



**9<sup>TH</sup> INTERNATIONAL ASECU CONFERENCE ON  
“SYSTEMIC ECONOMIC CRISIS: CURRENT ISSUES AND PERSPECTIVES”**

**Rana Eşkinat**  
*Anadolu University Law Faculty Eskişehir, Turkey*

**NEW MONETARY POLICY APPROACH OF THE CENTRAL  
BANK OF TURKISH REPUBLIC AGAINST FINANCIAL  
SYSTEMIC RISK**

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**Abstract**

*In the aftermath of the financial crisis of 2008 and 2009 there has been a lively debate about what caused the crisis and how the risks of future crisis can be reduced. Some blame loose monetary policy for laying the foundations for the crises. There is also a lively debate about the future of monetary policy, whether it needs to be modified in the light of the crisis, and what its relation to financial stability should be.*

*The expansionary monetary policy, applied by the developed countries after the breakdown of Lehman Brothers in September of 2008, created unexpected developments for the world economy. Based on the observation that emerging-market economies have received large capital inflows lately, with risks of bubbles and other negative effects, some observers suggest that the effects on capital flows to other countries should be taken into account.*

*This paper contains the new developments in monetary policy on Turkey since 2010. Provide a broad range of perspectives on the financial systemic risk issues. Provide a venue for discussion on the design and implementation of macroprudential policies and regulations in mitigating systemic risk.*

**Key Words:** *Systemic risk; Monetary policy; Financial stability; Macroprudential policy; Central Bank of Turkish Republic.*

*Jel Codes: E52, E58, E63, G28*



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### 1. Introduction

The Central Bank of Turkish Republic has been applying a new approach of monetary policy since the end of 2010. One of the reason behind the new policy application efforts were the world wide debate on the application of monetary policy and the increasing needs for the new approaches, connecting monetary policy to the financial stability. The other reason of searching for a new approach of monetary policy on Turkey was the financial threats on the Turkish economy, created by the global crisis of world economy after 2008.

The expansionary monetary policy, applied by the developed countries after the breakdown of Lehman Brothers in September of 2008, created unexpected developments for the world economy. This monetary policy may in many cases be too expansionary for the developing countries, creating an overheated economy with risks for bubbles and other negative consequences. These developments in the worldwide economic environment have threatened the macro economic and financial stability of Turkish economy. Increasing capital inflows, resulted with appreciation of Turkish Lira and credit expansion in Turkish economy, ended with serious foreign trade and current account deficit. Also the quality of the capital inflow deteriorated. Central Bank of Turkish Republic decided to change the traditional approach of monetary policy to eliminate the negative effects of uncertain and volatile economic environment. Much more flexible monetary policy has designed in order to prevent the negative effects of external shocks.

Central Bank of Turkey (CBT) has modified the conventional inflation targeting regime by adapting financial stability as a supplementary objective and enriching the set of policy instruments with a particular emphasis on credit and exchange rate channels. This study explains the underlying motivation why the CBT has adopted such a flexible policy, provides an overview of the framework, and summarizes the initial results.

### 2. A Brief History of Monetary Policy on Turkey

#### 2.1 Monetary Policy Approach after 2001

There was an economic turbulence during 1990s on Turkey. In order to understand how the recent Turkish experience differs from the past, taking intense financial crisis of 2001 as a starting point would be helpful. The year 2001 associated with fragilities in the banking system and a speculative attack on the fixed- exchange rate regime in place at the time. A severe recession ensued. After the 2001 crisis, Turkey embarked on a new IMF supported arrangement. Two major reforms, related with the monetary policy approach, that were implemented in the aftermath of the crisis can be listed as follows (Alp and Elekdağ, 2011: 7-8):

- The heavily managed and fixed exchange rates regimes of the past were abandoned in favor of floating exchange rates.
- The CBT started its transition, and in 2006, officially implemented a full-fledged inflation targeting regime which would serve as the economy’s nominal anchor.



