Asian Journal of Empirical Research

journal homepage: http://aessweb.com/journal-detail.php?id=5004

DETERMİNANTS OF COMMERCİAL BANKS' LENDİNG BEHAVİOR: EVİDENCE FROM TURKEY

Serpil TOMAK [1]

ABSTRACT

This paper studies the bank-level (size and access to funds) and market-based (interest rate, inflation rate, GDP) variables' impact on bank lending behavior in Turkey using quarterly bank level data of 15 private commercial banks and 3 state-owned banks for the 2003-2012 period. The empirical results indicate that banks' business loans performance depends on its size, total liabilities,nonperforming loans to total loans (NPL) and inflation rate. Besides, ownership structure also affects the total business loans behavior. The results suggest that private banks loans performance is better than the state-owned commercial banks.

Keywords: Bank lending, Ownership, Bank loans

INTRODUCTION

The availability of external funding, especially access to long-term credit and costs of credit, influences firms' investments level in an economy. Cash flow problems, limited access to credit, and high costs of credit constrain firms' ability to fund all desired or required investment projects (Noth, 2011; Behr *et al.*, 2013). Market imperfections as underdeveloped financial and legal systems, improper macroeconomic environment constrain firms' ability to fund investment projects. Demirgüç-Kunt and Maksimovic (1998) demonstrated that firms in countries with developed financial institutions and efficient legal systems obtain more external financing than firms in countries with less-developed institutions. Emerging economies are not capable of crediting long-term needs of private business required for growth investments. In other words, financial constraints of local banks in emerging markets lead to underinvestment and credit constrained borrowers.

One of the most well-known determinants of banks' lending behavior is the ownership type. Bank lending behavior is not uniform and various in terms of ownership structure of banks. Privately owned commercial banks typically aim at profit maximization, while state-owned banks tend to

[1] Vocational School of Social Sciences, Department of Management and Organization, Mersin University, Turkey

Email: tomakserpil@gmail.com

follow social welfare-oriented objectives and deviate from strict profit maximization (Noth, 2011; Behr *et al.,* 2013). Government ownership of banks is pervasive and large in many countries (La Porta *et al.,* 2002). Government active involvement can take place in three ways; direct state-ownership in banks, government sponsoring via guarantees, or state-base lending or savings programs (Noth, 2011; Behr *et al.,* 2013).There are two opposite views of the government's involvement in financial markets. The first development view state that in some countries where economic institutions were not sufficiently developed for private banks to play the crucial development role, government participation should essential for both financial and economic development. In this view, state-owned banks contribute to economic development and improve general welfare. Second, many researches document the negative aspects of government ownership like underperformance and inefficient credit allocation because of agency problems, political influence, fraud and corruption (La Porta *et al.,* 2002; Sapienza, 2004; Noth, 2011; Behr *et al.,* 2013).

The aim of this study is to reveal the bank-level and macroeconomics determinants of lending behavior to firms in Turkey. Most studies on banking sector lending are discussed in the context of capital structure decisions. This paper is one of the first studies that analyzes both the bank-level and macroeconomics determinants of lending behavior for the Turkish banks by using explanatory variables. These broad set of explanatory variables are applied to a panel data model.

LİTERATURE REVİEW

Studies on bank lending behavior can be handled in three categories. First, lending behavior of banks during a crises period (Ho *et al.,* 2012; Gupta, 2012, Cull, 2012; Swamy, 2012; Kapan and Minoiu, 2013; Allen *et al.,* 2013). Second group of studies comprises the ownership effect of lending behavior of banks (La Porta *et al.,* 2002; Sapienza, 2004; Micco and Panizza, 2006; Poncet *et al.,* 2010). Third group studies examine the determinants of bank lending behavior (Ewert *et al.,* 2000; Suwanaporn, 2003; Olokoyo, 2011; Djiogap and Ngomsi, 2012; Olusanya *et al.,* 2012; Imran and Nishat, 2012). Another point to be emphasized is that most prior studies have focused either on cross-country evidence or the analysis of bank loan maturities exclusively from the borrower's perspective. Very few studies are about bank-level determinants that impact long-term lending to firms (Djiogap and Ngomsi, 2012). Ewert *et al.* (2000) studied the determinants of bank lending performance in Germany for the period between 1992-1998 by using a data set from credit files of six leading German banks. They found ratings act as an important factor in the bank's lending policy. Ratings reflecting higher risks lead to higher interest rate premia. They concluded that collateralization is less clear and do not fully support any of hypotheses that are advanced to describe the role of collateral and covenants in credit contracts.

