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THE FINANCIAL CRISIS' EFFECTS ON BANKS' EFFICIENCY IN THE POŽEGA AND SLAVONIA COUNTY

UČINCI FINANCIJSKE KRIZE NA EFIKASNOST POSLOVNIH BANAKA U POŽEŠKO-SLAVONSKOJ ŽUPANIJI

ABSTRACT

In developed economies financial crises from 2007 have had significant influence on macro economy and bank's profitability and stability across national economies. Like in other banking systems in Croatia in last few decades' banks become larger and complex and had developed their business profiles through the wider usage of innovative financial techniques, instruments and information technologies. The aim of the paper is research the characteristics and volume of economic crisis in Croatia, the crises' impact on the Croatia banking sector efficiency and profitability and the effect on banks' profitability dominantly active in Požega and Slavonia County. The research would be based on the representative sample of Požega and Slavonia County clients (households and enterprises). So the paper will test next hypotheses: the influence of the economic crises on Slavonia economy, the quality of Slavonia banks loans portfolios, the categories in analyzed portfolios which are the most distorted through the crisis in the researched County. Research methodologies would consist mostly of the ratio analysis of the most used performance indicators like return on assets, return on equity, reservations, nonperforming loans, net income costs etc., their trends in last few years and future expectations on the values of used variables.

Key words: *bank, efficiency, profitability, financial crisis, loan quality, reservations*

SAŽETAK

Financijska kriza od 2007. godine značajno utječe na gospodarstva, bankovnu profitabilnost i stabilnost nacionalnih gospodarstava diljem svijeta. Kao i u drugim bankovnim sustavima u Hrvatskoj u zadnja dva desetljeća banke postaju sve krupnije, kompleksnije i kontinuirano razvijaju svoje poslovne modele posredstvom sve šire primjene inovativnih financijskih tehnika, instrumenata i informacijskih tehnologija. Cilj rada je istraživanje karakteristika i obujma ekonomske krize u Hrvatskoj, njenog utjecaja na efikasnost i profitabilnost hrvatskog bankovnog sektora te učinaka na profitabilnost najznačajnijih banaka aktivnih u Požeško-slavonskoj županiji. Istraživanje će se bazirati na reprezentativnom uzorku klijenata Požeško-slavonske županije (kućanstava i poduzeća).

Slijedom navedenoga rad će analizirati slijedeće hipoteze: učinak ekonomske krize na gospodarstvo Slavonske županije, kvalitetu kreditnog portfelja banaka u Slavonskoj županiji, kategorije kreditnog portfelja koje su najugroženije u Požeško-Slavonskoj županiji. Metodologija istraživanja obuhvatit će analizu omjera najznačajnijih pokazatelja koji se koriste u bankarstvu kao što su profitabilnost imovine, profitabilnost vlasničke glavnice, rezervacije, „loše" kredite, omjer troškova i prihoda i sl., njihova kretanja u posljednjih nekoliko godina te očekivanja o budućim trendovima.

Ključne riječi: *banka, efikasnost, profitabilnost, financijska kriza, kvaliteta kredita, rezervacije*

Introduction

In last twenty years Croatian financial system has changed dramatically and has become more competitive and comparable to developed and sophisticated financial systems of the market oriented economies. Also the constant development of economy had been slowed down by the influence of global financial crises factors in domestic financial system but in wider scope into the banking sector in Croatia. The paper analyses the specific factors influence on the quality of Požega and Slavonia County dominant banks loans portfolios, collaterals, reservation structure, repayments etc. Also the paper suggest some bank's actions which can restructure debtors positions in Požega and Slavonia County and in wider sense positively influence on reshape and development of regional economy.

1. Croatia banking sector in figures

Croatian market for financial services counted population of around 4,403 million people with nominal GDP per capita of 10,205 Euros at the end of 2012. In 32 commercial banks are employed 21,836 employees which manage by 54 billion euros bank's asset. In recent years the new technologies and communication infrastructures have become revolutionary forces changing bank business models, cost reductions and the nature of customer relationship in Croatia. The intensive use of electronic banking channels and self-service devices has also significantly changed typical branch profile. Compared to EU statistics and the significance of contemporary distribution channels in Croatia there is 3,363 people per branch while in EU only 2,131 people per branch. Also in Croatia are rising trend in Internet banking use (23% adult persons aged from 16 to 74). Croatian financial system is characterized by an extremely important role of commercial banks in servicing all deficit saving units (corporations, households, government). Total banking system asset category is continuously growing in last decade but in last few years at lower rate (Bank bulletin, 2012).

