Central Banking in Making during the Post-crisis World and the Policy-Mix of the Central Bank of the Republic of Turkey

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Abstract

After the global crisis, one of the most important lessons learned for the Central Banks has appeared to be the vital importance of financial stability along with the price stability. Hence, finding solutions to how to incorporate the financial stability objective in the implementation of the monetary policy without diluting the price-stability objective has started to be heavily discussed by the academics and policy makers. Accordingly, it has started to be debated that using only short-term interest rates as the main policy tool may not be enough to maintain the price stability and the financial stability at the same time. Interest rates that provide price stability and financial stability can be different and this necessitates the central banks to use multiple policy tools. In view of this, the Central Bank of the Republic of Turkey adopted a new monetary policy framework called the *new policy mix* in which multiple tools are employed to achieve multiple objectives. In this framework, required reserves ratios, weekly repo rates, interest rate corridor, funding strategy and other macro prudential tools are jointly used as complementary tools for the credit, interest rate and liquidity policies to achieve the price and the financial stability objectives concurrently. This new monetary policy adopted in Turkey also provides an interesting case study to assess how a country came up with novel policies to account for its country specific characteristics.

Keywords: Central banking, Policy-mix, Global financial crisis, Financial Stability

JEL Codes: E44, E52, E58

Central Banking in Making during the Post-crisis World and the Policy-Mix of the Central Bank of the Republic of Turkey

1. Introduction

The global financial crisis began to affect both developed and developing countries starting with the last quarter of 2008. All countries in a coordinated way have adopted a new set of monetary and fiscal policies in order to alleviate the harmful effects of the global financial crisis for their economies. After the most intense episode of the global financial crisis, the difference in the growth recovery rates between the developed and developing economies has been widened especially in 2010. The recovery in the economic activity in the advanced countries has been limited since the firms and households in these countries have continued the process of deleveraging and also there has been a slow recovery in their labor markets. On the other hand, a healthy financial structure and lower levels of household debt have led a much more rapid recovery in the developing countries in the post-crisis period. This situation has, however, instigated the continuation of monetary expansion in the advanced economies, while leading to the withdrawal of the measures taken during the crisis in the developing countries as well as intensifying the search by the policy makers of the developing countries for the alternative policies to prevent the undesirable side effects of the global monetary expansion.

Following the introductory part, the rest of the paper is organized as follows: the discussion about how the central banking has changed after the crisis is presented in the second part. The *new policy mix* of the Central Bank of the Republic of Turkey (CBRT) that is the new monetary policy framework adopted in Turkey in response to the post-crisis environment of the global financial markets is explained in the third section. The final part concludes the paper.

2. Central Banking in Making during the Post-crisis World

Since the period of Great Moderation has ended up with the global crisis, maintaining a low and stable inflation does not guarantee a macroeconomic stability in general and the financial stability in particular (Borio 2011). After the crisis, one of the most important lessons learned for the Central Banks has appeared to be the vital importance of financial stability along with the price stability. Hence, finding solutions to how to incorporate the financial stability objective in the implementation of monetary policy without diluting the price-stability objective has started to be heavily discussed by the academics and the policy makers. Given that these discussions are very likely to continue in the foreseeable future, Goodhart (2010) states that the years ahead will be a period of experimentation in the central banking.

Before the crisis, it was generally agreed that the monetary policy should take care of the price stability while the regulation and supervision should take care of the financial stability. In other words, the micro prudential regulation of the financial sector was considered to be adequate without necessitating any need for a macro prudential regulation of the financial sector. However, the global crisis has revealed that soundness of each and every individual financial institution is not enough for the stability of financial system and there is a need for a macroprudential perspective before the crisis erupts (Borio 2011). Brunnermeier et al. (2009) rightly argues that the central banks play a key role in this new macroprudential orientation. After the global financial crisis, the idea that the central banks should contribute to the financial stability while maintaining the price stability, is gaining more ground. In this context, using only short-term interest rates as the main policy tool may not be enough to maintain the price stability and contribute to the financial stability at the same time. The interest rate to provide the price stability and the interest rate to contribute to the financial

stability can be quite different for an extended period of time thereby requiring the central banks to use multiple policy tools to achieve the price stability and the financial stability objectives conjointly.

Bean (2009) argues that the financial stability is best ensured through the newly established macroprudential frameworks. On the other hand, Shirakawa (2010) and Bloxham et al. (2010) claim that macroprudential frameworks can help for the financial stability but they are not adequate since the role of monetary policy is simply too important. After Lehman Brothers' collapse, the central banks throughout the world started to aggressively reduce their policy interest rates and the interest rates hit the zero lower bound especially in the advanced developed countries. However, these reductions have not been enough for the economic recovery. Hence, the central banks in the advanced countries started to resort to a new set of unconventional monetary policies like the large-scale purchases of government and private sector assets. This unusual balance-sheet policy has maintained due to the zero lower bound dilemma of the interest rates. However, the concern has started to arise overtime about this accommodative policy stance since it would be very difficult to use exit strategies as the duration of unconventional policies prolongs. In this sense for example, Adrian and Shin (2010) shows that the low interest rates may encourage excessive risk-taking which makes it more difficult to reverse the initial accommodative policies adopted .

