

## **THE IMPACT OF FINANCIAL CRISIS ON THE BANKING SYSTEMS: AN ANALYSIS ON EU MEMBERS**

**Ionela-Gabriela MATEI**

Faculty of Economics and Business Administration, Alexandru Ioan Cuza University  
Iasi, Romania  
*matei.ionelagabriela@gmail.com*

**Abstract:** *When we talk about chaos, we think of events that can inevitably occur and which are difficult to manage, such as the financial crisis. Of course, in such situations it is good to analyze the position that banks have taken to survive the impact of a crisis on a country's economy. But as for every problem there is a solution and in such events there are diversified solutions, even if the solution of the problem is slow due to the strong scope created on the economic basis. Here we can analyze the measures taken by the banks in the system to reach an economic balance. Thus, the financial crisis has made its mark on price indicators on banking markets. From different perspectives, the increase in interest rates on new loans granted to non-financial companies and deposits for households in EU is a clear signal of fragmentation and heterogeneity in European banking markets and not only. The analysis aimed to emphasize the impact of the financial crisis on the banking systems of the member countries of the European Union. In this situation, the use of the OLS method was used to see the different interferences that the crisis had, but also because its presence was different from one state to another. Because of this analysis, we can conclude that it was a period of banking restructuring that led to a heterogeneity of the banking systems that were subject to banking inefficiency during the financial crisis.*

**Keywords:** *Financial Crisis, Bank Systems, European Union*

**JEL Classification:** *G01, G21, G34*

### **ACKNOWLEDGEMENT**

*This work was cofinanced from the European Social Fund through Operational Programme Human Capital 2014-2020, project number POCU/380/6/13/125015 "Development of entrepreneurial skills for doctoral students and postdoctoral researchers in the field of economic sciences"*

### **INTRODUCTION**

A financial crisis (Shleifer & Vishny, 2011) in its essence is often associated with a financial disaster due to massive withdrawals of investments (assets, money) by fearful investors, sharp fall in asset prices, inability to pay debts by individuals and legal entities, lack or insufficiency of liquidity of financial-banking institutions, the explosion of a speculative bubble, the collapse of the stock market, the currency crisis, the overvaluation of assets, irrational investment behaviors, etc. Many economists have said that the onset of the 2007 financial crisis was caused by sectors of the financial system, including banks, mortgage lenders and rating agencies.

As a result of this event, banks were forced to increase their lending requirements, but also those on their reserves for large-scale situations, such as the last crisis. Another restriction that banks have had to comply with refers to their way of investing, limiting

speculative transactions and eliminating those that include risky real estate. The new regulations brought by governments during the financial crisis have brought major changes that have involved both the supervisory authorities and the activities based on the consumption of financial-banking services.

## **LITERATURE REVIEW**

The financial crisis of 2007 affected the banking industry for a fairly short period of time, compared to other crises that lasted longer and caused more damage. That said, during the crisis, banks lost a lot of money for non-payment of mortgages, interbank loans were blocked, and all loans for consumers and businesses were limited. On the other hand, the financial crisis has led to the creation of new regulations at EU level through Basel III. These regulations target capital and liquidity in the banking sector to avoid another financial crisis, leaving EU member states to implement these prudential standards in their economic systems. This has led to sustained confidence in the economy, but at the same time restrictions have been set on the compensation of incentives.

### **Pre-crisis - the period of high profits?**

Before the financial crisis of 2007 in the United States and its spread to other continents, in the EU, as in the case of other countries around the world, due to the regulations in force at that time, there was a boom that concerns the purchase of real estate and subprime mortgages (Felton & Reinhart, 2008). At that time, many foreign banks around the world bought collateralized debt of American banks as collateral. Due to the rise in subprime lending after 2000 (Baily, et al., 2008), an action by the US government to avoid the recession was to drastically reduce interest rates to almost zero, leading to a "flood" of liquidity in the economy. Due to this action, the requirements for such loans continued to operate in the same parameters, and the effect of "cheap money" stimulated the emergence of a boom in the real estate market. This boom led to a series of speculations on the market, and house prices followed an upward trend, which formed a real estate bubble. At the same time, an effect created by this action was the decrease in bond yields compared to shares that were much more attractive. The decision of the American government at that time led to chaos in the stock market, the real estate market took a leading place, and the unemployment rate had fallen sharply due to massive investments made by companies.

