

Determinants of bank credit to the private sector – a case study from CESEE countries

Rilind Ademi

Abstract

The banking sector constitutes almost all of the financial sector in the CESEE countries, and on the other hand loan as a traditional banking product increasingly seen as an measurement of bank performance. The CESEE countries have been through a credit boom during the period between 2002–2008 with a credit growth of 30–35% per year, but with the appearance of the financial crisis, these rates lowered to near zero and remained at those disappointing level until the present days. The purpose of the study is to analyze the factors in the period 1994–2014 that describe the banking specifics that may affect bank credit to the private sector. The model which estimates more reliable results is the GMM (Generalized Method of Moments), with a coefficient of determination 0,54. The Credit growth, spread of the interest rates, deposit growth, ROA are important factors that positively affect the loan, while the real interest rate, the ratio of capital to assets and international financial integration appear as important factors which negatively affect on crediting .

Keywords: credit growth, determinants, banks, GMM.

1. Introduction

The banking sector, which accounts for almost the entire financial system in the CESEE countries, is of particular importance for the withdrawal of capital into the economy in the form of lending. Bank credit which placed in economy is a very important factor when analyzing the economic growth in the country, which comes from the transformation of savings into productive investments.

The role of the credit measure to economic growth has been discussed many times (see Goldsmith, 1969; McKinnon, 1973; King and Levine, 1993; Rousseau and Watchel, 1998). Nevertheless it is difficult to say that literature has reached a consensus, but it seems that most studies agree that the loan has a positive effect on economic growth.

A large increase in bank credit to the private sector has been highlighted in several Southeast European economies, from the second half of the 90s. For example, in some countries of the Balkans from 2002 to 2008 growth of loans towards the private sector were recorded up to 30-32% per year. A part of these high-rise over the years explains the reason that they started from initially very low levels of lending, but anyway this credit boom was upsetting to many researchers because they could create inflationary pressures and distortion in key national indicators.

When in early September, the IMF officials appeared before the media to report the October 2008 World Economic Outlook, the signs of the crisis had started to be presented in the CESEE countries and the enthusiastic tone that this region remained untouched by the wave of global financial crisis faded, correcting projections on economic growth. The pace of credit growth fell several times, with a growth rate of 31% average in the region over the years, it sat at an annual lending growth rate of only 3.38%.

2. A Brief Overview of Bank Credit in CESE Countries

Developing a modern banking sector, oriented by market forces was a particular challenge for transition economies in CESEE. The privatization of banks, mainly to foreign strategic investors, was a mainstay of the pre-2000 period, which by 2001 more than half of the total banking capital was mastered in the hands of foreign banks.

During 2003-08, most of the CESEE countries experienced credit booms, where annual increases went sometimes even 30-40% (Figure 1). During this period, foreign banks driven by a promising and growing economy, with a growing domestic demand they were competing for market share of optimistic borrowers who had little initial debts that were eager for consumption or investment. All this underwent a rapid expansion of credit to the private sector. Credit to the private sector since 2000-2005 grew by almost 70% in CEE, and almost doubled in the SEE countries. This increase comes mostly from low initial levels of lending. Mostly households were the biggest beneficiaries of this period, which accounted for half of the total loan portfolio. However, this growth of credit placement was seen as an element of banking market development, but also raised concerns about

a possible banking crisis and a crisis in macroeconomic balances (for more, Coudert and Pouvelle, 2010, Ademi, 2017).

The crisis of 2008–2009 changed the perception for foreign banks. They were initially seen as a problem for the creation of financial bubbles and also as the main culprit in transmitting the crisis in the SEE countries. The multinational banks transmitted the crisis to developing countries through reduced capital flows and reducing loans to their subsidiaries which were a major source of loan funding period before the financial crisis. Also, local banks that had borrowed in the international market before the crisis became more sensitive to the performance of global financial markets and were forced to reduce credit.

Also the international banking network structure as it was built and operated was important too. For example, the transmission of the crisis was lower when foreign banks extended their activities through subsidiaries and lending in these economies through these bank branches, compared with direct cross-border lending (EBRD, 2012). The pace of credit growth fell several times, the growth rate of 31% average in the region over the years before the crisis, was lowered at an annual lending growth rate of only 3.3%.

