

Bond and Note Transactions, and Trading Market Infrastructure

A. Trading of Bonds and Notes

In Thailand, bonds and notes can be traded either OTC or on an exchange. In contrast to equities, bonds and notes are typically traded in big lots. They are also traded less frequently than equities. As such, most bonds and notes transacted in the secondary market are traded OTC via negotiations between buyer and seller. Most transactions take place over the telephone or via voice broker. At the same time, trading on the SET, via TBX, is rarely observed.

To trade debt instruments in Thailand, investors are required to trade only with dealers who are financial institutions licensed by the SEC to trade debt instruments. As of May 2015, 44 dealers had dealing licenses but only 42 of these were active dealers, most of whom were commercial banks.

B. Trading Platforms

The trading of bonds or notes in the Thai market can be done in the OTC market or on TBX. Trading in the secondary market can be grouped into two types of transactions: (i) dealer-to-dealer or inter-dealer and, (ii) dealer-to-client. For dealer-to-client transactions, investors and dealers negotiate and trade their bonds via telephone.

1. Over-the-Counter Market

The OTC market is less a trading platform and more an organized market. There is no common trading platform used in the OTC market. Trades of bonds and notes are concluded directly between institutional counterparties via phone or using the services of a voice broker or an Inter-dealer brokers. Presently, four inter-dealer brokers are active in the Thai market. Dealers may also use Bloomberg or other such global trading system providers, or an in-house trading system. Participants in the OTC market must be members of ThaiBMA.

2. Thailand Bond Exchange

TBX, a division of the SET, trades fixed-income securities, which are primarily offered to the public (no transfer restrictions) as an electronic trading platform. TBX was officially launched on 26 November 2003 (as BEX), with operations beginning on 1 March 2006. The original trading platform was obtained from the TBDC (subsequently renamed ThaiBMA). The key objective of TBX has been to develop the secondary market for bond and note trading in Thailand, in particular with an orientation toward the retail market. Trades on TBX can only be executed by exchange members, which comprise brokers and securities firms. Trading volume on TBX has remained low (at less than approximately 1% of market volume). Figure 4.1 provides a TBX website of its Market Overview page.

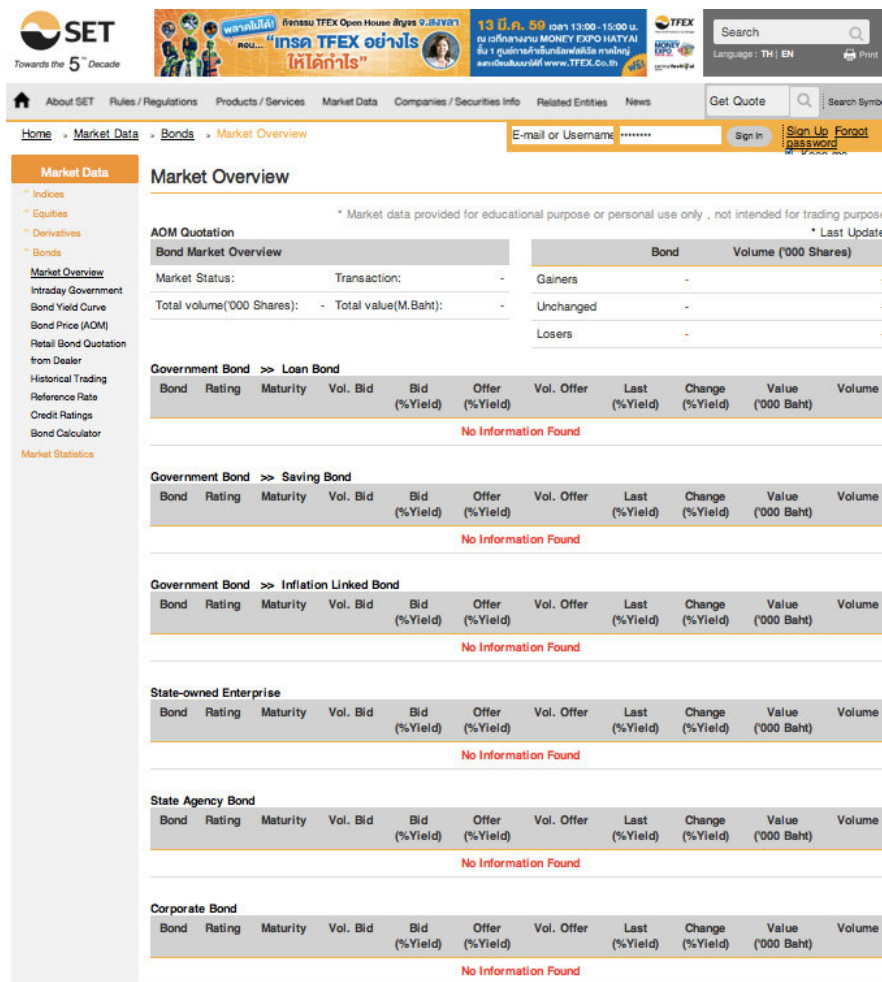
TBX's mandate includes following primary roles:

