Islamic Banking and Economic Growth in the Dual Banking System

Taner SEKMEN[*]

ABSTRACT

This study aims to determine the effect of Islamic banking on economic growth in Turkey by comparing it with conventional banking. In the study, the quarterly time series covering the period 2005Q4 to 2018Q4 and the Autoregressive Distributed Lag Model (ARDL) developed by Pesaran, Shin and Smith (2001) are used. According to the estimated long-run coefficients from ARDL model, the elasticity of the GDP with respect to the conventional banking credit and Islamic banking credit is equal to 0.106 % and 0.016 %, respectively. The estimates of the model confirm that conventional banks provide more contribution than Islamic banks to economic growth in Turkey. However, Islamic banking has still a very small part of the financial system in Turkey.Therefore, the development and encouragementof more Islamic financial instruments can strengthen relationship between Islamic finance and economic growth while increasing the share of Islamic finance in the financial system.

Keywords: Islamic Banking, Financial Development, Economic Growth, Turkey

JEL Classification: G20, G21, O16

İkili Bankacılık Sisteminde İslami Bankacılık ve Ekonomik Büyüme

ÖZ

Bu çalışma Türkiye'de İslami bankacılığın ekonomik büyüme üzerindeki etkilerini, geleneksel bankacılık ile karşılaştırarak belirlemeyi amaçlamaktadır. Bu çalışmada 2005Q4 ve 2018Q4 arası dönemi kapsayan çeyreklik verilerve Pesaran, Shin ve Smith (2001) tarafından geliştirilen Gecikmesi dağıtılmış Otoregresif Model (ARDL) kullanılmaktadır. ARDL modelinden elde edilen uzun dönem katsayı tahminlerine göre GSYH'nin geleneksel bankacılık kredilerine ve İslami bankacılık kredilerine göre esnekliği sırasıyla %0.106 ve %0.016'ya eşittir. Model tahminleri Türkiye'de geleneksel bankacılığın İslami bankacılığa göre ekonomik büyümeye daha fazla katkıda bulunduğunu onaylamaktadır. Ancak İslami bankacılık Türkiye'de hala finansal sistemin oldukça küçük bir parçasını oluşturmaktadır. Dolayısıyla daha fazla islami finansal aracın geliştirilmesi ve teşvik edilmesi, islami finansın finansal sistem içindeki payını artırırken islami finans ve ekonomik büyüme arasındaki ilişkiyi de güçlendirebilir.

Anahtar Kelimeler: İslami Bankacılık, Finansal Gelişme, Ekonomik Büyüme, Türkiye

JEL Sınıflandırması: G20, G21, O16

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[*] Dr. Öğr. Üyesi, Eskişehir Osmangazi Üniversitesi, İktisadi ve İdari Bilimler Fakültesi, İktisat Bölümü, tsekmen@ogu.edu.tr, ORCID: 0000-0002-0363-3765.

1. INTRODUCTION

The relationship between financial development and economic growth has been well presented theoretically in many studies(see Schumpeter (1912), Gurley and Shaw (1955), McKinnon (1973), Shaw (1973)). Theoretically, the development of the financial system or the banking sector will lead to the mobilization of funds and will ensure the efficient allocation of capital. These theoretical arguments have been largely empirically supported (King and Levine, 1993; Levine, 1997; Rajan and Zingales, 1998). On the other hand, Robinson (1952) argues that the relationship between financial development and economic growth can be from economic growth to financial development, while Patrick (1966) claims it is a reciprocal relation. While economic growth in less developed countries is driven by financial development, in developed countries, economic growth can foster financial development. Lucas (1988) emphasizes that financial development does not have an important role in the economic growth process.

The relationship between financial development and economic growth is mostly supported empirically, but the contribution of Islamic finance practices to economic growth is a matter of curiosity. Islamic finance practices can enable people who do not want to use interest-related financial instruments, especially in countries with a large Muslim population, to transfer funds to the financial system. Islamic finance development and increases in financial instrument diversity may increase financial deepening and positively affect economic growth. In addition, it can be expected that the increases in financial deepening may have indirect positive effects on economic growth by contributing to financial stability. On the other hand, in countries with a dual banking system, the Islamic banking system may play a supporting role for conventional banking and prevent a possible slowdown in economic growth, especially when the conventional banking system is unstable or limited to stimulate economic growth.

