

Monetary Policy under Global Imbalances: The Turkish Experience

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April, 2011

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1. During the global financial crisis, almost all countries focused on containing potential adverse effects of the crisis on the domestic economy. Turkey was not an exception in this regard. High levels of pre-crisis policy rates and relatively low sovereign risk allowed the Central Bank of Turkey (CBT) to deliver a substantial policy easing. Following the intensification of the crisis, the CBT delivered sizeable and front-loaded cuts in policy rates, reaching 1025 basis points in total. During this period, the CBT not only cut policy rates, but also pursued a counter-cyclical liquidity policy to support the functioning of money and credit markets, thereby strengthening the impact of the rate reductions on economic activity.
2. These efforts were successful in bringing back Turkey on a strong recovery. The sound household and banking system balance sheets facilitated a rapid rebound in domestic demand. As a consequence, Turkish economy experienced a domestic demand driven recovery since mid-2009. However, exports remained depressed due to weak recovery in advanced economies (Turkey's main trade destination is the euro area, which makes up almost half of the exports). Strengthening short term capital inflows fueled by the quantitative easing across advanced economies have further supported rapid credit growth and led to an appreciation in Turkish lira (TRY), exacerbating the divergence between the pace of recovery in domestic demand and external demand. Rapidly widening current account deficit coupled with short term capital inflows increased the vulnerability of the economy against sudden reversals in risk appetite and thus raised financial stability concerns, bringing new challenges for the monetary policy implementation.

A New Approach to Monetary Policy

3. Under the conventional inflation targeting framework, which we have been implementing since 2006, the CBT uses a single policy instrument to attain a unique ultimate goal—price stability. Nevertheless, the global crisis has taught us that ignoring financial stability can be harmful for macroeconomic stability and thus for price stability in the medium to long run; therefore, the central banks should also pay attention to financial stability from a macro perspective. However, the level of policy rate required to ensure price stability is not necessarily the same as the level of interest rate needed to preserve financial stability in many circumstances. For example, during boom periods driven by productivity and financial innovation shocks, a low policy rate would suffice to contain inflation; yet the very same level of interest rate may still lead to accumulation of financial risks. In emerging markets the situation is even more

¹ Prepared for the BIS Chief Economists' Meeting, April 4, 2011. I am thankful to Harun Alp, Koray Alper, Erdem Başçı, Ali Çufadar, Eda Gülşen, Refet Gürkaynak, and Fatih Özatay for useful comments and suggestions.

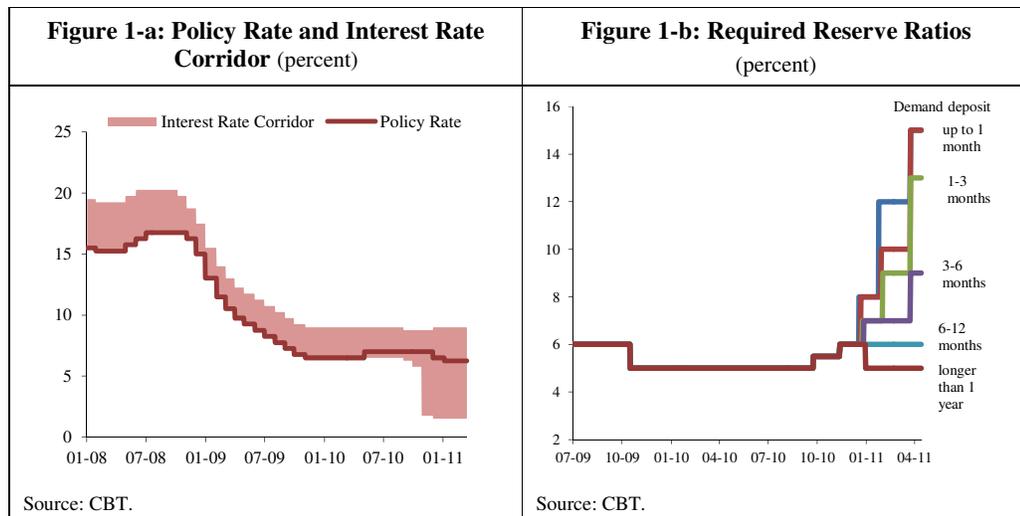
complicated. During global boom periods, emerging markets typically attract large capital inflows (due to either push or pull factors), accumulating financial stability risks associated with sudden stops and balance sheet mismatches. Containing the risks associated with massive capital inflows calls for lower policy rates. However, lowering policy rates may further boost domestic absorption and credit expansion, amplifying the risks towards financial stability. In other words, external and internal balances often require different equilibrium rates of interest, necessitating the use of more than one instrument.

