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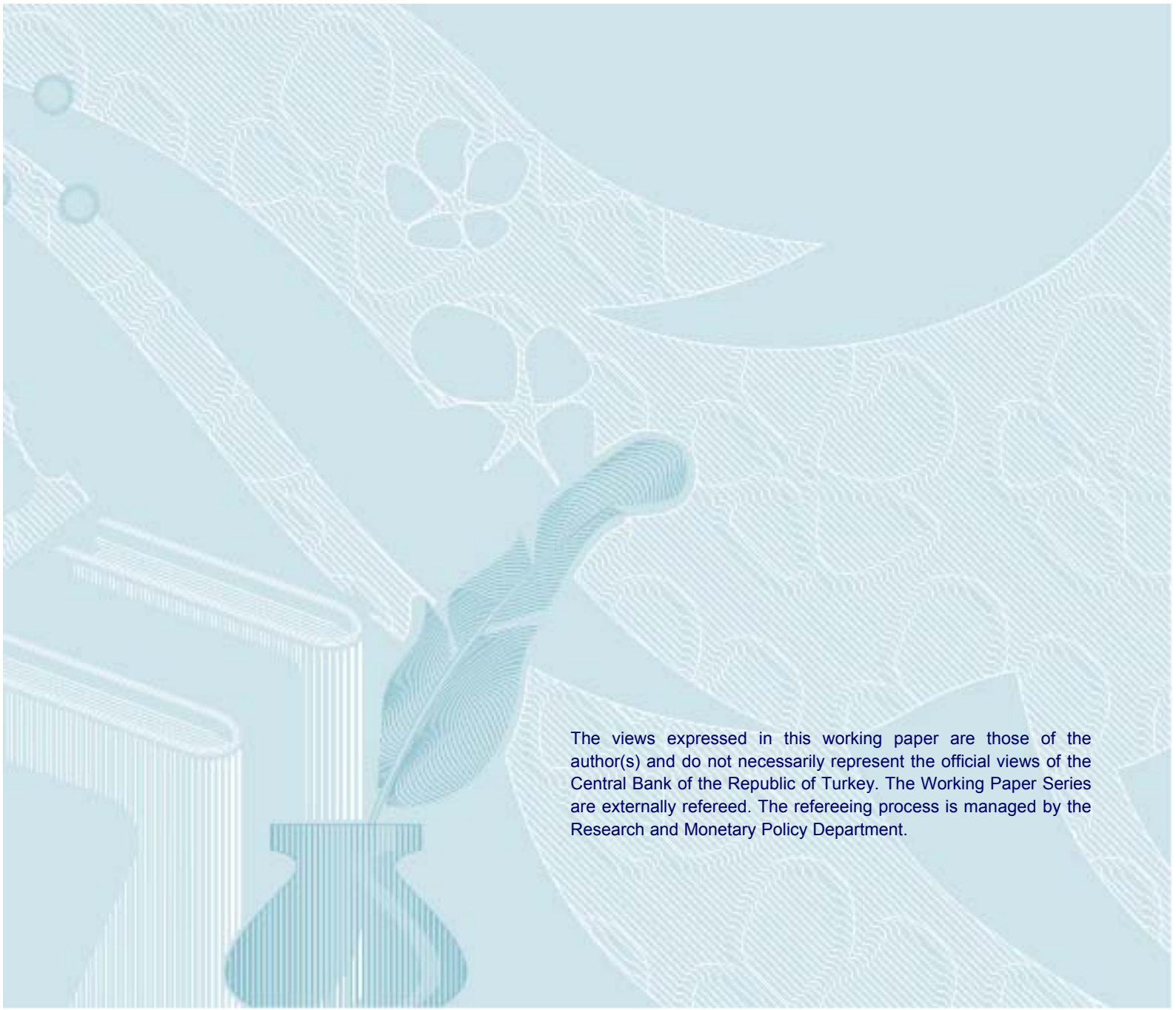

Reserve Option Mechanism: Does it work as an automatic stabilizer?*

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Abstract

Central Bank of the Republic of Turkey (CBRT) designed and implemented a new scheme since end-2011, called reserve option mechanism (ROM) in order to alleviate the adverse impact of capital flow volatility on the domestic economy. Although there are numerous studies on the mechanics of ROM, there has been no attempt to investigate the determinants of the ROM utilization in practice. In this note, we aim to fill this gap by using bank-level data to assess the behavioral aspects of ROM. Our results suggest that the relative cost of Turkish lira funding to foreign currency funding as well as the reserve option coefficients set by the CBRT largely explains the variations in the ROM utilization. In this context, we find that the most relevant proxy for the cost of Turkish lira funding for banks is overnight money market interest rates and the weighted average cost of CBRT funding. Moreover, foreign currency liquidity does not seem to be a significant parameter in driving the utilization of ROM. In light of these findings, we argue that the systematic policy induced movements in the short term domestic interest rates—higher during outflows, lower during inflows—may undermine the automatic stabilizer feature of ROM. In the conclusion part, we propose an adjustment in the remuneration of reserve requirements to strengthen the automatic stabilizer effect of ROM.

