

Reserves management and FX interventions

Central Bank of the Republic of Turkey

Abstract

Policy normalisation in the major advanced economies affects emerging market economies (EMEs) through many channels, posing major challenges for their central banks. EMEs have adopted a policy toolkit including monetary, fiscal, exchange rate and macroprudential policies. Given many EMEs' high external debt, the effective use of macroprudential measures and FX reserves is of great importance to contain financial fragilities in a challenging external environment. At the same time, central banks are taking a more active role in the FX markets. In particular, EME central banks are tending to use financial derivatives heavily as FX intervention tools. Therefore, it is crucial to establish whether these lead to a more efficient reserve management strategy and whether they are consistent with the broader policy framework. In this regard, this note first outlines post-crisis reserves management trends and central bank intervention strategies. It then surveys how the Central Bank of the Republic of Turkey uses its set of FX instruments, and their effects on the reserves and market liquidity.

Keywords: monetary policy, FX intervention, exchange rate volatility, macroprudential measures, financial stability.

JEL classification: F31, E52, E58.

1. Post-crisis trends in international reserves management

Following the global financial crisis, capital inflows stimulated by the unconventional monetary policies of the major advanced countries have put upward pressure on the currencies of emerging market economies (EMEs). Central banks have repeatedly expressed concerns about the spillovers of these policies into expanded capital flows and exchange rate volatility. Large and widening currency mismatches in EMEs have increased the importance of policies aimed at containing exchange rate volatility.

Meanwhile, EME central banks have adjusted their FX toolkit sets, including macroprudential measures, capital controls and FX interventions, to cope with the effects of large capital flows. The instruments and methods used in FX interventions have been redesigned in parallel with the structural changes in FX markets. In many cases, FX interventions have been complemented by the use of other instruments to manage capital flows, including reserve requirements as well as capital controls. Promoting financial stability has become an increasingly important motive for FX interventions, which can be designed to complement the monetary policy stance.

Starting with the 1997 Asian crisis, a trend towards the accumulation of reserves was observed. During the 2007–09 global financial crisis, however, the reserves of EMEs decreased slightly. Post-crisis expansionary monetary policies in the advanced economies accelerated capital inflows into the EMEs, allowing them to continue building their reserves. EMEs' FX reserves rose from \$4 trillion in 2004 to almost \$8 trillion as of end-2016. Central banks accumulate FX reserves to mitigate possible shocks to the economy, to make external debt payments, to support monetary and exchange rate policies and to provide FX liquidity to the financial system. Central banks with floating exchange rate regimes can intervene to counter excessive exchange rate volatility and prevent unsound price formation. Within this framework, central banks accumulate reserves to create a buffer against possible shocks, increase their credibility, reduce risk premiums and enhance the effectiveness of monetary policy.

If reserves are insufficient, the cost of possible shocks to the economy tends to increase and the risk perceptions of domestic currency assets to deteriorate. In this regard, there is a balance to be sought between the level of reserves and their opportunity cost. Countries make cost-benefit analyses when determining the optimal level of reserves as the cost of holding reserves may differ for each country. The reserves create a buffer against potential risks and fluctuations in FX, and therefore the cost of holding reserves can be viewed as an insurance premium. But, given the cost of holding reserves, central banks have come up with more efficient ways of using reserves when doing interventions, which is covered in the next section.

2. Central bank FX interventions

Central banks intervene in FX markets for various reasons and with a variety of techniques, depending on whether they aim to control inflation, maintain competitiveness, support financial stability or build up FX reserves against potential speculative attacks. These aims should also be seen in the context of their appropriateness for monetary and financial stability goals. Although macroeconomic

and financial stability objectives, which are the main drivers of interventions, have not changed fundamentally, the main reasons for FX interventions by EMEs are capital flows, exchange rate volatilities and reserves accumulation.