Table 1 Croatian commercial banks basic financial indicators, 2012

Size	Number	Asset (%)	Employees	Units	ATM	ROAA (%)	ROAE (%)	A/C (%)
Large	6	82.4	15,872	745	3,064	1,,2	6.1	21.2%
Medium	3	9.2	2,572	177	567	0.5	3.5	17.6%
Small	23	8.4	3,392	332	420	-0.2	- 3.1	16.5%
Total	32	100.00	21,836	1254	4,051	1.1	6.3	20.17

Note: Data for bank number, assets, ROAA, ROAE and A/C is for VI/2012 and assets for VI/2012
Source: Croatian Central Bank, official data, 2013.

Financial institution's assets to GDP per capita in Croatia financial system, 1998-2012
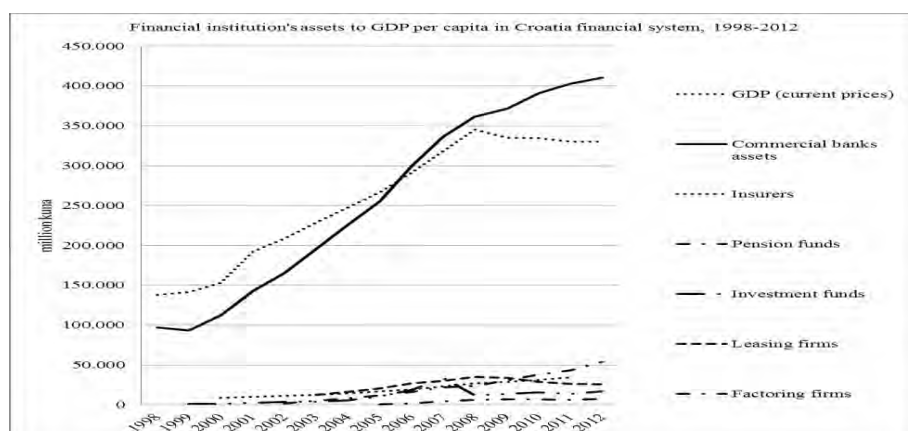
Source: Croatian Central Bank and Croatian Agency for financial services supervision, official data, 2013.

At the end of 2012 Croatian commercial banks credit portfolio had consisted of only 36.8% loans granted to corporations and almost 45,1%loans granted to households. On the other side 55% of total bank's deposits are from households sector and only 14.9% from corporate sector. In total bank's revenue structure about 67.4% is net interest revenues. The structure of commercial bank loans in Croatia has become worse from 2007 as result of global crises which spilled over in Croatia and the nonperforming loans (NPL) were 13.81% at the end of 2012 (the ratio of nonperforming loans in total loans in 2012 had amounted 49.67% for corporate sector and 9.15% for households mortgage loans).

Table 2 Concentration ratio C5 in Croatia banking system, 2004 to 2011.

Year	Total assets	Total deposits	Time deposits	Loans	Interest revenues	Non-interest revenues	Net profit	Capital
2004	0,7426	0,7169	0,7067	0,7306	0,7032	0,7446	0,7878	0,677
2005	0,7444	0,721	0,714	0,7465	0,7186	0,7258	0,7795	0,6881
2006	0,7265	0,7017	0,6852	0,73	0,7036	0,7191	0,7952	0,7189
2007	0,7155	0,7205	0,7209	0,7205	0,6851	0,7394	0,7751	0,6820
2008	0,7227	0,7136	0,7044	0,7258	0,7104	0,7208	0,8506	0,7047
2009	0,7543	0,7644	0,7732	0,7666	0,7201	0,7525	0,8446	0,7855
2010	0,7525	0,7539	0,7596	0,7668	0,7505	0,7526	0,8784	0,7853
2011	0,7597	0,7648	0,7722	0,7753	0,7477	0,744	0,8756	0,7937

Source: Pavkovic, A., Dumičic, K., Akalović Antić, J. (2012): pp. 117-136.

The table 2 consists of concentration ratios on the basis of different bank's criteria from 2004 to 2011 for five large commercial banks in Croatia: Zagrebačka banka, Privredna banka Zagreb, Erste & Steiermäarkische Bank, Hypo Alpe-Adria Bank, Raiffeisen Bank Austria. The highest rose is in profit and capital category for five strongest banks in Croatia. Consequently 26 other smaller banks have gained only 12% total net profit or only 21% capital.

