



**JAPAN
BANK FOR
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COOPERATION**

JBICI Research Paper No. 35

The Structured Bond Market in Thailand

April 2007

JBIC Institute
Japan Bank for International Cooperation

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Foreword

10 years have passed since the Asian financial crisis in 1997. During that period, East Asian countries have grown steadily, overcoming various difficulties such as SARS, Avian flu, and soaring oil price. As one of the factors underpinning this growth, the progress of regional cooperation and economic integration could be highlighted. On the trade and investment front, MNCs have expanded their production and distribution network in East Asia while a number of Economic Partnership Agreements (EPA) and Free Trade Agreements (FTA) have been concluded across the region. Meanwhile, on the monetary and financial front, various initiatives have been undertaken especially in the forum of ASEAN+3 Finance Ministers' process, as known by Economic Review and Policy Dialogue (ERPD), Chiang Mai Initiative (CMI), Asian Bond Markets Initiative (ABMI).

Among others, ABMI has been vigorously promoted as an important policy agenda among the ASEAN+3 countries, which aims to mitigate the maturity and currency mismatches in financing and facilitate the use of Asia's high savings for investments in Asia by developing the bond markets. JBIC has actively contributed to this ABMI. In Thailand where a large number of Japanese firms have invested for their business operations and there exists a relatively developed bond market in ASEAN, JBIC has conducted various attempts to diversify and deepen her bond market by issuing baht denominated bond and extending guarantee to the baht denominated bonds issued by Japanese subsidiaries.

In order to further develop the bond markets in Asia, attention has been recently paid to the initiatives to diversify the bond products and bond issuers, particularly the structured bond market such as securitization and infrastructure bond. This research paper aims to unveil the snapshot of structured bond market in Thailand (including government policy, legal and regulatory framework, and market infrastructure) and the impediments to its market development perceived by the market participants, and to make a policy recommendation, so that the structured bond market could be developed further. We hope that this research paper would be of any help to deepen the deliberation on the development of bond markets in Asia.

Last but not least, we would like to express our sincere gratitude to those people from the relevant organizations both in Japan and abroad for their extensive support and cooperation rendered to us in conducting this research.

April 2007

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The information on this paper is for informational purposes only. The Thai Bond Market Association assumes no liability for any inaccurate, delayed or incomplete information, nor for any actions taken in reliance thereon. The information in part of major impediment for structured bond market in Thailand which mainly comes from individual opinion of market participants is not verified by ThaiBMA. Prospects and Policy Recommendation in last part of working paper is not necessarily indicative of structured bond market direction in the future. Prior to making any investment decision, it is recommended that you consult directly with a qualified investment advisor.

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EXECUTIVE SUMMARY

The Structured Bond Market in Thailand

The Thai bond market made a significant stride of development following the 1997 Asian crisis when Thai Government issued substantial amount of debt instruments to mobilize funds for the nation's development in many aspects. At the end of 2006, outstanding value of domestic bonds totaled THB 4,085.26 billion, the majority portions or about 77% of which were government debt securities comprising loan bonds (LB) and treasury bills (TB) issued by the Ministry of Finance (43%), state agency bonds* (22%) and state-owned enterprise bonds (12%). The remaining 23% were long term corporate bonds and commercial papers whereas the Baht denominated foreign bonds shared marginally by less than 1%.

The long term corporate bonds in Thailand are mainly straight and plain. For structured bonds which are featured to be more complicated than general debt instruments, the market is still at an early stage of development. The structured bonds can be categorized into two groups: structured notes and securitization bonds. Most of the structured notes in Thailand are issued by commercial banks and are mainly Equity-Linked Notes (ELN). Although the period 1993-1998 witnessed the emergence of securitization market development in Thailand, it did not gain considerable momentum until late 2003 when Dhanarak Asset Development Company Limited (DAD), an asset management company owned by the Ministry of Finance (MOF), mobilized funds through the issuance of the largest size of securitization bonds in Thailand for the Government Complex Project.

Currently only a handful of key players are active in the securitization transactions with quality and variety of securitization projects in Thailand. A number of constraints were cited as key impediments to the development of the structured bond market which can be summarized as follows:

- Knowledge and Technological Know-how

Potential originators and issuers of securitization projects are lack of knowledge and experience in the concept of raising funds through securitization. On the other hand, knowledge and experience of institutional and individual investors in terms of product features, risk and return analysis are also considered insufficient. The major investors of Thai debt securities are institutional investors such as mutual funds, pension funds, and insurance companies. Most of them do not have confidence in

* Bonds issued by Bank of Thailand (BOT) and the Financial Institutions Development Fund (FIDF).

investing in such instruments. In particular, they are skeptical about the accuracy and reliability of the financial projections made in packaging the securitization deals.

Meanwhile, only a few underwriters in Thailand are considered as skillful and have a particular expertise in the securitization of structured bond. Among them are major local banks such as Siam Commercial Bank, Bangkok Bank and TMB Bank and Foreign financial institutions such as The Hong Kong and Shanghai Banking Corporation and Citicorp. So far, it has been a difficult task for the underwriters to convince the potential originator to issue securitized bonds.

- Legal Framework and Accounting Standards

Although the Emergency Decree on Specific Purpose Juristic Person for Securitization or the so called “Securitization Act” has been promulgated in Thailand since 1977, providing a legal foundation for special-purpose legal entities of asset securitization and extending considerable legal benefits to SPVs registered with the SEC, the securitization deals which have taken place up until now are still very limited. The securitization Act is deemed as complicated compared to securitization related laws in other countries. In addition, there is no law pertaining directly to the placement of collateral and also no legislation facilitating the guarantee of the SPV status in each securitization process.

As far as the accounting practice for the securitization process is concerned, there is no clear-cut accounting standard for the transfer of assets from the originators to the SPV. To most potential participants in the securitization transactions, there are no specific conditions for the determination of a real true sale transaction and it cannot be conclusive that whether sale of assets or transfer of debt is considered as a true sale or not.

As Thailand does not have a trust law for the time being, the role of the bondholders’ representative in respect of securitized bonds is still not distinctly defined. Normally, investors would like to have the bondholders’ representatives acting on their behalf in the event of credit default.

- Complexity of Securitization Process

The securitization process is regarded as complicated and requires concerted effort of expertise on different aspects. The process cited as most difficult and complicated is the future cash flow projection, especially for projects involving a relatively long period e.g. 30 years. Accordingly, in packaging a securitization deal, experienced professionals are required at every stage particularly the appointment of financial advisors, legal and tax counsels, the servicers, the bondholders’ representatives. This inevitably results in relatively higher cost of financing compared with the issuance of straight and plain vanilla bonds.

- Economy of Scale

In many countries, the most common underlying assets of asset-backed securitized bonds are auto loan and credit card receivables. However, the asset size of most financial institutions providing auto financing and credit card services in Thailand is not large enough to create economies of scale in employing a large pool of experts to facilitate the securitization transaction. They consequently turn to other methods of financing such as the issuance of plain debentures or borrowing from banks.

The nature of small auto loans and credit card receivables market also leads to the fact that the value of structured bonds backed by auto loans and credit card receivables offered for sales is relatively small, resulting in limited liquidity as major investors such as insurance companies, pension funds and mutual fund companies, which hold large investment portfolio, usually buy these securities and hold them until maturity. Limited liquidity of the issues contributes to the slow development of the structured bond market in Thailand and subsequently creates the cyclical cause-and-effect. As the market is small and the number of issuers is limited, it is not attractive for creditworthy companies abroad to undertake credit enhancement/guarantee business in Thailand. The inadequate market infrastructure further retards the growth of the market.

- Data Quality and Data Management

One of the critical factors for the success of a securitization project is the sufficiency of data and information which is essential for the analysis of current situation, the projection of future cash flows, as well as the monitoring of asset quality. Without an effective database management system, a major constraint for most participants in the securitization market is that relevant data and information is not collected in a standardized pattern and consequently cannot be utilized effectively.

Information disclosure is another concern of the investors. Although information disclosure at the initial process is adequate, the performance report of the project is limited to a group of investors, and the general investors have to acquire such information from the servicers on a case by case basis.

Despite the constraints discussed above, there are certain evidences supporting a favorable prospect for the future development of the structured bond market in Thailand:

1. Commercial banks which are the major source of assets for securitization are likely to face with a number of challenges in the near future including the requirement to comply with IAS 39, loan default, and intensifying competition with mutual funds for deposits. This may in turn force them to sell their assets for securitization and consequently increase the market supply.

2. Securitization on auto loan and credit card receivables will continue to grow as long as there are still significant spread between the lending rate and the cost of funding through securitization.
3. Amendment to the Securitization Act and the Enforcement of the Trust Law are currently under process. Once the legislation is put into effect, it would certainly help create a more comprehensive and clear-cut framework for the securitization process both on the legal and accounting aspects.
4. The liberalization of the securities business scheduled for 2012 may facilitate the expansion of structured bonds in Thailand as more participants are expected to enter into the market.
5. A more stable political situation and higher economic growth is expected soon, encouraging investment of infrastructure projects which increase the need for raising funds through bond issuance.
6. The regulators are considering promoting monoline insurance or guarantor of securitization bonds to boost the investors' confidence. This should increase the growth of the asset backed securitization market.

Policy Recommendations for the Development of the Structured Bond Market in Thailand

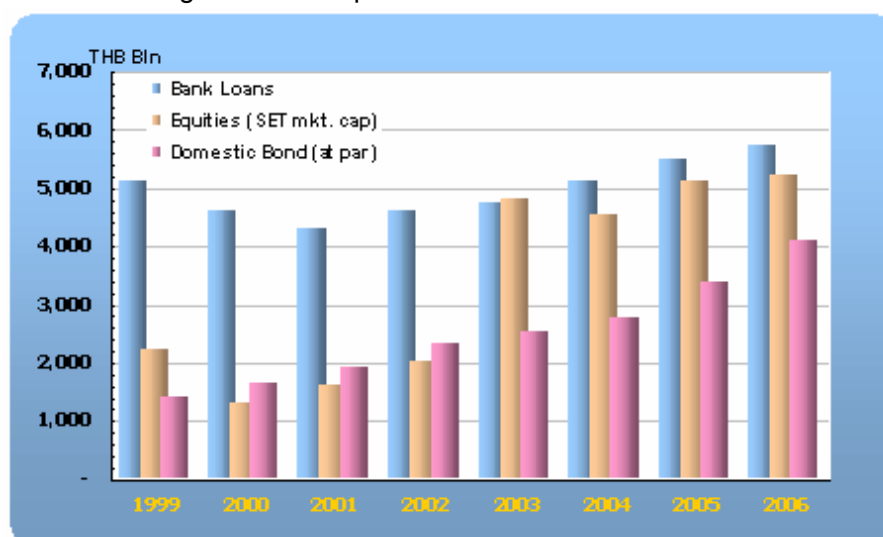
1. Related institutions both in the public and private sectors including universities should collaborate in providing knowledge and technical know-how on securitization. It is recommended that a central unit responsible for the education of this type of securities is established in order to expand the potential investor base.
2. The Bank of Thailand must play an active role in motivating and facilitating risk management of commercial banks through securitization.
3. The government should continue to provide appropriate infrastructure for issuance of securitization bond for example the enforcement of trust law for non-taxable SPVs or entities, expansion of investor base, credit enhancement , etc.
4. Establishment of an effective data management system is essential for facilitating the development of the securitization market. In particular, it is strongly recommended that the credit information of all borrowers in Thailand, which is the invaluable assets of the Credit Bureau, should be utilized more efficiently and effectively in order to benefit all participants in the securitization market in the long run.

I Overview of Thai Bond Market Development

1. Overview of the Bond Market in Thailand

Although the first issuance of debt instrument in Thailand took place a century ago, it was not until the past decade that the Thai bond market made a significant stride of development. In the wake of the Asian economic crisis in 1997, the Thai Government which envisaged huge budget deficits and financial liabilities became the major issuer of debt instruments to mobilize funds to facilitate the nation's development in many aspects. This in turn provided the impetus for the Thai bond market to take off.

Figure 1: Composition of Thai Financial Market



Source: ThaiBMA

Domestic Outstanding Value

At the end of 2006, outstanding domestic bonds totaled THB 4,085.26 billion; increased by 600 folds from the value of THB 546.80 billion in 1997 (see Figure 1). The Thai bond market can be categorized into three major segments, i.e., government debt securities, corporate bonds, and foreign bonds.

