

TÜRKİYE EKONOMİSİNDE BANKACILIK SEKTÖRÜ TARAFINDAN YARATILAN YURTIÇİ KREDİ HACMİ İLE EKONOMİK BÜYÜME ARASINDAKİ İLİŐKİ: ARDL SINIR TESTİ YAKLAŐIMI¹

THE RELATIONSHIP BETWEEN THE DOMESTIC CREDIT VOLUME CREATED BY THE BANKING SECTOR AND ECONOMIC GROWTH IN THE TURKISH ECONOMY: AN ARDL BOUND TESTING APPROACH

Oya KORKMAZ * Suna KORKMAZ **

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Öz

Bankalar finansal sistemin en önemli unsurlarından biridir. Bankalar ekonomide tasarrufların toplanmasını sađlayarak, fon fazlasını fon ihtiyacı olan ekonomik birimlere aktararak para piyasasının gelişmesinde bulunan kuruluşlardır. Bankalar kredi kanalıyla para arzını genişletmekte ve tasarrufların ekonomide yatırımlara dönüşmesini sağlamaktadır. Ülkedeki yatırımların artması üretim ve istihdamı artıracaktır. Mal ve hizmet üretiminin artması ekonomik büyüme hızının da artmasına neden olacaktır. Banka kredilerinin ekonomik büyüme üzerinde önemli bir rolü olduğundan bu çalışmada Türkiye ekonomisinde mevduat bankaları, kalkınma ve yatırım bankaları ve katılım bankaları tarafından yaratılan toplam yurtiçi kredi hacminin ekonomik büyüme üzerindeki kısa ve uzun dönem etkileri 2008:01-2022:02 dönemine ait üçer aylık veriler alınarak gecikmesi dağıtılmış otoregresif (ARDL) sınır testi yaklaşımı ile analiz edilmiştir. Analiz sonucunda toplam yurtiçi kredi hacmi ile ekonomik büyüme arasında eşbütünlüşme ilişkisi bulunmuştur. Toplam yurtiçi kredi hacmi ile ekonomik büyüme arasında uzun dönemli bir ilişkinin olmadığı ancak kısa dönemde ilişki içerisinde oldukları sonucuna varılmıştır.

Anahtar Kelimeler: Yurt İçi Kredi Hacmi, Ekonomik Büyüme, ARDL Sınır Testi.

Jel Sınıflaması: C22, E51, O47

Abstract

Abstract

Banks are one of the most important elements of the financial system. Banks are organizations that are involved in the development of the money market by ensuring the collection of savings in the economy, transferring surplus funds to economic units that need funds. Banks expand the money supply through the credit channel and ensure that savings are converted into investments in the economy. Increasing investments in the country will contribute to production and employment. The rise in the quantity of goods and services produced will also lead to development in the rate of economic growth. From this point of view, this study analyzes the short and long-run effects of the aggregate domestic credit volume created by deposit banks, development and investment banks, and participation banks on economic growth in the Turkish economy by adopting the autoregressive distributed lag bounds testing (ARDL) approach for quarterly data covering 2008:01-2022:02 periods. As a result of the analysis, a cointegration relationship has been found between the aggregate domestic credit volume and economic growth. It is concluded that there is no long-term relationship between the aggregate domestic credit volume and economic growth, but they are in a relationship in the short term.

Keywords: Domestic Bank Credit Volume, Economic Growth, ARDL Bound Testing.

Jel Classification: C22, E51, O47.

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* Prof. Dr., Tarsus Üniversitesi Uygulamalı Bilimler Fakültesi, oyakorkmaz67@tarsus.edu.tr, Tarsus –Türkiye, ORCID: 0000-0003-4570-803X.

