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Şule GÜNDÜZ •

B. Müge Tunaer Vural ••

Türkiye'de Kredi Genişlemesinin Ekonomik Faaliyetler Üzerindeki Etkisi

Impact of Credit Expansion On Economic Activity in Turkish Economy

Özet

Dünyada 2008 sonrası dönemde yeniden popüler hale gelen para politikalarına paralel olarak, Türkiye Cumhuriyet Merkez Bankası'nın bilançosu da 2010'dan 2019'a kadar yüzde 348 büyümüştür. Türkiye'nin makroekonomik büyümesi ile parasal tabanı arasındaki ilişkinin kopukluğu Türkiye Cumhuriyet Merkez Bankası'nın uyguladığı para politikasının etkinliğinin sorgulanmasına sebep olmaktadır. Bu araştırmanın temel amacı para politikasının etkinliğinin araştırılmasıdır. Bu amaçla, para politikası, banka kredileri ve iktisadi faaliyetler arasındaki ilişki incelenmektedir. Bulgular, Türkiye'de parasal aktarım mekanizmalarından olan banka kredi kanalının etkin olmadığını göstermektedir. Para politikası şokları kredi arzını değiştirmektedir. Ancak, üretim faiz oranlarına tepki vermediğinden para politikasını etkinsiz hale getirmektedir. Artan kredi arzına rağmen gayri safi yurtiçi hasıla önemli ölçüde artış göstermemektedir. Benzer şekilde daraltıcı para politikası enflasyonu aşağı çekmemektedir.

Anahtar Kelimeler: Parasal Aktarım mekanizması, Banka kredi kanalı, Etki-tepki analizi,

Jel Kodları: E4, E52, E58

Abstract

Parallel to the monetary policy regaining popularity in the post 2008 period throughout the world, Turkish Central Bank's balance has also increased by 348 per cent from 2010 until 2019. Disconnect between Turkish macroeconomic growth and the monetary base, however, increases the question on effectiveness of monetary policy implemented by the Turkish Central Bank. Main purpose of this research is to investigate the effectiveness of monetary policy. To this end, we implement an empirical analysis of the relationship between monetary policy, bank loans and economic activity. Findings reveal that the monetary transmission mechanism through bank lending channel is not effective in Turkey. Monetary policy shifts change loan supply. Yet, the production remains unresponsive to the changes in interest rates, rendering monetary policy ineffective. Despite increasing loan supply, gross domestic product does not increase significantly. By the same token, contractionary monetary policy shifts do not hold the inflation down.

Keywords: Monetary transmission mechanism, Bank-lending channel, Impulse-Response Analysis.

Jel Codes: E4, E52, E58

• Lecturer, Dr., Dokuz Eylül University, Faculty of Business, Department of Economics, sule.gunduz@deu.edu.tr., ORCID: 0000 0001 5484 5795

•• Assoc. Prof., Dokuz Eylül University, Faculty of Business, Deparment of Economics, muge.tunaer@deu.edu.tr., ORCID: 0000 0002 4252 6256

Introduction

The idea that monetary policy can significantly influence macroeconomic outcomes is an old one. Yet, the debate on how monetary policy works did not finalise. While the conventional Keynesian analysis of monetary transmission mechanism centred on nominal interest rate targeting, new monetarist approach focuses on the use of unconventional tools of monetary policy. Normally, decreasing short term interest rates aim to boost growth rates by increasing spending and stimulating aggregate demand. However, when interest rates reach zero lower bound, monetary transmission mechanism gets impaired, and monetary ease stops working. So that unconventional tools of monetary policy are required to implement.