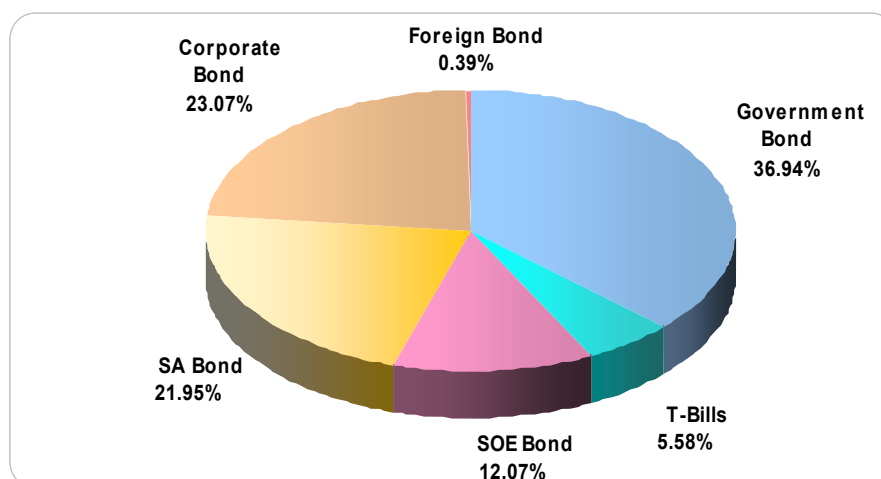
The government debt securities comprise loan bonds (LB), treasury bills (T-Bill), state-owned enterprise bonds (SOE), and state agency bonds (SA)¹. There are two

¹ The state agency bonds (SA) are bonds issued by the Bank of Thailand and the Financial Institutions Development Fund (FIDF) which is established as a separated juristic entity from the Bank of Thailand to rehabilitate financial institutions to maintain stability in the financial system. Currently, the FIDF has stopped issuing bonds and all the SA bonds are those issued by the Bank of Thailand.

major types of bonds in the corporate sector: long-term corporate bonds and commercial papers. Foreign bonds are instruments issued by international foreign institutions (IFIs), foreign governments (FGs), multinational corporations (MNCs) or any foreign issuers which were endorsed by the Ministry of Finance to raise funds domestically through the issuance of bonds.

Of the total outstanding bond value of THB 4,085.26 billion at the end of 2006, the majority portions, or about 77%, are government debt securities. This comprises loan bonds and treasury bills issued by the Ministry of Finance (THB 1,737.07 billion or 43%), state Agency bonds (THB 896.70 billion or 22%) and state-owned enterprise bonds (THB 492.89 billion or 12%) (see Figure 2). The structure demonstrates heavy reliance on supply from the public sector, in particular the Ministry of Finance. Currently loan bonds and treasury bills are auctioned weekly, with the auction value of approximately THB 5,000-8,000 billion per week for loan bonds, and approximately THB 14,000-18,000 billion per week for treasury bills.

Figure 2: Outstanding Value of Domestic Bond as of Dec 2006



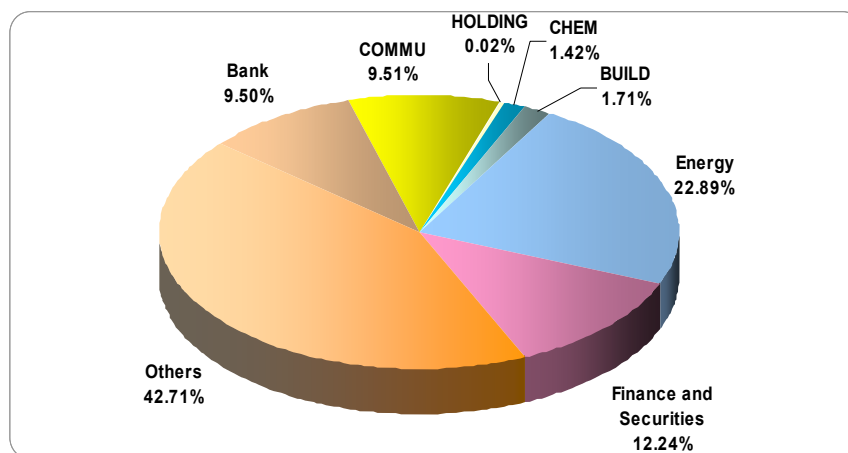
Source: ThaiBMA

The Baht denominated foreign bond² made its debut in Thailand in 2005 when the Asian Development Bank (ADB) issued THB 4 billion worth of domestic bonds on 24 May 2005. This was followed by the THB 3 billion worth of bonds issued by Japan Bank for International Cooperation (JBIC) on 7 September of the same year. In 2006, there were 3 issues of foreign bonds, 2 of which were issued by ADB worth THB 6.5 billion and another issued by CitiGroup, Inc., worth THB 2.6 billion. The total outstanding value of foreign bonds stood at THB 16.10 billion at the end of 2006.

² International Financial Institutions, the Foreign Governments and Financial Institutions of Foreign Governments, and foreign entities are permitted by the Ministry of Finance to issue Baht-denominated bonds or debentures in Thailand.

In the private sector, the outstanding value of long term corporate bonds and commercial papers combined to a total amount of THB 942.51 billion at the end of 2006. Among the top five industrial sectors, corporate bonds of the energy sector ranked in the first place with 23% share, followed by finance and securities companies (12%), communications sector and banking sector (10% each), construction material sector (2%) and chemicals sector (1%) (see Figure 3). The majority of corporate bonds (about 93%) are assigned a credit rating of “A” and above.

Figure 3: Outstanding Value of Corporate Bonds by Business Sector



Source: ThaiBMA

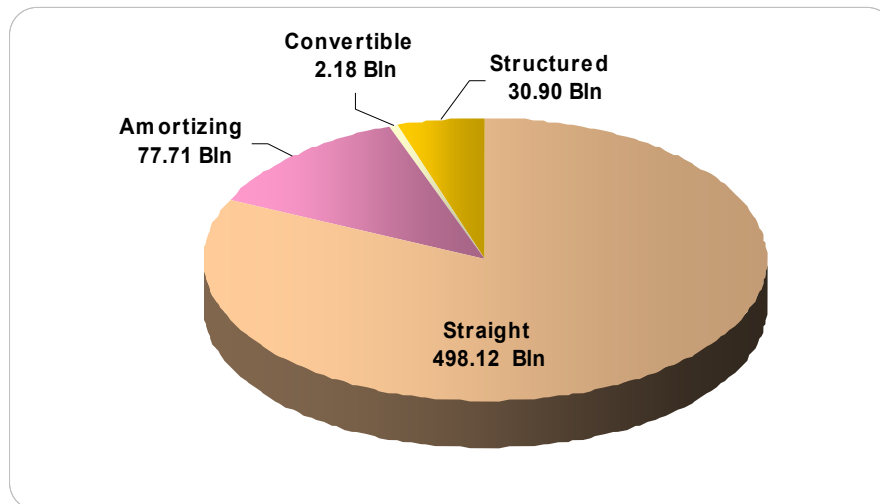
Table 1: Top Most Outstanding Value of Corporate Bonds by Issuer

Business Sector	Issuer
1. Energy	1. PTT Public Company Limited 2. Energy Fund Administration Institute (Public Organization) 3. Banpu Plc. 4. Glow Energy Plc. 5. Ratchaburi Electricity Generating Co., Ltd.
2. Finance and Securities Companies	1. Toyota Leasing (Thailand) Co., Ltd. 2. Siam Commercial Leasing plc., 3. Krungthai Card Plc. 4. Thanachart Capital Plc. 5. Kiatnakin Finance Plc.
3. Communications	1. Advanced Info Service Plc. 2. Total Access Communication Plc. 3. True Corporation Plc.
4. Bank	1. Kasikornbank Plc. 2. Bank of Ayudhya Plc. 3. Krung Thai Bank Plc. 4. TMB Bank Plc. 5. Small and Medium Enterprise Development Bank
5. Construction Material	1. Siam Cement Plc., 2. Holcim Capital (Thailand) Co., Ltd. 3. Sahaviriya Steel Industrial Plc. 4. Canadoil Asia Co., Ltd. 5. Vanachai Group Plc.
6. Chemicals	1. Aromatics (Thailand) Plc. 2. PTT Chemical Public Company Limited

Source: ThaiBMA

Almost all government debt securities in Thailand are straight bonds whereas long term corporate bonds are more diversified in type of issuance. Apart from straight bonds which accounted for 82% of the total outstanding value of long term corporate bonds registered with the Thai Bond Market Association (ThaiBMA), some companies also issued amortizing bonds (13%), structured bonds (5%), and convertible bonds (less than 1%) (see Figure 4).

Figure 4: Outstanding Value of Corporate Bond by Type of Bond



Source: ThaiBMA

2. The Structured Bond Market

Although the characteristics of long term corporate bonds in Thailand are more diversified relative to government debt securities, they are still plain and not so complicated. As for structured bonds which are featured to be more complex than general debt instruments, they can be categorized mainly into two groups: structured notes and securitization bonds.

2.1 Structured Notes

The development of structured notes in Thailand materialized when the Securities and Exchange Commission (the SEC) issued a notification in May 2003, namely, the SEC Notification Gor Jor 4/2546 Regarding Application and Permission to Offer Newly Issued Structured Notes, permitting corporate entities and commercial banks incorporated in Thailand, including branches of foreign banks, to mobilize fund through the issuance of structured notes.

The term structured notes stipulated in this notification are debt instruments with the following characteristics of debt repayment:

1. The amount of return is linked with a pre-determined underlying variable other than interest rate.
2. Total or partial amount of principal to be redeemed at maturity is linked with a pre-determined underlying variable.
3. Total or partial amount of return or repayment of principal at maturity can be made in the form of securities and other types of assets, except for newly issued shares of the issuer.

The above mentioned notification has been repealed by the SEC Notification Gor Yor 31/2549 dated 15 November 2006 which covered additional details about the regulations and conditions concerning the permission of the sale of structured notes.

There are currently 13 issues of structured notes traded on the secondary market in Thailand. Out of this, 12 issues are issued by commercial banks whereas another one issued by a securities house. Most of the structured notes in Thailand are Equity-Linked Notes (ELN) of which return is determined by the performance of a basket of equity securities e.g. SET Index, Nikkei 225 Index, etc. Major issues in this category are:

1. Two tranches of bills of exchanges issued by ABN Amro Bank NV, due 2008 (ABNA080A) and 2009 (ABNA096A (Not rated)) with Nikkei 225 index as the reference index.
2. “K-Smart” promissory note issued by Kasikornbank Public Co, Ltd. (KBNK088A (AA(tha))) with SET 50 index as the reference index.
3. Six tranches of promissory notes issued by Siam Commercial Bank Public Co., Ltd. due 2008 (SCB089A, SCB080A, SCB080B, SCB080C (Not rated)), due 2009 (SCB091B (Not rated)) with SET 50 index as the reference index, and due 2010 (SCB101A (Not rated)) with Community Index as the reference index.
4. ROCA-3 derivative debenture issued by SCB Securities Public Co., Ltd., with a tenor of no more than 9 months (SCBS1A37 (Not rated)) with certain three securities as the reference securities.

There are also structured notes of which coupon rate is linked with other underlying variables, for example:

5. Bills of exchange issued by Citibank NA due 2007 (CITI077A (Not rated)) with THB 6-month fixed deposit rate capped at 5.25% and floored at 3.25% as the reference rate.
6. Bills of exchange issued by ABN Amro Bank NV due 2007 (ABNA075D (Not rated)) with THB Fix 6 month capped at 4.85% and floored at 3.7% as the reference rate.

7. Subordinated debenture characterized as the hybrid tier-1 capital issued by Krungthai Bank Public Co., Ltd. (KTB06PA (A+(tha))). The instrument shall not make interest payment or accrued interest when the issuer cannot generate profit in that specific period.

2.2 Securitization

The period during 1993-1998 witnessed the emergence of securitization market development in Thailand. Initially, the securitization transactions involved the repackaging of auto receivables and export receivables for resale as tradable securities in the overseas market through Special Purpose Vehicles (SPVs). Notable transactions during this period include the Bank of Asia Receivables, TISCO Leasing and Tru-Way Company ("Thai Cars Deal"), SITCA Securitization Project, Nithipat Leasing, and Wong Paitoon.