** Prof. Dr., Bandırma Onyedli Eylül Üniversitesi İİBF, skorkmaz@bandirma.edu.tr, Bandırma– Türkiye, ORCID: 0000-0001-6221-2322

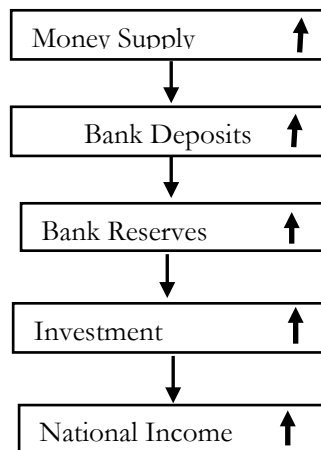
1. Introduction

In general, the market is defined as the place where buyers and sellers come together and transfer goods and services. Money markets, which are among the financial markets, are among the markets where short-term fund supply and demand encounter. Banks are located in the money market. Financial instruments traded in the money market include banknotes, repos, asset-backed securities, certificates of deposit, financing bonds, Eurodollars, and bank credits.

Governments try to influence the real economy with the monetary transmission mechanism by using monetary policy. The main monetary transmission mechanisms include the interest channel, the exchange rate channel, the asset prices channel, and the credit channel. Since it is possible to influence the real economy through the credit channel, it should be ensured that the credit channel operates independently. For the credit channel to work independently, three conditions must be valid. Firstly, bank credits and bonds provided to the public should not be a complete substitute. Secondly, the central bank should be able to influence the supply of credit by changing the number of reserves. Thirdly, price adjustments that eliminate the effect of monetary policy changes should not be possible (Telatar, 2002; p.91). The credit channel is divided into two as bank credits channel and the balance sheet channel. The bank credit channel shows the lending behavior of banks and the link between bank credits and the real economy. The balance sheet channel, on the other hand, gives the relationship between the credits of banks and the investment decision of firms. Through the bank credit channel, banks play a special role in the financial system. Large firms have direct reach to the credit market through the bond markets. However, banks play an important role in providing financing to small companies, especially where asymmetric information problems are evident (Mishkin, 1995; p.7).

In the credit channel, monetary policy causes banks to create effects on the real economy through the supply of credit. Central Banks affect aggregate spending by changing the amount of money. In order to slow down the growth in aggregate demand, the money supply may be reduced, reducing the reserves of the banking system. The contractionary monetary policy rises short-run interest rates. High-interest rates reduce aggregate demand by raising the cost of durable consumer goods (Bernanke, 1993; p.55). Increases in the money supply, on the other hand, raise the volume of deposits deposited in banks and the volume of credits distributed by banks. Increasing credit volume rises aggregate investments in the economy, thus the increasing level of investment increases the amount of production and national income in the economy. The expansionary monetary policy, which raises bank reserves and bank deposits, also rises the number of available bank credits. These credit increases, on the other hand, lead to an expansion of investment expenditures in the economy. The effect of monetary policy on the bank credit channel is given in Figure 1.

Figure 1. Mechanism of the Bank Credit Channel



References: (Mishkin, 1996; s.9).

The effects of monetary policy on the real economy emerge through the bank credit channel. As a result of a contractionary monetary policy implemented, bank reserves and bank deposits decrease. This reduces investments in the economy and causes a decrease in the level of income created. As a result of the implementation of the expansionary monetary policy, bank reserves and bank deposits will increase, and banks will ensure that savings are transformed into investments in the economy through credit channels and will contribute to economic growth.

In this study, the relationship among the aggregate volume of credits created and given to the country by deposit banks, development and investment banks in the Turkish economy, and participation banks, which have decisively occupied an important place in the recent period, and economic growth has been investigated. Islamic financial institutions were first institutionalized in Turkey in 1983 under the name of “Private Financial Institutions”. Later, in 2005, it was included in the Turkish Banking System under the name of “Participation Banking” with the regulation made in the Banking Law. Participation banks have taken an important place in the banking system in recent years in terms of providing alternative investment and financing sources to retail bank customers who do not accept interest (Toraman, Ata and Buęan, 2015; p.762). The existence of banks that express the entire society and the credits they provide significantly affect the real economy.