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Monetary policy of the CBT became increasingly more transparent since 2001 with many important structural changes transforming the policymaking environment (Demiralp; Kaya and Özlü, 2011:5-9). Turkey adopted inflation targeting regime and free float exchange rate policy in February 2001. The new Central bank Law was enacted in May 2001, which defined the main goal of the CBT as achieving stability. Along with the legislation of the new law, CBT was granted with instrument independence and the short-term interest rates became the main operational instrument of the monetary policy.

The Law also defined a new decision making body, the Monetary Policy Committee (MPC). Main task of the MPC is to formulate the strategy for monetary policy which includes setting policy rates and communicating future monetary policy. The CBT law also defined the MPC as the ultimate body on designing the strategy of monetary policy.

The CBT envisioned implicit inflation targeting as a transition period for full-fledged inflation targeting, during which the communication, transparency and the institutional setup would be enhanced gradually. The decision making process shifted to a more predictable and systematic setup in 2005 with the adaptation of pre-announced fixed decision dates.

The CBT adopted full-fledged inflation targeting at the beginning of 2006. The regime brought many innovations in terms of decision making process and the role of communication. In terms of communication aspects, there were two main innovations: First, the CBT started to publish the medium term inflation fore casts along with some qualitative information regarding the future policy path. Second, the CBT enhanced forward looking information content of the policy statements, providing more specific guidance regarding the revisions in the policy stance. In sum, the implementation of full-fledged inflation targeting, coupled with the new strategy adopted by the MPC, has increased the forward looking component of the monetary policy.

The CBT Law, which was amended in 2001, gives responsibility the bank with taking necessary measures to contribute financial stability alongside its primary mandate of achieving and maintaining price stability. Accordingly, in order to contain macro-financial risks in the domestic economy posed by global imbalances, the CBT designed and launched a new policy strategy by the end of 2010 (Başçı, 2012:23-26).

### **2.2 Monetary Policy Approach after 2010**

The most important reason behind the adaptation of an unconventional approach of monetary policy by the CBT was the changing thoughts about the central banking applications in the post crisis period. One of the major lessons learnt from the global crisis is that while focusing on price stability as a main objective, central banks shouldn't underestimate the importance of risks accumulating in the financial system and the bubbles in asset prices. As a result of this alternative approach, the idea that the central banks should attach more weight to financial stability has gradually been highlighted across international platforms like G-20. Moreover, academic studies advocating the implementation of macro prudential policies in order to escape from the



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negative effects of economic crisis have increasingly occupied the agenda in the recent economic literature (Bianchi and Mendoza 2011; Jeanne and Korinek 2010).

Besides changing views about central banking and discussions about the increasing necessity of new economic policy approach, prevailing worldwide economic problems and unusual global economic environment were influential in inducing the search for a new policy mix by the CBT.

The devastating effects of the global crisis and subsequently-implemented policies by advanced economies as well as prevailing global imbalances led to unusual dynamics in the global economy. After four years of painful adjustment process since the outbreak of the crisis, deleveraging process in advanced economies still continues. Downside risks in advanced economies remain critical, causing these economies to maintain expansionary monetary policies, while domestic demand remains strong in emerging economies amid capital inflows (CBT, 2011-II:1). The divergence between advanced and emerging economies accelerates capital inflows to countries like Turkey, with strong economic fundamentals and relatively low risk. Rapid credit expansion and widening current account deficit fueled by short-term capital inflows feed risks to financial stability and may hamper price stability over the medium term, hence giving rise to adopting different approaches that incorporate financial stability in to monetary policy framework.

Post-crisis responses by the major central banks complicate the policy-making process in emerging economies. Substantial volatility in capital flows in recent years resulted with increasing uncertainty and risk. These developments constitute a major challenge for macroeconomic and financial stability in emerging economies, especially those with sizeable external financing needs. This environment calls for more flexible policies to ensure timely and effective responses to external shocks.

