisation as an alternative source of funding, the following requirements have to be fulfilled.

(i) The availability of an adequate homogeneous asset base to be used as collateral and a low default rate.

(ii) A large investor base.

(iii) Legal framework to protect the investor and the SPV from the risk of bankruptcy.

(iv) Credit rating facilities.

(v) Originator's capacity to produce detailed historical data.

(vi) A stable long-term yield curve.

As a commitment of time and resources is required for a securitisation procedure, its feasibility has to be assessed based on these factors. Special attention should be given to ascertaining whether the originator has a computer system that could produce performance reports on the portfolio quickly and accurately to the level of detail required by investors, lenders and analysts. In general, all these pre-conditions depend on the level of a country's development.

In Sri Lanka, liberalisation of the trade and payments system and financial sector reforms since 1977 has led to the expansion of money and capital market activities. However, the capital market in Sri Lanka is not well developed compared with many other markets in the region. Its listing and investor base remain narrow due to insufficient participation by ordinary people and the local business community. For example, the number of listed companies in the Colombo stock exchange is only 239 while the daily transactions take place only with respect to about 20-30 companies according to CSE records. Even when the commercial banks, development banks and other financial institutions are taken into consideration, the institutional base in Sri Lanka is relatively small. Short-term and long-term financing requirements of these institutions are fulfilled largely through domestic borrowings as foreign borrowings are still restricted. The structure of the financial system, high rate of reserve requirements and higher opera-

tional cost of banks have resulted in high intermediation cost keeping lending rates at a higher level. This has led the market to find sources of low cost funds such as securitisation which helps to convert illiquid assets into liquid assets of larger amounts. However, the success of securitisation largely depends on the marketability of the instrument which has to be achieved through investor confidence. Therefore, some pre-conditions have to be satisfied before a more conducive environment for securitisation could be achieved.

10.4.1 Assessment of Pre-Conditions for the Development of Securitisation in Sri Lanka

The use of the securitisation technique varys widely in different countries due to following reasons:

(i) Different levels of capital shortages among originators.

(ii) Different cultural approaches to the concept of selling creditor/ debtor arrangements.

(iii) Different sizes of relevant asset pools.

(iv) Different regulatory and legal restrictions.

The possibility of using securitisation will be based on the prevailing laws and regulations, accounting practices, taxation of the parties involved in the transactions, credit rating systems, capital market development and interest rate structure. Each of this will be assessed in this section.

(i) Laws and Regulations

When structuring the securitisation process, the objectives of the originator, the expectations of investors and the demands of the rating agencies must be reconciled within the constraints of the applicable legal and regulatory environment. In this context, securitisation of each different type of assets will have its own unique problems which have to be identified on a case by case basis. Various regulators may be involved in a securitisation transaction. As experienced in many other countries, regulations have been imposed on originators by central banks or by any other authorities supervising accounting practices when assets are transferred or mortgaged and its impact on calculations

of capital adequacy ratios. The main concern of these various financial sector regulators is that securitisation should not undermine prudential supervision especially with respect to capital adequacy. The second major category of regulators comprises securities regulators such as securities commissions and stock exchanges. They all stipulate that information about listed and tradable securities must be disclosed publicly.

(ii) Registration requirement

Registration of issues of assets or mortgage backed securities at a central authority would be required due to two main reasons. First, there should be a formal way to record all the transactions as this information is necessary to measure the developments in the capital market and also to gauge whether it has any significant impact on monetary management. Secondly, registration at a central authority would raise investor confidence and also reduce insolvency risk. In the United States all the issues of securities must be registered under the Securities Act. Generally, when a SPV is making a public offer, it has to be registered with the Securities and Exchange Commission. Once the registration statement has been declared effective by the SEC, the SPV may engage in the issuance and sale of its securities. However, in Sri Lanka at present, there are no specific regulations on securitisation. Under a liberalised financial system, it is practically impossible to regulate every securitisation transaction of every institution. When a company is listed on the Colombo Stock Exchange, it has the responsibility of submitting regular reports of its profits and loss accounts to the CSE and also report any important changes in the company. If such a company needs to obtain funds through securitisation it could get a quotation for the debt instrument from the CSE. This will enhance investor confidence and the marketability of the product will be increased. Therefore, with respect to regulatory aspects, the most important thing would be to encourage issuing companies to get listed on the CSE. For non-listed companies, neither the CSE nor the SEC would be involved in this connection. Therefore, investors would have to be careful when they make their investment decisions. Meanwhile, the Bank Supervision Department of the Central Bank can impose rules only for commercial banks to disseminate all the information regarding their issues of asset backed or mortgage backed securities and any guarantee or endorsement which has been issued for any other institution regarding securitisation as those are

necessary for the examination of capital adequacy requirements, asset/ liability matching of a bank and the amount of contingent liabilities.

(iii) Applicability of Sri Lanka's Existing Laws and Regulations on Securitisation

Under the Prevention of Frauds Ordinance in Sri Lanka, any sale, transfer, purchase, assignment or mortgage of any immovable property should be registered with the Land Registry which is a general requirement. Transfer or mortgage of any immovable asset for the purpose of issuing asset backed securities has to be registered with the Land Registry under this general provision. Meanwhile, the assignment of book debt is not a new concept with respect to registration requirements. Under the Registration of Documents Ordinance No.23 of 1927 and the Mortgage Act No.6 of 1949, any assignment of a book debt by way of mortgage should be registered in the movable register at the Land Registry.

Depending on the originator's requirements, securitisation can take the form of a transfer of an asset or a mortgage of an asset. The legal obligations or rights are different in these two scenarios. If an asset is transferred to the SPV, the originator has no ownership of the asset. Therefore, if the receivables on those assets are defaulted, the SPV has to take legal action to recover such receivables. However, transferring of assets may not be desirable from the SPV's point of view if the default rate is high according to past experiences. When the assets are transferred to the SPV, debtors would be reluctant to fulfill their obligations as the creditor is now another party. Therefore, there is a possibility of having a higher default rate and the SPV may have to bear an additional cost to recover the receivables. If the SPV does not have "parate execution"[4] which is a powerful loan servicing tool, the recovery of loan receivables will be more difficult. Due to this reason usually the originator and the SPV are more comfortable with mortgaging assets rather than transferring assets for the purpose of securitisation. If the asset is mortgaged to the SPV, it has no ownership of the asset. Therefore, the originator has the responsibility of recovering loans and passing them to the SPV as agreed.

4. Parate Execution is a special procedure which vests the creditor with the right to sell the mortgaged property without recourse to the court. This right is available only to all licensed commercial banks and certain state lending institutions.

Where investors are concerned, there should be a proper arrangement to safeguard them which in turn would also improve the marketability of the securities. Safeguarding the investor is usually done through a trust which is responsible for making proper arrangements to make payments to investors as agreed in the securitisation process.

One of the major legal impediments in the issues discussed above is that the SPV does not have parate execution rights. Only licensed commercial banks or state lending institutions have been vested with this right. As this is a disincentive to the transfer of assets to the SPV, the debt recovery laws should be amended to give parate execution right to such institutions. Otherwise, the special purpose vehicle should be incorporated by an Act of Parliament to vest it with parate execution powers.

In order to use a pool of assets for securitisation, customers should be informed of the possibility of securitisation under the general conditions of a loan agreement. This could be easily done by including a clause in the loan agreement that the customer would have no objections should the lending institution use those assets for securitisation. This is required because when the assets are transferred to the SPV, the customers' obligations would be to the SPV and this would be a violation to the original agreement between the bank or any other lending institution and the customer. Even when the asset is mortgaged to the SPV, the customer will have to be informed unless the servicer of the loans is not the original institution. This may be a constraint to securitisation as the customer may have objections regarding the transferring or mortgaging of his / her obligations.

(iv) Taxation on Financial Assets and SPV

Since the liberalisation of economic policies, various tax concessions and fiscal incentives have been given to improve capital market transactions. Until recently, the main focus of these policies was to develop the stock market rather than the debt securities market. However, as a move to develop the debt securities market, bonds and other debt securities of quoted public companies which are traded through the stock exchange were exempted from stamp duty in the 1996 Budget proposals. Further, in the Budget proposals for 1998, tax exemptions were granted on income, capital gains or profits on the sale of debentures, bonds and other debt instruments issued by registered

companies provided that the debt instruments are listed on the Colombo Stock Exchange. With a view to developing a sustainable housing finance system by creating liquidity through the use of the secondary mortgage market and mortgage backed securities, stamp duty on the assignment of mortgage backed securities relating to housing loans was reduced to 0.1 percent from the earlier rate of 2 percent. This was an encouraging factor to the SMIB and HDFC which have taken initial steps to securitise their mortgage backed housing loans. Despite these changes, further rationalisation of the tax system is required for the development of securitisation and an active secondary market.