FIGURE 1: Banking Credit growth



Source: IMF, International Finance Statistics, Claims to private sector

3. Literature Review

High levels of loan that followed the region of CESEE were accompanied by concerns from various authors (Cottarelli, Dell’Ariccia, Vladkova-Hollar, 2005;

Egert, Backe and Zumer, 2006, Coricelli and Masten, 2004) about the dangers that can transmit to the macroeconomic indicators.

Studies find that high credit flows did not cause deterioration in banks strength (Tamirisa & Igan, 2007). The same study with data on banking level answers on the factors of this high rate credit for the period 1995-2004 for some developing countries of Europe. Thus, an increase in real GDP is statistically significant and promotes the growth of credit. The banking profitability and banking efficiency emerge as factors that play an important role in the growth of lending. From the results of the study it can be argued that growth with high levels of credit has not adversely affected banks' strength.

With the same concern is the survey on credit and factors determining the loan balance level for CEE countries (Kiss-Martón & Vonnak, 2006). This paper attempts through a data panel for euro zone member states to identify the link between the loan and its fundamental level. Then through ECM model to explain the dynamics of credit. 1% increase in GDP per capita leads to the growth of credit to the private sector/GDP to 0.5%. While real interest rates and inflation has almost the same effect: 1% increase of these factors shrank credit to GDP to 2% on average. The study also shows that bank credit observed during this period can be justified; it represents a deepening financial sector.

In the same line of study is the research of (Kalluci, 2012) for the behavior of the loan in Albania. Key findings from the statistical point of view suggested that Albania has generally not experienced lending boom situation, despite high rates of credit which grew, especially after 2004.

It is a study with a panel data for 25 developing countries among which CESEE developing countries (Magud, Reinhart, Vesperoni, 2012). The gathered estimates suggest that the regime of the exchange rate is statistically significant and has a negative impact, which means that most rigid exchange regimes are associated with higher levels of loan. Besides the exchange rate regime as relevant factors that positively affect bank credit also appear capital inflows and deposit base (measured by the broad money aggregate).

During the crisis, it became interesting period of the study of the role of foreign banks in developing countries, where the debate was generated about the impact and consequences of foreign ownership structure of the banking sector. Credit rates of foreign banks fell more than loan rates of local banks. In addition to the Latin American countries, state-owned banks increased loans during a crisis, and we cannot say the same for the CESEE countries (Cull & Peria, 2012).

Similar results also show a study (Chen and Wu, 2014) which marked a downward credit trend of foreign banks, compared with the counter-cyclical role of state banks.

4. Data and Methodology

This study may provide very important signals about the behavior of bank crediting during the period 1994-2014, identifying causes of this behavior.

An important objective of this study is to group some countries, that are similar, because they passed the same stages of financial transition and economic development in general, and it turns out that our conclusions pertaining to the entire region which included in the model. Generally the region of CESEE has gone through similar stages, until 2000 it passed a phase of transition and an inflow of foreign banking capital in the country and after 2000 generally in the region started its growing credit at rapid rates, which recorded growth of credit placement of up to 30% per year. But still, almost all countries in the region were affected by the shock wave of the financial crisis that disrupted credit rhythms and depressively the extent of the placement of loans continues almost until today. Some countries of these regions are excluded from the model because they are not homogeneous movement observed with the rest of the region, as well as the size of the economic powers (Russia and Turkey) does not align on other countries and therefore could distort the overall results.

During sample selection and data collection for the corresponding variables, included in the model, there were numerous difficulties as a result of the creation, division or suppression of various countries, especially in the SEE region. Also new states that have not yet been established a long time have no series of data that can be considered. Here is also included an unbalanced panel of data as a result of the lack of reporting on the various indicators that are included in the model.

To test the hypothesis, a database was created for 15 countries in the region (Macedonia, Albania, Bulgaria, Serbia, Montenegro, Bosnia and Herzegovina, Croatia, Slovenia, Romania, Hungary, Slovakia, Czech Republic, Moldova, Poland and Ukraine) for a period (1994-2014), which makes it even more important paper, as a result of the fact that in this period appear all the situations in which the banking sector have been going through. The data, models and results are processed with statistical and econometric package EVIEWS. Based on empirical evidence, to test hypotheses in question, as regards the bank crediting to the private sector and the variables that affect it, is using the following model:

$$Y_{it} = \alpha_i + \beta X_{it} + u_{it}$$

where i = the number of countries throughout the study period 1994-2014

Y_{it} = Loan Growth during the period t

X_{it} = The independent variables of i , during the time t that represent specific factors involved in our research.