Sapienza (2004) demonstrated that state and privately-owned banks behave differently. Analysis period covers the 85 banks (40 are privately and 43 are state-owned banks, two were privatized during the period of observation.) in Italy between 1991-1995. Their findings showed that state-owned banks charge systematically lower interest rates to similar or identical firms than do privately owned banks. Besides, state-owned banks mostly favor large firms and firms located in depressed areas. The lending behavior of state-owned banks is affected by the electoral results of the party affiliated with the bank: the stronger the political party in the area where the firm is borrowing, the lower the interest rates charged. Micco and Panizza (2006) found evidence for the fact that state-owned banks may play a credit smoothing role for the period of 1995-2002 for 6623 banks. This suggests that state-owned banks lending is less responsive to macroeconomic shocks than the lending of private banks (both domestically and foreign-owned). The second finding is that lending of public banks located in developing countries seem to be less pro-cyclical than lending of public banks located in develop countries. This means that public bank lending in developing countries has a very different response to the business cycle with respect to monetary policy. Noth (2011) analyzed whether financial constraints of private firms depend on bank lending behavior. The sample includes 68646 German SMEs for the period from 1995 to 2007. Their results suggest that an increase in relative borrowings from local state-owned banks significantly reduces SMEs' financial constraints, while there is no such effect for borrowings from privately owned banks. The reduction in financial constraints is related to better credit availability and private information production and stronger when regional economic growth is low.

Olokoyo (2011) researched the determinants of commercial banks' lending behavior in Nigeria. The model covers Nigerian commercial banks loan advance and other determinants or variables such as their volume of deposits, their investment portfolio, interest (lending) rate, stipulated cash reserve requirements ratio and their liquidity ratio for the period from 1980 to 2005. They found a functional relationship between the dependent variable and the specified independent variables. They concluded that commercial banks should focus on mobilizing more deposits as this will enhance banks' lending performance and should formulate critical, realistic and comprehensive strategic and financial plans. Djiogap and Ngomsi (2012) investigated the determinants of bank long-term loan using a sample of 35 commercial banks of six African countries over the period 2001-2010. They found that a bank's ability to extend long-term business loans depends on its size, capitalization, GDP growth and the availability of long term liabilities. These results underlined the importance of supply side constraints in extending vital long-term credit to firms. The multivariate test of cross-countries differences in the bank lending decisions suggest that smaller banks, less capitalized banks, banks with low levels of long term funding sources, banks with higher nonperforming loans and operate in recession environment are more averse to lend long term.

Imran and Nishat (2012) investigated the determinants of the bank credit by using time series data from 1971 to 2010 in Pakistan. The empirical results indicated that the foreign liabilities, domestic deposits, economic growth, exchange rate, and the monetary conditions have significant impact on banks credit to the private sector in Pakistan, particularly in the long run. Whereas the inflation and money market rate do not affect the private credit. In conclusion, the determinants of bank lending behavior literature indicate that bank level (size, capitalization, ownership structure and access to funds) and market-based (interest rate, inflation rate, GDP) variables' impact bank lending behavior in different ways in different countries. In this context, bank lending behavior varies according to the dynamics and the institutional background of the country.

Institutional background of the turkish banking system

Before the 2000-2001 financial crisis, Turkish economy experience two decades of chronically high levels of inflation accompanied with volatile economic growth. High public sector deficits and financial climate of fiscal dominance became a major characteristic of the economy. Huge level of public involvement in the economy led to high real interest rates and low maturities (Ozsuca and Akbostanci, 2012). Higher demand of the public sector in the credit market prevent from firms' ability to fund investment projects. Regulatory and structural reforms in the aftermath of the 2000-2001 crisis have changed profoundly the functioning of the Turkish banking system. In addition, The financial system in Turkey has been rapidly deepening over time. High economic growth and high saving rates, led to rapid growth of financial institutions' claims on the private sector. In the aftermath of the 2000-2001 crisis loan to deposits rate has boomed (See Figure 1).

