THE INFLUENCE OF THE MACROECONMIC SITUATION IN THE VALUE OF THE SYTEMATIC CREDIT RISK IN ALBANIA. AN STATISTICAL ANALYSIS

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Abstract: The study presents the results of a statistical analysis of the macroeconomic impact in the credit risk in Albania. The purpose of the analysis is the determination of macroeconomic factors that had a significant impact on systematic credit risk in Albania. The analysis resulted that the depreciation of the currency in relation to the euro led to a worsening of financial situation of borrowers who have a loan in Euros, increasing the possibility of default loans. The world financial crisis has adversely affected our banking system, reducing the loans offered and worsening macroeconomic indicators. High inflation and GDP change also had a significant impact on the deterioration of the quality of the banking portfolio. By statistical analysis resulted in the period taken into account, the credit risk in Albania is not influenced by interest rates, export-imports, the unemployment rate and the exchange rate of the dollar.

JEL classification: E02, E44, G01, G11, G21.

Key words: financial crisis, modern portfolio theory, macroeconomic factors, credit risk factors, Albania banking system.

1. Introduction

It is very difficult measurement of the degree of vulnerability of the banking system against unexpected losses that may be caused by the process of loan payment. Efforts have been made to build empirical models that assess the extent of the impact of various macroeconomic factors on indicators measuring the quality of the banking system, namely the ratio of nonperforming loans to total loans. In curring loans from borrowers who can not turn them back or that late. These borrowers belonging to different economic groups develop their microeconomic activity at a time and in a certain space. Their behavior depends on and is influenced by the performance of basic indicators that characterize a country's macroeconomic development. If such indicators show performance it is not conductive to the borrower, it will affect in one way or another loan payment also on the degree of credit and the latter would affect the quality of the banking system. Credit risk is measured by microanalysis, that determine unsystematic risk and macroanalysis, which asses systematic risk (Morton Glantz, 2003). APT developed by Richard Roll and Stephen Ross (1976), was propagandized by CAPM and includes as a key tool survey systematic risk. The methodology adopts economic factors to explain investment returns. APT current research focus on more factorial statistical techniques as factor analysis to dismantle the total return on

investment in a separate part explained by external factors, each explains only a portion of the variance of total return on investment. The main factors are macroeconomic and include: industrial production (or market portfolio), changes in a default risk premium (measured by the differences in promised yields to maturity on Baa corporate bonds versus AAA), tuists in the yield curve (measured by the difference in promides yields to maturity on long and short term government bonds), unanticipated inflation, changes in the real rate (measured by the treasury bill rate minus consumer price index. Investment returns are affected by many underlying factors that affect the economy. Modifications of these factors affecting investments returns in many ways being conditioned on how the return of investment is influenced by any factor. More factorial statistical techniques as factor analysis, break up the total return of the vehicle in separate parts, which explains a part of total return variance the vehicle. The formula for price arbitrage model is given:

$$E(R_j) = R_f + \beta_{j1}\left[E(R_1) - R_f\right] + \beta_{j2}\left[E(R_2) - R_f\right] + \beta_{j3}\left[E(R_3) - R_f\right]$$

$E(R_j)$ - expected return; R_f – risk-free rate; $\beta_{j1}, \beta_{j2}, \beta_{j3}$ – sensitivities of investment to factors 1,2,3.

Factor 1 could be the sensitivity of investment to industrial production, factor 2 may be sensitivity to changes in the default risk premium, the factor 3 may measure the response of investment to unanticipated inflation or twists in the yield curve. APT knowledge and techniques related to help bank managers to identify these risks. Tom Wilson and McKinsey and Company developed the "Credit Portfolio View" a very factorial model for measuring credit risk. This model may be useful to provide the default probability distribution and the possibility of deterioration of class credit to various sectors of industry and individual states. Credit Portfolio View takes into account the dependence that exists between the probability of default and deterioration of class credit to the economy. When the economy is in trouble the possibility of default of the companies and credit deterioration of classes increased, and the opposite happens when the economy is emerging. Economic slow increases cause more deterioration of credit classes and lower grades of credit have a high correlation with macroeconomic factor. The quality of the banking system is influenced by macroeconomic factors separate, and which of them have a significant impact on credit risk depends on the characteristics of the country, economic sector and in the study period. Kern / Reitzig, 2000, assessed in seven of the eight key sectors of German economy three macroeconomic factors systematically influence the deterioration of credit quality. These factors were: change in gross domestic product, unemployment rate and the exchange rate of domestic currency to the U.S. dollar. Bostjan Aver, 2007, determined that the systematic risk of bank loan portfolio in Slovenia influenced more by interest rates, short, medium and long term banking institutions in that country, the unemployment rate and stock index trading. The quality of the banking system less affected by imports, exports, exchange rate, the change of GDP or the inflation rate.

