

Bond Market and Rating Agencies in Thailand

March 6, 2010

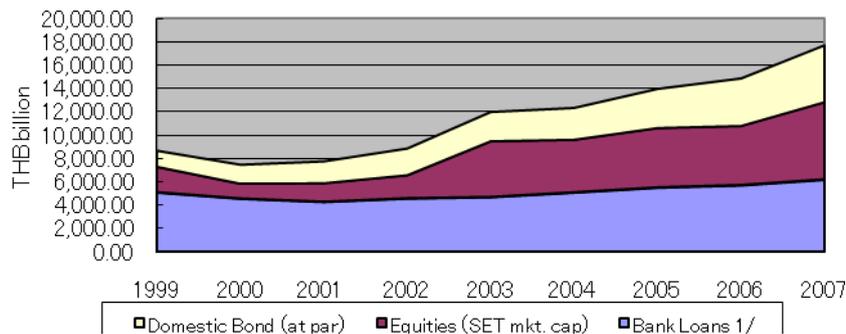
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1. Capital Market in Thailand

1.1 Banking Sector, Share and Bond Markets

Banks had taken leading roles before the Asian crisis, but in the wake of the crisis, the influence of banks weakened. The securities market, especially, the bond market is growing.

Figure 1. Size of Thai Financial Markets



In the bond market, public bonds are mainly traded. As of the end of Jun. 2009, the balance of Thai Baht-denominated bonds (LCY) was 5.4 trillion Baht. Public bonds, including government, treasury, central bank, and public enterprise bonds, account for 79%, whose balance was 4.3 trillion Baht.

Figure 2. Issuance of Domestic Bonds

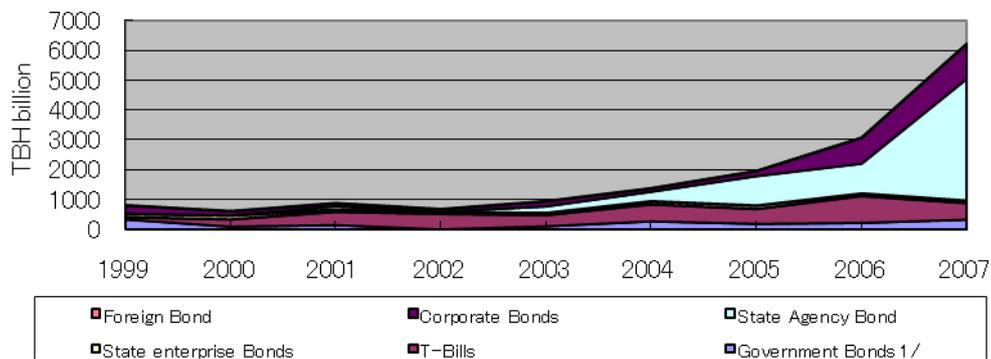
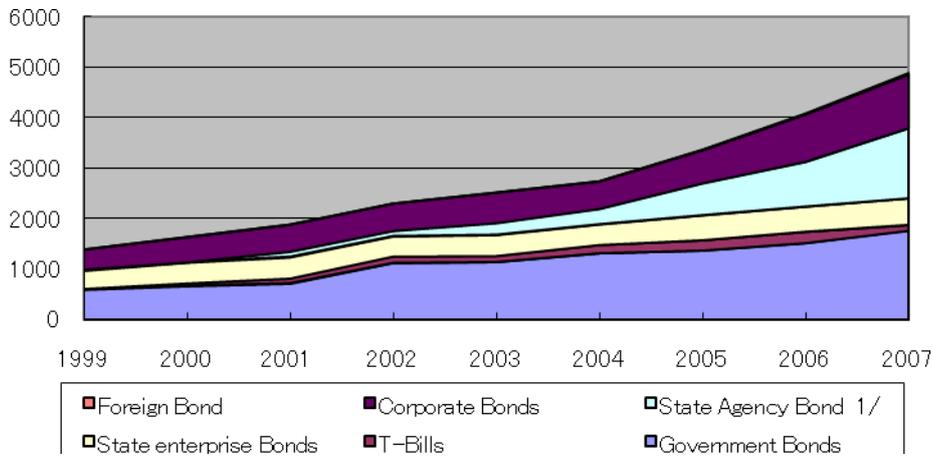