The share of the asset of Islamic financial institutions in the global financial system has increased significantly in recent years. The global Islamic financial system grew an average of 6% annually between 2012 and 2017. The asset size of Islamic financial institutions globally reached 2.44 trillion dollars at the end of 2017. The Islamic banking systems have the largest share in Islamic financial sector (Islamic Finance Development Report, 2018). Islamic finance development in Turkey is quite similar to the global trend. The share of Islamic finance or participation banking in the banking system has gradually increased in the last two decades. While the share of the assets of Islamic banking in the banking system was around 2% in the early 2000s, this share increased to 6% in 2020 (Banking Regulation and Supervison of Agency, 2020).Although the share of Islamic banking in Turkish banking systemhas tripledin the last 20 years, the potential impact of such a development on macroeconomic variables, especially economic growth, is a key concern.

This study aims to contribute to the current literature by approaching the relationship between financial development and economic growth from an Islamic finance perspective. More specifically, it attempts to answer how the development of Islamic banking contributed to economic growth. In other words, do Islamic banking credits have a larger effect on the economic growth in the dual banking system? Such a comparison can be a guide in determining banking sector based economic growth policies.Different from most prior studies in Turkey, this paper pays attention to the short-run and the long-run influences of Islamic and conventional banking credits on economic growth. It is employed the autoregressive distributed lag (ARDL) approach to test the relationship between the types of banking credits and GDP in Turkey. The findings show that the development of Islamic banking has a positive impact on economic growth. However, the impact of Islamic banking on economic growth is extremely low compared to conventional banking. Findings may help policymakers to evaluate their financial policy options and business strategies to increase the contribution of Islamic finance to real economic activities. The rest of the article is organized as follows: in the second section, the

empirical literature review is summarized. The third section introduces data and econometric methodology. The fourth section presents the results of the model and the final section provides concluding remarks and policy recommendations.

2. LITERATURE REVIEW

It is seen that empirical studies on the relationship between Islamic finance and economic growth have started to flourish in the last decade. The increase in the share of Islamic finance applications in the financial system and the accumulation of data in this area have accelerated empirical research. Although most of the studies in the literature confirm the positive relationship between Islamic finance and economic growth, the literature also has mixed results. In one of the first studies in this field, Furqani and Mulyany (2009) examine the long-run relationship between Islamic banking and economic growth in Malaysia using cointegration and Vector Error Correction models. The authors conclude that there is a long-run positive correlation between Islamic finance and capital accumulation and economic growth in Malaysia. In the long run, both increases in capital formation and economic growth cause Islamic finance, while Islamic finance only causes capital accumulation. Kassim (2016) examines the effect of Islamic finance on economic growth in Malaysia for the period 1998-2013 using the ARDL method. The findings reveal that Islamic deposits do not have an impact on the real economy in the short run, while this effect is positive in the long run. On the other hand, the financing activities of Islamic banks have a positive effect on the real economy both in the short and long run. In another study for Malaysia covering the period of 2007-2014, Khaliq and Thaker (2017) detect a positive relationship between the total deposit, total financing, and total assets in the Islamic banking system and economic growth, while they find a negative relationship between the non-performing loan and economic growth. Abduh and Omar (2012) explore the relationship between Islamic banking development and economic growth both in the short and long run in Indonesia by using the ARDL model. Model findings reveal the existence of positive and significant relationships between Islamic banking development and economic growth both in the short and the long run. Tabash and Shankar (2014) analyze the impact of the development of Islamic finance on economic growth in Qatar for the period of 1990-2008. In the study, a positive relationship is found between the funds provided to the private sector by Islamic banks and economic growth. Moreover, it is emphasized that Islamic banking contributes to the gross fixed capital formation and foreign direct investment inflow. Kalim, Mushtaq and Arshed (2016) evaluate the effects of Islamic financial instruments on economic growth in the short and long run in Pakistan by using the ARDL model for the period of 2006-2013. In the study, a long-run cointegration is determined between Islamic finance investments and economic growth.