2. Purpose and Objectives

The main purpose of this study is to analyze the trend of credit risk. Further using reliable date nationally and internationally, the study aims to analyze the relationship that exists between macroeconomic indicator and the quality of banking system credit. The main purpose of statistical analysis is the determination of

macroeconomic factors affecting the value of portfolio credit risk banking. Search results have confirmed the main hypothesis that certain macroeconomic factors have a significant impact on the credit risk of the banking system. The study focuses on two main directions. First we will give our assessments about the performance of credit risk in our banking system by identifying some important moments of time have significantly affected the tendency of non-performing loans. Secondly we will study the relationship that exists between credit risk, as measured by the ratio of nonperforming loans to total loans, and some key macroeconomic indicators. To achieve these goals in the study defined the following objectives: 1. To analyze and evaluate existing applications macroeconomic impact on the value of credit risk. 2. To carry out a detailed analysis of the activity of banking lending and credit risk tendency. 3. To develop an enhanced model of linear relationship between credit risk and specific macroeconomic factors. 4. Empirically apply the extended model and investigate the impact of macroeconomic factors specific to the level of nonperforming loans in the banking system. 5. To draw the appropriate conclusions and make recommendations for banking sector in Albania.

3. Charasteristics of the loan portfolio in Albania banking system

In recent years, banking activity has been increasing sharply, the share of total banking system assets to GDP at the end of 2008 was 76.7% and at the end of 2009 was 77.5%. (Table 1). Increased lending base has been identified as one of the most vigorous and exerts great influence not only in banking activities, but across the economy.

Table no. 1 Total of assets and privat credits to GDP in Albania banking system

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total of assets/GDP	**54.6**	**54.5**	**53.8**	**56.8**	**60.9**	**70.8**	**76.8**	**76.7**	**77.5**
Total of credits/GDP	**4.8**	**6.3**	**7.3**	**9.3**	**15.7**	**22.4**	**30.2**	**36.5**	**39.3**

Source: Bank of Albania

Despite high rates of growth, Albania is one of the countries with the lowest ratio of private credit to GDP. (Table 2). Commercial banks have followed a conservative business strategy. The funds raised by the public, in the form of deposits are invested largely in Treasure bills or similar instruments, high security and low rate of return. Credit to the economy, for businesses and individuals has been limited, interest rates have been high and long procedures. Demand by borrowers has been more stable, high and upward trend. Most of the loan portfolio of business voice accorded credit, 65% and 31% individual business.

Albania economy using foreign currencies, especially the euro and U.S. dollar is widespread. 75% of the portfolio is in foreign currency, where the euro is 84% and 15% in dollar. Total foreign currency loans where the borrower's incomes are in the domestic currency represents 37.7% of total credit, and 54% of the loan in foreign currency. While the euro loans where the borrower's incomes are in the domestic currency represents 31.64% of total credit, and 45.6% of credit in foreign currency. This part of the loan represents a potential channel negative impact on the banking sector to adverse changes in exchange rate that can be accompanied with increase in indirect credit risk as a result of the difficulties of borrowers for the payment of the loan

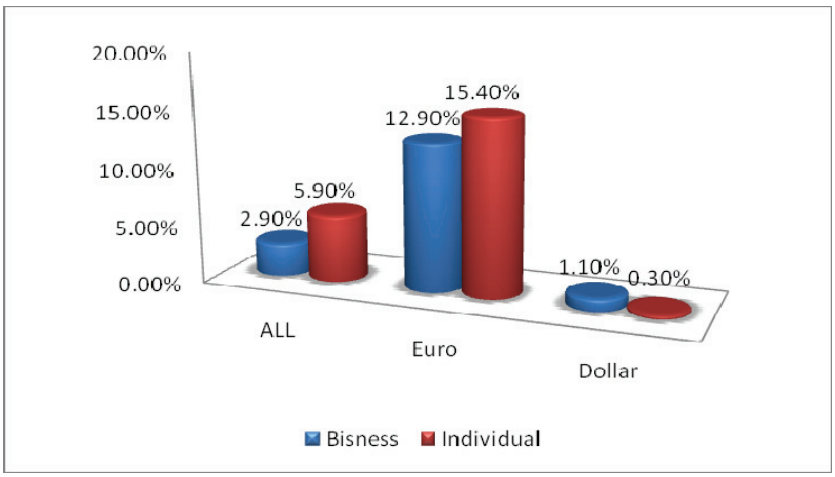
obligation.

