Reserves management and FX intervention in Thailand

Bank of Thailand

Abstract

In recent years, the economic and financial environments have continued to confront emerging market economies, including Thailand, with challenges in conducting monetary and exchange rate policy. The unwinding of unconventional monetary policy, escalating trade tensions and disruption from new technology have complicated policy design and implementation. As a result, the policy framework needs to be continuously assessed in order to validate its effectiveness while avoiding unintended consequences. This paper explains the objectives of Thailand's FX intervention policy along with the benefits and costs to the economy. It also discusses the effectiveness of FX intervention, as well as alternatives. In addition, the paper describes various aspects of the reserves management framework, such as governance and portfolio structure, which have shifted in recent years in the interests of financial stability and improved returns within the risk guidelines. Public communications regarding FX intervention and reserves management, which is the means to maintaining central bank's independence and credibility, are also addressed.

Keywords: Bank of Thailand, FX intervention, sterilisation, reserves management.

JEL classification: E58, O24.

1. Determinants of Thailand's reserves level

Under its flexible exchange rate regime, the Bank of Thailand (BOT) has maintained an intervention framework focusing on moderating excessive exchange rate volatility, discouraging sharp capital flows, and curbing excessive currency speculations. These, in turn, contribute to the main objective of maintaining long-term economic growth, as well as price and financial stability. From a policy perspective, there is no predetermined level of FX reserves, and the change in Thailand's reserves level is generally a by-product of other policies.

1.1 Benefits, costs and consequences

In the past decade, during which major central banks conducted ultra-loose monetary policy, Thailand, like many other Asian countries, occasionally experienced massive capital inflows that caused the currency to move in one direction with excessive volatility. Even in the recent years of policy unwinding, the gradual pace of QE normalisation was, at times, seen to support EMs and could lead to excessive speculation in some EM currencies. FX interventions that curbed such movements were deemed warranted, as they helped avoid adverse impacts on the adjustment of the real economy. As a by-product of this policy, Thailand's net FX reserves have increased from USD 118 billion in 2008 (40% of GDP) to USD 234 billion in 2018 (52% of GDP).[1]

A high level of FX reserves and a persistent current account surplus have put Thailand's external position on a solid footing. In the period of high uncertainties caused by monetary policy normalisation in major economies, FX reserves have helped support monetary policy and financial stability objectives by providing a cushion for potential capital outflows and safeguarding confidence. Thus, the BOT can maintain monetary autonomy, conducting monetary policy according to the needs of the domestic economy.

Despite such benefits, the BOT recognises that FX interventions also come with costs that must be weighed carefully against the benefits. The accumulation of reserves can expose the BOT's financial position to two main risks. First, it could incur losses from negative carry when returns on foreign reserves are lower than the costs of sterilisation. Second, the currency mismatch between assets and liabilities of the BOT could lead to either gains or losses depending on exchange rate movements, thus adding volatility to the central bank's capital. Given these risks to the balance sheet, appropriate communication with the public is necessary to ensure the central bank's credibility.

Financial risks aside, other consequences must also be considered. Sizeable reserves accumulation and the resulting sterilisation may create distortions in certain pockets of the domestic financial market, especially where the BOT's presence is large compared with that of private participants. Another side effect is that the country may be perceived as an "EME safe haven" due to the high level of reserves. As a result, it could be exposed to additional short-term capital flows during risk-off episodes, creating further pressure for rapid exchange rate appreciations.

[1] Net reserves as of October 2018 and GDP is a three-year average.

More importantly, excessive FX interventions might cause local players to be too reliant on the central bank's actions in the market, and become unable to develop their own capacity to manage currency risks. As such, they might lack resilience when hit by volatility. Furthermore, persistent intervention could also lead to misallocation of resources and complacency among businesses, which may delay the structural adjustments needed to enhance productivity and long-term growth potential.

Recognising the benefits of FX reserves as a cushion for external volatility and as a means of anchoring confidence, the BOT is also mindful of the costs and consequences associated with reserve accumulation when determining its foreign exchange policy.

1.2 Reserves adequacy assessment

The BOT considers several approaches to reserves adequacy assessment concurrently. First, the BOT uses traditional metrics, eg the reserves to short-term external debt ratio, the reserves to three-months-of-imports ratio, and the reserves to 20% of broad money ratio. Second, the BOT applies the IMF's Assessing Reserve Adequacy for Emerging Markets (ARA EM) metric with weights adjusted for the case of a "managed float" exchange rate regime. The BOT pays heed to the ARA EM metric on the basis that it takes into account a comprehensive list of factors, including exports, short-term external debt, broad money and other liabilities. For a forward-looking assessment, the BOT projects the traditional metrics and the ARA EM metrics over the medium term. Third, the BOT employs scenario analysis to assess reserves adequacy. The scenarios are based on historical episodes in Thailand and other Asian countries during the Global Financial Crisis, as well as other extreme cases of capital outflows that may potentially occur in the future.