- (i) support the development of Thailand's secondary bond market,
- (ii) expand bond activities to smaller investors, and
- (iii) properly educate noninstitutional investors on additional investment instruments.

To attract bond activities in both retail and wholesale markets, TBX was granted approval from the SET to include both government bonds and corporate bond and note issues on its exchange platform. TBX has also been planning to include Asian bonds on its trading platform.

TBX has two trading methods for investors: (i) automatic order matching, and (ii) put through for the retail market when the trading volume exceeds 10,000 units (THB10 million).

Figure 4.1: Thailand Bond Exchange Market Overview



Note: Further information on bond trading procedures is available via the following link to the Stock Exchange of Thailand website: http://www.set.or.th/en/products/trading/bond/bond_trading_p1.html
Sources: TBX Market Overview and SET website. http://marketdata.set.or.th/tfx/bexoverview.do?locale=en_US

The SET now operates bond and note trading on both the exchange platform (automatic order matching) and the non-exchange platform, the Fixed Income and Related Securities Trading System (FIRSTS), which aims to serve fixed-income dealers and institutional investors. Institutional and large-scale investors trade via FIRSTS. There are presently 28 primary dealers registered on FIRSTS.³³

C. Trade Reporting to the Thai Bond Market Association

Regardless of the choice of trading platform, all licensed dealers must report trades of bonds and notes in the Thai market to ThaiBMA within 30 minutes of execution. This practice is mandated by SEC regulations.

Bond dealers capture trade details in their own trading systems and transmit the required data to ThaiBMA via a defined interface. FIRSTS trades are reported by the SET to ThaiBMA on a continuous basis via a direct connection.

To provide transparency in the bond market, intraday transactions reported to ThaiBMA are disseminated through a screen called MARKET WATCH that is available to investors through the ThaiBMA website.

D. Market Monitoring and Surveillance in the Secondary Market

ThaiBMA monitors market movements and every trade transaction to ensure that there are no violations of regulations or ThaiBMA rules, wrongful conduct, or unfair trading occur. In addition to daily and regular monitoring, ThaiBMA also reports to concerned authorities such as the SEC and BOT.

For transactions on TBX, the SET's Market Surveillance Department is responsible for maintaining an orderly market and enhancing market transparency and market integrity.³⁴

E. Bond Information Center (ThaiBMA)

As part of its regulatory mandate, ThaiBMA also serves as the bond information center by collecting and distributing information on the bond market, including live trading information, traded data, yield curves, announcements, and additional background information. Figure 4.2 provides an example of ThaiBMA's daily bond data page. ThaiBMA's information services specifically targeted at retail investors are described in Chapter III.P.2.

To aid ThaiBMA in its dual role as a bond information center and the SRO for the bond market, SEC regulations prescribe that all publicly offered and some private placement corporate bond and note issues must register with ThaiBMA. While there is no such regulation applied on government securities, in practice, all government bond issues are automatically registered with ThaiBMA. As discussed in section C above, dealers must report traded prices to ThaiBMA.

