CONFERENCE PROCEEDINGS/FULL PAPERS
ISBN: 978-625-99063-7-9/December 2023

33rd RSEP International Conference on Economics, Finance and Business
23-24 November 2024, UNIVERSITY OF WASHINGTON ROME CENTER, Rome, Italy

Examination of the monetary transmission mechanism: Effectiveness of the credit channel in Turkiye (2013Q1-2022Q4)

Oguz Oztunc
PhD student at Kırıkkale University, Institute of Social Sciences, Department of Economics, Türkiye
Email: oztuncoguz@hotmail.com
Seda Bayrakdar
Prof., Kırıkkale University, Institute of Social Sciences, Department of Economics, Türkiye
Email: sedabayrakdar@kku.edu.tr

DOI: https://doi.org/10.19275/RSEPCONFERENCES281

Abstract

The effects of monetary policy changes on the real economy occur through various transmission channels. In order for the central bank to achieve it's policy objectives, it is essential to accurately assess the potential effects of the implemented policy on the real economy. To enable accurate evaluation, a comprehensive and current literature is necessary. This study aims to contribute to the literature by examining the effectiveness of the credit channel in Turkey for the period of 2013q1-2022q4 through the Impulse Response Analysis. The analysis results indicate that the credit channel was not effective during the examined period.

Keywords: transmission channels, credit channel, impulse response analysis.
Jel codes: E52

The articles on the RSEP Conferences website are bear Creative Commons Licenses either CC BY or CC BY-NC-ND licenses that allow the articles to be immediately, freely, and permanently available on-line for everyone to read, download, and share.

1. Introduction

Monetary transfer; It refers to the situation where policy changes made by the monetary authority affect the output level (Erdoğan and Beşballı, 2009:28). The transmission of monetary policy changes to the real economy can be achieved through various economic variables. These variables; It can be explained as interest rate, exchange rate, credit volume, asset prices and expectations. At the same time, these variables are also expressed as “monetary transmission channel” (Central Bank of the Republic of Turkey [TCMB], 2013). The effects of monetary policy changes on real economic activity do not occur only through a variable or, in other words, a transmission channel; Different transmission channels can be used to transfer monetary policies to real economic activity (Erdoğan and Beşballı, 2009:29). For example; While a change in interest rate is linked to the credit channel in terms of affecting the cost of borrowing, it is also linked to the exchange rate channel in terms of its impact on exchange rates (Örnek, 2009:107). It is possible to diversify the examples on the subject: following the implementation of an expansionary monetary policy aimed at affecting the level of output through the credit channel, the demand for foreign currency or financial assets may increase with the increasing credit volume of economic units, and as a result of these increases in demand, the level of output may be affected at a different level than expected. In this context, the monetary authority can achieve its policy goals by correctly evaluating the possible effects of the policy it will implement (TCMB, 2013). This correct evaluation requires the existence of comprehensive and up-to-date literature on the subject.

In this study, credit channel efficiency in Turkey will be investigated for the period 2013Q1-2022Q4. The study aims to contribute to the current literature. Since our study will specifically examine the effectiveness of the bank credit channel, in the second part of the study, only the theory of the bank credit channel among the monetary transmission channels is discussed, and while explaining this theory, some information about the traditional interest rate channel is also mentioned in order to ensure the integrity of the subject. In the third part of the study, recent studies (literature) regarding the credit channel in the Turkish sample are included. The fourth chapter is devoted to the empirical analysis of the credit channel. This section explains the data used and analysis management; This is the section where the findings are evaluated. Finally, in the fifth chapter, the findings obtained from the study were interpreted and the study was concluded.