Therefore, a review of the present taxes applicable to securitisation to identify major fiscal impediments has been done in this section. The taxes imposed on financial instruments in Sri Lanka are discussed briefly before giving attention to the taxation applicable to securitisation.

In Sri Lanka, taxation on financial instruments varies by type of instrument. Apart from the application of direct taxes on all sources of income such as interest, dividends, capital gains etc. generated through financial instruments and financial transactions, these are also subject to a number of indirect tax treatments such as turnover taxes, stamp duties, defence levy and transfer taxes.

In general, the aggregate income from all the sources (except the items for which exemptions have been given) are taxed under the global income taxation system. Accordingly, income taxes have been imposed based on progressive rates with a maximum of 35 percent. Similarly, income from financial instruments received by a company or other corporations or a partnership is also subject to tax as other sources of income and are taxed at a single rate of 35 percent. With a view to improving tax compliance, banks and financial institutions are requested to pay withholding tax of 10 percent on the interest payable on any deposits held by any individual or corporation with these institutions. However, withholding tax on Treasury bills was withdrawn with effect from 1 June 1994.

Capital gains are generally treated as part of income but they are taxed differently depending on the source of capital gains. If the period of ownership is between 2-25 years, the applicable tax rates range from 25 percent to 5 percent. In the case of capital gains arising

from other sources such as redemption of shares, debentures, surrender or relinquishment of a right etc., the normal tax schedule is applicable subject to a maximum tax rate of 25 percent.

Where indirect taxes are concerned, stamp duty is levied on a wide spectrum of financial instruments such as certificates of deposits, cheques, teller machine transactions, credit card, travelers cheques, letters of credit, bills of exchange, drafts, promissory notes, share certificates, share transactions and transactions on debt securities.

(a) Taxes Applicable for Securitisation

Taxation on asset backed or mortgage backed securities could be discussed under the following three main categories.

- Taxes on originator
- Taxes on SPV
- Taxes on investors

Taxes on Originator

- Income tax

If assets are transferred from originator to the SPV, interest on loans to date of transfer, net income of the originator at the point of transfer and service fee receivable over the term of a loan would constitute income subject to income tax. Under the general conditions, in Section 3 of the Inland Revenue Act No 28 of 1979, income received through securitisation is subject to income tax of 35 percent. All expenses including interest paid or payable by originator in relation to the said income is exempted from the income tax requirement. If the company is listed and the debt instrument is registered under the CSE, the income received on issuing debt instruments is exempted from income tax.

- Turnover tax

The interest income on pooled loans or mortgages is subject to a turnover tax of 1 percent.

- National security levy

Originators' income from interest and other charges is subject to the national security levy at the prevailing rate of 4.5 percent.

- Stamp duty

If the asset transfer occurs as a sale to the SPV or a mortgage to the SPV, stamp duty on such transfers or mortgage of immovable property is 2 percent with effect from November 1996. Stamp duty on mortgages related to housing loans has been reduced to 0.1 percent in the Budget proposals for 1998.

Taxes on SPV on the Premise of the SPV being an Incorporated Company

The net income of the SPV (i.e., interest income received from the originator and less expenses incurred in the production of income) is subject to income tax of 35 percent.

- Turnover tax

The SPV's gross income is subject to 2 percent of turnover tax as the SPV could be a "Financier"[5] .

- National security levy

As a Financier, the SPV is liable to a defence levy of 4.5 percent.

- Stamp duty

The issue of mortgaged back securities to investors would be subject to stamp duty depending on the form of the underlying instrument. If the instrument is a debenture bond, the stamp duty is 2 percent and if it is in the form of promissory note, a stamp duty of 0.1 percent would be charged.

5. "Financier" is defined as "one skilled in levying and managing public funds and the conduct of financial operations.

Taxes on SPV on the Premise of the SPV being a Trust

The SPV itself could be structured as a trust with the investors as trust beneficiaries. According to the trust deed, redistribution of trust income will be free from turnover tax and defence levy. This eliminates the double incidence of turnover tax and defence levy on institutionalised investors and on the SPV. Any undistributed income of the trust would be subject to tax in the hands of trustees. However, expenses on trust management and any other expenses are not deductible in ascertaining income liable to tax on a trustee. The rate of tax currently applicable to a trustee is 35 percent.

Taxes on Investors in the SPV

- Income tax

Income on mortgage backed securities is considered as taxable income of investors. If the investor is a tax payer and if he has investments with financial institutions, the interest income on these investments is liable to a withholding tax. In the Budget proposals for 1997, the withholding tax rate has been reduced to 10 percent from the previous level of 15 percent.

- Turnover tax

If the investor is an institutionalised investor such as a development bank, investment bank etc. (which is a "financier") the interest on mortgage backed securities is subject to a turnover tax of 2 percent. There should be no turnover tax impact on individual investors or others where the income does not constitute business income.

- National security levy

Both interest on the mortgaged backed securities and proceeds on sale would be liable to defense levy only where the investor is carrying on the business of a bank or it is considered as a financier.

- Stamp duty

Sale of mortgage-backed securities (MBS) on the secondary market would attract a stamp duty of at least 1 percent, this being the rate applicable to debentures. This would not be applicable if the SPV is listed on the CSE and the sale of the MBS is transacted through the CSE. However, the listing of a SPV does not appear to be feasible as it is established for the sole purpose of issuing securities.

Existing Disincentives in the Taxes Applicable to Securitisation

Taxes applicable to various parties which are involved in the securitisation have some disincentive effects. In the case of stamp duty it has a cumulative impact. Stamp duty has to be paid on the issue of the mortgage loan by the originator. Secondly, the transfer or assignment of the mortgage to the SPV or to the trustee of the investors is also subject to stamp duty. Finally, the issue of mortgage backed securities to the ultimate investors is charged a stamp duty. Accordingly, a cumulative stamp duty at the present rate of 2 percent will be 6 percent (other than the housing mortgages which would have a cumulative rate of 0.3 percent as proposed in the 1998 Budget) and is a major disincentive to securitisation in Sri Lanka.

A similar disincentive is the turnover tax as both the SPV and the ultimate investors would be liable to turnover tax on the passed through income on the mortgage loans. On conversion of the tax system to a goods and services tax, which is being implemented from April 1998, the supply of most financial services would be exempted from the GST. However, the turnover tax remains as a levy on financial services. Further, it is not clear whether the loan servicing fee payable to the originators by the SPV would qualify as an exempted financial service which would receive the advantage of GST exemption. Another disincentive for the development and promotion of securitisation is the 4.5 percent defence levy which is imposed at each stage and on the parties involved. The income of the originator, the pass through income of the SPV and the income of investors which are financial institutions are all subject to a defence levy.

The SPV is a separate entity which is established for the purpose of securing investors by paying the due principal and interest on time through the income on the pool of mortgage assets. In this context, the SPV receives only an interim income. According to the present practice, the SPV has to pay income tax on this interim income which is a disincentive to securitisation.

Secondary market transactions are also subject to stamp duty, turnover tax and income tax on any gains from secondary market trading (a capital gain is taxed at a rate of 25 percent, while normal trading profits, 35 percent). In the United States, securitisation has become a successful tool for capital market development as exemptions have been given from stamp duties, value added tax on the transfer of assets and any registration or notarial fees on the transfer of mortgages. Securitisation in Sri Lanka would, therefore, be more likely to succeed if stamp duty is imposed only at the point of origination of the mortgage loan. It could also be suggested that the stamp duty be reduced to 1 percent which prevailed prior to 7 November 1996. Further, if asset/mortgage backed securities are to attract private sector investor interest, stamp duty on secondary market dealings has to be eliminated. Exclusion of the SPV from the turnover tax would also be desirable. As the defence levy has to be paid by both the originator and the SPV, elimination of it from the SPV could be suggested. Further, investors in securities who are tax payers are required to pay a 10 percent withholding tax on their investment income which is a disincentive.