Before the crisis, it was argued that if each central bank keeps its house in order, there would be a proper global monetary stance. Rose (2007) argues that all central banks need to do is to ensure price stability in their own economy and let the exchange rate float. However, Padoa-Schioppa (2008) claims that the common view that keeping one's house in order is sufficient for the global stability need to be reconsidered. After the crisis, the idea that is gaining more ground is that there needs to be a close cooperation between the central banks for the global macroeconomic and financial stability. Consequently, the large-country central

banks need to pay more attention to their collective policy stance and its global implications and furthermore they should be ready to implement a coordinated action to help stabilize the global economy in times of stress.

3. Policy-Mix of the Central Bank of the Republic of Turkey

Expansionary monetary policies by the advanced countries had significant implications for the Turkish economy since the availability of ample and low-cost short-term foreign financing led to a rapid credit expansion and deterioration of the current account (Figure 1). The appreciation in the Turkish lira and the increase in the domestic consumption accelerated the import growth while the weak foreign demand in the aftermath of the crisis led to a moderate increase in the export growth. Consequently, the deterioration in the current account and the surge in the share of short-term capital inflows amplified the vulnerability of the Turkish economy to the vagaries in the global risk appetite. Hence, under these circumstances, the implementation of a new policy mix was inevitable (Figure 2).

(Insert Figure 1 and Figure 2 here)

In this new policy mix, while maintaining the price stability is certainly the primary goal of the CBRT while contributing to the financial stability becomes a supportive objective in the monetary policy framework. In this framework, multiple instruments are employed to achieve the multiple objectives; the price stability and the financial stability. Reserve requirements and other macro-prudential tools are used for the credit policy, weekly repo rate is used for the interest rate policy and finally the interest rate corridor and the funding strategy are used for the liquidity policy. In utilizing these tools, expectations, credit growth and exchange rate are monitored as key indicators for the price and financial stability (Scheme 1). For instance, the reference rate of 15 percent annual credit growth is set and closely

monitored by CBRT to ensure a balanced demand and a more controlled growth. Moreover, the reference point of 120 in real effective exchange rate is also announced in order to give indication to the market as to whether there is an excessive appreciation pressure on the Turkish lira. These newly formulated unconventional policies are used in Turkey to maintain the financial stability without forgoing the primary objective of price stability.

(Insert Scheme 1)

In the period of November 2010-August 2011, the global risk appetite was strong and therefore there was a high short-term capital inflow to the emerging markets. During this period, the CBRT aimed to channel the capital inflows for longer term investments and to prevent the excessive appreciation of the Turkish lira emanating from the short-term portfolio inflows. (Başçı and Kara, 2011; Akçelik et al., 2013). Moreover, the CBRT targeted a more controlled growth of domestic demand and credit growth in order to rebalance the domestic demand and foreign demand. In November 2010, the CBRT decreased the overnight borrowing rate 400 basis points from 5.75 percent to 1.75 percent while keeping the lending rate at 8.75 percent and the policy rate at 7.00 percent.

In December 2010, the overnight borrowing rate was lowered to 1.50 percent and the overnight lending rate was raised to 9.00 percent. Thus, the interest rate corridor was widened further and the difference between the lending and the borrowing rate became 750 basis points. The policy rate was reduced to 6.50 percent in December 2010, and later reduced to 6.25 percent in January 2011. These interest rates were kept unchanged until August 2011. During this period, the overnight interest rates were allowed to materialize significantly below the policy rate so that short term carry trade was discouraged by reducing the return to risk ratio (Figure 3). In the same period, the reserve requirement ratios were also increased to prevent the excessive credit growth and to control the domestic demand. Moreover, after

November 2010, the movement of the Turkish lira against the U.S. dollar was clearly differentiated relative to the currencies of other developing countries. While the Turkish lira was depreciated by a policy induced move, the currencies of other developing countries appreciated against the U.S dollar (Figure 4). Furthermore, the share of the long-term capital inflows began to increase during this period (Figure 5).