2. Theoretical Scope: Credit Channel

Mishkin (2004) (cited in Erdoğan, 2011:31) bank credit channel; It is defined as "monetary policy affects the amount of bank loans by changing bank reserves and bank deposits". Therefore, in the bank credit channel, the effects of an expansionary or contractionary policy implemented by the monetary authority on the lending capabilities of banks are discussed (İnan, 2001: 4). In the bank credit channel, it is stated that monetary policy changes also affect the asset side of bank balance sheets in addition to their effects on the liability side of bank balance sheets through the traditional interest rate channel. It is stated that in the transmission of monetary policy changes through the traditional interest rate channel, changes in the monetary base, or in other words, strong money, cause adjustments in interest rates and liabilities for banks. In the bank credit channel, in addition to the effects of monetary policy changes on the monetary base, interest rates and liabilities, the effects on banks' lending capabilities are also discussed, and it is stated that the asset side of bank balance sheets is also affected following a monetary policy change (Ökte, 2006:29). Considered from this aspect, the bank credit channel is a channel that magnifies the effects of monetary policy changes on the real economy (Özçiçek, 2006:259).

It is possible to explain how the effects of monetary policies on the real economy increase through the credit channel with the help of Bernanke and Blinder's (1988) IS-LM-CC model. This model is an extension of the IS-LM model with the credit market (Ökte, 2006:30). In the IS-LM model, there are only two assets, money and bonds (Kasapoğlu, 2007:13), and it is assumed that both borrowers and lenders can only invest in bonds (Kasapoğlu, 2007:22). The fact that only two assets, money and bonds, are taken into account in the IS-LM model implicitly shows that full substitution is assumed between loans and bonds (Bernanke and Blinder, 1988:435). In the IS-LM-CC model, the assumption of full substitution between loans and bonds was abandoned, loans were included in the model as a third asset, and it was assumed that both lenders and borrowers could choose between bonds and loans (Bernanke and Blinder, 1988:435).

Since the IS-LM model is expanded with the credit market and becomes IS-LM-CC, the credit market equilibrium needs to be explained (Bernanke and Blinder, 1988:435). In order to explain the supply of credit, the bank's simplified balance sheet must be taken into account (the emphasis on the simplified balance sheet is due to the omission of equity capital). While the asset side of the balance sheet consists of reserves (R), bonds (T) and loans (K), the liability side consists of deposits (MEV) (Bernanke and Blinder, 1988:435). Accordingly, the simplified balance sheet representation can be seen from equation 1.

$$R + T + K = MEV \quad (1)$$

Considering that the reserves item on the asset side of the balance sheet consists of both reserve requirements (πMEV) and excess reserves (FR) (Bernanke and Blinder, 1988:435) The simplified balance sheet can be shown first as equation number 2 and then as equation number

$$\pi MEV + FR + T + K = MEV \quad (2)$$

$$FR + T + K = MEV(1 - \pi) \quad (3)$$

Assuming that the portfolio ratio requested by the bank is based on the return on existing assets, the loan supply can be shown as equation number 4 (Bernanke and Blinder, 1988:435).

$$K_S = \Delta(p_+, i_-)MEV(1 - \pi) \quad (4)$$

In equation number 4, K_S represents the loan supply, p represents the loan interest, and i represents the bond interest. What is stated by equation number 4 is that while the loan supply has a positive relationship with the loan interest and a negative relationship with the bond interest, it also depends on $MEV(1 - \pi)$ (Ökte, 2006:32).

Considering that the choice between loans and bonds for both lenders and borrowers is made based on the interest rates of these instruments (Bernanke and Blinder, 1988:435), the loan demand can be shown as equation number 5.

$$K_D = K(p_-, i_+, y_+) \quad (5)$$

In equation number 5, y represents transaction credit demand dependent on GNP, which may arise due to working capital or liquidity concerns (Bernanke and Blinder, 1988:435).

When credit supply and credit demand are given, the equilibrium in the credit market is formed as shown in equation 6 (Bernanke and Blinder, 1988:435):

$$K(p, i, y) = \Delta(p, i)MEV(1 - \pi) \quad (6)$$

In the model, the money market is defined through the traditional LM curve and it is stated that the excess reserves held by banks are equal to equation number 7 (Bernanke and Blinder 1988:436):