Keywords: Monetary policy, Reserve Requirements, Capital flows, Financial Stability

JEL Codes: E52; E58; F31; F32

* The views expressed in this paper are those of the authors' and do not necessarily represent the official views of the Central Bank of the Republic of Turkey. We thank Erdem Başçı, Mehmet Yörükoğlu and an anonymous referee for helpful comments. Contact: İstiklal Cad. No:10 06100 Ulus Ankara Turkey.

1. Introduction

The size and the volatility of capital flows into emerging market economies have increased substantially during the post-crisis period, leading to financial and macroeconomic stability challenges such as excessive volatility in exchange rates and credit growth. In response, central banks in many emerging economies, including Central Bank of the Republic of Turkey (CBRT) incorporated financial stability concerns into the standard inflation-targeting framework and adopted new monetary policy tools to deal with the adverse consequences of capital flows.

Reserve option mechanism (ROM) is a new monetary policy tool designed by the CBRT in order to increase the resilience of the economy against the volatility in capital flows and external finance shocks. This mechanism provides the banks with the option to hold a fraction (up to reserve option ratio) of their mandatory required reserves for Turkish lira liabilities in USD, euro and gold.[1] The amount of foreign currency/gold for meeting one unit of TL required reserve is called reserve options coefficient (ROC). For example, if the ROC is 2, banks must hold 2 TL worth of foreign currency or gold per 1 TL reserve requirement if they wish to utilize the ROM facility. The CBRT can change the relative cost of using the ROM by adjusting the ROC.

Figure 1: FX Reserve Options Coefficients

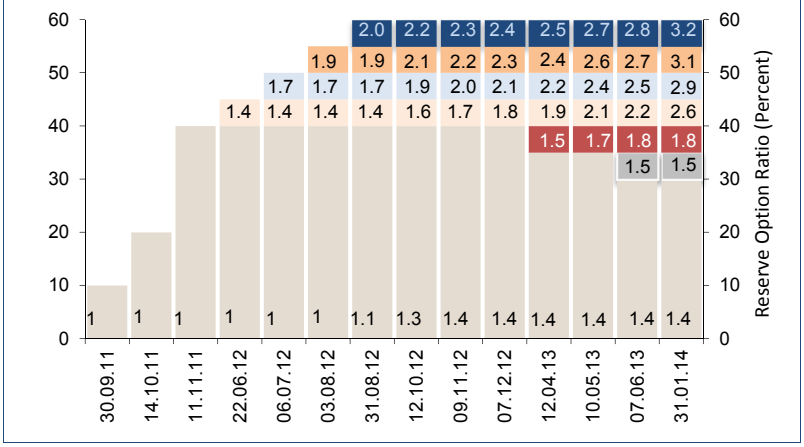
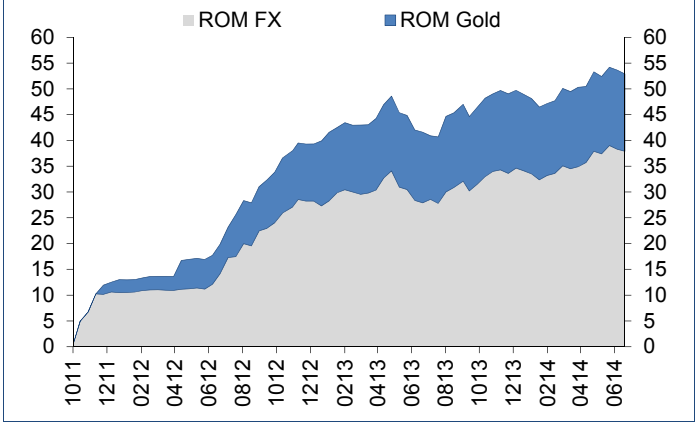


Figure 1 shows the evolution of the ROM since it was launched. The build-up of the system is engineered at a gradual pace since the rapid increase in the reserve option coefficients might give an additional shock to the banking system. For this reason the CBRT increased the reserve option ratio and reserve option coefficients gradually, also taking account the course of capital inflows and the pace of credit growth.

Banks accumulated more than 50 billion USD of reserves through ROM at the CBRT accounts since the inception of the mechanism (Figure 2).

[1] The option for the use of Euro in ROM has been abolished as of August 2014.