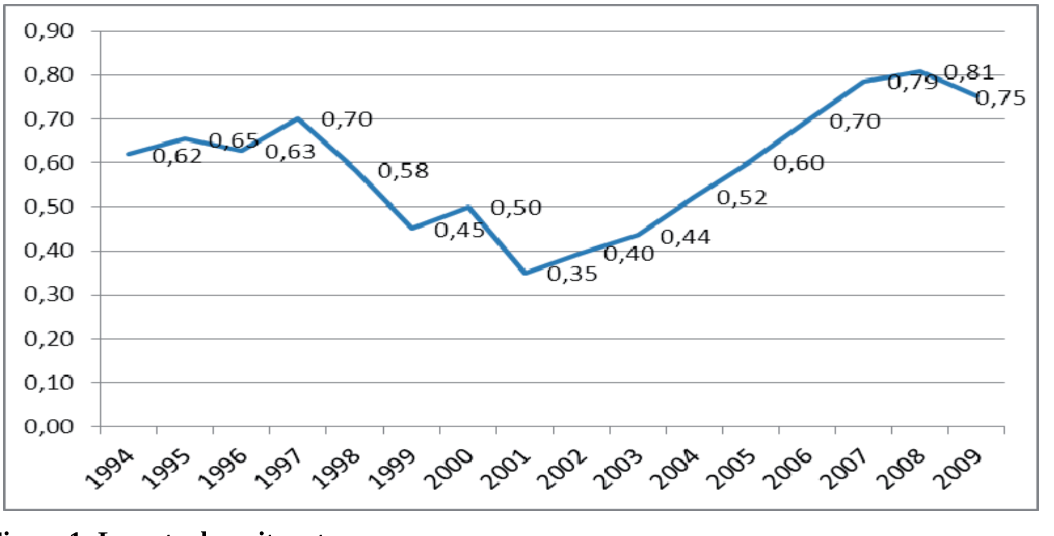

Figure 1: Loan to deposits rate

Source: Coşkun *et al.,* (2012)

Restructuring process, not only help to decrease the number of banks, but the restructuring of state-owned banks, and the strengthen of private sector banks' capital structure. Besides, liquidation, sale, and transfer of 21troubled banks by SDIF (Insures, savings, deposits and participation funds) led to the strengthening of supervision and monitoring infrastructure of the system. After this process, the excess capacity of the banking sector was dissolved by means of public authority. In addition to this, merger and acquisition activities of private banks increased the concentration ratio of the banking sector (Dinçer, 2006). The Turkish commercial banking sector was highly concentrated with the five largest banks accounting for nearly half of bank assets and the top ten banks accounting for nearly 84 percent of the bank assets in the system (Table 1). Three of them are the state banks (T. C. Ziraat Bankası, Türkiye Halk Bankası, and Türkiye Vakıflar Bankası). Currently there are 45 registered banks in Turkey.

Table 1: Number and share of the top ten bank groups as asset types

	Bank*	Total Assets (TL)	%
1	Türkiyeİşbankası A.Ş.	181.064.000.000	0.13
2	TürkiyeCumhuriyetiZiraatBankası A.Ş.	168.918.000.000	0.13
3	TürkiyeGarantiBankası A.Ş.	167.080. 000.000	0.12
4	Akbank T.A.Ş.	156.293. 000.000	0.11
5	YapıveKrediBankası A.Ş.	126.399. 000.000	0.09
6	TürkiyeHalkBankası A.Ş.	111.347. 000.000	0.08
7	TürkiyeVakıflarBankası T.A.O.	106.788. 000.000	0.08
8	Finans Bank A.Ş.	54.282. 000.000	0.04
9	TürkEkonomiBankası A.Ş.	47.094. 000.000	0.03
10	Denizbank A.Ş.	46.549. 000.000	0.03
	Total value	1.165.814.000.000	0.84