(v) Credit Rating System

One of the important factors to be considered when pricing a debt instrument is the credit risk. The standard method of assessing credit risk is through the mechanism of a credit rating by an independent rating institution such as Standard & Poors and Moody's. According to Standard & Poors "the ratings give investors an accurate and comparable measure of risk by which to compare debt of any issuer worldwide". Ratings address the likelihood that an issuer will repay principal and interest in full and on time in accordance with the terms of the security. It represents an unbiased and impartial opinion of the credit quality of an issue and issuer while it does not give any recommendation to buy, hold or sell a security. Therefore, if an issuer's name

or reputation is unknown in a local or foreign market, ratings can provide investors with the necessary level of understanding of an issuer's creditworthiness. As the world becomes more globalised, ratings will become even more important particularly for issuers seeking to borrow from new markets and in new ways. Further, an independent rating is necessary as companies may be reluctant to show an accurate picture of the institution. An important feature in the rating business is that both the issuer and the debt instrument are rated.

At present there is no rating agency operating in Sri Lânka. This has been a major impediment to the development of the securitisation market. Therefore, issues of this kind of debt instruments have to carry a guarantee from a commercial bank or a recognised development finance institutions for them to be marketable. As a guarantee fee has to be paid, cost of funds would become higher. Having realised the necessity of a rating agency, the Central Bank of Sri Lanka has taken initial steps to establish one. With ADB's technical assistance, a feasibility study has been completed and it has recommended that the establishment of a rating agency in Sri Lanka is viable and feasible under the prevailing market conditions.

A credit rating agency has to be a completely independent institution and it should not, therefore, belong to any one party, including the Central Bank. Hence, the ownership of a rating agency has been a major consideration. Under the feasibility study, the possibility of getting foreign partnerships in the share capital has been explored. Accordingly, Duff and Phelps Credit Rating Corporation (DCR) in USA and the Malaysian Rating Agency Berhard in Malaysia will invest 25 percent and 15 percent respectively of the total share capital. The balance share capital will be contributed by domestic financial institutions such as the Central Bank, Development Finance Corporation of Ceylon Bank and the National Development Bank. The Central Bank's contribution will be about 10 percent of the share capital. The Letter of Intent will be signed soon and the rating agency is expected to be established by mid-1998.

(vi) Interest Rate Structure

Prior to 1977, interest rates in the financial market were administratively controlled and kept at a low level. Therefore, in some years the real interest rate was negative or was at a very low level,

which was a major impediment to the development of the financial market.

One of the important financial sector policy reforms introduced under liberalisation policies was to move away from a regime of low interest rates. With the increase of bank rates from 8.5 percent to 10 percent in 1977 and a sharp increase in interest rates on deposits of the Government-owned National Savings Bank (NSB), the most dominant mobiliser of financial savings, Sri Lanka moved to a high interest rate regime. Interest rates on commercial bank deposits have been freely determined but they were guided by the rates offered by the NSB.

Under the government policy of keeping deposit rates at a higher level and thus fixing NSB rates to maintain positive real interest rates, lending rates also had to be kept high. Continued inflationary pressure, a reflection of a high rate of monetary expansion, compelled the country to adopt restrictive monetary policy. As a result interest rates continued to remain at a high level. However, this had adverse repercussions in the financing of working capital and fixed capital requirements. In 1997, with the moderation of monetary growth and inflationary pressures, steps were taken to bring down interest rates with the objective of expanding credit to promote economic growth in the country. The Statutory Reserve Requirement on commercial deposit liabilities was reduced by 3 percentage points and non-BOI exporters were also allowed to obtain foreign currency loans. In addition, there was a substantial decline in the government financial requirements with the inflow of privatisation proceeds. As a result, both the Average Weighted Prime Lending Rate (AWPR) and the Average Weighted Deposit Rate (AWDR) declined during 1997. Following this, other deposit and lending rates also declined and remained at a stable level.

One of the main pre-conditions for the development of a private debt securities market is having a smooth risk free yield curve in order to plan long-term financing arrangements. The Treasury bill rates have served to provide a short-term (up to one year) risk free yield curve. However, the non-availability of a long-term yield curve is a disadvantage for issuers as well as investors with respect to private long-term debt securities as there is no proper way of pricing an issue.

Table 10.2
Real Interest Rate
(in Percent)

Year	Commercial Banks 12 month fixed deposit rate	Colombo Consumer Price Index	Real Interest Rate
1974	4.7	12.3	-6.8
1980	20.0	26.1	-4.80
1985	15.0	1.5	13.30
1990	16.0	21.5	-4.50
1991	15.0	12.2	2.50
1992	16.7	11.4	4.76
1993	16.0	11.7	3.85
1994	13.5	8.4	4.70
1995	13.5	7.7	5.39
1996	14.3	15.9	-.90
1997	11.5	9.6	1.73

Source: Central Bank of Sri Lanka

Realising this, the Central Bank introduced longer term securities, i.e., Treasury bonds in 1997 on an auction basis with maturities of up to four years. These market-oriented government securities were a new development in the capital market. Legislation was passed in 1995 to legalise these issues. The Treasury bonds carry a coupon rate, with interest paid semi-annually and are sold by auction. The yield rate on these bonds is market determined. The issue of these bonds will provide the private sector with medium-term bench mark interest rates and provide a risk free yield curve for a period beyond the one year provided by Treasury bills. This would add greatly to the development of securitisation.

From the investors' point of view, the yield offered for securities should be higher than the money market rates to attract investment.

LOLC offered a fixed interest rate of 17.5 percent for its asset backed notes based on the prevailing interest rates in the market when the securities were issued. Starting from early 1997, market interest rates began to decline following the reduction of the SRR and the decline in inflation during the year. Therefore, investors in LOLC securities benefited while the LOLC was at some disadvantage. Hence, a change in interest rates will be a disincentive either to the investor or to the originator as the case may be, as the commitment made for a fixed interest rate is for a relatively long period. Due to this reason, the determination of the interest rate to be paid to investors of securities is very important and expertise is needed to make accurate forecasts of market rates. Meanwhile, as the inflation rate has a significant impact on the determination of interest rates, keeping inflation at a lower and a stable level is important. In Sri Lanka, the inflation rate has been a problem due to its wide variations as seen in the Table 10.2.

(vii) Capital Market Developments

Since the liberalisation of economic policies, the capital market in Sri Lanka has achieved a noteworthy development. Stock market activities expanded due to developments in the corporate sector, incentives provided by the Government to develop the market and the privatisation of state owned enterprises. As a result, the equity market has achieved an impressive growth. However, the development of the debt securities market has been sluggish until recently when several steps were taken to develop the market.

As mentioned earlier, the introduction of Treasury bonds and the provision of a long-term yield curve were important steps taken to develop the debt securities market. The Colombo Stock Exchange (CSE) allowed some companies to list their debenture issues on the CSE and to trade those through the CSE in the secondary market. This has helped to attract investor interest and hence, enhance the demand for such debentures. Further, the CSE is currently examining the possibility of listing commercial paper issues which would be a further step towards formalising the debt securities market.

Meanwhile, the Government in its budget proposals in the recent past has paid special attention to developing the stock and debt markets through the provision of the following incentives

(i) As the number of companies which are listed in the CSE is small, a special incentive was given in the 1996 budget for listing in the CSE by giving income tax exemptions for the capital gains arising from transactions in the CSE.

(ii) As a move to develop a long-term debt market, bonds and other debt securities of quoted public companies which are traded through the stock exchange, were exempted from stamp duty in the same budget proposal. An exemption was also given for turnover tax on share market transactions.

(iii) In the 1998 Budget proposals, with the objective of deepening the debt market, companies which issue debt instruments, have been exempted from income tax, capital gains or profit on the sale of debentures, bonds and other debt instruments provided that they seek a listing for debt instruments in the Colombo Stock Exchange.

(iv) The stamp duty was reduced from 2 percent to 0.1 percent for mortgage backed securities against housing loans in the 1998 Budget.

These policy decisions have helped to expand capital market activities. As mentioned in a previous section, it is impossible to impose regulations for registration for all the companies which use securitisation as a source of funds. Therefore, the most appropriate way to improve investor protection and the tradability of debt instruments such as ABS or MBS is to encourage companies to be listed on the CSE.

