Development of the Thai bond market

Akkharaphol Chabchitrchaidol and Orawan Permpoon[1]

1. Introduction

The rebuilding and strengthening of Thailand's financial sector in the aftermath of the 1997 economic and financial crisis brought to light weaknesses in the country's financial development. Prior to the financial crisis of 1997, the function of financial intermediation fell almost entirely on commercial banks. They mobilised funds mainly through deposits, which accounted for roughly 80% of domestic banking liabilities. At the same time, they held almost 70% of total financial sector assets, most of which were in the form of credits to the household and corporate sectors. Direct financing through the domestic bond market – through both government and corporate bonds – was relatively small and not well developed. Nine consecutive years of fiscal surplus between 1988 and 1996 provided no incentive for the government to issue regular and substantial amounts of government bonds. The resultant limited supply of government bonds inhibited the development of a risk-free benchmark for the market and private issuers to price their corporate bonds.

The crisis brought to the fore an imbalance in the structure and operation of Thai financial markets. In particular, with limited financing alternatives to bank loans, businesses in Thailand after the crisis faced a severe liquidity crunch as the banking sector curtailed its lending operations amid high non-performing loan ratios and a need to rebuild its capital. This intensified the economic slowdown, as the highly leveraged business sector was without the normal channel of funding.

In the aftermath of the crisis, the authorities in Thailand put a great deal of effort into redressing this imbalance in the financial system. Development of the domestic bond market was given a high priority, partly because of the necessity of funding the financial sector restructuring and partly as an alternative funding source to reduce reliance on bank intermediation. In addition to the efficiency gain expected from increased competition for funding, a more developed bond market would also provide the economy with a more balanced financial infrastructure, thereby diversifying the risk of intermediation across a large number of institutions and market players. The aim has been to achieve a better distribution between bank financing, equity financing through the stock market, and debt financing through the domestic bond market.

Graph 1 shows that although bank loans still dominate the bulk of financing in the country, the share of bonds used for financing has increased steadily.

2. The development of bond markets in Thailand

The development of a government bond market was seen as a crucial step in providing the infrastructure for the development of the overall bond market in terms of volume, a risk-free benchmark price signal and market liquidity for active secondary market trading.

The Thai bond market is dominated by issues of public debt securities, which account for more than two thirds of the total number of bonds in the market. While the corporate bond market has grown fourfold since the crisis, its development is still being handicapped by the lack of quality issuers. In total, the fixed income market in Thailand grew from 7.6% of GDP in 1992 to about 35% in 2000. The outstanding value of the total bond market increased from THB 547 billion ($22 billion) in 1996 to THB 1,882 billion ($47 billion) at the end of 2001. Trading volume in the secondary market rose from a daily

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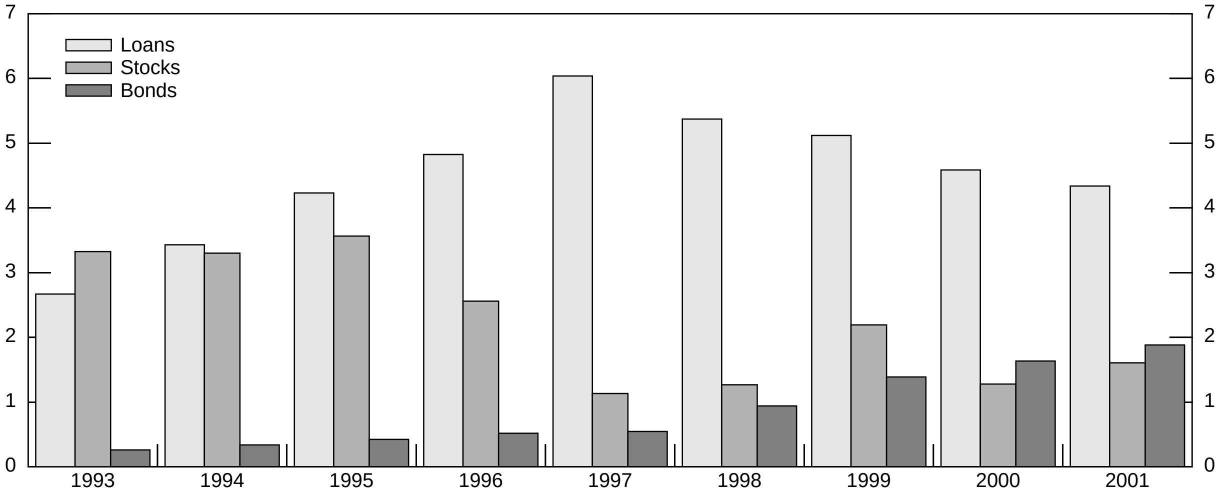
[1] Economist in International Economics Department and Analyst in Financial Markets Operations Group respectively, in the Bank of Thailand.

average of THB 822 million ($32 million) in 1996 to THB 4,485 million ($112 million) in 2001. Trading in corporate and government issues reached record levels in early 2001, and turnover now averages around THB 130 billion ($2.9 billion) a month.