Figure 2: The Amount of FX and Gold Held at CBRT Accounts via ROM Facility (Billion USD)



One of the main motivations of adopting the ROM was to smooth the impact of capital flows on the domestic economy (automatic stabilizer). In order to facilitate the automatic stabilizer feature of the ROM, the ROCs are designed as an increasing function of the reserve option ratio. Once the mechanism is built up, the CBRT's plan was eventually to keep ROC constant and let ROM act as an automatic stabilizer against external financing shocks. In other words, the major aim was to smooth the effect of excessive volatility in the capital flows on the domestic economy by allowing banks to decide on their own reserve option utilization, depending on their constraints and objective functions. The main assumption here is that banks would react to the volatility in capital flows by adjusting their ROM utilization. During capital inflows, borrowing cost in foreign currency would fall and this would motivate banks to keep a higher fraction of their required reserves in foreign currency. Hence, the demand for foreign currency would increase; smoothing the exchange rate and/or credit impact of capital inflows.

However, this idea is based on theory rather than empirical findings and is silent about how the system would react to different types of flows. There is no empirical finding about how banks adjust their ROM utilization in the case of shifts in capital flows and other macro variables. Our study aims to shed light on this question by investigating the factors affecting FX ROM utilization rate. By doing so, we try to understand how the banks' ROM utilizations respond to changes in financial and economic environment.

2. The Literature on ROM

Although ROM is a relatively new tool, there are many studies exploring various aspects of the mechanism. These studies can be categorized into two parts. The first group focuses on the theory of reserve option mechanism. Alper, Kara, and Yörükoğlu (2012) conceptualize the ROM, ROC, and the breakeven ROC, and explain how the mechanism might work during capital inflows/outflows. Küçüksaraç and Özel (2012) calculate the breakeven ROCs for various funding sources, showing that the breakeven ROCs should be sensitive to foreign currency and Turkish lira funding costs.

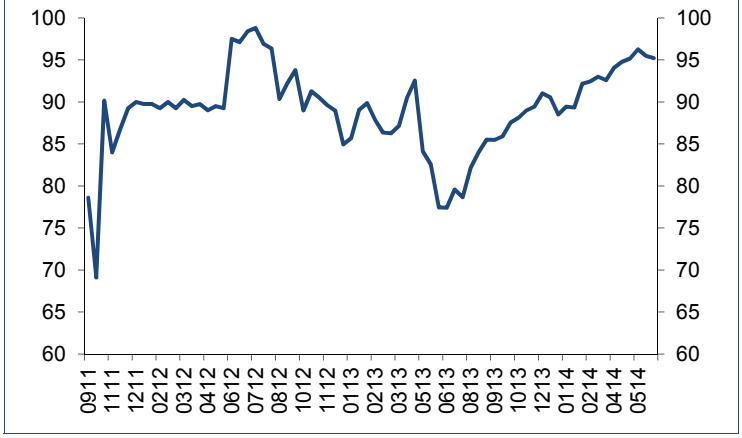
The second group of papers investigates the impact of ROM on exchange rate and credit volatility. Using GARCH models, Oduncu et al (2013) compare the volatility of exchange rates before and after the initiation of ROM and claim that ROM have reduced the volatility of Turkish lira. Using implied expectations data from foreign currency options, Değerli and Fendoğlu (2014) compare the volatility, skewness and kurtosis of Turkish lira against US dollar (USD) with similar emerging economies currencies. They argue that expectations for volatility, skewness, and kurtosis of the exchange rate have declined after the introduction of asymmetric interest rate corridor and ROM. Ermişoğlu et al (2013) investigate the effect of the CBRT's new policy mix on the volatility of credit growth and find that the new policy mix including ROM significantly reduced the volatility.

Although these papers provide valuable information regarding the impact of ROM on target indicators such as exchange rate and credit, none of them provide any clue on the exact response of banks' ROM utilization against changes in the macroeconomic parameters in practice. Understanding the bank-level behavior would help to assess the possible interaction between ROM and other macroeconomic indicators. Our study aims to fill this gap by investigating the factors affecting the utilization of ROM by using bank level data.

3. ROM Utilization Rate: Definitions

ROM utilization rate is defined as the fraction of Turkish lira reserve requirements held in foreign currency. It is a measure of how intensively ROM is utilized by banks. Figure 3 depicts the aggregated ROM utilization rate of the banking system. There are significant fluctuations in the utilization rate across time. In order to understand the transmission mechanism of ROM and how it will behave in response to different shocks, it is important to investigate the factors affecting the utilization rate. This will also help us to assess whether ROM works as an automatic stabilizer.

Figure 3: FX ROM Utilization Rate of the Banking System
(Percent)



It is possible to classify the factors which might affect ROM utilization rate as (i) cost related factors and (ii) other factors.