Table no. 2 Credit to private sector/GDP for South-eastern Europe

Credits/GDP	2004	2005	2006	2007	2008	2009
Turkey	15.8	20.8	25.4	30.6	38.7	40.8
Romania	15.5	19.5	25.9	35.7	37.6	40
Bulgaria	34.6	42.1	45.2	64.6	69.8	73.1
Serbia	23.1	28.8	28.7	34.2	38	40.6
FYR Macedonia	21.2	23.9	28.7	36.3	43.1	43.1
Albania	9	14.8	21.3	29.1	35.2	36.6
Ukraine	25.7	32.5	45.1	59.1	76.2	76.9

Source: Transition Report 2010 "Recovery and reform".

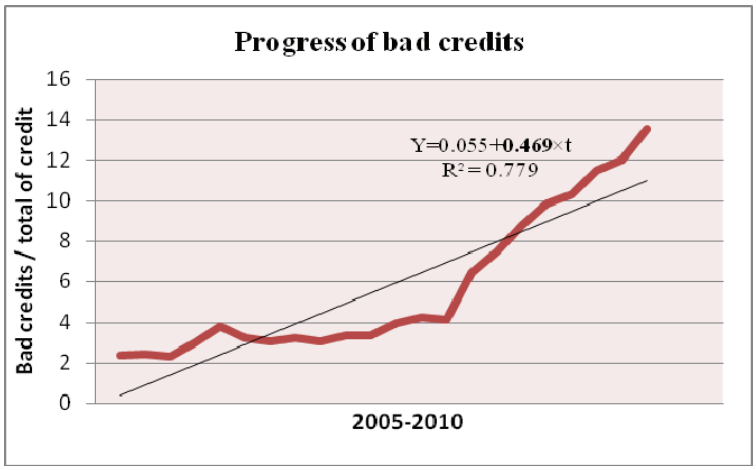
Real estate loans have increased significantly. They represent 14.6% of GDP. Main features of the process for real estate lending recorded over the years are: the prevalence of real estate loans extended to individuals and the prevalence of real estate loans extended in foreign currency, Figure 1.



The data to draw the graph from Albanian Bank

Figure no. 1 Real estate loans to total of credits. September 2010.

Regarding the intended use, credit for business is focused on "overdraft", "purchase of equipment", "real estate" and less "capital". Figure 2 shows the evolution of the quality of the banking system, nonperforming loans to total loans, respectively. Obviously upward steadily indicator problem loans to total loans, tend to undergoing a significant growth in the third quarter of 2008. This strong growth was due to the negative effects of economic and financial crisis in our banking system. The value of the ratio problematic credit versus the total credit, 2005-2010, from one quarter to the next one, is approximately increased by 46.9%, an increase that is estimated statistically important, according to the t-statistic test. (t=8.595).



The data to draw the graph from Albanian Bank

Figure no. 2 The tendency of bad credits

Comparison of key indicators that measures the quality of loans portfolio in the region a test to the quality of loans portfolio in the banking system in Albania, at relatively good, compared to several regional countries such as Bulgaria, Romania, Lithuania etc..presented with the highest ratio of non-performing loans to total loans.

Table no. 3 Bank nonperforming loans to total loans for Central and Eastern Europe

	2005	2006	2007	2008	2009	2010
Albania	2.3	3.1	3.4	6.6	10.5	12
Bosnia and Hercegovina	5.3	4	3	3.1	5.9	7.1
Bulgaria	2.2	2.2	2.1	2.5	6.4	7.8
Croatia	6.2	5.2	4.8	4.9	7.8	8.8
Estonia	0.2	0.2	0.4	1.9	5.2	5.6
Hungary	2.3	2.6	2.3	3	6.7	7.8
Lithuania	0.6	1	1	4.6	19.3	19.2
FYR Macedonia	15	11.2	7.5	6.8	8.9	9.9
Montenegro	5.3	2.9	3.2	7.2	13.5	14.9
Romania	2.6	2.8	4	6.5	15.3	17.5
Turkey	5	3.9	3.6	3.8	5.6	4.9

Source: IBM "Global Financial Stability Report", October 2010

4. Establish hypothesis

Based on the research of scientists and international experts, we will try to explore macroeconomic factors that influence the systematic credit risk in bank loan portfolio in Albania.