(Insert Figure 3 and Figure 4 here)

In the period of August 2011-June 2012, the concerns regarding the public debt issues in some European countries had resulted in an escalation of global risk aversion. Thus, the capital outflows started to take place away from the developing countries. Since the CBRT had ample room for maneuvers due to the earlier proactive policy actions taken, the CBRT started to use the policy tools in the opposite direction. In response to the deterioration in the global risk appetite, the CBRT increased the overnight borrowing interest rate from 1.50 percent to 5.00 percent and reduced the policy rate from 6.25 percent to 5.75 percent while keeping the overnight lending rate at 9.00 percent. Thus, the interest rate corridor was narrowed in August 2011. In October 2011, in order to prevent the adverse effects of the Eurozone debt crisis on the medium-term inflation expectations and outlook, the CBRT increased the overnight lending rate by 350 basis points to 12.50 percent while keeping the overnight borrowing interest rate constant. Accordingly, the interest rate corridor was widened upward and the difference between the overnight lending and borrowing became 750 basis points. In addition, the Turkish lira reserve requirements were reduced to alleviate the liquidity requirement of the banking sector. With the help of upward interest rate corridor, the overnight interest rates were realized to be close to the overnight lending rate of the CBRT (Figure 6).

(Insert Figure 5 and Figure 6 here)

As a pillar of the new policy mix, the overnight interest rates are adjusted according to the course of economic and financial developments without changing the weekly repo rates, i.e. the policy rate (Başçı, 2011). Accordingly, the CBRT has occasionally delivered an additional monetary tightening as needed in order to prevent the temporary price movements from deteriorating the inflation outlook via expectations. During the days of an additional monetary tightening, as a part of the active liquidity policy, reduced funding or even no funding is supplied via the quantity auction method. Instead, the market is funded via the traditional auction method, and thereby the policy rates settle close to the upper bound of the interest rate corridor. The additional monetary tightening had been delivered 6 times during this period. Akçelik et al. (2012) empirically show that the additional monetary tightening policy had a significant impact in reducing the volatility in the exchange rate of the Turkish lira and they also document that the Turkish lira even appreciated against the emerging market currencies during the days of additional monetary tightening. As a result of the proactive and timely unconventional monetary policies implemented in this period, the share of long-term capital inflows in financing the current account deficit started to accelerate gradually and this share became even larger than the share of short-term capital inflows for the first time in October 2011 (Figure 7). Finally, from the second quarter of 2011, the real imports started to decline and the real exports began to rise thereby allowing the rebalancing to take place in the Turkish economy (Figure 8).

(Insert Figure 7 and Figure 8 here)

As a result of the measures taken in the Euro area, the global risk appetite has later improved. Not surprisingly, the resurge in the short term capital flows to the emerging markets has accelerated since June 2012. Furthermore, the risk perception towards Turkish economy has improved thanks to the better-than-expected outturns in the inflation and current account. Accordingly, the CBRT has reduced its average funding rate gradually and

subsequently the market overnight interest rate declined (Figure 9). There have been clearer signs of a more robust rebalancing process on the current account and a better composition of growth (Figure 10).

(Insert Figure 9 and Figure 10 here)

The disinflationary impact of the domestic demand has also become more prevalent and hence the inflation has started to decline (Figure 11). In September 2012, the CBRT decreased the overnight lending rate from 11.50 percent to 10.00 percent while maintaining the overnight borrowing interest rate and the policy rate at their existing levels. The overnight lending rate was reduced 50 basis points once in October and once more in November 2012. Therefore, the interest rate corridor was narrowed further. Then, the policy rate was reduced 25 basis points in December 2012. The overnight lending and borrowing rate of CBRT were reduced 25 basis points both in January and February 2013. In March 2013, the lending rate has been cut 100 basis points and this made interest corridor more symmetric. In April 2013, the policy, lending and borrowing rates were reduced 50 basis points in order to keep interest rates lower under the global financial conditions. Currently, the CBRT's the overnight lending rate is 7.00 percent; the borrowing rate is 4.00 percent and the policy rate is 5 percent (Figure 12).

(Insert Figure 11 and Figure 12 here)

Meanwhile, the CBRT has adopted a new policy mechanism called the Reserve Option Mechanism (ROM) that aims to increase the resilience of the financial stability in Turkey. ROM gives an option to the Turkish banks to hold FX or gold reserves instead of a certain fraction of Turkish lira reserve requirements. This mechanism is expected to smooth the imbalances between FX demand and supply due to shifts in the capital flow movements (Alper et al., 2012). The ROM mechanism has been constructed over time. At first, the upper

limit for the FX reserves that might be held to maintain the Turkish lira reserve requirements was set to 10 percent in September 2011 and then it was increased gradually to 40 percent. In May 2012, the reserve option coefficient (ROC) was introduced and the upper limit of the above-mentioned facility has been raised to 45 percent, and the banks are allowed to hold the Turkish lira reserve requirements in FX over the total amount calculated by multiplying the first tranche corresponding to 40 percent of Turkish lira reserve requirements by a ROC of "1", as previously, and the second tranche corresponding to 5 percent of Turkish lira reserve requirements multiplied by a ROC of "1.4". The upper limit of the above-mentioned facility has been raised to 60 percent in August 2012. After having been revised a number of times, currently the ROCs are accordingly: for the first 35 percent: 1.4, between 35-40 percent: 1.7, between 40-45 percent: 2.1, between 45-50 percent: 2.4, between 50-55 percent: 2.6 and between 55-60 percent: 2.7 (Figure 13).