Cost Related Factors

One of the most important factor affecting ROM utilization rate by banks is relative cost of FX funding to Turkish lira funding. ROCs are also important in determining the cost of using ROM. These parameters can be used to define a concept of "breakeven ROC": The breakeven ROC is the coefficient leaving banks indifferent between using and not using the reserve options facility. The approximate breakeven ROC can be expressed as follows:

$$Breakeven\ ROC \sim \frac{(1 - RR_{FX})r_{TL}}{(1 - RR_{TL})r_{\$}} \qquad (1)$$

The parameters $\mathrm{RR_{FX}}$ and $\mathrm{RR_{TL}}$ in the calculation of breakeven ROC represent foreign currency and Turkish lira reserve requirement ratio and $\mathrm{r_{TL}}$ and $\mathrm{r_{\$}}$ represents Turkish lira and foreign currency (USD) interest rates respectively. In other words, breakeven ROC is the ratio of the cost of FX funding to the cost of TL funding. Under the assumption that reserve requirement rates are constant in the short run, the main determinant of the breakeven ROC is the Turkish lira interest rate and the foreign currency interest rate. If the breakeven ROC is larger than the ROC level determined by the CBRT, banks are expected to prefer using the facility. In other words, the gap between the breakeven ROC and the actual ROC levels determined by the CBRT is expected to be the key parameter in determining the ROM utilization rate.

The Utilization Rate Implied by Breakeven ROC

Although breakeven rate seems to be a natural candidate to use as an explanatory variable in the regressions for the ROM utilization rate, there is a practical complication: Since ROCs are step functions rather than a continuous function, small movements in the breakeven ROCs do not always lead to a change in the utilization rate, which may distort the findings of the regression. In order to circumvent this problem, we derive a new index called "Expected ROM Utilization Rate". This index represents the utilization rate implied by the breakeven ROC.

The construction of "Expected ROM Utilization Rate Index" rests on the idea that, if the breakeven ROC is higher than the ROC set by the CBRT for a particular tranche, we expect that tranche to be utilized. A simple example would help to understand how expected ROM utilization rate is calculated: Suppose the breakeven ROC for a bank is 2.7 and the ROCs determined by the CBRT are as in Table 1. In this case, the bank is expected to utilize the tranches with a ROC below 2.7. In other words, it would be too costly for the bank to utilize tranches between 45 and 60 percent. Therefore expected ROM utilization rate for the bank would be 45 percent.

Table 1

FX Reserve Option Tranches and ROC

FX Reserve Option Tranches	Current ROC
0-30	1.4
30-35	1.5
35-40	1.8
40-45	2.6
45-50	3
50-55	3.1
55-60	3.2

Formally, with current ROCs, expected ROM utilization rate can be expressed as follows:

$$Expected\ ROM\ Utilization\ Rate = \begin{cases} 0 & if\ Breakeven\ ROC < 1.4 \\ 30 & if\ 1.5 < Breakeven\ ROC \leq 1.4 \\ 35 & if\ 1.8 < Breakeven\ ROC \leq 1.5 \\ 40 & if\ 2.6 < Breakeven\ ROC \leq 1.8 \\ 45 & if\ 3.0 < Breakeven\ ROC \leq 2.6 \\ 50 & if\ 3.1 < Breakeven\ ROC \leq 3.0 \\ 55 & if\ 3.2 < Breakeven\ ROC \leq 3.1 \\ 60 & if\ Breakeven\ ROC \geq 3.2 \end{cases}$$

Using this approach, we compute the implied utilization rates for each bank across time, which, by construction, should be the main variable explaining the movements in the actual ROM utilization.

Other Factors Affecting ROM Utilization Rate

Since banks need foreign currency funds to use ROM, their foreign currency liquidity conditions may also affect ROM utilization. There may be cases where utilization rate is less than expected because of foreign currency liquidity shortage, although it may otherwise be optimal to utilize the facility considering the breakeven ROC. Therefore, the inclusion of a variable representing foreign currency liquidity conditions of banks into the empirical analysis may contribute to explain the movements in the utilization rate.

In addition to foreign currency liquidity conditions, exchange rate movements are also expected to affect the utilization rate through a direct–yet mechanical–channel. Since the use of ROM does not necessitate taking a foreign currency position, exchange rate does not have any impact on the breakeven ROC. However the appreciation or depreciation of Turkish lira can still affect the utilization rate of some banks through valuation effects. For instance, depreciation of the Turkish lira increases the Turkish lira value of the foreign currency reserves and may lead to higher utilization rates for banks with foreign currency liquidity constraints.

Global risk appetite has become one of the determinants of capital flows, especially after the 2008 financial crises. Therefore, it would be useful to test the relationship between a measure of global risk appetite (such as VIX) and the ROM utilization rate. Since global risk appetite is *indirectly* included in the analysis through the variables such as interest rate, exchange rate and liquidity, at first sight it might seem unnecessary to include this variable separately. However, we still include the VIX in our empirical model in order to control for the *direct* effect of capital flows on the ROM utilization rate.