After the short-lived recession of 2001, investment banks (ECB, 2007) tried to make "slight" profits from these products, which were later incorporated into the same category as prime mortgages, but which nevertheless created a slight confusion among investors because the risks associated with such a maneuver could not be fully understood. The moment investors realized that subprime mortgages were a toxic debt they tried to save themselves from this situation, but this formed a cascade of failures that led to a liquidity contraction above the upper levels of the banking industry.

In the situation where unpaid mortgages were high, banks had to borrow from each other, thus becoming an "impossibility" for potential new consumers and businesses to access such loans. Another action taken by banks to avoid the crisis and this bankruptcy was to resort to hedge funds, but this action was also insufficient for what was to come.

### **Financial crisis - The beginning of the end?**

During the crisis, a number of reforms have been implemented at EU level, as have other regulators around the world. These regulations have focused on large high-risk banks. These regulations have been complied with and implemented by the Financial Stability Board (monitors the global financial system), the Bank for International Settlements (provides services to all central banks) and the Basel Committee on Financial Supervision (develops banking regulatory standards).

Some countries have entered a recession faster than other countries, and this has led to declining demand for imported goods and services and at the same time stimulating other countries to reach this threshold. However, the supervision of financial stability has become of major importance, and the European community has tried to place a greater emphasis on large banks that may present some uncertainties.

The decimation of the banking sector by the emergence of the financial crisis (Thakor, 2015) has led to the bankruptcy of some banks, to the merging of small banks with stronger banks but also to the rescue of some of them by governments. During that period, the banks' shares suffered substantial price declines, dividends were either reduced or postponed for a later date (1-2 years), and in terms of investors they were the most affected due to the fact that they lost huge investments. This experience has led to a much greater diversification of risks than was done before the crisis.

The outbreak of the crisis was based on a multitude of factors (ECB, 2007), among which we can mention: the rapid growth of the real estate market, the lack of liquidity in the market, a large number of banks with large portfolios of non-performing loans, systemic failures, unexpected investment behaviors or uncontrolled, taking too many risks, absence or insufficiency of regulations, contagion of one institution / country by another, etc.

Although the crisis of 2007 started in the United States, it spread globally (Claessens & van Horen, 2016) in an extremely short time, which leads us to believe that this phenomenon has easily penetrated the territories with which the United States connects. Being a crisis that could no longer be avoided and / or controlled, it determined the world's economies to enter into a long-term recession (Blecker, 2014).

The effects of the new regulations have taken into account the following aspects: better supervision of financial markets, strengthening supervisory mechanisms, the creation of a board to monitor systemic risks, the introduction of new standards to protect investors, the creation of processes and tools to help through cash infusions financial-banking institutions facing financial difficulties and measures to improve the activity of rating agencies.

## **DATA AND METHODOLOGY**

The financial crisis has been analyzed by different economists and researchers to see the different interferences it has created within the banking sectors in different countries but also on certain economies. Jack Joo K. Ree (2011) examines how the financial crisis is transmitted through different channels (changes in the way financial assets are valued, how they affect the decrease in cross-border financing and the increase in non-performing loans due to cross-border links) and affects the soundness of banks in Asian countries with small incomes. Igor Živko și Tomislav Kandžija (2013) analyze the effect of the global crisis on the stability of the Croatian banking sector and what kind of correlation there is between lending activities and economic growth, which can highlight the level of availability that

finances the economy. Another researcher, Samuel O. Fadare (2011) examines the liquidity of the Nigerian banking system and how the financial crisis of 2007-08 affected the liquidity of deposit banks due to monetary policies that did not ensure the good survival of the banking sector at that time.