It is important through which channel the monetary policy to be implemented in an economy will affect the economy. Different channels are used to achieve economic goals. Banks, which are credit channels and one of the most important financial institutions, play an important role in economies that aim for economic growth. In these days when the growth rate of many countries' economies has slowed down; the credit channel has a great effect on the Turkish economy's positive growth rate compared to other countries' economies. For this reason, in this study, the effect of the credit channel on economic growth was investigated. In general, other studies in the literature have taken bank credits given to specific sectors. In this study, the effect of the aggregate credit volume extended domestically by all banks in the economy on economic growth has been examined. This study differs from other studies with this property.

In this study, the short-run and long-run effects of the aggregate domestic credit volume created by deposit banks, development and investment banks, and participation banks in the Turkish economy on economic growth were tested according to the ARDL bounds testing approach by taking quarterly data for the period 2008:01-2022:02. The use of this test in examining the relationship of aggregate credits issued by all types of banks with economic growth distinguishes the study from other studies. In other studies, credits given to a single type of bank and specific sectors are examined with different econometric methods.

2. Literature Review

Diřbudak (2010) has found that bank credits raised gross domestic product growth both in the short and long run until 2002, as a result of the ARDL method he used for the Turkish economy with the annual data of the 1961-2008 period, but after 2002 it has had an adverse effect.

Krishnankutty (2011) has revealed that bank credits do not have much effect on economic growth because of his panel data analysis for the North East Indian economy with annual data for the 1999-2007 period.

Akpansung and Babalola (2011) have found a one-way causality relationship between economic growth to private sector credits as a result of the Granger causality test they conducted for the Nigerian economy with annual data for the 1970-2008 period.

Murty, Sailaja and Demissie (2012) have found that there is a positive and statistically significant equilibrium relationship between bank credits given to the private sector and economic growth, as a result of the analysis they performed for the Ethiopian economy according to the multivariate Johansen Cointegration Method with the data for the period 1971/72-2010/11.

Leitão (2012) has determined that bank credits hurt economic growth as a result of applying the dynamic panel data (GMM-System Estimator) method for the European Union (AP-27) economy using annual data for the period 1990-2010.

Raz (2013) found that there is a bidirectional relationship between economic growth and credit market development because of the causality test for the Indonesian economy with annual data for the 1985-2011 period.

Tinoco-Zermeño, Venegas-Martínez and Torres-Preciado (2014) proved that private sector bank credits have a positive effect on the real gross domestic product as a result of the ARDL method they used for the Mexican economy with annual data for the period 1969-2011.

Timsina (2014) has revealed that bank credits given to the private sector have a positive effect on economic growth in the long run, as a result of the error correction method he used for the Nepalese economy with annual data for the 1975-2013 periods.

Ding (2015) has determined that consumer credit and economic growth are closely related because of his Vector Autoregressive Analysis of the Chinese economy with annual data for the 2001-2012 period.

Korkmaz (2015) has found that domestic credits affect economic growth as a result of his panel data analysis for 10 European countries with the data for the period of 2006-2012.

Tahir et al. (2015) have proved that bank credits hurt economic growth as a result of their regression analysis of the Pakistani economy with annual data for the 1973-2013 period.

Thierry et al. (2016) found a one-way causality relationship from bank credits to the private sector to gross domestic product per capita as a result of the Vector Error Correction Method (VECM) they used for the Cameroon economy with annual data for the period 1969-2013.

Mohanty, Kumar and Patra (2016) have found a bidirectional causality relationship between aggregate bank credits and economic growth as a result of the panel causality test they conducted for the Indian economy with the annual data of 2001-2014.

Ananzeh (2016) has determined a causality relationship between economic growth to bank credits given to agriculture and construction sectors as a result of the Granger causality test conducted for the Jordanian economy with annual data for the 1993-2014 period. In addition, he has found a bidirectional causality relationship between economic development and bank credits given to the construction sector.

Sipahutar et al. (2016) have revealed a bidirectional causality relationship between bank credits and economic growth as a result of the VAR model they made for the Indonesian economy with annual data for the 1990-2014 period.