*****There are 45 registered banks in the system.

Source: www.tbb.org.tr (31/03/2013)

Turkey has a bank-based financial system. The rest are financial institutions, which play small roles in the credit market. As a unique role of the financial intermediaries, banks have a significant share in the financial system. Therefore, bank loans are one of the most important financing sources in Turkey as it was in many other countries. The Turkish banking sector is classified into three functional groups as deposit, participation and development and investment banks. When analyzed by ownership, there are two types of ownership; private banks (domestic and foreign-owned) and the state-owned banks. As of 2013, 91% of the sector's asset size (%27.2, %50.2 and %13.6 of total assets share state-owned, domestic-owned, and foreign-owned respectively) is composed of deposit banks, while 5.2% of participation banks and 3.7% of development and investment banks (Table 2). All in all, the credit market in Turkey is strongly dominated by private commercial banks. A 25.4%, 51% and 13.8% of total loans are held state-owned, domestic-owned, and foreign-owned respectively in 2013. Private commercial deposit banks grant the most credits to the economy (Table-3). Loans granted by the banks are an important part of the corporate loans in Turkey. As the main item of the banking sector assets, loansvary in line with macroeconomic developments. The annual real increase in loans was at the lowest (negative) level in crises (95 economic crises, Asian crises, 2000-2001 banking crises and global finance crises) period.

Table 2: Number and share of the bank groups as asset types (%)

Bank Types	%	Number of banks
State banks	27.2	3
Domestic-owned private banks	50.2	12
Foreign banks	13.6	10
Participation banks	5.2	4
Development and investment banks	3.7	6
Banking sector	100.0	35

Source: Banking Regulation and Supervision Agency (BRSA), March 2013

Table 3: Share of the bank groups as loans types (%)

Bank types	Institutional	SME	Personal	Total
State banks	24.1	25.3	26.9	25.4
Domestic-owned private banks	51.3	50.3	51.1	51.0
Foreign banks	11.3	12.1	18.1	13.8
Participation banks	5.4	10.6	3.5	6.1
Development and investment banks	7.9	1.8	0.4	3.8
Banking sector	100.0	100.0	100.0	100.0

Source: BRSA, March 2013

In emerging economies state-owned banks generally have larger size and ability to better access to long-term stable funding in the form of long-term liabilities and capital. Three largest state-controlled banks by their larger size appear to have higher share both as asset and loan types in the system. However, four domestic-owned banks have also higher share in the Turkish banking sector. Besides, the Turkish banking system was characterized by low participation of foreign-owned banks, which held 13.6% of the assets and 13.8% of the financial system.

DATA AND METHODOLOGY

Macroeconomic variables used in this paper as interest rate, inflation rate, and gross domestic product (GDP) are derived from the Central Bank of the Republic of Turkey (TCMB) data sources. Our main data source for bank specific characteristics comes from the Banks Association of Turkey (BAT). The reported balance sheet and income statements are used to get relevant data. Sample contains several financial data of 15 Turkish commercial deposit banks spanning from 2002 – 2012 on a quarterly basis. As of 2013, there are 25 commercial deposit banks (3 of stated-owned, 12 of domestic-owned, and 10 of foreign-owned) operating in Turkey on the study period. This study uses 18 of these banks, where 7 banks and are excluded due to lack of data. Table-4 shows the list of banks used in this study.

Table 4: List of the banks used in the study

T.C. ZiraatBankası A.Ş.	Finans Bank A.Ş.
TürkiyeHalkBankası A.Ş.	HSBC Bank A.Ş.
TürkiyeVakıflarBankası T.A.O.	Şekerbank A.Ş.
Akbank T.A.Ş.	TekstilBankası A.Ş.
Alternatif Bank A.Ş.	Turkish Bank A.Ş.
Anadolubank A.Ş.	Türk Ekonomi Bankası A.Ş.
Arap Türk Bankası A.Ş.	Türkiye Garanti Bankası A.Ş.
Denizbank A.Ş.	Türkiyeİşbankası A.Ş.
Deutschebank A.Ş.	Yapı ve Kredi Bankası A.Ş.