The new strategy preserves the main objective of achieving and maintaining price stability while safeguarding financial stability as a supporting objective. In this context, in addition to the policy rate, complementary tools such as reserve requirement ratios and interest rate corridor are also used in order to cope with financial imbalances. These policies aim to ensure sounder economic growth in a gradual way without hampering the medium-term inflation outlook. Accordingly, policies are pursued to prevent excessive deviation of the exchange rate from economic fundamentals, while the necessary measures are taken in collaboration with other regulatory institutions, to avoid excessive credit growth (Başçı, 2012: 24).

### **3. Reasons behind the New Policy Approach: Global Imbalances, Capital Flows and the Turkish Economy**

Reviewing post-crisis dynamics of Turkish economy would be helpful for understanding the importance of capital flows on macroeconomic stability of Turkey and the reasons behind the new monetary policy approach of CBT after 2010.

After contracting in 2009, Turkish economy experienced a rapid recovery on the back of strong fundamentals and solid domestic demand. The surge in capital inflows fuelled by expansionary monetary policies of developed countries and historically low policy



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rates supported credit growth and led to an excessive appreciation in Turkish lira. Rapid expansion in credit facilities reinforced the growth in domestic demand. Appreciation of Turkish lira resulted with increasing demand for imports. However, there was no positive improvement for exports under the prevailing conditions of weak external demand and appreciated Turkish lira. As a result foreign trade deficit and current account balance deteriorated notably and resulted with increasing vulnerability of the economy against sudden reversals in the global risk appetite. The excessively volatile nature of global risk appetite in the post crisis world together with increasingly short-term nature of current account finance raised further concerns about financial stability on Turkish economy. By the last quarter of 2010, current account deficit has been financed almost completely through short-term capital and portfolio investments (Kara, 2012:3)

1994, 2001, and 2008 were the years of severe economic crisis for Turkey. Common problem of those years was the sudden stop in capital flows. Historic experiments of Turkish economy related with economic crises provided enough evidence about the importance of capital flows for achieving macro-economic stability and sustainable growth in Turkish economy. This historical perspective points out the need for enhancing the resilience of the economy against abrupt changes in the global risk appetite. It also suggests that a more flexible approach would be useful in monetary policy, paving the way for a new policy framework.

### **4. New Monetary Policy of Central Bank of Turkey**

#### **4.1 Financial Stability and Monetary Policy**

Since the end of 2010, a new policy framework implemented by CBT takes into account macro financial risks. In this respect, the general framework of the inflation targeting regime was modified and additional policy instruments were developed to support the adaptation of financial stability as a complementary objective (CBT, 2012-IV:1). Policies implemented in this period aimed at managing macro financial risks without prejudice to the price stability objective. Accordingly, additional policy tools were developed in order to pursue multiple objectives. The new policy design aimed at constructing a framework to enhance the resilience of the economy against fragilities that are particularly driven by external balance, credit expansion and capital flows. Current account balance and the course of capital flows in Turkey entail noteworthy information on financial stability and macro financial risks (Kara, 2012: 5). For example, higher risk appetite in times of strong global growth accelerates capital inflows and resulted with rapid credit growth. Credit growth increases maturity and exchange rate mismatches on balance sheets, leading to accumulation of risks by distorting resource allocation. Appreciation of the local currency and rapid credit expansion deteriorates the current account balance. The deterioration in current account and the volatility in external financial flows increase the risk of a sudden stop which can be regarded as some form of systemic risk. Therefore, current account balance and capital flows are at the center of the new policy design alongside with traditional variables like credit. Accordingly, policies implemented since the end of 2010 concentrated on alleviating the potential adverse effects of capital flow volatility, aiming at soft landing and improving the external financing structure.