³³ See http://www.set.or.th/en/products/member/firsts/firsts_dealer_p1.html

³⁴ For further information, please refer to the following link: http://www.set.or.th/en/regulations/supervision/surveillance_p1.html

Figure 4.2: Daily Market Highlight



Source: Thai Bond Market Association. <http://www.thaibma.or.th/EN/Market/Highlight1.aspx>

Currently, ThaiBMA categorizes reported data into three types to facilitate bond market analysis and to provide a fair and valid reference to the data:

- (i) An **outright transaction** refers to a one-shot transaction under no obligation agreed upon in advance, such as the sell-and-buy-back price; generally, it refers to T+4 transactions that are settled within 4 business days.
- (ii) A **financing transaction** occurs under a repurchase agreement (repo) or sell-and-buy back condition where bonds are treated as collateral.
- (iii) **Other transactions** refer to any transaction other than outright and financing transactions, such as transactions with prior agreements, transactions that are settled after 4 business days, or transactions based on options or forward agreements.

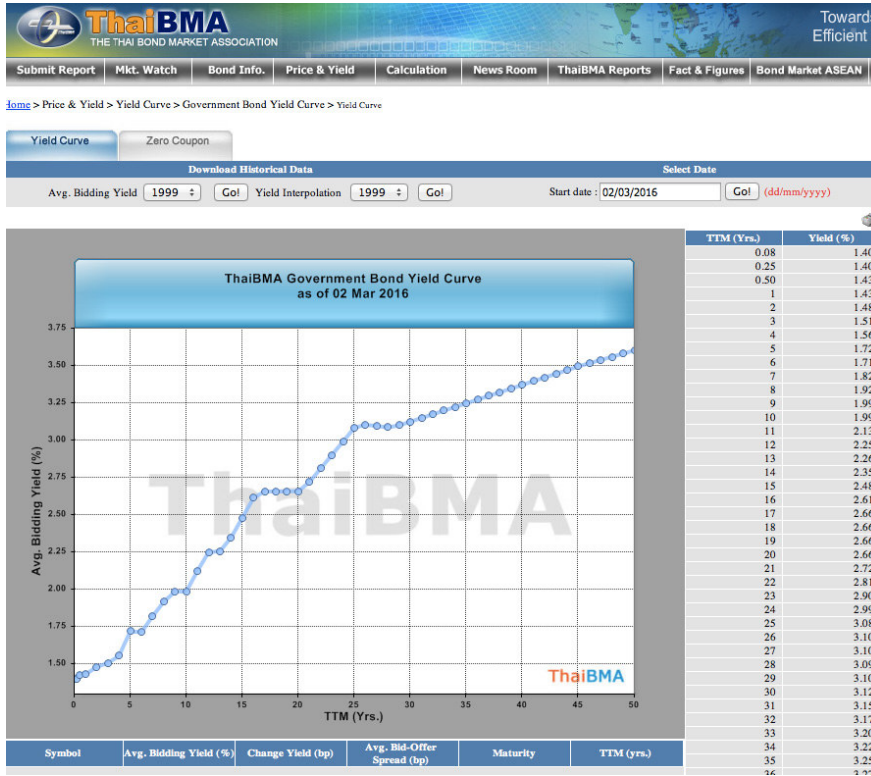
Transaction reports submitted to ThaiBMA are reviewed by the Surveillance Department prior to compilation and dissemination to the general public, and for the mark-to-market process of the bonds or notes.

F. Government Bond Yield Curve and Bond Indexes

ThaiBMA developed Thailand's government bond yield curve by using bidding yields quoted daily by primary dealers, which are published on the ThaiBMA website. ThaiBMA also publishes reference yields of SOE bonds, FIDF bonds, and Treasury bills. Yield curve information has been disseminated to the public on a daily basis since 1999. Figure 4.3 presents a Government Bond Yield Curve page on ThaiBMA's website.

In addition to the yield curve, ThaiBMA also developed the ThaiBMA Index as a tool to track market performance (Figure 4.4). The ThaiBMA Index—comprising the Total Government Bond Index, Corporate Bond Index, and the Categorized Index—is divided into several subgroups by maturity (e.g., 1–3 years, 3–7 years, 7–10 years, and more than 10 years).