This is the equation of the regression function that defines the relationship between the variables considered in the study. Where α is the constant term of the model, and β is the coefficient of the regression function, the value for the regression equation to predict the variance in the dependent variable. This means that if β coefficient is negative then the predictor variable or independent adversely influences the dependent variable, an increase of one unit in the independent variable will decrease the dependent upon the respective value of the coefficient variable.

In the same way if β coefficient is positive, the dependent variable will increase the value of the corresponding coefficient. α is the constant value which is expected to have the dependent variable if the two independent variables is equal to 0 (if $X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8$ and $X_9, \dots, X_n = 0$) then $Y = \alpha$. While ε is the error term, which reflects the effect of all other variables, in addition to the independent variable and dependent considering the regression function.

Despite the number of variables, data structure defines the data in two dimensions. They have an observation unit group, which in this case are the countries i , and they also have reference time, t , in this case the years. Error term has two dimensions, one for countries and one for the period. In our case, the number of states is 15 and the number of years is 21, where this results in a number of Observations 315, but as a result of an unbalanced data panel, the number of observations decreases.

Below we see the list of variables that are considered to be entered into the model equations or regression function to consider.

$$CG_{i,t} = \alpha + \beta_1 \text{Fin_int}_{i,t} + \beta_2 \text{RIR}_{i,t} + \beta_3 \text{For_Bank}_{i,t} + \beta_4 \text{ROA}_{i,t} + \beta_5 \text{ROE}_{i,t} + \beta_6 \text{CR3}_{i,t} + \beta_7 \text{NPL}_{i,t} + \beta_8 \text{CAR}_{i,t} + \beta_9 \text{RiskPrime}_{i,t} + \beta_{10} \text{Crisis}_{i,t} + \beta_{11} \text{Crisis08-09}_{i,t} + \beta_{12} \text{Spread}_{i,t} + \beta_{13} \text{EXTFin}_{i,t} + \beta_{14} \text{DepositG}_{i,t} + \varepsilon_{i,t}$$

Fin_int - international financial integration

RIR - real interest rate

For_Bank - foreign bank capital

ROA - return on assets

ROE - return on equity

CR3 - banking concentration of 3 major banks

NPL - the rate of non-performing loans

CAR - Bank capital to assets ratio

RiskPrime - risk premium on lending

Crises - banking crises during the period analyzed

Crises08-09 - The global financial crisis 2008-2009

Spread - lending rate minus deposit rate

EXTFin - financing loans and deposits from abroad

DepositG - growth of bank deposits

The dependent variable - Credit Growth (Source: IFS)

Domestic credit to the private sector refers to financial placements, run by private sector and led by financial sector. The data is an annual comparison. In the study we have inserted credit growth as a dependent variable and not credit to the private sector in relation to GDP, as a result of how the selected indicator is more representative of the credit developments and best describes credit dynamics during different periods.

International financial integration - (Source: The Chinn-Ito index (KAOPEN) 2012)

Index that measures the country's financial integration, where a more integrated country implies an easing of domestic financing, but also less immune to external shocks. In a crisis context it expected a negative impact, while in normal situations expected a positive impact.

The real interest rate - (Source: IFS)

The interest rate corrected for inflation is expected to have an inverse connection with bank loans. An increase in interest rates means that crediting is more expensive and makes it less attractive and therefore expected a negative coefficient.

Foreign banking capital - (Source: EBRD & CLAESSENS, S., VAN HOREN, N. (2014)

A greater presence of foreign banking capital brings more stability in the banking sector and therefore expects a positive coefficient. But some researchers also saw that the presence of foreign banks in the country as a key mechanism for the transmission of the financial crisis from developed countries to developing countries (IMF, 2009; Cull & Peria, 2012; Wu & Chen, 2014).

ROA (return on assets) and ROE (return on equity) - (Source: FSI)

Return on assets and return on equity, these indicators of bank profitability, means that banks are the most profitable are likely to lend more, but it can also mean even more risky position. Signs are not obvious, but expected positively.