Recent developments in the global economy, particularly capital flows, have influenced the supply and demand for FX and, therefore, the approach to FX interventions. When the exchange rate is volatile in both directions there is an incentive for the corporate sector or domestic/ international investors to hedge their exchange rate risk, increasing demand for foreign currency. According to the IMF's Global Financial Stability Report, EME corporates have increased their indebtedness. Additionally, the share of foreign currency in corporate debt has increased substantially, increasing the sensitivity of firms to changes in the exchange rate. This exposure raises demand for FX hedging, depending also on factors such as the composition of firms' balance sheets, and the nature of their business operations. Similarly, foreign investors also hedge the FX risk arising from their portfolios of EME domestic currency bonds.

Additionally, capital flows tend to be increasingly dependent on the risk perception of international investors and global liquidity conditions, leading to sudden and sharp fluctuations in exchange rates. Credit supply to EMEs may also be affected by the depreciation of the local currency against other currencies. This may result in the tightening of domestic financial conditions. Adequate FX reserve buffers can mitigate the effects of fluctuations stemming from risk aversion in international markets. In this regard, central banks may intervene with a view to maintaining efficient market functioning. Another recent development is that some EME central banks, including those of Brazil, Colombia, Mexico and Turkey, have increasingly used FX derivatives or other instruments to hedge against FX risk and to influence FX market liquidity while economising on the use of their FX reserves. The next section briefly summarises the CBRT's FX toolkit.

3. CBRT foreign exchange instruments

The CBRT has recently expanded its toolkit (see Table 1), in much the same way as other EMEs have, and has embarked on a reserves management policy that allows it to economise on its use of FX reserves. In this way, the CBRT seeks to provide FX liquidity with a view to ensuring the smooth functioning of the FX market, compensating for interruptions in the availability of external private financing and preventing disorderly exchange rate movements.

3.1 Turkish lira-settled forward FX auctions

Forward FX sale auctions settled in Turkish lira (TRY) started at the end of 2017. The framework is quite similar to the one implemented in Mexico. The main aim of this instrument is to enhance the currency risk management of both the financial and real sectors. Although the direct counterparties for this instrument are eligible banks, it benefits corporates indirectly. In these auctions the CBRT has a short FX position while the auction-winning banks have a long FX position. Banks can transfer the forward FX long positions purchased from the CBRT to the corporate sector through the local OTC markets or sell them in foreign markets. In this respect, the instrument

The CBRT's FX instrument set

Table 1

Instrument	Mechanism	Provide FX hedge	Support FX market liquidity	Economise on use of FX reserves
TRY-settled forward FX sale auctions	CBRT sells forward FX through auctions and pays/receives TRY depending on the exchange rate at maturity date.	Yes, TRY payment/receipt offsetting FX valuation loss/gain	Yes, support management of FX liquidity	Yes, no FX payment
TRY-settled forward FX sale transactions at the BIST Derivatives Market	CBRT sells forward FX contracts and pays/receives TRY related to changes in exchange rate throughout holding period	Yes, TRY payment/receipt offsetting FX valuation loss/gain	Yes, support management of FX liquidity	Yes, no FX payment
FX deposits against TRY deposits auctions	CBRT sells FX and purchases TRY at the auction date	Yes, against market risk	Yes, supplies FX liquidity	Yes, only temporary supply of FX
FX deposit facility	Banks can borrow FX from the CBRT and also borrow from and lend to each other	Yes, against market risk	Yes, supplies FX liquidity	Yes, only temporary supply of FX.
Collateral FX deposit facility	CBRT accepts FX deposits at TRY providing operations	Indirectly yes, against market risk	Yes, economise on excess FX liquidity as a collateral	Yes, temporary increase in FX reserves
TRY currency swap market	CBRT buys FX and sells TRY at the spot leg of the transaction	Yes, against market risk	Yes, support both TRY and FX liquidity management	Yes, temporary increase in FX reserves
Rediscount credits	CBRT extends credits in TRY, repayments are in FX	No	No	Yes, permanent increase in FX reserves
Repayments of rediscount credits in TRY	CBRT extends credits in TRY, repayments in TRY, instead of FX	Yes, repayments in TRY from fixed exchange rate	Yes, supplies liquidity when demand for FX increases	No
FX sales to energy-importing state-owned companies	CBRT sells FX to energy importing state owned companies	Yes	Yes, supplies liquidity when demand for FX increases	No
FX reserve requirements	Banks maintain FX to fulfil their FX required reserves	No	Yes, balances FX market liquidity	Yes, temporary increase in FX reserves
Reserve option mechanism	Banks can maintain FX and gold accounts to fulfil their TRY required reserves	No	Yes, balances FX market liquidity	Yes, temporary increase in FX reserves

Source: CBRT.

contributes to the hedging toolkit at times of heightened FX volatility in domestic financial markets.