4. In order to cope with these challenges, we decided to modify our existing framework of inflation targeting by explicitly highlighting the increasing role of financial stability in our objective function since mid-2010. The idea is to bring the economy to a soft landing (avoid a “sudden stop”) and to rebalance the composition of growth, without hampering the price stability objective. To achieve this task, we geared our policies towards two intermediate objectives: discouraging short term capital inflows and containing domestic credit growth. This approach necessitated utilizing alternative policy instruments and macroprudential measures to supplement our conventional instrument, the short term interest rate. Accordingly, we decided to adopt a new policy mix by using alternative policy tools at our disposal. To this end, we added two more instruments into our toolkit, namely the required reserve ratios and the interest rate corridor, to help secure financial stability without hampering price stability. Let me explain how and to what extent we utilized these instruments.

Implementation of the New Policy

5. The first step was to announce the details of our exit strategy from crisis measures in April 2010. We have normalized the liquidity support facilities gradually (we had, for example, become a market-maker in the interbank FX market and removed ourselves from that role). Starting from mid-2010, we began to highlight the macro financial risks and contingent policy responses, aiming at reducing the vulnerabilities associated with macro imbalances. Accordingly, we stated through our policy documents that, if the divergence in growth rates between domestic and external demand continued in the forthcoming period, and if this pattern of growth coexisted with rapid credit expansion and deterioration in the current account balance, it would be necessary to utilize other policy instruments such as reserve requirement ratios and liquidity management facilities more effectively. To this end, during April to November 2010, reserve requirements on TRY and FX deposits were restored from 5 percent and 9 percent to pre-crisis levels of 6 percent and 11 percent, respectively. Moreover, in order to encourage interbank lending and enhance the effectiveness of our liquidity management strategy, we have changed our operational framework: one-week repo auction rate became the main policy instrument, while overnight borrowing and lending rates were set below and above the policy rate with some adjustable margin. These changes have facilitated the use of interest corridor as an active policy tool (details explained below).

6. By the last quarter of 2010, rapid credit expansion and widening current account deficit had become more evident, necessitating a policy response. However, we thought that conventional policies, such as raising the policy rate, would not be efficient because of two reasons: First, due to ongoing financial deepening process and demographic factors in Turkey, anecdotal evidence suggests that elasticity of demand for credit to interest rates is quite low. In other words, the size of interest rate increases needed to bring credit growth rates to desired levels would be very high, which could itself lead to instability in financial markets. Second, and more importantly, higher policy rates would attract further short term capital inflows, exacerbating the buildup of macroeconomic imbalances. Therefore, raising interest rates did not appear as the optimal response under prevailing global conditions. Instead, lowering short term interest rates, while driving a wedge between the cost of domestic and foreign interest rates through higher reserve requirements, appeared as a viable strategy.
7. The first pillar of the policy response was reducing the incentives for carry trade and lengthening the maturity of capital inflows, which together aimed at improving the quality of capital account, limiting maturity mismatches, and avoiding exchange rate misalignments. To this end, we first slashed our overnight borrowing rates by a cumulative of 500 bps to 1.50 percent, and reduced the policy rate by a total of 75 basis points to 6.25 percent (Figure 1-a). Moreover, we have widened the corridor between overnight borrowing and lending rates to introduce some volatility in the short-term interest rates and discourage short-term TRY conversion through currency swaps. The unpredictable behavior of short term rates, especially in swap markets, and the higher exchange rate uncertainty induced by the new policy framework, aimed at reducing the expected return-to-risk ratios from carry trades and discouraging short term speculative inflows.
8. In order to offset the potential expansionary impact of policy rate cuts on the domestic absorption, we embarked on a quantitative tightening strategy, basically aiming at directly controlling the amount of liquidity and moderating the rapid credit expansion. Slowing credit growth was seen as a key intermediate objective as it would support both the financial and price stability objectives. To this end, we started using reserve requirement ratios as an unconventional policy tool. First, remuneration of reserve requirements was halted in order to increase the effectiveness of the reserve requirement ratios as a policy tool. Next, we started hiking reserve requirement ratios significantly, with varying degrees across maturities, and broadened the coverage of liabilities subject to reserve requirements (Figure 1-b).