$$FR = \varepsilon(i)\ MEV(1 - \pi) \quad (7)$$

For the sake of simplicity in the above equation, it is assumed that the demand for excess reserves is affected only by bond interest rates (i) and not by loan interest rates (p) (Bernanke and Blinder 1988:436). Accordingly, excess reserves are in relationship with bond interest rates, provided that they depend on $MEV(1 - \pi)$. Therefore, the supply of deposits (ignoring cash) is equal to the product of reserves and the money multiplier $(1/\pi)$. This equality can be shown as equation 8 (Bernanke and Blinder, 1988:436; Ökte, 2006:32; Tüzün, Aydın, and Ekinci 2017:5):

$$MEV_S = R\frac{1}{\pi} \quad (8)$$

The demand for deposits (money) occurs due to transaction motivation; The interest rate is based on income and total wealth, which can be shown as equation 9 when total wealth is assumed constant (Bernanke and Blinder, 1988:436):

$$MEV_D = (i_-, y_+) \quad (9)$$

As can be seen in equation number 9, deposit (money) demand has a negative relationship with bond interest and a positive relationship with income.

Given deposit (money) supply and deposit (money) demand, money market equilibrium is formed as shown in equation 10 (Bernanke and Blinder, 1988:436):

$$(i_{-}, y_{+}) = R\frac{1}{\pi} \tag{10}$$

After the balances regarding the credit and money markets are explained, there is only one goods market balance left, which we can summarize with the traditional IS curve and show it as equation 11 (Bernanke and Blinder, 1988:436):

$$y = Y(i_{-}, p_{-}) \tag{11}$$

In the next stage, using equation 10, which represents the equilibrium condition for the money market, the $MEV(1-\pi)$ part on the right side of equation 5, representing the equilibrium condition for the credit market, is replaced with $R1\pi(1-\pi)$. Following, the new form of equation solves for the credit interest rate (p) as a function of interest rate (p), bond yield (i), income (y) and reserves (R). We can represent this solution as equation 12:

$$p = \partial(i_{+}, y_{+}, R_{-}) \tag{12}$$

Finally, when equation 12 is substituted in equation 11, the CC curve is obtained and the CC curve can be shown as equation 13 (Bernanke and Blinder, 1988:436):

$$y = Y(i, \partial(i, y, R)) \tag{13}$$

The CC curve, like the IS curve, has a negative slope and changes places as a result of monetary policies and credit shocks (Bernanke and Blinder, 1988:436). In economic terms, the existence of the credit channel makes monetary policies more expansionary than in the IS-LM model (Bernanke and Blinder, 1988:437). This situation can also be shown through the figure 1.

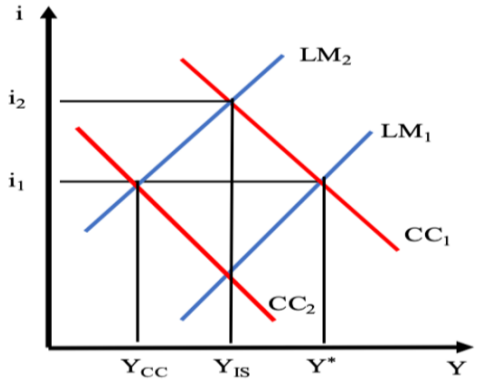

Figure 1. The Effect of a Contractionary Monetary Policy in the IS-LM-CC Model

Sources: (Ökte, 2006:36; Tüzün et al., 2017:7).

In Figure 1, the initial equilibrium point is determined at Y^* level by the intersection of LM_1 and CC_1 curves. As a result of a contractionary monetary policy, LM_1 will shift to LM_2, while CC_1 will shift to CC_2. As a result, the new equilibrium output level will be at the Y_{CC} level. On the contrary, in the IS-LM model, since the IS curve is not affected by monetary policy changes (in the case where we assume the CC_1 curve in Figure 1 as the IS curve), a contractionary monetary policy will only shift the LM curve from LM_1 to LM_2 and reduce the equilibrium output level to the Y_{IS} level.

Based on Mishkin (1996:9), the functioning of the credit channel can be explained as follows: an expansionary monetary policy that increases bank reserves and deposits increases the amount of available credit, and the increase in the amount of available credit causes an increase in investment expenditures.

3. Literature Review

Recent studies and results of studies testing the functionality of the credit channel in the Turkish sample are as follows.