The obstacles with respect to development of the capital market in Sri Lanka could be outlined as follows:

(a) One of the main obstacles to the growth of the debt securities market in Sri Lanka has been the lack of demand for such instruments. Even though captive sources such as the Employees' Provident Fund (EPF), Employees' Trust Fund (ETF), insurance companies and pension funds have a large amount of resources, almost all these funds are invested in government securities. For example, EPF has about Rs 145 billion worth of deposits under its management and about 98 percent of these are invested in government rupee loans, Treasury bills and Treasury bonds. Even though the EPF Act does not have any restrictions on investment

of the outstanding amount of the fund, practically a large amount of the money available in the fund is invested in Government securities to assist the Government in financing its large deficits.

(b) Meanwhile, the National Savings Bank has been restricted by its Act to invest only in government guaranteed securities. Therefore, the NSB had to obtain a guarantee from the Bank of Ceylon, which is a state bank, to invest in mortgage backed securities issued by LOLC. However, an amendment to the NSB Act was introduced in November 1995 and it was allowed to invest in guaranteed debentures. Private provident funds and private insurance companies are also restricted in their investment policies and the purpose of this is to prevent investments in funds which are high-risked. These restrictions on captive sources has prevented them from investing in more profitable instruments. For the future development of an efficient debt securities market, elimination of these restrictions would be required.

(c) Securitisation involves a complex procedure and hence usually this source of funding is used to raise large amount of funds. In Sri Lanka, the investor base is still very small when captive sources are excluded. In some other Asian countries such as Indonesia, there are no restrictions on the raising of funds through securitisation in the international market using a foreign SPV. In Sri Lanka, since the capital account has yet to be liberalised, raising funds in the international market is restricted. Therefore, it is necessary to examine whether foreign capital should be allowed in for the future development of securitisation, in Sri Lanka.

(d) Lack of clear public knowledge on securitisation is one critical factor impeding the growth of the market. Even the institutions which need a cheaper and quicker source of funds do not have a good understanding of securitisation. Therefore, a public awareness campaign similar to that carried out by the CSE and the SEC for the promotion of the share market is required to overcome this problem.

(e) For securitisation to be attractive, an active secondary market is a pre-requisite to provide liquidity for investors. In Sri Lanka, secondary market activities with respect to debt securities are sluggish. However, the development of a secondary market depends

on a number of other factors such as issuing quality securities (which has a lower default risk), people's awareness of securitisation, and having efficient market intermediaries in the form of dealers/ market makers. In addition, the establishment of a clearing and depositing system for debt securities is also required for the smooth functioning of securitisation transactions in the future.

(f) The lack of a homogeneous asset base suitable for securitisation would also be a major impediment for many institutions in Sri Lanka.

(vii) Accounting Practices

In Sri Lanka, accounting practices of banks and other financial institutions are based on the Generally Accepted Accounting Principals (GAAP) used in published financial statements and Regulatory Accounting Principals (RAP) adopted in reports for supervisory agencies. Accounting practices with respect to securitisation have to be considered according to GAAP and RAP requirements.

To identify whether a securitisation transaction is an on-balance sheet item or an off-balance sheet item, it is necessary to see whether the transaction constitutes a sale or a borrowing. A securitisation transaction qualifies as a sale if the securitised assets are sold to a third party (SPV) without recourse and without retention of any residual interest in the assets. Such assets could be removed from the seller's balance sheet. In addition, an issuer can avoid reserve requirements[6], deposit insurance premiums and capital requirements. These are applicable for both GAAP and RAP. In the event that the above conditions are not satisfied, the transaction would be similar to borrowing with fixed repayment terms and would remain on the originator's books.

6. In some countries like Australia, the money obtained through securitisation is considered as deposits and subject to reserve requirements. However, there is no such requirement in Sri Lanka as securitisation has yet to be used by any commercial bank.

(a) Capital Adequacy Requirements for On-Balance Sheet and Off-Balance Sheet Items

Commercial banks in Sri Lanka are required to maintain risk weighted capital adequacy ratios based on requirements laid down by the Banking Regulations and Supervisory Practices (BASLE) Committee. Exercising national discretion permitted under the BASEL agreement, the Central Bank of Sri Lanka has modified these standards. In such modifications, the practices of other developed financial systems in the region have been considered.

Accordingly, as highlighted in section 10.2.1 (iv), capital adequacy requirements for Tier 1 and Tier 2 capital should be maintained at 4 percent and 8 percent respectively of the risk weighted assets. The guidelines have also been issued for credit risk weights for all assets. There are five credit risk classifications for banks in Sri Lanka i.e., 0 percent, 10 percent, 20 percent, 50 percent, and 100 percent and capital adequacy is defined in relation to the total risk weighted assets. (For a detailed classification of assets on different risk weights see Appendix 10.3).

As mentioned above when assets are sold without recourse, there are no further obligations to the seller and therefore, capital adequacy or reserve requirements are not applicable for such transactions. However, if the securitisation transaction is arranged with recourse, the asset will appear in the originator's balance sheet. Meanwhile, if a bank gives a guarantee for a securitisation issue or underwrites it on behalf of any other institution, it would be a contingent liability of the bank. Even though these are off-balance sheet items, they should be accounted for in the capital adequacy calculations. For this purpose, the principal amount of off-balance sheet items should be converted into credit equivalent by using a credit conversion factor.

Principal amount of off-balance sheet item	*	Credit conversion factor	=	Credit equivalent of off-balance sheet item

The weight for credit conversion on general guarantees of indebtedness or bank acceptances is 100 percent while on underwriting of shares/securities is 50 percent. (A detailed table on credit conversion weights for off-balance sheet items is given in the Appendix 10.4).

10.4.2 Feasibility of Developing Securitisation

Securitisation first came to the Sri Lankan capital market in 1995 when the LOLC used it with the technical assistance of the International Finance Corporation. Since then, no other securitisation arrangements have been recorded though consideration has been given to its use as a source of obtaining liquidity by some financial institutions. The biggest obstacle as explained in the previous section to the growth of securitisation is the lack of development of the debt market in Sri Lanka. Although the history of Sri Lanka's capital market dates back to the 1890s, a noteworthy development of the market was achieved only after 1977 when the economic reforms were introduced. However, during all these years, the market development was mainly in the area of equity related instruments. Issuing debentures by some financial institutions through the stock exchange in the recent past is a step towards improving the debt instruments in the capital market. Meanwhile, some financial institutions are engaged in some other financing arrangements like private placements rather than using securitisation as they perceive it as a complex procedure with various impediments.

(i) Securitisable Assets in Sri Lanka

Among the securitisable assets in Sri Lankan banks and other financial institutions are housing loans as they have a larger asset base in comparison with other assets. Major institutions which provide housing loans are the National Development Bank, National Savings Bank, State Development and Mortgage Bank, Housing Development Financing Corporation, and the National Housing Development Authority. Total approved housing loans of these institutions was Rs.4428 million in 1996 which was 26 percent of their total lending. Apart from these institutions, commercial banks also provide staff housing loan facilities. Since these are long-term lending, the recovery of such loans takes a long time and it would affect the liquidity position of the institution. To increase lending to low income families, the SMIB and HDCF have already made arrangements to issue mortgage backed securities based on their housing loans.

Leasing has become an important source of alternative financing to entrepreneurs in Sri Lanka. Therefore, lease receivables are another pool of assets available for securitisation. Since the inception of the

equipment leasing industry in 1981, the volume of assets leased has trended upward particularly in the past few years. The leasing industry in Sri Lanka comprises three specialised leasing companies, referred to as "Leasing Companies", in addition to the commercial banks, finance companies, merchant banks and development finance institutions which engage in leasing. The main areas where leasing facilities are available are in the trading, industry, transport, and services sectors. The total amount of leasing facilities provided by three leasing companies amounted to Rs.1,921 million at the end of 1996. Generally, most leasing facilities are provided for a long period. Therefore, as a way of obtaining liquidity in the short-run, lease receivables could be used for securitisation. In the survey, four institutions have mentioned their willingness to use lease receivables for securitisation.

Another asset available is credit card receivables. The credit card business in Sri Lanka started in 1979. At present, there are nine commercial banks and one non-bank financial institution engaged in this business. Credit for both domestic and international transactions is available. The outstanding amount of credit card receivables as at end-July 1997 was Rs.746 million. However, credit card receivables are short-term and balances fluctuate frequently. This may be a disadvantage with respect to securitisation.

Long-term loans other than the housing loans and trade credits are other available assets for securitisation. However, due to tremendous diversity in the profiles of borrowers such as beneficiary groups, maturity patterns etc., it will be difficult to find homogeneous pools of these assets which is an essential requirement of the securitisation process.