If the spot exchange rate on the maturity date is higher than the forward exchange rate set on the contract date, the CBRT pays the difference between the spot and forward exchange rate in TRY. If the spot exchange rate on the settlement date is lower than the forward exchange rate set on the contract date, the CBRT receives the difference between these two rates in TRY from the corresponding bank. In neither case are payments on settlement dates made in FX.

Auctions are held via the traditional auction method. Although auctions are conducted at various maturities, such as one, three or six months, an auction with a

maturity other than these may be held if deemed necessary. Member banks of the CBRT FX Markets present their bids at these auctions. The banks submit the amount of FX and forward exchange rate bids and must keep collateral at the CBRT until the contract expires. The winners are the banks with the highest forward exchange rate bids. The CBRT may also roll over the maturing contracts if it deems appropriate. The quarterly timetable and auction amounts are pre-announced on the CBRT website such that there is no surprise effect, in contrast to the auctions carried out by the Bank of Mexico.

In these auctions, the prices are determined by supply-demand conditions, so that the auction prices are in line with those in the market. The auctions help to deepen the forward FX market.

TRY-settled forward FX sale auctions have no direct impact on the CBRT's FX reserves. If the CBRT becomes the payer on the settlement date, the payment is made in TRY, so that the CBRT's FX reserves are not drawn upon.

3.2 TRY-settled forward FX transactions in the derivatives market at Borsa Istanbul Stock Exchange (BIST)

In addition to the traditional TRY-settled forward FX sale auctions, the CBRT also conducts the same transactions at the BIST Derivatives Market (VIOP), which likewise contributes to the efficient functioning of the domestic FX markets. The main aim of these transactions is to support the corporate sector's exchange rate risk management. By making transactions in this market, the CBRT takes advantage of this market's longer operating hours and wider access to different market participants. To date, the main counterparties have been foreign corporates, as well as domestic retailers and corporates.

3.3 FX deposits against TRY deposits auctions

The market for FX deposits against TRY deposits is used to enhance the flexibility and instrument diversity of TRY and FX liquidity management within the current monetary and exchange rate policy framework. In this way, the CBRT provides FX deposits to banks in exchange for TRY deposits, with a set auction and bank limit. In these auctions, banks send their FX deposit demand, and the CBRT determines the interest rate to be paid on TRY and USD deposits. Via these auctions, the CBRT offers an alternative to the offshore swap market. Since the interest rates on both legs are determined by the CBRT, the facility serves as a benchmark for the offshore swap market. The daily auctions have a one-week maturity, with the interest rate determined and announced by the CBRT. The banks are obliged to keep additional collateral at the CBRT until maturity. The CBRT publishes the auction amounts, the amount of total bids and the FX deposits granted on a daily basis.

3.4 FX deposit facility

Banks can borrow FX liquidity from the FX Deposit Market within the CBRT at a predetermined interest rate. In this context, CBRT provides EUR and USD liquidity to the banks that are members of the CBRT's FX and Banknotes Market, within their limits. In this market, banks are also able to borrow from and lend to each other

through the intermediation of the CBRT and the rules laid down by the CBRT. FX deposit transactions are carried out under the CBRT's guarantee and between banks that are temporarily in need of FX liquidity and banks that have excess FX liquidity. Currently, banks are able to borrow FX deposits from the CBRT on one-week and one-month maturities. Deposit rates are set according to FX market liquidity conditions.

3.5 Collateral FX deposit facility

The collateral FX deposits facility allows banks to place FX deposits as collateral for open market operations and standing facilities. The flexibility of this facility lets banks conduct short-term FX swap transactions through the CBRT. In addition, the collateral FX deposit facility also decreases banks' off-balance sheet FX positions, as it has the effect of reducing the currency mismatch between banks' assets and their liabilities. In practice, it serves as an alternative to currency swap transactions. It also prevents the currency swap rate from diverging too far from the BIST repo rate, as observed in periods of heightened hedging costs during periods of financial stress.