2. Contemporary banks efficiency tools

Different parties are interested in bank performance, like bank clients, public as potential investor, bank supervisors, financial analysts, shareholders, management and others (scientists, students, society) etc. The profitability analysis is based on a set of different indicators and often offers an

image of banking management quality. The main performance indicators computed for banks are return on equity, return on assets, income ratio, capital adequacy, ratio of overdue debt to credit exposure, non-performing loans, provisions to credit exposure ratio, etc. Return on Equity measures how efficient the shareholders capital is used. The indicator is determined as the ratio between net profit and equity. In the banks situation, a normal margin of this indicator is appreciate to be situated between the significant thresholds of 10% and respectively 30% .The Return on Equity indicator should be higher or equal inflation rate to retain real value of capital (Pavković, 2004,181). Return on Assets indicator is also known as profit to assets or the assets rent ability. It measures the effect of management capacity to use the bank assets in order to generate profit. The computation formula of the indicator is the ratio between the net profit and average asset category. The limits of indicator's variations are generally between 0.5 and 1.6 percent. Specifically to the large banks is the small value (< 1%), while to the small and medium banks is characteristic an extra unit dimension of indicator (Pavković, 2004,183). Beside these indicators, the most frequently used as performance indicators are cost income ratio and capital adequacy. Ratio of overdue debt to credit exposure is simple indicator which measures quality of portfolio and is useful to determine trend. It corresponds with provisions and non-performing loan indicator, but it is not as accurate. Provisions to credit exposure ratio is quality portfolio indicator. This indicator is based on assessment of losses in portfolio. Reservations are counted accurately defined methodology. The next indicator is the non-performing loans (NPL) to total exposure ratio. For non-performing loan, it is generally considered to be in default over 90 days, but the banks for their reporting can use different number of days. It is a more precise indicator of credit quality than the ratio of overdue debt to total exposure. Others frequently used indicators are: earnings per share, price per share, dividends per share, price earnings ratio, net interest margin, loan to deposit ratio and other comparable ratios.

## 3. Bank's financial crises – literature review

Up until recently, views of financial crises in the literature have split into two polar camps, those who think that government intervention in crisis is unnecessary and can be harmful and those who advocate a much expanded role for government intervention when a financial crisis, broadly defined, occurs (Mishkin, 1991, 3). Today, most of economists agree with government intervention but there are different opinions in which way government should intervene. The large in the Depression era occurred between fiscal conservatives, who wanted to rein in the deficit, and Keynesians, who thought the government, should run deficits to stimulate the economy (Stiglitz 2010). When many banks—either depository banks or shadow banks—get into trouble at the same time, there are two possible explanations. First, many of them could have made similar mistakes, often due to an asset bubble. Second, there may be financial contagion, in which one institution's problems spread and create trouble for others. Banking crises are almost always associated with recessions, and severe banking crises are associated with the worst economic slumps. Furthermore, experience suggests that recessions caused in part by banking crises inflict sustained economic damage, with economies taking years to recover (Krugman, Welles, 2012, 6). Paul Krugman, a Nobel Prize winner, has advocated the view that the fundamental concern of macroeconomic and fiscal policy should be the revitalization of the financial and economic activities, preventing further increase in unemployment and economic growth, not the budget deficit: concerns about the budget deficit are needed to leave aside at the moment. Another Nobel Prize winner, Joseph Stiglitz explained that the main causes of global financial crisis in USA are: deregulation, adoption of the law that make no difference between commercial and investment banks, rating agencies are paid by those they evaluate, economic and military policies of George W. Bush which reduce taxes, reduce the interest rate of the central bank, extent of tax relief on all investments executing the war in Iraq, which resulted in a sharp rise in oil prices, and thus a radical budget deficit increase. Plenty of money and deregulation have led to the emergence and flooding subprime loan "bubble" in the housing market (Stiglitz, 2010, 27). Another important cause, Stiglitz explained, is inequality and

lack of demand. The country faces enormous inequality, the largest among advanced countries. Since those at the top consume a much smaller fraction of their income than the rest, when money moves from the bottom to the top total demand is weakened. Firms won't invest if there is no demand for their products. What's needed for a robust recovery are more government spending, especially on investments directed at addressing the two underlying related problems, our structural transformation and our persistent and outsized inequality. Reinhart and Rogoff engage comparative historical analysis which is focused on the aftermath of systemic banking crises. These is their results: first, asset market collapses are deep and prolonged. Real housing price declines average 35 percent while equity price collapses average 55 percent over a downturn. Second, the unemployment rate raises an average of 7 percentage points over the down phase of the cycle. Output falls (from peak to trough) an average of over 9 percent. Third, the real value of government debt rising an average of 86 percent. The main cause of debt explosions is not the widely cited costs of bailing out, but the inevitable collapse in tax revenues that governments suffer in the wake of deep and prolonged output contractions (Reinhart, Rogoff, 2009, 223).