Korkmaz (2016) has found a one-way causality relationship between economic growth to banking sector credit volume as a result of the Granger Causality Test conducted for the Turkish Economy with quarterly data for the period 2006:Q1-2015:Q3.

Alkhazaleh (2017) has found a positive relationship between deposit bank credits and economic growth as a result of the OLS method he used for the Jordanian Economy with data covering the six years from 2010 to 2015.

Orimogunje (2019) has proved that domestic credit and net domestic credit have a statistically significant relationship with the gross domestic product because of the Granger Causality Test conducted for the Nigerian Economy with the data for the 1996-2014 period.

Joseph (2020) has not found any relationship between bank credits and economic growth as a result of his analysis according to the causality and Vector Error Correction Method for the Tanzanian Economy with annual data for the 1993-2017 periods. In the long run, bank credits have a significant positive effect on economic growth.

Pham and Nguyen (2020) have concluded that credit expansion hurts economic growth in the long run and there is a bidirectional causality relationship between domestic credits and economic growth as a result of the ARDL Method for Vietnam Economy using quarterly data for the period 2004:Q1-2017:Q4.

Grbić and Luković (2020) have determined a one-way causality relationship between banks' credit activities to economic growth as a result of the Toda-Yamamoto Causality Test they conducted for the Serbian Economy with quarterly data for the 2003:Q1-2019:Q4 period.

Camba and Camba (2020) have proved that there is a long-term relationship between domestic credit and gross domestic product growth as a result of the ARDL Test they have conducted for the Philippines with annual data for the 1995-2018 periods.

Bui (2020) has found that the increase in domestic credits stimulated the economy as a result of the GMM Method he has used for ASEAN Countries with the data for the period of 2004-2017. However, the fact that domestic credits exceed the optimal threshold hurts economic growth.

Çevik et al. (2022) Threshold VAR-TVAR models were used to determine the relationship between the variables with monthly data between January 1998 and July 2020. In their study, credit volume is used as an indicator of financial development, and industrial production index is used for economic growth. The empirical results show that there is bidirectional Granger causality between private bank credit and industrial production during periods of low financial stress. However, they find only unidirectional causality from industrial production to private bank credit during high financial stress periods.

Unlike the studies we mentioned in the literature review, in this study, the aggregate bank credits given to the country by the all banking sector have been taken into evaluation. In some of the previous studies, the relationship between bank credits given to some specific sectors and economic growth has been examined. In addition, the relationship from economic growth to bank credits were found. This study is similar to previous studies in terms of the method used. There are studies using the ARDL method. In addition, it has been determined by previous studies that there is a relationship between bank credits and economic growth.

3. Data and Methodology

In this study, the economic growth relationship between the aggregate domestic credit volumes created by the banking sector in the Turkish economy will be tested by taking quarterly data for the period 2008:01-2022:02 according to the ARDL Bounds Testing Approach. Since the value of the aggregate domestic credit volume created by deposit banks, development and investment banks, and participation banks is high, the logarithm of this series has been taken into consideration. The aggregate domestic credit volume data (DC) created by the banking sector is taken from the Central Bank of the Turkish Republic Electronic Data Distribution System. As economic growth, the chained volume is taken by the Gross Domestic Product (GDP) Expenditure Method. Since the economic growth value is very large, the logarithm of this series has been taken. Since the economic growth is quarterly data and includes seasonality, it has been seasonally adjusted according to the Census X-12 method. Economic growth data is taken from the Central Bank of the Turkish Republic Electronic Data Distribution System. In the empirical analysis, first of all, ADF (Augmented Dickey-Fuller) and PP (Phillips Perron) unit root tests have been analyzed to test the stationarity conditions of the series. After the unit root test, the cointegration relationship between aggregate domestic credit volume and economic growth was tested according to the Boundary Test Approach developed by Pesaran, Shin and Smith (2001). Short and long-run (term) static relationships will be tested using ARDL Model, after determining the cointegration relationship between aggregate domestic credit volume and economic growth.