Analysis is carried out in two parts. In the first section, both private- and state-owned banks are included in the analysis. In the second part, considering the weight and prominence of the private banks in the Turkish financial system, only private banks lending behavior are the subject of analysis. State controlled banks are omitted in the second part of the analysis.We use the following econometric specification:

$$\begin{aligned} \mathrm{TBL}_{i,t} &= \alpha_0 + \alpha_1 Size_{i,t} + \alpha_2 Tliab_{i,t} + \alpha_3 NPL_{i,t} + \alpha_4 Private_{i,t} \\ &\quad + \alpha_5 Inf_{i,t} + \alpha_6 GDP_{i,t} + \alpha_7 Interest_{i,t} + v_t + \varepsilon_{it} \qquad (1) \end{aligned}$$

Here, total business loan (TBL) is the ratio of bank loans to nonfinancial private firms divided by assets, expressed as a percentage. Size is the log value of the Bank assets. Capital (Cap) is the ratio of book equity to assets, expressed as a percentage. Total liability (Tliab) is the ratio of bank liabilities with divided by total assets, expressed as a percentage. NPL is the ratio of nonperforming loans to total loans. Private = 1 if a bank is majority-controlled by a private investor zero otherwise. GDP is the growth rate, Interest is the interest rate, and Inf is the inflation rate. α_0, $v_t$and $\varepsilon_{it}$are respectively, the specific effect, a dumb variable of time and error term.The second regression equation is as follows:

$$\mathrm{TBL}_{i,t} = \alpha_0 + \alpha_1 Size_{i,t} + \alpha_2 Tliab_{i,t} + \alpha_3 NPL_{i,t} + \alpha_5 Inf_{i,t} + \alpha_6 GDP_{i,t} + \alpha_7 Interest_{i,t} + \varepsilon_{it} \qquad (2)$$

Here, all variables used here are defined and the same as above.

REGRESSİON RESULTS

Due to lack of data, it is not possible to distinguish lending behavior in terms of maturity. That's why, this study reveals the total lending behavior of banks instead of long-term liabilities. The estimation results are presented in Table 5. In the regression model, the coefficients on bank size, total liabilities and inflation rate are positive and statistically significant at 1 percent level. However, nonperforming loans to total loans (NPL) is negative and statistically significant at 1 percent level. Besides in terms of the impact of the ownership, private-owned banks are more likely to lend business loans than state-owned banks. However, the estimated coefficient of the GDP and interest rate variables are statistically insignificant.

Table 5: Determinants of bank lending behavior

	Dependent variable: Total business loans as % of assets	
Variable	Coefficient	T-Statistic
Size	0.4286	4.34*
Tliab	0.7972	4.82*
NPL	-0.3625	-2.99*
Private	0.1100	4.21*
Inf	0.2730	3.77*
GDP	0.0493	0.70
Interest	-0.0116	-0.32
Constant	-2.8052	-5.80*
N	720	
R^2	0.2301	
Adjusted R^2	0.2226	
Fstatistics	30.40	
Prob(F-statistic)	0.0000	

Note: Breusch-Pagan/Cook-Weisberg test results indicate that the there is noheteroskedasticity problem of regression model.* $p< 0.01$, ** $p < 0.05$, *** $p < 0.10$

As bank size and total liabilities grow, total business loans are also improving. This means that larger bank size and total liabilities increase the total business lending capacity. Bank size is an important determinant of total business loans. Banks with larger nonperforming loans to total loans (NPL) exhibit lower ratios of total loans to assets. Higher nonperforming loans to total loans (NPL) affect negatively the total business lending capacity of commercial banks. Unfavorable macroeconomic variables are believed to constrain banks' ability to lend to businesses. Whereas higher inflation rate means higher total business loans as percent of assets, GDP and interest rate is statistically insignificant in explaining the total business loans ratios of banks in Turkish banking market for the analysis period. Generally loan interest rate is accepted as an important determinant of total business loans. One possible explanation of the insignificancy of interest rate is that firms' high demand for credit or financial constraints and bank-dependent finance of private firms. In other words, it can be explained by supply side constraints in credit to firms. In emerging economies like Turkey banks are the main providers of private firms especially for SMEs (small and medium sized enterprises).