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### 4.2 New Policy Instruments

In the traditional inflation targeting framework, central banks mainly aim at keeping inflation in line with the target by using a single policy instrument of short-term interest rates. However, in the new policy approach due to the tradeoff that may occasionally arise between financial stability and price stability, additional tools are needed besides policy rate. As a result CBT diversified its policy tools before adapting the new policy mix. The new policy mix entailed the joint use of the interest rate corridor between overnight borrowing and lending rates, liquidity policies and required reserves in addition to short term policy rates. Kara (2012:6), summarizes the main tools utilized with in the new policy framework as follows:

- Interest rate corridor; one-week repo rate and liquidity management tools.
- Required reserves and more recently reserve option mechanism.

### 4.3 Intermediate Variables: Credit and Exchange rates

Since the policy was newly implemented, the existing economic literature provided little information about the channels through which the new policy tools like interest rate corridor or required reserves affected price and financial stability. Insufficient information about the effects of the tools on the objectives of CBT required an additional effort in terms of communication policy.

To increase the communication about the transmission mechanism the CBT defined and highlighted two intermediate variables: credit and exchange rates (Kara, 2012:7). By the help of these variables the new policy of CBT became much more explicit for the economic agents. Since these variables are directly observable and relevant data are announced without delay, they can be easily and directly monitored by the economic agents. This approach facilitated a more reliable and effective communication regarding the policy implementation, as it provided a clear and observable transmission from policy instruments to final objectives.

If the CBT has financial stability concerns, increasing the policy rate may not be desirable as it would lead to exchange rate appreciation which may conflict with the financial stability objective. Therefore, the presence of financial stability as an explicit objective may require the use of credit and exchange rate channels separately (Kara, 2012:7). Accordingly, monetary authority may need to resort to other instruments besides short-term policy rate in order to affect both credit and exchange rate channels in the desired direction.

### 4.4 Effects of Policy Instruments on Intermediate Variables

#### 4.4.1 Effects of Liquidity Management and Interest rate Corridor on Credit and Exchange rates

Liquidity management and interest rate corridor are the key instruments for understanding the CBT's new policy frame work.



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In order to affect the amount of liquidity and interest rates in the interbank money market, the CBT has alternative instruments. CBT, provides short-term funds (daily, weekly or monthly) to banks that are short of liquidity or borrows from banks that have excess of it by using different instruments.

The main instrument the CBT uses to manage the liquidity of the system and to change the stance of monetary policy is the one-week repo auctions. Interest rate corridor is the area that lies between the rates at which the CBT can borrow and lend overnight in the money market.

In the traditional inflation targeting frame work repo rate and the interest rate corridor are revised by the Monetary Policy Committee (MPC) on a monthly frequency. As a result short-term interest rates stay unchanged until the next meeting. Since the interest rate for the main funding operation (one week repo) is predetermined average funding rate of the CBT stays flat through out the whole month.

On the other hand, under the new system, there is no short-term commitment for the level of market rates or average cost of funding by the CBT. The key feature of the interest rate corridor is that the market interest rates can be changed on a daily basis by adjusting the quantity of funds provided through one-week repo auctions. The width of the interest rate corridor signals the maximum possible change that can be engineered in the short-term market rates via daily liquidity operations. Under this framework volatility of short-term interest rates can be used as an additional policy instrument. The new corridor system allows the short-term money market rates to persistently deviate from the average funding cost of the CBT. This differential, coupled with the active liquidity policy and interest rate corridor, allows the CBT to affect the credit and exchange rate channels in separate ways. Within the new setup, the interest rate corridor provides an important role in the conduct of monetary policy. New policy approach facilitates a swift response to rapid changes in risk appetite and provides a much-valued flexibility against uncertainties surrounding the global economy.

### **4.4.1.1 Effects on Credit**

Through the use of the corridor and liquidity facilities, the CBT control the marginal cost of credit at a high frequency for banks that have liquidity shortfall. Also, CBT uses uncertainty regarding the funding rate as a policy instrument. In the case of an undesired acceleration (deceleration) in credit growth, the CBT can increase (decrease) the uncertainty regarding the amount and cost of funding provided to banks and lead to a tightening (loosening) in credit supply (Kara, 2012:10). In a market which the CBT is a net creditor, it can have a significant effect on credit rates and credit growth.