So-called unconventional tools of monetary policy include a wide range of measures aimed at easing financing conditions. These refer to three main strategies for stimulation of the economy, without changing the level of the policy rate: (i) shaping interest rate expectations, (ii) altering the composition of Central Bank's balance sheet, (iii) expanding the size of Central Bank's balance sheet (Bernanke and Reinhart, 2004). Any of the quantitative easing practices are aimed at having an impact on the external finance premium in credit markets.[1] External finance premium arises because of finance market imperfections, and when external finance premium decreases the cost of borrowing decreases and credit becomes attractive to the borrowers. Since external finance premium is directly associated to the changes in interest rates, as monetary policy increases (decreases) the open market interest rates, external finance premium increases (decreases). Credit/lending theory stresses the magnified (enhanced) impact of monetary policy through the changes in external finance premium.

Bernanke and Gertler (1995) describe bank lending and balance sheet channels subsumed under credit/lending theory of monetary transmission mechanism. In terms of bank lending channel, supply of loanable funds by banks change with respect to changes in monetary policy actions. Contractionary monetary policy (i.e. increased open market interest rates or decreased reserves available for banks) decreases the amount of loanable funds by shifting the supply curve of loanable funds by banks (Bernanke and Blinder, 1988). Under the balance sheet channel, monetary contraction, by decreasing the asset prices then, reduces the net worth of potential borrowers. External finance premium increases with the increased risk perception (deteriorating creditworthiness) of the firms with weaker balance sheets. By the same time, banks become less willing to lend credit to smaller firms, which are assumed to be exposed to higher perceived risk. The increased cost of credit hence, intensifies the negative impact of tight monetary policy.

From the early 2000s up until 2008, policy rates of interest have been well below Taylor – rule implied rates for most of the developed and emerging market economies, indicating that economies had relatively more accommodative monetary policies relative to the Taylor rule prescriptions (Hofmann and Bogdanova, 2012). Consequently, monetary authorities relied on unconventional monetary tools, known as quantitative

[1] External finance premium is defined as the cost differential between external (issuing equity or bonds in stock exchange markets or bank credits) and internal (retained earnings) funding options (Bernanke and Gertler, 1995).

easing. Vast number of research studied the role of prolonged accommodative policies, and leverage, in sparking off financial crises. A strand of literature identified monetary expansion and credit booms as potential causes of financial instability (Taylor, 2010; 2015; Eggertsson and Krugman, 2012; Gourinchas and Obstfeld, 2012; Schularick and Taylor; 2012). Yet, another strand of literature focuses on the relationship between credit market frictions and the economic activity. Intermediaries' deteriorating balance sheets, increasing the credit market frictions, also increased external finance premium. Thus, contraction in financial intermediation distressed overall economic activity (Gertler and Kiyotaki, 2015).

Given the lower zero bound, insolvency in financial markets raised use of unconventional monetary measures by monetary authorities of many industrialised economies, following the global financial crisis of 2008 (great recession). Similarly, Turkish Central Bank has been relying on unconventional tools of monetary policy for the purpose of financial stabilisation, even though the short-term interest rates have been far from the zero lower bound in Turkish case. Turkish Central Bank balance sheet has grown by 348 per cent over the period 2010 – 2019, which may be interpreted as an indicator of accommodative policies to foster economic growth. Besides, average credit growth exceeded 10 per cent growth rate during the same period. Main purpose of this research is to explore the impact of credit supply focusing on the bank lending channel of the monetary transmission mechanism on real economic activity., to search for the effectiveness of monetary policy.

The remainder of the paper is organised as follows. Section 1 provides a brief discussion on related literature. Section 2 describes the data and empirical methodology. Section 3 presents the empirical findings. Section 4 makes the concluding remarks.

1. Literature Review

Central Banks implement monetary policy to maintain price/financial stability. Monetary policy makers make use of the monetary transmission mechanism and channels to demonstrate the impact of the implemented monetary policy on variables such as aggregate demand and inflation.