Graph 1

Sources of financing

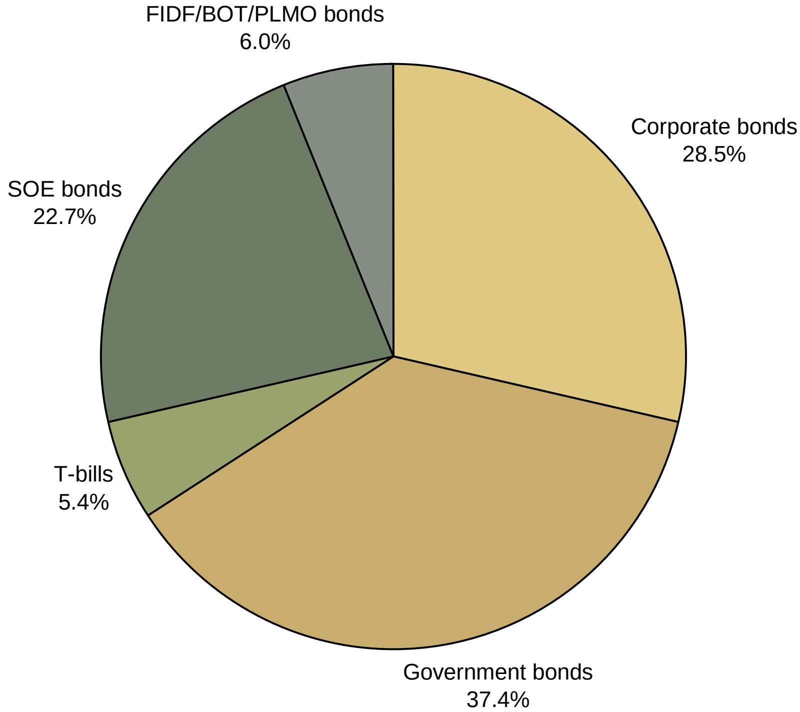
In trillions of Thai baht



Source: Thai Bond Dealing Centre (TBDC).

Graph 2

Thai bond market profile



Source: Bank of Thailand.

There are four major types of public debt securities;

- Treasury bills are short-term debt instruments with a maturity of less than one year and are sold on a discount basis.
- Government bonds are medium to long-term debt instruments issued by the Ministry of Finance (MoF). There are three types; investment bonds (IB), loan bonds (LB) and savings bonds (SB). While IBs have not been issued since 1991 and have now all fallen due, LBs capture the majority of the market as they are issued for financing the budget deficit, as well as to fund financial sector restructuring. SBs are issued to provide households and non-profit organisations with an alternative source of saving.
- Bank of Thailand (BOT) bonds, Financial Institutions Development Fund (FIDF) bonds and Property Loan Management Organisation (PLMO) bonds are issued by the BOT, the FIDF and the PLMO respectively. The BOT has not issued bonds since 1997 and the last of these matured in July 2001.
- State enterprise bonds are medium to long-term debt instruments issued by state-owned enterprises. Bonds of this type are generally guaranteed by the MoF, and so benefit from lower coupon rates.

Table 1

Bond market profile
year-end

	1997	**1999**	**2000**	**2001**
Government bonds	14	587	659	709
FIDF[1] bonds (government-guaranteed)				112
State enterprise bonds: of which	294			
Government-guaranteed		*309*	*345*	357
Not guaranteed		*47*	*64*	*59*
Treasury bills		25	62	110
Corporate bonds	134	402	501	538
Total	442	1,370	1,631	1,882

[1] Financial Institutions Development Fund.

Source: Bank of Thailand.