**Table 1. Variable description**

Variable abbreviation	Variable name	Variable description
ROA	Return on assets	The profitability of a bank in relation to its total assets
OBNKS	Operating banks	The total number of banks operating in a country
DCREDIT	Domestic credit	Loans that a central bank of a country makes available to borrowers in the same territory
NPLR	Non-performing loans ratio	The rate of those loans on which the debtor has not paid its outstanding payments for a certain period
EXCHR	Exchange rates	The price of a nation's currency against another foreign currency
BSCTLEVER	Banking sector leverage	The amount of capital present in the form of debt and which assesses the ability of the banking sector to meet its financial obligations
BCRISISDUMMY	Banking crisis dummy	The period in which the crisis begins (massive losses of the banking system and the intervention of the banking policy) and the one in which it ends (the growth of real GDP and loans within two consecutive years)

In the following we will review the analysis carried out for the period 2007-2015, in which the emphasis was on the impact that the financial crisis 2007-08 had on the banking sectors in the member countries of the European Union.

The analysis uses Ordinary least squares based on the equation below:

$$ROA_{i,t} = \beta_0 + \beta_1 OBNKS_{i,t} + \beta_2 DCREDIT_{i,t} + \beta_3 NPLR_{i,t} + \beta_4 EXCHR_{i,t} + \beta_5 BSCTLEVER_{i,t} + BCRISISDUMMY_{i,t} + \varepsilon_{i,t}$$

where:

ROA – return on assets

OBNKS – operating banks

DCREDIT – domestic credit

NPLR – non-performing loans ratio

EXCHR – exchange ratio

BSCTLEVER- banking sector leverage

BCRISISDUMMY- banking crisis dummy

ε- residuals

In order to analyze the impact of the financial crisis on the EU member states, we have constructed the following hypotheses:

*H1: The financial crisis has a negative impact on EU member states*

*H2: The financial crisis has a greater negative impact on EU member states with upper middle income*

Before performing the analysis, we proceeded by testing the data set by checking the multicollinearity by the VIF test (Appendix - A1) and making the correlation matrix (Appendix - A2) that we found them in the appendix. Following this test, it was found that we do not have multicollinearity and the correlation matrix tells us that there is a slight correlation and mostly negative between the variables with the highest value 0.21 between the operating banks and the leverage of the banking system.

**Table 2. Descriptive analysis**

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	252	0.176	1.530	-10.472	4.241
OBNKS	246	171.231	359.414	3	1936
DCREDIT	252	978849.2	1532	11626.16	5694972
NPLR	250	7.172	7.516	0.1	47.747
EXCHR	252	9.866	39.978	0.5	279.332
BSCTLEVER	245	14.548	8.708	4.149	51.646

Source: Results obtained by the author

As we can see in table 2, the return on assets registers a very large difference between its minimum and maximum value, which leads us to the fact that the financial crisis led to a negative return on banking systems, their losses being substantial. What is surprising is that the average of non-performing loans is quite low compared to market expectations at the time.

**Table 3. The impact of financial crisis on return of assets of banking systems from EU**

	[1]	[2]	[3]	[4]
lnobnks			0.131 (0.085)	0.041 (0.079)
nplr		<b>-0.080***</b> (0.011)		<b>-0.080***</b> (0.012)
exchr	-0.000 (0.002)	0.001 (0.002)	-0.000 (0.002)	0.000 (0.002)
lndcredit			-0.012 (0.067)	-0.049 (0.062)
bsctlever	<b>-0.026*</b> (0.011)	<b>-0.036*</b> (0.010)	<b>-0.028*</b> (0.012)	<b>-0.033**</b> (0.011)
bcrisisdummy	<b>-0.724**</b> (0.219)	<b>-0.578**</b> (0.202)	<b>-0.749*</b> (0.219)	<b>-0.577**</b> (0.204)
_cons	<b>0.751***</b> (0.188)	<b>1.417***</b> (0.198)	0.405 (0.676)	<b>1.824**</b> (0.659)
Adj. R <sup>2</sup>	0.076	0.225	0.080	0.221
F-stat	7.76	18.68	5.25	12.5