3.1. Unit Root Tests

Before proceeding to our analysis, stationarity tests of aggregate domestic credit volume and economic growth series were performed according to ADF and PP tests, and the results of the unit root test are given in Table 1.

Table 1. ADF and PP Test Results

Variables	ADF				PP			
	Trend-Intercept t-statistic	Trend-Intercept p-value	Intercept t-statistic	Intercept p-value	Trend-Intercept t-statistic	Trend-Intercept p-value	Intercept t-statistic	Intercept p-value
LDC (Level)	-1.761	0.710	0.661	0.990	-1.695	0.741	0.461	0.983
LDC (1 st Difference)	-5.041	0.000*	-5.016	0.000*	-5.099	0.000*	-5.077	0.000*
LGDP_SA (Level)	-4.054	0.012*	-0.015	0.952	-4.263	0.006*	0.176	0.968

*, **, *** signs indicate that the variables are significant at the 1%, 5%, and 10% significance levels, respectively. If the p-value is found to be higher than the significance level in the ADF and PP test results, there is a unit root; otherwise, there is no unit root decision. Critical values have been taken from MacKinnon (1996).

According to the results of the ADF and PP unit root tests, it is seen that the aggregate domestic credit volume series is not stationary at the level, but when the first difference is taken, it becomes stationary at the I (1) level. The economic growth series is stationary at the 5% level of significance in the trend-intercept condition according to the results of the ADF and to be stationary at the 1% level of significance in the PP unit root tests. While the aggregate domestic credit volume series is stationary at I (1), the economic growth series is stationary at I (0). In this case, the ARDL test can be performed.

3.2. Cointegration Analysis

As a result of the ADF and PP unit root analyses in Table 1, the GDP series is stationary at the level value and the DC series is stationary when the first difference is taken. In this case, the cointegration relationship between the series cannot be made according to the Engle-Granger or Johansen Cointegration Method. Because in these methods, the series must be integrated to the same degree. According to the ARDL Bounds Test Approach developed by Pesaran, Shin and Smith (2001), the cointegration relationship between the series with different degrees of stationarity can be tested.

In the ARDL Bounds Testing Approach, an unconstrained error correction model has been first created to determine the cointegration relationship between the series. This model is shown in equation 1 below.

$$\Delta DC = \beta_0 + \sum_{i=1}^m \beta_{1i} \Delta DC_{t-i} + \sum_{i=0}^m \beta_{2i} \Delta GDP_SA_{t-i} + \beta_3 DC_{t-1} + \beta_4 GDP_SA_{t-1} + \varepsilon_t(1) \quad (1)$$

In Equation 1, m is the optimum lag length, Δ is the difference operator, and ε is the error term. F test has been used to test the null hypothesis $H_0: \beta_1DC = \beta_2DC = 0$ and the alternative hypothesis $H_1= \beta_1DC \neq \beta_2DC \neq 0$ stating that there is no cointegration among the variables in Equation 1 and that there is cointegration between the variables. If the calculated F statistic exceeds the upper limit, the null hypothesis stating that there is no cointegration between the variables is rejected. If the calculated F value falls between the upper and lower limit values, it is not possible to reach a definite decision about whether the variables are cointegrated or not. The results of the upper limit $I(1)$ and lower limit $I(0)$ test values in the F test obtained as a result of the analysis are given in Table 2.

Table 2. Cointegration Test Results

k	F- Statistics Value	99% Level		95% Level	
		I(0)	I(1)	I(0)	I(1)
1	12.83	7.435	8.46	5.125	6.045

* k represents the number of independent variables. Critical values are taken from Pesaran, Shin and Smith (2001) Table CI(iii).

It is seen that the F statistical value calculated according to the results in Table 2 is higher than the upper limit values given in the table at 1% and 5% significance levels. Therefore, the H_0 hypothesis, which states that there is no cointegration between the series, has been rejected. The alternative hypothesis stating that there is cointegration between the series was accepted. There is a cointegration between aggregate domestic credit volume and economic growth. After the cointegration relationship, the long-term relationship between the series was investigated.