In addition to the individual country study, it is seen that recent studies examining the relationship between Islamic finance and economic growth focus on panel data methods. Goaied and Sassi (2011) investigate the relationship between financial development, Islamic banking and economic growth in the Middle East and North Africa (MENA) region. Empirical findings based on panel system GMM estimates reveal an insignificant relationship between financial development and economic growth. The same finding is valid for the relationship between Islamic banking development and economic growth. Yusof and Bahlous (2013) examine the Islamic finance and economic growth relationship in Malaysia, Indonesia and the Gulf Cooperation Council (GCC) countries for the period between 2000-2009. The panel cointegration analysis, variance decomposition and impulse response functions show that Islamic banking positively affects economic growth in all selected countries in the long run. This positive effect also occurs in the short run and, it is greater in Malaysia and Indonesia. Imam and Kpodar (2016) assess the impact of Islamic banking development on economic growth for 52 countries with data covering the period of 1990–2010. When financial development and other

determinants of economic growth are kept constant, it is concluded that Islamic banking has a small positive effect on economic growth. Lebdaoui and Wild (2016) investigate the relationship between the presence of Islamic banking and economic growth in South Asian countries. The findings obtained from panel cointegration and panel regression methods show that there is a long-run relationship between the shares of Islamic banking deposits as well as assets in conventional banking deposits and economic growth, while there is no relationship between these variables in the short run. Tunay (2016) examines the relationship between the total assets of Islamic banks, their funds and deposits they collect, and GDP and gross capital formation in 19 Islamic countries using panel causality methods. The findings obtained from the analysis show that there is no causality from the Islamic banking variables to GDP, but there is causality from the Islamic banking variables to gross fixed capital formation. On the other hand, there is causality from GDP to Islamic bank deposits and funds provided by Islamic banks. Zirek, Çelebi, and Hassan (2016) research the effects of Islamic banking variables on economic growth in 14 Islamic countries by using the Panel VAR method during the period between 1999-2011. The authors conclude that increases in Islamic bank assets, deposits, and loans drive economic growth. Ali and Azmi (2017) analyze the impact of Islamic banking on economic growth and economic volatility for 21 OIC member countries, and they conclude that although the share of Islamic banking is small compared to conventional banking, it positively affects economic growth, but does not affect economic volatility. In addition, the authors emphasize that Islamic banking is not a substitute for conventional banking activities but it is complementary. Boukhatem and Moussa (2018) investigate the effects of Islamic finance on economic growth in 13 countries of the MENA region. According to the results of the panel cointegration and panel regression tests conducted with the data covering the period between 2000-2014, Islamic financial development supports economic growth depending on the institutional structures of the countries. Mensi et al. (2020) explore the nonlinear relationship between Islamic banking development and economic growth with the panel smooth transition models in Islamic countries. The findings reveal a positive and nonlinear relationship between Islamic banking development and economic growth.

Finally, studies investigating the relationship between Islamic finance and economic growth for Turkey has increased in recent years in parallel with international literature. Jobarteh and Ergeç (2017) investigate the relationship between Islamic financial development and economic growth using cointegration and causality tests, and they confirm a unidirectional relationship from Islamic finance development to economic growth in Turkey for both the short and long run. Yüksel ve Canöz (2017) analyze the relationship between Islamic banking loans and economic growth or industrial development through the causality test based on the VAR model with data covering the period from 2005 to 2016 in Turkey. The findings show that there is no significant relationship between loans of Islamic banks and economic growth or industrial development in Turkey. Çakar, Karakaş and Güngör (2018) examine the relationship between the loan volume of different types of banking and economic growth in Turkey for the period 2005-2016. While the results of the cointegration test show that there is a long-run relationship between the loan volume of development and investment banks and economic growth, the results of the causality test show that there is no causality from any of the loan volumes of different types of banking to economic growth. On the other hand, it is concluded that there is a causality relationship from the total loan volume of participation banks and the total loan volume of the banking sector to economic growth. Kandemir, Arifoğlu, and Canbaz (2018) investigate the causality relationship between the sectoral loans of participation banks and economic growth and export for Turkey. Causality tests conducted from 2005 to 2017 with loans provided by participation banks to ten different sectors show that loans to the maritime, food/beverage/tobacco, construction, metal/processed mineral, textile/textile products, wholesale trade/brokerage, tourism, and agriculture/fishing sectors are the cause of at least one of economic growth or exports. While loans to the energy sector are the cause of both variables, there is no