Figure 4.3: Thai Bond Market Association Government Bond Yield Curve (as of 2 March 2016)



Source: Thai Bond Market Association. Government Bond Yield Curve. <http://www.thaibma.or.th/EN/Market/YieldCurve/Government.aspx>

Figure 4.4: Thai Bond Market Association Index (as of 2 March 2016)

Index	Open Price	Chg (bps)	Green Price	Chg (bps)	Total Return	Chg (bps)	Yield	Duration
Government Bond Index	112.21	-0.45	112.22	-0.49	267.97	-1.17	2.20	7.81
Maturity Risk Group	88.26	-0.02	81.11	-0.02	293.81	-0.06	1.83	8.81
Group 1 (1 - 1Y)	119.17	-0.14	116.75	-0.15	256.83	-0.35	1.62	4.66
Group 2 (1 - 3Y)	145.61	-0.21	140.78	-0.26	348.85	-1.00	1.81	7.89
Group 3 (3 - 5Y)	174.38	-1.56	175.65	-1.58	418.80	-1.71	2.85	14.22
Group 4 (5 - 10Y)	94.89	-0.12	97.80	-0.18	228.14	-0.26	1.73	3.86
SOE/G Bond Index	106.14	-0.11	107.16	-0.14	159.13	-0.22	2.02	3.20
Maturity Risk Group	98.23	-0.01	99.23	-0.01	142.83	-0.02	1.66	2.07
Group 1 (1 - 1Y)	116.76	-0.10	114.78	-0.10	179.11	-0.17	1.86	4.31
Group 2 (1 - 3Y)	128.26	-0.07	127.24	-0.08	186.18	-1.02	2.22	7.37
Group 3 (3 - 5Y)	135.52	-0.08	131.88	-0.09	201.84	-1.28	2.61	9.82
Group 4 (5 - 10Y)	105.88	-0.11	106.11	-0.12	157.82	-0.18	1.84	5.30
SOE/NG Bond Index	111.02	-0.32	111.18	-0.33	173.18	-0.30	2.38	3.39
Maturity Risk Group	101.00	-0.01	102.00	-0.02	149.28	-0.02	1.81	2.01
Group 1 (1 - 1Y)	116.08	-0.16	117.71	-0.17	177.65	-0.22	1.93	4.21
Group 2 (1 - 3Y)	121.18	-0.18	121.20	-0.18	181.81	-1.82	2.33	6.87
Group 3 (3 - 5Y)	128.03	-0.27	127.65	-0.28	195.85	-1.25	2.87	10.83
Group 4 (5 - 10Y)	113.00	-0.21	112.65	-0.22	167.54	-0.30	2.08	4.17

Source: Thai Bond Market Association. ThaiBMA Bond Index. <http://www.thaibma.or.th/EN/Market/Index/BondIndex.aspx>

ThaiBMA bond indexes are made publicly available on a daily basis.

G. Repo Market

1. Overview³⁵

There are two types of repo transactions in the Thai market. A bilateral repo is conducted between the BOT and a primary dealer appointed by the BOT. A private repo is transacted between dealers, or between a dealer and a client, without BOT participation. Both types of repo are reported to ThaiBMA, which makes the data publically available on a daily basis. This also allows the BOT to use such data in the making and executing of policy.

There was little private repo activity when the BOT still engaged in repo operations. Under the BOT-operated repo, the BOT acted as the counterparty to all participants with no legal transfer of ownership of the bond collateral. The BOT introduced the bilateral repo market in 2000 in which the BOT would conduct monetary operations exclusively with a group of appointed primary dealers. In a bid to stimulate private repo, the BOT discontinued the BOT-operated repo market in 2008. The private repo market has enjoyed considerable growth since then. In this context, ThaiBMA played an active role in promoting market conventions for private repo, such as the use of the Global Repurchase Master Agreement (GMRA), the standard calculation of interest margin, and reference prices for mark-to-market purposes.

Growth and actual private repo activities between bank and nonbank clients have slowed significantly since 2012 when the BOT implemented a surcharge of 0.46% on all deposits, including those stemming from repo business, in a bid to replenish the FIDF. At the same time, the private repo market is supported by a policy initiative of the PDDF under the governance of the Bond Market Development Bureau at the MOF.