According to the assessment for Q3 2018, Thailand's gross reserves of USD 204.5 billion remained adequate. This level amounted to 3.1 times short-term external debt, 1.7 times 20% of broad money, and could support 8.8 months of imports. The level of gross reserves was 162% of the IMF's ARA EM metric, above the 100–150% band recommended by the Fund. Moreover, this level could accommodate capital outflows in all scenario cases analysed.

2. BOT FX intervention

2.1 Motivations, strategies and tactics

The Monetary Policy Committee (MPC) is responsible for the policy that allows the exchange rate to adjust flexibly as a shock absorber to the extent that it remains in line with fundamentals, and does not lead to further imbalances.

The BOT normally uses both verbal and actual interventions to curtail excessive and persistent volatility, discourage speculation and deter sharp capital flows. The two-sided intervention would allow more time for economic agents to smoothly adjust to volatility and avoid disruption to the real economy. However, the action is not intended to either resist changes in the exchange rates that are in line with economic fundamentals, or gain competitiveness from an undervalued currency.

Generally, the timing of an intervention is based on exchange rate developments and market conditions. A set of indicators such as price movements, volatility, market participants' activities and liquidity conditions are taken into consideration. For price movements, the BOT considers not only the USD/THB spot rate, but also the nominal effective exchange rate (NEER), the real effective exchange rate (REER), and the relative movements against regional currencies. The BOT also monitors the behaviour of key market players to ensure that currency movements would not trigger a panic or excessive speculative flows, which could create further imbalances.

The interventions are conducted mainly via outright spot USD/THB transactions on both onshore and offshore interbank markets. The BOT employs designated agent banks to maintain anonymity in the market.

The BOT has never announced any actual FX operations ex ante or ex post, as doing so might create destabilising effects and limit the effectiveness of the intervention, especially given the relatively small size of the Thai FX market. However, the amount of net reserves is published on the BOT's website on a weekly basis with a one-week lag.

2.2 Effectiveness of FX interventions

FX interventions may influence exchange rates via various channels, such as the signalling (or expectation) and the order-flow (or microstructure) channels. The basis of the signalling channel is that a track record of the central bank's activities can influence market expectations about future interventions and exchange rates. In the case of Thailand, despite the fact that interventions are not announced, market participants occasionally infer the BOT's actions from price behaviour. Such inferences could play a part in forming expectations about future interventions.

In terms of the order flow channel, preliminary results from the BOT's study from 2017[2] on the effects of FX intervention on market microstructure show that the BOT's purchases or sales of US dollars can influence market behaviour by encouraging order flows, especially from residents, from the same side as the BOT over a short period (the so-called coordination channel). However, such interventions are not found to deter order flows from the opposite side (the dampening channel).

Regarding verbal intervention, the central bank's credibility is key to ensuring its effectiveness. It is also crucial that such interventions are delivered at the right time with the appropriate message. Most of BOT's past verbal interventions yielded their intended results, although, at times, the effects were short-lived.

2.3 Alternatives to FX interventions

During periods of massive capital inflows, the BOT generally allows the exchange rate to adjust flexibly as a shock absorber, before resorting to FX intervention or other alternative tools. Rather than imposing the CFM-type tools as the first alternative, the BOT focuses on tackling capital flow imbalances that could cause excessive one-way volatility. To this end, the BOT has liberalised regulations and eased restrictions on

[2] A further study based on J Koosakul and I Shim, "The beneficial aspect of FX volatility for market liquidity", *BIS Working Papers*, no 629, April 2017.

capital flows to create an environment that fosters more balanced flows. Examples of liberalisations that have been completed are as follows.

- For residents:
    - In 2010 and 2013, respectively, the limits for Thai companies and Thai individuals' outward direct investment were completely removed.
    - In 2013, the BOT removed the outward portfolio investment limit for institutional investors and retail investors (through local intermediaries), and expanded the types of permitted securities to cover instruments such as foreign currency-denominated bonds.
    - In 2016, the BOT allowed qualified investors (QI) with specified amounts of financial assets to invest directly in securities abroad but only within a certain limit. The qualification and investment limits for qualified investors were further relaxed in 2018.
- For non-residents (NR):
    - In 2015, the BOT relaxed the limit on domestic financial institution lending THB to non-residents without underlying from THB 300 million to THB 600 million per non-resident group for one financial institution.