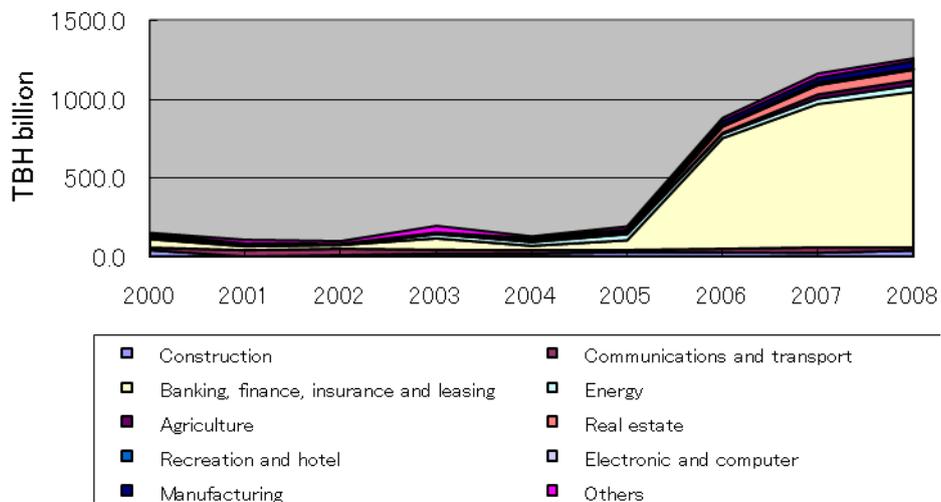
Figure 3. Outstanding Value of Domestic Bonds



Among baht-denominated bonds, the trading volume of government bonds is dominant. The turnover ratio of government bonds is also much higher than that of corporate bonds. As of Jun. 2009, the trading volume and turnover ratio of Thai government bonds were 1.4 trillion baht and 0.32, respectively. On the other hand, the trading volume of Thai corporate bonds was 15.7 billion baht, but its turnover ratio was 0.01.

Domestic bonds are issued by mainly financial institutions. The top 10 companies issued 36% of the total corporate bonds and public enterprise bonds (SOE) as of Jun. 2009. The top 10 companies include 5 financial institutions.

Figure 4. New Issuance of Private Debt Securities by Sector



Bonds are also owned by mainly financial institutions. Thai government bonds are owned mostly by financial institutions. As of Jun. 2009, they account for 35.1% of the total government bond balance. The shares of other holders are 29.8% for depository corporations, 16.4% for households and nonprofit organizations, 14.8% for the central government, 2.5% for nonresidents, 1.3% for non-financial companies, and 0.1% for the central bank.

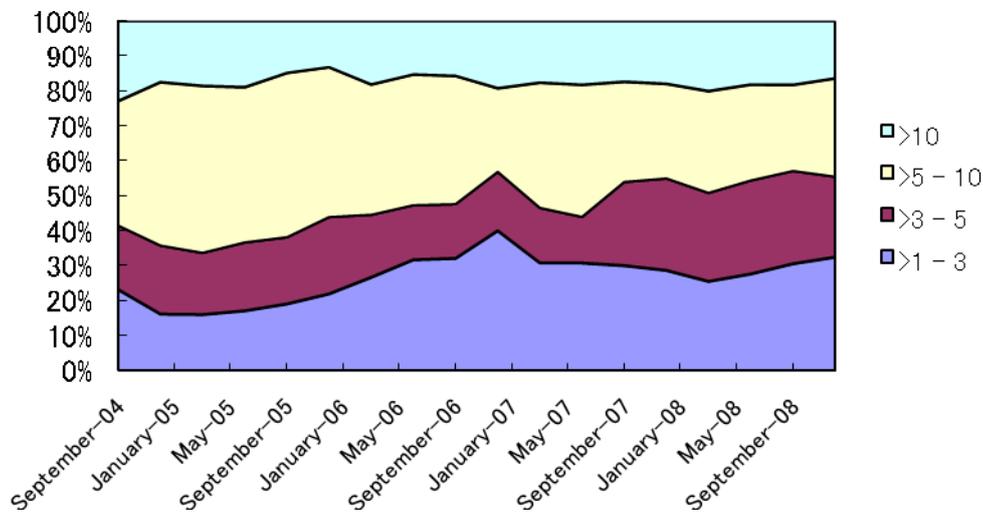
Corporate bonds are owned mainly by individual investors, who account for 53.4% of the total corporate bond balance as of the end of Jun. 2009. On the other hand, institutional investors account for 33.7%. 45.3% of individual investors is composed of individuals, while 8.1% is composed of firms. Contractual saving funds, including the governmental pension fund, are the largest institutional investor holding 11.5% of corporate bonds. 8.9% of corporate bonds is owned by insurance companies; 8.0% by mutual funds; 4.0% by commercial banks; and 1.1% by financial institutions, which include Export-Import Bank of Thailand, Government Housing Bank, and Government Saving Bank.