3.3. Long-run Relation

The long-term relationship is analyzed within the scope of the model given below.

$$DC_t = \alpha_0 + \sum_{i=1}^m \alpha_{1i}DC_{t-i} + \sum_{i=0}^n \alpha_{2i}GDP_SA_{t-i} + \varepsilon_t \quad (2)$$

The long-term coefficients and diagnostic tests obtained as a result of the analysis of the ARDL (1,0) model are given in Table 3.

Table 3. Long-run Test Results

Dependent Variable: DC_t			
Variable	Long-run Coefficient	t-statistics	Probability Value
GDP_SA _t	0.019	0.821	0.415
Diagnostic Tests			
R ²	0.116		
F-statistics	3.478 (0.038)		
χ_{BGO}^2	1.858 (0.394)		
$\chi_{WhiteDV}^2$	1.883 (0.390)		
$\chi_{RamseyReset}^2$	0.412 (0.523)		

* $\chi_{BGO}^2, \chi_{WhiteDV}^2, \chi_{RamseyReset}^2$ sequentially, shows Breusch Godfrey Autocorrelation, White Test, and Ramsey Reset Test model building error statistics.

According to the long-term test results in Table 3, the variable of economic growth has been statistically insignificant at the 5% significance level. Economic growth does not affect domestic credit volume in the long run. In addition, as a result of the diagnostic test results, it shows that there is no error in the model establishment; there are no autocorrelation and changing variance problems.

3.4. Short-run Relation

After determining that there is no long-term relationship between the aggregate domestic credit volume and economic growth, the short-term relationship is formed within the framework of the following model by creating an error correction.

$$\Delta DC_t = \beta_0 + \sum_{i=1}^m \beta_{1i}\Delta DC_{t-i} + \sum_{i=0}^n \beta_{2i}\Delta GDP_SA_{t-i} + \psi ECM_{t-1} + \vartheta_t \quad (3)$$

The short-run coefficients of the ARDL (1.0) model are given in Table 4.

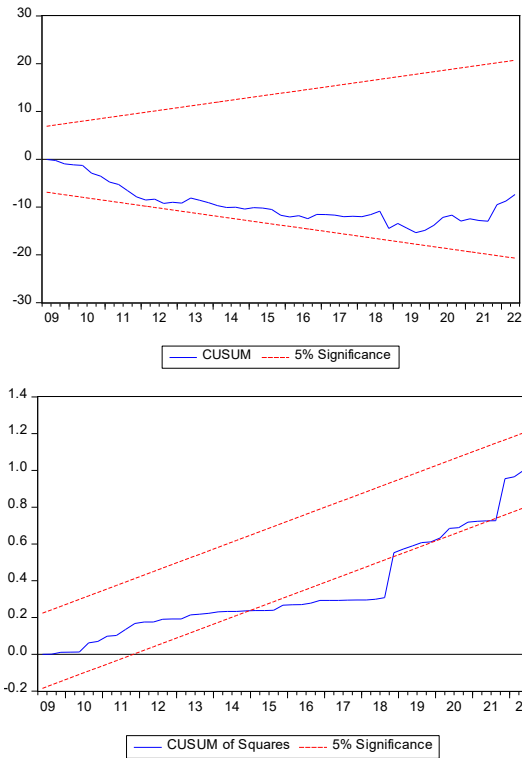
Table 4. Short-run Test Results

Dependent Variable: ΔDC_t			
Variable	Short-Run Coefficient	t-statistics	Probability Value
Constant	-0.347	-5.087	0.000
ECM_{t-1}	-0.672	-5.115	0.000

According to the results in Table 4, the sign of the ECM term is negative and statistically significant at 1% significance level. A long-term deviation among the variables converges again at the rate of 67 percent in the next period. The error correction term (-0.67) of the model is negative and less than 1. The short-term deviations between the series disappear and the series converges to the long-term equilibrium value again. In the short run, the series is in a relationship.

After the descriptive tests, the CUSUM and CUSUM OF SQUARES graphs of the ARDL (1,0) model have been examined. Graphics are given in Figure 2.