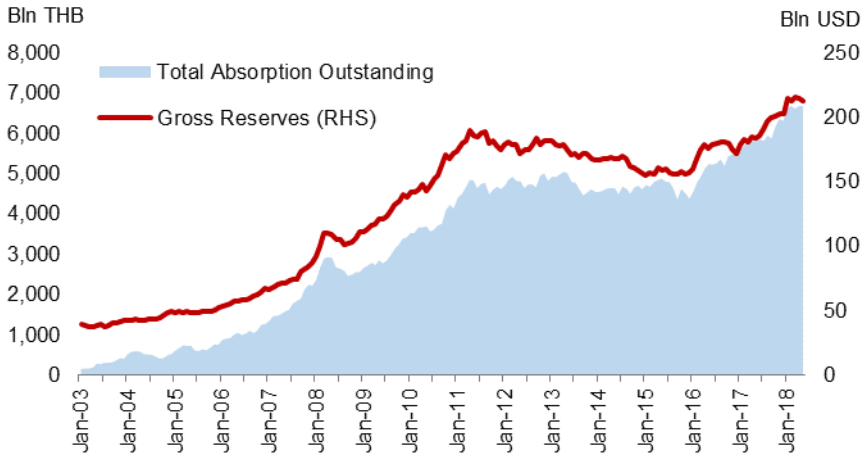
In addition, the BOT also pursues policies that encourage local market participants to manage FX risk more efficiently and thus become more resilient to exchange rate fluctuations. This should help lessen the need for exchange rate management going forward.

- The BOT collaborates with commercial banks in promoting the use of FX hedging products, by arranging seminars and providing materials to raise the corporate sector's awareness of such products, especially among small and medium-sized enterprises (SMEs).
- The BOT supports initiatives in Thailand's FX options projects to promote the use of FX options and provide incentives for SMEs to manage their FX exposure.
- The BOT collaborates with commercial banks in publishing forward points for SMEs on the BOT's official website. These indicative hedging costs could help improve pricing transparency and competition, as well as enhance SMEs' negotiating power.
- The BOT publishes indicative interest rates and fees for foreign currency deposit accounts (FCDs) on the BOT's official website. These indicative rates help the corporate sector to conveniently compare interest rates on FCDs offered by different commercial banks.

2.4 Sterilisation

Under the current inflation targeting regime, in which the policy interest rate is an operational target, excess THB liquidity created by the purchase of USD needs to be fully sterilised to ensure that the prevailing money market rates are in line with the Monetary Policy Committee's (MPC) policy interest rate. In the past few years, the obligation has increased (Graph 1) due to higher capital inflows.

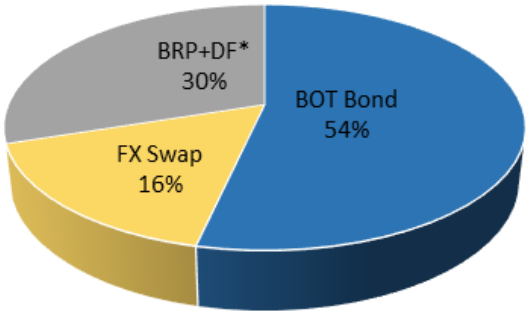
Total absorption instruments outstanding Graph 1



Source: Bank of Thailand (as of October 2018).

The BOT employs several instruments to sterilise excess liquidity. The main ones are the issuance of BOT bills and bonds, bilateral repurchase operations, and FX swaps (Graph 2). The proportion allocated to each instrument is determined by its effectiveness in transmitting monetary policy, the potential impact on individual markets and the effect on financial market development.

Proportion of total instruments outstanding Graph 2



*DF = Deposit Facility.

Source: Bank of Thailand (as of October 2018).

The bilateral repurchase operation (BRP) between the BOT and primary dealers is the most flexible tool for daily liquidity management, with varying tenors of up to one month. The rates conducted via bilateral repo are most closely anchored to the policy rate. The high volume of bilateral repo transactions has been a major factor contributing to the active private repo market.

FX swaps are used when market conditions permit, as fluctuations in USD liquidity could cause the FX swap rates movement to be more volatile than that of other short-term rates. The BOT plays a major role in the FX swap market, absorbing THB while injecting USD in up to one-year tenors. Some episodes of temporary

tightness in USD funding could make FX swaps the less costly instrument to absorb liquidity.