Monetary transmission mechanism operates through various channels. Mishkin (1995) states that the impact of monetary shocks on the basic macroeconomic indicators can be analyzed through channels such as; conventional interest rate, exchange rate, asset price and credit channels. Two of the primary channels are the interest rate channel (money view) and the credit channel (credit view). Traditional view of monetary transmission mechanism, which is also known as the money view, rests on the Keynesian impact of short-term interest rates on aggregate demand. This is, a change in short-term interest rates changes the cost of capital, and consequently influences aggregate spending, aggregate demand, and income. In the credit channel the monetary policy decisions by alter the availability and supply of loans which in turn influence the macroeconomic indicators. Bernanke and Gertler (1995) argue that the credit channel is not an alternative

to the classical interest rate channel [2] but rather comprises and complements it. In the interest rate channel, the demand for loans is directly affected from the monetary policy. In the credit channel however, monetary policy may influence both the demand and the supply of loans. In other words, the credit channel of monetary transmission mechanism stresses that monetary policy impacts on the level of economic activity not only by changing the short – term interest rates, but also altering the supply of loanable funds. Özsuca and Akbostancı (2012) argue that the credit channel captures the influence of monetary policy on the interest rate and the external finance premium, which in turn affect the investment and spending decisions of firms and households.

Mishkin (1996) states that the credit channel has two sub-channels; bank lending and the balance sheet channels. According to the balance sheet channel, if monetary policy causes the interest rates to raise, which in turn causes a decline in stock prices, this causes a deterioration in the net worth of the firm. Also, if the firm has used them as collateral to make loans, the value of its collaterals decline. Hence, there will be a decline in the limit of the loans that the firm can make. In the bank lending view, besides money and bonds [3]there are intermediated loans (Kashyap and Stein 1994). Özsuca and Akbostancı (2012) argue that, in this channel by controlling the intermediated loans the monetary policy authority can influence the external finance premium.

The conventional theory of monetary transmission ignores the non-neoclassical components of transmission mechanism, such as the role of financial intermediaries. Credit channel of monetary transmission mechanism stresses that monetary policy impacts on the level of economic activity not only by changing the short – term interest rates, but also altering the supply of loanable funds. Taylor (1995) pinpoints the significance of commercial banks and other financial intermediaries in the monetary transmission mechanism. Taking commercial banks' role into consideration is crucial especially in countries where a significant portion of the borrowers are bank dependent, therefore they cannot have access to alternative finance sources.

Mishkin (1996), stresses the role of banks in the monetary transmission mechanism and describes how the transmission mechanism of the bank lending channel operates following an expansionary monetary policy as follows:

Money supply (M) ↑→bank deposits ↑→ bank loans ↑ investments (I) and most probably consumer spending ↑ → Y ↑.

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[2] Classical Keynesian view argues that, the impact of monetary policy on the economy is explained through the interest rate channel. Accordingly, a contractionary monetary policy causes a decline in the money supply. Ceteris paribus, decline in the Money supply puts an upward pressure on the interest rate, which will cause a decline in investments and the aggregate demand.

[3] In the conventional monetary transmission mechanism there are basically two assets, money and bonds.

In the above scenario where the Central Bank conducts loose monetary policy, an increase in the deposits of banks provides more supply of loanable funds and increases banks' ability to lend. As a result, bank dependent borrowers, both firms and households, whose external finance premium has fallen, have the opportunity to increase their investment and consumption expenditures.

On the other hand, a tight monetary policy, as Golodniuk (2006) explains, causes a fall in commercial banks deposits and a reduction of loans which in turn makes firms and households, who depend on bank loans, decrease their spending on durable goods and capital for investment so that real GDP falls.

For this bank lending channel to be effective, two conditions must be satisfied according to Oliner and Rudebusch (1995). First one is that banks do not completely isolate their supply of loans from changes in reserves following a monetary policy change. For example, a tight monetary policy reduces bank reserves and deposits and consequently puts a drag on banks' ability to lend. Secondly, borrowers cannot isolate their real spending from changes in accessibility of bank loans.

To analyze the impact of monetary policy on real economic variables bank lending channel has been used in many empirical studies. While some of these studies rely on aggregate data, some employ bank-level data. The first line of research tries to explain the impact of monetary policy by analyzing the response of bank deposits/loans and bonds to the monetary shocks. In order to figure out the interaction they employ vector-autoregression (VAR) models. The second line of research assumes that certain characteristics of banks are important to see how they react to monetary shocks.