Banking concentration - (Source: Bankscope, Bureau van Dijk)

Are used two indicators: CR3 and CR5. This is a total assets ratio of three (five) largest banks in total assets of the banking system. A banking system more concentrated means a credit monopoly and consequently a banking sector unattractive, expensive and as a consequence a lower credit. Before the crisis was expected to have a negative impact on credit, while during and after the crisis there is an expectation that a more concentrated banking market has managed, more easily with the crisis.

Risk premium on lending - (Source: IFS)

It presents the risk that banks perceive towards the private sector versus public sector. The higher it is, the banks perceive that there is a greater risk in crediting to the private sector versus "risk free" of state credit. It expected a negative coefficient.

Banking crises - (Source: Laeven & Valencia, 2012)

Presented a categorical variable when in different countries occurred the

banking crisis. It takes value 1 when the country has a banking crisis and takes the value 0 when the country has no a crisis. As a result of that different countries have different crises during periods then this variable serves as a control variable to clear the effect of the crisis may affect the bank loan.

2008-2009 Crisis - (Source: Author)

A control variable to control the impact of the global financial crisis on the loan. It represents a categorical variable, which take the value 1 in the years of the financial crisis (2008.2009) and take the value 0 in the other years.

Bank lending-deposit spread- (Source: IFS)

Difference between lending rate and deposit rate. As wide as this difference is expected to a negative effect, because credit becomes expensive and savings unattractive. But also it is considering the fact that most of the bank's revenues come from net interest income we expect a positive impact on bank lending, which in a way encouraged banks to expand credit products.

Non-performing loans - (Source: FSI)

Bad loans bring risk and also generate losses for the banks and thus unfavorably affect the loan.

Financing from abroad - (source: BIS)

It represents the position of banks that have over external financing (including the instrument, loans and deposits) as compared to bank deposits. It is expected that the growth of external financing, has been run subsidiaries and banking sector positively affect credit growth and vice versa.

Deposit Growth - (Source: IFS)

As a variable that will be inserted in the model is deposit growth as an annual percentage change. A bigger savings means more funds to lend and thus an increase in loans.

Bank capital to assets - (Source: FSI)

The relation of capital on assets measures how much banks are able to support their assets with equity. This index measures the financial condition of banks and financial institutions as regulatory system establish a minimum to this index. Greater reliance of capital to absorb losses helps banks to extend more credit (positive coefficient expected).

As it can be seen in the text, where the explanations of variables are thought to enter the model presented (in parentheses) the resources that were taken from these data. We took the relevant annual secondary sources that the final results are logical and credible.

For evaluation parameters are consulted several valuation models in order to compare the model results:

Pooled OLS - In cases where there is no significant difference between countries or significant time effects, we can bring all the data to calculate POLS method.

Although in most cases we have domestic effects or even time effects, there are times when none of these is not statistically significant.

Fixed effects - Another model of the panel may have a constant slope coefficient, but intercept can change the data set, e.x.: states. Although there are no significant effects of time, there are significant differences between countries in this model. Since the termination of the axis is as group specific and in this case varies from country to country, it can be changed but not over time. Since we entered into the state panel data which may have significant differences, it is logical to choose the model with fixed effects analysis of the data panel.

Stepwise - regression is a form of step-by-step evaluation or a semi-automated process to build a successful model by adding or removing variables based solely on t-statistics and their estimated coefficients. Usually when there are a large number of variables in the model, stepwise used to eliminate irrelevant variables and to make them simpler results and interpretations.

GMM model - For researchers who apply it, this provides a convenient method of calculation of the evaluation of nonlinear dynamic models without full knowledge of the probability distribution of the data (Baltagi, 2003). Generalized Method of Moments (GMM) as an assessment that allows specification of economic models often to avoid unwanted assumptions or unnecessary procedures, such as distribution defined errors, and therefore model GMM is widely applicable (Hall, 2005). The method is applied in many areas of the economy, but perhaps is most often applied in finance.

5. Empirical Results

In addition will present various models for evaluating variables. A wide approach to the evaluation of a large number of methods is put in place to determine the best method for evaluating variables and extract the sound conclusions about relationships and influences that have explanatory factors on credit growth.

