

Monetary Policy Instruments

Introduction

Under the inflation targeting framework, the Bank of Thailand (BOT) implements its monetary policy by influencing short-term money market rates via the selected key policy rate, currently set on the 1-day repurchase rate¹. The Monetary Policy Committee (MPC) signals shifts in monetary policy stance through announced changes in the key policy rate. The BOT uses a variety of monetary policy instruments to implement MPC's interest rate decisions.

Monetary Policy Instruments

The operational framework of the BOT's monetary operations consists of a set of instruments which can be classified into three categories.

1. Reserve Requirements
2. Open Market Operations
3. Standing Facilities

1. Reserve Requirements

Commercial banks are required to maintain the required reserves on average over a fortnightly period (starting on a Wednesday and ending on a second Tuesday thereafter) with carry-over provisions using the previous period's average level of commercial banks' deposits/liabilities as the base.

The amount of reserves required to be held by each bank is determined as a percentage of its reserve base. The reserve base comprises deposits, short-term foreign borrowings maturing within one year and other borrowings with index-linked returns or embedded financial derivatives. Currently, the reserve requirements ratio is 6% and the reserveable assets consist of

- 1) a minimum 1% in non-remunerated current account deposits at the BOT, (of which no more than 0.2% in cash at the central cash centers of commercial banks can be counted towards this component)
 - 2) a maximum 2.5% in vault cash
- and 3) the rest in eligible public securities .

The averaging provision means that compliance with reserve requirements is determined on the basis of the average of the end-of-day balances of the banks' reserveable assets

¹ On 17 January 2007, the BOT switched the monetary policy operating target (the policy rate) from the 14-day repurchase rate to the 1-day repurchase rate, as part of the monetary operation reform plan, in order to enhance the efficiency and transparency of the BOT's monetary policy implementation. (Further details on the reform of BOT monetary policy operation framework can be found in the January 2007 Inflation Report) After the closure of BOT-operated repurchase market on 13 February 2008, the policy rate became the 1-day bilateral repurchase rate.

over a maintenance period. Such averaging arrangement helps to facilitate banks' own liquidity management and to reduce daily volatility in short-term interest rates.

The carry-over provision allows banks to fall short of their reserve requirements by up to 5% (of the requirements). They then have to make up their shortfalls in the next period. This carry-over provision applies to the current account deposits component only and it works both ways. That is, banks can also count part of this period's excess reserves towards next period's requirements by up to 5% of the requirements. This helps reduce interest rate volatility on the last day of the reserve maintenance period.

2. Open Market Operations (OMOs)

In conducting open market operations, the BOT undertakes transactions in financial markets in order to affect the aggregate level of reserves balances (financial institutions' deposits at the BOT) available in the banking system, and therefore affects the short-term market interest rates.

OMOs are the most actively used instrument to maintain the policy rate, while at the same time ensuring that there is sufficient liquidity in the banking system to meet banks' demand for reserves and settlement balances.

The BOT employs five main types of open market operations:

2.1 Bilateral repurchase operation (Bilateral RP)

The BOT uses bilateral repurchase and reverse repurchase transactions² to temporarily add or drain reserves available to the banking system³. The bilateral repurchase operation is conducted through "Primary Dealers (PDs)" appointed for Bilateral RP transactions. Normally, the BOT conducts Bilateral RP operations in the morning, by notifying the Bilateral PDs before 9.30am, via Web Portal (a secured internet-based communication channel), of the bilateral RP operation the BOT plans to conduct that day (inject or absorb at which maturity). The PDs have 15 minutes to respond with their tenders. By 10.00am, the BOT informs each PD the results of their biddings. The settlement has to be completed by 2pm on the same day. However, on MPC's meeting days, the bilateral repurchase operation is

² A repurchase transaction involves a purchase or sale of securities with a simultaneous agreement to reverse the transaction at an agreed date and price in the future. This effectively is a "collateralized" cash loan, with securities being used as collateral. When conducting a repurchase operation, the BOT buys (sells) a security at its current market price and simultaneously agrees to sell (buy) the security back to the same counterparty at an agreed price (loan + RP interest) at a specified future date.

³ The BOT used to conduct repurchase operation through the BOT-operated repurchase market, where the BOT acted as a matched principal broker. The BOT-operated RP market operated via continuous matching system on a first-come first-serve basis. A principal broker fee was charged at 0.06% of the transaction value per annum. However, as part of the plan to promote money market development, especially the private repurchase market, the BOT ceased operating the BOT RP market on 13 February 2008. Thereafter, the BOT instead manages the liquidity in the banking system through the bilateral repurchase operation.

postponed to 2.30pm in the afternoon, after an announcement of the MPC's interest rate decision. In addition, the BOT may consider conducting a special round of bilateral RP operation, if necessary, at 4pm to fine-tune liquidity in the system.

The BOT has the option of conducting either fixed-rate or variable-rate tenders. To enhance the signaling effect of the policy rate, a fixed-rate tender is conducted for the 1-day tenor while a variable-rate tender applies for all other tenors. In other words, when the BOT wishes to conduct a 1-day bilateral repurchase transaction, it will do so at the policy rate. Thus PDs will indicate the amounts of money they wish to transact with the BOT at the policy rate. In a variable rate tender, PDs will indicate the amounts and the interest rates at which they want to transact with the BOT.