The BOT's bills and bonds, which represent the largest share of absorption tools, are used to absorb liquidity of 14-day to three-year maturities (Table 1). The BOT and the Ministry of Finance (MOF) have agreed to take up separate segments of the sovereign yield curve, with the BOT issuing bonds in tenors of up to three years, and the MOF issuing government bonds in tenors of longer than three years. Coordination between the two authorities has helped foster bond market development by providing a regular supply of bonds along the entire curve.

BOT bond issuance plan in 2019 Table 1

Type of bond	Issue size per auction (millions of baht)	Outstanding per Issue (millions of baht)	Number of issues per year
1. Discount bond			
Cash management bills	10,000–50,000	10,000–50,000	As appropriate
one-month	10,000–30,000	10,000–30,000	As appropriate
three- and six-month	20,000–60,000	20,000–60,000	50–52
one-year	20,000–60,000	20,000–72,000	10
2. Fixed coupon bond			
two-year	15,000–40,000	45,000–144,000	4
three-year	15,000–45,000	45,000–162,000	2
3. Floating-rate bond			
three-year	8,000–25,000	48,000–180,000	1

2.5 Communications

The BOT's operations and financial results are reported and discussed in the meetings of the Bank of Thailand Board and the Bank of Thailand Audit Committee (AC), which are held regularly. At present, there are no risk transfer arrangements between the BOT and the MOF. The BOT thus bears all financial risks and costs related to its operations.

To ensure the BOT's independence and credibility, sufficient and appropriate public communications are needed. Details of the BOT's operations (except for FX interventions) are published daily on its official website, and summaries of financial status are published weekly. Direct communications regarding the effect of FX policy and market operations are also addressed to key influencers – eg researchers, private analysts and members of the press – who will in turn make their own communications to the general public. Furthermore, regular communications through the official channels and social media, in the forms of official data, articles, analysis, research papers, executive interviews and educational materials, help enhance knowledge and understanding among the general public of various issues, eg the objectives of intervention policy and the consequences of the policy for the BOT's balance sheet etc.

3. Reserves management

International reserves are crucial in maintaining investors' confidence in the country, facilitating international trade and investment, and withstanding shocks arising from capital flight or lack of liquidity in the foreign exchange market. Reserves management under the BOT is therefore based on the principle of prudence, financial soundness, and liquidity. While the intention is to generate returns within the investment and risk guidelines, they are not the BOT's primary objective. As such, foreign currency reserves management operations are carefully conducted to support monetary and foreign exchange policy, and to safeguard financial stability.

In 2016, the BOT introduced changes to various aspects of the reserves management framework, such as a governance structure, portfolio structure and management, new asset classes, and performance measurement. The revised framework of the BOT's reserve management is described below.

3.1 Governance structure

The BOT has continuously underscored the importance of a rigorous risk management mechanism through the designated Risk Management Committee, Financial Risk Management Sub-Committee, Reserve Investment Committee, and Investment Sub-Committee. The redefined governance structure, with the creation of the Reserve Investment Committee, promotes a well-defined organisation and reduces conflict of interest between units in charge of reserve investment and risk management, leading to an improved standard of check and balance in reserve management process (Graph 3).

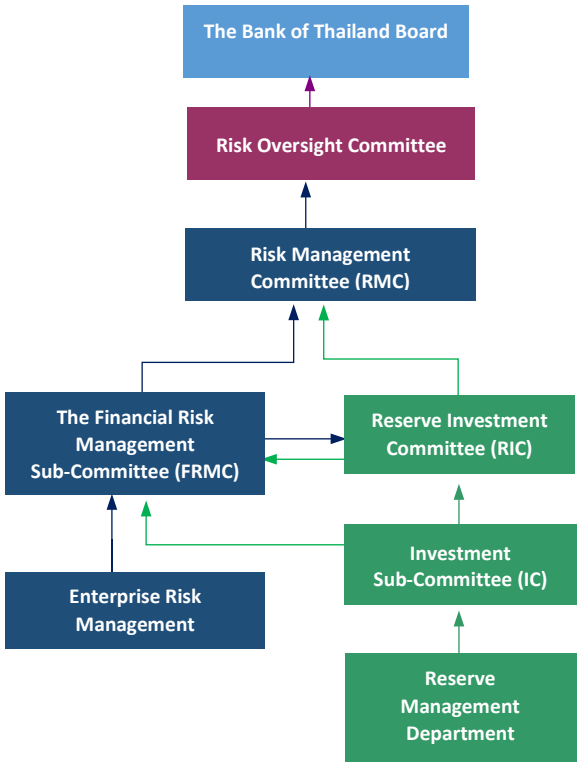
1. The Risk Management Committee (RMC), chaired by the Governor, determines the overall risk management policy and framework for the BOT, which defines an acceptable level of risk-taking and ensures adequate risk management processes. Furthermore, the RMC considers proposals related to financial risk management as submitted by the relevant subcommittees.