9. The hikes in reserve requirement ratios are expected to affect credit growth through (i) direct cost channel, (ii) interest rate risk channel. Quantifying the direct cost channel is more straightforward as reserve requirements induce an obvious cost on financial intermediation, driving banks to adjust either credit or deposit rates, depending on the market structure. In this regard, the measures we have taken since September 2010 regarding reserve requirements—including the termination of the remuneration and raising required reserves effectively by around 8.3 percentage points—have induced an extra intermediation cost of around 100 basis points.

10. Quantifying the interest rate risk channel, however, is less straightforward. Increasing the reserve requirement ratios should have little impact on bank lending as long as the central bank is committed to supply unlimited funding at a fixed policy rate, which is usually the case under an inflation targeting regime. Nevertheless, the central bank funding would not necessarily be a perfect substitute for deposits because of its very short term nature and the associated interest rate risk. Perceived interest rate risk may be even more significant if the central bank does not provide full allotment in liquidity provision (as in the case of CBT), which means the lack of unlimited access to central bank lending at a predetermined policy rate (which is the one-week repo auction rate in the Turkish case). In order to further bolster the impact of the interest rate risk channel, we have not only induced significant volatility in the short term interest rates but also deliberately provided less policy guidance—what we call as “controlled ambiguity”—regarding the path of future policy rates. This strategy has heightened the perceived interest rate risk and thus increased the opportunity cost of substituting deposits with short term central bank funding.

11. There may be other reasons why borrowing from the central bank would not be a perfect substitute for deposit funding. Banks may not wish to be in a position of heavily funding themselves through overnight operations for various reasons related to risk management practices (avoiding exposures to excessive interest rate and liquidity risk), suggesting that substitutability between central bank funding and deposits may

weaken significantly after a certain threshold. If reserves requirements are raised high enough so that such a threshold is reached, the banks would adjust their liquidity positions through asset reallocation, which may lead to a more prudent lending behavior. The level of the threshold would depend upon the distribution of liquidity across banks, central bank's liquidity management policy, and the institutional structure of money markets.