Note: standard errors in parentheses

\*\*\* statistical significance level at 1%

\*\* statistical significance level at 5%

\* statistical significance level at 10%

Source: Results obtained by the author

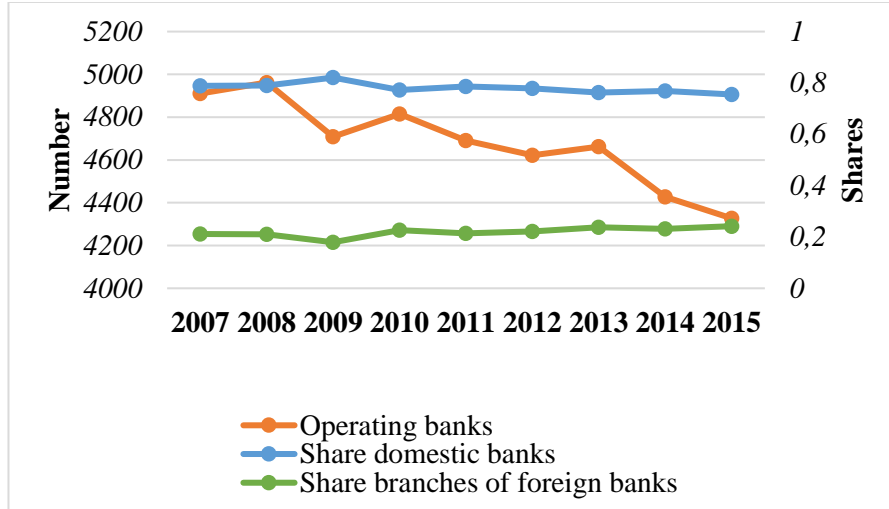
The results indicate those non-performing loans (NPLR), banking sector leverage (BSCTLEVER) and banking crisis dummy (BCRISISDUMMY) have a high significance

on determining return on assets into banking systems from EU. The models from the table above having as a dependent variable the return on assets indicate that non-performing loans (from total loans) are negatively significant at the 1% level, banking sector leverage negatively significant at the 10% and banking crisis dummy (years when the crisis was in every country from EU) are negatively significant at the 5% level for the regular term. This means that between these indicators and return on assets is a negative link.

The return on assets during the financial crisis and post-crisis (Appendix - A4) was negatively influenced both by the non-performing loans rate (-0.07% - crisis, -0.09% - post-crisis) and by the banking sector leverage (-0.05%). Moreover, domestic credit (0.0000003%) during the crisis influenced the return on assets in a positive way, but in a very small percentage, making the banking systems unable to cover the losses that amounted to more. If the non-performing loans rate and the banking sector leverage were 0, the return on assets was estimated during the crisis at a lower value (0.72%) than in the post-crisis period (1.39).

At the same time, if we look at the impact of the financial crisis on the return on assets of each banking sector for each EU member country (Appendix - A5), we can see that the non-performing loan rate has contributed to lower returns on bank assets in Bulgaria, Czech Republic, UK, Croatia, Italy, Lithuania, Netherlands, Portugal and Slovenia, with the exception of Slovakia with an increase of 0.15%. In the case of operating banks in each EU country, their number influenced the return on assets more positively (UK, Lithuania, Netherlands, Sweden, Slovakia) than negatively (France, Italy). Foreign exchange was the only one that helped increase the return on assets, but this happened only in 2 countries (Italy - 16.75% and Portugal 17.36%) of the 28 EU members. Domestic credit affected positively only the banking sectors from UK and Croatia, and negatively affected the banking sectors from Slovenia and Slovakia, Slovenia being the most affected on this side (USD 39.23 billion) due to the less restrictive lending policy from that period and before the onset of the financial crisis. The only ones that negatively affected the return on assets of the EU banking sectors was leverage and the financial crisis. Therefore, the country that could have an increase in return on assets of 312%, in circumstances where the non-performing loans rate and the level of domestic loans were 0, is Slovenia.