Figure 5. Summary of Debt Securities Outstanding Classified by Groups of Holders



The ratio of short-term bonds is high. As of 2007, the bonds that mature within 5 years account for over 70% of the total balance of the bond market, while the bonds that mature over 10 years after issuance account for less than 10%. In the private corporate bond market, the bonds that mature over 10 years after issuance account for only 3%. It is obvious that the investors in the Thai bond market have no interests in long-term investment.

Figure 6. Government Securities Maturity Profile (years)



1.2 Regulations and Systems of the Bond Market

Corporate bonds are under the supervision of Securities and Exchange Committee (SEC) of Thailand, and the issuance of corporate bonds follow the regulations of SEC (See Table 1.).

At present, SEC has the following guidelines regarding the issuance and sale of securities: (1) bonds, convertible bonds, securitized bonds, short-term bonds, and derivative bonds shall be subject to the regulations on the application and permission regarding the offer for the issuance of new bonds (SEC Notification Gor Yor 31/2549); (2) the bonds given to offshore investors shall be subject to the regulations on the application and permission regarding the offer for the issuance of new bonds (SEC Notification Gor Jor 47/2541); (3) any offer for foreign bonds toward commercial banks in Thailand shall be subject to the regulations on the offer for foreign bonds toward commercial banks in Thailand (SEC Notification Gor Jor 2/2549); and (4) any offer for foreign bonds in Thailand shall be subject to the regulations on the offer for foreign bonds in Thailand (SEC Notification Gor Jor 4/2549).

(i) Issuance of shares and corporate bonds

Basically, the issuance of corporate bonds is classified into the two types: the issuance of publicly offered bonds and the issuance of private placement bonds. While government bonds are issued with the auction method, corporate bonds are generally issued with the underwriting method.

Issuance of publicly offered bonds

In order to issue bonds with the purpose of selling bonds to the general public, it is necessary

Table 1. Financial Institutions and Related Regulators and Laws

Item	Regulator	Related Law
The Bank of Thailand	Ministry of Finance	Bank of Thailand Act B.E.2485 and amended
Commercial Banks	Bank of Thailand	
Foreign Bank branches		Commercial Banking Act B.E.2505 and amended
Subsidiary		
Retail Banks		
Finance Companies	Bank of Thailand	The Act on the Undertaking of Finance Business, Securities Business and Credit Foncier Business B.E.2522 and amended
Credit Foncier Companies		
The Government Savings Bank	Ministry of Finance/ Bank of Thailand	Government Savings Bank Act, B.E.2489
The Bank for Agriculture and Agricultural Cooperatives (BAAC)	Ministry of Finance/ Bank of Thailand	The Bank for Agriculture and Agricultural Cooperatives Act, B.E.2509
The Government Housing Bank	Ministry of Finance/ Bank of Thailand	Government Housing Bank Act, B.E.2496
The Export - Import Bank of Thailand (EXIM-Bank)	Ministry of Finance/ Bank of Thailand	The Export-Import Bank of Thailand Act, B.E.2536
Small and Medium Enterprise Development Bank of Thailand (SME Bank)	Ministry of Finance/ Bank of Thailand/ Ministry of Industry	Small and Medium Enterprise Development Bank of Thailand Act, B.E. 2545
Islamic Bank of Thailand	Ministry of Finance/ Bank of Thailand	Islamic Bank of Thailand Act, B.E.2545
The Small Industry Credit Guarantee Corporation (SICGC)	Ministry of Finance/ Ministry of Industry	The Small Industry Credit Guarantee Corporation Act, B.E. 2534
Secondary Mortgage Corporation (SMC)	Ministry of Finance/ Bank of Thailand	Emergency Decree on Secondary Mortgage Corporation B.E.2540
Thai Asset Management Corporation (TAMC)	Ministry of Finance	Emergency Decree on the Thai Asset Management Corporation B.E.2544
Asset Management Companies	Ministry of Finance/ Bank of Thailand	Emergency Decree on the Asset Management Company B.E.2541
Money Changers	Ministry of Finance/ Bank of Thailand	Exchange Control Act, B.E.2485
Securities Companies	Securities and Exchange Commission	The Securities and Exchange Act, B.E.2535
Mutual Fund Management Companies		
Life Insurance Companies	Ministry of Commerce/ Office of Insurance Commission	Life Insurance Act, (No. 2) B.E.2551
Agricultural Cooperatives	The Department of Cooperatives	Cooperative Act, B.E.2511 and amended
Savings Cooperatives	Promotion and the Department of Cooperative Auditing, Ministry of Agriculture and Cooperatives	
Provident Fund	Securities and Exchange Commission	Provident Fund Act, B.E. 2530
Social Security Fund	Ministry of Labor	Social Security Act, B.E.2533
Pawnshops	Ministry of Interior	Pawn-shop Act, B.E.2505 and amended

(Source) The Bank of Thailand WebSite

to obtain the permission of SEC. If permitted, the bonds can be issued within 3 years after the permission. However, bond issuers need to submit the details of each issuance in advance, except securitized bonds, which require permission for each issuance. At the time of issuance,

bonds need to be rated and registered in ThaiBMA.