Communicating the New Policy Framework

12. We have been quite open with the public regarding our new policy framework and its limitations. We acknowledged that the measures we implemented are necessary but not alone sufficient to safeguard financial stability. In this regard, we underscored the crucial role of coordination across all related institutions. In fact, macroprudential measures implemented by other institutions were also supportive of the monetary policy response. To moderate credit growth, the government raised the Resource Utilization Support Fund levy on the interest from consumer loans. As a complementary action, the banking supervision and regulation agency have taken a set of measures (such as restricting the loan to value ratios for certain segments of bank credits) in order to contain the credit supply. To encourage longer maturities, permission was granted for banks to issue TRY denominated bonds. These measures support the existing ones, such as the ban for households to use FX-denominated or indexed loans and the FX net general position limits for the banking sector. The support from other institutions through macroprudential measures have eased the potential communication challenges posed by the new policy framework.
13. One crucial communication issue not to be neglected during the implementation of unconventional policies is convincing the public that these measures do not mean giving up on the overriding concern, which is the price stability. In fact, it was not easy to communicate why we lowered our main policy instrument, one-week repo rate, during a period when the output gap was closing. Financial markets had some difficulty in interpreting the new policy. The lack of past experience (and thus empirical evidence) with using reserve requirements hampered the expectation channel of the newly adopted monetary policy. In order to convince the markets and contain inflation expectations, we used a hawkish tone, underscoring that the quantitative tightening implemented through non-interest measures will more than offset the expansionary impact of the policy rate cuts. Moreover, we have stated that, given the rapid pace of domestic demand and rising commodity prices, general price setting behavior will be closely monitored and additional measures will be taken to contain inflation expectations, if needed. In this respect we have forcefully signaled that the net impact of the macroprudential policy package implemented—and to be implemented—by the CBT and other institutions should be on the tightening side.
14. We underscored that the primary objective of the CBT is to achieve and maintain price stability. However, we also reminded the public that one of the lessons learned from

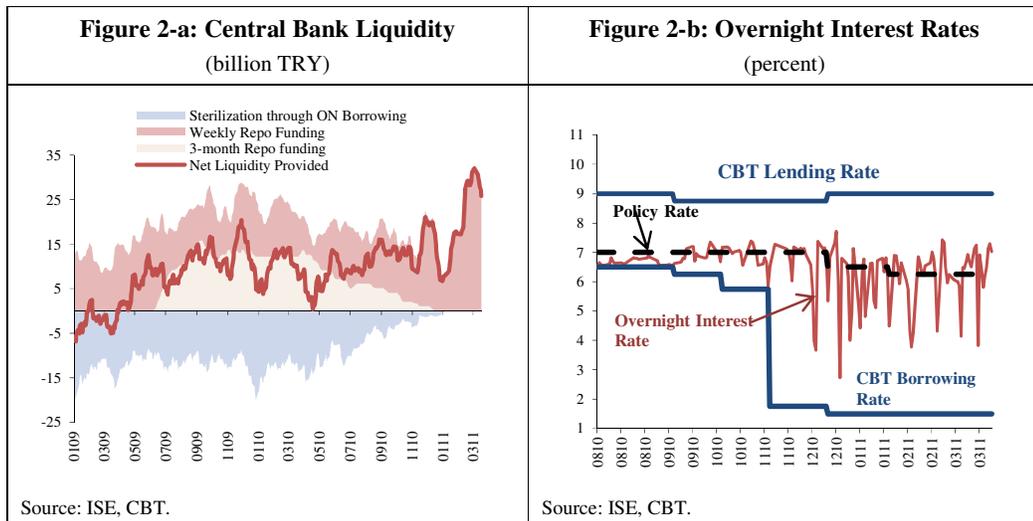
the global crisis is that central banks should also pay a considerable attention to macroeconomic and financial stability, which, in the long term, is a *sine qua non* for price stability. The boom bust cycles and the consequent sharp reversal of capital flows may impede the ability to maintain price stability, especially in emerging economies operating under high exchange rate pass-through. Against this backdrop, we underscored that existing global imbalances warrant incorporating financial stability as a complementary objective.