There have been many studies regarding the effectiveness of monetary policy on the Turkish economy. These studies analyze the monetary transmission mechanism through which monetary shocks alter the real variables. As the primary objective of the Central Bank of the Republic of Turkey is to maintain price stability and inflation targeting regime has been explicitly implemented since 2006 to maintain that goal. On the other hand, as Kara (2012) mentions especially after 2010, Central Bank has also focused on financial stability. Therefore, besides interest rate channel the credit channel of the monetary transmission mechanism has been very effective. This study focuses on the bank lending channel to analyze the impact of monetary policy practices on the Turkish economy. Brooks (2007), Çatık and Karaçuka (2012), Çiçek (2005), Özsuca and Akbostancı (2012), Çağlarırmak-Uslu and Karahan (2016), Erdoğan and Beşballı (2009), Turguttopbaş (2019) also focus on the bank lending channel. Depending on the period under investigation, the bank credit channel has been effective/in effective in Turkey. For example, Çavuşoğlu (2002) concludes that the bank credit channel is not effective for the 1988-1999 period. Similarly, Aklan and Nargeleçekenler (2008) demonstrate that bank lending does not function well for the analyzed 1988-2001 period. On the other hand, Erdogan and Besballı (2009) argue that the bank lending channel operates effectively for the 1988-2009 period.

2. Data and Methods

Vector autoregression (VAR) is a system of ordinary least-squares regressions, in which each of a set of variables is regressed on lagged values of both itself and other

variables in the set (Bernanke and Gertler, 1995). The model has proven to be useful for understanding the dynamic relationships among variables. VAR models are commonly used for the empirical analysis of monetary policy since the seminal work of Sims (1980). VARs successfully assess the response of macroeconomic variables to monetary policy shocks.

A VAR is given by:

$$Y_t = A_1 Y_{t-1} + A_2 Y_{t-2} + \cdots + A_p Y_{t-p} + v_t \quad (1)$$

where, p is a non-negative integer, Y_t is an $nx1$ vector of data at date t, A_i are nxn matrices of coefficients, and v_t is a $nx1$ vector of white noise structural disturbances, with variance-covariance matrix Σ.

Following a similar approach to Ciccarelli et.al (2015), we processed credit and macro variables with a VAR model:

$$Y_t = C + A(L)Y_{t-1} + v_t \quad (2)$$

where; $t = 1,..T$ denotes time, Y_t is the vector of endogenous variables, and v_t is the vector of white noise residual terms. The $A(L)$ matrix includes all coefficients describing lagged relations between all endogenous variables.

The vector of endogenous variables Y_t in equation (2) consists of three sets of variables, as in Christiano, et.al. (1999); key macroeconomic variables, credit variables and the policy variable. Following Bernanke and Blinder (1992), we included a short term interbank interest rate (INT) as our policy variable. Our key macroeconomic variables are real Gross Domestic Product (GDP) and Consumer Price Index (CPI). These variables are expected to account for the eventual effects of monetary policy shocks on real activity and prices. Finally, the credit variables are broad money (M3), and a financial mix (MIX) as offered by Kashyap et. al. (1993). MIX identifies the relative movements in bank and non-bank loans. To ascertain the relevance of bank lending channel, the monetary contraction should induce a decline in bank loans while leaving alternative sources of funds unaffected. Thus, a fall in MIX following a tight monetary policy would signify operation of bank lending channel.

As an initial step in our empirical estimation strategy, we tested variables for unit root. For those variables, which contain unit roots, Johansen cointegration tests are employed to find out any existence of cointegration. Following the unit root and cointegration tests, we employed Granger causality techniques, and impulse – response analysis in order to reveal the direction of causality, and investigate the dynamic relationships between the variables.

The VAR model is estimated using quarterly data over the period 2000 – 2018. We took credit to non-financial sector data from Bank for International Settlements statistics. We assembled rest of our data set from Electronic Data Delivery System of Turkish Central Bank.