In June 1999, LSPV Company Limited offered on a private placement basis the securitization debentures which was secured by a pledge of spirits so acquired in form of a pledge of warehouse warrants and was guaranteed by Saeng Som Company Limited, a major producer of liquor in Thailand. The program comprised 3 series of amortizing secured debentures, totaled THB 11,070 million. Another notable issue was the securitization of a pledge on unit trusts and mortgage loans of Lehman Brothers Group, with G.T Stars acting as intermediary. In the public sector, the National Housing Authority (NHA) initiated the first two public sector securitization programs in 1999. The first program worth THB 345.95 million is backed by the receivables of the Second Mortgage Corporation (SMC - the originator), and SMC SPV Company Limited acted as the SPV offering the debentures through private placement. Another program had NHA being the originator, while NHA SPV Co., Ltd. and Osprey Series I Co., Ltd acted as intermediaries, issuing short-term debentures worth a total of THB 607.9 million offered for sale to the general public. Currently, Osprey Series I Co., Ltd. has issued short-term debentures from time to time to accommodate the redemption of the short-term debentures issued under the securitization program.

As of January 2007, there are 21 issues of securitization bonds traded in the secondary market and registered with the Thai Bond Market Association, with issue size ranging from THB 77 to 6,000 million, or an average of THB 1,900 million per issue. Such securitization bonds can be categorized into 4 groups according to characteristics of the assets which were securitized as follows:

1. Asset Back Securities (7 issues by 6 companies)

Originator	Name of Issuer	No. of Issue	Name of Issue	Rating
1. Scandinavian Leasing Plc.	1. Auto Receivable SPV Co., Ltd.	1	AUTO071A	A+(tha)
2. Siam Panich Leasing Plc.	2. Siam Panich SPV 1 Co., Ltd	2	SPLV103A ; SPLV119A	AAA(thai)
3. Siam Industrial Credit Plc.	3. SICCO Special Purpose Vehicle 1 Co., Ltd.	1	SSPV09NA	AAA
4. Siam Industrial Credit Plc.	4. SICCO Special Purpose Vehicle 2 Co., Ltd	1	SSPV112A	AAA
5. National Housing Authority	5. Osprey Series I Co., Ltd	1	OSPA1A37	F1(thai)
6. National Housing Authority	6. Osprey Series II Co., Ltd	1	OSPB1A37	F1(thai)

2. Credit Card/Personal Loan Receivable-backed Securities (7 issues by 3 companies)

Originator	Name of Issuer	No. of Issue	Name of Issue	Rating
1. AEON Thana Sinsap (Thailand) Plc	1. Eternal Credit Card Special Purpose Vehicle Co., Ltd	2	ECC082A ; ECC102A	AAA(thai)
2. AEON Thana Sinsap (Thailand) Plc	2. Eternal 3 Special Purpose Vehicle Co., Ltd	4	Class A1 & A2 : ESPT092A; ESPT112A Class B : ESPT113A Class C : ESPT113B	AAA(thai) AA(thai) A(thai)
3. AEON Thana Sinsap (Thailand) Plc	3. Eternal Special Purpose Vehicle Co., Ltd.	1	ESPV102A	AAA(thai)

3. Deposit Receipts : 1 issue

Originator	Name of Issuer	No. of Issue	Name of Issue	Rating
1. Bangchak Petroleum Plc.	1. Siam DR Co., Ltd	1	BCP141A	AA

4. Future Cash Flow : 6 issues

Originator	Name of Issuer	No. of Issue	Name of Issue	Rating
1. Dhanarak Asset Development Co., Ltd	1. DAD SPV Co., Ltd	6	DAD12NA; DAD15NA; DAD20NA; DAD20NB; DAD25NA; DAD25NB	AAA

DAD SPV Company Limited

The securitization market in Thailand gained considerable momentum in late 2003 when the project of Bangkok Metropolitan Government Office Center (or the Government Complex), responsible by Dhanarak Asset Development Company Limited (DAD), an asset development company owned by the Ministry of Finance (MOF), mobilized fund through the issuance of securitized bonds. Under the program, DAD SPV Co., Ltd. (DAD SPV) plans to issue debt securities worth up to THB 24 billion within three years for sale to the general public. The issued debt securities are backed by future rental fee obligations of the Treasury Department (TD), Ministry of Finance (MOF). Such initiation is the largest size of securitized debt securities ever launched for public offering in Thailand.

Rationale for the DAD Program:

1. The government wants to centralize various governmental offices which in the past rented building space from the private sector. These offices incurred a huge sum of lease payment each year.
2. The government wants to raise funds directly from the local investors, which have an abundance of funds, without disturbing the government budget.
3. The government wants to spearhead the development of the securitization market in Thailand by building up the public familiarization and understanding of the issuance of securitized debt instruments. Although some government agency such as the National Housing Authority used to launch such securitization program in the past, they had involved short-term securities and had not much contributed to the development process of the securitization market in Thailand.

DAD SPV is scheduled to issue debt securities worth up to THB 24 billion within three years (from 2005 to 2007). The debentures are structured to receive lease and service payments from TD under a 30-year Building Space Lease Agreement, a 30-year Service Agreement, and a 5-year Furniture Procurement Agreement, collectively referred as the Asset Agreements, which TD has engaged with DAD. Proceeds from the securitized debentures are used to finance the construction of the Government Complex.

As of January 2007, DAD SPV has issued 6 tranches of securitized debentures under the program at a total value of THB 18,500 million, comprising 4 debentures issued in 2005 worth a total of THB 10,300 million, 2 tranches in 2006 worth a total of THB 8,200 million (see Table 2) and the remaining THB 5,500 million worth of debentures is expected to be launched in 2007. Following the debenture offering, the future liquidity

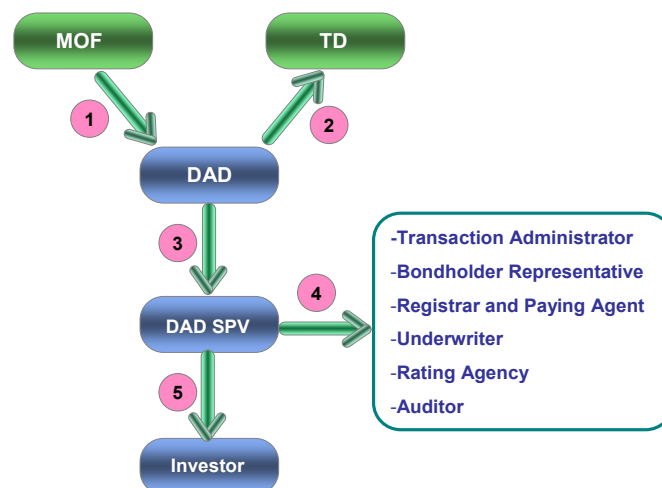
of DAD SPV will be derived from net proceeds from the offering of the THB 24,000 million of securitized debentures and the net proceeds from the main operations. As for major future flow of expenses, they will include interest and principal repayment of the debentures, and the cost of purchase of rental payment obligations, and expenditures.

Table 2: List of DAD SPV Bond

Issue Year	Issue	Tenor	Coupon (%)	Rating
2005	1.DAD12NA	7 Yrs	6.7	AAA
	2.DAD15NA	10 Yrs	7.35	AAA
	3.DAD20NA	15 Yrs	7.5	AAA
	4.DAD25NA	20 Yrs	7.99	AAA
2006	1.DAD20NB	14 Yrs	6.05	AAA
	2.DAD25NB	19 Yrs	6.5	AAA

Source: ThaiBMA

Figure 5: Legislative Framework of the DAD Program



Source: DAD SPV

1. DAD has entered into a 3-year land lease agreement with the TD (from July 2005 to June 2008) for construction of the project and another 30 years (from July 2008 to June 2038) for building lease. DAD will oversee the construction of the project and manage the properties after completion of the project.
2. DAD has leased the properties back to TD for the period of 30 years (from July 2008 to June 2038) for sub-leasing to government departments and related agencies. During this period, DAD will provide service and maintenance functions and will procure the furniture for the lessees.
3. DAD will transfer the rights to receive lease and service payments obliged to be

paid by TD to DAD SPV under the Asset Agreements in order to use part of the rights to fund the project construction and administration.

4. DAD SPV appointed related parties in the securitization program, i.e., Transaction Administrator, Bondholders' Representative, Registrar and Paying Agent, Underwriters, Rating Agency and Auditor.
5. DAD SPV issued securitized debentures under the program up to THB 24,000 billion for sale to institutional investors and the general public according to rules and regulations specified in the SEC Notification Gor Jor 4/2548.

Credit Enhancement of DAD SPV Securitized Debentures

Since the securitized debentures of DAD SPV is backed by future cash flows of receivables which DAD SPV has purchased the rights to receive from DAD under the Asset Agreements and the Government Complex is currently under construction, in order to enhance the creditworthiness of the project, and to strengthen the investors' confidence regarding interest payment and principal repayment, DAD SPV has engaged in the following conditions for credit enhancement:

1. TD is unconditionally and irrevocably obliged to pay lease and service payments in accordance with the Asset Agreements between DAD and TD throughout the life of the transaction.
2. The transaction administrator on behalf of DAD SPV is committed to allocating part of the net proceeds from the debenture issuance and the lease and service payments received from TD into three reserve accounts as follows:

2.1 General Reserve

During the construction period, an amount equating to withholding tax payable in 2008, interest and expenses payable for the period of the bond issuance date until November 2008 will be deducted from the proceeds of the bond issuance and held in the general reserve. From July 2008 onwards, this reserve at the equivalent of 12 months of withholding tax, interest and expenses payable will be funded from annual lease payment received.

2.2 Liquidity Reserve

This reserve will be funded from annual lease payments received and maintained at the equivalent of 92 days' interest and expenses. This reserve will be available to cover any shortfall or delay in such payment, but following a drawdown will be replenished on the following collection date.

2.3 Principal Accumulation Reserve

This reserve will be built from the first lease payments received in July 2008 to meet principal repayments on the bonds, according to a fixed schedule after interest, expenses and taxes have been met. This reserve will be used to repay the principal of the bonds at maturity. DAD SPV has entered into a swap agreement (the Guaranteed Investment Contract) with The Hong Kong and Shanghai Banking Corporation Ltd (HSBC), the swap counterparty, equivalent to 2005 and 2006 bond issues amount, which guarantees the return on cash held in the principal reserve account to reduce DAD SPV's negative carry risk. under the swap agreement, DAD SPV will transfer the required amount to HSBC in November each year for 2005 bond issues and in March the following year for 2006 issues, and HSBC will then return the fixed amount to DAD SPV at least 3 days prior to the due date of each bond series. Any substitution of the swap counterparty is allowed only if the rating of the counterparty is no worse than 'AAA(tha)' and/or AAA.

3. Any future issuance of debentures by the issuer under this securitization program will not impact the ratings of the outstanding debentures.

To further enhance the creditworthiness of the securitized debentures of DAD SPV and to add investors' confidence, DAD SPV has acquired credit ratings for these debentures from the two authorized credit rating agencies in Thailand, namely, TRIS Rating Co., Ltd. and Fitch Ratings (Thailand) Ltd. The 6 series of debentures issued by DAD SPV have been assigned AAA and AAA (tha) ratings from TRIS Rating and Fitch Ratings, respectively.

Related Parties in the DAD Project

Responsibilities	Operator
1. Originator	- DAD
2. Issuer	- DAD SPV
3. Transaction Administration	- Conduit Management Services Ltd. - Bangkok Bank Public Co., Ltd
4. Bondholders' Representative	- Thai Military Bank Public Co., Ltd - Thai Military Bank Public Co., Ltd
5. Registrar	- Bangkok Bank Public Co., Ltd.
6. Paying Agent	- Thai Military Bank Public Co., Ltd
7. Underwriter	- The Hong Kong and Shanghai Banking Corporation Ltd. - Fitch Ratings (Thailand) Ltd.
8. Rating Agency	- TRIS Rating Co., Ltd.
9. Swap Counterparty	- The Hong Kong and Shanghai Banking Corporation Limited
10. Legal and Tax Counsel	- White & Case (Thailand) Limited - Earnst & Young Co., Ltd.
11. Accounting Counsel	- Bangkok Bank Public Co., Ltd - Thai Military Bank Public Co.Ltd
12. Financial Advisor	- The Hong Kong and Shanghai Banking Corporation Limited
13. Financial Advisor of Originator (Program Advisor)	- Trinity Advisory 2001 Co., Ltd
14. Auditor	- Earnst & Young Co., Ltd

Source: DAD SPV

3. Government Policy and Legal/Regulatory Structure

Laws, notifications and/or regulations governing debt instrument issuance in Thailand can be categorized into major groups according to type of issuers as follows:

1. Debt instruments issued by the Ministry of Finance, which are under the following laws and regulations:
 - The Public Debts Management Act B.E. 2548
 - The Royal Decree Empowering the Ministry of Finance to Borrow and Manage the Loans to Assist the Financial Institution development Fund (FIDF) B.E. 2543
2. Debt instruments issued by state-owned enterprises, which are under the following laws and regulations:
 - Act Concerning the Establishment of State-Owned Enterprises under which each state-owned enterprise is governed separately with different details of specific rules and regulations.
 - The Public Debt Management Act, B.E. 2548, which, combined with the Act Concerning the Establishment of State-owned Enterprise, regulate the issuance of State-Owned Enterprise Bonds guaranteed by the Ministry of Finance.
3. Debt instruments issued by the Bank of Thailand, which are under the following laws and regulations:
 - The Bank of Thailand Act, B.E. 2485
 - The Royal Decree Concerning the Operations of the Bank of Thailand, B.E. 2485
 - Regulations of the Bank of Thailand Concerning the issuance of the Bank of Thailand Bond, B.E. 2546
 - The Bank of Thailand Notification Concerning the Distribution, Authorized person to Auction, Underwriting and Settlement of The Bank of Thailand Bond, B.E. 2546
4. Debt instruments issued by Thai companies incorporated under Thai laws or foreign bank branches authorized to undertake full branch operations in Thailand are regulated by
 - The Securities and Exchange Act, B.E. 2535
 - SEC Notification Gor Yor 31/2549 Re: Application and Permission to Offer Newly Issued Debentures
 - SEC Notification Gor Jor 2/2549 Re: Offering of Foreign Debentures to Commercial Banks in Thailand
 - SEC Notification Gor Jor 4/2549 Re: Offering of Foreign Bonds or Foreign Debentures in Thailand
 - BOT Notification Re: Permission for Commercial Banks to Undertake Securitization Business

In addition, business entities established under the Thai laws, or foreign bank branches authorized to undertake full branch operations in Thailand, are able to issue securitized debentures in three alternatives as follows:

- 1) Issue debentures under the Emergency Decree on Specific Purpose Juristic Person for Securitization (The Securitization Act) and the SEC Act.
- 2) Issue debentures under the SEC Act.
- 3) Comply with the rules and regulations concerning the establishment of mutual funds purchasing distressed assets from financial institutions.