15. There is always a considerable amount of uncertainty regarding the transmission lags of the monetary policy implementation. In the case of unconventional policies, the uncertainty is even higher. In order to overcome the possible communication problems associated with this uncertainty, we have announced that we will monitor the effects of our decisions from both price stability and financial stability perspectives, and will not hesitate to implement additional measures if necessary.
16. Although it looks quite complicated at first sight, the framework we adopt in spirit is not significantly different from the conventional inflation targeting framework. The only difference is that, previously our policy instrument was the one week repo rate, but now our instrument is a “policy mix”—which consists of a combination of short term interest rates, reserve requirement ratios and an interest rate corridor. We seek to use these instruments in the right combination in order to cope with both inflation and macro-financial risks. The monetary policy stance in this framework is not only determined by the path of policy rates, but as a mixture of all policy instruments outlined above. Just like the conventional inflation targeting framework, the policy is forward looking and contingent on the economic outlook. The exact setting of the policy mix depends on the factors affecting price stability and financial stability.
17. Within the current setup, communication of monetary policy outlook refers to the policy mix, rather than the path of short term interest rates. For example, our baseline scenario outlined in the January Inflation Report envisages a gradual tightening by changing the mix of the policy rate and reserve requirement ratios. In order to preserve the policy flexibility against the uncertain global outlook, we preferred not to be specific about the exact content of the policy mix. Yet, we made sure that the net impact of the policy decisions will be on the tightening side, underscoring that such a tightening would not only aim at slowing down credit growth and domestic demand, but also reduce macroprudential concerns.
18. It is important to note that each country has its own characteristics and should design the macroprudential policy framework according to its own needs. Moreover, from an emerging market point of view, the concept of “macroprudential” measures may not necessarily be the same as it is perceived in advanced economies. For example, from the Turkish perspective, financial stability risks under global imbalances manifested itself as a rapidly increasing current account deficit fueled by short-term capital inflows and accompanying rapid credit growth. However, this does not necessarily

mean that the emphasis on financial stability reflects a permanent change of monetary policy objectives. In this respect, it should be also underscored that the weight the central bank attaches to financial stability may be state dependent and thus highly time variant.

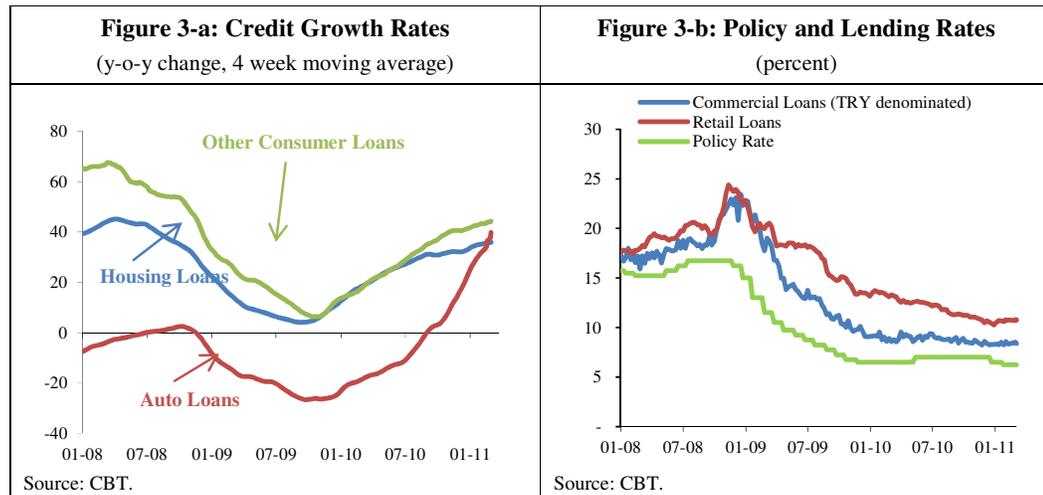
Initial Impact of the New Policy Mix on Financial Markets

19. The hikes in required reserve ratios introduced since September has led to a withdrawal of around 40 billion TRY (around 12 percent of the total TRY credit stock extended to nonfinancial sector) of liquidity from the banking system. The initial reaction of the banks has been to resort to central bank funding in order to replace the liquidity withdrawn by the reserve requirement hikes. In fact, Figure 2-a shows that the amount of central bank funding has increased substantially after the significant hikes in reserve requirements. Moreover, in line with our intentions, the volatility of overnight rates in the money market have increased markedly after the drastic cut in CBT borrowing rate in November, which significantly widened the interest corridor (Figure 2-b).