causality relationship between the loans provided to the financial sector and these variables. Koçak (2018) questions the relationship between Islamic finance and economic growth in Turkey for the period 2005-2015. Dynamic least squares, cointegration, and causality tests reveal a unidirectional and positive causality from Islamic finance to economic growth. Atıcı (2018) examines the relationship between Islamic banking and economic growth with a causality test based on the vector error correction model for the period between 2008 and 2018 and determines a one-way causality relationship from Islamic banking variables to economic growth in the long run. The findings confirm the existence of unidirectional causality from Islamic banking variables to economic growth in the long run for Turkey. Bilman (2020) questions the relationship between financial development, Islamic banking, and economic growth in Turkey for the period from 2005 to 2020. In the study using linear and nonlinear causality methods, a causality relationship between Islamic banking and economic growth cannot be determined. On the other hand, nonlinear methods reveal a bidirectional causality relationship between Islamic banking and financial development while they detect only unidirectional causality from financial development to economic growth. Bozkurt, Altıntaş and Yardımcıoğlu (2020) examine the impact of both traditional and participation banking on the economic growth of Turkey. As a result of the analyzes based on the ARDL bound test for the period between 2005 and 2016, a linear relationship emerges between participation banking and economic growth, while a non-linear relationship between conventional banking and economic growth emerges.The majority of the studies conducted Turkey to reveal the relationship betweenIslamic banking and economic growth use the causality tests. Unlike the current literature, this study relies on a cointegration relationship with a more recent data set to reveal both long and short-run relationships.

3. METHODOLOGY AND DATA

In order to investigate the relationship between financial development and economic growth, we use the Autoregressive Distributed Lag Model (ARDL) developed by Pesaran, Shin and Smith (2001). This approach has several advantages compared to other co-integration tests. The ARDL model allows to investigate whether there is a cointegration relationship between variables regardless of whether the whole series is I(0) and I(1) or a mixture of I(0) and I(1), but this test is not available if the series are I(2). The ARDL Bound test is based on the estimation of unrestricted error correction models by the least-squares method and is shown in the following equations:

$$\Delta lnGDP_t = \alpha_0 + \sum_{i=1}^{j} \alpha_{i1} \Delta lnGDP_{t-i} + \sum_{i=0}^{k} \alpha_{2i} \Delta lnCAPITAL_{t-i} + \sum_{i=0}^{l} \alpha_{3i} \Delta lnOPENNESS_{t-i}$$
$$+ \sum_{i=0}^{m} \alpha_{4i} \Delta lnINFLATION_{t-i} + \sum_{i=0}^{n} \alpha_{5i} \Delta lnTBC_{t-i} + \sum_{i=0}^{p} \alpha_{6i} \Delta lnPBC_{t-i}$$
$$+ \beta_0 lnGDP_{t-1} + \beta_1 lnCAPİTAL_{t-1} + \beta_2 lnOPENNESS_{t-1}$$
$$+ \beta_3 lnINFLATION_{t-1} + \beta_4 lnTBC_{t-1} + \beta_5 lnPBC_{t-1} + u_t \qquad (1)$$

where Δ represents the first difference of variables. Afterward, the model is estimated by the OLS method and the existence of a long term relationship is then tested by the F test (Wald test). The null hypothesis, $H_0 = \beta_0 = \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = 0$, indicates that there is no cointegration between variables. The asymptotic distribution of the F-test is described in Pesaran, Shin and Smith (2001). The calculated F statistic value is compared with the lower and upper bound critical values in Pesaran, Shin and Smith (2001) and if the calculated F statistic is greater than the upper critical value, the null hypothesis can be rejected. If it is proved that there

is a long-term relationship between the variables at this stage, then we can estimate the short and long-term models that are shown in Equations 2 and 3, respectively.

$$\Delta lnGDP_t = \varphi_0 + \sum_{i=1}^{r} \varphi_{1i}\Delta lnGDP_{t-i} + \sum_{i=0}^{s} \varphi_{2i}\Delta lnCAPITAL_{t-i} + \sum_{i=0}^{t} \varphi_{3i}\Delta lnOPENNESS_{t-i}$$
$$+ \sum_{i=0}^{u} \varphi_{4i}\Delta lnINFLATION_{t-i} + \sum_{i=0}^{v} \varphi_{5i}\Delta lnTBC_{t-i} + \sum_{i=0}^{y} \varphi_{6i}\Delta lnPBC_{t-i}$$
$$+ \mu ECT_{t-1} + u_t \tag{2}$$