Issuers of securitized debentures under the Securitization Act are entitled to enjoy tax privileges provided that all remaining benefits of the securitization program (net of debt repayment and related expenditures of the program) are transferred to the originator to ensure that real purpose of the securitization is to mobilize funds for the originator. A special purpose juristic person or an SPV is set up for the purpose of securitization and will act as a mechanism to issue securities in order to segregate out the assets of the originator for asset management only. An SPV may invest or seek benefits from the transferred assets in accordance with the approval of the SEC but this shall not impact the debt repayment of the program.

Regarding securitization process under the regulations concerning the establishment of mutual funds purchasing distressed assets from financial institutions, or the so called type 2, type 3 and type 4 mutual funds, these funds are entitled to the same tax benefits as general mutual funds, i.e., corporate tax and property transfer tax exemptions. Type 2, 3, 4 mutual funds were set up during the period when Thailand encountered economic crisis in 1997 in order to raise funds through the sale of unit trusts of the funds to purchase distressed assets of financial institutions. Currently, the SEC Office has stopped receiving applications for establishment of these funds, with the last fund scheduled to terminate on August 31, 2015. Apart from this, the SEC currently has no policy to allow SPV in the form of mutual funds, although Section 9 of the Securitization Act stipulates that a special purpose juristic person may be established in the form of a private limited company, a public limited company, a mutual fund or any other type of juristic person as may prescribed by the SEC.

SEC Notification Concerning Fund Management

1. Establishment and Management of Mutual Funds
 - SEC Notification Gor Nor 8/2547 Re : Guidelines, Conditions and Methods for Establishment and Management of Mutual Funds
 - SEC Notification Sor Kor 23/2547 Re : Establishment of Mutual Funds and Execution of Agreements for Management of Private Funds
2. Determination of Investment Ratio
 - SEC Notification Sor Nor 28/2549 Re: Investment and Acquisition of Assets by Funds

Issuers of securitized debentures can seek the SEC approval to issue securitized debentures either in accordance with the Securitization Act or not. However, it has been evidenced that currently all securitization programs were processed under the Securitization Act. Securitized debentures may be offered to investors domestically on a private placement (PP) basis or offered to offshore investors. Moreover, the new SEC notification (Gor Yor 31/2549) also allows the public offering of securitized debentures within the country.

In case of a public offering, the regulations required that a bondholder's representative must be appointed. The bondholders' representative has the duty to monitor the activities carried out by the SPV and counterparty in compliance with the agreements and endorse the change of a servicer. If the servicer is a different entity other than the originator, it must be a financial institution or a juristic person approved by the SEC. The servicer must have a separate account for debt settlement payments and the proceeds cannot be used for other purpose. The servicer must transfer the debt settlement payments together with reporting documents to the SPV within 15 business days and at the same time submit the reports to the bondholders' representatives.

Privileges of Debenture Issuance Under the Securitization Act

Issuance of securitized debentures in compliance with the terms and conditions stipulated in the Securitization Act is entitled to various privileges in the process of asset transfer between the originator and the servicer as follows:

1. If the originator acts as the servicer (remains the agent who collects and receives payments of debts after the securitization transaction has occurred.), there is no need to notify each individual obligor (debtor) of the transfer of the debt pursuant to Section 306 of the Civil and Commercial Code.
2. In the event that the originator goes bankrupt after the asset transfer, the assets of the SPV are safe. (Bankruptcy remoteness)
3. The originators and SPV's in a securitization transaction are exempted from the transfer fee payment of assets and collateral.
4. If the originator which is a financial institution had been legally entitled to charge interest beyond 15% per annum from the debtor, normally the maximum allowed in Thailand, then the SPV is also entitled to charge the specified amount of interest once the securitization process has been completed.
5. In the event that the SPV is adjudged bankrupt, the investors of the securitized debentures which are not subordinated to other unsecured creditors have status as secured creditors under the bankruptcy law. Essentially, the holders of such instruments are entitled to payments before any other type of creditor of the SPV in

the event of a bankruptcy.

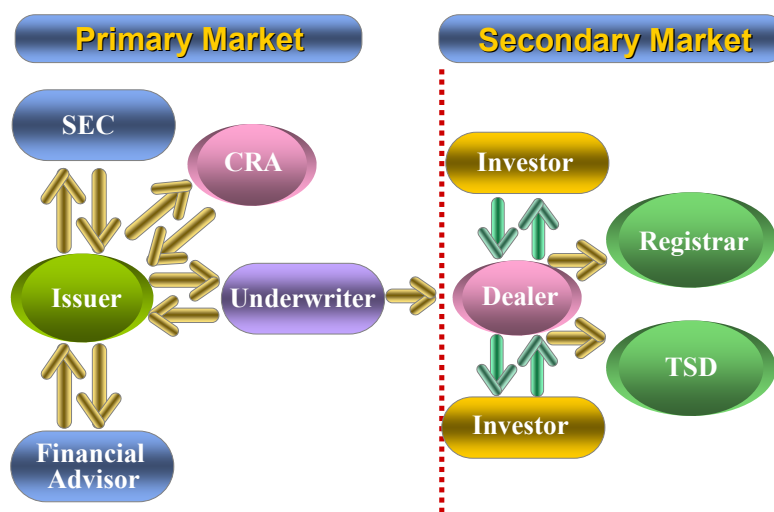
In addition, issuance of securitized debentures under the Securitization Act is also entitled to tax privileges e.g., exemption of value added tax, special business tax and stamp duties. An SPV in the form of private limited company is entitled to consider the reserves for doubtful debts as expenditures in corporate tax calculation. In the case of borrowers of the housing loans which have been transferred to an SPV, the interest payments paid for the loans are personal income tax deductible.

During 2006, four companies were granted approval by the SEC to offer 9 series of securitized debentures through SPVs under the Securitization Act, with a total issuance amount of THB 18,480 million³.

1. AEON Thana Sinsap (Thailand) Public Company Limited issued 4 series of credit card receivables securitized debentures worth THB 2,280 million.
2. Siam Commercial Leasing Public Company Limited issued 4 series of debentures backed by auto loan receivables worth THB 5,000 million.
3. SICCO Finance Public Company Limited issued debentures backed by auto loan receivables worth THB 3,000 million.
4. DAD issued 2 series of debentures backed by future flows of lease payment from the Government Office Center Project, worth THB 8,200 million.

4. Market Infrastructure and Major Market Players in Bond Market

Figure 6: Market Infrastructure for Bond Market



Source: ThaiBMA

³ See more information on ThaiBMA website

This section will discuss briefly the major players involved in the process of bond issuance in the primary and secondary markets.

Primary Market

1. Financial Advisor and Underwriter

Most issuers of debentures will appoint financial advisers and underwriters to facilitate the issuance process. The financial advisor and underwriter will assist the issuer in applying for issuance approval and filing with related regulators necessary information and documents. They will also prepare required data and information in seeking credit rating and marketing campaigns which will contribute to the success of the issue as planned. Normally, the financial advisor and the underwriter is the same company.

Currently there are 68 companies granted licenses to undertake business of debt instruments underwriters; they comprise 19 commercial banks, 39 securities houses. However, only 15 are active players in this sector, most of which are commercial banks.

In 2006, the top five debt instruments underwriters are all commercial banks, with Standard Chartered Bank (Thai) Public Company Limited ranked at the first place, followed by Kasikornbank Public Company Limited..

Underwriters Ranking Jan to Dec (Q1-Q4) 2006

Ranking	U/W	No. of Issues	Amount (THB mln.)	% Shares
1	Standard Chartered Bank (Thai) Plc.	16	38,401.00	25.64
2	Kasikornbank Plc.	20	28,223.41	18.85
3	Siam Commercial Bank Plc.	17	27,663.04	18.47
4	Citigroup Securities (Thai) Ltd	13	18,180.00	12.14
5	Bangkok Bank Plc.	14	17,618.78	11.77

Source: ThaiBMA

2. Credit Rating Agency (CRA)

According to the SEC Notification Gor Jor 30/2544, newly issued debentures must seek the credit rating from an authorized credit rating agency each time of issuance if such debentures are offered to the general public. This requirement is not applied to debentures issued for private placement. Presently there are 2 credit rating agencies authorized by the SEC, namely, TRIS Rating Co., Ltd. and Fitch Ratings (Thailand)

Ltd.

Credit ratings for debt instruments are divided into short term and long term ratings. TRIS and Fitch Ratings assign different rating symbols to indicate the creditworthiness of the debt issue as follows:

Long-term Corporate Bond

TRIS	Fitch	Rating Definition	
AAA(tha)	AAA	Highest Rating	Investment Grade Bonds
AA(tha)	AA	Very low degree of credit risk	
A(tha)	A	Low credit risk	
BBB(tha)	BBB	Moderate credit risk	
BB(tha)	BB	High credit risk	Speculative Grade Bonds
B(tha)	B	Very high credit risk	
CCC, CC, C(tha)	C	Highest credit risk	
DDD, DD, D(tha)	D	Default	

Source: TRIS Rating and Fitch Ratings

Short-term Corporate Bond

TRIS :

Symbol	Definition
T1	Issuer has strong market position, wide margin of financial protection, appropriate liquidity and other measures of superior investor protection. Issuer designated with a "+" has a higher degree of these protections.
T2	Issuer has secure market position, sound financial fundamentals and satisfactory ability to repay short-term obligations.
T3	Issuer has acceptable capacity for meeting its short-term obligations.
T4	Issuer has weak capacity for meeting its short-term obligations.

Source: TRIS Rating

FITCH RATINGS :

Symbol	Definition
F1 (tha)	Strongest capacity for timely payment of financial commitments
F2 (tha)	Satisfactory capacity for timely payment of financial commitments
F3 (tha)	Adequate capacity for timely payment of financial commitments
B (tha)	Uncertain capacity for timely payment of financial commitments
C (tha)	Highly uncertain capacity for timely payment of financial commitments
D (tha)	Actual or imminent payment default

Source: Fitch Ratings

Currently there are 177 series of debentures registered with the ThaiBMA having obtained credit ratings from TRIS, 152 of which are assigned “A” rating and above whereas 25 are assigned rating below investment grade. Meanwhile, there are 110 issues rated by Fitch Ratings, 88 of which are assigned “A” rating and above and 22 issues are assigned rating below investment grade. It is also noted that there are 18 issues which have been rated by both TRIS and Fitch.