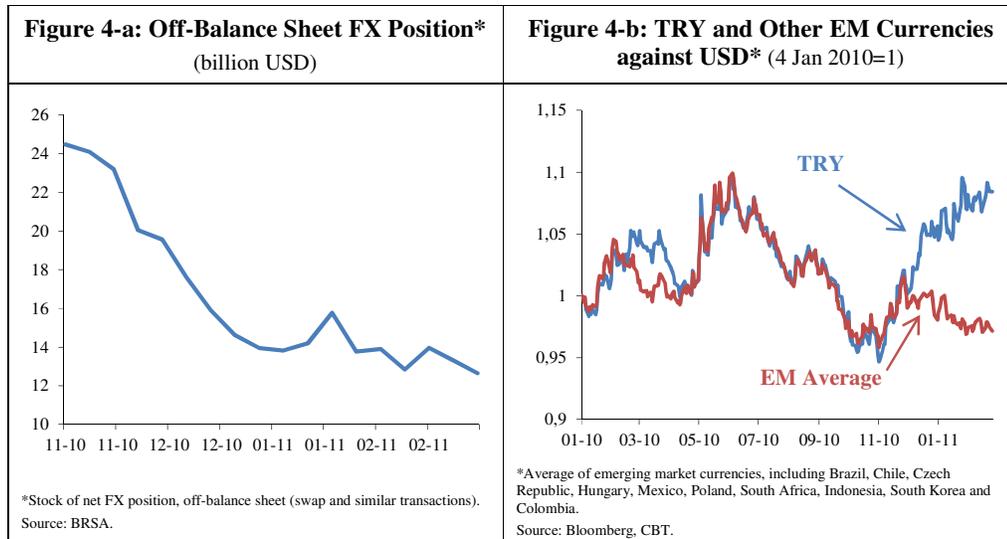
20. Although there are some signs of moderation, credit growth has remained relatively strong in the first quarter (Figure 3-a), suggesting that reserve requirement hikes so far have not delivered the intended slowdown. However, it is too early to draw a firm conclusion at this point, as we expect that it will take some time before the tightening in the liquidity conditions affect lending behavior of banks. Higher volatility and more uncertainty regarding short term rates coupled with excessive dependency on overnight lending are expected to make the banks more cautious in liquidity management, leading to a tightening in lending standards. In other words, we anticipate that the impact of quantitative tightening would become more visible through the supply of credits in the forthcoming period.

21. Lending rates have been quite stable in the meanwhile. Despite the recent policy rate cuts, both retail and commercial loan rates have remained flat (Figure 3-b), suggesting that the impact of the intermediation cost on lending rates induced by the reserve requirement hikes are largely offset by the interest rate cuts. Yet, it should be noted that transmission channels work with a lag and they involve a high degree of uncertainty.