3. Empirical Findings

In order to assess the impact of a monetary policy shock on macro and credit variables, we estimated a conventional VAR model. All series are expressed in logarithmic form except interest rate and MIX variables. Broad money series (M3) are seasonally adjusted.

We used ADF test for testing stationarity. Unit root test results, shown in Table 1, suggest that the hypothesis of a unit root cannot be rejected for the levels of all variables, and all variables are I (1).

Table 1: Augmented Dickey – Fuller (ADF) Unit Root Test Results

Variables	Level		1st Difference	
	Intercept	Intercept & Trend	Intercept	Intercept & Trend
lnGDP	0.6371	-1.8405	-7.4161*	-7.5839*
lnCPI	2.08923	1.3748	-5.6352*	-6.0956*
INT	-1.5898	-0.7996	-4.7383*	-5.1147*
lnM3	-0.6459	-2.7163	-7.1833*	-5.6000*
MIX	-1.6174	-0.5971	-5.4851*	-5.8958*

*indicates %1 significance level.

Conventional unit root tests are criticised for failing to reject the unit root hypothesis for the series under presence of structural breaks (Perron, 1989). In order to test the hypothesis of a unit root against the alternative that series exhibit trend stationary process with a structural break, we employed unit root test developed by Zivot – Andrews (1992). As can be seen from Table 2, results from Zivot – Andrews test also confirm that the impact of structural breaks disappears once the variables are first differenced.

Table 2: Zivot – Andrews Test Results

Variables	Model A		Model B		Model C	
	t-statistic	Break point	t-statistic	Break point	t-statistic	Break Point
lnGDP	-4.4667	2008Q3	-4.0240	2009Q2	-4.5137	2008Q3
lnCPI	0.1757	2016Q4	-2.7930	2016Q4	-3.2035	2016Q4
INT	-2.6070	2009Q1	-3.3366	2012Q1	-3.5164	2010Q4
lnM3	-3.6657	2012Q1	-3.7098	2009Q1	-4.1508	2012Q1
MIX	-1.8101	2010Q1	-2.5099	2014Q3	-2.3492	2014Q4
ΔlnGDP	-7.9800*	2009Q3	-7.5151*	2011Q3	-8.4917*	2009Q3
ΔlnCPI	-6.6593*	2009Q1	-8.1238*	2016Q3	-8.1959*	2016Q2
ΔINT	-5.5970*	2008Q4	-5.6483*	2016Q3	-5.8007*	2016Q3
ΔlnM3	-6.3106*	2011Q4	-5.9301*	2016Q2	-6.3391*	2011Q4
ΔMIX	-8.8209*	2009Q2	-6.5989*	2010Q3	-9.3327*	2009Q2
Critical Values						
1%	-5.34	-5.34	-4.80	-4.80	-5.57	-5.57
5%	-4.93	-4.93	-4.42	-4.42	-5.08	-5.08
10%	-4.58	-4.58	-4.11	-4.11	-4.82	-4.82

Note: * indicates significance at 1% level, ** indicates significance at 5% level, *** indicates significance at 10% level, respectively.

Selection of the lag order for this study was based on the results of several methods including the sequential modified LR test, final prediction error and information content evaluation criteria (AIC, SC, HQ). On the basis of these criteria, the optimal lag length was chosen to be one.

All of the variables are difference stationary, and the results of Zivot – Andrews test also confirm the robustness of the unit root tests. Thus, Johansen cointegration test is applied to test for the existence of a long run relationship among the variables. The variables considered for cointegration test are $lnGDP$, $lnCPI$, INT, $lnM3$, and MIX. Lag length is 1, with a lag interval 3. Results of the Johansen cointegration test are shown in Table 3.

Table 3: Johansen Cointegration Test Results

H_0	λ_{trace} statistics	Critical Values (0.05)	H_0	λ_{max} statistics	Critical Values (0.05)
$r = 0^*$	119.4001	79.34145	$r = 0^*$	44.39092	37.16359
$r \leq 1^*$	75.00914	55.24578	$r \leq 1^*$	40.35464	30.81507
$r \leq 2$	34.65450	35.01090	$r \leq 2$	22.50182	24.25202

Note: ** indicates significance at 5% level.