The objective of conducting the above mentioned sample survey was to ascertain the perception of the banks and financial institutions in Sri Lanka on the applicability of the securitisation process, their willingness to use the instrument, the perceived problems and impediments for implementation. A survey was conducted using a sample of ten commercial banks, a development bank, a merchant bank and a leasing company. Except for three commercial banks, ten institutions responded to the questionnaire. The views of these institutions could be summarised as follows.

10.4.3 Applicability of Securitisation as Source of Funding

All the institutions which responded to the questionnaire are unanimous on the point of securitisation becoming an important tool due to following aspects:

(i) It would solve the problem of asset liability mismatch.

(ii) It achieves the objective of improving capital adequacy and it would be beneficial to those institutions which are presently having problems in meeting capital adequacy requirements.

(iii) It is an efficient means of raising funds as funding cost would be lower than the traditional bank financing.

(iv) It gives a higher return to investors than from money market instruments.

10.4.4 Impediments of Using Securitisation

Almost all the institutions which have responded to the survey are of the view that the following difficulties will arise for securitisation in Sri Lanka.

(i) Non-availability of credit rating facilities.
(ii) Non-availability of a stable long-term yield curve.
(iii) High tax rates at various intermediate stages.
(iv) Legal problems when transferring assets and setting up bankruptcy proof SPV.
(v) Lack of investor awareness.
(vi) Inactive secondary market.
(vii) Transaction size is too small to be cost effective.
(ix) Difficulties of debt recovery process.

10.4.5 Impact on Banking Business.

Most of the institutions in the survey are of the view that securitisation would expand the availability of long-term funds for borrowers. Further, it was mentioned that it would enhance

banking business if commercial banks play a vital role as facilitators while it would enhance the new avenues for investors. However, some institutions are of the opinion that the traditional banking business of borrowing and lending will be adversely affected.

10.4.6 Intentions to Use Securitisation in Future

Six institutions have mentioned their intention of using securitisation in the future. Of these, four institutions are willing to use lease receivables, one institution - housing loans and one institution - credit card receivables.

Based on these views it could be said that the feasibility of developing securitisation in Sri Lanka will depend on the elimination of the aforementioned constraints and impediments. The arrangements to establish a credit rating agency, tax incentives especially for housing mortgages and encouraging listing of debt instruments in the stock exchange by giving some tax concessions are positive steps which have been taken so far and these will be favourable for the development of securitisation in future.

10.5 Cost Benefit Analysis for Securitisation as an Alternative Source of Funding

In making a cost benefit analysis, a hypothetical example has been used taking into account the current interest rates and tax rates prevailing in Sri Lanka. The effective rate of interest which is defined here as the Internal Rate of Return (IRR) has been used for the comparison of two alternative sources of funding.

Option 1 : Bank Loan

ABC & Company, which is a leasing company is seeking funds with the purpose of expanding leasing activities of the company. The amount expected to be obtained for this purpose is Rs.650 million. If the company borrowing this amount from a bank is to repay in 10 equal annual installments, the bank is willing to provide the loan at an interest rate of 19 percent. The loan will be disbursed in two equal installments in the first and second year. The IRR for this borrowing could be computed as follows.

Table 10.3
The IRR for a Bank Loan

Year	Loan Disburse-ment	Repayment	Outstanding Balance (end of year)	Interest Payment at 19%	Net Cash Flow
0	325				325.0
1	325	65	585	111.2	148.9
2		65	520	98.8	-163.8
3		65	455	86.5	-151.5
4		65	390	74.1	-139.1
5		65	325	61.8	-126.8
6		65	260	49.4	-114.4
7		65	195	37.1	-102.1
8		65	130	24.7	-89.7
9		65	65	12.4	-77.4
10		65	-	0	-65.0
IRR	19 percent				

Option 2 : Securitisation

Alternatively ABC & Company can issue securities by mortgaging its lease receivables to a SPV. In this regard, the following assumptions could be made:

1. The present value of future cash flows of lease receivables to be securitised is Rs.650 million. The capital amount of these lease receivables is Rs.560 Mn. These leases will receive an interest of 20.5 percent. The present value of future cash flows have been calculated using a discount factor of 14.5 percent considering the present interest rate structure in the country (see Table 10. 4).

2. The value of mortgage to the SPV is Rs.650 Mn. The SPV issues securities to investors at 10.5 percent or 12.5 percent interest per

annum (current Treasury bill rate is around 12 percent). Interest to investors will be paid on a quarterly basis while the principal payment will be paid at the end of the 10 year period.

3. The SPV provides a loan facility to ABC & Company for Rs.650 Mn. at an annual interest rate of 13.5 percent or 14.5 percent. A fixed amount of interest on Rs.650 Mn. has to be paid to investors throughout the 10 year period. The difference of 3 percent or 2 percent (13.5 percent-10.5 percent or 14.5 percent - 12.5 percent) is SPV's income.

4. The servicing of the loan on behalf of the SPV will be done by ABC & Company. For this, the SPV pays a servicing fee of 1.5 percent on the year end outstanding lease receivables (Table 10. 6).

5. ABC & Company should transfer all the money received from leases immediately to the SPV and the SPV deposits this money with the custodian bank to be used for principal repayment to the investors at the end of the 10 year period.

6. The SPV re-invests its interest receipts from the ABC & Company (keeping a sufficient amount for interest payments to investors and for other expenses) in Government's three month Treasury Bills. Interest rate on such investments is assumed to be 12 percent.

7. The SPV's administrative expenses including bank charges are assumed to be Rs.5 Mn. in the first year and for the next three years, to increase by 5 percent and remain unchanged thereafter.

8. ABC & Company undertakes to meet any deficit in the amount required to meet interest and capital payment. The maximum default rate for lease receivables is assumed to be 1 percent. (Table 10. 6)

9. The taxes applicable are assumed to be constant for the 10 year period. The cost benefit analysis of mortgage backed securities based on above information is tabulated in the following tables:

Table10.4
Present Value Calculations of Future Cash Flows from Leasing to be Received by ABC & Company (Rs. Mn.)

Year	Installments	Interest received (after turnover tax)	Net cash flow	DCF 14.5%	Present value
1	84.15	113.9	198.0	0.87	172.93
2	84.15	96.8	180.9	0.76	138.00
3	84.15	79.7	163.8	0.67	109.15
4	67.32	62.6	129.9	0.58	75.60
5	67.32	49.0	116.3	0.51	59.08
6	56.10	35.3	91.4	0.44	40.56
7	44.88	23.9	68.8	0.39	26.66
8	39.27	14.8	54.1	0.34	18.30
9	28.05	6.8	34.9	0.30	10.31
10	5.61	1.1	6.7	0.26	1.74
Total	561.0				652.35

As appears in the Table 10.7, if the originator pays 13.5 percent for the loan taken from the SPV, the originator's IRR is 14 percent and if the rate of interest to the SPV is 14.5 percent, the IRR is 15 percent. Under these alternatives SPV has a net gain before income tax of Rs.141.6 million and Rs.12.4 million respectively. Therefore, obtaining a loan from the SPV at 13.5 percent and paying 10.5 percent interest to investors is preferable for both the originator and the SPV. When compared with the IRR on a bank loan, IRR on securitisation is less by 4 percent.