**Figure 1. Number and shares of banks in European Union members in 2007-2015**

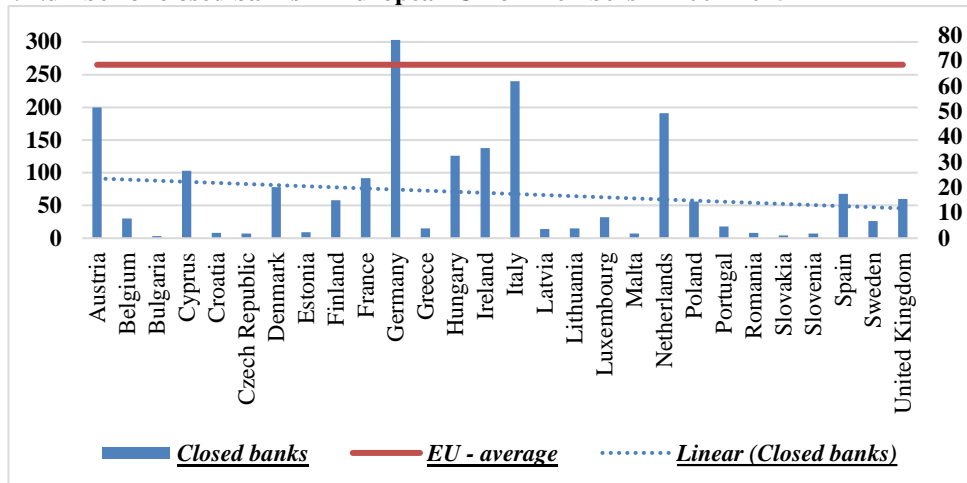


Source: Results obtained by the author

Regarding the banks operating in the EU member countries (fig. no. 1), we can see that during the existence of the financial crisis and the period after it the number of banks decreased by 18.8%, which tells us that the recession period did not help to increase their number. The banks that operated in the period 2007-2015, as can be seen in the figure above, followed a constant ownership trend for almost the entire period, the only difference being in 2009 when several banks were domestically owned and fewer held by foreigners and 2015 when banks began to be owned more by foreigners.

Analyzing the number of banks by income level in European Union (Appendix - A3), we can see that the countries with high income owned the most part of the banks (79% shares of domestic banks and 21% shares of foreign banks) compared with those countries with upper middle income. Also, from a regional perspective, the presence of a large number of domestic banks in EU can be seen in the central (89%), northern (77%), southern (62%) and southwest (50%). The large number of foreign banks in EU can be seen in the eastern (64%), western (66%), southeast (72%) and southwest (50%).

Figure 2. Number of closed banks in European Union members in 2007-2015



Source: Author estimations based on the informations provided by TheBanks.eu

The financial crisis has led to the closure of many banks during its existence. In fig. no. 2 we can observe that the countries that registered a large number of closed banks out of the total number of operating banks at that time is represented by Austria, Germany, Italy and Netherlands, due to the fact that in these countries there were more foreign banks and fewer with local full capital. In addition, several countries have a smaller number of banks that were forced to close their activity, which is why the number of operating banks of those countries was not extremely affected as in the countries mentioned above. However, the trend of banks that ceased operations was declining towards the end of the crisis because the banking system went into recession and tried to balance the balance of elements that led to such financial losses, customer losses, etc.

## CONCLUSIONS

Financial crises have usually occurred in the circumstances in which many of the transactions are made in foreign currency. Nowadays, financial crises are not uncommon due to the multitude of factors that compose them but also to the uncertainties in the market. That is why the financial crisis of 2007, like other crises over time, provided a series of answers and lessons to be applied to the current financial system through the causes and effects of the events that made it up and culminated with a collapse of the banking system at that time.

The element of differentiation of financial crises is given by the recession period, being the result of the emergence and existence of the crisis at regional or global level. Also, in such large-scale situations, governments and central banks, commercial, investment, specialized, etc. (UN SYSTEM TASK TEAM WORKING GROUP, 2013) from around the world come together to form a "wall of protection / defense" to reduce the effects of such a phenomenon but also to prevent other financial catastrophes. At the same time, the problems of this financial crisis required both conventional and unconventional methods of resolution, as well as coordinated actions to provide support to financial-banking institutions in difficulty and to put the interbank market back on its feet. A key problem created by the 2007 crisis is the lack of confidence in financial markets, which can be restored in the longer term through new strategies, methods, techniques, etc. which can generate change.

## References

1. Baily, M. N. (2008, November). *The Origins of the Financial Crisis. The Initiative on Business and Public Policy*, FIXING FINANCE SERIES(Paper 3).
2. Blecker, R. A. (2014, December). Economic stagnation in the United States: underlying causes and global consequences. *Brazilian Journal of Political Economy*, 34(4).
3. Claessens, S. &. (2016, January 28). The Impact of the Global Financial Crisis on Banking Globalization. *IMF Economic Review*, 63, 868–918.
4. ECB. (2007). *FINANCIAL STABILITY REVIEW*. Frankfurt am Main: European Central Bank.
5. Fadare, S. O. (2011, October). Banking Sector Liquidity and Financial Crisis in Nigeria. *International Journal of Economics and Finance*.
6. Felton, A. &. (2008). *The First Global Financial Crisis of the 21st Century* . CEPR for VoxEU.