2. The Financial Risk Management Sub-Committee (FRMC) examines and filters proposals related to risk management policy and framework before submission to RMC. For checks-and-balances purposes, the FRMC is chaired by the Deputy Governor of Corporate Support Services. Topics under deliberation may involve risk management practices, foreign currency reserve management policies, investment benchmarks, and the scope and tools involved within investment processes. FRMC is also tasked with monitoring and evaluating performances of investment strategies and risk management outcomes related to foreign currency reserve management operations and selecting permissible counterparties.

3. The Reserve Investment Committee (RIC), established in 2016 and chaired by the Deputy Governor of Monetary Stability, is responsible for taking a bank-wide view of strategic asset allocation (SAA). The committee draws upon resources from the whole organisation, as it comprises senior executives from various departments within the BOT, including the Financial Markets Department, Reserve Management Department, Monetary Policy Group and Research Institute.

4. The Investment Sub-Committee (IC), chaired by the Assistant Governor of Financial Markets Operations Group, formulates investment strategies in relation to the country's foreign currency reserves within the boundaries of the RMC-approved risk management policy and framework. In carrying out its task, the IC monitors the world's major economies and factors relevant to foreign currency reserve management operations, proposes SAA strategy preference, and evaluates potential entries into new asset classes, geographical markets, or instruments before submission to the RMC for approval.

BOT's governance structure for reserves management Graph 3



3.2 Portfolio structure and management

The foreign reserves of the Bank of Thailand are divided into the following two main portfolios.

1. Liquidity portfolio for the purpose of meeting the short-term liquidity needs of monetary and exchange rate policies. This portfolio contains highly liquid asset classes, such as deposits and short-term securities in US dollars.
2. Long-term investment portfolio for capital preservation and returns from both interest payments and capital gains. The portfolio also serves as a balance of payment buffer in crisis times, and to maintain long-term international purchasing power. As such, the tranche has a strategic exposure to countries with sound economic fundamentals as well as long-term competitiveness and potential.

Apart from the funds managed at the head office in Bangkok, the BOT manages a portion of reserve assets through its representative offices in New York and London, outsourcing another portion to external fund managers. The benefits of outsourcing investment in more sophisticated asset classes are not only to generate above-average returns by taking advantage of external managers' investment skills and geographical locations, but also to acquire insights into high-quality investment ideas, research and industry best practices for both investments and operations. The ultimate goal is to upgrade the internal capability so that all types of asset class are eventually managed within the BOT.

3.3 Asset classes

The expansion into new asset classes is pursued in order to increase overall portfolio diversification, rather than to seek enhanced yields. The BOT continues to expand into new asset classes while maintaining the risk level of the overall portfolio and without compromising the key objectives of reserves management. This is made possible by taking a total portfolio approach, such as targeting capital preservation at the portfolio level instead of at the asset level, or not focusing only on short-term fixed income when considering the liquidity of the overall portfolio.

The BOT has recently diversified investment risk in the long-term investment portfolios by expanding the range of countries and asset classes. The universe of investable assets has been broadened from purely defensive assets such as sovereign bonds to riskier assets, namely foreign currencies (including CNY), inflation-linked bonds, covered bonds, agency mortgage-backed securities and high-rated corporate bonds. The major development in the composition of reserves is the inclusion of equities in 2016, which included as eligible assets exchange-traded funds or foreign equity securities, in an effort to manage overall portfolio risk.

3.4 Disclosure

The BOT discloses neither the performance of its reserves under management, nor the detailed composition of reserve portfolios. However, the data on the outstanding and forward obligations of the international reserves, from 1999 to the present, are disclosed weekly on the BOT's official website with a one-week lag. The data are published in both US dollar and Thai baht terms. The composition of the international reserves is also presented broadly in terms of foreign currency reserves, gold, Special Drawing Rights, and the reserve position at the IMF. In addition, the BOT reports the end-of-period quarterly data on the currency composition of official foreign exchange reserves (COFER) to the IMF.