Figure 2. CUSUM and CUSUMQ Graphs



Looking at the graphics, the CUSUM graph is within critical limits. However, the CUSUM OF SQUARES graph remained outside the critical limits in the 2017:04-2018:03 period and 2021:03 periods. To correct this situation, the model has been reconstructed by adding a dummy variable for the periods outside the critical limits of the model. The results of the reconstructed model with the added dummy variable are given in Table 5.

Table 5. F Statistics and Critical Values of the Adjusted ARDL (1,0,0) Model

k	F-Statistical Value	99% Level		95% Level	
		I(0)	I(1)	I(0)	I(1)
1	8.399	5.707	6.977	3.987	5.09

According to the results in Table 5, the F-statistics value was found to be higher than the critical values at the 1% significance level. According to these results, there is a cointegration relationship between aggregate domestic credit volume and economic growth.

After the cointegration relationship, the long-term relationship between the series was investigated. The long-term coefficients and diagnostic tests obtained as a result of the analysis of the ARDL (1,0,0) model are given in Table 6.

Table 6. Long-run Test Results

Dependent Variable: DC_t			
Variable	Long-run Coefficient	t-statistics	Probability Value
GDP_SA _t	0.019	0.783	0.437
Dummy	-0.001	-0.043	0.965
Diagnostic Tests			
R ²	0.116		
F-statistics	2.275 (0.090)		
χ^2_{BGO}	1.848 (0.396)		
$\chi^2_{WhiteDV}$	3.443 (0.328)		
$\chi^2_{RamseyReset}$	0.399 (0.530)		

* χ^2_{BGO} , $\chi^2_{WhiteDV}$, $\chi^2_{RamseyReset}$ sequentially, shows Breusch Godfrey Autocorrelation, White Test, and Ramsey Reset Test model building error statistics.

According to the long-term test results seen in Table 6, the variable of economic growth has been statistically insignificant at the 5% significance level. Economic growth does not affect domestic credit volume in the long run. In addition, because of the diagnostic test results, it shows that there is no error in the model establishment; there are no autocorrelation and changing variance problems.

The short-run test results obtained according to the ARDL (1,0,0) model are given in Table 7.

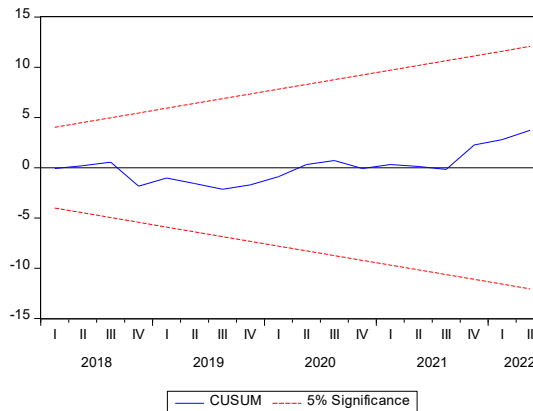
Table 7. Short-run Test Results

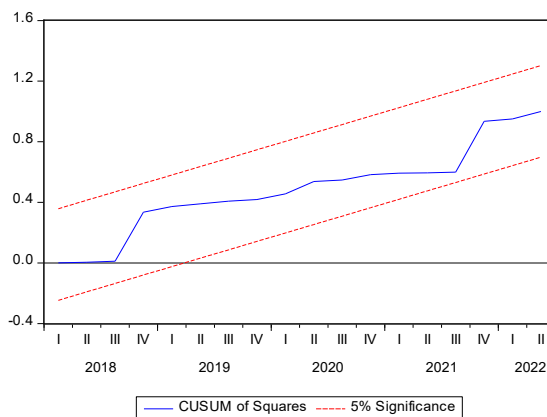
Dependent Variable: ΔDC_t			
Variable	Short-run Coefficient	t-statistics	Probability Value
Constant	-0.353	-5.088	0.000
ECM _{t-1}	-0.673	-5.115	0.000

According to the results in Table 7, the sign of the error correction term was found to be negative, less than 1, and statistically significant at 1% significance level. The results obtained in Table 7 show that the short-term deviations approach the equilibrium again in the long term.