The bilateral repurchase operation has been designed such that it conforms to international market practices of repurchase agreements. For example, initial haircuts, margin calls and marking to market of collateral are applied.

The BOT has gradually been increasing the importance of bilateral repurchase operation in its market operations, as this also fosters the development of the Thai money market. In doing so, the BOT has increased both the frequency and the amount of its bilateral repurchase operations. Currently, the BOT undertakes bilateral repurchase operations daily⁴. As of end-April 2008, the amount absorbed through this operation stood at 407.9 billion baht.

2.2 Outright Purchase/Sale of Government Securities

To permanently add or drain liquidity available to the banking system, the BOT buys or sells government securities outright with Outright Primary Dealers. The BOT usually adds rather than drains reserves through this channel to accommodate the permanent increase in currency in circulation as the economy grows. The scope for outright securities transactions by the BOT has greatly improved as the Thai bond market becomes more developed.

The procedure for outright operation involves the BOT notifying the Outright PDs before 10am, via Reuters Dealing system, the specific securities that the BOT would like to buy or sell. The PDs have half an hour to respond with their bids/offers indicating yields and amounts. The multiple-priced auction procedure

⁴ In December 2000, the BOT began conducting the Bilateral RP operation as part of its OMOs in parallel with the operation in the BOT-operated RP market. The aim is to help stimulate the private repurchase market which should enable the gradual move of monetary operations away from the BOT-operated RP market. This would also help improve efficiency and transparency of the RP operations. In 2007, the total bilateral RP volume was 11,311,962 million baht, which exhibited a 3.5 folds increase from 2006. It amounted to 39.7% of total transaction in the BOT-operated RP market, compared with its share of 9.8% in the previous year. Most transactions were in the 1-day tenor, accounting for 68% of total bilateral RP transactions, while 7-day and 14-day transactions contributed 19% and 13% respectively.

is employed. The BOT will inform each PD before noon whether or not they have been allocated. Settlement takes place two days afterwards.

Although eligible securities include all types of secured public debt securities, the BOT has primarily used government bonds in outright operations as the market for government bonds is most liquid.

2.3 Issuance of Bank of Thailand Bills/Bonds

The BOT started reissuing Bank of Thailand Bills/Bonds in early 2003, with an aim to expand the range of instruments used in the implementation of monetary policy. This would enhance the flexibility and efficiency in managing money market liquidity and in conducting monetary operations.

The BOT determines the total issue size and maturity distribution in accordance with the prevailing money market conditions, taking into account the issuance schedule of public sector debts. The monthly auction calendar is announced in advance on the Bank of Thailand website.

Bills/Bonds are issued through competitive multiple-priced auctions held mostly on Tuesdays. Settlement takes place two days later on Thursdays. Eligible bidders comprise the same institutions as those eligible for the bidding of Treasury bills and Government bonds which are commercial banks, specialized financial institutions, finance companies, finance and securities companies, securities companies, Government Pension fund, Provident funds, Mutual funds, Social Security Office, Life and Non-life insurance companies, and other institutions which hold their current accounts at the Bank of Thailand.

For bonds with maturities exceeding one year, both competitive and non-competitive bids are allowed. Eligible non-competitive bidders include foundations, cooperatives and non-profit organizations.

Since 2003, most of the BOT papers issued are discount instruments with maturities of 12 months or less. In addition, the BOT has also been issuing 2-year bond since 2005 and in 2007 issued a 3-year floating-rate bond for the first time. 3-year fixed-rate bond was issued in January 2008. As of end-April 2008, there were 1,487.2 billion baht of BOT bills/bonds outstanding.

2.4 Foreign Exchange Swap

The foreign exchange swap⁵ is another instrument the Bank of Thailand uses to influence liquidity conditions in the money market. It supplements other market

⁵ The FX swap transaction involves a purchase or sale of foreign currency with a simultaneous agreement to reverse the transaction at an agreed rate on a specified date in the future. In other words, the FX swap transaction consists of simultaneous spot and (reverse) forward transactions. As such, the FX swap is

operations in domestic debt securities quite well especially when domestic debt securities are scarce. The FX swap is similar to a repurchase agreement in domestic debt securities, the difference being that the Thai baht is exchanged for foreign currency, namely the US dollar, rather than domestic debt securities.

The BOT facilitates electronic platform for the bidding of buy-sell FX swap. Local banks wishing to obtain baht liquidity may do so by submitting their bids, via Web Portal, to the BOT before 1.30pm, indicating swap points, amount and maturity. The BOT, after taking into account the overall money market condition, will notify counterparties their results. Settlement usually takes place one or two days afterwards. The BOT will occasionally allow same-day settlement in exceptional circumstances.

The BOT also conducts liquidity withdrawal operations via sell-buy FX swap transactions with both onshore and offshore commercial banks. The sell-buy FX swap operation is generally planned to help lessen the amount of withdrawal needed to be done through repurchase operations. The BOT will either call banks directly asking for quotes or access the market via brokers. The transactions are undertaken throughout the day, usually for one- or two-day settlement.