Regression results show that the coefficient on private bank dummy is positive and statistically significant 1 percent level. It can be stated that private banks total business loans performance is better than the largest three state-owned banks. This may be explained by the view of social welfare-oriented objectives rather than strict profit maximization, underperformance and inefficient credit allocation because of agency problems, political influence, and fraud and corruption reasons in the banks' lending behavior literature. As stated above, in the aftermath of the 2000-2001 crisis, the restructuring process not only help to decrease the number of banks, but the strengthen of private sector banks'. Today, Turkish private banking system has reached a more robust structure. As stated before, in the second part of the analysis by excluding state controlled banks, only 15 private banks lending behavior is examined. The estimation results of private banks are presented in Table-6. Similar to our prior findings, the coefficients on bank size, total liabilities and inflation rate remain positive and statistically significant at 1 percent level in the second regression model. However, the estimated coefficient of the GDP and interest rate variables are alike statistically insignificant. The only difference result in the second regression analysis is the insignificancy of nonperforming loans to total loans (NPL). Interestingly, the nonperforming loans to total loans (NPL) effect in total loans becomes disappears in the case of private banks. One possible explanation may be private commercial banks have relatively overall riskier loan portfolios.

Table 6: Determinants of private banks' lending behavior

	Dependent variable: Total business loans as % of assets	
Variable	Coefficient	T-Statistic
Size	0.4665	6.60*
Tliab	0.7901	6.64*
NPL	-0.1873	-1.18
Inf	0.1806	3.20*
GDP	-0.0008	-0.02
Interest	-0.0408	-1.44
Constant	-2.2566	-6.12*
N	600	
R^2	0.3374	
Adjusted R^2	0.3307	
Fstatistics	50.32	
Prob(F-statistic)	0.0000	

Note: Breusch-Pagan/Cook-Weisberg test results indicate that the there is noheteroskedasticity problem of regression model.* $p< 0.01$, ** $p < 0.05$, *** $p < 0.10$

CONCLUDING REMARKS

Berr *et al.* (2013) stated that the availability of external funding in terms of access to and cost of credit impact the firms' investment level. Financial constraints of businesses, unfavorable macroeconomic environment and underperformance of banking system prevent firms from funding all desired investment which is necessary for economic growth. The aim of this study is to identify the factors which explain the bank credit to the businesses in varying financial environments. This paper examines the empirically bank-level (size and access to long-term funds) and market-based (interest rate, inflation rate, GDP) variables impact on bank lending behavior in Turkey using quarterly bank data of 15 private commercial banks and 3 state-owned banks between 2003-2012. In the second part of the analysis, only private banks (15 private banks) lending behavior is examined.

In consequence, banks' business lending behavior depends on its size, total liabilities, nonperforming loans to total loans (NPL) and inflation rate. The estimation results are similar in the second regression analysis except for NPL ratio. The nonperforming loans to total loans (NPL) effect in total loans becomes disappears in the case of private banks. Besides, private banks with a robust banking structure exhibit better lending performance than the state-controlled banks. As mentioned above, private-owned bankshave higher share both as asset and loan types in the Turkish banking systemin comparison with the foreign-owned and state controlled banks. The insignificancy of two macroeconomic variables as interest rate and GDP can be explained by firms' high demand for credit or financial constraints and supply side constraints in credit to firms. These results suggest the bank-level (size and access to long-term funds) and market-based (interest rate, inflation rate, GDP) variables' impact on bank lending behavior in Turkey.

REFERENCES

Allen, F., K. Jackowicz and O. Kowalewski (2013). The effects of foreign and government ownershipon bank lending behavior during a crisis in Central and Eastern Europe. *Working Paper*, pp. 1-36.

Behr, P., L. Norden and F. Noth (2013). Financial constraints of private firms and bank lending behavior. *Journal of Banking & Finance*, Vol. 37, pp. 3472–3485.