7. Onofrei, Mihaela, Dumitru-Nicușor Cărăușu, and Dan Lupu. The role of the macroeconomic environment in shaping capital market co-movement in CEE countries. *Economic research-Ekonomska istraživanja* 32.1 (2019): 3813-3834.
8. Ree, J. (2011, May). Impact of the Global Crisis on Banking Sector Soundness in Asian Low-Income Countries. *IMF Working Paper*(WP/11/115).
9. Shleifer, A. &. (2011). Fire Sales in Finance and. *Journal of Economic Perspectives*, 25(1), 29-31.
10. Thakor, A. V. (2015). *The Financial Crisis of 2007–2009: Why Did It Happen and What Did We Learn?* Oxford University Press.
11. UN SYSTEM TASK TEAM WORKING GROUP. (2013). Challenges in raising private sector resources for financing. In UNTT, *Financing for sustainable development* (pp. 5-15). UN's Intergovernmental Committee of Experts on Sustainable Development Financing.
12. Živko, I. &. (2013). IMPACT OF FINANCIAL CRISIS ON BANKING SECTOR STABILITY IN REPUBLIC CROATIA. *Poslovna izvrsnost*, 7(1).
13. World Bank
14. TheBanker.eu

## APPENDIX

### A1. VIF Test for multicollinearity

Variable	VIF	1/VIF
<i>dcredit</i>	1.9	0.526
<i>bsctlever</i>	1.62	0.615
<i>obnks</i>	1.37	0.732
<i>bcrisisdummy</i>	1.14	0.880
<i>nplr</i>	1.07	0.932
<i>exchr</i>	1.04	0.965
Mean VIF	1.36	

Note: VIF<10 => no multicollinearity

### A2. Variable correlation - ROA

	<i>obnks</i>	<i>dcredit</i>	<i>nplr</i>	<i>exchr</i>	<i>bsctlever</i>	<i>bcrisis dummy</i>	<i>_cons</i>
<i>obnks</i>	1.000						
<i>dcredit</i>	-0.484	1.000					
<i>nplr</i>	0.134	0.053	1.000				
<i>exchr</i>	-0.060	0.101	-0.071	1.000			
<i>bsctlever</i>	0.209	-0.545	0.071	0.029	1.000		
<i>bcrisisdummy</i>	-0.047	0.095	-0.098	-0.090	-0.317	1.000	
<i>_cons</i>	-0.275	0.165	-0.491	-0.101	-0.682	0.02	1.000

### A3. Number and shares of banks in European Union by income level and region

	Number of operating banks	Shares of domestic banks	Shares of foreign banks
<i>All countries</i>			
High income	41592	0.79	0.21
Upper middle income	531	0.25	0.75

<i>Regions of Europe divided on the members of European Union</i>			
Central European Union	30331	0.89	0.11
Eastern European Union	740	0.34	0.64
Northern European Union	2334	0.77	0.23
Western European Union	4110	0.34	0.66
Southern European Union	1057	0.62	0.38
Southeast European Union	621	0.28	0.72
Southwest European Union	2930	0.50	0.50

Source: Results obtained by the author

#### **A4. Differences on the return on assets during the crisis and post-crisis period**

	<b>Crisis</b>	<b>Post-crisis</b>
LNOBNKS	-0.000	-0.000
	(0.000)	(0.000)
NPLR	<b>-0.069***</b>	<b>-0.087***</b>
	(0.016)	(0.013)
EXCHR	0.003	-0.000
	(0.002)	(0.002)
LNDCREDIT	<b>0.000**</b>	-0.000
	(0.000)	(0.000)
BSCTLEVER	<b>-0.053***</b>	-0.021
	(0.016)	(0.014)
_CONS	<b>0.718*</b>	<b>1.388***</b>
	(0.364)	(0.219)
Adj. R <sup>2</sup>	0.278	0.192
F-stat	6.48	9.14