Issuance of private placement bonds

In order to issue private placement bonds, it is necessary to satisfy either of the following 4 conditions: (1) the amount of bonds to be issued does not exceed 100 million baht, and the bonds will be given to institutional investors; (2) the number of specific investment groups that will receive bonds does not exceed 10; (3) only the current creditors of the issuer will receive bonds; and (4) the issuance is permitted by SEC.

The issuance of private placement bonds does not require detailed filing, bond rating, or the registration in ThaiBMA, but issued bonds are subject to the transfer restriction. In this case, SEC does not permit any advertisements targeted at the general public.

(ii) Distribution market

The distribution market of corporate bonds in Thailand is managed by The Thai Bond Market Association (ThaiBMA), which was established in 2006 in accordance with the SEC law. Thai bonds are traded through OTC trading or exchange. Bonds are generally traded in large lots, and its trading frequency is not high. Therefore, most of bonds are traded through OTC trading in the distribution market. ThaiBMA developed the OTC trading system called iDeal, which was superseded by FIRSs developed by SET.

The trading in the distribution market can be classified into the two types: the inter-dealer trading and the dealer-to-client trading. At present, about 60 companies participate in the inter-dealer trading. Such companies include securities companies, domestic and foreign commercial banks. The inter-dealer trading is generally conducted through inter-dealer brokers. The current inter-dealer brokers are ICAP and Wallstreet. The dealer-to-client trading is conducted in larger lots, and such a trading accounts for about 70% of all transactions in the bond market, including government and corporate bonds.

(iii) Regulations regarding repurchase transactions

In order to secure proper repurchase transactions, the following regulations are specified: (1) the target transactions shall follow the regulations regarding repurchase transactions specified by SEC or BOT; (2) repurchase transactions shall be conducted based on the documents approved by SEC; and (3) in repurchase transactions, any sellers of securities shall pledge to repurchase in accordance with the promised contents. In addition, repurchase shall be made within one year.

1.3 Tax System

The income from bond investment can be classified into the following 3 types: (1) interest income, (2) capital gain, and (3) discount yield (difference between the purchase price and redemption amount of discount bonds) (See Table. 2). The tax amounts for the above incomes are determined according to the types of incomes and investors. In general, the withholding tax rates are 15% for individuals, 1% for corporations, and 10% for funds, etc. The 3.3% enterprise tax is imposed on banks, securities companies, and other quasi banks and financial institutions. In addition, stamp tax is imposed on the trading of bonds. The income tax for capital gain is not imposed on the bond investment conducted by mutual funds.

Table 2. Taxation in Investment

Type of Bonds	Resident Investors		Nonresident Investors	
	Interest Income	Capital Gains	Interest Income	Capital Gains
Government & Quasi Government Bonds (including SFIs)	Individual: 15% withholding tax (recipients can choose to include in calculation for the purpose of personal income tax)	Individual: 15% withholding tax (for zero coupon instruments, if 15% is prepaid, capital gains is tax exempt)	Individual: Withholding tax-exempt	Individual: Withholding tax-exempt
	Corporate: 1% withholding tax	Corporate: Liable for corporate income tax	Corporate: Withholding tax-exempt	Corporate: Withholding tax-exempt
Corporate Bonds	Individual: 15% withholding tax (recipients can choose to include in calculation for the purpose of personal income tax)	Individual: 15% withholding tax (for zero coupon debt instruments, (if 15% is prepaid, capital gains is tax exempt))	Individual: 15% withholding tax	Individual: 15% withholding tax (for zero coupon instruments, if 15% is prepaid, capital gains is tax exempt)
	Corporate: Liable for corporate income tax.	Corporate: Liable for corporate income tax.	Corporate: 15% withholding tax	Corporate: 15% withholding tax
Supranational Bonds	Waived	Waived	Waived	Waived
Securitized Bonds	Individual & Corporate: 15% withholding tax upon debenture interest payment	N/A	Individual & Corporate: 15% withholding tax upon debenture interest payment	N/A

(Source) Revenue Department Tax Treaties Link

Withholding tax

Pursuant to the Revenue Code, any corporations that pay appraisable incomes need to pay withholding taxes to the government. Bond interests need to be paid with the specified tax rate at specified intervals. If bonds are traded during a tax payment period, tax is imposed according to the interest payment and profit between the new and old bond holders.