$$lnGDP_t = \varphi_0 + \sum_{i=1}^{r} \varphi_{1i}lnGDP_{t-i} + \sum_{i=0}^{s} \varphi_{2i}lnCAPITAL_{t-i} + \sum_{i=0}^{t} \varphi_{3i}lnOPENNESS_{t-i}$$
$$+ \sum_{i=0}^{u} \varphi_{4i}lnINFLATION_{t-i} + \sum_{i=0}^{v} \varphi_{5i}lnTBC_{t-i} + \sum_{i=0}^{y} \varphi_{6i}lnPBC_{t-i} + u_t \tag{3}$$

where μ is the coefficient of error correction term, ECT_{t-1}, which represents how fast deviations from equilibrium in the short-run come back to long-run equilibrium (Pesaran, Shin and Smith 2001). The coefficient of the error correction term is expected to be negative and significant. We use quarterly time series of six macroeconomic variables over the period 2005Q4 to 2018Q4 in local currency. In addition to the traditional and Islamic financial development indicators, we are controlling some macroeconomic variables such as capital, trade openness, and inflation that may have a significant impact on economic growth. The definitions of variables are reported in Table 1.All data were collected from the electronic data delivery system (EDDS) of the Central Bank of the Republic of Turkey (CBRT). We remove price effects from nominal variables and use the logarithm of all variables in the model. Table 2 shows the descriptive statistics of variables. The probability value of the Jarque–Bera (JB) test indicates that the variables exhibit non-normal distribution except for GDP, Capital, OPENNESS, TBC, and PBC. The standard deviation of coefficients reports that Islamic banking credits fluctuate more than conventional bank credits. In addition, according to the same coefficients, the risk of participation bankloans is slightly higher than the traditional banks.

Table 1: Data Descriptions

Abbreviation	Data Description	Source
GDP	Gross domestic product	EDDS
CAPITAL	Gross fixed capital formation	EDDS
OPENNESS	The ratio of the sum of exports and imports to GDP	EDDS
INFLATION	The percent change in consumer prices index (CPI)	EDDS
TBC	The total loan volume of deposit banks	EDDS
PBC	The total loan volume of participation banks	EDDS

Table 2: Descriptive Statistics

	GDP	CAPITAL	OPENNESS	INFLATION	TBC	PBC
Mean	19.575	18.288	2.859	0.607	20.186	16.470
Median	19.591	18.302	2.869	0.799	20.252	16.196
Maximum	19.957	18.747	3.644	1.889	21.493	18.584
Minimum	19.182	17.636	2.225	-1.859	18.622	14.635
Std. Dev.	0.217	0.281	0.352	0.772	0.850	1.316
Skewness	0.081	-0.213	0.337	-0.794	-0.155	0.332
Kurtosis	1.853	2.062	2.457	3.515	1.736	1.667
Jarque-Bera	2.959	2.344	1.656	6.161	3.739	4.840
	(0.227)	(0.309)	(0.436)	(0.045)	(0.154)	(0.088)

Note: The probability values of the Jarque–Bera test for normality are demonstrated in parentheses.

Table 3: Unit Root Tests

	Levels			
	Constant		Constant & Trend	
	ADF	PP	ADF	PP
GDP	-0.485	-0.509	-2.424	-1.985
CAPITAL	-0.694	-2.086	-3.638**	-4.698***
OPENNESS	1.233	0.151	-1.480	-3.492*
INFLATION	-8.184***	-8.164***	-8.354***	-8.389***
TBC	-1.879	-2.395	-1.498	-1.395
PBC	-0.318	-0.330	-2.006	-2.007
	First Difference			
	Constant		Constant & Trend	
	ADF	PP	ADF	PP
GDP	-3.959***	-6.587***	-3.907**	-6.512***
CAPITAL	-3.399**	-34.470***	-	-
OPENNESS	-12.500***	-8.158***	-12.708***	-8.882***
INFLATION	-	-	-	-
TBC	-4.153***	-4.136***	-4.525***	-4.497***
PBC	-6.954***	-6.953***	-7.051***	-7.066***

Note: The values demonstrate *t* statistics for ADF and PP tests. ***, **, and * indicate statistical significance level at 1%, 5% and 10%, respectively.The test critical values of unit root tests for 1%, 5% and 10% are respectively -3.56, -2.91, -2.59 (constant) and -4.14, -3.50, -3.17 (constant & trend).