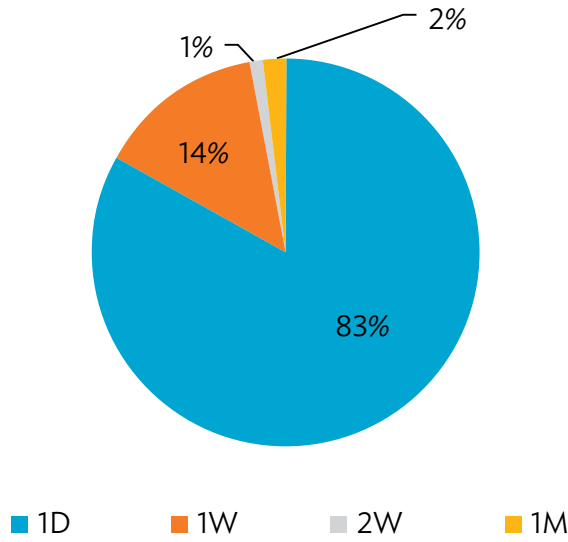
Bilateral repo is still used for open market operations by the BOT to manage or provide liquidity to the banking system. The primary dealers act as intermediaries between the BOT and the market for liquidity management. The typical tenors of a bilateral repo are overnight, 1 week, 2 weeks, or 1 month, with the shares of the total for each shown in Figure 4.5. As of June 2016, overnight private repo represents about 37% of the total private repo outstanding, while tenors of 1 month or longer represented 14%. The value of private repos outstanding totaled THB475 billion at the end June 2016 (Figure 4.6).

Most repo transactions are conducted in the OTC market, with typical value dates at 3 plus zero (3-day settlement for first leg, same day for second leg), 2 plus 1, or 2 plus 2, but the tenor can be tailored, usually up to 1 month. Banks and other financial institutions may act as a lender or borrower to counterparties in both Thai baht and foreign currencies.

At the same time, private repo transactions may also be entered into using the repo services of TSD. The repo service is similar to the securities borrowing and lending (SBL) services provided by TSD. (For more details on SBL, refer to section H in this chapter.) This repo service requires the maintenance of dedicated accounts at TSD for the transfer of the debt securities as collateral.

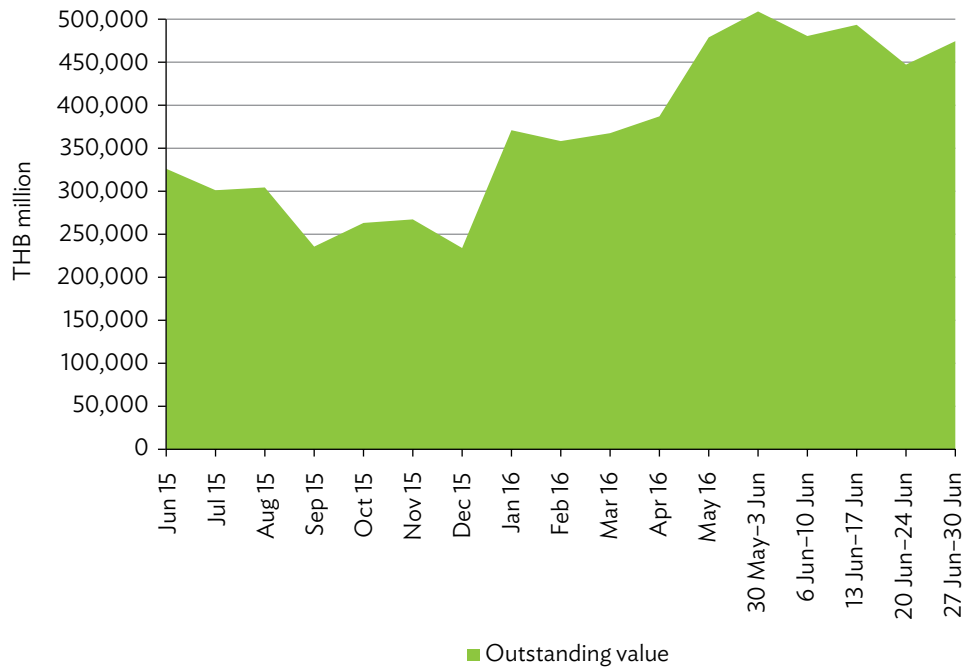
³⁵ Information adapted by ADB consultants for SF1 from ASEAN+3 SRO Working Group case study on ASEAN+3 repo markets (2014).