Secondary Market

3. Bondholders’ Representative

The SEC has stipulated that a bondholders’ representative is required for the issuance of some forms of debentures, i.e., the debentures offered to the general public and the secured debentures offered on a private placement basis. According to the SEC regulations, the bondholders’ representative must be a financial institution with sound financial status and has no conflict of interest in performing the role of bondholders’ representative. The major responsibilities of a bondholders’ representative include monitoring the issuer to comply with the terms and conditions under the bonds, monitoring the interest and principal payment of the issuer, and holding the benefit of the security documents or any properties for the bondholders. Currently there are 13 bondholders’ representatives approved by the SEC as follows:

1. Bangkok Bank Public Company Limited
2. Bangkok First Investment & Trust Public Company Limited
3. Bank of Ayudhya Public Company Limited
4. Kasikornbank Public Company Limited
5. JP Morgan Chase Bank
6. Citibank, N.A.
7. Deutsche Bank
8. TMB Bank Public Company Limited
9. Bankthai Public Company Limited
10. Siam Commercial Bank Public Company Limited
11. Thanachart Bank Public Company Limited
12. Siam City Bank Public Company Limited
13. The Hong Kong and Shanghai Banking Corporation Limited

4. Registrar

A Registrar provides services to issuers and holders of securities in such areas as securities transfer, pledging, confiscation, change of particulars in the securities register, securities holder’s book closing, dividends or interest payment to securities

holders with names appear on the book at the book closing date. Currently, there are 16 companies authorized to undertake the registrar business, comprising 6 securities companies and 10 other financial institutions as follows:

Securities Companies

1. Kim Eng Securities (Thailand) Public Company Limited
2. KGI (Thailand) Securities Public Company Limited
3. TISCO Securities Public Company Limited
4. Thanachat Securities Public Companies Limited
5. BFIT Securities Public Company Limited
6. MFC Asset Management Public Company Limited

Other Financial Institutions :

1. The Bank of Thailand
2. Thailand Securities Depository Company Limited
3. Bangkok Bank Public Company Limited
4. Bank of Ayudhya Public Company Limited
5. Kasikornbank Public Company Limited
6. TMB Bank Public Company Limited
7. Bankthai Public Company Limited
8. Siam Commercial Bank Public Company Limited
9. Siam City Bank Public Company Limited
10. United Overseas Bank Public Company Limited

According to the ranking of registrars conducted by the ThaiBMA, TMB Bank Public Company Limited is the top performer among securities registrars in terms of newly issued debenture value in 2006, followed by the Siam Commercial Bank Public Company Limited (see Table 3).

Table 3: Corporate Registrar Ranking Jan-Dec (Q1-Q4) 2006 (Only Bond Issue in 2006)

Ranking	Underwriter	No. of Issues	Amount (THB mln)	% Share
1	TMB Bank Public Company Limited	20	46,887.10	31.31
2	Siam Commercial Bank Public Company Limited	15	37,300.00	24.91
3	Thailand Securities Depository Company Limited	11	36,380.00	24.30
4	Bangkok Bank Public Company Limited	7	16,000.00	10.69
5	Kasikornbank Public Company Limited	4	7,660.00	5.12

Source: ThaiBMA

5. Thailand Securities Depository Co., Ltd (TSD)

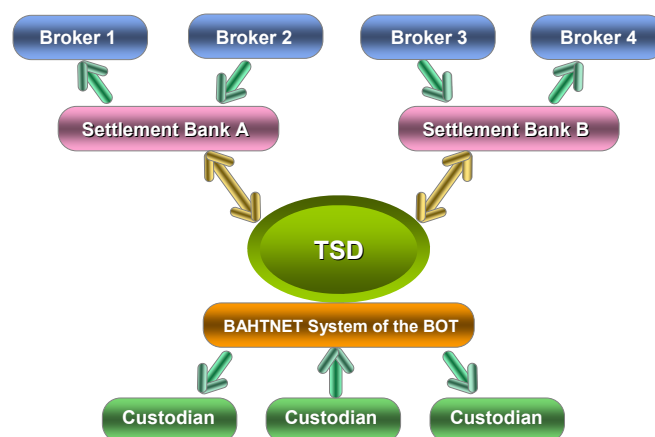
TSD is a wholly-owned subsidiary of the Stock Exchange of Thailand (SET) providing the services for its members in the following areas: securities depository, security clearing and settlement, securities registration, fund registration and back office service bureau.

Regarding securities clearing and settlement, TSD has implemented the Delivery versus Payment (DvP) method to its clearing and settlement system. It has currently used the payment method of electronic fund transfers through the settlement banks and the BAHTNET system of the Bank of Thailand instead of cheques, in order to reduce risk to clearing house, as well as to increase liquidity in the market. In this process, TSD will act as an intermediary between the two settlement banks chosen by member companies, i.e., the Siam Commercial Bank PCL and the Bangkok Bank PCL, and the custodians. The process is different pending the type of its membership as follows:

1. General members (brokers/sub-brokers) : they send/receive the payment to/from their settlements, which will in turn send /receive that payment to/from the TSD through the Bahtnet system.
2. Associate members (Custodians) : they send/receive the payment to/from the TSD through the Bahtnet system.

The TSD also acts as intermediary in securities settlement through the book entry system.

Figure 7: Securities Clearing and Settlement Process



Source: TSD

6. Dealer

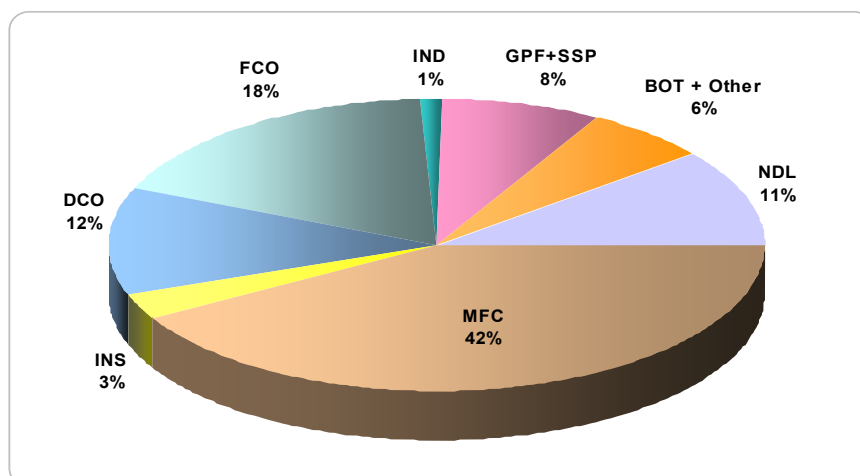
A dealer is a financial institution licensed by the SEC to trade or underwrite debt instruments in accordance with the rules and regulations prescribed in the related SEC Notification. The SEC has stipulated that the company granted debt instrument trading license must designate qualified trader who has passed the examination and registered with the ThaiBMA. Currently there are 52 debt instrument dealers, consisting of 11 Thai commercial banks, 8 foreign banks, and 33 securities companies.

7. Investor

Investors are those who trade debt instruments in the secondary market. They can be either institutional or individual investors. In the Thai bond market, major investors can be categorized into the following types:

1. Mutual Funds (MFC)
2. Domestic Companies (DCO)
3. Foreign Companies (FCO)
4. Insurance Companies (INS)
5. The Government Pension Fund (GPF)
6. The Social Security Fund (SSF)
7. Individual Investors (IND)
8. Non Dealer License (NDL)
9. The Bank of Thailand (BOT)
10. Others

Figure 8: Composition of Dealer to Client Transaction in Year 2006



Source: ThaiBMA

8. Custodian

A custodian is a bank or financial institution assigned by the mutual fund management companies or other type of clients to keep custody of their assets. In addition, the custodians also accept, deliver, check and verify the accuracy of assets, prepare the account of assets in its custody, as well as monitor and arrange to receive interests and benefits arising from investment in such assets and report to its clients. Any bank or financial institution wishing to undertake the custodian business in Thailand must seek approval from the SEC.

Currently, there are 13 custodians approved by the SEC as follows:

1. Tisco Bank Public Company Limited
2. Citibank N.A. Bangkok Branch
3. Siam Commercial Bank Public Company Limited
4. Bangkok Bank Public Company Limited
5. Kasikornbank Public Company Limited
6. Ayudhya Bank Public Company Limited
7. Siam City Bank Public Company Limited
8. TMB Bank Public Company Limited
9. Phillips Securities Public Company Limited
10. The Hong Kong and Shanghai Banking Corporation Limited
11. Bankthai Public Company Limited
12. Deutsche Bank A.G.
13. Standard Chartered (Thai) Bank Public Company Limited

5. Secondary Market and Derivative Market

5.1 Secondary Bond Market

At present, about 99% of bonds circulated in the secondary market is traded over the counter (OTC), which involves a private agreement between seller and buyer with no specific period in trading of bond and no formal market center for trading. The remaining 1% of bonds in the secondary market is traded in the exchange market of Bond Electronic Exchange (BEX), a subsidiary of The Stock Exchange of Thailand (SET). The creation of BEX is to provide retail investors with an additional channel for debt instruments investment.

For each transaction traded in the secondary market, bond dealers are required by the SEC to report all bond trading transaction, regardless of trading channels, to ThaiBMA within 30 minutes after execution. The ThaiBMA has classified the type of bond trading transaction reported by dealers into 3 types in order to use the

information for analyzing and monitoring the bond market movement and also to use as the acceptable reference data.

These transactions are classified as follows:

1. Outright Transaction - a transaction whereby the bonds are bought or sold outright in the market without any prior committed obligations or conditions.
2. Financing Transaction - a repurchase agreement (repo) transaction using bonds as collateral.
3. Other Transaction - any other transaction not classified in either of the above-mentioned categories

Total trading value in the Thai bond market has been growing remarkably over time. In 2006, the average daily outright trading value was THB 28.5 billion, an impressive growth of over 300% over the average value of THB 6.47 billion in 2001 (see Figure 9). Trading transactions mostly focus on government debt securities as Loan Bonds (LB), Treasury Bills (T-Bills) or State Agency Bonds (SA), while corporate bonds have relatively less demand in the market.

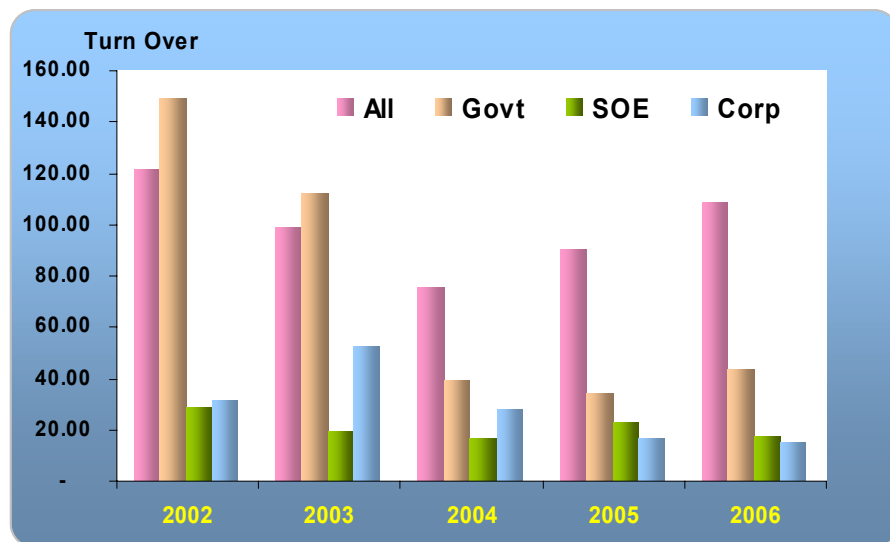
In 2006, total outright trading value was THB 4,277.50 billion, with state agency bonds (SA) gaining the highest share in outright trading value, accounted for THB 1,968.20 billion (or 46% of total outright trading value) due to large supply from the new issuance of the BOT bonds. During 2006, the BOT issued large volume of bonds as a rollover of the previous series which have already matured and also to absorb liquidity in the market. T-Bill and LB amounted to THB 1,500.30 billion and THB 631.12 billion baht, or capturing 35% and 15% shares of the total outright trading value, respectively. State owned enterprise (SOE) accounted for THB 83.83 billion (or 2% of the total outright trading value), consisting of THB 51.55 billion guaranteed SOE bonds, and THB 32.28 billion non-guaranteed SOE bonds (see Table 4).