3. The government bond market

Since the onset of the crisis, Thailand's domestic bond market has grown progressively, dominated largely by the government bond market. With the government's need to borrow in order to meet the cost of financial sector restructuring, there was a sharp surge in the supply of government bonds. The large volume of issuance provided an opportunity to create a regular supply of government bonds. As of December 2001, total outstanding government bonds stood at THB 709 billion ($16 billion). Daily turnover rose from an average of THB 1.4 billion ($37 million) per day in 1999 to an average of THB 3.0 billion ($75 million) in 2001. On active trading days, volume has hit up to THB 10 billion ($249 million).

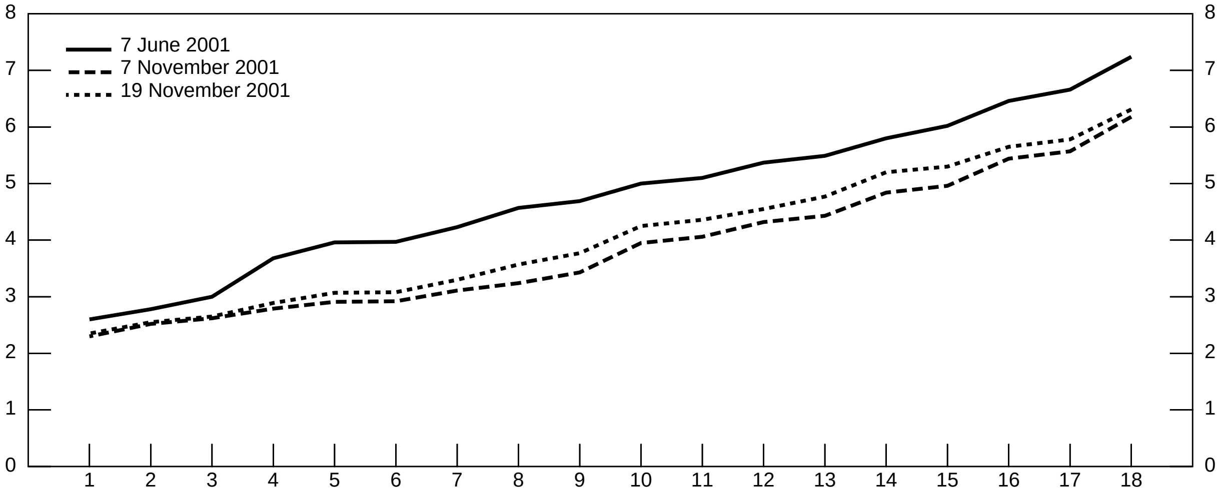
A number of measures have been taken to develop the government bond market. Currently, advance issuance schedules are made public to ensure certainty of funding for the government and efficient fund management. Secondly, securities are being issued in regular amounts and across maturities ranging from one to 20 years. Third, a system of primary dealers has also been set up to support government bond auctions and bond trading activities (for both private and public securities) and facilitate the BOT's own conduct of open market operations. There have been parallel efforts to develop the market for T-bills through a regular auction of one-, three- and six-month bills. The T-bill yield curve, in turn, provides the benchmark for the short-term money market.

With the systematic issuance of government bonds, together with increased activity in the secondary market, the government bond yield curve is now available on a daily basis and provides an important indicator of financial market conditions as well as market sentiment.