Figure 4.5: Tenure of Bilateral Repo (as of 26 February 2016)



1D = 1 day, 1W = 1 week, 2W = 2 weeks, 1M = 1 month.
Source: Thai Bond Market Association.

Figure 4.6: Outstanding Value of Private Repo (as of 26 February 2016)



THB = Thai baht.
Source: Thai Bond Market Association.

2. Acceptance of Standards

The GMRA is widely adopted among market participants in Thailand, and typically executed under the official Thailand Annex to the GMRA 2000, which was endorsed by TBDC (subsequently renamed ThaiBMA).

The GMRA has been used in Thailand since the start of the private repo market in 2006, but after a few years, market participants felt the need to introduce some local standard agreement to further stimulate the private repo market. This led to the introduction of the Thailand Annex, with all participating financial institutions in Thailand having since adopted the GMRA. In 2010, the BOT initiated and sponsored the development of a standard Thai-language repo master agreement to increase the penetration of repo transactions in the smaller financial institution and nonfinancial institution segments. This standard Thai-language repo master agreement was expected to help lower legal and operational costs of each institution, and to a certain extent, lower operational risk if widely used among market participants.

3. Specific Repo Practices

This section summarizes a number of relevant practices in the repo market in Thailand.

(a) Type of repo

In Thailand, the repo practice follows the classic type (outright sale and purchase) in that the repo transaction is considered to be an agreement for a transaction that involves a purchase of securities from the seller of said securities at an agreed date and price. The lender provides cash to the borrower, and the borrower in turn provides the securities as collateral for the lender. The borrower will (re)purchase said securities from the lender at an agreed time and price.

From a legal perspective, securities are transferred to the lender so the lender can sell the securities in the market. In case of default, the lender can liquidate the bonds in the market to settle any obligations of the borrower.

(b) Eligible debt securities

Eligible debt securities for repo transactions include THB-denominated government and investment-grade corporate bonds. Most of the collateral used consists of short-term instruments, with a representative breakdown at about 75% BOT bills, 25% government bonds, and 0.3% SOE bonds.

(c) Margin

Variation margin over the tenure of the repo is typically determined in cash. If there is interest payable on the cash margin, such interest will be included in the calculation of the cash margin.

As for the calculation of the margin requirements for participants entering repo transactions, both lender and borrower have an obligation to monitor market movements, and both are obligated to provide a margin if the price movement is greater than a preset threshold, which is determined as follows:

- (i) market value = (gross price %) * (current par) * (number of units)
- (ii) required securities value = (purchase price + accrued interest) / (1 - initial margin)
- (iii) threshold = ± THB500,000
- (iv) market value < Required securities value
- (v) margin exposure = market value – required securities value
- (vi) margin exposure > threshold => call margin

(d) Accounting and tax treatment

By definition, with this type of repo transaction the securities are still booked in the borrower's balance sheet even if the securities are already transferred to the lender. Hence, the securities remain in the account of the borrower.

There is no capital gain on the repo because there is no real trade in the debt securities used as collateral. Consequently, there is no capital gains tax applicable on the securities transfer for the lender, but the income from the repo fee is subject to corporate income tax and may be subject to withholding tax for related income (coupon payment) depending on the tax status of the borrower. In case of coupon payment, the lender will receive the coupon on behalf of the borrower; therefore, the lender must transfer all coupons received before the withholding tax can be deducted at the borrower's end.

(e) Market participants

Market participants in private repo transactions include the 10 primary dealers appointed by the BOT, financial institutions, retail investors (Thai nationals only), and institutional investors such as asset managers and insurance companies. Any securities company authorized by the SEC can participate in repo transactions. Retail investors may also participate in private repo transactions, in which case repo is only available using government bonds and corporate bonds of investment grade.

Foreign bank branches in Thailand may participate in private repo transactions; however, as part of BOT's exchange control policy, there is no direct access for foreign investors or intermediaries to the repo market.