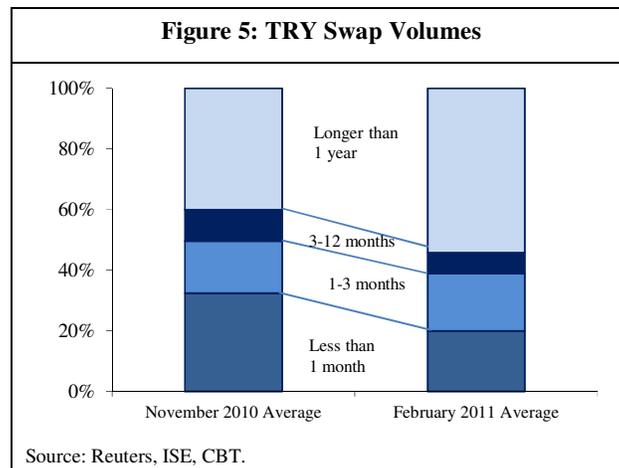


22. Another aim of the new policy strategy is to avoid potential exchange rate misalignments caused by the short-term speculative inflows—partly driven by exceptionally loose policies implemented in developed economies. To this end, in order to decrease the attractiveness of short term TRY positions, we reduced policy rates by 75 basis points in December and January while many other emerging markets were tightening. Moreover, we have widened the interest rate corridor and allowed considerable variation in overnight rates, increasing the volatility of the short term rates substantially. The strategy to discourage short term carry trade has been quite effective. Following the adoption of the new policy mix, we observed a significant drop in the stock of short-term speculative inflows, mainly through cross currency swaps, which can be tracked via off-balance sheet positions (Figure 4-a).² Consequently, appreciation pressures reversed and the behavior of Turkish lira diverged significantly from the currencies of peer emerging economies (Figure 4-b).

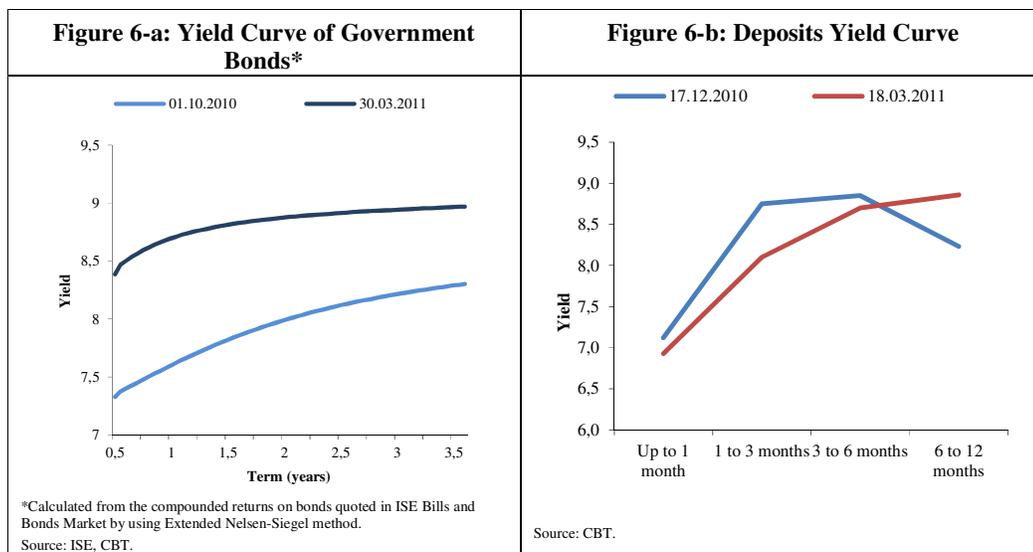
² Turkish banks, with their ample FX deposits, use cross-currency swaps to create TRY funds for new lending. Foreign investors, who represent the main counterparties of these transactions, use these swaps to take a long spot position in TRY to benefit from relatively high interest rates and currency appreciation. Although direct data on swap transactions are not available, total stock may be inferred from off-balance sheet positions of the banking system.



23. One of the goals of the new policy package is to increase the maturity of the liabilities of the banking system in order to support financial stability. The strategy of inducing more volatility for the short end of the yield curve has been instrumental in maturity extension in TRY market operations. As depicted in Figure 5, the share of TRY swaps at longer maturities increased, while the share of short term swaps declined significantly since the adoption of our new monetary policy. This development has contributed to a reduction in roll-over and interest rate risk of Turkish banks.