*Note: standard errors in parentheses*

*\*\*\* statistical significance level at 1%*

*\*\* statistical significance level at 5%*

*\* statistical significance level at 10%*

Source: Results obtained by the author

#### **A5.1. The impact of financial crisis on return of assets of banking systems from EU – by country**

Note: standard errors in parentheses

	AT	BE	BG	CY	CZ	DE	DK
LNOBNKS	1.005	6.666	2.117	-1.954	0.943	2.103	-0.555
	(6.671)	(2.600)	(2.072)	(0.911)	(0.409)	(1.499)	(0.799)
NPLR	-0.590	-0.133	<b>-0.770*</b>	0.033	<b>-0.770**</b>	-0.071	-0.191
	(1.061)	(0.113)	(0.290)	(0.035)	(0.242)	(0.163)	(0.117)
EXCHR	-0.553	0.141	17.911	4.772	0.003	0.714	0.394
	(3.882)	(0.214)	(9.750)	(4.428)	(0.030)	(0.504)	(0.326)
LNDLCREDIT	-3.861	1.944	24.787	-0.448	-0.033	0.337	2.525
	(2.113)	(1.420)	(12.090)	(3.406)	(1.786)	(0.683)	(3.386)
BSCTLEVER	-0.282	<b>-0.192**</b>	0.638	-0.188	-0.180	<b>-0.049*</b>	-0.001
	(0.321)	(0.025)	(1.897)	(0.144)	(0.105)	(0.011)	(0.036)
BCRISISDUMMY	-0.055	0.196	0	-1.222	0	-0.064	<b>-0.607*</b>
	(0.406)	(0.231)	(omitted)	(1.644)	(omitted)	(0.238)	(0.189)
_CONS	48.915	-41.147	-286.522	9.683	4.244	-20.115	-32.737
	(54.544)	(22.793)	(144.052)	(36.600)	(21.414)	(20.409)	(43.828)
Adj. R <sup>2</sup>	0.094	0.946	0.330	0.901	0.461	0.966	0.674
F-stat	1.14	24.39	1.79	11.72	2.37	39.02	3.77

\*\*\* statistical significance level at 1%

\*\* statistical significance level at 5%

\* statistical significance level at 10%

Source: Results obtained by the author

#### A5.2. The impact of financial crisis on return of assets of banking systems from EU – by country

	EE	ES	FI	FR	GB	GR	HR
LNOBNKS	29.682	0.122	0.315	<b>-1.036*</b>	<b>0.546*</b>	4.351	0
	(29.146)	(1.385)	(0.630)	(0.354)	(0.128)	(3.520)	(omitted)
NPLR	-2.152	-0.166	0.221	-0.046	<b>-0.245***</b>	0.069	0.204
	(1.696)	(0.138)	(0.604)	(0.059)	(0.023)	(0.107)	
EXCHR	-9.194	-5.387	0.226	1.411	1.731	-14.686	-0.762
	(22.437)	(7.343)	(3.223)	(0.523)	(1.174)	(15.547)	
LNDLCREDIT	-2.555	-2.087	-2.381	1.275	<b>2.300**</b>	10.233	0
	(17.028)	(3.937)	(1.777)	(0.533)	(0.331)	(8.815)	(omitted)
BSCTLEVER	-0.775	-0.082	0.109	<b>-0.033**</b>	<b>-0.021*</b>	-0.039	0
	(1.603)	(0.213)	(0.163)	(0.007)	(0.006)	(0.097)	(omitted)
BCRISISDUMMY	0	0.087	0	-0.030	0.277	-2.956	0
	(omitted)	(1.533)	(omitted)	(0.052)	(0.100)	(1.899)	(omitted)
_CONS	-36.942	36.911	28.194	-16.469	<b>-37.822**</b>	-135.285	1.333
	(224.505)	(61.282)	(21.655)	(8.464)	(5.257)	(121.365)	
Adj. R <sup>2</sup>	0.310	-0.373	0.388	0.933	0.967	0.533	
F-stat	1.72	0.64	1.89	19.83	40.23	2.53	

*Note: standard errors in parentheses*  
 \*\*\* statistical significance level at 1%  
 \*\* statistical significance level at 5%  
 \* statistical significance level at 10%  
 Source: Results obtained by the author