Similarly, the upper limit for gold reserves that might be held to maintain Turkish lira reserve requirements was set 10 percent in November 2011 and then it was increased gradually to 30 percent. As of April 2012, the ROCs for the gold are determined for the first 15 percent: 1.4, between 15-20 percent: 1.5, between 20-25 percent: 2.0 and between 25-30 percent: 2.5 (Figure 14).

(Insert Figure 13 and Figure 14 here)

This new facility not only provides the Turkish lira liquidity to the banks in a more permanent way and lowers their cost, but also supports the CBRT's foreign exchange and gold reserves (Figure 15 and Figure 16). The ROM is designed to operate as an automatic stabilizer for the variations in the capital flows and has increased the flexibility of Turkish monetary policy. Oduncu et al. (2013) empirically analyze the effectiveness of ROM in

decreasing the volatility of Turkish lira and they find that that the ROM is statically significant in reducing the exchange rate volatility.

(Insert Figure 15 and Figure 16 here)

4. Conclusion

After the global financial crisis, it was well understood by the academics and the policy makers that the price stability is not sufficient for maintaining the macroeconomic stability and the financial stability is essential for the well-functioning of the domestic and the global financial markets. Therefore, finding a solution on how to incorporate the financial stability objective into the implementation of the monetary policy without diluting the price-stability objective has become a pressing concern for the central bank authorities. The CBRT adopted a new monetary policy framework called the policy mix since November 2010 in order to offer a country-specific solution to this concern.

In this policy mix, the required reserves and other macro prudential tools like the weekly repo rates, interest rate corridor and funding strategy are jointly used as the complementary tools for the credit policy, interest rate policy and liquidity policy. In utilizing these tools, the expectations, credit growth and exchange rate are monitored as the key indicators for the price and financial stability (Başçı, 2012). Moreover, the Reserve Option Mechanism, that is the option to hold FX or gold reserves in increasing amounts in place of the Turkish Lira reserve requirements of Turkish banks, was introduced during the same period. It is aimed to increase the resilience of the financial system against the external shocks through increasing international reserves of the banking system held within the Central Bank and to give more flexibility to the monetary policy through separate management of domestic and foreign liquidity. In conclusion, it is believed that the discussion of the post-crisis central

banking and the CBRT's experience with the policy mix will be helpful for the academics, economists in practice and the central bank authorities when they all are currently treading in the uncharted waters of the new global financial system.

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Scheme-I

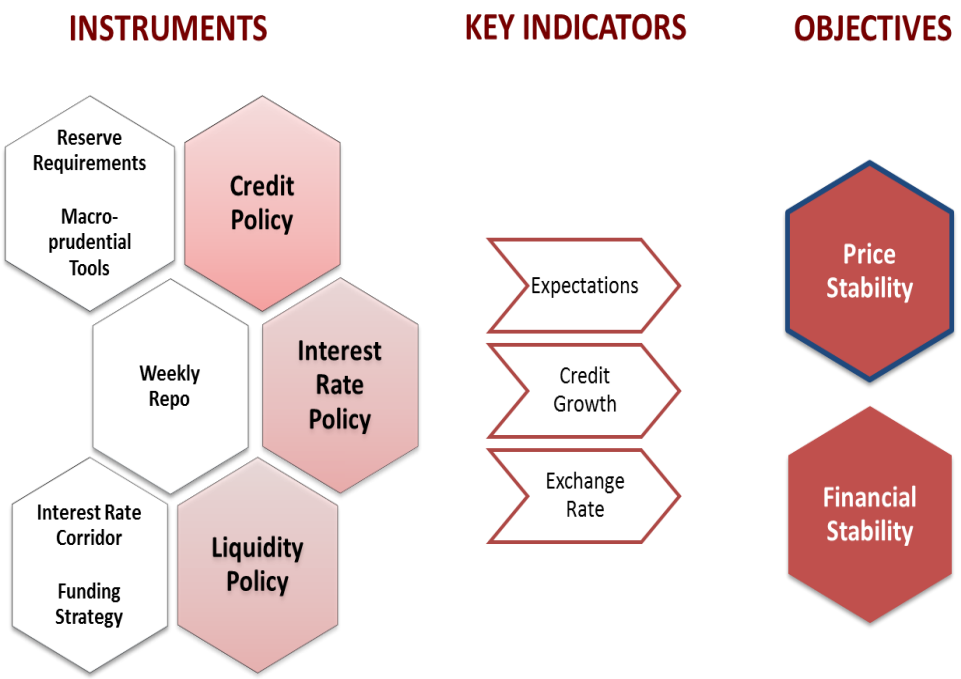
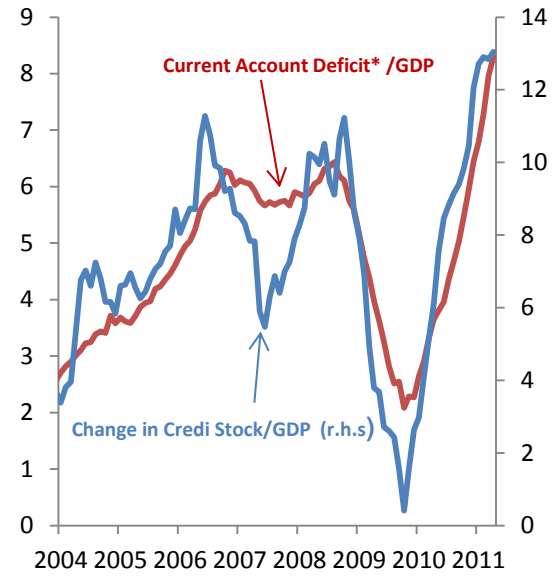