Johansen cointegration test results, both λ_{trace} and λ_{max} indicate that there exists a cointegration vector among the variables at a significance level of 0.05. The evidence of cointegration relationship among the variables implies that there exists some significant Granger causality in the system, at least in one direction. In order to identify the direction of the existing relationships, we resorted to Granger causality test. Table 4 presents the F – test statistics and corresponding probability values for the Granger causality test.

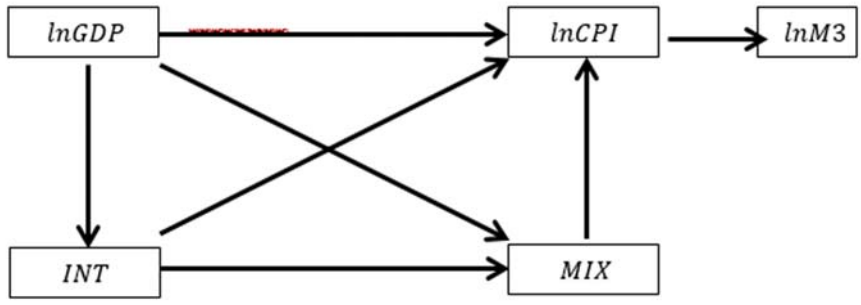
Table 4: VAR Granger Causality/Block Exogeneity Wald Test Results

Excluded Variable	Chi-Square	Prob.
Dependent Variable: $lnGDP$		
$lnCPI$	3.6576	0.9087
$lnM3$	2.7281	0.6043
MIX	2.3846	0.6654
INT	1.0073	0.9087
All	13.8117	0.6127
Dependent Variable: $lnCPI$		
$lnGDP$	12.0836	0.0167
$lnM3$	2.4754	0.6491
MIX	21.6468	0.0002
INT	52.5860	0.0000

Excluded Variable	Chi-Square	Prob.
All	103.3702	0.0000
Dependent Variable: *lnM3*		
lnGDP	6.0853	0.1929
lnCPI	10.4996	0.0328
MIX	5.0774	0.2794
INT	5.4594	0.2433
All	35.5831	0.0033
Dependent Variable: *MIX*		
lnGDP	13.7781	0.0080
lnCPI	6.2199	0.1833
lnM3	6.7133	0.1518
INT	16.1620	0.0028
All	46.6307	0.0001
Dependent Variable: *INT*		
lnGDP	9.0229	0.0605
lnCPI	3.7796	0.4367
lnM3	5.9306	0.2044
MIX	4.8719	0.3007
All	29.6941	0.0197

Granger causality test results indicate that the ratio of bank loans to non – bank financing (MIX) is Granger caused by short – term interest rates (INT), and gross domestic product ($lnGDP$). Gross domestic product, in addition, determines the consumer price index ($lnCPI$) and short – term interest rates. Consumer price index is also Granger caused by short – term interest rates, and the ratio of bank loans to non – bank financing. Finally, consumer price index Granger causes monetary aggregate M3 and M3 does not Granger cause any variables. Figure 1 illustrates the Granger causality directions between variables in the model.