Hypotheses that arise in this case is that certain macroeconomic factors have a significant impact on systematic risk of credit banking system.

The form of the model is expressed as follows:

$$y = \beta 0 + \beta 1 \times CPI + \beta 2 \times IntR + \beta 3 \times ExchR + \beta 4 \times FinK + \beta 5 \times \Delta GDP + \varepsilon$$

Variables used are quarterly frequency. More specifically equation expresses the relationship between the dependent variable, systematic credit risk, as measured by the ratio non-performing loans to total loans, and other independent variables, which are: Consumer price index; The interest rate for short-term loan in ALL; Exchange rate ALL/EUR; The financial crisis and economic crisis; Change of the Gross Domestic Product. The model described above, on the right side of the equation expresses the combination of main macroeconomic indicators, so in some way the indicators reflect the general economic situation in which their activity even borrowers. The left side gets indicator value that gives loans to total loans, the quality of the banking system, or the probability of default of loans obtained, which in this case is conditioned by the macroeconomic environment. This means that the values of macroeconomic indicators in a given time determine this report.

The hypothesis that needed to be verified are:

H_0: $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = 0$

H_1: At least one of the above parameters is different from zero.

5. Research Methodology

Date on potential factors that influence the systematic credit risk Albania's banking system, we can find between the different macroeconomic variables, e.g. change in gross domestic product, interest rates on loans offered by our banking system, exchange rate, consumer price index and other external factors. In this case we have included the financial crisis and economic turmoil. The crisis had negative effects on macroeconomic situation in Albania, which was reflected in the level of nonperforming loans. Five different macroeconomic factors were selected to test the above hypothesis. The design of the model is presented in Figure 3 . Figure shows selected factors which influence the systematic credit risk and represent the input variables of the model used to determine their impact on the value of significant credit risk in the banking system.

The following sources were used to data analysis: Institute of Statistics, Statistical Office; Database of the Bank of Albania (archives of financial date from the bulletin of the Bank of Albania, the statistical time series); Various materials published by the Bank of Albania. The analysis of Albania's banking portfolio is mainly quantitative, since four independent variables used to describe the systematic risk factors banking loan portfolio are quantitative and only one of them, the crisis is variable quality.

Variable quality, "Dummy", takes the values 0 and 1. Specifically it takes the value 1 when our banking system was influenced by economic and financial crisis and 0 for otherwise. For the period from the third quarter of 2008, a period when our banking system was affected by the effects of the crisis and until the third quarter of 2010 quality factor "Dummy" takes the value 1 and the next period of time takes the value 0.

The impact of specific macroeconomic factors in the value of credit risk in the banking system has been tested with the help of SPSS software and specific statistical methods, such as multiple linear regression. The model implemented is based on date from the various macroeconomic factors, credit risk, collected on quarterly basis, and quarterly data of credit risk banking portfolio from 1 January 2005 to September 30,

2010. Selected period of Albania's banking system after 2004 was more suited for the analysis, since the period before 2005 complicates the analysis results.

The inflation rate	CPI	Consumer price index
GDP	ΔGDP	Change of the Gross Domestic Product
The interest rate	IntR	The interest rate for short-term loan in ALL
Exchange rate	ExchR	Exchange rate ALL/EUR
Variable quality "Dummy"	FinK	The financial crisis and economic crisis

Figure no.3 Systematic risk factors of the credit

First: For lack of data. Data series for all variables analyzed was impossible be provided for the period before 2005, because some time series data were calculatedby taking as base year 2005, it does allow us to extend our analyze before 2005.

Second: Methodological changes. By the year 1998 classification by categories and sub-performing loans was on some criteria that differ from today's charts. In this way, their value is not comparable to the respective periods of time.