Graph 3

Government bond yield curve

In per cent per annum



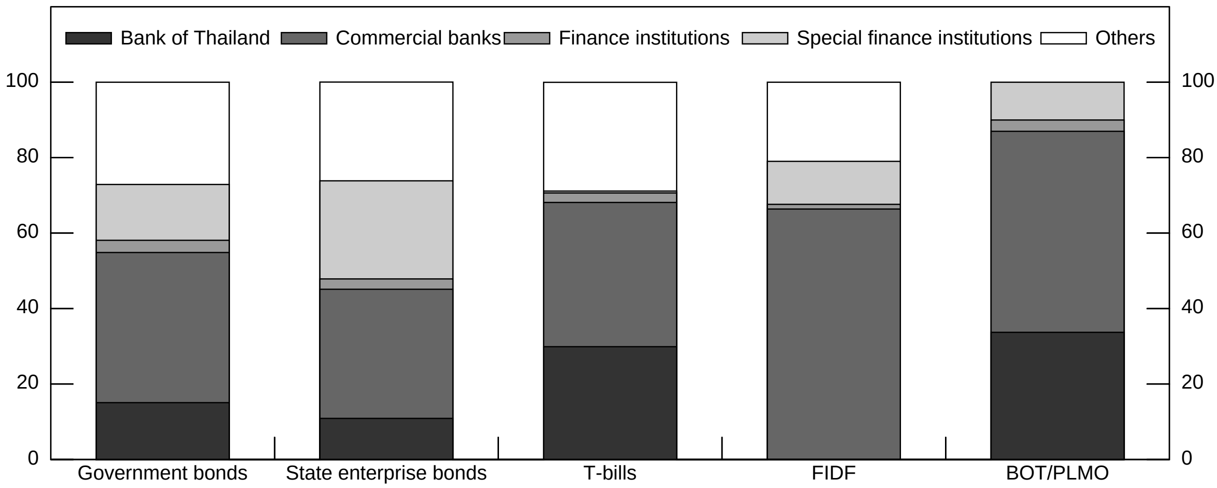
Source: Bank of Thailand

The BOT acts as fiscal agent and registrar of government securities and collects and disseminates data on holders and trading volume. Commercial banks are the largest holders of government bonds, given their inclination towards caution in extending credit to the private sector (Graph 4).

Graph 4

Profile of government bondholders

As a percentage of all bondholders



Note: Finance institutions include finance companies, finance and security companies, credit foncier companies and security companies. Special financial institutions include The Government Savings Bank, Bank for Agriculture and Agricultural Cooperatives, Government Housing Bank, Export-Import Bank of Thailand and the Industrial Finance Corporation of Thailand.

Source: Bank of Thailand.

4. The corporate bond market

Following the enactment of the Securities and Exchange Act in 1992, which has streamlined criteria for the issuance of corporate bonds, the corporate sector gradually began to issue bonds. The amount of corporate debt securities rose gradually, picking up speed in 1999-2000. This came about as a low interest rate environment encouraged Thai corporations to source funds directly from the capital market, while banks all but ceased lending as they sought to rebuild capital and restructure their NPLs.

The development of the corporate bond market, however, faces a number of impediments. There are problems arising from supply and demand conditions as well as market liquidity and volatility. On the supply side, there was a limited supply of quality corporate issuers with a financial standing that was strong enough to meet the rigorous public disclosure requirements and external party ratings. This resulted in a higher all-in cost of funding through bond issuance relative to bank lending. In addition, in the wake of the crisis, the credit quality of most firms has been greatly impaired. This meant that there were a limited number of firms qualified to issue bonds, especially in the large amounts that were common with bond issues. This problem was further compounded by the fact that banks, which derived a large part of their profits from lending, were reluctant to underwrite issues. As a result, there have only been a limited number of issuer names, with the telecommunications and property sectors being the more common issuers.

On the demand side, there was limited interest from mutual funds and an inadequate institutional investor base. While the former was due to the lack of creditworthiness of the mutual funds, the latter resulted partly from the conservative nature of regulations governing the investment polices of institutional investors, as well as the preference for shorter-term investment given the perceived uncertainty about the economy. Investors may also have been concerned over the lack of a follow-up mechanism or effective monitoring of bond issuers after the initial public offering, especially with regards to the possible misuse of proceeds. This in turn made investment in corporate bonds less attractive.

The third problem was the lack of supporting facilities necessary for promoting an active secondary market for corporate bonds. Initiatives to develop the market further include a corporate bond yield curve as well as the Bangkok Inter-Bank Offered Rate, both of which could serve as a reference for floating rate securities and derivatives. There was also an underdeveloped market for risk and liquidity management instruments – including the lack of a private repurchase market – due in part to a non-neutral tax treatment, outdated accounting practices and regulations that limited market participation. Reliance on over-the-counter (OTC) rather than electronic trading as well as an ineffective distribution of real-time market information add to the cost of information search. Altogether, this meant that there was a lack of liquidity in the secondary market, as well as of any active two-way price quotation.

Outstanding corporate bonds grew from THB 5.1 billion ($201 million) in 1991 to THB 538 billion ($13 billion) in 2001. Daily trading volume of corporate securities rose from THB 0.13 billion ($3.5 million) in 1999 to THB 0.38 billion ($9.3 million) in 2001.