In his study, Özçiçek (2006) examined the effectiveness of the credit channel for the period 1986-2005 through the Granger causality test and impulse response analysis in VECM and VAR models; It was concluded that the credit channel was not effective. In the study of Aklan and Nargeleçekenler (2008), the effectiveness of the credit channel was investigated by using the data of 51 banks operating in Turkey for the period 1998-2001, through the management of Panel GMM; As a result of the analysis, they concluded that the credit channel was partially functioning.In the study of Cengiz and Duman (2008), the effectiveness of the credit channel was examined through impulse response analysis for the period 1990-2006; As a result of the analysis, it was concluded that the credit channel is effective. In the study of Erdoğan and Beşballı (2009), the effectiveness of the credit channel for the 1996-2006 period was examined through impulse response analysis, and as a result of the analysis, it was concluded that the credit channel worked partially or, in other words, did not work effectively enough. In the study of Peker and Canbazoğlu (2011), the effectiveness of the credit channel was examined through Granger causality test and impulse response analysis for the period 1990-2008, and as a result of the analysis, it was concluded that the credit channel was effective. Çakır (2012) examined the effectiveness of the credit channel for the 2005-2011 period through impulse response analysis and variance decomposition applications, and as a result of the analysis findings, it was concluded that the credit channel was not effective. Taş et al. (2012) examined the effectiveness of the credit channel for the period 1990-2010 through the Johansen-Jesulius cointegration test and impulse response analysis, and it was concluded that the credit channel worked partially or, in other words, was not effective enough. In the study of Yiğitbaş (2013), the effectiveness of the credit channel was examined through impulse response analysis and Granger causality test for the period 1990-2012, and based on the analysis results, it was concluded that the credit channel is effective. Belke and Kaya (2017) examined the effectiveness of the credit channel through impulse response analysis, variance decomposition and Granger causality test for the period 2003-2016, and concluded that the credit channel is effective. Mirasedoğlu (2017) examined the effectiveness of the credit channel through impulse response analysis for the 2006-2017 period, and as a result of the analysis results, it was concluded that the credit channel was partially effective. Günbegı and Karahan (2021) examined the effectiveness of the credit channel through impulse response and variance decomposition applications for the period 2005-2019; Based on the analysis results, it was concluded that the credit channel is effective.

4. Data, Methods and Findings

In this section, the effectiveness of the credit channel in Turkey for the 2013-2022 period; It will be examined through Mishkin's (1996:9) description of the functioning of the credit channel. The schematic representation of Mishkin's (1996:9) description of the operation is as follows.

Money supply ↑ → Credit volume ↑ → Investments ↑

Data to be used in the analysis of this operation; M1 money supply representing money supply (in thousand TL), commercial banking sector total loan volume (in thousand TL) representing credit volume, and industrial production index (2015=100) representing investments. Natural logarithms (LN) of the raw data were taken to bring the data to the same level. The data, notations and sources of the data are seen in Table 1.

Table 1: Information About the Data

Data	**Notation**	**Data Source**
Money Supply	LNMSO	CBRT EDDS (Central Bank of the Republic of Turkey, Electronic Data Delivery System) https://evds2.tcmb.gov.tr/
Credit Volume	LNTK	Banking Regulation and Supervision Agency, Montly Banking Sector Data, https://www.bddk.org.tr/BultenAylik/en
Investments	LNSUE	CBRT EDDS (Central Bank of the Republic of Turkey, Electronic Data Delivery System) https://evds2.tcmb.gov.tr/

The effectiveness of the credit channel; It will be examined through the Impulse Response Analysis method within the framework of the Vector Autoregressive (VAR) model. This technique was preferred because it allows it to be seen how the other variable or variables are affected in the current and future periods by a shock occurring in a variable within the scope of analysis (Barışık and Kesikoğlu 2006:69). Before establishing the VAR model, it is necessary to test whether the variables are stationary or not. ADF unit root test was applied to test the stationarity of the variables. Test results are seen in table 2.