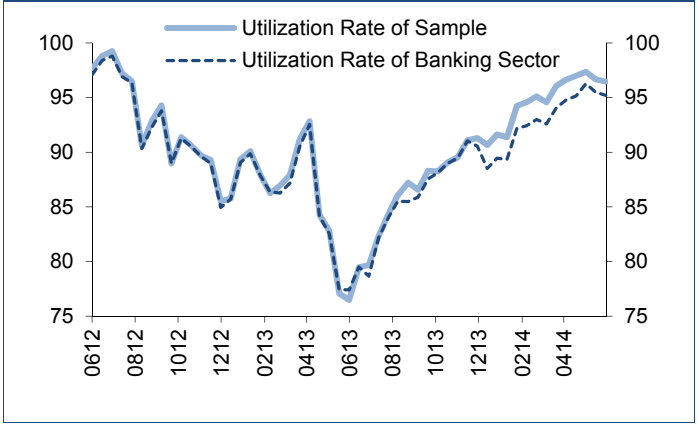
In assessing ROM utilization rates, one should also take into account that banks have the option to use their foreign currency funds to acquire other form of assets. For example, banks can use their foreign currency funds to directly extend foreign currency denominated loans or Turkish lira loans using cross currency swaps. In order to capture these effects, we include the ratio of loans to the balance sheet size as an additional explanatory variable. We expect this variable to move in opposite direction with the ROM utilization rate.

4. Data and Sample

Although ROM has been initiated first in September 2011, at the early stages ROCs were mostly constant at 1 and did not show variability before June 2012. Therefore, our sample for the empirical analysis starts from 22 June 2012. The frequency of the data is decided by the length of the reserve maintenance periods which is two weeks. Therefore we use data at bi-weekly frequency for our empirical analysis, which makes 53 observations for each bank from June 2012 to June 2014.

The panel data analysis covers 17 banks, constituting 91 percent of the banking system in terms of reserve requirements. In aggregated time series analysis, we calculate the ROM utilization rate for the whole sample by weighting the utilization rate of each bank by their share in total Turkish lira required reserves. Figure 4 shows that our sample of 17 banks provides a good proxy for the overall utilization rate of the banking sector.

Figure 4: Utilization Rates of ROM
(Percent)



In order to calculate expected ROM utilization rate, we need to compute the breakeven ROC. That means we need to know which interest rates for foreign currency and Turkish lira represent the funding costs of the banks. This question is not trivial in practice, since there are various financing sources for banks. In this study we try to answer this question through a reverse engineering empirical analysis: We first calculate the expected utilization rates implied by the breakeven ROC for each alternative funding cost. Next, using empirical analysis, we try to assess which one is better in explaining the realized ROM utilization rate.

As alternative Turkish lira funding rates, we use Turkish lira currency swap rate, Borsa İstanbul (BIST) overnight repo rate, CBRT one-week repo rate, CBRT overnight lending rate, CBRT average funding rate, and deposit rate up to 3 months. As for foreign currency funding costs, we use the interest rate of foreign currency deposit, which has a high share in the foreign currency funding of the banks. Banks have other foreign currency funding sources such as borrowing from abroad in short or long term as well as direct security issues. However, due to lack of time series data for these alternative funding sources, we opt to represent the foreign currency funding costs of the banks with deposit rates. For this purpose, we use USD and euro deposit rate up to 3 months maturity. The euro based costs are converted into USD and the series are weighted by currency shares in ROM utilization.

5. Empirical Findings

Which Turkish Lira Interest Rate is more relevant for the ROM Utilization?

In order to find the interest rate that is relevant for banks' ROM utilization costs, we investigate which interest rate is most successful in explaining the realized utilization rate of ROM. For this purpose, using the cost of alternative Turkish lira funding sources listed above and foreign currency deposit rates, we calculate breakeven ROC(s) and the expected ROM utilization rates. For each of the alternatives, we compute the expected utilization rate implied by the breakeven ROC and then we calculate the aggregated expected utilization rate index for the banking sector by weighting the individual bank's index with their share in Turkish lira reserve requirement. Then, using OLS estimation, we ask which index is more successful in explaining the movements in realized utilization rates. The estimation results and the R^2 statistics are presented in Table 2. The dependent variable is the aggregate ROM utilization. Each column in the Table represents a different regression using expected utilization rate index calculated by a different interest rate. Also, we include a constant and a lagged value of the dependent variable in the regression.

Regression results show that the indices calculated with the CBRT average funding rate, BIST overnight repo rates and currency swap rates are statistically significant in explaining the realized utilization rate. The results suggest that the index calculated by overnight interest rates and CBRT average funding rate have more explanatory power than others. In other words, the CBRT average funding costs and the overnight money market rates seem to be the best proxies for banks' ROM-relevant TL funding costs. Therefore, in the remainder of the study, we will mostly use the expected ROM utilization rate calculated using these two interest rates.