The corporate sector has issued a number of different types of bonds, which can be classified by features such as redemption and interest payments. They include straight coupon bonds, convertible bonds, amortising bonds and floating rate notes (FRNs).[2]

In an attempt to increase the variety of bonds available in the Thai bond market, the BOT has proposed that the Public Debt Management Office of the MoF issue FRNs. This is intended to provide a greater variety of instruments for investors, thereby helping to widen the investor base. Not only are FRNs expected to reduce investors' interest rate risk as the coupon is indexed to an interest rate benchmark, they are also expected to help reduce the cost of funding for the MoF compared to T-bills. In addition, this should show the MoF's commitment to a regular auction calendar as well as ensure a regular future supply of T-bills if the yield on the latter is to be used as the reference rate for FRNs. This should help contribute to building a solid framework for the further development of debt markets.

[2] FRNs are debt instruments which pay interest based on a reference rate, usually a short-term interest rate in the money market.

5. The primary market

Significant progress has been made in the development of the primary market for government debt in the last two years. The MoF, with assistance from the BOT, has established a regular programme for government bond and treasury bill issuance and an issuance calendar for market participants, which can be accessed through the websites of the BOT (www.bot.or.th) and the MoF (www.mof.go.th). While an advance calendar has been issued for government bonds and treasury bills, no formal schedule is yet available for state enterprise bonds. The aim is, by announcing as far ahead as possible and committing as closely as possible to the issuance calendar, to enhance the continuity, predictability, and transparency of bond issuance. Another crucial step in ensuring the successful development of the Thai bond market will be the development of a legal framework and the enactment of supportive legislation, such as the Debt Management Law, which will enhance the flexibility of public debt management.

In addition, the authorities are in the process of developing both savings bonds for retail investors and new debt instruments such as strip bonds, floating rate notes, index linked bonds and zero-coupon bonds to meet the demands of market participants.

Auction procedures

The American auction procedure is used for government bonds, T-bills, and FIDF bonds and is open to dealers as well as end investors in the primary market. It is a system that ensures the widest participation by the dealer community under a competitive bidding process. Government bonds, T-bills and FIDF bonds are auctioned by the BOT.

State enterprise bonds are auctioned using an underwriting procedure, whereby entire issues are awarded to bidders (underwriters) who offer the lowest cost of funding. The auctions are held by the Public Debt Management Office (PDMO).[3] The authorities are looking to improve the auction method by allowing large state-owned enterprises to be auctioned off to many buyers. In addition, all future auctions are to be centralised at the BOT.

Issuance of corporate bonds can be made through a public offering or a private placement. For publicly offered issues, the issuer must meet the criteria set by the Securities and Exchange Commission (SEC) and obtain its approval prior to launching an issue. For privately placed issues – offered to no more than 35 investors or to the 17 types of institutional investors as specified by the SEC – placement is much simpler. Since April 2000, both types of issues are required to be credit-rated, with an exemption granted for issuers with an offer amount not exceeding THB 100 million and with transfer limits of 10 holders.

Recognising the inefficiency of physically handling transactions, the BOT is in the process of developing an online bidding process. The introduction of an electronic system for the submission of bids, instead of the present system whereby dealers are required to physically submit their bids on paper, is expected to reduce turnaround time for dealers and traders, and also support trading in the secondary market.

Establishment of a primary dealer system

The development of a primary dealer system is aimed at supporting the auction process in the primary market as well as enhancing liquidity in the secondary market and facilitating the conduct of open market operations. The BOT appointed eight banks and one securities firm, which are active market participants, as primary dealers in June 2000. These institutions are required to act as market makers, providing daily two-way indicative quotations for outstanding government bond issues.

Institutions wishing to qualify for selection as primary dealers for outright transactions have to meet a number of requirements, as announced by the BOT in December 2001. They are required to

[3] The PDMO was established in September 1999 in order to improve the efficiency of the country's debt management. Its objective is to centralise bond issuance so that the auction calendar of government and state enterprise bonds can be consolidated and set in advance.

participate frequently in auctions of government bonds and maintain the specified amount of government bonds allocated for investment in the primary market. In the secondary market, they are required to be able to provide a two-way price quotation for benchmark securities as well as a firm price in ordinary circumstances. In addition, they are required to maintain an appropriate level of trading in the secondary market for each maturity as required by the authorities. These institutions will act as advisors to the MoF in planning the issue of further government bonds, and will act as counterparty for any transactions by the BOT, in addition to acting as a contact with the central bank in developing the bond market.

A different set of criteria have been published for primary dealers for bilateral repo transactions. These primary dealers are required to act as intermediaries in transactions between the BOT and other market agents and as counterparty to the BOT in its bilateral repo transactions, which are to be used for open market operations.