4. The financial crises influence on Požega and Slavonia County banks

Požega and Slavonia County has 85,831 inhabitants according to 2011 population statistics which makes 1.93% of the Croatian population. While unemployment rate in Croatia in the year 2011 is 19.1%, this rate in Požega and Slavonia County is 26.2%. The value of industrial products sales measured in the industrial local units is 1,287 million kunas, which represents 0.96% of the total sales of the Croatian industrial products. Gross domestic product per capita in Požega and Slavonia County is 6,229 euros. The share of gross value added for the same county is 1.1% Croatian gross value added. The assessment basis of sector portfolio quality in the selected banks in Požega and Slavonia County is a random sample. It is focused on default loans and overdue debt to credit exposure ratio. The sample includes 220 clients: 20 corporate clients, 100 small and medium-sized enterprises and 100 individual clients. Studies are exempt from the limits on cards and current account balances. It is used sampling without replacing at which each selected customer, after a random draw, is excluded from the population. The sample was selected using a random number table.

Graph 2 Ratio of overdue debt to credit exposure in selected banks in Požega and Slavonia County, 2007- 2011
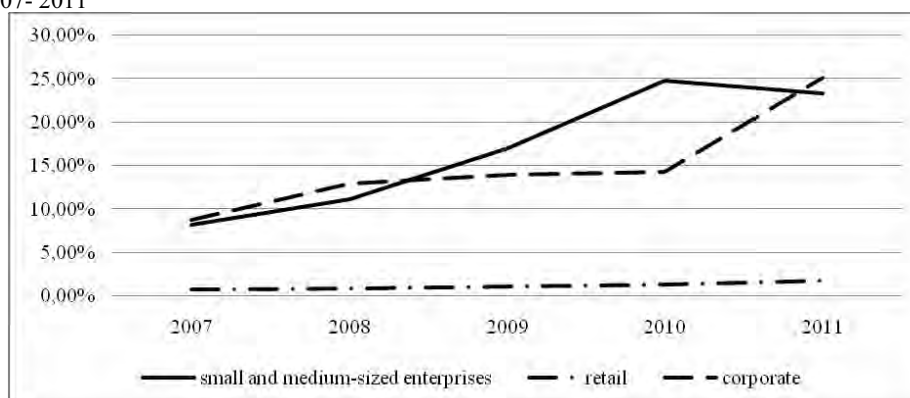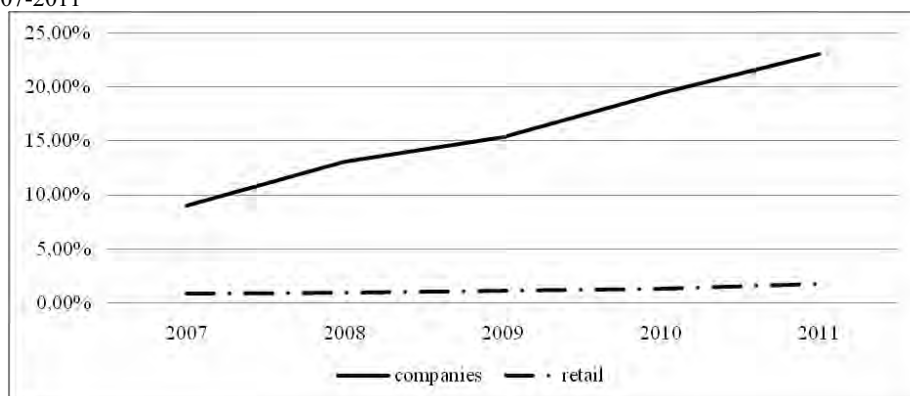

Source: Klarić, T, (2012): pp. 102-103.