Figure 1: Granger causality directions between variables



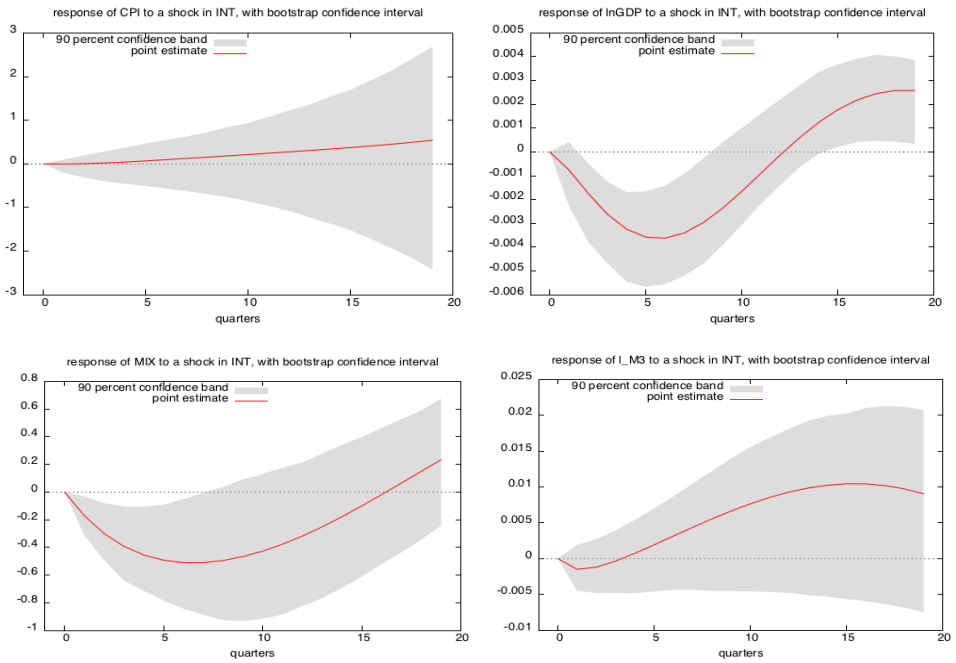
Final section of the analysis is performed with an estimation of VAR model. Identification of a monetary policy shock is obtained through a standard Cholesky type identification. Cholesky decomposition imposes the restriction that policy shocks have no contemporaneous impact on output, inflation, and credit variables. Given these considerations, the variables in the VAR system are ordered as follows:

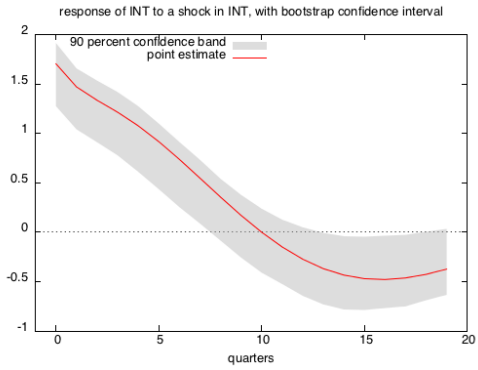
$$Y_t' = [lnGDP, lnCPI, lnM3, MIX, INT] \quad (3)$$

The VAR model is estimated in levels, using quarterly data over the period 2006 – 2018. The response patterns following an unanticipated monetary contraction, that is represented by an increase in the interest rate by 1.75 per cent, are reported in the Graph 1.

First, after the monetary shock the interest rate is persistent and it takes around 10 quarters to gradually return to its baseline level. It is striking that the gross domestic product does not show a significant response to a positive interest rate shock. In fact, results from Granger causality analysis also confirm that gross domestic product is not caused by either monetary policy or credit variables. Second, a contractionary monetary policy shock generates a monotonic increase in consumer price index. This finding is in contrast with conventional wisdom, that contractionary policy is implemented in order to hold inflation down. This phenomenon termed as 'price puzzle', appears in many VAR based models, and inclusion of an oil price index or a world commodity index has been recommended to resolve the issue (Sims, 1992). However, inclusion of either variable does not resolve this price puzzle in our case. A possible explanation is that increasing interest rates reflect higher risk premium with a loss of central bank credibility, thus raising inflation expectations. Third, M3 rises as a response to the contractionary monetary shock. The positive relationship among short-term interest rates and M3 may be explained with positive short-term interest rate elasticity of M3, since this broad money aggregate contains interest-bearing assets.