6. The secondary market

A large primary issue of government bonds in itself does not mean that a market is developed. A deep and liquid market requires active secondary trading so that bondholders need not be concerned about incurring any losses or penalties should they wish to liquidate their bonds. An active secondary market is an integral part of the price discovery process where neither issuers nor borrowers will be disadvantaged by paying too high a price for capital, and can be confident of a fair market rate should they wish to exit the market. Among the important prerequisites for active secondary trading are the availability of intermediaries, hedging tools and a broad-based investor pool, as well as an efficient clearing and settlement system.

Within the secondary market, the authorities have tried to enhance liquidity and trading through the development of a primary dealer system (as mentioned above), whose institutions are required to act as market-makers and provide daily price quotations. At present, both indicative and executed price quotations are available on a daily basis for over 300 issues of government bonds, treasury bills, state enterprise bonds, and investment grade corporate bonds at the Thai Bond Dealing Centre's website (www.thaibdc.or.th). These primary dealers will be required to quote firm bids once a number of hedging tools are available to provide greater flexibility and protection. These tools include interest rate swaps as well as tools that will allow the short sale of bonds and the undertaking of repurchase operations and securities borrowing and lending.[4]

The role of the Bank of Thailand in developing the secondary market

In January 2000, the BOT carried out initial outright transactions with its counterparties in order to adjust its own portfolio holding of government bonds and to kick-start secondary trading. This had the effect of boosting the secondary market; the average daily turnover progressively rose from around THB 1.4 billion per day to over THB 3 billion per day. On 27 December 2000, the BOT started bilateral repurchase operations with its primary dealers in parallel with the current BOT-operated repo market. Even though the main objective of bilateral repurchases is the implementation of monetary policy, it is also expected to provide liquidity in support of secondary market trading. In addition, with the cooperation of the Thai Bond Dealers' Centre (TBDC) and its primary dealers, an indicative benchmark yield curve for risk-free government bonds has been published since September 1999. On 7 November 2000, the TBDC began to publish a matrix for government-guaranteed state enterprise bonds, which shows the daily spread for each state-enterprise group over government bonds with the same maturity.

[4] The BOT has allowed commercial banks to undertake securities borrowing and lending as principals, as well as allowing short sales, since September 2000. Previously, securities borrowing and lending had been permitted with the banks as agents since June 1999.

7. Market infrastructure

Regulatory environment

The BOT supervises the operation of banking and financial businesses while the SEC supervises the primary and secondary markets for securities. The issuance of securities is governed by the Securities and Exchange Act 1992. In November 1994, the “Bond Dealers’ Club” was set up to act as the secondary market for debt securities. It was upgraded to the TBDC in April 1998 after it was granted a “bond exchange” licence from the SEC. The TBDC’s goals are to provide an environment for fair and secure trading, to monitor trade and to disseminate information on the secondary bond market. The TBDC also functions as a self-regulatory organisation and has implemented a number of standards and conventions for bond trading.

Other developments

The BOT, in collaboration with various government agencies such as the SEC and the MoF, has been working to establish a market infrastructure that will be most conducive to the development of a bond market. This includes setting up a clearing and settlement system as well as the promotion of a private repurchase market.

An efficient clearing and settlement system for securities is absolutely essential to the active execution of trade at front offices. At present, the BOT is responsible for the settlement of public debt securities, as it acts as both depository and registrar. The majority of government bonds are issued in bearer form and are settled by physical delivery at the BOT. Corporate bonds are cleared and settled at the Thailand Securities Depository, and are transferred on a book entry basis. With the aim of reducing settlement risk, the BOT has developed the delivery versus payment (DvP) system, also known as BAHTNET II, which commenced operations on 21 December 2001. Market participants should benefit greatly from BAHTNET II as it reduces interbank settlement risk, improves convenience and service and allows the integration of future services and new financial instruments.

The development of a private repurchase market is also an important step in improving market infrastructure. If bond prices are transparent and reliable, the repurchase market provides a link between collateral and money markets. In the present repo market, the BOT acts as a matchmaker for lenders and borrowers. Because all transactions are made with the BOT, however, the market is distorted as credit risks of counterparties are not reflected in the interest rate charged, but reflect the risk of the central bank. Having realised the problems inherent with having the central bank as a central counterparty, the BOT is currently concluding development of the private repo market. Aside from providing tools for market participants to hedge their positions and manage liquidity,[5] a private repo market will also better reflect the borrowing needs and credit conditions of market participants. This will enable the BOT gradually to phase out the current BOT-run repo market and change the role of this window to being purely for monetary operations to absorb or inject market liquidity.