INSTRUMENTS
KEY INDICATORS
OBJECTIVES
Reserve Requirements
Macro-prudential Tools
Credit Policy
Weekly Repo
Interest Rate Policy
Interest Rate Corridor
Funding Strategy
Liquidity Policy
Expectations
Credit Growth
Exchange Rate
Price Stability
Financial Stability

Figure-I

Current Account Deficit & Credit Growth

(*12-month cumulative, Percent)

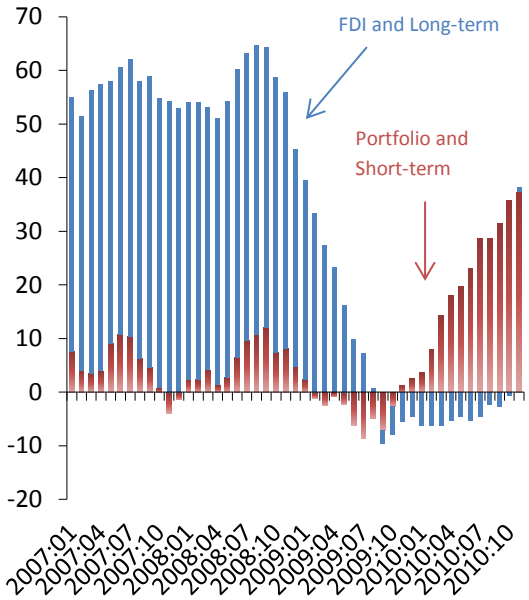


Source: CBRT, Turkstat.

Figure-II

Sources of External Finance

(12-month cumulative, Billion USD)

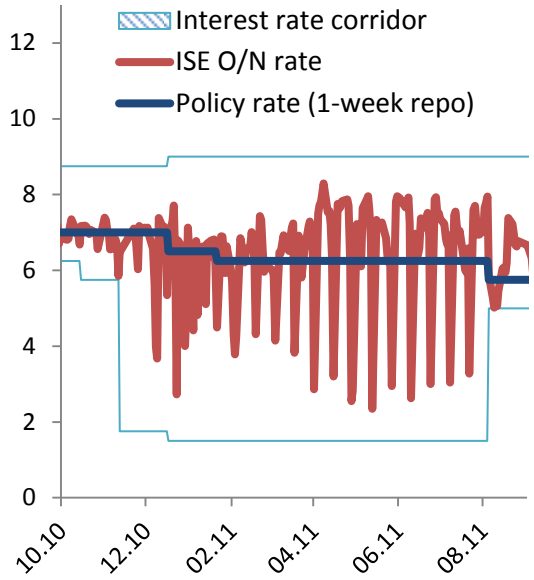


Source: CBRT.

Figure-III

Monetary Policy & Interest Rates

(Daily, Percent)

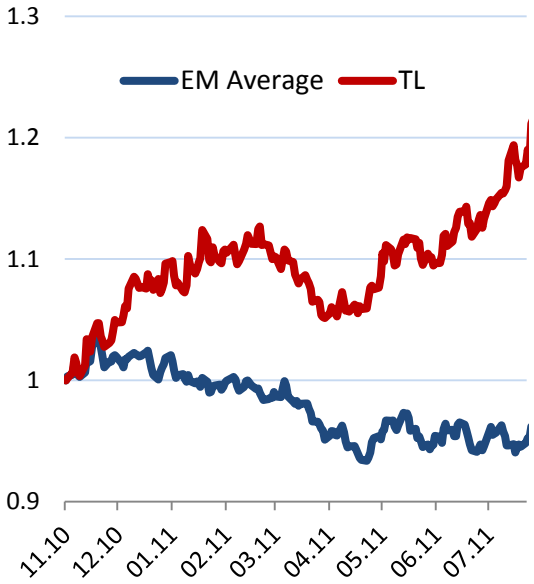


Source: CBRT, ISE.