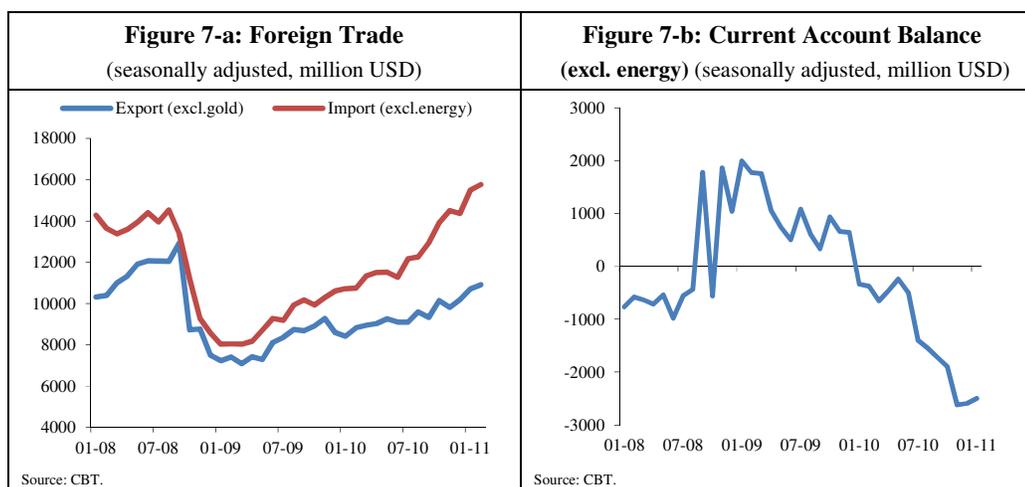


24. The yield curves confirm that the implementation of the policy mix as a whole reflects a tightening in the monetary policy stance. Tighter domestic liquidity conditions driven by reserve requirement hikes have led to an upward shift in the yield curve of government securities (Figure 6-a). The recent upsurge in commodity prices was another development leading to higher yields. On the other hand, the strategy of differentiating required reserve ratios across maturities has led to a steepening in the deposits yield curve (Figure 6-b). The rates on shorter term deposits have declined around 50 basis points, whereas the rates on longer term deposits have stayed almost constant—a development encouraging maturity extension.



Impact of the New Policy Mix on the Macroeconomic Indicators

25. One of the main motivations of our recent policy is to deliver a soft landing of the economy after a period of rapid divergence between the external and domestic demand. The measures taken by the CBT since November were intended to reduce macro-financial risks by leading to a more balanced growth path, mainly through a slowdown in import growth (Figure 7-a). We expect that the effects of the policy mix on macroeconomic variables will be observed with some lag.³ In that sense, the full impact of the recent hikes in required reserves is yet to be seen. However, even within such a short period, it is encouraging to observe signs of rebalancing in the economy, as evidenced by a slight moderation in the current account deficit (Figure 7-b).



³ According to a recent preliminary study conducted within the CBT, changes in required reserve ratios in Turkey affects credit growth with a lag of one quarter and private consumption with a lag of two quarters.

26. The recent unrest in the Middle East and North Africa (MENA) region has shown the need for and the timeliness of introducing macroprudential tools: The sharp rise in oil prices have not only increased the cost push pressures on inflation but also added to the import bill. Moreover, the significant drop in the external demand from the MENA region will impede the recovery in our exports, which would further delay the improvement in current account deficit. These developments make a clear case for tightening domestic credit via macroprudential tools rather than interest rates.
27. The Monetary Policy Committee (MPC), therefore after hiking reserve requirements moderately in December and January, decided to deliver a stronger tightening via reserve requirement hikes, while keeping the policy rate intact. The statement accompanying the decision reiterated that additional measures would be taken along the same line, if needed.

Final Remarks

28. We are going through a period in which central bank policies have to be creative in dealing with the existing global imbalances. In this context, Turkey started to implement an unconventional policy by utilizing several complementary instruments. Although it is too early to draw firm conclusions, initial results so far seem promising, suggesting that a lower policy rate, a wider interest rate corridor, combined with higher required reserve ratios may serve as an effective policy mix in dealing with rapidly increasing macro imbalances driven by short term capital inflows. Nevertheless, before recommending this approach to other central banks, it should be noted that country specific features should be taken into account while designing policies to deal with short term capital inflows. The exact content of the policy mix and the set of policy tools would depend on several factors such as the structure and institutional setup of the financial system, the nature of the capital flows, and the state of the domestic and external business cycles.