Table 2: ADF Unit Root Test Results

Variables	ADF Intercept Only		ADF Intercept and Trend	
	t-Stat	prob	t-Stat	prob
LNMSO	2.141030	0.9999	-0.325736	0.9870
LNTK	1.695702	0.9995	0.346590	0.9982
LNSUE	0.143525	0.9648	-5.570322	0.0003
ΔLNMSO	-5.124993	0.0001	-5.896981	0.0001
ΔLNTK	-5.128504	0.0001	-5.585493	0.0003
ΔLNSUE	-8.648190	0.0000	-8.570757	0.0000

The null hypothesis of the ADF unit root test is "H0 = series has a unit root". Because of the probablity values exceeding 10% (except the intercept an trend option for LNSUE), for each variables the null hypothesis can be rejected and it means that the variables to be used in the analysis were not stationary at their level values. Since the variables are not stationary at their level values, their first differences were taken and the ADF unit root test was repeated, and it was concluded that the variables were stationary at their first differences.The functioning of the bank credit channel to be tested is modeled as follows in the context of the VAR approach.

$$LNMSO_t = E_{t-1}[LNMSO_t] + \varepsilon_t^{LNMSO} \quad (14)$$

$$LNTK_t = E_{t-1}[LNTK_t] + \partial_1 \varepsilon_t^{LNMSO} + \varepsilon_t^{LNTK} \quad (15)$$

$$LNSUE_t = E_{t-1}[LNSUE_t] + \sigma_1 \varepsilon_t^{LNMSO} + \sigma_2 \varepsilon_t^{LNTK} + \sigma_3 \varepsilon_t^{LNSUE} \quad (16)$$

Before performing analysis within the framework of the VAR approach, the optimal lag length suitable for the model must be determined. The optimal delay lengths recommended by the information criteria are shown in Table 3.

Table 3: Optimal Delay Lengths Recommended by Information Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	150.7027	NA	5.48e-08	-8.205708	-8.073748*	-8.159650*
1	161.2947	18.83015*	5.03e-08	-8.294150	-7.766310	-8.109920
2	171.5561	16.53233	4.75e-08	-8.364230	-7.440511	-8.041827
3	182.8964	16.38032	4.30e-08*	-8.494242*	-7.174643	-8.033667

Yıldız and Yıldırım (2018: 283) stated that the most preferred information criteria in terms of determining the optimal lag length in the literature are AIC, SC and HQ. Additionally, Yıldız and Yıldırım (2018: 285) stated in

their study that if a small sample is studied, choosing the optimum delay recommended by the AIC information criterion would be compatible with the literature. Within the framework of this information, 3 lag lengths recommended by the AIC information criterion were preferred in determining the lag length of the model.

In order to determine whether the established VAR model is dynamically stable or not, it was examined whether the inverse roots of the AR characteristic polynomial were located within the unit circle.

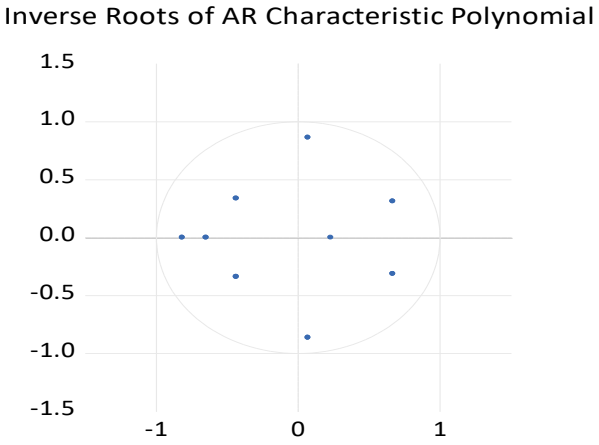

Figure 2: Inverse Roots of AR Characteristic Polynomial

Figure 2 shows that the reverse roots remain within the unit circle. Based on Figure 2, it has been concluded that the established VAR model is dynamically stable.

Whether there was an autocorrelation problem at the selected lag length was examined using the LM autocorrelation test. LM autocorrelation test results are seen in table 4.