We first check the stationary levels of variables. Table 3 presents the unit root test results of variables. The stationarity of the variables is checked by using Augmented Dickey-Fuller (ADF) and Phillips–Perron (PP) unit root tests. The ARDL model does not require the stationary of variables for estimation, but none of the variables should not be I(2). As seen in Table 3, all of the variables become stationary at the level of I (0) or I (1). After determining that any variable is not stationary in I(2), we can perform the ARDL model estimates.

4. EMPIRICAL FINDINGS

Table 4 shows the results of the bound test of the estimated ARDL model. The optimal lag length of the ARDL model is determined by the Akaike Information Criteria (AIC). AIC selects ARDL (1, 4, 0, 0, 0, 2) as the most suitable model. When the diagnostic tests of the model predicted by the OLS method are examined, it is seen that there is no problem as deterministic and stochastic. In other words, according to the statistical results obtained, the functional form of the model is determined correctly and the model does not have autocorrelation as well as heteroscedasticity problem. In addition, the error terms of the model are normally distributed.

Tablo 4: ARDL Model Estimates

Model: ARDL (1, 4, 0, 0, 0, 2)

Panel A: ARDL Bound Test

F-statistic	4.154 k = 5	
Critical Value Bounds		
Asymptotic Critical Values	**I(0) Bound**	**I(1) Bound**
%10	2.26	3.35
%5	2.62	3.79
%1	3.41	4.68
Panel B: Diagnostic Checks		
Tests	**Test Statistics**	**Probability**
Breusch&Godfrey LM	0.014	0.986
White Heteroscedasticity	1.060	0.419
Ramsey Reset	0.458	0.502
JB Normality	0.311	0.855

Note: The optimal lag length is selected by Akaike Information Criteria (AIC).

According to bound test results, the calculated F-statistic value, 4.154, is higher than the upper bound value (3.79) which is presented in Pesaran, Shin and Smith (2001). Therefore, the null hypothesis that there is no cointegration relationship between variables is rejected. After the existence of the cointegration relationship between the variables is determined by the bound test method, we can estimate the long-run coefficients and short-term error correction model which gives short-run elasticity of variables. These results are demonstrated in Table 5. Many of the short-run elasticities are statistically significant. The coefficient of error correction term is – 0.77

and it is negative and significant as expected. Accordingly, it can be said that the duration of re-equilibrium between the variables as a result of the long-term equilibrium deviation will take approximately less than one and a half periods.

Tablo 5: ARDL Model Estimates

Panel A: Error Correction Model			
Variables	**Coefficients**	**Std. Errors**	**t-statistics**
ΔCAPITAL	0.333***	0.039	8.479
ΔCAPITAL$_{t-1}$	0.093*	0.052	1.769
ΔCAPITAL$_{t-2}$	0.007233	0.056	0.128
ΔCAPITAL$_{t-3}$	-0.080**	0.039	-2.066
ΔOPENNESS	0.053***	0.016	3.346
ΔINFLATION	0.005**	0.002	2.627
ΔTBC	0.082***	0.014	5.548
ΔPBC	-0.000667	0.005	-0.131
ΔPBC$_{t-1}$	-0.018***	0.005	-3.421
ECM$_{t-1}$	-0.770***	0.114	-6.718
Panel B: Long-run Coefficients			
Variables	**Coefficients**	**Std. Error**	**t-statistics**
CAPITAL	0.289***	0.032	9.014
OPENNESS	0.069***	0.019	3.619
INFLATION	0.007**	0.003	2.418
TBC	0.106***	0.011	9.679
PBC	0.016***	0.003	4.228
CONSTANT	11.668***	0.429	27.145

Note:***, **, and * indicate statistical significance level at 1%, 5% and 10%, respectively.