Figure-IV

TL and Emerging Market Currencies

(Daily, 01.11.2010=1)



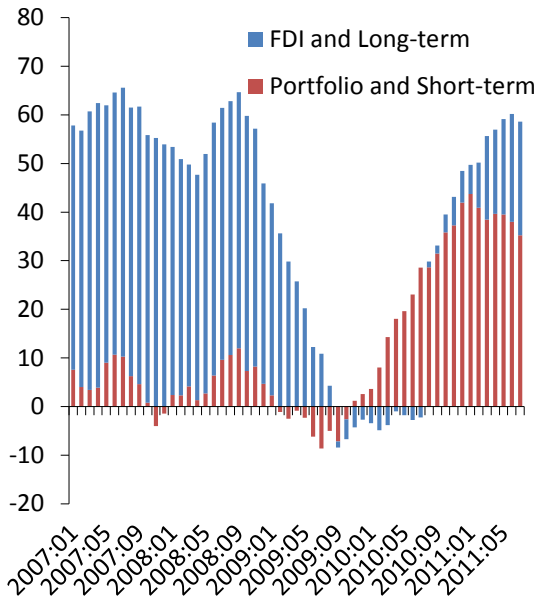
Source: Bloomberg.

EM Average: Brazil, Chile, Colombia, Czech Republic, Hungary, India, Indonesia, Israel, Malaysia, Mexico, Philippines, Poland, Romania, South Africa, South Korea and Thailand.

Figure-V

Sources of External Finance

(12-month cumulative, Billion USD)

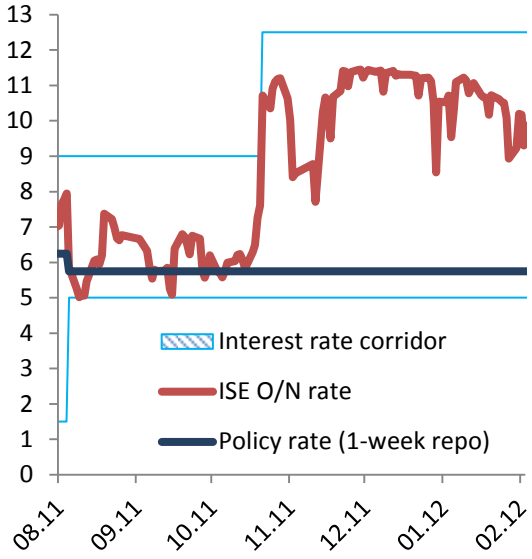


Source: CBRT.

Figure-VI

Monetary Policy & Interest Rates

(Daily, Percent)

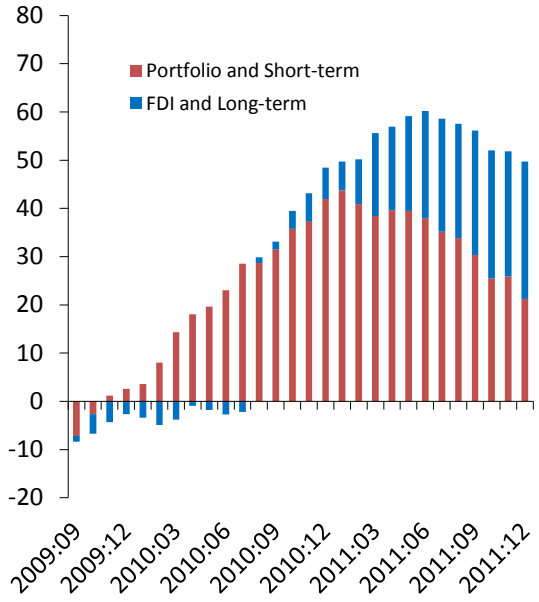


Source: CBRT.

Figure-VII

Sources of External Finance

(12-month cumulative, Billion USD)

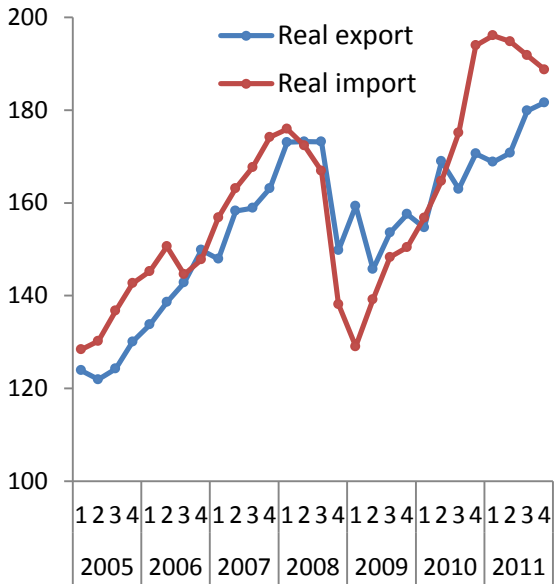


Source: CBRT.