Alternative to mortgaging assets to the SPV, the originator has the option of transferring (selling) lease receivables to the SPV. Then the receipts from leasing is owned by the SPV. The SPV can collect receivables and invest them until payments have to be made to investors. The originator has an opportunity of earning a servicing fee from the SPV if he still gets the responsibility of collecting lease receivables. As seen in Table 10.9, the IRR on transferring assets to the SPV is similar to the IRR on mortgaging assets. However, the SPV is in a better position under the sale option (Table 10.10) compared with the loan option as SPV's re-investment income is higher

Table10. 5
SPV's Re-investment Income

At 13.5percent Interest from Originator						At 14.5percent Interest from Originator				
Year	Interest from ABC &Co.	Cash for Expense	Balance cash	Cumula-tive cash deposit	Re-invest-ment at 12%	Interest from ABC &Co.	Cash for Expenses 90percent	Balance cash	Cumula-tive cash deposits	Re-invest ment at 12%
1	87.75	80.40	7.35	7.35	-	94.25	93.40	0.85	0.85	-
2	87.75	79.39	8.36	15.71	1.88	94.25	92.39	1.86	2.71	0.32
3	87.75	78.39	9.36	26.95	3.23	94.25	91.39	2.86	5.89	0.71
4	87.75	77.66	10.09	40.28	4.83	94.25	90.66	3.59	10.19	1.22
5	87.75	76.65	11.10	56.21	6.75	94.25	89.65	4.60	16.02	1.92
6	87.75	75.81	11.94	74.90	8.99	94.25	88.81	5.44	23.38	2.81
7	87.75	75.13	12.62	96.51	11.58	94.25	88.13	6.12	32.30	3.88
8	87.75	74.54	13.21	121.29	14.56	94.25	87.54	6.71	42.88	5.15
9	87.75	74.12	13.63	149.47	17.94	94.25	87.12	7.13	55.16	6.62
10	87.75	74.04	13.71	181.12	21.73	94.25	87.04	7.21	68.99	8.28

Table 10.6
Default Amount and Loan Servicing Fee

Year	Principal Amount	Default Rate	Repayments on Rs.560mn		Balance Outstanding	Default Amount	Net Cash Flow	Loan Servicing Fee
			percent	Rs. Mn.				
1	560	-	15	84.15	476.85	-	84.15	7.15
2		0.15	15	84.15	392.70	0.59	83.56	5.89
3		0.15	15	84.15	308.55	0.46	83.69	4.63
4		0.15	12	67.32	241.23	0.36	66.96	3.62
5		0.16	12	67.32	173.91	0.28	67.04	2.61
6		0.25	10	56.10	117.81	0.29	55.81	1.77
7		0.35	8	44.88	72.93	0.26	44.62	1.09
8		0.78	7	39.27	33.66	0.26	39.01	0.50
9		0.85	5	28.05	5.61	0.05	28.00	0.08
10		1.00	1	5.61	-	5.60	-	-
Tota 1			100	561.00		8.15	551.85	27.35

Table 10.7
Cash Flow of the Originator (Loan Option)

Year	0	1	2	3	4	5	6	7	8	9	10
Receipts											
Loan from the SPV	650.00										
Servicing fee from SPV (table 6)		7.15	5.89	4.63	3.62	2.61	1.77	1.09	0.50	0.08	0.00
Total	**650.00**	**7.15**	**5.89**	**4.63**	**3.62**	**2.61**	**1.77**	**1.09**	**0.50**	**0.08**	**0.00**
Payments											
Transfer of lease receivables for repayments to investors											650.00
Interest Payments to the SPV (1) 13.50%		87.75	87.75	87.75	87.75	87.75	87.75	87.75	87.75	87.75	87.75
(2) 14.50%		94.25	94.25	94.25	94.25	94.25	94.25	94.25	94.25	94.25	94.25
Initial expences	10.00										
Total (1) 13.50%	**10.00**	**87.75**	**87.75**	**87.75**	**87.75**	**87.75**	**87.75**	**87.75**	**87.75**	**87.75**	**737.75**
(2) 14.50%	**10.00**	**94.25**	**94.25**	**94.25**	**94.25**	**94.25**	**94.25**	**94.25**	**94.25**	**94.25**	**744.25**
(1) Net cash flow before indirect taxes option 1	**640.00**	**-80.60**	**-81.86**	**-83.12**	**-84.13**	**-85.14**	**-85.98**	**-86.66**	**-87.25**	**-87.67**	**-737.75**
(2) Net cash flow before indirect taxes option 2	**640.00**	**-87.10**	**-88.36**	**-89.62**	**-90.63**	**-91.64**	**-92.48**	**-93.16**	**-93.75**	**-94.17**	**-744.25**
Indirect Taxes											
Stamp Duty	13.00										
National Security Levy		0.32	0.27	0.21	0.16	0.12	0.08	0.05	0.02	0.00	0.00
Total Taxes	**13.00**	**0.32**	**0.27**	**0.21**	**0.16**	**0.12**	**0.08**	**0.05**	**0.02**	**0.00**	**0.00**
(1) Net cash flow after indirect taxes option 1	627.00	-80.92	-82.12	-83.33	-84.29	-85.26	-86.06	-86.71	-87.27	-87.67	-737.75
(2) Net cash flow after indirect taxes option 2	627.00	-87.42	-88.62	-89.83	-90.79	-91.76	-92.56	-93.21	-93.77	-94.17	-744.25
IRR Option 1 14%											
Option 2 15%											

Table 10.8
Income Statement of SPV (Loan Option)

Year	0	1	2	3	4	5	6	7	8	9	10
Receipts											
Interest income from Originator Table 5		87.75	87.75	87.75	87.75	87.75	87.75	87.75	87.75	87.75	87.75
		94.25	94.25	94.25	94.25	94.25	94.25	94.25	94.25	94.25	94.25
Reinvestment income Table 5		0.00	1.88	3.23	4.83	6.75	8.99	11.58	14.56	17.94	21.73
			0.32	0.71	1.22	1.92	2.81	3.88	5.15	6.62	8.28
Total Revenue		87.75	89.63	90.98	92.58	94.50	96.74	99.33	102.31	105.69	109.48
		94.25	94.57	94.96	95.47	96.17	97.06	98.13	99.40	100.87	102.53
Payments											
Interest to Investors		68.25	68.25	68.25	68.25	68.25	68.25	68.25	68.25	68.25	68.25
		81.25	81.25	81.25	81.25	81.25	81.25	81.25	81.25	81.25	81.25
Loan servicing fee to the originator		7.15	5.89	4.63	3.62	2.61	1.77	1.09	0.50	0.08	0.00
Administrative and other expences		5.00	5.25	5.51	5.79	5.79	5.79	5.79	5.79	5.79	5.79
Total Expenses		80.40	79.39	78.39	77.66	76.65	75.81	75.13	74.54	74.12	74.04
		93.40	92.39	91.39	90.66	89.65	88.81	88.13	87.54	87.12	87.04
Profit Before Tax		7.35	10.24	12.60	14.93	17.85	20.93	24.20	27.76	31.56	35.44
		0.85	2.18	3.57	4.81	6.52	8.25	9.99	11.85	13.74	15.49
Indirect Taxes (at 13.5%interest & 10.5% interest cost)											
Stamp duty	13.00										
Turn over tax on interet receipts 1%		0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
National security levy on interest income 4.5%		3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95
Total	**13.00**	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83
Indirect Taxes (at 13.5%interest & 10.5% interest cost)											
Stamp duty	13.00										
Turn over tax on interet receipts 1%		0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
National security levy on interest income 4.5%		4.24	4.24	4.24	4.24	4.24	4.24	4.24	4.24	4.24	4.24
Total	**13.00**	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
Profit after indirect taxes before income tax	**-13.00**	2.52	5.42	7.77	10.10	13.02	16.10	19.37	22.93	26.74	30.62
	-13.00	-4.34	-3.00	-1.61	-0.37	1.34	3.06	4.81	6.67	8.56	10.30

Table 10.9
Sale Option (transfering assets to SPV)
Originators Cash Flow

Year	0	1	2	3	4	5	6	7	8	9	10
Receipts											
Sale of assets to the SPV	650.00										
Servicing fee		7.15	5.89	4.63	3.62	2.61	1.77	1.09	0.50	0.08	0.00
Total	**650.00**	**7.15**	**5.89**	**4.63**	**3.62**	**2.61**	**1.77**	**1.09**	**0.50**	**0.08**	**0.00**
Payments											
Loss of lease receivables due to selling assets		198.00	180.93	163.85	129.94	116.28	91.40	68.79	54.07	34.88	6.75
Initial expenses	10.00										
Total	**10.00**	**198.00**	**180.93**	**163.85**	**129.94**	**116.28**	**91.40**	**68.79**	**54.07**	**34.88**	**6.75**
Net cash flow before indirect taxes	**640.00**	**-190.85**	**-175.04**	**-159.22**	**-126.32**	**-113.67**	**-89.63**	**-67.70**	**-53.57**	**-34.80**	**-6.75**
Indirect taxes											
National security levy	0.00	0.32	0.27	0.21	0.16	0.12	0.08	0.05	0.02	0.00	0.00
Stamp Duty	13.00										
Total taxes	13.00	0.32	0.27	0.21	0.16	0.12	0.08	0.05	0.02	0.00	0.00
Net cash flow after indirect taxes	**627.00**	**-191.17**	**-175.30**	**-159.43**	**-126.48**	**-113.79**	**-89.71**	**-67.74**	**-53.59**	**-34.80**	**-6.75**
IRR **15%**											