The long-run coefficients are all significant, but the coefficient of inflation is positive. The effect of inflation on economic growth can occur in two directions.The relationship between inflation and economic growth has been frequently questioned nonlinearly in recent years and various threshold values have been determined.The findings largely show that high and unstable inflation harms economic growth, but a low and moderate level of inflation positively affects economic growth (Sekmen and Topuz, 2019). Increases in the credit volume of Islamic and conventional banks have a boosting effect on GDP in the long-term. The results show that the %1 increase in Islamic banking credit leads to an increase in GDP by approximately % 0.016. Capital accumulation is the variable that has the greatest impact on economic growth as expected. The 1% increase in capital accumulation increases GDP by about 0.29%. In addition, the second-largest impact on GDP belongs to conventional banking loans. When we compare the impact of conventional banking loans with Islamic banks, the effect of Islamic banks on

economic growth is quite low. This result is quite similar to the findings of Imam and Kpodar (2016) based on panel regression estimates of 52 countries.These findings are also in line with the findings of the study carried out x and y for Turkey.These findings are also in line with the findings of Ergeç (2017), Çakar, Karakaş and Güngör (2018), Kandemir, Arifoğlu, and Canbaz (2018), Koçak (2018), Atıcı (2018), Bozkurt, Altıntaş and Yardımcıoğlu (2020)studies conducted for Turkey.This result is in line with the ratio of participation banks in the banking sector and, it is extremely important in terms of showing the size of the relationship between the financial system and economic activity. The links between the conventional banks and the economic activity are still stronger than participation banks in Turkey. Over the past two decades, more people have been integrated into the financial system and have had a loan-deposit relationship with the banking sector in Turkey. This progress has led to a further tightening of the relationship between financial development and economic growth, and it also has provided that financial development becomes one of the most important drivers of economic growth.

Finally, the results of CUSUM (cumulative sum) and CUSUMSQ (cumulative sum of squares) tests proposed by Brown, Durbin and Evans (1975), which are used to investigate the stability of the predicted ARDL model coefficients and to determine whether there is a structural break for the variables, are presented in Graph 1 and Graph 2. The CUSUM and CUSUMSQ statistics remain within the critical limits (between two lines) at the 5% significance level. Therefore, we accept the null hypothesis which states that the coefficients in the ARDL model are stable.
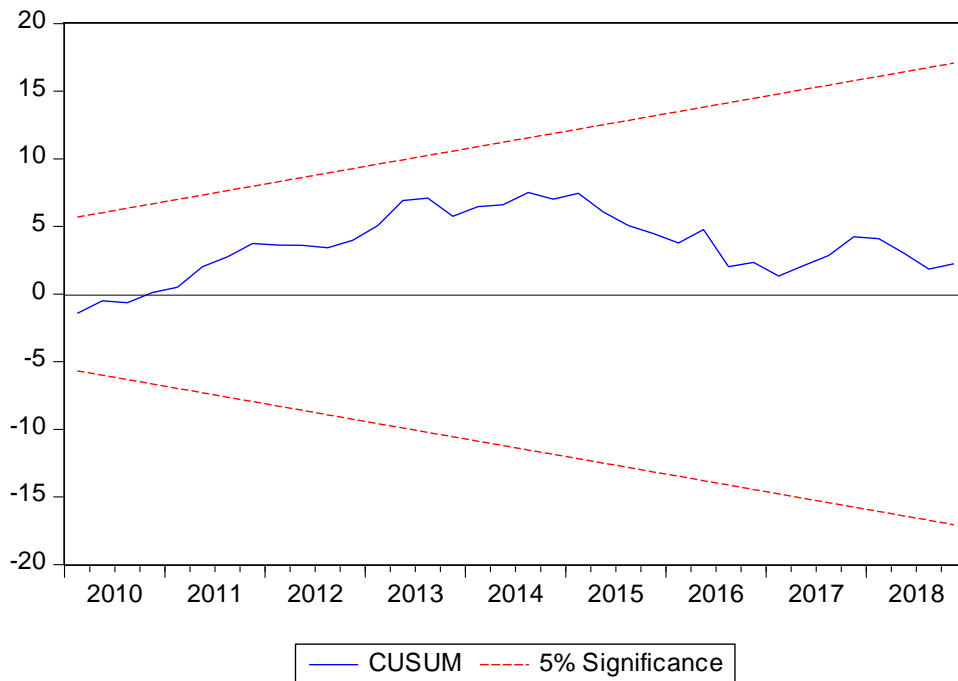
Graph 1: CUSUM Test
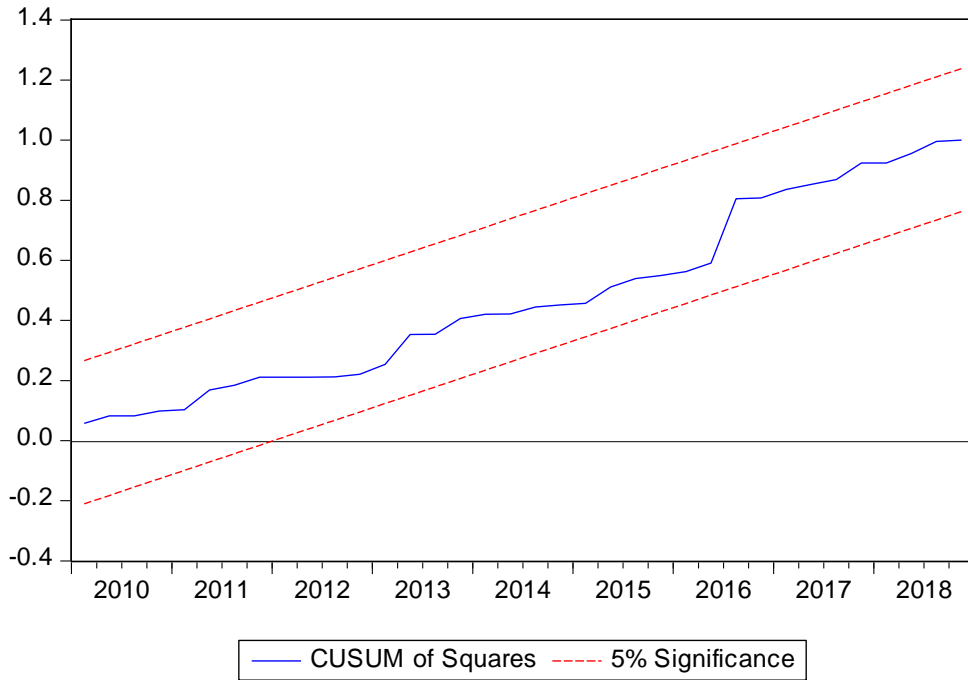
Graph 2: CUSUMSQ Test