Remaining work on this issue will deal with the interpretation of rules and regulations of other institutional investors such as the Government Pension Fund or specialised government-owned financial institutions which have a large inventory of bonds, and whether they can actively participate in repo transactions. With regard to tax issues, the Revenue Department has agreed to abolish capital gains tax on repo transactions as of 10 April 2000, as well as the special business tax on the capital gains of the repo borrower and stamp duty on the transfer of securities.

Another important initiative, which can help provide greater stability to the market, is the broadening of both the issuer and the investor base. With regard to the former, Thailand’s corporate issuers cover the entire spectrum of industries. With institutional investors, the presence of a larger variety of market actors such as fund managers, insurance companies, and other end-users will help eliminate the one-

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5 For example, if a dealer or mutual fund is subject to aggressive redemptions and wants cash, it need not liquidate its bond holdings but may instead repo out the bonds for cash, thus helping to preserve the value of its portfolio and curb market volatility. On the other hand, the party holding a large portfolio of bonds can also use those assets to enhance returns by selling them with an agreement to buy them back later.

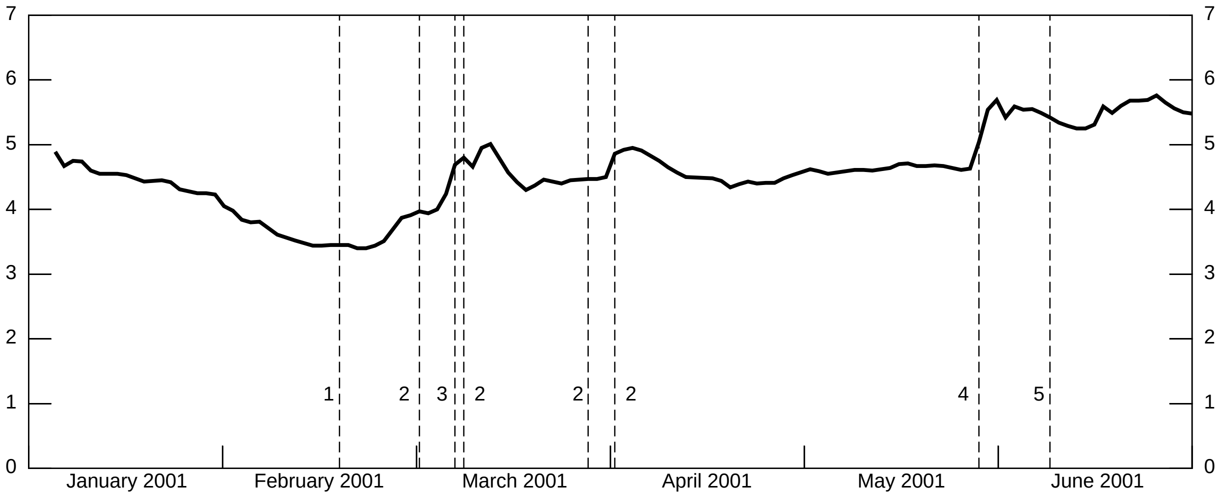
way direction of the market. It is worth noting that retail investors have begun to participate in fixed income security markets. In a recent $190 million corporate-bond issue by Advance Info Services, Thailand's largest wireless telecommunications company, retail investors purchased more than 60% of the securities issued. However, a number of problems still exist. For one thing, regulatory authority remains unclear; the BOT, MoF, TBDC and SEC share responsibility for regulation and supervision. This requires cooperation from all sides to provide a regulatory environment which will enable the institutions under their supervision to participate actively in the fixed-income market. This also includes pushing for equality of tax treatment between private repurchase transactions (which are currently taxed on a gross basis) and other money market transactions (such as swaps, which are taxed on a net basis).

Efforts to streamline regulation

At present, there are three types of income subject to taxation: interest, discount (a spread between par and a lower offer price) and capital gains. Tax rates vary according to type of investor and income. For example, non-resident institutional investors are subject to a 15% withholding tax on interest, discount and capital gains income. These rates may be reduced to 10% for non-residents from double tax treaty countries. However, by making interest income and capital gains from local bond mutual funds tax-exempt, the government has been able to stimulate demand from retail investors. At present, there are more than 80 fixed income mutual funds in Thailand that invest exclusively in local bonds. Together they have a total net asset value of THB 80 billion ($1.8 billion), up from THB 20 billion in early 1998.