Specific enterprise tax

Specific enterprise tax is imposed on sole proprietors, unincorporated firms, and business corporations for the income from banking, financial, securities, insurance, pawn-broking, quasi-banking, and realty businesses. The rate of specific enterprise tax for bonds is 3.3%.

Stamp tax

Stamp tax is imposed on governmental services and the legal protection on rights and benefits. The stamp tax rate for bonds is as follows: (1) if bonds are issued by corporations, associations, individual groups, and other institutions, the fixed-amount stamp is affixed to each set of documents. If bonds are issued by unions, they are exempted from stamp tax; and (2) when bonds are traded, each buyer needs to affix a 1-baht stamp per 1,000 baht. In the case of the trading of bonds issued by the government, cooperative associations, and BAAC, they are exempted from stamp tax.

Agreement for avoiding double taxation

The agreement for avoiding double taxation was concluded between the Thai government and various countries, to specify the exemption of the tax on investment income, so as to prevent double taxation in several countries. This regulation also applies to foreign investors. The agreement for avoiding double taxation applies to the direct taxes imposed on the residents of the countries that signed the agreement. Direct taxes include individual income, corporate, and petroleum income taxes. Indirect taxes, such as value-added, specific enterprise, and commodity taxes, are not subject to the agreement for avoiding double taxation. This agreement specifies the upper limit of tax in each country that imposes tax.

1.4 Cross-border Transactions

International capital flow and foreign exchange is basically liberalized in Thailand. However, international transaction accompanied with Thai bath speculation are under the government regulations (see Table A1. Summary of Regulations on the Measures to Prevent Thai Baht Speculation in Appendix).

1.5 Recognition of Credit Risk by Authorities, Firms, and Investors

Government bonds are traded actively in Thailand, and the market evaluation on their credit has reached a certain level. On the other hand, some corporate bonds are not traded at all, and so market evaluation on their credit is difficult.

As for baht-denominated bonds, the trading volume of government bonds is large, and its

turnover ratio is much higher than that of corporate bonds. As of Jun. 2009, the trading volume and turnover ratio of government bonds in Thailand were 1.4 trillion baht and 0.32, respectively. On the other hand, the trading volume and turnover ratio of corporate bonds in Thailand were 15.7 billion baht and 0.01, respectively.

As for government bonds, credit risk is reflected in the yield curve to a considerable degree. For example, the bond yield curve in Jun. 2009 was steeper than that at the end of the previous year, because long-term yield increased while short-term yield decreased. As the background, price increase rate continued to be negative, policy interest rate decreased, many government bonds were issued, and it was inferred, from the long-term viewpoint, that government bonds will increase.

1.6 Asymmetric property of information

The reason why investors in the Thai bond market are limited is considered to be the fact that retail investors are not familiar with the bond market and do not trust bond investment. In addition, the government guarantees the full amount of bank deposits, and so retail investors highly evaluate bank deposits from the viewpoint of safety. However, Deposit Insurance Agency (DIA) is scheduled to be established, and when it is established, the deposition guarantee will shift to partial one, and so the deposits at unstable small-sized banks is expected to be transferred to more stable large-sized banks or the bond market.

1.7 Factors in impairing corporate bond finance

The Thai bond market is small and lacks thickness and width, and the variety of products is poor. In the bond market, the numbers of issuers and investors are small, and liquidity is insufficient. This tendency is remarkable, especially in the private bond market. The problems that need to be solved for the growth of the bond market are as follows:

(i) Small Investor Base

One of the obstacles to the growth of the Thai bond market is that the investor base is small. Especially, the number of corporate investors is small, and bonds are traded by a small number of major investors. The recent growth of mutual funds is a good sign for expanding the investor base, as bank depositors are transferring their assets to the bond market. Especially, government bonds have the merits of high safety and tax exemption, and the rate of return of government bond investment funds is better than that of bank deposits. Therefore, its growth is expected. In addition, in order to develop the bond market, there is a preferential tax treatment for Long-Term Equity Fund (LTF) and Retirement Fund (RMF), which is considered to contribute to the expansion of the investor base in the bond market.

(ii) Small Number of Private Firms Issuing Corporate Bonds

Another obstacle to the growth of the Thai bond market is that the number of companies that issue corporate bonds is small. At present, this number is about 100, which is only one fifth of the total number of companies listed in Thai Stock Exchange. The total amount of outstanding corporate bonds is 20% of the total amount of outstanding bonds, and so the investment options for investors are extremely limited. One of the reasons is that commercial banks offer loans with very favorable interest rates to the companies that could issue corporate bonds, and so such companies disregard the merits of the issuance of corporate bonds.