H. Securities Borrowing and Lending

SBL is possible in Thailand, including for debt instruments, and conducted either using the services of TSD or directly between trading counterparties.

4. Thailand Securities Depository³⁶

SBL transactions using the services of TSD are largely conducted in the process of settlement fail management. Depository members, such as brokers or custodians, who settle fixed-income transactions on behalf of their clients may require short-term coverage of settlement obligations such as when a preceding transaction does not settle in time to provide sufficient securities holdings. In these transactions, TSD acts as either an agent for the lender and the

³⁶ For further details, please refer to the following link: <http://www.set.or.th/tsd/en/service/repo.html#6>

borrower (referred to as a put-through transaction) or as the lender of last resort (referred to as a settlement coverage transaction). In the latter case, if no direct counterparty can be found to lend the required debt securities, TSD, acting as principal, will furnish the required debt securities from its own lending pool.

In the case of a put-through transaction, TSD will match the demand and supply from borrowers and lenders, and manage the variation margin requirements throughout the lifetime of the SBL transaction.

Both types of SBL transactions can be captured directly in TSD's Securities Borrowing and Lending System through the access screen of depository members.

In order for a depository member to execute an SBL transaction, the member must have applied for the SBL services, opened dedicated SBL and collateral accounts, and complied with TSD's SBL rules and procedures.

5. Direct Transactions

In direct SBL transactions, counterparties agree on the required debt securities, the collateral to be posted, and other such conditions via phone or other trading systems. The transfer of the borrowed securities and the related collateral are typically instructed and settled as individual free-of-payment transactions at TSD.

Direct SBL transactions may be subject to specific agreements between counterparties on the provision of collateral, terms of the loan, and applicable fees and costs.

6. Eligible Collateral

The eligible collateral is similar for both TSD SBL and direct SBL transactions. TSD and market counterparties accept:

- (i) Thai baht cash,
- (ii) Thai government securities (specific conditions and maturity requirements may apply),
- (iii) securities issued by SET-listed companies, and
- (iv) letters of guarantee.

TSD, as well as market counterparties, may apply different haircuts to the value of the borrowed debt securities for the purpose of determining the value of collateral, depending on the type and nature of the underlying securities.

I. Interest Rate Futures

Thailand Futures Exchange (TFEX), a subsidiary of the SET, was established on 17 May 2004 as a derivatives exchange. TFEX is governed by the Derivatives Act B.E. 2546, 2003 and is under the supervision of the SEC.³⁷ TFEX is allowed to trade futures, options, and options on futures for underlying assets, which include bonds and interest rates.

³⁷ For more details, please refer to the TFEX website: <http://www.tfex.co.th/en/about/glance.html>

In 2010, the TFXE launched its first interest rate-based derivatives product (Figure 4.7). At present, TFXE trades two contracts each of short-term (3-month) BIBOR interest rate-based futures (BB3Futures) and long-term (5-year) government bond futures (TGB5 Futures).

Figure 4.7: Thailand Futures Exchange Interest Rate Futures Page (as of 3 March 2016)



Source: Thailand Futures Exchange. Interest Rate Futures. <http://www.tfex.co.th/en/products/5Y-GB-futures-spec.html>

Trading data on the TFXE website are delayed by 15 minutes.

To trade on TFXE, investors need to place orders with securities firms licensed by the SEC who are TFXE members, since only members can access the trading platform. Contracts can be traded through an Electronic Trading Transaction, with automated matching on price-then-time priority, or in the form of a Block Trading Transaction, for large or negotiated deals. The maximum order volume of a trade is 100 contracts, and the minimum order for block trades is 20 contracts. The value of a contract is THB10 million.³⁸

TFXE traded interest rate futures are accessible on the following:³⁹

Bloomberg	TORA <COMDTY>
Thomson Reuters	BB3my
	0#BB3:
	BB3TVO.FX
Six Telekurs	BB3myy, 825

³⁸ For further details, please refer to the following link: <http://www.tfex.co.th/en/products/3M-BIBOR-futures-spec.html>

³⁹ Examples provided are for a BB3 contract.