Table 10.10
Income Statement of SPV

Year	0	1	2	3	4	5	6	7	8	9	10
Receipts											
Interest Income from Leasees (table 10)		113.9	96.8	79.7	62.6	49.0	35.3	23.9	14.8	6.8	1.1
Reinvestment income (table 10)		12.6	24.7	36.3	45.4	54.1	60.9	65.8	69.7	71.8	70.8
Total Revenue		**126.4**	**121.5**	**116.0**	**108.0**	**103.1**	**96.2**	**89.7**	**84.5**	**78.6**	**71.9**
Expenses											
Interest to Investors 12.5%		81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
Administration & Other expenses		5.0	5.3	5.5	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Servicing fee		7.2	5.9	4.6	3.6	2.6	1.8	1.1	0.5	0.1	0.0
Total Expenses at 12.5% interest		**93.4**	**92.4**	**91.4**	**90.7**	**89.6**	**88.8**	**88.1**	**87.5**	**87.1**	**87.0**
Profit/ loss before taxes		**33.0**	**29.1**	**24.7**	**17.4**	**13.4**	**7.4**	**1.6**	**-3.0**	**-8.5**	**-15.1**
Indirect taxes											
Stamp duty	13.0										
Turnover tax		1.1	1.0	0.8	0.6	0.5	0.4	0.2	0.1	0.1	0.0
National security levy		5.1	4.4	3.6	2.8	2.2	1.6	1.1	0.7	0.3	0.0
Total indirect taxes	**13.0**	**6.3**	**5.3**	**4.4**	**3.4**	**2.7**	**1.9**	**1.3**	**0.8**	**0.4**	**0.1**
Profit/Loss after indirect taxes	**-13.0**	**26.7**	**23.7**	**20.3**	**13.9**	**10.7**	**5.4**	**0.3**	**-3.8**	**-8.9**	**-15.2**

Table 10.11
Cash Flow of the Originator

Year	0	1	2	3	4	5	6	7	8	9	10
Receipts											
Loan from the SPV (securities issued at at a 5% discount)	617.50										
Servicing fee from SPV (table 5)		7.15	5.89	4.63	3.62	2.61	1.77	1.09	0.50	0.08	0.00
Total	**617.50**	**7.15**	**5.89**	**4.63**	**3.62**	**2.61**	**1.77**	**1.09**	**0.50**	**0.08**	**0.00**
Payments											
Transfer of lease receivables to the custodian account											650.00
Interest Payments to the SPV (1)		87.75	87.75	87.75	87.75	87.75	87.75	87.75	87.75	87.75	87.75
(2)		94.25	94.25	94.25	94.25	94.25	94.25	94.25	94.25	94.25	94.25
Initial expences	10.00										
Total (1)	10.00	87.75	87.75	87.75	87.75	87.75	87.75	87.75	87.75	87.75	737.75
(2)	10.00	94.25	94.25	94.25	94.25	94.25	94.25	94.25	94.25	94.25	744.25
(1) Net cash flow before indirect taxes option 1	607.50	-80.60	-81.86	-83.12	-84.13	-85.14	-85.98	-86.66	-87.25	-87.67	-737.75
(2) Net cash flow before indirect taxes option 2	607.50	-87.10	-88.36	-89.62	-90.63	-91.64	-92.48	-93.16	-93.75	-94.17	-744.25
Indirect Taxes											
Stamp Duty	13.00										
National Security Levy		0.32	0.27	0.21	0.16	0.12	0.08	0.05	0.02	0.00	0.00
(1)Net cash flow after indirect taxes, at option 1	594.50	-80.92	-82.12	-83.33	-84.29	-85.26	-86.06	-86.71	-87.27	-87.67	-737.75
(2)Net cash flow after indirect taxes, at option 2	594.50	-87.42	-88.62	-89.83	-90.79	-91.76	-92.56	-93.21	-93.77	-94.17	-744.25
IRR Option 1 15%											
Option 2 16%											

These computations have been done with the assumption that the originator has a good reputation and investors are not hesitant to invest in those securities. However, in Sri Lanka, due to the unavailability of credit rating facilities and underdeveloped financial market, this would not be a reasonable assumption. In light of this situation, securities would most probably be issued at a discount. In the above example, if securities are issued at a 5 percent discount, the IRR for the originator would be increased to 16 percent (Table 10.11). Therefore, it can be seen that the benefit of securitisation is dependent on the marketability of such instruments.

10.5.1 Implications for Central Bank Policies

Maintaining stability in the financial system is one of the main objectives of the policies of a Central Bank. Financial sector deregulations, emerging new financial instruments and liberalisation of interest rates have made this task more complicated in many countries. As a long-term financial market instrument, securitisation has become an attractive source of raising funds. Even though securitisation is usually defined as financial disintermediation, as financial institutions including commercial banks may be involved in many ways in the process of securitisation, it may not necessarily be so. However, it has led the deficit units in the financial market to obtain necessary financing directly from surplus units rather than going for traditional bank borrowing. This has been a main concern of monetary authorities as it affects monetary management.

In Sri Lanka, the commercial paper, a source of direct financing in the short-run, is a popular instrument at present. The outstanding issues of commercial papers exceeded Rs.2 billion by end-December 1997 while more than forty institutions have used this instrument to obtain short-term liquidity. As previously mentioned, securitisation is still in the infant stage in Sri Lanka like many other countries in the Asian region. However, it has been revealed that many financial institutions in Sri Lanka are hoping to use securitisation in the future as a way of raising liquidity .

When the market moves towards more direct financing, traditional banking activities of accepting deposits and lending them to deficit units would be affected. This is because when securitisation becomes an attractive instrument of financing, bank borrowings by deficit units

will decrease. Similarly, investors would prefer investing in securities as it will give a higher return than interest paid by banks. Therefore, income derived by banks through traditional lending business will be affected forcing banks to diversify their business towards fee-based activities which are not reflected in the balance sheet. Hence, the supervisory and regulatory task of the central bank would be more complicated.

Availability of credit rating facilities will create a more conducive environment for securitisation. However, in the absence of credit rating, the issuer will have to get a bank guarantee in order to improve the marketability of such debt instruments. By issuing guarantees, banks can earn a fee income. However, such guarantees will create a hidden contingent liability in the banks. If the cash flows from the securitised assets are not received as expected, banks will have to bear the ultimate responsibility of paying investors who invested in securities. As this raises the risk of banking activities, the supervisory authorities may have to enhance the scope of supervision of commercial bank activities. On the other hand, if investors are not protected through credit enhancement procedures, the confidence in the whole financial system will deteriorate in a case of a default by issuers. Hence, the respective authorities may need to consider issuing directives to regulate the securitisation process.

As the monetary authority, the central bank can control money supply through influencing the credit creating capacity of commercial banks. This could be done through imposing high reserve ratios, raising the bank rate or through direct credit controls. However, if the credit requirements of the economy are fulfilled through direct financing such as commercial papers or securitisation, and without going for bank borrowings, the central bank cannot influence such credit through its usual credit control instruments. Therefore, direct financing will create an environment where monetary management will be more difficult. Hence, the capacity of the central bank to regulate the total volume of credit and thereby the aggregate nominal expenditure will be adversely affected.

A central bank designs policies to achieve its stabilisation objectives by regulating money supply as there is a stable relationship between commercial banks domestic credit and aggregate demand in the economy. However, when funds are received on a large scale

through non-commercial bank sources, for example through securitisation, this relationship would no longer be stable. Hence, there may come a stage when the central bank will have to look for new instruments and intermediary targets to achieve its objectives.

10.6 Conclusion

Deregulation of the financial system, interest rate liberalisation and enhanced economic and business activities have contributed largely to financial innovations in many economies. Securitisation is one such innovation of direct financing which has helped banks and non-bank institutions to obtain liquidity rather than through time consuming and costly bank borrowings. However, the success of securitisation largely depends on the development of the financial system in an economy. A favourable legal and tax system, credit rating facilities, investor awareness, a stable long-term yield curve, developed capital markets and the availability of a homogeneous asset base are pre-conditions which are essential for the success of this source of funding. Many developed countries which have satisfied these pre-conditions have benefited greatly from securitisation. Even though many developing countries perceive the necessity of moving towards such methods of direct financing, it has not really taken off ground due to the lack of development in their financial systems. Sri Lanka is not an exception. However, even in the light of not so favourable conditions, LOLC, a leasing company, securitised its lease receivables in 1995 with the technical assistance of the IFC. Two more housing financing institutions are expected to securitise their housing loans in the near future. In addition, a survey undertaken for this study revealed that some bank and non-bank institutions are willing to use lease receivables, housing loans, credit card receivables and trade credits for this purpose in future.