Coşkun,M. N., H. N. Ardor, A. H. Çermikli, O. Eruygur, F. Öztürk, İ. Tokatlıoğlu, G. Aykaç, and T. Dağlaroğlu (2012). Türkiye'de Bankacılık Sektörü Piyasa Yapısı, Firma Davranışlarıve Rekabet Analizi, Türkiye Bankalar Birliği, İstanbul.

Cull, R. (2012). Bank Ownership and Lending Patterns during the 2008–2009 Financial Crisis: Evidence from Latin America and Eastern Europe. *Policy Research Working Paper 6195*, pp. 1-39.

Demirgüç-Kunt, A. and V. Maksimovic (1998). Law, finance, and firm growth, *Journal of Finance*, Vol. 53, pp. 2107–2137.

Dinçer, A. (2006). Bankacılık Sektöründe Konsolidasyon, Ülke Deneyimlerive Türkiyeİçin Öneriler, DPT. 2697, Ankara.

Djiogap, F. and A. Ngomsi (2012). Determinants of Bank Long-term Lending Behavior in the Central African Economic and Monetary Community (CEMAC). *Review of Economics &Finance*, pp. 107-114.

Ewert, R., G. Schenk and A. Szczesny (2000). Determinants of Bank Lending Performance in Germany: Evidence from Credit File Data. *Schmalenbach Business Review*, Vol. 52, pp. 344-362.

Gupta, J. (2012). Banks in Family Business Groups: Pyramid, Lending Behavior, and Financial Crises. *Working Paper*, pp. 1-33.

Ho, C., D. Li, and S. Tia (2012). Political Influence and Incentive: The Lending Behavior of a State-owned Bank in the Global Financial Crisis. *Working Papers*, pp. 1-54.

Imran, K. and M. Nishat (2012). Determinants of Bank Credit in Pakistan: A Supply Side Approach. *Proceedings of 2nd International Conference on Business Management (ISBN: 978-969-9368-06-6)*, pp. 1-32.

Kapan,T. and C. Minoiu (2013). Balance Sheet Strength and Bank Lending During the Global Financial Crisis. *IMF Working Paper*, pp. 1-37.

La Porta, R. , F. Lopez-de-Silanes, and A. Shleifer (2002). Government ownership of banks. *Journalof Finance*, Vol. 57, pp. 265–301.

Micco, A. and U. Panizza (2006). Bank ownership and Lending Behavior. *Economic Letters*, Vol. 93, pp. 248-254.

Noth, F. (2011). Financial Constraints, Bank Lending Behavior, and Financial Stability. *Discussion Paper*, pp. 1-54.

Olokoyo, F. O. (2011). Determinants of Commercial Banks' Lending Behavior in Nigeria. *International Journal of Financial Research*, Vol. 2, No. 2, pp. 61-72.

Olumuyiwa, O. S., O. A. Oluwatosin, and O. E. Chukwuemeka (2012). Determinants of Lending Behaviour Of Commercial Banks: Evidence From Nigeria, A Co-Integration Analysis. *Journal Of Humanities And Social Scienc*, Vol. 5, No. 5, pp. 71-80.

Ozsuca, E. A. and E. Akbostanci (2012). An Empirical Analysis of the Bank Lending Channel in Turkey. Middle East Technical University ERC Working Papers in Economics 12/05,1-33.

Poncet, S., W. Steingress, and H. Vandenbussche (2010). Financial constraints in China: Firm-level evidence. *China Economic Review*, Vol. 21, pp. 411–422.

Sapienza, P. (2004). The effects of government ownership on bank lending. *Journal of Financial Economics,* Vol. 72, pp. 357-384.

Suwanaporn, C. (2003). Determinants of Bank Lending in Thailand: An Empirical Examination for the Years 1992 to 1996. *Working Paper*, pp. 1-177.

Swamy, V. and S. Sreejesh (2012). Financial Instability, Uncertainty and Bank Lending Behavior. *The International Journal of Banking and Finance*, Vol. 9, No. 4, pp. 74-95.

www.bddk.org.tr

www.tbb.org.tr

www.tcmb.gov.tr