**A5.3. The impact of financial crisis on return of assets of banking systems from EU –by country**

	HU	IE	IT	LT	LU	LV	MT
LNOBNKS	-8.437 (5.583)	0.651 (2.394)	<b>-0.801*</b> (0.234)	<b>17.444***</b> (2.631)	15.755 (7.158)	7.412 (28.590)	-1.609 (0.926)
NPLR	<b>-0.144*</b> (0.041)	-0.209 (0.301)	<b>-0.285**</b> (0.062)	<b>-0.433***</b> (0.040)	0.454 (1.264)	-0.265 (0.191)	-0.204 (0.260)
EXCHR	-0.003 (0.021)	-14.859 (24.692)	<b>16.751*</b> (4.024)	11.558 (5.780)	6.065 (4.250)	1.999 (22.166)	0.376 (4.519)
LND CREDIT	<b>6.497*</b> (2.209)	-3.818 (6.928)	2.872 (2.135)	4.827 (3.115)	5.036 (4.091)	4.315 (15.114)	9.934 (6.695)
BSCTLEVER	-0.130 (0.153)	-0.203 (0.484)	-0.008 (0.013)	<b>-0.595**</b> (0.171)	-0.008 (0.038)	-0.627 (1.773)	0.111 (0.156)
BCRISISDUMMY	-0.071 (0.376)	-1.756 (2.747)	0.584 (0.288)	0.000 (omitted)	0.197 (0.246)	-0.761 (3.193)	0 (omitted)
_CONS	-26.775 (31.120)	65.157 (109.889)	-49.152 (32.902)	<b>-94.209*</b> (36.135)	-141.260 (82.600)	-60.028 (175.537)	-88.925 (59.820)
Adj. R <sup>2</sup>	0.897	-0.700	0.869	0.942	0.453	-0.15	0.1146
F-stat	12.66	0.45	9.88	27.07	2.11	0.83	1.21

*Note: standard errors in parentheses*  
 \*\*\* statistical significance level at 1%  
 \*\* statistical significance level at 5%  
 \* statistical significance level at 10%  
 Source: Results obtained by the author

**A5.4. The impact of financial crisis on return of assets of banking systems from EU –by country**

	NL	PL	PT	RO	SE	SI	SK
LNOBNKS	<b>1.720**</b> (0.264)	-9.558 (13.723)	9.385 (4.425)	-35.212 (25.943)	<b>0.439*</b> (0.150)	9.321 (5.013)	<b>0.251*</b> (0.079)
NPLR	<b>-0.441**</b> (0.086)	0.516 (0.427)	<b>-0.363*</b> (0.099)	-0.142 (0.126)	-0.294 (0.192)	<b>-1.736*</b> (0.514)	<b>0.146*</b> (0.056)
EXCHR	1.716 (0.868)	-0.855 (0.917)	<b>17.361*</b> (4.924)	-3.507 (3.233)	0.066 (0.109)	58.102 (25.228)	0.774 (0.706)
LND CREDIT	1.153 (1.056)	-2.237 (1.367)	-0.335 (3.478)	0.430 (5.911)	-0.143 (0.667)	<b>-39.228*</b> (11.751)	<b>-3.655**</b> (0.798)
BSCTLEVER	<b>-0.102**</b> (0.021)	0.066 (0.184)	0.087 (0.122)	-0.081 (0.784)	-0.109 (0.044)	4.057 (1.723)	<b>-0.018*</b> (0.006)
BCRISISDUMMY	<b>-0.305*</b> (0.098)	0 (omitted)	-0.374 (0.783)	0 (omitted)	0.346 (0.213)	1.846 (2.573)	0 (omitted)

---

_CONS	-22.164	90.920	-51.526	137.12	1.3515	<b>312.314*</b>	<b>39.252**</b>
	(14.581)	(93.445)	(33.809)	(112.528)	(9.470)	(97.995)	(8.807)
Adj. R <sup>2</sup>	0.991	0.358	0.859	-0.127	0.527	0.728	0.874
F-stat	159.65	1.9	9.13	0.82	2.49	4.57	12.18

*Note: standard errors in parentheses*

*\*\*\* statistical significance level at 1%*

*\*\* statistical significance level at 5%*

*\* statistical significance level at 10%*

*Source: Results obtained by the author*



This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution - Non Commercial - No Derivatives 4.0 International License.