Standard tenors are overnight up to 1 year, but the FX swap operations are more typically concentrated on the short ends (up to 3-month). As of end-April 2008, the outstanding FX swap was 20,373 billion US dollar.

2.5 Electronic BOT Debt Security (e-PN) Window

The BOT launched the electronic BOT debt security (e-PN) window on 13 February 2008, after the closure of the BOT-operated repurchase market. This is another channel in which the BOT used to withdraw liquidity from the banking system in order to maintain short-term money market rates.

The characteristic of the e-PN purchase operation is similar to the BOT accepting deposits and issuing e-PN in return. Member financial institutions can bid for BOT debt securities by specifying the amount and the rate of return of each maturity to the BOT during 4pm – 4.30pm. The minimum amount per transaction is 100 million baht, with increments as multiples of 10 million baht. The BOT will inform the results of their tenders by 4.45pm, and settlement takes place within 5pm on the same day.

The financial institutions wishing to access this window are required to apply for membership. Eligible financial institutions are commercial banks, finance companies, credit foncier companies, specialized financial institutions, and other juristic persons approved by the BOT.

similar to a repurchase agreement in domestic securities, the only difference being that the Thai Baht are exchanged for U.S. dollar rather than domestic securities. Foreign exchange swaps do not involve any foreign exchange risk and have no direct effect on the spot exchange rate.

Available maturities of the BOT debt securities are overnight, 7 days, 14 days, 1 month, 2 months, 3 months and 6 months. The BOT debt securities are neither transferable nor eligible to be used as collateral.

As of end-April 2008, the outstanding amount of transactions through this operation was 396.9 billion baht, with most transactions concentrated in the overnight tenor. Currently, after the amended Bank of Thailand Act (B.E. 2551) came into effect, the BOT is in the process of modifying related regulations and supporting system to turn this operation into a deposit facility.

3. Standing Facilities

The BOT provides collateralized standing overnight facility called the "End-of-Day Liquidity Adjustment Window" through which the BOT offers both overnight lending and borrowing to financial institutions. This allows financial institutions with insufficient liquidity at the end of the day to pledge collateral to obtain liquidity from the BOT and those with excess reserves to lend overnight to the BOT and in return receive a BOT debt instrument (e-PN).

The rate charged on the End-of-Day Liquidity Adjustment Window is the policy rate plus or minus an adjustable margin depending upon whether the BOT is lending to or borrowing from financial institutions. Normally, the margin is set at +/- 50 basis points, except for the 3-month period following the closure of the BOT-operated repurchase market (13 February – 12 May 2008) when the BOT temporarily set the margin at +/- 25 basis points. With the policy rate currently at 3.25 percent per annum, the rates charged on the End-of-Day Liquidity Adjustment Windows are at 3.0 and 3.5 percent per annum. In determining the width of the interest rate corridor, considerations have been taken to ensure that the corridor is sufficiently wide to encourage market players to adjust liquidity amongst themselves while at the same time narrow enough to ensure that market interest rates will fluctuate within an acceptable range⁶.

⁶ Prior to this, the Bank used to operate via the End of Day Liquidity Facility, which enabled the financial institutions to adjust their liquidity only by borrowing from the Bank, without the lending side. The borrowing rate was set at 1.5 percent over the policy rate (with bonds as collateral). As a result, the End of Day Liquidity Facility rate acted as a ceiling of the money market rates. Lacking a mechanism to limit the downward movements of the money market rates, the BOT consequently launched the End-of-Day Liquidity Adjustment Window on 17 January 2007, which allows financial institutions to adjust their liquidity on both borrowing and lending sides with the BOT.

Even though there is no restriction on the amount that each institution can borrow through the End-of-Day Lending Facility, the borrowing amount is implicitly capped by the amount of each institution's eligible collateral. The overnight lending facility is also provided as part of the BAHTNET RTGS (Real Time Gross Settlement) payment system to accommodate the "spill-over" into overnight liquidity of the free-of-charge intra-day liquidity. In the event that the intra-day liquidity is not repaid by the end of the day, banks will be charged the same interest rate as that of the End-of-Day Lending Facility, thereby effectively using the standing overnight credit facility.

Eligible collateral is the same set as eligible securities used in the normal repurchase operations which consist of government bonds, treasury bills, FIDF bonds, government-guaranteed state enterprises bonds, and BOT bonds.

All transactions through the Liquidity Adjustment Window are overnight and are settled on the same-day. The facility is available to all financial institutions with deposits at the Bank of Thailand. Eligible financial institutions are commercial banks, finance companies, finance and securities companies, and specialized financial institutions. The facility is available every working day from 16.30-17.30 except on days with some technical problems, the opening hour could be extended to accommodate the payment system.

Though actual borrowings through these windows are quite limited, the window has served well as a mechanism to ensure money market stability. It acts as a "safety valve" mechanism, while setting an upper ceiling and floor on overnight market rates (forming an interest rate corridor).

April 2008