Figure 9: Average Daily Outright Trading Value vs Outstanding Value



Source: ThaiBMA

Figure 10: Turnover Ratio by Bond Type



Source: ThaiBMA

Table 4: ThaiBMA Outright Trading Value and Outstanding Value Unit: THB Mln

Type of Securities	2005	2006	% change
	Trading	Trading	Trading
Government	438,157.52	631,117.30	44.04
State Enterprise	110,079.47	83,832.72	-23.84
- Guaranteed	71,928.46	51,554.84	-28.32
- Non Guaranteed	38,151.01	32,277.87	-15.39
T- Bills	908,448.94	1,500,202.87	65.14
State Agency	1,282,437.01	1,968,201.76	53.47
Corporate	77,685.45	92,543.82	19.13
Foreign	394.00	1,602.01	306.60
Total Value	2,817,202.39	4,277,500.48	51.84
- Monthly Average	234,766.87	356,458.37	
- Daily Average	11,498.79	17,602.88	
- No. of trading days	245	243	
No. of transactions	40,870.00	52,117.00	
- Monthly Average	3,406	4,343	
- Daily Average	166.8163265	214	
Dealer Participation	41	40	

Source: ThaiBMA

About 70% of outright trading value in the secondary market came from transactions between dealers and their clients whereas the remaining 30% was from transactions among dealers themselves. In 2006, mutual funds captured the major portion or 42% of outright trading value between dealers and their clients, followed by foreign investors with a share of 18% and domestic corporations with a share of 12% (see Figure 8).

The top ten member dealers in outright trading in 2006 consisted of six domestic banks; Kasikornbank (14.57%), Siam Commercial Bank (14.55%), Bank Thai (8.08%), Bangkok Bank (7.63%), TMB Bank (7.17%), and United Overseas Bank (Thai) Plc (6.54%), and four foreign banks; Deutsche Bank AG (8.81%), Standard Chartered Bank (7.29%), The Hong Kong and Shanghai Banking Co., Ltd (4.84%), and Citibank N.A.(4.35%) (see Table 5).

Table 5: Top Ten Active Dealer Member Dealer in 2006

Unit: THB Mln

Rank	Dealers	Share	Trading Value			Total
			Outright	Financing	Other	
1	Kasikorn Bank Plc.	14.57	812.98	311.67	19.23	1,143.88
2	Siam Commercial Bank Plc.	14.55	811.80	589.25	1.91	1,402.97
3	Deutsche Bank AG, Bangkok Branch	8.81	491.85	2.59	0.51	494.95
4	Bank Thai Plc.	8.08	451.00	13.57	0.85	465.42
5	Bangkok Bank Plc.	7.63	425.84	380.60	-	806.45
6	Standard Chartered Bank	7.29	406.77	61.92	12.71	481.41
7	TMB Bank Plc	7.17	400.37	0.78	8.00	409.15
8	United Overseas Bank (Thai) Plc.	6.54	365.12	21.13	19.76	406.01
9	The Hongkong and Shanghai Banking Co., Ltd.	4.84	270.16	137.28	-	407.45
10	Citi Bank N.A.	4.35	242.38	8.55	-	251.24
	Other	16.16	901.67	976.30	228.63	2,106.61
	Total	100	5,580.26	2,503.65	291.61	8,375.52

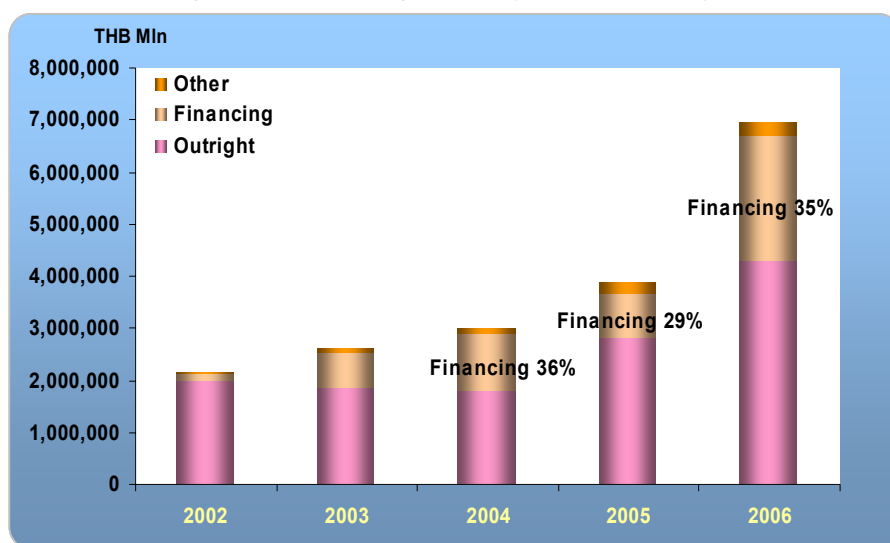
Source: ThaiBMA

For financing transaction, the trading value in 2006 increased to 35% of total trading value, compared to 29% in 2005 (see Figure 11). Financing transaction as classified by ThaiBMA can be divided into 3 sub-categories: Bilateral Repo, Private Repo, and Buy and Sell Back.

“Private Repo” and “Buy and Sell Bank transactions” are different in practice, the differences between these two type of transactions are such that Private Repo transaction is under Global Master Repurchase Agreement (GMRA) contract and have to mark to market to maintain the margin during the transaction period while Buy and Sell Back transaction has no standardized contract and is not required to mark to market.

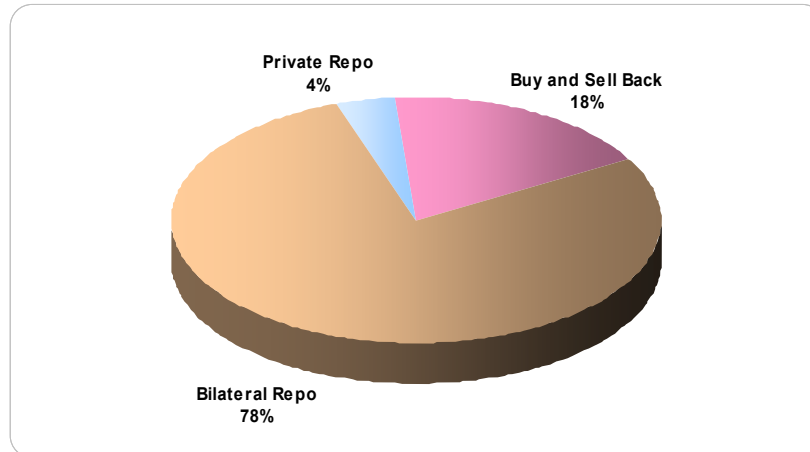
Bilateral Repo, which is the transaction between the Bank of Thailand (BoT) and Primary Dealers (PD) shared by 78% of the total financing trading value in 2006, followed by 18% of buy and sell back and 4% of private Repo (see Figure 12).

Figure 11: Trading Value by Transaction Type



Source: ThaiBMA

Figure 12: Composition of Financing Transaction in 2006



Source: ThaiBMA

5.2 Derivative Market

The derivative market is financial contract between counterparty in order to buy or sell or swap the underlying securities, which can be equity, bond, currency, or commodity, at a specific price in a specific period in the future. Currently, the derivative products in Thailand can be divided into four types: Forward, Futures, Option, and Swap

The first derivative Market in Thailand is the Agricultural Futures Exchange of Thailand (AFET) which was established in 2004 with the first underlying product traded in this market is the natural rubber ribbed smoked sheet no.3 (RSS3). In 2006, Thailand Future Exchange (TFEX), the second derivative market in Thailand, was operated and the only underlying product traded in this market is the SET 50 Index. TFEX plans to add new potential products such as bond futures and interest rate futures in the near future.

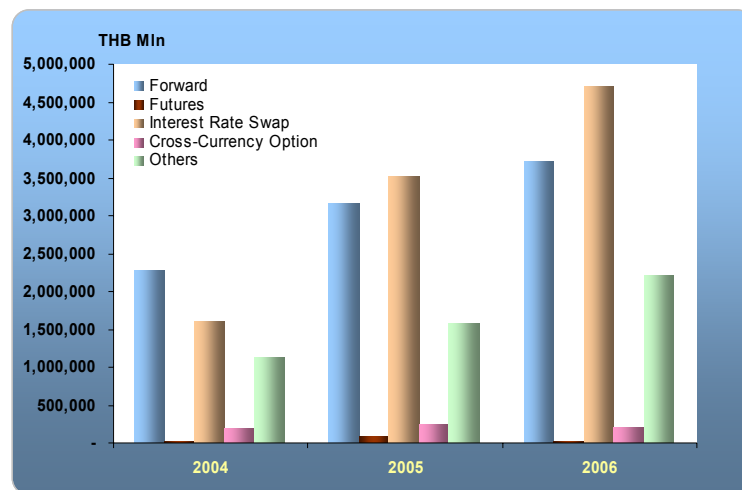
Derivative markets in Thailand are at the beginning stage and the underlying securities are limited to a few products. This leads the derivative product usually traded in OTC, in the form of a private agreement. Most of the derivative products are related to foreign currency or interest rate such as forward and swaps so commercial banks provide these services as risk management instruments for their clients such as exporters, importers, and foreign loan borrower.

According to the BOT regulations, commercial banks are required to report outstanding value of derivative transactions at the end of the month to the BOT. It has been evidenced that the outstanding value of derivative transactions grew significantly every year, particularly interest rate swap (IRS) which outstanding value has surged

by almost two times from 2004 to 2006.

As of December 2006, the outstanding value of derivative transactions was THB 10,841.42 billion, which was higher than the outstanding of domestic bonds (THB 4,085.26 billion) and stock market capitalization (THB 5,046.91 billion) by almost 100%. Outstanding value of derivative transactions at the end of December 2006 consisted of THB 4,700.61 billion of IRS (or 43% of total outstanding value of derivative transaction), THB 3,710.92 billion of Forward (34%), THB 202.49 billion of Cross-Currency Option (2%), THB 18.55 billion of Futures (1%) and THB 2,208.86 billion of the rest (20%) (see Figure 13).

Figure 13: Contingent Liabilities of Commercial Banks



Source: BoT

Table 6: Result of the 2004 Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activities Daily Average Turnover in OTC Derivative Markets (THB Denominated Instruments)

million USD	April 2001		April 2004	
	Amount	%	Amount	%
Forward	130	10	396	20
Fx Swap	1,169	89	1,333	67
Cross Currency Swap	14	1	240	12
Option	2	0	10	1
Total	1,315		1,979	
FRA	3	33	2	2
IRS	6	67	93	98
Total	9		95	
Grand Total	1,324		2,074	

Source: BIS

II Major Impediments to Structured Bond Market Development in Thailand

1. Supply Factor

The structured bond market in Thailand is still at an early stage of development. Only a handful of key players are active in the securitization transaction with limited quantity and variety of securitization projects. Major issues focused as impediments to the development of structured bond market in Thailand can be concluded as follows:

1.1 Knowledge & Education

- Potential originators and issuers in Thailand are not quite familiarized with the concept of raising fund through securitization. They are not fully aware of utilizing securitization as an alternative financing method due to inadequate knowledge and understanding about the securitization process, in particular concerns about creditworthiness of the transaction and types of assets to be securitized. Consequently, the number of securitization deals so far has been limited and the active players are confined to well-established organizations having more confidence in securitization through long-term and on-going research on financial innovation. Notable among them are the Treasury Department of the Ministry of Finance (The project of DAD SPV Co., Ltd. - securitization of future cash flows from lease and service payments to fund the construction of the Government Office Center), private sector financial institution (the project of SICCO Special Purpose Vehicle Co., Ltd. - securitization of auto hire purchase receivables), and non-bank financial institution with foreign shareholders or partners with experiences in securitization abroad (Eternal Credit Card Special Purpose Vehicle Co., Ltd. - securitization of credit cards receivables), etc.
- The securitization market is facing shortage of high expertise personnel, sufficient and quality database, and technological know-how. Such constraints inevitably deteriorate investors' confidence about the accuracy and reliability of financial forecasts made in packaging the securitization deals. This is especially true in the case of securitization involving future cash flows to fund the public infrastructure projects such as the new Government Complex, the subway system, etc. As a matter of fact, there has been only one public sector agency, namely the Treasury Department, which issued the securitized debts for fund mobilization. It is safe to say that the success of TD's securitization deal owed considerably to the substantial resources and efforts spent in studying the securitization structure and the strong initiative from the government.

1.2 Legal & Accounting Standards

- The current legislative framework facilitating the securitization is still deemed not comprehensive and need to be clarified in certain areas. In addition, there is no absolute conclusion about the accounting practice for securitization process; for example, there is still debate as to whether or not sale of assets or transfer of debts from the originator to the SPV is treated as a true sale. If this is not considered as a true sale, the originator will incur additional expenditures and has to consolidate the account of the SPV in the balance sheets. Moreover, in the event that the SPV goes bankrupt, the originator is obliged to pay the debts to investors, which is not the case of bankruptcy remoteness in general securitization context.