Introducing a long-term yield curve by issuing long-term Treasury bonds, reducing stamp duties for housing mortgages and the provision of tax incentives for those companies which wish to be listed in the Colombo Stock Exchange are some positive steps which have been taken for developing the debt securities market in Sri Lanka. However, constraints on the investment of funds by captive sources and excessive usage of such funds for the Government's budgetary financing and limitations on using foreign SPVs due to regulations on capital account transactions of the balance of payments are major impediments which

have resulted in a small investor base for securitisation in Sri Lanka. For the development of securitisation, satisfying the pre-conditions as well as removing existing barriers would be necessary. At the same time, the Central Bank should concentrate on supervisory aspects as the wide usage of securitisation in the financial market will require greater regulation and supervision of financial institutions to ensure the stability of the financial system. In addition, widespread use of securitisation would reduce the effectiveness of traditional instruments used for monetary management and thus present new challenges to a central bank in its efforts to implement monetary policy.

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Appendix 10.1

The Questionnaire Sent to Financial and Non-Financial Institutions

1. Has your organisation ever used securitisation as a source of fund? If so, please provide details.

2. Are you contemplating securitisation of your loans or other assets in the near future? Please give categories of assets that are expected to be used for this purpose? (eg., housing loans, credit card receivables, lease receivables etc.)

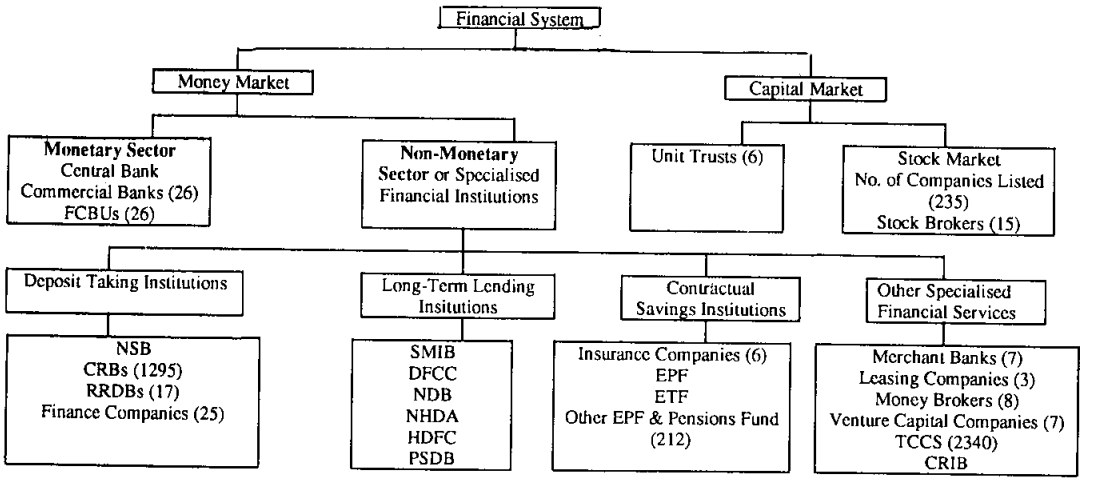
3. Please explain the accounting practices with regard to any assets that have been securitised (off-balance sheet treatment).

4. What are the impediments that you have observed in using securitisation as a source of funds?

5. What are the chances of securitisation becoming a really meaningful instrument for asset and liability management and for maintaining capital adequacy requirements?

6. Please indicate briefly, what in your view, would be the impact of securitisation on the future of banking business?

Financial System of Sri Lanka



Note : RRDBs : Regional Rural Development Banks
SMIB : State Mortgage and Investment Bank
DFCC : Development Finance Corporation of Ceylon
NHDA : National Housing Development Authority
HDFC : Housing Development Finance Corporation
EPF : Employees' Provident Fund
ETF : Employees' Trust Fund
TCCs : Thrift & Corporate Credirt Sociaties
CRIB : Credit Information Bureau
CRBs : Corporate Rural Banks
PSDB : Pramuka Savings & Development bank
FCBUs : Foreign Currency Banking Units
NSB : National Savings Bank

Appendix 10.3

Computation of Risk Weighted Assets of Commercial Banks (on balance sheet items)

Code	Assets	Total Amount *	Risk Weight =	Risk Weighted Assets Amount
01	Cash- Local Currency/Foreign Currency	***	0%	***
02	Gold & Bullion	***	0%	***
03	Due from Central Bank of Sri Lanka	***	0%	***
04	Sri Lanka Government Treasury Bills	***	0%	***
05	Sri Lanka Govt / Central Bank Securities	***	0%	***
06	Other Securities Guaranteed by Sri Lanka Government	***	0%	***
07	Loans and Advances:			
07.01	Against Cash Deposits /Gold	***	0%	***
07.02	Against SL Govt Guarantee/ Securities	***	0%	***
07.03	Guaranteed by Central Bank of Sri Lanka	***	0%	***
07.04	Staff Loans Secured by Provident Fund Balances	***	0%	***
07.05	Guaranteed by OECD Govt. Central Banks	***	10%	***
07.06	Guaranteed by non–OECD Govt. Central Banks	***	20%	***
07.07	Guaranteed by Local/ Foreign Commercial banks & Local / Foreign Development Finance Institutions with maturity up to one year	***	20%	***
07.08	Guaranteed by OECD Incorporated Banks	***	20%	***
07.09	Guaranteed by SLECIC	***	50%	***
07.10	Secured by a Primary Mortgage over Residential Property	***	50%	***
07.11	Other Loans and Advances	***	100%	***
08	Due from Branches Abroad	***	0%	***
09	Due from Banks Abroad	***	20%	***
10	Due from Local Banks Including Development Financial Institutions	***	20%	***
11	Due from FCBUs	***	10%	***
12	Cash Items in Process of Collection	***	20%	***
13	Other Investments (Excluding Items deducted from total capital)	***	100%	***
14	Fixed Assets	***	100%	***
15	Other Assets	***	100%	***
16	Total			***

Computation of Risk Weighted Assets of Commercial Banks
(on balance sheet item)

Code	Instruments	Principal Amount of = Off-balance Sheet item	Credit = Conversion Factor	Credit Equivalent Of Off-balance sheet item
17 17.1	Direct Credit Substitutes General Guarantees of Indebtedness	***	100%	***
17.2	Standby LCs Serving as Financial Guarantees			
17.3	Bank Acceptances			
17.4	Others (please specify)			
18 18.1	Transaction – related Contingencies Performance Bonds, Bid Bonds & Warrantees	***	50%	***
18.2	Standby LCs related to particular Transactions			
18.3	Others (please specify)			
19	Short-term Self-Liquidating Trade-related Contingencies	***	20%	***
19.1	Shipping Guarantees			
19.2	Documentary Letters of Credit			
19.3	Trade related acceptances			
19.4	Others (please specify)			
20	Sale and Repurchase Agreements and Assets Sale with recourse where the credit risk remain with the bank	***	100%	***
20.1	Sale and Repurchase Agreements			
20.2	Housing Loans sold with recourse			
20.3	Other Assets sold with recourse			
20.4	Forward Assets sold with recourse			
20.5	Partly Paid Shares/Securities			
20.6	Others (please specify)			
21	Obligations under an On-going Underwriting Agreement	***	50%	***
21.1	Underwriting of Shares/Securities Issue			
21.2	Note Issuance Facilities and Revolving Underwriting Facilities			
21.3	Others (please specify)			
22	Other Commitments with an Original Maturity of upto One Year of which can be unconditionally cancelled at any time	***	0%	***
22.1	Formal Standby facilities and credit lines			
22.2	Undrawn Term Loans			
22.3	Undrawn Overdraft Facilities			
22.4	Others (please specify)			
23	Other Commitments with an Original Maturity of Over One Year	***	50%	***
23.1	Formal Standby facilities and credit lines			
23.2	Undrawn Term Loans			
23.3	Others (please specify)			
	Total			***