(iii) Bond Market Dominated by Public Bonds

The third obstacle to the growth of the Thai bond market is that public bonds now account for about 80% of bonds in the Thai bond market. In general, government bonds can be considered to be risk-free without credit risks, but considering the possibility of drastic changes in political measures, government bonds can be said to have significant potential risks. However, since the Asian crisis, the government has promoted the growth of the bond market on a full-scale basis, and this policy will not be changed from the medium to long-term viewpoints. In this light, the issuance of government bonds under appropriate policies would significantly contribute to the growth of the bond market.

(iv) Short Maturity Period of Bonds

The fourth problem with the bond market is the shortage of long-term bonds. In 2007, the bonds that mature in less than 5 years account for over 70% of the total balance of the bond market, while the bonds that mature over 10 years after issuance account for less than 10%. As for the private corporate bond market, the bonds that mature over 10 years after issuance account for as low as about 3%. The investors in the Thai bond market obviously have no interests in long-term investment. This is because they do not trust the credits of issuers, and so they consider the risks accompanying short-term bonds only. Another reason for the preference for short-term investment is that Thailand lacks tools for hedging market risks, and it is impossible to avoid the significant changes in the values of bonds held by investors according to market conditions. What is more, institutional investors, which tend to hold bonds for a long period of time, are still immature, and so long-term investment is not advanced.

(v) Poor variety of bonds and Limited Investment Options

It was pointed out that the variety of bonds is poor, and this diminishes the attractiveness of bond investment. The fifth problem with the Thai bond market is that the interest rates of most

bonds in Thailand are fixed. Structured bonds are still scarce, and so these cannot be used as alternative investment tools to bonds with fixed interest rates.

(vi) Small Number of Bond Dealers

In Thailand, the number of securities companies that have interests in transactions in the bond market is limited, and transaction costs are high. This is one of the problems with the bond market. The number of commercial banks that work actively in the securities market is also small, and most of commercial banks still concentrate on the conventional deposit and money-lending businesses. Therefore, the Thai securities market is occupied by a limited number of financial institutions, that is, under the oligopoly situation. About 50% of transactions in the bond market are conducted by the top 5 companies. The trading shares of the top 10 companies and the top 20 companies are 80% and 98%, respectively. Therefore, it can be said that a few dealers control the transactions in the bond market, augmenting the costs for depository, settlement, and payment services.

(vii) Immaturity of the Thai Financial Market

It is also said that the short-term capital market is not well-developed, and so it is difficult for bond dealers to procure short-term funds, which restricts transactions in the bond market. For most of securities companies whose capitals are small, it is difficult to borrow money from the interbank market. In addition, the development of the repurchase market is delayed. Swap and futures instruments for hedging financial risks are rarely used and expensive. The legitimate derivative product is only Stock 50 Index. Such products as Money Market Index, Bond Futures, and Bond Options are still unavailable. Short selling is permitted in the market, but its transaction cost is said to be high, and so short selling and the borrowing and lending of securities are not conducted so often. This condition hinders the transactions in the Thai bond market.

(viii) Regulation on International Short-term Capital Flow

In Thailand, in order to avoid the adverse effects of the inflow of overseas short-term capital on the Thai economy, the central bank enforced the regulations regarding international short-term investments in 2006. Then, it was obliged to prepare 30% reserve for each international short-term investment that mature within one year, except the case in which the total amount held is hedged for the entire holding period. This measure inhibits international investment in the bond market.

2. Rating Agencies

2.1 Rating System

According to the regulations of Securities and Exchange Committee of Thailand, in order to issue new bonds with the purpose of selling them to the general public, it is necessary to make the credit of each bond rated by rating agencies. In the case of private placement, rating is unnecessary. As of now, the rating agencies approved by SEC are TRIS Rating Co., Limited and Fitch Ratings (Thailand) Limited.

2.2 Outline of Rating Agencies

TRIS Rating Co., Limited and Fitch Ratings (Thailand) Limited are providing rating services in Thailand. The major characteristics of two credit rating agencies operating in Thailand are summarized in Table 3.

Thai Ratings and Information Services Co., Limited, the predecessor of TRIS Rating Co., Limited, was established through the joint initiative of the financial ministry and the central bank in 1993, one year after the enforcement of SEC Act., and its operation was started in July 1993. 18.5% of TRIS is owned by the government, and the remaining shares are owned by the private sector, including Thai Stock Exchange, commercial banks, securities companies, and insurance companies. Asian Development Bank owns 5%. Thai Ratings and Information Services Co., Limited started its business, receiving technical assistance from S&P, and established the 100% subsidiary TRIS Rating Co., Ltd. in 2002, and this subsidiary engaged in the rating business. TRIS assessed the performance of governmental institutions and public enterprises. TRIS Rating Co., Ltd. offers the company-rating and bond-rating services to public enterprises, financial institutions, and other private firms. As of the end of 2007, the number of client companies was 82, and the cumulative number of bond rating cases was 160.