### **4.4.1.2 Effects on Exchange Rates**

A wide interest rate corridor and liquidity facilities make it possible for the CBT to adjust overnight interest rates on a daily basis so as to smooth out the volatility in short term capital flows and exchange rate. For example in periods of high global risk aversion, during which emerging countries like Turkey are likely to experience capital outflows, the CBT can prevent an excessive depreciation of the Turkish lira by



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supplying less liquidity than demanded by the market and let the short-term rates rise. This policy also works by inducing banks to sell foreign exchange to meet liquidity needs, which would also ease the depreciation pressure on domestic currency. The width of the corridor can play an important role in smoothing exchange rate volatility and the system can be adopted to smooth the flow of capital in both directions.

### 4.4.2 Effects of Required Reserves on Credit and Exchange rates

#### 4.4.2.1 Effects on Credit

Required reserves are mainly used for liquidity purposes and also for affecting credit supply. Capital inflows are typically associated with easing supply conditions, falling interest rates and rapid credit growth. Higher required reserve ratios can limit the acceleration in credit supply and contain macro financial risks. On the other hand, during a deceleration in capital inflows or increased risk perception, reduction of required reserves can reduce the risk of a credit crunch.

#### 4.4.2.2 Effects on Exchange Rates

As an additional tool, the CBT allows the banks to keep a certain ratio of Turkish lira required reserves in foreign exchange or gold (Mimir; Sunel; Taşkın, 2012: 1-6). This flexibility, which is called the Reserve Option Mechanism has the potential to smooth out the effects of fluctuations in capital flows on the exchange rate and financial markets. For example, a rise in foreign exchange liquidity and a fall in foreign interest rates in times of accelerated capital inflows will lead banks to keep a larger part of their required reserves in foreign exchange. This can alleviate the appreciation pressure on the exchange rate and can support financial stability by reducing the excess lending in foreign exchange. In that sense this mechanism would not only act as an automatic stabilizer for the foreign exchange, but also reduce the sensitivity of the credits to capital flows.

### 4.5 Effects of Intermediate Variables on Final Monetary Objectives

#### 4.5.1 Effects on Price Stability

The CBT sets its monetary policy stance to ensure that medium-term inflation outlook is consistent with the inflation target. To this end, the CBT makes use of the demand and cost channels. Credit plays an important role for the demand channel, while the exchange rate is the main determinant of the cost channels.

Credit channel has a prominent role in financing consumption and investment. As a result it is the main transmission mechanism to affect the output gap and medium term inflation dynamics.

The exchange rate is a key variable for the cost channel. Given that imported intermediate inputs are intensely used in production in Turkey, exchange rate pass-through is typically main channel for the short-term inflation outlook.

There fore credit and exchange rates are important determinants of inflation dynamics through demand and cost channels.





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### 4.5.2 Effects on Macro-financial Risks

The financial stability notion that the CBT considers reflects a macro perspective. Rapid credit growth, external imbalances and misalignment of the exchange rate can be listed as the most important macro financial risks of Turkey in recent years.

In fact credit and exchange rates directly interact with the current account balance and macro financial risks. Researches find close relationship between the current account balance and credit use in Turkey (Çebi, 2011). On the other hand, excessive appreciation in the exchange rate fuels the demand for directly imported goods. As a result both credit expansion and over appreciation of the local currency deteriorate the current account balance and may increase the fragility of the economy against abrupt changes in capital movements. Credits and exchange rates have also considered as direct indicators for health of the overall economic environment. In this context, rapid credit growth and excessive appreciation of the local currency are found to be primary leading indicators for a possible crisis (Tornell and Westermann 2005; Mendoza and Terrones 2008; Reinhart 2012).

### 5. Implementation and Outcomes of the New Monetary Policy

The new policies implemented since the end of 2010 can be discussed under three periods.