3.6 TRY currency swap market

The primary objective of the CBRT's TRY currency swap market, is to enhance flexibility and instrument diversity in banks' TRY and FX liquidity management. The market started operating in November 2018. The transactions in this market only temporarily increase the CBRT's reserves, without having any long-term effect.

Since transactions are conducted within pre-determined limits, they should not be considered as a substitute for the offshore swap market. However, the benefits of shifting these currently OTC transactions onto an organised exchange are obvious from the viewpoint of increased transparency, operational risk, cost reduction, central clearing, monitoring, reporting and reducing systemic risk.

Turkey's FX swap market is important for the banking sector. Swaps are heavily used by banks to convert FX assets into TRY assets without taking on FX risk. Recently, the Banking Regulation and Supervision Agency restricted the total notional principal amount of Turkish banks' currency swap and swap-like transactions with foreign counterparties so that domestic banks can pay TRY and receive FX to a maximum of 25% of the respective bank's regulatory capital. This threshold also limited the access of foreign counterparties to TRY liquidity. The main objective was to support financial stability and to reduce the exchange rate volatility. After the regulation was put in place, volatility in FX markets indeed fell and the depreciation of the TRY lost momentum.

3.7 Rediscount credits

Firms are permitted to obtain rediscount credits from the CBRT through intermediary banks with a maximum maturity of 240 days or 360 days for exports of high-tech industrial products, exports to new markets and FX-earning services, by presenting FX bills for rediscount.

Rediscount credits are extended to firms through intermediary banks in the TRY equivalent of the foreign currency amount specified in the discounted bill, as calculated with the exchange rate effective on the day that the credit is extended. As

the repayments of these credits are made in FX, they help boost the CBRT's FX reserves on the maturity dates. Rediscount credits are extended with maturities of predominantly eight months or, to a lesser extent, of four months or shorter. Their contribution to reserves varies according to these maturities. The bill discounting framework is similar in many respects to those of other countries.

If deemed necessary, to support financial stability, the CBRT gives banks the option to repay the rediscount credits in TRY at a fixed below-market exchange rate. In this case, the demand for FX from exporters diminishes, since they do not have to make the repayment of their rediscount credits in foreign currency. Thanks to the reduced uncertainty on their foreign currency exposure, this option helps exporters manage their debt more effectively.

3.8 FX sales to energy-importing state-owned enterprises

The FX needs of energy-importing state-owned enterprises are met directly, in whole or in part, by the CBRT and the Ministry of Treasury and Finance. Details of FX sales to these enterprises are published on the CBRT website.

3.9 FX reserve requirements

According to the Communiqué on Reserve Requirements, banks are obliged to maintain FX required reserves at the CBRT for their foreign currency liabilities. FX required reserves are remunerated on a similar basis to domestic currency required reserves.

3.10 Reserve Option Mechanism (ROM)

Within the framework of its post-crisis policy mix, the CBRT has started to use reserve requirements. In the first stage, reserve requirement ratios were gradually increased, then the remuneration of required reserves was discontinued, reserve requirement ratios were differentiated across maturities, and the range of liabilities subject to reserve requirements was widened. In August 2011, as risk appetite became more volatile due to global developments, reserve requirement ratios were reduced in order to lower the banking system's demand for liquidity. At this time, the Reserve Option Mechanism was introduced to dampen the impact of volatile capital flows on macroeconomic and financial stability, strengthen the CBRT's gross FX reserves and give banks more flexibility in their liquidity management.

The ROM allows banks to hold a certain fraction of their TRY reserve requirements in FX (USD and/or euro) and standard gold. It lets banks manage their FX assets in line with their TRY liquidity needs. Banks can also voluntarily accumulate foreign currency reserves at the CBRT. Increased capital inflows due to abundant foreign resources result in a higher utilisation of the ROM facility and hence increased withdrawal of FX liquidity via the mechanism. In this case, the amount of TRY liquidity to be sterilised will be less than what would have been the case if the CBRT had bought the same amount of FX.