Table 2
Time Series Results

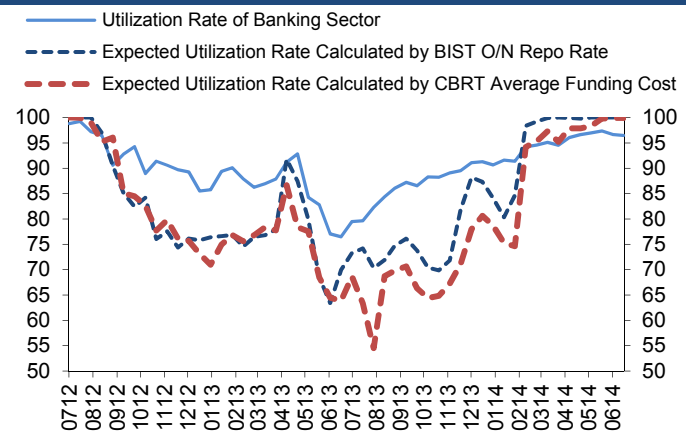
Explanatory Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Lagged Value of Utilization of ROM	0.577*** (0.000)	0.647*** (0.000)	0.867*** (0.000)	0.809*** (0.000)	0.871*** (0.000)	0.901*** (0.000)	0.893*** (0.000)
CBRT Average Funding Rate	0.172*** (0.002)						
BIST Overnight Repo Rates		0.168*** (0.005)					
Currency Swap Rate			0.282*** (0.007)				
TL Deposit Rate				0.360 (0.162)			
Overnight Lending Rate					0.025 (0.587)		
Policy Rate							0.002 (0.834)
Constant	0.243*** (0.003)	0.175*** (0.004)	-0.161* (0.054)	-0.183 (0.396)	0.093* (0.089)	0.089* (0.083)	0.094** (0.166)
R-Square	**0.871**	**0.876**	**0.861**	**0.828**	**0.821**	**0.82**	**0.82**

The sample covers the period from 22 June 2012 to 20 June 2014. The first values in the table represent coefficients and the second ones represent p-values.

The expected ROM utilization rate calculated by the overnight repo rate and the CBRT funding rate is compared with realized utilization rate in Figure 5. In general, both series move in the same direction. However the utilization rate is consistently higher than the expected one. This situation can be explained by the fact that the foreign currency deposit rate used in our calculation of breakeven ROC is higher than the actual cost of short term foreign currency funds in practice.[2]

[2] Interest rate data for external foreign currency funding of banks is not available as a time series; hence as explained above we use foreign currency deposit rate as a proxy.

Figure 5: Implied and Actual Utilization Rate of ROM (Percent)



Overall, these results show that expected ROM utilization rate implied by the breakeven ROC calculated by the average funding cost of the CBRT and the BIST overnight repo rate is an important determinant of ROM utilization. In fact, in-sample fit of a simple OLS model using only the expected ROM utilization index as an explanatory variable is quite high (Figure 6).

Figure 6: Forecast of the Utilization Rate by Using a Simple Specification (Model 2 in Table 2) and the Realization (Percent)

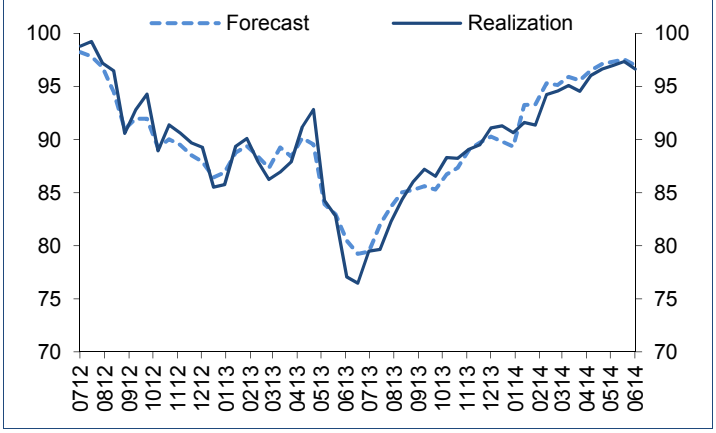
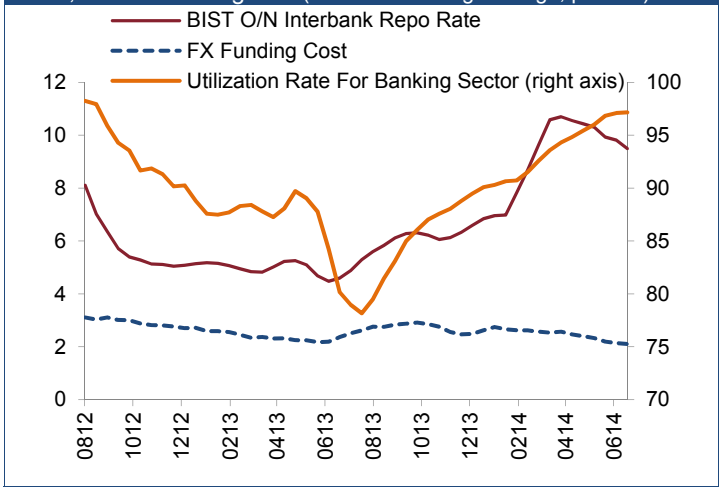