During the observed period, it is evident deterioration in the debt due payment in all sectors. The significant growth of the debt due in the sector of small and medium-sized enterprises occurred in 2009 and the trend has continued in 2010 year. In the corporate sector there was significant growth

in 2008 and in 2011 year. The retail sector recorded a slight increase in maturity and at a much lower level than the two above mentioned sectors. It is a common indicator calculated for corporate and small and medium-sized enterprises to make the data comparable with the overall Croatian banking system. These enterprises are collectively called "companies" as shown in the chart. Overdue debt to credit exposure ratio in Požega Slavonia County in observed period increased as the same indicator for the Croatian banking sector. It was also observed that in level, Požega and Slavonia County and Croatian banking sector, there is stronger growth of the indicator in the companies sector, while the retail growth rate is lower. Comparing the indicators, it can be concluded that the clients in the retail sector of selected banks in Požega and Slavonia County are more accurate to pay on time their obligations than the Croatian sector's average. It can also be concluded that retail sector has smaller proportion of non-performing loans and that is the least affected by the financial crisis. Besides, financial crisis affected that sector by the time lag in relation to the companies sector. The most important reasons for the household sector to set better indicators are: delayed effects of the crisis due to priority payment of salaries in relation to other creditors in businesses, relatively small amounts of loans with longer term and better security and stricter lending policies (for example: the guarantors and joint debtors).

Graph 3 Overdue debt to credit exposure ratio in selected banks in Požega and Slavonia County 2007-2011

Source: Klarić, T, (2012): pp. 102-103.

Analysis of company sector indicators showed opposite results. The 2011 year in selected banks, Požega and Slavonia County, the ratio of overdue debt to credit exposure was significantly higher compared to the Croatian banking system. In the sample selected banks indicator was 23.02%, while the Croatian banking sector was 14.23%. The main reason for the payment delay of small and medium-sized enterprises and corporate clients is the economic downturn, decline in revenue and decrease in cash flow needed to repay the loan, while the main reason in the retail sector unemployment, the increase rate for the franc exchange rate, reducing wages and the increasing cost of living. The crisis first hit the construction sector. Entrepreneurs who practiced real estate construction and sales of building materials first found themselves in difficulties. The reason for that are the real estate market bubble and the decline in demand for real estate. Following, the entrepreneurs in other industries faced with declining activity. The analysis showed that the retail sector is more resilient to the crisis compared to corporate and small and medium enterprises. There is a deterioration of the portfolio quality in all sectors, but it is significantly expressed in corporate and small and medium enterprises. Trend worsening portfolio has not yet stopped.

5. Conclusion

Overdue debt to credit exposure ratio in Požega and Slavonia County in observed period increased as the same indicator for the Croatian banking sector. In both level, Požega and Slavonia County and Croatian banking sector, there is stronger growth of the indicator in the corporate and small and medium-sized enterprises sector, while the retail growth rate is lower. Therefore retail sector has smaller proportion of non-performing loans. In general, because of lowering portfolio quality, provisions are increasing which directly effects on costs and profit in a negative way. According to that, financial crisis influenced to profitability of the banks in Požega and Slavonia County as it was on the state level. Measures banks should make to improve their portfolio quality are: reprograms on credits, moratorium approvals, haircuts, write-offs and combinations of all mentioned measures. This will enable Požega and Slavonia County enterprises to restructure their debts and harmonize debt payments with decreased cash flow.

REFERENCES

Klarić, T., (2012): *Utjecaj financijske krize na efikasnost poslovanja banaka u Republici Hrvatskoj*, magistarski rad, Ekonomski fakultet Zagreb, pp. 102-103.

Krugman, P., Wells, R, (2012): *Crises and Consequences chapter*, Economics, Mac Higher, p. 6.

Mishkin, F.S., (1991): *Anatomy of financial crisis*, Working paper, No. 3934, National Bureau of Economic Research, Cambridge, p. 3.

Pavkovic, A., Dumičic, K., Akalović Antić, J. (2012): *Mjerenje koncentracije u bankarstvu u Republici Hrvatskoj*, Zbornik Ekonomskog fakulteta u Zagrebu, Grgić, M, (urednik), Sveučilište u Zagrebu, Ekonomski fakultet Zagreb, No 2., pp. 117-136.

Pavkovic, A., Pavlović, A., Stojanović, A. (2012): *Basel II – case of Croatian commercial banks*, The Business Review, Cambridge, Vol. 19, No 2, pp. 288-295.

Pavković, A., (2004): *Instrumenti vrednovanja uspješnosti poslovnih banaka*, Zbornik Ekonomskog fakulteta u Zagrebu, Grgić, M, (urednik), Sveučilište u Zagrebu, Ekonomski fakultet Zagreb, No 2., pp. 179-193.

Reinhart, C.M., Rogoff, K.S., (2009): *This time is different: Eight Centuries of the Financial Folly*, Princeton University Press, New Yersey, pp. 223-224.

Stiglitz, J.E., (2010): *Freefall : America, free markets, and the sinking of the world economy*, W.W.Norton & Company, New York.

Stiglitz, J.E., (2012): *The Price of Inequality: How Today's Divided Society Endangers Our Future*, W.W.Norton & Company, New York.