In the following Table 1 it can be seen as presented the evaluations of statistical significance and economic importance of the input variables in the study models. For an explanation of the banking concentration it is removed from the model the variable concentration of five banks (CR5) and taking into account the variable concentration of three banks (CR3); to explain the impact of foreign banks in countries included in the study we removed from the model variable of foreign bank capital and is taking into consideration the variable of foreign banks; to explain the impact of bank profitability, we removed from the model variable ROE and taking into account the ROA variable, because they have a closer correlation and more influential to the dependent variable (see annexes, table 2). Also in the

model variable risk premium on lending is not entered, as a result of a significant lack of data for this indicator.

In general, it can be seen from the table below, that, the statistical significance of different regression models of evaluation have produced similar results, the same cannot be said of the economic importance (coefficients) of input variables in the model. We can also say that generally results ascertaining the impact variables are logical and expected from theory. Table 1 is a summary of the results obtained from the evaluation of parameters based on different methods (which appear in the Annexes, Table 4, Table 5, Table 6, Table 7, Table 8 and Table 9).

The most important variable statistically in all methods of regression evaluation is the real interest rate (RIR) in the level of significance of 0.01 (1%), which leads us to reject the null hypothesis and accept the alternative hypothesis that RIR influences credit growth. We reject H_0 and accept H_A in a 0.01 significance level, because the results that we won could happen very often that we are confident in our results, namely the conclusion that RIR affects credit growth. As expected from theory, the growth of bank credit interest rates, loan product makes it more expensive and less attractive for the borrower and normally causes the decrease of credit growth. This variable has a coefficient of (-1.53) - (- 1.94), which means that an increase of 1% real interest rate, in ceteris paribus, will reduce credit for 1.53-1.94%.

Another important variable is statistically shown us is ROA (return on assets). As mentioned ROA is an indicator of the profitability of the banking sector in relation to total assets. It gives us an idea how efficiently assets are being used to generate profits. Currently, this indicator has a great economic importance for the growth of lending, by looking at the height of coefficients resulting from all of regression valuation models. Of all the models, it has a huge positive impact on credit growth, which increased 1% ROA, the increase bank lending to the private sector from 4.68 to 6.72%. It should be note that ROA indicator from descriptive tables has a 1.03 average and a standard deviation of 1.78, which means that many small fluctuations are indicative of this and therefore an increase of 1% has a huge effect on credit growth. This means that banks the more generate profit, the more motivated they were to lend. In fact it corresponds to the period before the financial crisis when the banking market was underdeveloped, while the need for funding to good creditors was big, even in those periods by multinational banks in CESEE countries were seen as places that have a potential for growth, which was oriented much of the capital, which banks also generate profits but also had high rates of placing loans to the private sector.

Spread of interest rates as factors also appear significant at every regression model evaluation. This indicator, at first glance, is expected to be negatively related to credit growth. A higher spread can be as a result of higher interest rates on loans,

discouraging economic agents in bank borrowings. Also a high spread of interests could mean a lower level of banking intermediation, or inefficiency of banks or the entire financial system. In these cases we can understand that banks are unable to optimally channeling resources from savers to the investors. In this model contrary to what we have said so far, it results to us that the increase in the spread on 1% on average, under constant other factors, will increase a credit of 1.05-2.18%. We must also note that through stepwise specification with nine variables, according to pooled OLS method appears that these two indicators are negatively related. But it is also not surprising, positive ratio of these two indicators. With increase in the spread of interest rates, increased revenues from interest rates, this motivates more banks to expand credit offer. A study of emerging Europe (Tamirisa & Igan, 2008) for the period from 1995 to 2004 found a positive relationship between these indicators, based on how spread of interest rates often seen as an indicator of bank profitability, and its growth, motivates banks to increase credit supply, thereby expanding credit.

Banks are essentially institutions which do not create or produce something oneself and they trade a small number of products. In principle, they have only one good - money - with what they give "loans" and get "borrowed" from various parties (Petkovski, 2009). From this seemingly simple function they represent almost the entire financial system, especially in developing countries. In economics always appear surplus agents who are usually families and these surpluses are oriented to deficient agents-enterprises (Mishkin & Eakins, 2012).