Fitch Ratings (Thailand) Limited was approved by Securities and Exchange Committee of Thailand as the second rating agency in Thailand. This company rates financial institutions, corporate finance, structured finance, debt funds, and asset management services. 49% of this company is owned by Fitch Ratings, and the remaining shares are held by the governmental pension fund, Kasikorn Asset Management Co., Limited, Thai Life Insurance Co., Ltd., and TISCO Asset Management Co., Ltd.

2.3 Items to Be Rated, and the Number of Times of Rating

According to the rating index of TRIS, long-term bonds are rated with 8 grades from the highest AAA to the lowest D. The four grades from AAA to BBB indicate eligible investments, while the remaining four grades from BB to DD indicate speculative investments. According to

the rating index of Fitch, long-term bonds are rated with 12 grades. The four grades from AAA to BBB indicate eligible investments, while the remaining eight grades from BB to D indicate speculative investments.

As for short-term bonds, TRIS rates them with 4 grades from the highest T1 to the lowest T4, while Fitch rates them with 6 grades from F1 to D.

Table 4A Rating Symbols for Long-term Corporate Bonds

TRIS	Fitch	Rating Definition	
AA	AAA(thai)	Highest rating	Investment grade bonds
AA	AA(thai)	Very low degree of credit risk	
AA	AA(thai)	Low degree of credit risk	
BBB	BBB(thai)	Moderate credit risk	
BB	BB(thai)	High credit risk	
B	B(thai)	Very high degree of credit risk	
C	CCC(thai)	Highest credit risk	Speculative grade bonds
	CC(thai)		
	C(thai)		
D	DDD(thai)	Default	
	DD(thai)		
	D(thai)		

(Source) TRIS, Fitch Rating

Table 4B Rating Symbols for Short-term Corporate Bonds

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

(Source) TRIS, Fitch Rating

Most of the bonds registered in Thai Bond Market Association (ThaiBMA) have been rated. As of the end of Aug. 2007, the balance and number of the bonds rated by TRIS were 355.379 billion baht and 176, respectively. The balance and number of the bonds rated by Fitch were 365.119 billion baht and 168, respectively. Grade-A bonds were dominant with respect to balance and quantity, followed by AA and AAA.

Table 5: Registered Corporate Debentures

Company Rating	Outstanding Value (THB million)	Number of Resgistered Corporate Debentures
TRIS	355379.1	176
Fitch	365119.2	168
Moody	13500	3
S&P	13500	3

(Source) TRIS

Table 6: Ratings of Registered Corporate Debentures

Rating	Outstanding Value (THB million)	Number of Resgistered Corporate Debentures
AAA	111074.2	46
AAA	214841.8	62
AAA	252346.4	95
BBB	49635.3	17
BBB	2550.4	4

(Source) TRIS

2.4 Evaluation of the Performance of Rating Agencies

According to the analysis of TRIS Rating Co., default rate is lower, as rating is higher. The issuers of eligible investment grades have obviously low default rates. The default rate of grade C (1999) showed an abnormal value, because of the shortage of samples. The default rate of grade AA (1997-1998) was influenced by the nationalization of financial institutions.

Table 7. Annual Default Rates of Rated Companies between 1996 and 2007 (%)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
AAA	0	0	n.a.									
AA	0	33	0	n.a.	n.a.	0	0	0	0	0	0	0
A	0	0	0	0	0	0	0	0	0	0	0	0
BBB	0	50	33	0	0	0	0	0	0	0	0	0
BB	0	100	100	n.a.	n.a.	0	n.a.	0	n.a.	0	0	0
B	n.a.	n.a.	50	n.a.								
C	n.a.	n.a.	n.a.	100	n.a.							
Investment grade	0	32	14	0	17	0	0	0	0	0	0	0
Non-Investment grade	0	100	67	100	n.a.	0	n.a.	0	n.a.	0	0	0
Total	0	35	30	17	17	0	0	0	0	0	0	0

(Source) TRIS

(Note) n.a.=there is no issuer rated in the rating category.