Figure 7 shows that the variability in FX deposit rates are quite low during the sample period and almost all the variation in the relative cost of funding comes from the Turkish lira funding rates. This observation indicates that (assuming a constant ROC), high frequency variations in the ROM utilization would be mainly driven by the movements in the short term Turkish lira interest rates. Indeed, Figure 7 shows that ROM utilization rate and BIST overnight repo interest rate have moved largely in the same direction, as higher (lower) TL funding cost would make ROM more (less) attractive for banks. These findings imply that the strategy to increase (decrease) short term interest rates during capital outflows (inflows) may undermine the automatic stabilizer feature of the ROM, since it would encourage the banks to keep a higher (lower) portion of their reserve requirements in foreign currency. In other words, the systematic movement of the policy rates may weaken the stabilizing effect of the ROM.

Figure 7: ROM Utilization Rate, BIST Interbank Overnight Repo Rate, and FX funding cost (4 Periods Moving Average, percent)



Other Factors Affecting ROM Utilization

Although the gap between breakeven ROC and actual ROC is the main determinant of ROM utilization, there are still significant differences between expected utilization implied by breakeven ROC and realized utilization in some periods. This observation indicates that other factors may also be important for ROM utilization. In order to evaluate the effect of other variables we conduct a panel data analysis using bank level data.[3]

To this end, we use the additional variables explained in the previous section such as the exchange rate, VIX, the share of credit in the balance sheet of the banks and foreign currency liquidity ratios. Exchange rate basket is calculated separately for each bank by using the share of USD and euro held for ROM. For instance, if the share of USD and euro in total amount of FX held for ROM is 60 percent and 40 percent respectively, then exchange rate basket is calculated by 60 percent USD and 40 percent in euro. Through this calculation, the effect of the exchange rate on the ROM utilization rate can be identified more precisely. We use the share of loans in the balance sheet of banks as a proxy for banks' appetite to extend loans. In addition, foreign exchange liquidity ratio of each bank is used as an indicator of foreign exchange liquidity positions of the banks.

Timing of the variables is as follows: we use the most recent data released before the start of each maintenance period. In other words, we use the data set by the time banks claim their ROM utilization. In addition, we use one week lagged data for foreign currency liquidity position and the share of loans in the balance sheet to ease the endogeneity problem. For exchange rate basket

[3] The source of overnight repo rate is BIST. Currency swap rate and VIX are obtained from Bloomberg. Bank liquidity ratios are from BRSA. All other variables are taken from the CBRT sources.

data, we used the data at the time of obligation date. One day lagged VIX is used for a proxy of global risk appetite.

In this context, we perform fixed effects panel estimation using the model below with the data of 17 banks between 22 June 2012 and 20 June 2014.

$$ROM_{it} = \alpha_i + \beta_1 ROM_{i,t-1} + \beta_2 EROM_{i,t} + \beta_3 Loan_{i,t-1} + \beta_4 FCLR_{i,t-1} + \beta_5 Basket_{i,t} + \beta_6 VIX_{t-1} + \varepsilon_{it} \quad (2)$$

In the model, "ROM" represents the realized utilization rate, "EROM" represents expected ROM utilization rate, "Loan" represents the share of loans in the balance sheet of banks, "FCLR" represents foreign currency liquidity ratio, "Basket" represents basket exchange rate which is calculated for each bank and "VIX" represents volatility index.

Table 3[4]

Explaining ROM Utilization Rate: Panel Data Estimation Results

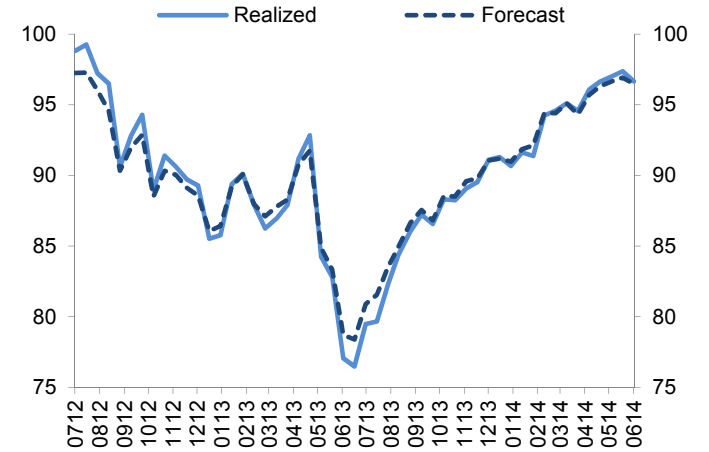
Explanatory Variables	Coefficient
Lagged Value of ROM Utilization Rate	0.789***
	(0.000)
Expected ROM Utilization Rate Calculated by Using CBRT Average Funding Rate	0.029***
	(0.001)
Share of Loans in the Balance Sheet, Lagged Value	- 0.044
	(0.382)
Foreign Currency Liquidity Ratio, Lagged Value	0.006
	(0.331)
Risk Appetite (VIX)	-0.001*
	(0.056)
Exchange Rate Basket	0.012*
	(0.077)
Constant	0.174***
	(0.000)
R-Square	**0.879**