Graph 5
Long bond yield movement

Government bond maturing in December 2008



[1] Heavy demand for long-term issues leads to aggressive bidding. [2] Volatile market conditions make investors nervous. Government and FIDF bond auctions are cancelled or not fully subscribed due to high yield bids. [3] Comment from the authorities that interest rates have reached bottom. Yields fluctuate by as much as 80 bps daily. [4] BOT governor Chatu Mongkol Sonakul removed on 29 May 2001. [5] BOT announces an increase in the policy rate by 100 bps from 1.5% to 2.5% on 8 June 2001.

Source: TBDC.

Work is also continuing on the rationalisation of remaining tax obstacles that hinder the development of private repurchase transactions and term lending in the money market. This includes the Special Business Tax, which is imposed on money market transactions on a gross basis. Other changes to the regulatory environment include streamlining accounting practices to ensure equal treatment for private repurchase transactions and other money market transactions,[6] as well as continuing to rationalise regulations concerning securitisation, credit guarantees and derivatives. This includes relaxation of policies governing the use of hedging instruments – such as interest rate swaps – so that investors can reduce their risk. Mutual funds at the moment, for example, are prohibited from pledging their assets and therefore cannot enter into contracts for certain derivatives transactions.

The Thai bond market has come a long way in its development since the crisis. Nevertheless, more needs to be done. A number of events – including market volatility – which affected the market in 2001 reflected the rudimentary stage of the market, which still has to build up resilience and strength. Taking a 10-year government bond, we are able to see the volatility of its yield movements over a six-month period. For instance, the large demand for long-term issues led to aggressive bidding by market participants, bringing the yield curve to an all-time low in February 2001. Subsequently, with an influx of a large volume of state enterprise bonds, markets were confronted with shocks leading to large fluctuations in price and yield. The lack of depth of the market is also reflected in its sensitivity to comments from the authorities.

8. Conclusion and implications for monetary policy

In addition to creating a market and instruments to fund the government deficit and helping to develop capital and financial markets, the BOT has also benefited from the development of bond markets, which provided it with instruments for open market operations and increased the effectiveness of bond portfolio management. Like most central banks, the BOT previously relied on direct monetary instruments – reserve requirements, interest rate ceilings, and credit controls – as well as sectoral credit allocation. The development of bond markets has allowed the BOT to move away from direct instruments towards a greater use of market-based instruments, namely through open market operations. As the capital market becomes deeper and more liquid, the development of a repo market will facilitate the trend of monetary policy towards the use of indirect instruments.

Government securities are important assets as they can also be used by the central bank in market operations to manage the amount of liquidity in the financial system, and as collateral to support the functioning of payment and settlement systems. In market transactions, central banks prefer to use government securities as they are the most liquid and have minimal credit risk. Liquidity is important as central banks need to be able to conduct large transactions without distorting prevailing market prices in order to implement monetary policy efficiently, manage their balance sheets and, when required, supply credit to financial institutions in their role as lender of last resort.

The bond market has also been useful in strengthening the signalling effect of monetary policy, thereby enhancing the credibility of monetary policy operations. As bond yields typically respond much more rapidly to changes in the policy rate, or even to market sentiment or an assessment of impending change, this has provided the BOT with another vehicle for assessing the impact of monetary policy which is more sensitive, timely and clearer than when traditional market intermediation was dependent on bank financing. In addition, with the development of a domestic bond market, the authorities need to be concerned with and monitor the balance sheet effect of monetary policy as bonds constitute a growing portion of the asset holding of banks, mutual funds, insurance companies and other institutional investors who are subject to mark-to-market rules.

The interest rate channel of monetary policy transmission is also likely to become more effective with a more developed bond market. When the banking sector is impaired, as was the case in Thailand after the 1997 crisis, a change in the policy interest rate can still have some effect through the change in behaviour and issuing costs for corporate bonds. With the use of bilateral repurchase transactions, the central bank is able to support monetary operations under an inflation targeting framework by imposing an initial margin as well as marking collateral to market. At the same time, with more financing alternatives, the corporate sector will continue to have access to funds notwithstanding the problems in the banking sector.

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6 For example, swaps are off balance sheet items and do not count as part of the liability base on which the FIDF fee (a fee for guarantee of the liabilities of financial institutions) is charged.