Table 8. Three-year Cumulative Average Default Rates between 1994 and 2007 (%)

	Cumulative issuers 1993-2007	(1) 1st yr Default rates	(2) 2nd yr Default rates	(3) 3rd yr Default rates	(4) Cum 3yrs Default rates 100%-(100%-(1))(100%-(2))(100%-(3))
AAA	10	0	0	0	0
AA	50	2	5	8	14
A	153	0	1	1	2
BBB	186	4	4	5	13
BB	11	18	14	0	30
B	2	50	100	0	100
C	1	100	0	0	100
Total	413	3	4	4	10

(Source) TRIS

Table 9. Three-year Cumulative Average Default Rates between 1994 and 2007 (%)

(excluding closed financial institutions, %)

	Cumulative issuers 1993-2007	(1) 1st yr Default rates	(2) 2nd yr Default rates	(3) 3rd yr Default rates	(4) Cum 3yrs Default rates 100%-(100%-(1))(100%-(2))(100%-(3))
AAA	10	0	0	0	0
AA	44	0	0	0	0
A	153	0	1	1	2
BBB	178	2	3	5	9
BB	11	18	14	0	30
B	2	50	100	0	100
C	1	100	0	0	100
Total	399	2	2	3	7

(Source) TRIS

Table 10. Average One-year Transition Rates between 1994 and 2007 (%)

From \ To	Cumulative issuers 1993-2007	AAA	AA	A	BBB	BB	B	C	D	Withdrawals issuers
AAA	10	70	30	0	0	0	0	0	0	2
AA	50	2	88	8	0	0	0	0	2	6
A	153	0	4	93	3	0	0	0	0	19
BBB	186	0	0	5	87	30	1	0	4	16
BB	11	0	0	0	18	64	0	0	18	6
B	2	0	0	0	0	0	0	50	50	0
C	1	0	0	0	0	0	0	0	100	0

(Source) TRIS

2.5 Problems with Credit Risks in the Market

It is said that the short-term capital market is immature, and so it is difficult for bond dealers to procure short-term capital, which inhibits the transactions in the bond market. For most of securities companies whose capital amount is small, it is difficult to borrow money from the interbank market. In addition, the development of the repurchase market is delayed. The swap and futures products for hedging financial risks are rarely used or expensive. The legitimate

transactions of derivative product are limited to Stock 50 Index. Such products as Money Market Index, Bond Futures, and Bond Options are still unavailable. Short selling is permitted in the market, but its transaction cost is said to be high, and so short selling and the borrowing and lending of securities are not conducted so often. This condition hinders the transactions in the Thai bond market.

2.6 Prospect of Bond Markets Development

Limitations of the banking functions

As economy grows, the financial system that relies on banks only is faced with the severe limitations of its capability of tolerating risks. Banks change (lengthen) fund periods in addition to its intermediary function. Therefore, banks have the risk of bankruptcy due to panics. If a bank goes into bankruptcy, internalized information will be lost, causing a series of company bankruptcy and a strong impact on the entire economy.

Since financial deregulation, bank's intermediary function has been faced with the severe restrictions on the capability of tolerating risks (credit and market risks) (Saito [2001]). This is because banks need to control credit and interest-rate risks according to shareholders' equity, under the restrictions of the BIS regulations. When bank loans become larger or their period are lengthened, banks become unable to tolerate their risks, and so bank's capability of tolerating risks becomes limited compared with the market. In addition, since it is necessary to keep shareholders' equity above a certain level through the regulations regarding capital-to-asset ratio, bank's fund-raising cost becomes high compared with the securities market where money is directly collected from general investors. Furthermore, banks procure the important portion of funds from deposits, and so their capability of tolerating long-term interest-rate risks is poor. In developing countries, the ratio of short-term deposits is high, and so the above tendency is more significant.

Introduction of the new BIS regulations (Basel II)

The introduction of the new BIS regulations (Basel II) is expected to influence the behavior of banks in developing countries considerably (Yoshii and Koto [2007]). The new BIS regulations oblige each bank to design explicit business strategies, while gauging credit and operational risks in a sophisticated manner. In order to develop the optimal risk asset portfolio according to bank's business strategies, the bond market needs to have large-scale distribution systems in which various financial products, such as securitized products and corporate bonds, are traded.

Market-oriented indirect financing

On the other hand, as the middle-income class grows and households increasingly invest in the market, institutional investors, which are entrusted by households with asset management, become more important. In developing countries, the asymmetry of information is significant, and the information production function of the market is not good. In addition, when households, which are unaccustomed to market transactions, conduct asset management in the market, the households suffer excessive risks. From this viewpoint, it is necessary to develop market-oriented indirect finance intermediated by institutional investors that have the fiduciary function.

Economic growth enhances the importance of the insurance business, which maintains the household economic base. In developing countries, where economic systems are immature, the guarantee of the household economic base strongly depends on nepotistic social systems. However, as economy grows, the importance of mutual assistance in such social systems degrades, and modern insurance systems, such as life insurance, become more important. Especially, in a medium-income economy, the insurance business tends to grow rapidly, and so the roles as institutional investors are expected.

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