These savings their importance is even give evidence demonstrated in this study, where the growth of deposit base, as measured by growth in deposits over the years, positively affected credit growth, and that the increase of 1% of deposits, extend credit from 0.46-0.59% per annum, under other constant factors. What can be observed is that in each method of evaluation model, coefficients are approximate, and also statistically significant at the level of 1%, especially taking into account econometric model GMM. In fact the results and impact are similar from a number of other studies that have been done on the phenomenon of bank credit. Also another study for developing countries, among which are the countries from the region of CESEE (Guo & Stepanyan, 2011) resulted in a positive coefficient with an approximate impact of bank deposits in loans.

Often the dynamics of an indicator depends on its previous movement. In most cases, a good predictor of what has contributed to a period t , is what happened in the period $t-1$, e.x: economic growth of the previous year definitely affects economic growth in the current year, or a previous year's inflation definitely affects the inflation of the current year. In this regard, we in some regression evaluations, as the independent variable introduced the credit growth with one time delay (Credit growth _{$t-1$}). All approximation resulted that we must reject H_0 and accepts

TABLE 1: Summary of the evaluations models of variables

	Pooled OLS		Fixed effects		Stepwise POLS
	Coeffic.	Prob.	Coeffic.	Prob.	Coeffic.
CG_ ₍₋₁₎					0,149127
CRISIS	-4,5287	0.3804	-0.836649	0.8787	-8,18742
NPL	-0.076157	0.6352	-0.418906	**0.0275	
SPREAD	2,182581	***0.0000	1,366381	**0.0165	-1,74372
CAR	-0.732276	0.1100	-0.458768	0.4847	-0,84113
CR3	-0.000180	0.9985	-0.127798	0.2956	
DEPOSITG	0.591036	***0.0008	0.311359	0.1026	0,461933
EXTFin	-0.034493	0.5577	-0.064727	0.4072	
FIN_int	-11,50657	**0.0213	7,780747	0.3185	-11,23406
RIR	-1,582789	***0.0000	-1,948788	***0.0000	-1,533344
ROA	5,273219	***0.0001	6,722589	***0.0001	4,888148
For_Bank	0.091543	0.2899	-0.597839	**0.0142	0,073819
Crisis08-09					
C	13,82035	0.2217	6,173215	0.0015	15,75481
R ²	0.518056		0.589681		0.539528
N.observations	158		158		159

The dependent variable: Credit growth in %

*** Statistically significant at the 1% level of confidence.

** Statistically significant at the 5% level of confidence.

* Statistically significant at the 10% level of confidence.

H_A in a 0.01 level of significance, namely the conclusion that lending growth with one time delay affects the growth of lending. The coefficients are very close among the various specifications and concluded that credit growth of 1% in the previous year, will increase credit by 0.12-0.15%, below the other constant factors.

With the increase of the country's financial integration it is believed that it can create new funding avenues. Also, a more integrated banking structure in the global banking activities makes it even more reliable in the domestic market. An indicator that measures this effect on credit behavior is Chinn-Ito index (KAOPEN), which measures the level of the country's financial liberalization in a range of 0-1, where higher values mean even higher liberalization. In all the different specifications of the model that are made, wherever the presence of statistical significance is estimated, the country's financial integration negatively affects bank loan. Also is noted the presence of a high coefficient, which can be explained by the nature of the indicator of the country's financial liberalization (KAOPEN). It is believed

		Stepwise Fixed effects		GMM stepwise		GMM full	
	Prob.	Coeffic.	Prob.	Coeffic.	Prob.	Coeffic.	Prob.
	***0.0076	0.124618	**0.0336	0.148847	***0.0080	0.150315	**0.0139
	0.1043	-5,78552	0.3119	-8,179486	0.1059	-8,08557	0.1332
						-0.064229	0.6899
	***0.0001	1,056837	*0.0582	1,739603	***0.0001	1,727859	***0.0001
	**0.0335	-0.860090	0.1450	-0.841156	**0.0341	-0.790425	*0.0867
						0.005613	0.9528
	***0.0066	0.231828	0.2277	0.463519	***0.0068	0.471560	***0.0094
						-0.007042	0.9051
	**0.0164	0.541719	0.9420	-11,24925	**0.0166	-11,62228	**0.0184
	***0.0000	-1,743657	***0.0000	-1,53055	***0.0000	-1,5431	***0.0000
	***0.0001	6,58532	***0.0000	4,900553	***0.0001	4,680923	***0.0007
	0.3617	-0.411309	**0.0388	0.073216	0.3680	0.066394	0.4381
						-0.609834	0.8854
	0.0900	44,12775	0.0053	15,79072	0.0905	16,69625	0.1363
		0.585704		0.538942		0.539494	
		159		158		158	

that the country's financial integration makes the country more vulnerable to shocks that occur in the global market, and perhaps right here is explained the presence of the financial crisis, which violated the trust of banking institutions, caused a liquidity drain and created a panic over the possible moves. In line with this logic can be confirmed to us by a study of 146 countries for a period from 1990 to 2013 (Pham, 2015), where the growth of the country's financial liberalization resulting in a significant variable with a negative impact on bank credit.