Figure-VIII

Exports and Imports Index

(Seasonally Adjusted, Quarterly, 2003=100)

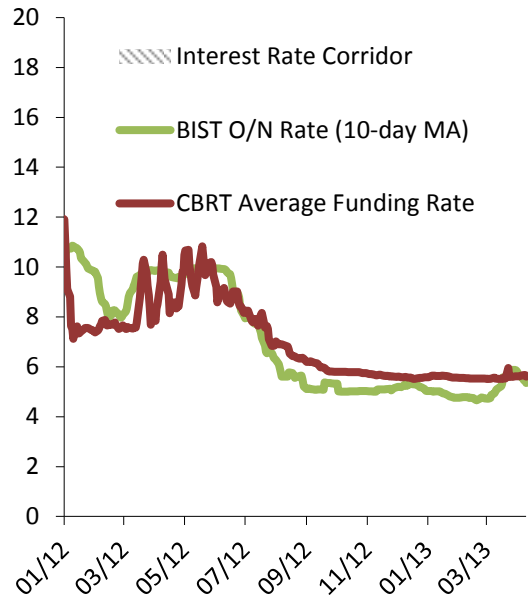


Source: CBRT, Turkstat.

Figure-IX

CBRT Average Funding and ISE O/N Rates

(Daily, Percent)

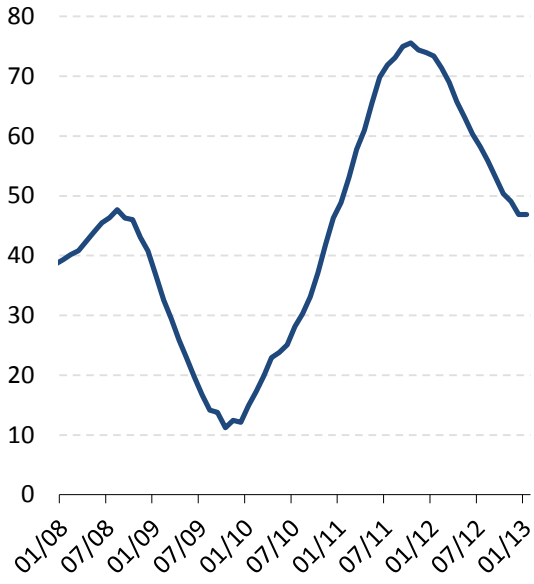


Source: CBRT.

Figure-X

Current Account Deficit

(12-Month Cumulative, Billion USD)

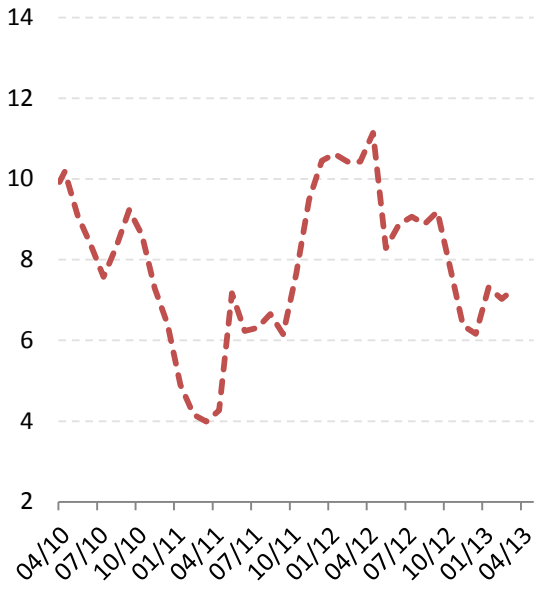


Source: CBRT.

Figure-XI

Inflation

(Percent)

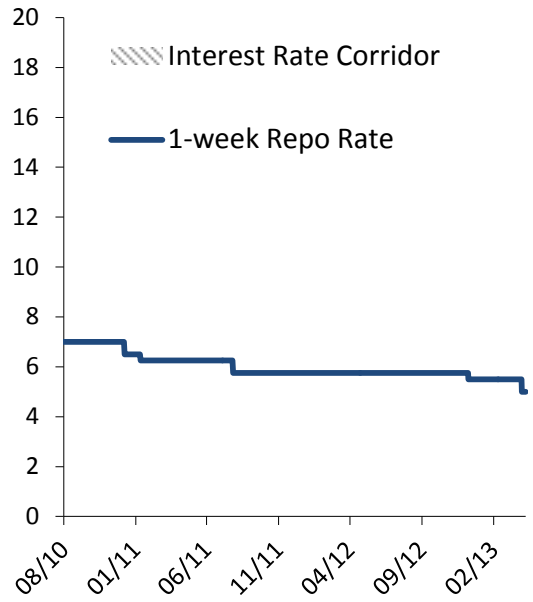


Source: Turkstat.