CUSUM and CUSUM OF SQUARES graphs of the ARDL (1,0,0) model are given in Figure 3.

Figure 3. CUSUM and CUSUMQ Graphs





It is seen that both the CUSUM and CUSUM OF SQUARES graphs in Figure 3 are within critical limits. CUSUM and CUSUM OF SQUARES graphs have shown that the regression coefficients have been stable.

4. Conclusion

It is possible to effect the real economy with the monetary transmission mechanism. There is a relationship between the monetary transmission mechanism and the real economy. Interest rate channel, asset prices channel and credit channel exists among the monetary transmission mechanisms. The credit channel is divided into two as bank credits channel and balance sheet channel. Which channels will be used and how they will be used also change according to the targets set in the country. If economic growth is aimed in a country, the functioning of the credit channel becomes important. Banks, one of the financial intermediary institutions, have great responsibilities in the functioning of the credit channel.

Among the financial players in the financial system in Turkey are banks, Borsa İstanbul (BIST), the Central Bank of the Republic of Türkiye (CBRT), and other financial institutions. Banks have an important place in the financial system. Banks, which are among the financial intermediaries, play an important role in the functioning and development of the real sector. The banking sector ensures that the funds obtained from savings are directed to real investments. Banks contribute to the increase of investments in the economy by providing available funds for investors at a minimum cost. Increasing investments will lead to the production of more goods and services in the economy. It will also create new employment opportunities. The most important contribution of the banking sector to the economy through financial intermediation is the financing of economic growth. Banks support economic growth by financing consumption and investment in the economy.

It is a fact that in the Turkish economy, banks have an important place in the financial system and the credits given by banks are considered effective for economic growth. Therefore, in this study, it has been analyzed with the ARDL Bounds Testing Approach by considering the short- and long-run effects of the aggregate domestic credit volume created by deposit banks, development and investment banks, and participation banks on economic growth based on quarterly data for the 2008:01-2022:02 period. As a result of the analysis, a cointegration relationship was found between aggregate domestic credit volume and economic growth. It is concluded that there is no long-term relationship between aggregate domestic credit volume and economic growth, but they are in a short-term relationship. It is observed that bank credits have a short-term effect on economic growth. There is a relationship between bank credits and economic growth in the Turkish economy.

The results obtained from the study show similarities with the results of these studies examined by Murty, Sailaja and Demissie (2012), Tinoco-Zermeño, Venegas-Martínez and Torres-Preciado (2014), Timsina (2014), Ding (2015), Korkmaz (2015), Thierry et al. (2016), Alkhazaleh (2017), Orimogunje (2019), Grbić and Luković (2020). Dişbudak (2010), Krishnankutty (2011), Akpansung and Babalola (2011), Leitão (2012), Raz (2013), Tahir et al. (2015), Mohanty, Kumar and Patra (2016), Korkmaz (2016), Joseph (2020), Pham and Nguyen (2020), Camba and Camba (2020) and Bui (2020) take place (are included) among the studies that found different results from these results obtained from the study. The main reason underlying the different results of these studies is that the econometric methods and data set used are different. Apart from these studies, it is suggested that researchers who will work on this topic in the future should use different econometric methods such as asymmetric analysis to obtain more accurate and different results.

As can be seen from the results of the studies carried out, that is, because there is a decoupling between bank credits and economic growth, the government needs to implement an expansionary monetary policy. As a result of the government's implementation of an expansionary monetary policy, interest rates will also decrease. As a

result of the government expanding the money supply, the volume of deposits deposited in banks will increase. When the deposit volume of banks increases, the volume of credits distributed to households and firms will also expand. With the increasing credit volume, households will use more housing, vehicle, and consumer credits. Since the demand for goods and services will increase, production will also expand. The investments of companies in the economy will increase. This, on the other hand, will rise the amount of production and rise the national income.

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