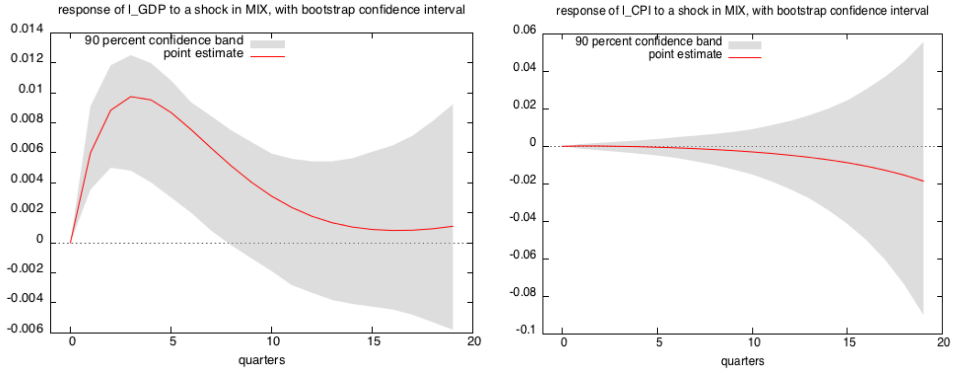
Graph 1: Impulse – Responses Following a Monetary Contraction





Kashyap et. al. (1993) show that there are two necessary conditions to be fulfilled for monetary policy to affect aggregate demand through lending channel. First, loans and securities (commercial papers) must be imperfect substitutes as bank assets. So that, as a result of a change in interest rates (monetary policy shift), banks react by changing their loan supply, altering the ratio of bank loans to non-bank funding. Second, loans and securities must also be imperfect substitutes as corporate liabilities. That is, the monetary policy change affects the external finance premium, and investments/production react monetary policy depending on the change in external finance premium. Having a look at the Graph 1, shift in the monetary policy alters the mix of bank loans and non-bank financing. Ratio of bank loans to non-bank financing decreases as a result of an unanticipated positive interest rate shock. This result is in line with the finding in the Granger causality test (Fig. 1). This finding suggests that first condition of lank lending channel is satisfied. In order to test whether the second condition holds, we provide selected impulses responses to a shock to the variable MIX in Graph 2.

Graph 2: Selected Impulse Responses to a Shock to the MIX.



Impulse responses in Graph 2 indicate an increase in the ratio of bank loans to non-bank financing (a positive shock to the MIX variable) do not bring out any significant changes in either gross domestic product or inflation. This finding also indicates that the second condition does not hold for the bank-lending channel to operate. In sum, bank loans and securities are not perfect substitutes as bank assets. Increasing interest rates

naturally decrease the supply of bank loans. However, the second condition fails so that the production remains unresponsive to the changes in interest rates, rendering monetary policy ineffective. For a potent monetary transmission mechanism, we would expect to see intensified increase (decrease) in production as a result of expansionary (contractionary) monetary policy. Yet, monetary policy shifts remain ineffective on macro variables (i.e. GDP, inflation), despite changing loan supply. One possible explanation is persistent differences between bank loan interest rates and the alternative lending rates. This renders borrowers to costlessly switch from bank loans towards alternative credit supplies. Considering the large public sector debt together with the heavy weight of public banks in Turkish banking system, fund flows from public banks towards public sector may well be one reason for persistent differences in cost of borrowing.

4. Concluding Remarks

Monetary policy is implemented in order to influence the main macroeconomic indicators such as GDP and the inflation rate. Turkish Central Bank has been explicitly implementing tight monetary policy to combat with inflation since 2006. This study empirically analyses the functioning of the bank lending channel of the monetary transmission mechanism to search for the effectiveness of the monetary policy for the period 2006-2018. The findings reveal that a change in the policy rates influence bank credit ratio in other words, supply of loans. As the policy rates increase, supply of loans decrease. This result shows that one of the two conditions to have an influential monetary policy is satisfied. However, the results imply that the output growth does not respond to changes in the policy rates or the supply of loans. There might be several reasons behind that result such as the fiscal constraint which supresses the banks' ability to provide new loans to the private sector. Future research might focus on the reasons behind the disconnect between the policy rates/supply of loans and the GDP.

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