Table 4: LM Autocorrelation Test Results

Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	4.072131	9	0.9066	0.439685	(9, 51.3)	0.9070
2	9.978882	9	0.3522	1.138482	(9, 51.3)	0.3539
3	5.172925	9	0.8190	0.564265	(9, 51.3)	0.8197

Null hypothesis of LM autocorrelation test; It can be expressed as "H0 = there is no autocorrelation problem at the selected lag length". For lag 3, because of the probability value of the test exceeding 10%, the null hypothesis cannot be rejected. Therefore, it was concluded that there was no autocorrelation problem with the selected lag length. One final action that needs to be done within the framework of the VAR approach; It is to check whether the variance of the error terms in the established VAR model changes from one observation to another, in other words, whether there is a heteroscedasticity problem in the model. The heteroscedasticity problem was checked with the White heteroskedasticity test. The test result is seen in table 5.

Table 5: White Heteroscedasticity Test Result

Chi-sq	df	Prob.
116.5695	108	0.2698

Null hypothesis of White test; It can be expressed as "H0 = there is no heteroscedasticity problem in the model". Result of the test show that the probablity value exceed 10%, and it means the null hypothesis cannot be rejected. Therefore, it can be concluded that there is no heteroscedasticity problem in the model. Following the conclusion that there was no problem in the VAR model, the effectiveness of the credit channel was examined using the impulse response analysis technique. Graphs regarding the impulse response analysis are seen in Figure 3.

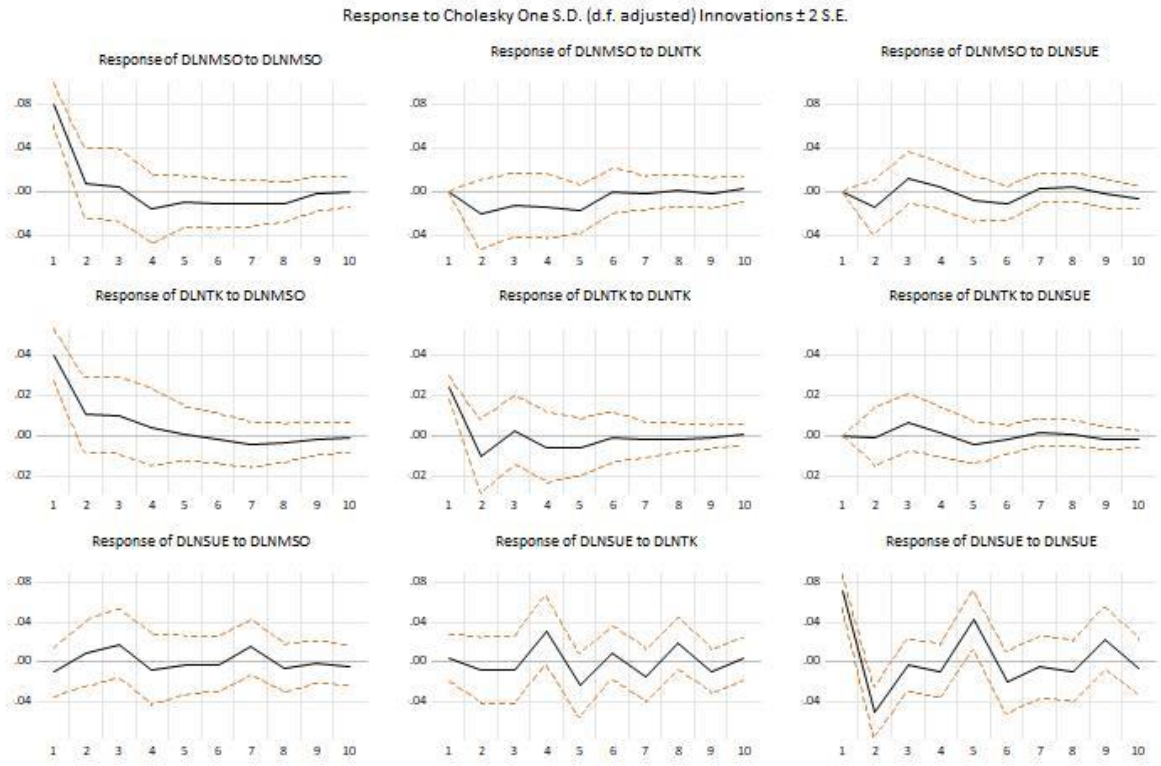

Figure 3: Graphs of Impulse Response Functions

By means of action-response graphs and based on Mishkin's (1996: 9) description of the functioning of the credit channel, whether the credit channel was effective in Turkey for the examined period, "DLNTK's reaction to DLNMSO" in the second row and first column of figure 3 and It can be decided as a result of the graphs "DLNSUE's response to DLNTK" in the third row and second column.