When the banks' activities are funded with more capital, banks are more able to absorb the losses they incur on their own assets. In this way banks are better protected against a fall in prices of assets that possess. On the other hand a requirement for more capitals means that banks can not expand their activities through debt. They should expect to expand the balance sheet, collecting capital. This makes them less agile in new opportunities, and this is believed to negatively affect the loan. Also in our study, it turns out that a negative relationship between the indicators, where

1% increases in the ratio of capital to assets will cause contraction of 0.79-0.84% of bank credit under other constant factors. Our conclusion is that the financing of capital banking activities is more expensive than debt financing.

With the entry of foreign banking capital, mainly in the late 90th and early 2000s, they were seen as an opportunity of increasing banking competition, expansion of banking intermediation in general and the development of these sector capabilities and more. But these banks also were seen as “guilty of importing” the financial crisis in the years 2008-2009, where foreign banks decreased significantly credit as a result of lower funding from parent companies. Even in our study when we evaluate the impact of foreign banks in credit growth, some regression estimations appeared to show that the large presence of foreign banks in the domestic market has a negative impact on credit, with a coefficient of -0.41 to -0.59%. In fact, we should be careful with these interpretations, because some models have problems with the normal distribution tests, while the model that should be taken into account and that is GMM, which brings this indicator as not so important for credit growth, with a positive coefficient. However the negative impact of foreign bank presence on the loan is not meant to be a surprise, given the fact that they really contracted largely credit supply in the period of financial crisis and later, where other studies (Cull & Peria, 2012) concluded a decline in credit rates of foreign banks versus domestic banks. Also (Chen & Wu, 2014) noted a greater negative relationship between loan rates and foreign banks, especially in Emerging Europe. (Bakker et. Al, 2013) also shows that foreign banks reduced lending more than the domestic’s banks and that this contraction is due to the contraction of the conditions for funding from the parent banks.

High values of non-performing loans rate cause pressure on the balance sheets of banks, increasing bank costs, increasing the risk of lending and this may affect bank credit operations. NPL has mainly explained by weakening the capacity of borrowers to pay debts, while the link that conveys the effect is often associated with the credit supply channel. Diawan and Rodrik (1992) suggest that NPL increase bank capital uncertainty and as a result they limit access to project financing. This in return raises interest rates and therefore contributes to reducing credit growth. Other justifications of the negative impact of the NPL are related with increased costs that cause NPL (Mohd et.al, 2010). All these reasons in fact lead to a conclusion that these two indicators have a negative relationship. It also turns us in our study, although it can be said that only one evaluation of the model specification emerges as an important variable statistically at the level of 5%, stating that an increase of 1% of the NPL will impact on reducing the credit growth for 0.41%, below the other constant factors. Also in all other models specifications, the coefficient turns to be negative too, but not significant.

As a result of a wide panel of data of different countries, heterogeneous errors may exist where problems arise as heteroscedasticity or no normal distribution of residuals. We believe that the best model specified and which produces reliable evaluation is the GMM model.

6. Findings and Policy Implications

The dynamics of the credit growth as a traditional banking instrument and important for the economy has had its ups and downs in relation to time developments. The study aims to find the factors of financial-banking specifics of influencing these credit dynamics. As a result of a wide panel of data, heterogeneous errors may exist where the problems appear to us as heteroscedasticity or no normal distribution of residuals. The best specified model that produces reliable evaluation is the GMM model. Including variables in this model emphasizes that the dependent variable is explained by 54%. Variables such as credit growth with one time delay, spread of interest rates, deposit growth, return on assets are important factors that positively affect the credit growth. Variables such as non-performing loans, bank capital to assets, financial integration, and real interest rates are statistically significant factors that negatively affect credit.