1.3 Complexity of Securitization Process

- The process of securitization is complicated and requires concerted efforts of various expertises. It is not easy for an originator or an SPV to understand thoroughly and to be convinced that securitization is a better and cost effective alternative for fund raising other than other type of financing such as borrowing from banks or issuance of straight bonds.
- Even the DAD SPV securitization deal which has received overwhelming support from the government, the securitization process remain complicated, in particular, in the process of future cash flow projection. This is due to the fact that the project involves a long period of 30 years, it is therefore very difficult to cover all the risks incurred throughout the life of the securitization program and to identify proper measures to mitigate and transfer such risks.

1.4 Higher Cost of Financing

- The cost involved in issuing structured bonds through securitization process is relatively high as it is more complicated than the issuance of a straight bond. Highly skilled and experienced professionals are required for the whole transaction and also after the sale of the securities. To mention just a few, the appointment of bond underwriter, the management of database of the securitized assets, the transfer of assets to the SPV, the appointment of financial advisor, legal and tax counsel, servicer, bondholders' representatives, etc.
- Moreover, to add the creditworthiness of the issue, the issuers need to engage in various types of credit enhancement measures, such as Over Collateralization, Reserve Account, Subordination or seeking a Guarantor which is normally the parent company or the originator. This further builds up the cost for securitization of the originator and the SPV.

1.5 Economy of Scale

- For most of the financial institutions that provide auto financing or credit card

service, their asset size is not large enough to create economies of scale in employing a large pool of experts to facilitate the securitization transaction. They consequently turn to other methods of financing such as the issuance of plain debentures or borrowing from banks.

- The attempt to bunch up the mortgage loans of various commercial banks to a appropriate value is also not possible due mainly to two factors:
 1. Under the current BIS regulations, housing loans have a risk weight of only 50% whereas other types of loan involved a risk of 100%.
 2. Currently the commercial banking system does not envisage any serious liquidity problem and has no pressure to offer their housing loans for sale.
- The possibility to collect similar type of housing loans into an appropriate size to package as Mortgage-backed Securitized bonds is low because these loans are usually of small size and scattered throughout the country. Moreover, there are various expenses incurred during the process such as tax payment.

1.6 Data Quality and Management

- The issuers do not have an effective database management system for their assets to facilitate the issuance of structured bonds, especially, data and information about cash flows, asset quality, and risk exposures of the assets. Such information is essential for the credit rating procedure. Without such information, the originator/issuer has to place higher collateral which leads to higher cost of issuance.
- A number of infrastructure projects in Thailand still have insufficient plan in compiling and managing systematic and long-term data and information regarding their future receivables, for example, fares of underground trains, toll fees of expressways, etc. Such data and information is helpful in making accurate future cash flow projection and is essential for credit rating. Without adequate data and information, the issuer may have to face unnecessary high credit enhancement costs.

2. Demand Factor

Major constraints to the expansion of investor base for structured bond market in Thailand include the following issues:

2.1 Knowledge & Education

- Institutional and individual investors have insufficient knowledge and understanding about structured bonds, either in the context of product features, return, risks, especially the issue of using future flows to back the securitization. Regarding the case of DAD SPV securitization deal which was offered both on the basis of private placement and public offering, all related parties involved in the deal including the issuer and underwriters have to make great efforts in explaining the

features to target investors. It is recommended that a central unit responsible for the education of this type of securities is necessary to help expand the potential investor base.

2.2 Product Size and Diversity

- The value of structured bonds backed by auto loan receivables and credit card receivables offered for sale is relatively small. In 2006, total value of structured bonds which registered with the ThaiBMA amounting to only THB 10,200 million with the tenor ranging from 3-5 years. This resulted in limited liquidity as major investors such as insurance companies, pension fund, mutual funds companies which hold large investment portfolio, usually buy these securities and hold them until maturity.

2.3 Risks

- There is limited diversity of structured bonds offered for sale in each tranche. In 2006, most of the structured bonds which involved auto loan receivables and credit card receivables are assigned AAA (Thai) ratings and the similar level of return, i.e., coupon rate of 5.73-6.00% for auto loans; and coupon rate of 5.73-5.88% for credit card. As a result, investors do not have much options in managing their investment portfolio to meet their return target at the acceptable level of risk exposure.

2.4 Services

- Investors may lack confidence in investing in structured bond due to the fact that the servicer does not have adequate database system management which leads to the inefficiency of asset quality monitoring and present value of guaranteed assets
- The rate of servicing fee is relatively high and there is no maximum ceiling. Therefore, the investors are not able to estimate the real cost of investment. Currently there is limited number of servicers and investors have little choice in choosing an efficient servicer.
- Although information disclosure at the initial process is adequate, the performance report of the project is limited to a group of investors. Investors have to seek such information from the servicers on a case by case basis.

3. Intermediary

3.1 Technological Know-how

- There are only few underwriters with skills and experience in the securitization of structured bonds (according to the ThaiBMA) for example, the Siam Commercial Bank PLC as expertise in auto loan securitization, whereas Siam Commercial Bank PLC and Citicorp, Inc have good experience in credit card securitization.

- The deal of DAD SPV involved 3 commercial banks as underwriters, namely, Bangkok Bank PLC, TMB Bank PLC, and The Hong Kong and Shanghai Banking Corporation Ltd. The project is a pool of strength of the 3 banks either in the areas of technological know-how, distribution channel through branch offices, and the wide potential investor base.
- The underwriting of securitized debentures is relatively difficult especially when underwriting the issues among foreign investors. This is because the credit ratings in Thailand do not conform to the international standard. Despite a high rating of AAA, there is no guarantee that the issues are sold out among foreign investors.

3.2 Knowledge & Education

- It is not easy for the underwriter to convince the originator to issue securitized bonds as the originator do not have adequate knowledge and understanding about such issue. In addition, the underwriter has to educate the originator about database system management which is essential in obtaining an AAA credit rating. It is also recommended that Thailand should have a central unit to act like a credit bureau in order to collect and manage relevant data and information and utilize such information to rate the assets used as collateral.
- To persuade and educate investors regarding the separation of SPV from servicer or originator is difficult as Thailand has insufficient track records in the past to clearly support the issue.

Table 7: Issuer, Underwriter and Outstanding Value of Structured Bonds

as of February 17, 2007

ThaiBMA Symbol	Issuer	Underwriter	Rating Agency (FITCH)	Issue Date	Issue Term (Yrs.)	Coupon (%)	OutStanding Value (THB mln)
Auto Loan:							11,490.00
AUTO088A	Auto Receivables SPV Co., Ltd.	KBANK	A+(tha)	16-Aug-04	4	4.8	0
SPLV103A	Siam Panish SPV 1 Co., Ltd.	SCB, SCBT	AAA(tha)	29-Mar-06	3.98	5.73	2,500.00
SPLV119A	Siam Panish SPV 1 Co., Ltd.	SCB, SCBT	AAA(tha)	29-Mar-06	5.48	6.05	2,500.00
SSPV09NA	SICCO Special Purpose Vehicle 1 Co., Ltd.	SCB, SCBT	AAA(tha)	30-May-05	4.48	4.21	3,490.00
SSPV112A	SICCO Special Purpose Vehicle 2 Co., Ltd.	SCB, SCBT	AAA(tha)	17-Aug-06	4.52	6	3,000.00
Credit Card:							5,780.00
ECC082A	Eternal Credit Card Special Purpose Vehicle Co., Ltd.	CST	AAA(tha)	17-Feb-05	2.98	4.03	1,000.00
ECC102A	Eternal Credit Card Special Purpose Vehicle Co., Ltd.	CST	AAA(tha)	17-Feb-05	4.98	4.92	1,000.00
ESPT092A	Eternal 3 Special Purpose Vehicle Co., Ltd.	CST	AAA(tha)	6-Feb-06	3.01	5.73	1,500.00
ESPT112A	Eternal 3 Special Purpose Vehicle Co., Ltd.	CST	AAA(tha)	6-Feb-06	5.01	5.88	500
ESPT113A	Eternal 3 Special Purpose Vehicle Co., Ltd.	CST	AA(tha)	6-Feb-06	5.09	6.13	120
ESPT113B	Eternal 3 Special Purpose Vehicle Co., Ltd.	CST	A(tha)	6-Feb-06	5.09	6.33	160
ESPV102A	Eternal Special Purpose Vehicle Co., Ltd.	SCBT	AAA(tha)	19-Feb-04	5.98	4	1,500.00
Future Cash Flow:							18,500.00
DAD12NA	DAD SPV Co., Ltd.	BBL, TMB, HSBC	AAA(tha)	29-Nov-05	7.01	6.7	1,500.00
DAD15NA	DAD SPV Co., Ltd.	BBL, TMB, HSBC	AAA(tha)	29-Nov-05	10.01	7.35	2,000.00
DAD20NA	DAD SPV Co., Ltd.	BBL, TMB, HSBC	AAA(tha)	29-Nov-05	15.01	7.5	1,800.00
DAD20NB	DAD SPV Co., Ltd.	BBL, TMB, HSBC	AAA(tha)	17-Oct-06	14.13	6.05	2,200.00
DAD25NA	DAD SPV Co., Ltd.	BBL, TMB, HSBC	AAA(tha)	29-Nov-05	20.01	7.99	5,000.00
DAD25NB	DAD SPV Co., Ltd.	BBL, TMB, HSBC	AAA(tha)	17-Oct-06	19.13	6.5	6,000.00
Depository Receipt:							2,175.96
BCP141A	Siam DR Co., Ltd.	SCIBS, FSL		29-Jan-04	10.01	3	2,175.96

Source: ThaiBMA

Note: SCB = Siam Commercial Bank Plc; SCBT = Standard Chartered Bank Thailand; CST = Citicorp Securities (Thailand) Ltd.; BBL = Bangkok Bank Plc; TMB = Thai Military Bank Plc.; HSBC = The Hong Kong And Shanghai Banking Corporation Limited.

4. Legal / Regulatory Factor

4.1 Accounting Issue

- Thailand does not have clear accounting standard for the transfer of asset from the originator to the SPV. This depends on the judgment that whether it is the sale of asset or the secured financing. As a result, in the case that the originator wishes to transfer the assets off balance sheet through the process of securitization, they have to judge that whether or not the SPV have to consolidate its account with the originator.

4.2 True Sale

- The definition of true sale is still unclear and there are no specific conditions for the determination of a real true sale transaction. Particularly, the sale of debts or receivables can be performed in many different ways and each of them has different method of accounting record. Without a standardized accounting practice, the new issuers of securitized bonds are reluctant to enter into the market since they are aware that any change of policies or regulations in the future might affect the normal accounting practice they have previously judged.
- The unclear definition of true sale leads to the problem of consolidation since in the securitization process the originator will transfer assets to SPV in order to deduct

those assets out of the balance sheet of originator. Therefore, if the transfer of asset is defined as true sale, the balance sheet of the SPV does not have to be consolidated with the originator's balance sheet.

- At present, the Thai Civil and Commercial Code do not bear the right of claim in assets which are securitized and also not facilitate the definition of true sale. This leads to the problem of bankruptcy remoteness.
- The Bank of Thailand's Notification issued on September 21, 2006 which permits commercial banks to undertake securitization transaction stipulated that commercial banks or financial institutions acting as the originator shall not have control over the transferred assets. Also, if the originator goes bankrupt, account payable of the originator has no rights to claim for those transferred assets. However, this notification regulates only commercial banks and financial institutions which have high liquidity and usually have no need to raise fund through securitization. The regulation does not cover other non-financial institution issuers.

4.3 Regulation

- Currently Thailand does not have laws pertaining directly to the placement of collateral and there is no legislation facilitating the guarantee of the SPV status in each securitization process. This situation fails to persuade issuers to raise fund through securitization. Another limitation is that the only law governing securitization in Thailand is the Emergency Decree on Special Purpose Juristic Person for Securitization, B.E. 2540 or the so called Securitization Act. Therefore, the issuance of securitized bonds in Thailand has to conform with the Securitization Act and other related legislations. This is complicated comparing with other countries which have comprehensive securitization laws.
- The Bank of Thailand's capital control measures announced in December 2006 unfavorably affected the bond market as the rate of return of debt instrument has been raised higher and the cost of debenture issuance is consequently pushed up. This inevitably affects the issuance of securitized bonds which have a much more complicated structure.

4.4 Recourse

- Laws governing the appointment of bondholders' representative in the case of securitized debentures are still not clear-cut. Investors therefore are not confident in making investment in such securities since investors want the bondholders' representative to perform with fiduciary and care for their interest and benefits and act on their behalf in the event of payment default.
- Currently there is no Trust Law which allows the separation of assets between the originator and the SPV. Accordingly, in the event that either the originator or the

SPV goes bankrupt, investors have difficulty in claiming their debts.