It is known that in order for the effect of a shock occurring in one variable on another variable to be statistically significant, both confidence intervals (dashed red lines in action-response graphs) must be either above or below the zero band (Albayrak 2013:72). Only the evaluations made within the framework of this information are consistent. In the "Response of DLNTK to DLNMSO" graph, it is seen that the credit volume responded positively and statistically significantly to a shock in the money supply for two periods. On the other hand, the "Reaction of DLNSUE to DLNTK" graph shows that a shock in credit volume does not have a statistically significant effect on investments. As a result of the impact response analysis, it was concluded that the increases in the total credit volume through expansionary monetary policies did not affect investments. Based on this result, it can be stated that the credit channel was not effective in Turkey in the 2013q1-2022Q4 period.

5. Conclusion

Monetary policy practices; It affects economic activity through various transmission channels. However, knowing which of these various transmission channels is effective or not is important in terms of correctly evaluating the possible effects of the planned change on the real economy while preparing policies and preparing the policy within this scope. Evaluating possible impacts as accurately as possible requires the existence of a comprehensive and up-to-date literature on the subject. In this study, in order to contribute to the literature, the effectiveness of the credit channel, one of the monetary transmission channels, was examined through impulse response analysis for the 2013q1-2022q4 period in the Turkish sample; Based on the analysis results, it was concluded that the credit channel was not effective for the period examined. Based on this finding; It can be inferred that the change in monetary policy should not be designed through the credit channel, and if it is designed through the credit channel, the effectiveness of the policy change will not be achieved.

References

Aklan, Nejla, ve Mehmet Nargeleçekenler. 2008. "Para Politikalarının Banka Kredi Kanalı Üzerindeki Etkileri". *İstanbul Üniversitesi Siyasal Bilgiler Fakültesi Dergisi* (39):109-32.

Albayrak, Nilcan. 2013. "İŞSİZLİK VE BÜYÜME İLİŞKİSİ: 2000-2012 TÜRKİYE ÖRNEĞİ". Yayımlanmamış Yüksek Lisans Tezi, Karadeniz Teknik Üniversitesi Sosyal Bilimler Enstitüsü, Trabzon.

Barışık, Salih, ve Ferdi Kesikoğlu. 2006. "TÜRKİYE'DE BÜTÇE AÇIKLARININ TEMEL MAKROEKONOMİK DEĞİŞKENLER ÜZERİNE ETKİSİ (1987-2003 VAR, ETKİ-TEPKİ ANALİZİ, VARYANS AYRIŞTIRMASI)". *Ankara Üniversitesi SBF Dergisi* 61(4):59-82.

Belke, Murat, ve Harun Kaya. 2017. "TÜRKİYE'DE PARA POLİTİKALARININ KREDİ KANALI AKTARIMI: VAR YAKLAŞIMI". *Finans Ekonomi ve Sosyal Araştırmalar Dergisi* 2(3):185-208. doi: 10.29106/fesa.346346.

Bernanke, Ben S., ve Alan S. Blinder. 1988. "Credit, Money, and Aggregate Demand". *The American Economic Review* 78(2):435-439.

Cengiz, Vedat, ve Mehmet Duman. 2008. "TÜRKİYE'DE BANKA KREDİ KANALININ ÖNEMİ ÜZERİNE ETKİ TEPKİ FONKSİYONLARINA DAYALI BİR DEĞERLENDİRME (1990-2006)". *Hacettepe Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi* 26(2):81-104.