Figure-XII

Monetary Policy & Interest Rates

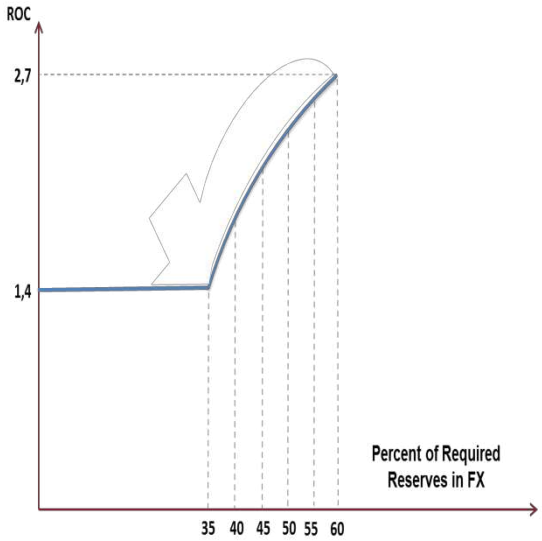
(Daily, Percent)



Source: CBRT.

Figure-XIII

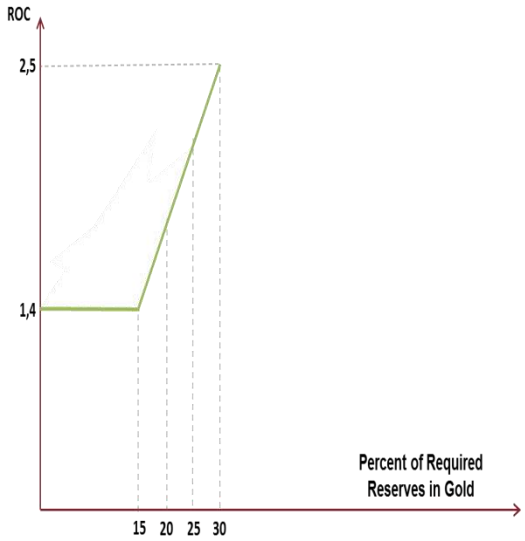
Reserve Options Mechanism (FX)



Source: CBRT.

Figure-XIV

Reserve Options Mechanism (Gold)

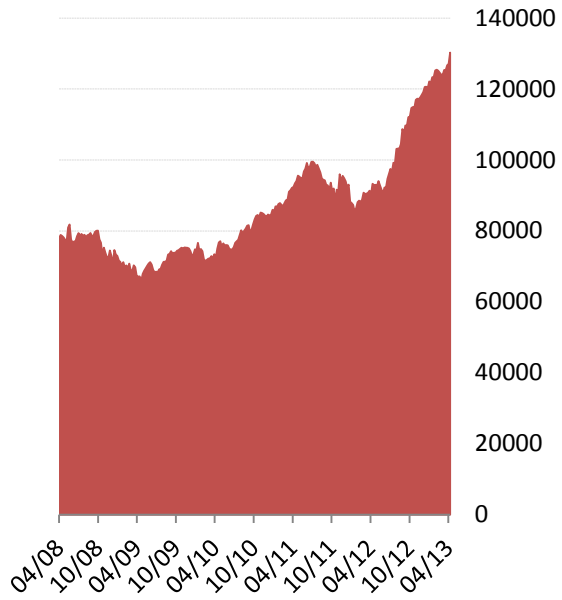


Source: CBRT.

Figure-XV

FX Reserves (Gold included)

(Million USD)

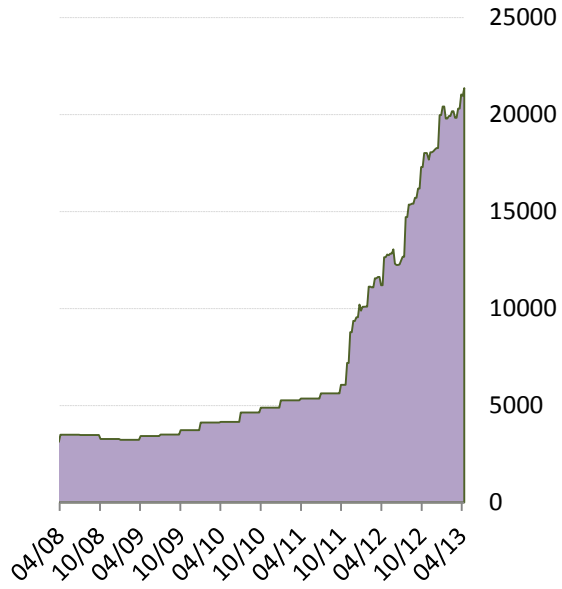


Source: CBRT.

Figure-XVI

Gold Reserves

(Million USD)



Source: CBRT.