4.5 Others

- The conditions under the agreements of related parties are not standardized. The drafting of each agreement relies mainly on the benefits of each party concerned. This discourages issuers without legal expertise to issue this type of structured bonds.
- The securitization of mortgage loan usually involves receivables which are scattered throughout the country. The pledge registration process therefore is time consuming.

5. Market Infrastructure

5.1 Credit Rating Agency

- The number of authorized credit rating agencies in Thailand is limited and there is lack of technological know-how in assigning credit rating for structured bonds. As a consequence, the issuer has limited choice and the effort to issue securities with high credit rating may involve significantly high cost in making credit enhancement.
- The local credit rating agencies have insufficient expertise in the legal aspect of securitization. They have to hire legal advisor in rating the new securitized issues which resulted in longer time consumed.

5.2 Credit Enhancing

- The Thai structured bond market is still young and the number of issuers is too small to attract experienced and credit worthy companies abroad to undertake the credit enhancement/guarantee businesses in Thailand. The transfer of technological know-how from such companies will help promote the structured bond market in Thailand.
- There are still inadequate credit enhancements in Thailand. Such credit enhancements comprise internal credit enhancement (over-collateral) and external credit enhancement (the appointment of monoline to guarantee the debt issuance). As a matter of fact, it is lack of local companies to provide the service of monoline for the securitization transaction in Thailand for the moment.

5.3 Information

- Currently there is no standard for the valuation of every type of securitized debt instruments. Therefore, investors, particularly investment funds, are reluctant to invest in these securities, especially when there is an event of payment default and the funds are not able to mark the instruments at fair value in their portfolio.
- The bond market in Thailand does not have any reference product with a maturity of up to 20 years. This discourages the parties involved in the securitization transaction, such as issuer, underwriter or investor to confidently issue or invest in

very long-term debt instruments. The obstacle does not only pertain to the securitized debentures but also long-term corporate debentures.

- Limited information disclosure is the major hindrance for the expansion of investor base. At present, important information such as performance of the project is only available on request.

6. Other Impediments

- As there are many parties involved in different process of securitization, a neutral agency is needed in evaluating the performance of each involving party in complying with the agreements or condition set forth in the prospectus. Such an evaluation will enhance the confidence of investors of the securitized debentures.
- The Credit Bureau which is the central agency of data and information regarding creditworthiness of bank borrowers and credit card holders in Thailand has not effectively utilized the relevant data and information in research and analysis. The effective use of such data and information will certainly support the issuance of securitized bonds.
- There is a lack of acceptable central agency responsible for the compilation and management of database for the used cars market and the second mortgage market. This is essential for the issuer of structured bonds to use standards in assessing the value of securitized assets as well as the quality of assets throughout the life of the project.
- The current unstable political environment together with unpredictable economic direction is not favorable for the issuance and investment of securitized debentures.
- Investors of the securitization debentures are subject to the same tax rate as other types of corporate debentures, i.e., 15% withholding tax, while on the other hand investment in government securities is tax exempt.

III Prospects and Policy Recommendation

1. Prospects for Future Structured Bond Market in Thailand

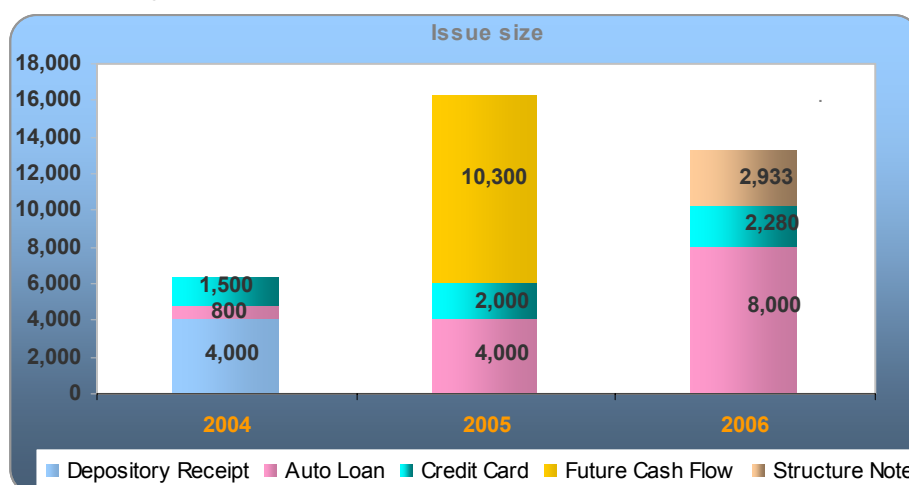
1.1 Supply

1. Banks are the major sources of assets to be sold for securitization. At present, banks have no problems with liquidity and risk weight on loans especially housing loans, which require only 50% for capital requirement. Banks may face challenges in the future when applying IAS 39, Basel II, having higher defaults on loans as well as competing for deposits with mutual fund companies. These might force banks to sell off some assets for securitization in order to reduce their risks and to meet with new rules on capital requirements.
2. From Figure 14, the growth of securitization on auto loans and credit card loans will continue to increase, since there is enough spread, the difference between lending rate and costs of funding through securitization. In Thailand, this spread is around 1.5% to 2%. So, there would be enough rooms for issuers to hire legal counsel, underwriter, etc. in issuing securitization bonds. Moreover, issuers are non-bank financial institutes which have limitations on acquiring funds through depositing directly from consumers or general public.
3. There would be less attractive to issue securitization bond using housing loans comparing with auto loans or credit cards. The major difficulties are low spread or no spread (the different between lending rate and costs of funding through securitization), floating interest rate after 3 years of lending, and uncertainty in projecting cash flows due to defaults, prepayment, etc. Low spread of housing loans is due to competition among banks and finance companies. So, the effective market lending rate is low comparing to auto loans or credit cards.
4. Normally in Thailand, interest rate charged on housing loans is fixed for the first 3 years of lending and then will be floated in accordance to financial market situations. Therefore, it is difficult to project the quality of assets or their future cash flows accurately after 3 years, due to delay, defaults or prepayment. There are no good records on housing loans for tracking and analyzing of their performance throughout the whole term of lending, which means the certainty on future cash flows.
5. So, there are doubts over the prospects on Asset Backed Securitization (ABS) using housing loans. Nevertheless, the Government Housing Bank announced that they were considering issuing securitization bonds on housing loans (website of Prachachart Thurakit Newspaer, 27 January 2007). The issue size will be THB 40 billion and the time duration is 3 to 10 years. The purposes are to diversify source of

funding of the Government Housing Bank as well as to develop long-term products (10 to 20 years) for their customers.

6. In Thailand, there are less likely to issue securitization bonds on future cash flows of infrastructure projects in the near future due to insufficient future cash flows from the projects after operation and agreements on sharing of future cash flows between investor and operator. For instance, BTS sky train in Bangkok has been in operation around 10 years. However, the number of daily passengers has not yet reached its break-even point of 600,000 passengers/day yet.
7. In addition to uncertainty on time duration of future cash flows to reach its break-even point, at the moment there remains uncertainty in regard to how the future cash flows would be shared between investor and operator of the infrastructure project. These uncertainties give more difficulties on the new 5 railway mass transit systems in Bangkok and Metropolitan areas using securitization for funding of such projects. If these difficulties are resolved together with good track records, the time duration of such securitization bonds would be very long probably around 30 years. Comparing to DAD SPV Co., Ltd. project is much more secured since the government is the sole tenant and pays rents using government budget.
8. There would be more opportunities to do securitization on commercial real estate like shopping malls or office buildings. Since, these projects are able to generate future cash flows or incomes to reach break-even point in shorter time, possibly within 10 years. In addition, if issuers are mutual fund companies to issue in form of unit trust, there would be tax exemption on investment as well.

Figure 14: Issue Size of Structured Bonds, 2004-2006



Source: ThaiBMA

9. The Securities Exchange Commission (SEC) of Thailand has completed the drafts of two Acts, which are an Act for amendment to the Royal Decree on Special

Purpose Company for Transactions in Securities Markets B.E. 2540, “Securitization Act”, and a Trust Act for Transactions in Securities Markets, “Trust Act.” At the moment, these two Acts have been submitted to the Ministry of Finance and are in legislation process. When they are amended, the definition of Securitization, legal entity of Special Purpose Company (SPC), duties and the rights of SPC would be more clear-cut and very much facilitate the securitization process in Thailand. In addition, the Federation of Accounting Professions is currently in the process of issuing accounting guidelines for recoding securitization transactions, regarding transferring or receiving of assets or assets pledged as collaterals between the originator and SPC. The major impediments to the Thai securitization market regarding True Sale, Bankruptcy Remoteness, and Recourse are expected to be resolved when these laws together with the new accounting guidelines are put in place. Such developments will certainly accelerate the development of the structured bonds or securitization market in Thailand into the next stage.

1.2 Demand

1. The factors that are influencing the prospects on demand for structured bond in the Thai market are as the following:
 - Education
 - Dissemination of information
 - Quality of assets
 - Infrastructure
2. Most of investors in debts market are institutional investors, such as mutual funds, pension funds and insurance companies, rather than individuals or retail investors. Normally, institutional investors invest around 70% of their funds in debts market. Due to lacking of knowledge and understanding on securitization bonds, institutional investors more likely to invest in straight bonds. To convince investors to invest in securitization bond, in some cases, underwriters have to explain about the product features to investors in an one-on-one manner. In the future, there will be more market players in debts market, if SEC liberalizes mutual fund industry in 5 years.
3. For knowledge and education, the Thai Bond Market Association (ThaiBMA), the Association of Investment Management Companies (AIMC), and the Stock Exchange of Thailand (SET) are three major institutions to provide knowledge regarding debts market and their new instruments regularly.
4. From 2005 to 2006, trading volume on outstanding debts of foreign investors had increased from 3% to 12%, due to better information dissemination, investors' confidence and attractive returns. Recently, investments from foreign investors have dropped since BoT's policy on 30% reserve on capital inflow into Thailand. However, this would be temporary incident when BOT relax such policy for better

Thai economy as well as political stability in the near future.

5. Especially for new structured bond products, quality of assets to be backed for issuing bonds would be another concern of investors additional to coupon rate, receive of principal on maturity date, etc. Since there were little information or no good track records for investors to analyze risks inherently to quality of underlying assets.
6. To increase confidence among both Thai and foreign investors, monoline insurance or guarantor of securitization bonds either in full or partial for the purpose of credit enhancements would be one mechanism in debts market development plan considering by related Thai regulators. This will push growth in Asset Backed Securitization (ABS) market.

2. Policy Recommendation to Improve / Develop the Structured Bond Market in Thailand

1. Since the major players in the Thai market are commercial banks, the BOT should play more active role in motivating and facilitating banks to manage risks by utilizing their assets through securitization. For instance, BOT would give risk weight of MBS with good credit enhancements lower than underlying assets. However, the Securities Exchange Commission (SEC) has been playing an active roles in elevate legal and accounting impediments and facilitate issuers to supply more structured bonds into the market as well as to increase investor base through private placement and public offering channels.
2. Government should continue on in providing good infrastructures for issuing securitization bonds, such as trust law for non-taxable SPVs or entities, expansion of investors' base via mandatory retirement funds, credit enhancements, etc. Moreover, government should set more examples and give continuing supports in resolving impediments by issuing securitized bonds to fund infrastructure projects as of DAD SPV Co., Ltd. project. Supports from the government like Cagamas in Malaysia and Ginnea Mae or Fannie Mae in the USA would be good examples and successful cases for Secondary Mortgage Corporation (SMC) of Thailand.
3. There should be more number of organizations in each role of securitization process, such as credit rating agencies, credit enhancers, servicers, etc. So, originator would have more choices to ask for services to fit their needs. Moreover, competition among them would give better improvement on technological know-hows and services. For instance, currently we have one credit agency in Thailand, Fitch Ratings, who have international experience and know-hows in providing credit rating for securitization bonds.
4. Government, related agencies as well as universities should join hands in providing more education and technological know-hows regarding securitization

bonds and market on regular basis to issuers, investors, underwriters, credit rating agencies, servicers, etc.

5. Last but not the least, most of home mortgages in Thailand are adjustable mortgages depend upon the movement of interest rates in the future. Credit bureau should utilize their invaluable assets which are credit information of all borrowers in Thailand. This information can be used to calculate for dynamic default rate, patterns of defaults for the whole lending term, cumulative defaults, etc. The results of these analyses would be very much beneficial for originator, issuer, credit rating agency, pricing agency as well as investors in both primary and secondary markets. For instance, credit rating agency would better project default rate or expected loss of assets. So, there would be lower requirements on over-collaterals for credit enhancements by originator, which mean lower costs of funding through securitization.

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