Çakır, Zeynep. 2012. "TÜRKİYE'DE KREDİ KANALIYLA PARASAL AKTARIM MEKANİZMASININ İŞLEYİŞİ". Yayımlanmamış Yüksek Lisans Tezi, Bilecik Üniversitesi Sosyal Bilimler Enstitüsü, Bilecik.

Erdoğan, Seyfettin. 2011. *PARA POLİTİKASI AKTARIM KANALLARI*. Kocaeli: Umuttepe Yayınları.

Erdoğan, Seyfettin, ve Sinem Gözde Beşballı. 2009. "TÜRKİYE'DE BANKA KREDİLERİ KANALININ İŞLEYİŞİ ÜZERİNE AMPİRİK BİR ANALİZ". *Doğuş Üniversitesi Dergisi* 11(1):28-41.

Günbegi, Fehime, ve Özcan Karahan. 2021. "Türkiye'de Banka Kredi Kanalının Etkinliği". *JOEEP: Journal of Emerging Economies and Policy* 6(2):162-69.

İnan, Emre Alpan. 2001. Parasal Aktarım Mekanizmasının Kredi Kanalı ve Türkiye. *Bankacılar* (39) https://www.tbb.org.tr/Dosyalar/Arastirma_ve_Raporlar/parasal.doc (Erişim tarihi: 26.06.2023).

Kasapoğlu, Özgür. 2007. "PARASAL AKTARIM MEKANİZMALARI: TÜRKİYE İÇİN UYGULAMA". Uzmanlık Yeterlilik Tezi, TCMB Piyasalar Genel Müdürlüğü, Ankara.

Mirasedoğlu, Mustafa Uğur. 2017. "Türkiye'de Enflasyon Hedeflemesi Döneminde Banka Kredi Kanalının Etkinliğine İlişkin Bir Analiz". *Iğdır Üniversitesi Sosyal Bilimler Dergisi* (13):518-44.

Mishkin, Frederic S. 1996. "The Channels of Monetary Transmission: Lessons for Monetary Policy".

Ökte, M. Kutluğhan Savaş. 2006. "Banka ödünçleri kanalı: Literatür ve Türkiye örneği (1986- 2000)". *Uludağ Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi* 25(1):19-61.

Örnek, İbrahim. 2009. "Türkiye'de parasal aktarım mekanizması kanallarının işleyişi". *Maliye Dergisi* (156):104-25.

Özçiçek, Ömer. 2006. "Türkiye'de 1980 Sonrası Para Aktarım Mekanizmasında Kredi Kanalının Yeri". *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi* 15(1):257-68.

Peker, Osman, ve Birgül Canbazoğlu. 2011. "Türkiye'de Banka Kredi Kanalının İşleyişi: Ampirik Bir Analiz". *Yönetim ve Ekonomi Dergisi* 18(2):127-43.

Taş, Seyhan, İbrahim Örnek, ve Selen Utlu. 2012. "Banka kredi kanalı ve Türkiye uygulaması". *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi* 21(1):53-74.

Türkiye Cumhuriyet Merkez Bankası [TCMB]. 2013. *PARASAL AKTARIM MEKANİZMASI*. https://www.tcmb.gov.tr/wps/wcm/connect/4e99834e-179b-4a08-820c- f2b259032afd/ParasalAktarim.pdf?MOD=AJPERES (Erişim tarihi: 26.06.2023).

Tüzün, Osman, Üzeyir Aydın, ve Ramazan Ekinci. 2017. "TÜRKİYE'DE BERNANKE- BLINDER MAL KREDİ (CC) YAKLAŞIMININ TVP VAR TEKNİĞİ İLE ANALİZİ". *Hacettepe Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi* 35(4):1-30.

Yıldız, Rıfat, ve Ertuğrul Yıldırım. 2018. *SORU-CEVAP TEKNİĞİYLE TEZ YAZMA, MAKALE HAZIRLAMA VE YAYINLAMA KILAVUZU*. Ankara: Detay Yayıncılık.

Yiğitbaş, Şehnaz Bakır. 2013. "Parasal aktarım mekanizması: Türkiye'de banka kredi kanalı". *Bankacılar* 24(85):71-80.