Panel data results in Table 3 show that in addition to expected ROM utilization rate calculated by CBRT average funding rate, lagged value of ROM utilization rate, exchange rate basket and VIX are statistically significant and the signs of the coefficients are in the expected direction (the numbers in the parentheses are p-values). Although the signs of foreign currency liquidity ratio and the share of loans in the balance sheet are as expected, these variables are not statistically significant. The insignificance of the coefficient of the foreign currency liquidity ratio in explaining the ROM utilization rate is particularly interesting, since this finding may suggest that banks in general do not seem to face significant liquidity constraints when they decide on how intensively to use the ROM facility.

[4] We also estimated the parameters using Arellano-Bond method. The results did not change.

Figure 8 compares the in sample fit of the model and realizations to check whether we have left out any important variable. Using panel estimations, we forecast each bank's ROM utilization and weight them by their share in total Turkish lira required reserves to obtain an in-sample fit for the banking sector. The Figure shows that our model does a reasonable job in explaining the actual movements in the ROM utilization rate.

Figure 8: Panel Data Forecast and Realized ROM Utilization Rate



6. Conclusion and Final Remarks

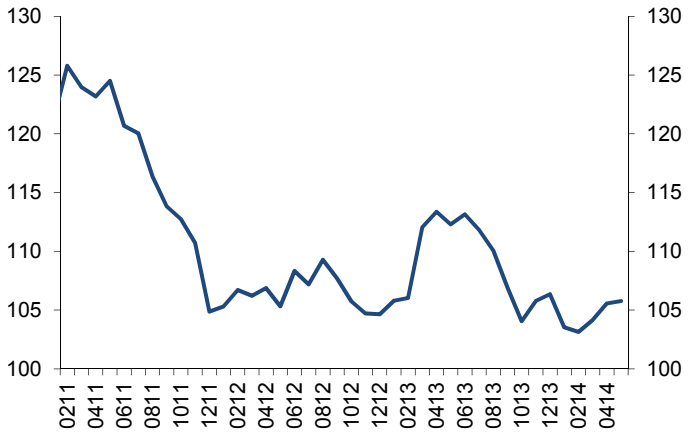
Our results show that breakeven ROC, which depends on the relative cost of foreign currency versus Turkish lira funding as well as ROCs set by the central bank, is the main determinant of ROM utilization. We have also shown that the most relevant interest rates for the banks in terms of ROM utilization are the central bank funding rate and the overnight money market rates.

Typically, the variation in the Turkish lira short term interest rates is more than the variation in foreign currency funding during the sample period. This implies that, assuming an unchanged ROC, the utilization of ROM will be mainly driven by the short term Turkish lira interest rates. An increase in the short term interest rate makes using ROM more profitable for banks, since the cost of Turkish lira funding increases compared to FX borrowing. Therefore, the strategy to increase short term interest rates during capital outflows may undermine the automatic stabilizer feature of the ROM, as it would encourage the banks to keep a higher portion of their reserve requirements in foreign currency. Indeed, banks' ROM utilization has increased during the post-"taper" period in 2013, acting in the same direction as capital outflows rather than offsetting them.

Another reason why banks did not resort to their ROM FX reserves at the CBRT during the post-tapering period may be related to the composition of capital outflows. The sharp trend reversal in capital flows in this period was mainly driven by portfolio flows rather than bank flows. Banks did not need to withdraw reserves from their ROM holdings because there was no external rollover

problem, as the shock in this period was a re-pricing shock rather than a financing shock. The rollover ratio for banks' external debt has hovered above 100 percent (Figure 9).

Figure 9: Rollover Ratio of Banks' External Debt
(Percent, 6 months moving average)



To sum up, ROM is designed as a flexible and market friendly mechanism which increases the CBRT reserves with low sterilization cost, and decreases the rollover risks of banks. On the other hand, our results suggest that the systematic strategy of increasing the short term interest rates during capital outflows using the flexible interest rate corridor may have weakened the automatic stabilizer behavior of ROM in the short term. Abandoning this strategy completely may not be feasible from the monetary policy point of view, as it would heavily constrain the policy flexibility. As an alternative, fixing the cost of holding Turkish lira reserves may be considered to facilitate the automatic stabilizer feature of ROM. For example, paying partial interest on required reserves maintained in Turkish lira, at a rate which moves one-to-one with the short term market interest rate or CBRT average funding rate, would broadly fix the cost of holding required reserves in Turkish lira. In this case, breakeven ROC would mainly vary with the changes in the foreign currency funding costs, facilitating the mechanism to act as an automatic stabilizer.

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