- November 2010-August 2011: Strong capital inflows
- August 2011-October 2011: Euro area depth crisis and increasing uncertainty
- Post October 2011 Period: Surge in inflation and monetary tightening

#### 5.1 First Period (November 2010-August 2011)

Rapid capital inflows threatened the macro financial stability of Turkish economy in the first period. Thanks to favorable inflation outlook, monetary policy could focus on discouraging short-term capital inflows and preventing excessive appreciation of the exchange rate. Policies implemented in this period aimed at containing domestic credit growth and rebalancing domestic and external demand to minimize macro financial risks caused by the rapid deterioration in the current account deficit and the quality of its finance. In this respect, widening of the interest rate corridor downwards created a marked volatility in overnight interests and helped preventing very short-term capital inflows by increasing downside risks on overnight interests. Also during the same period, reserve requirement ratios were significantly increased with the goal of preventing excessive credit growth and controlling domestic demand. Moreover, foreign exchange buying auctions were held regularly to take advantage of strong capital inflows in reserve build-up.

These measures made a significant contribution in mitigating excessive appreciation pressures on the Turkish lira. Meanwhile, a notable deceleration was observed in loan growth after mid-2011. As a consequence, the composition of aggregate demand and the quality of capital inflows started to improve, allowing the Turkish economy to follow a rebalancing path as of mid-2011.



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### 5.2 Second Period (August 2011-October 2011)

Due to increasing uncertainty over the global growth outlook and sovereign debt problems in some European economies, as of August 2011 global risk aversion escalated and volatility in risk appetite reached historic highs. As capital outflows from developing countries accelerated in this period, the CBT used the same policy tools but in the opposite direction than during the period of rapid capital inflows (Başçı, 2012: 25). The CBT acted by narrowing the interest rate corridor to decrease the volatility in short-term interest rates with a view to limit the extent of capital outflows. Turkish lira reserve requirements were revised to decrease the liquidity requirement of the banking sector. One week repo rates were also cut to reduce the downside risks on economic activity driven by unfavorable external demand conditions. In addition, ample foreign exchange liquidity was provided to the market to avoid the possibility of a sudden stop.

### 5.3 Third Period (Post October 2011)

Starting from October 2011, developments on the inflation front have dominated the implementation of monetary policy. The rise in inflation was higher than expected due to the excessive depreciation of the Turkish lira stemming from the deterioration of the global risk appetite since August 2011 and adjustments in administered goods prices in the final quarter. Overnight lending rates were raised considerably in October in order to prevent deterioration in the medium-term inflation expectations. The CBT implemented a strong tightening by widening the interest rate corridor upwards and reducing the amount of funding provided by one-week repo auctions (so-called additional tightening). In order to avoid an undesired tightening in liquidity and credit conditions, reserve requirement ratios were lowered.

Accordingly, the measures taken since August 2011 have significantly contributed to alleviate the adverse effects of global problems on the Turkish economy. The CBT's measures regarding the foreign exchange market and decisions related to interest rate corridor in August and October 2011 reduced the degree of fluctuations in the exchange rate compared to that of other emerging market economies. Mean-while, the monetary tightening implemented since October 2011 has also contributed to moderating the excessive credit growth.

## 6. Conclusion

The CBT has designed and implemented a new monetary policy framework incorporating financial stability with a macro perspective since 2010. Two main developments following the global crisis of 2008 affected the policy-making process of MPC:

- The changing landscape of central banking at a global scale
- The extra ordinary global conditions and increasing capital flow volatility

Depending on the related literature and researches on the implementation of the new monetary policy approach of CBT, the outcomes of the new policies can be summarized as follows:

- The new policy framework has proved quite efficient in smoothing out the adverse effects of capital flow mobility.



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- New policy mix has been successful in engineering a soft landing and rebalancing of the economy without hampering the price stability objective.
- Current account deficit started shrinking without undergoing crisis for the first time in the recent history of the Turkish economy.
- Turkish experience deserves a close attention as an example of how the existing inflation targeting frameworks can be modified to allow for more room regarding macroeconomic and financial stability.

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