5. CONCLUSION

The rapid development in Islamic finance and Islamic banking in recent years requires a better understanding of the effects of the development of Islamic finance on economic growth. It is reasonable to consider the effects of Islamic finance on economic growth as similar to the potential effects of a well-functioning financial system on economic growth. Further clarification of the effects of Islamic finance on economic growth can help change the economic growth potential of countries which have Islamic financial systems.

This study examines the impact of banking credits on economic growth by paying attention to Islamic banking in the dual banking system between 2005 and 2018. The estimates of the ARDL model reveal that the size of the impact of banking credits on economic activity depends on the types of banking operations. Based on the estimated long-run coefficients, the elasticity of the GDP with respect to the conventional banking credit and Islamic banking credit is equal to %0.106 and %0.016, respectively. The results confirm that conventional banks provide more contribution than Islamic banks to economic growth in Turkey. However, Islamic banking has still a very small part of the financial system and is not a complete substitution of the conventional banking system in Turkey. The development and encouragement of more Islamic financial instruments can strengthen relationship between Islamic finance and economic growth while increasing the share of Islamic finance in the financial system.Hence, in order to support economic growth, Islamic banking may be supported by government policies. The magnitude of this positive relationship between Islamic banking and economic growth can be increased by attracting more economic actors to the financial system through more Islamic financial instruments. Turkey has a high Muslim population and therefore, Islamic finance has a significant potential for the development of the financial system. Licensing new Islamic financial instruments, introducing these instruments to people, and promoting these instruments should be among the priorities of policymakers in order to deepen the financial system and to ensure the flow of funds in the financial system effectively. Finally, the development of Islamic finance in

Turkey and the diversity of Islamic financial instruments can be helpful to foreign fund flows especially from Muslim countries.

This study relies on the total loan volumes of conventional and Islamic banks while examining the effects of Islamic banking on economic growth.However, reducing Islamic finance only to Islamic banking loans may not be sufficient to reveal the total effect of Islamic finance on economic growth.Therefore, future studies may prefer a more holistic approach and obtain more detailed resultsby examining the effects of other instruments of Islamic finance.

Research and Publication Ethics Statement

This study has been prepared in accordance with the rules of scientific research and publication ethics.

Contribution Rates of Authors

The author's contribution is 100%.

Conflicts of Interest

On behalf of all authors, the corresponding author states that there is no conflict of interest.

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