References

- Ademi, R. (2017). 'Faktorët e kredisë bankare ndaj sektorit privat-evidenca nga shtetet e EJJ-së dhe EQL-së'. Punim doktrature, UET, Tiranë.
- Backe, P., Egert, B., Zumer, T. (2006). 'Credit growth in Central and Eastern Europe: New (over) shooting stars?'. ECB, Working paper series no 687.
- Bakker, B., Klingens, Ch., Impavido, G., Vandenbussche, J., Zeng, L., Yang, J., (2013). 'Credit Growth and Foreign Bank Ownership and Funding: A bank-level analysis'. IMF Working Papers.
- Chen, G., Wu, Y., (2014). 'Bank Ownership and Credit Growth in Emerging Markets During and After the 2008–09 Financial Crisis—A Cross-Regional Comparison'. IMF Working Paper.
- Coricelli, F., Masten, I., (2004). 'Growth and Volatility in Transition Countries: The Role of Credit'. A paper presented at the IMF conference in honor of Guillermo Calvo, Washington, April 15-16.
- Cottarelli, V., Ariccia, G., Vladkova, I. (2013). 'Early Birds, Late Risers, and Sleeping Beauties: Bank Credit Growth to the Private Sector in Central and Eastern Europe and the Balkans'. IMF Working Paper, WP/03/213.
- Coudert, V & Pouvelle, C., (2010). 'Assessing the sustainability of Credit Growth: The case of CEEC'. European Journal of Comparative Economies, Vol. 7, n. 1, pp. 87-120.
- Cull, R., Peria, M.S., (2012). 'Bank ownership and lending patterns during the 2008-09 financial

- crisis'. The World Bank, Policy Research Working Paper 6195.
- Diwan, I., Rodick, D. (1992). 'Debt Reduction, Adjustment Lending, and Burden Sharing'. NBER Working Paper No. 4007 (Cambridge, MA, March).
- European Bank for Reconstruction and Development (2012). 'Transition Report 2012-Integration Across Borders'.
- Goldsmith, W.R. (1969). 'Financial Structure and Development'. New Haven, Connecticut: Yale University Press.
- Guo, K., and Stepanyan, V., (2011). 'Determinants of Bank Credit in Emerging Market Economies'. IMF Working Paper.
- Kalluci, I. (2012). 'Sjellja e kreditimit në Shqipëri; Një shenjë konvergjence apo një devijim nga tendenca e vet afatgjate'. Banka e Shqipërisë, Material diskutimi.
- King, R.G., Levine, R. (1993 August). 'Finance and Growth: Schumpeter might be right'. The Quarterly Journal of Economic, Vol.108, No.3, pp.717-737.
- Kiss-Marion, G., Vonnak, N. (2006). 'Credit Growth in Central and Eastern Europe: Convergence or Boom'. MNB Working Papers, Budapest.
- Magud, N.E., Reinhart, C.M., and Vesperoni, E.R., (2012). 'Capital Inflows, Exchange Rate Flexibility, and Credit Booms'. IMF Working Paper.
- McKinnon, R.I. (1973). 'Money & Capital in Economic Development'. Washington D.C., the Brookings Institution.
- Mishkin, F.S., Eakins, S.G, (2012). 'Financial Markets and Institutions'. 7th Edition, The Prentice Hall Series in Finance.
- Mohd, Z., A. Karim, C. Sok-Gee., and Sallahundin, H., (2010). 'Bank Efficiency and Non-Performing Loans: Evidence from Malaysia and Singapore'. Prague Economic Papers, 2.
- Pham Th.H., (2015). 'Determinants of Bank Lending'. Working Paper EA 4272, Lemna, Universite de Nantes.
- Rousseau, P.L., Wachtel, P. (1998 November). 'Financial Intermediation and Economic Performance: Historical Evidence from Five Industrialized Countries'. Journal of Money, Credit and Banking, Vol. 30, No. 3, Part 2.
- Tamirisa, N., Igan, D. (2007). 'Credit Growth and Bank Soundness in Emerging Europe'. Croatian Central Bank.
- Tamirisa, N., Igan, D., (2007). 'Credit Growth and Bank Soundness in Emerging Europe'. Croatian Central Bank.
- Петковски, М., (2009). 'Финансиски пазари и институции (Financial Market and Insitutions)'. второ издание (2nd edition).