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Does the reserve options mechanism really decrease exchange rate volatility? The synthetic control method approach[☆]



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ABSTRACT

After the invention of the Reserve Option Mechanism (ROM) by the Central Bank of Turkey (CBRT), it has been debated whether it can help decrease the volatility of foreign exchange rate. In this study, I apply a new microeconomic technique, the synthetic control method, in order to construct counterfactual foreign exchange rate volatility in the absence of ROM. I find that, USD/TRY rate is less volatile under ROM. However, it has not worked efficiently after CBRT raised interest rates as a reaction to the tapering tantrum in June 2013. Furthermore, it could have decreased the volatility of foreign exchange rate if CBRT had not increased interest rates as a reaction.

1. Introduction

The invention of the Reserve Option Mechanism (ROM) by the Central Bank of the Republic of Turkey (CBRT) has shed light on the alternative policy instruments, namely macro-prudential tools, which can be used to mitigate exchange rate volatility. Between its adaption in September 2011 and FED's tapering tantrum in June 2013, the volatility of USD/TRY exchange rate has followed a steady path due to the automatic stabilizer feature of ROM. However, FED's tapering tantrum caused capital outflows in Turkey like in other emerging countries and resulted in depreciation of the exchange rate. These developments led people to ask two main questions? Does ROM really work? Would ROM have worked as expected in the absence of the tapering?

ROM basically allows banks to hold a certain ratio of their Turkish lira reserve requirements in foreign exchange and/or gold. It is designed in such a way that it will act as an automatic stabilizer during capital inflows and outflows. FX funding costs relative to Turkish lira (TL) funding costs typically decrease during capital inflows and increase during capital outflows. Accordingly, capital inflows will induce banks to hold more reserves in FX. Since a portion of capital inflows are kept at the central bank, domestic credit growth and the appreciation pressure on TL will be limited by ROM. On the other hand, banks will hold less reserves in FX in times of capital outflows since it becomes difficult to borrow in FX. Therefore, a portion of FX reserves in ROM will be released and the depreciation pressure on TL will be eliminated. The main consequence of ROM utilization is that the appreciation and depreciation pressures on the Turkish lira will be eliminated without a need of central bank intervention. Therefore, ROM has the potential to decrease exchange rate volatility and act as an automatic stabilizer. The relationship between capital flows and the amount of FX reserves in ROM is presented in Fig. 1. Until June 2013, a co-movement is observed between the two, as expected. However, after June 2013, the behaviour of banks is altered

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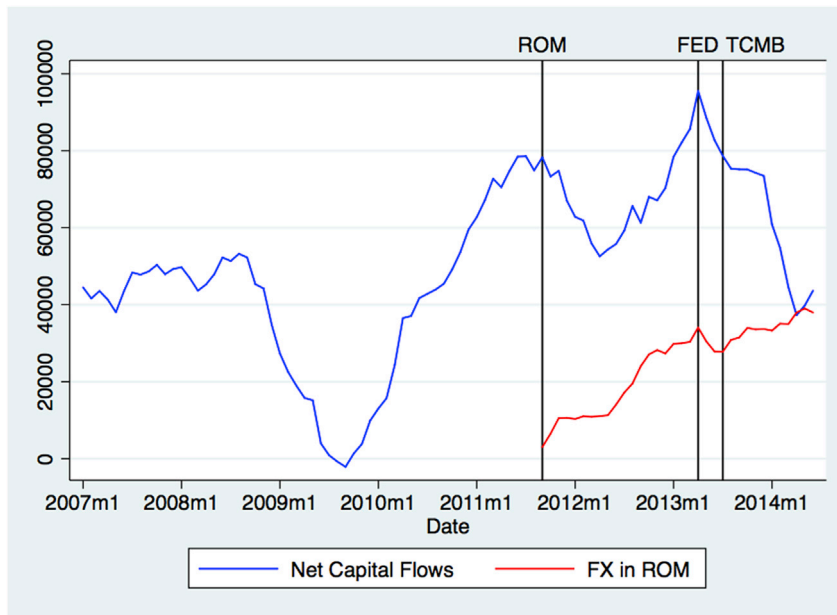


Fig. 1. Capital flows and FX reserves in ROM. Source: CBRT.

and the amount FX reserves in ROM has increased despite capital flows has declined significantly. Fig. 2 shows the behaviour of USD-TRY exchange rate volatility.¹ The volatility of the exchange rate is stabilized until the tapering but the Turkish lira depreciated and its volatility increased again after June 2013.

The depreciation of the exchange rate has been mainly caused by capital outflows but ROM should have abolished the depreciation pressure as an automatic stabilizer. However, as Aslaner, Ciplak, Kara, and Küçükşarac (2015) argue, CBRT's systematic response to the tapering by increasing the short-term interest rates deteriorated ROM's automatic stabilizer feature unexpectedly. CBRT has been using overnight borrowing and lending interest rates in addition to its policy interest rate, which is 1-Week Repo rate. Table 1 presents

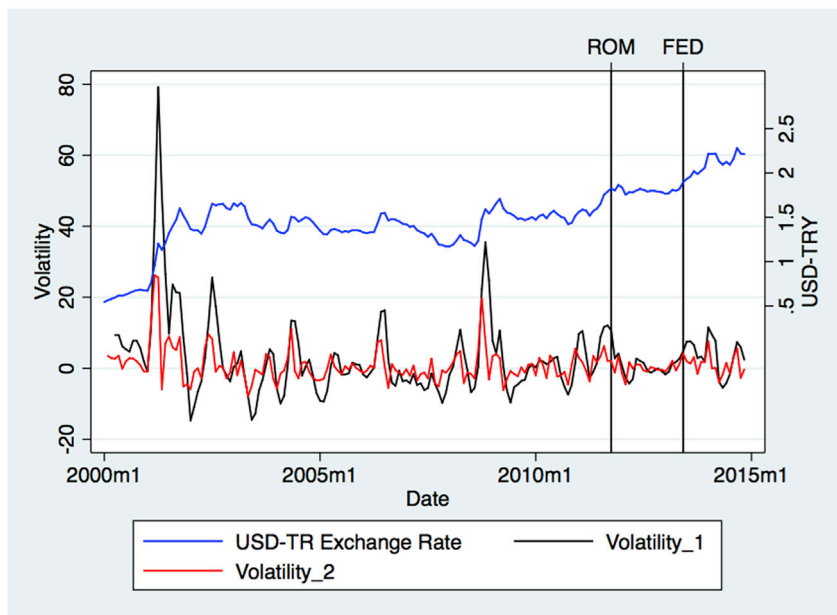


Fig. 2. USD-TRY exchange rate.

¹ Volatility₋₁ and Volatility₋₂ are percent changes from 3 months and 1 month before, respectively.

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