Third: Change in credit policy. Pre-1997 loans were given on an professional and not competitive . This led to the creation of multiple credit problems of the Albania state-owned banks. At the end of 2004 was privatized major banks in Albania, the Savings Bank (Reiffasen Bank). Nonperforming loans of state banks privatized were transferred at the Credit Treatment Agency. After the 2004 series of bad loans was clean, devoid of the influence of above factors, by reflecting the impact of macroeconomic factors. Indicator of portfolio credit quality is measured by the ratio of nonperforming loans to total loans offered by the banking system.

6. Results

As a result we obtain a multiple linear regression model for five macroeconomic variables, the R Square coefficient 0.948, and the adjusted R. Square coefficient 0.932. This means that 93.2% of the variability of the systematic credit risk in the banking system in Albania explained by the model built, then the linear dependence of the five macroeconomic variables. The results obtained are presented in table below. Table 4 the results of the test "t" in connection with testing the characteristics of the influence of independent variables in credit risk.

Control of the importance of connectivity.

The value of fisher, "F" is 58.136, which is greater than the critical value. This fact rejects the hypothesis H_0, and automatically accept as true the hypothesis H_1. Well according to Fisher's test we proved that among the dependent variable, credit risk, and independent variables, five macroeconomic variables, there is an important relationship, then at least one of the parameters, β, is different from zero.

Criteria "t" for assessing the significance of individual parameters. The equation that we get is:

$$y = -54.943 + 0.221\times CPI + 0.125\times IntR + 0.290\times ExchR + 1.934\times FinK - 0.086\times \Delta GDP + \varepsilon$$

Table no. 4 Results of multiple linear regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.974[a]	.948	.932	.95787

ANOVA

Model	Sum of Square	df	Mean square	F	Sig.
Regression	266.706	5	53.341	58.136	.000[a]
Residual	14.680	16	.918		
Total	281.386	21			

Coefficients

Model	Unstandardized coefficients		Standardized Coefficients	t	Sig	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
Constant	-54.943	8.188		-6.710	.000	-72.301	-37.586
Exchange rate	.290	.069	.462	4.188	.001	.143	.436
Financial crisis	1.934	.753	.266	2.568	.021	.338	3.531
CPI	.221	.089	.288	2.482	.025	.032	.410
ΔGDP	-.086	.089	-.066	-.965	.349	-.275	.103
Interest	.125	.253	.032	.495	.627	-.411	.662

However it is interesting to do a check next to assess which of the parameters (β) is important. As a statistical method to control the importance of individual parameters serving criteria "t". By comparing the values of "t" critical for 21-5-1=15 degrees of freedom and α=0.05 shows that the factors that influence more credit risk in the banking system, are the exchange rate, consumer price index, financial and economic crisis and changing world gross domestic product, while the interest rate on short-term loans in ALL has a small impact.

7. Conclusions and recommendations

Conclusions

Results of the analysis of credit risk in the banking system in Albania for the period January 2005-September 2010 shows that specific macroeconomic factors have a significant impact on credit risk in the banking portfolio in Albania. Increased credit risk is influenced by:

Increased inflation. The index of consumer price has increased consistently during the period. CPI rises averaging 65.5% from one quarter to another showing a statistically significant upward trend, F=266.822. This has adversely affected the quality deterioration of the banking portfolio. Inflation has weakened the financial viability of the economy and businesses. This is reflected in the form of reduced revenues and profits and delayed payment of loans or paying them, so the growth of nonperforming loans.

Growth rate ALL/EUR. Currency depreciation and appreciation of the euro has negative impact on borrowers who have a loan in euro. Much of the credit offered by our banking GDP was system is in euro. For 2009, 75% of credit offered by our banking system was in euro. Loans in euro, where the income of borrowers are in ALL represents 31.64% of total credit and 45.6% of credit in euro. Then the growth of non-

performing loans as a result of increased exchange rate ALL/EUR is expected. Exchange rate ALL/EUR increased averaging 36.1% from one quarter to another showing a statistically significant upward trend, F=6.793. After the crisis the exchange rate values are significantly larger than the average review period. Economic and financial crisis led to depreciation of the dollar against the euro, the reduction of income from remittances and reducing exports. These factors led to the significant appreciation of the euro against the All. But for borrowers who have a loan in euro this mean more money to repay installment credit as a result increases the possibility for delay of payment or dishonor of credit by increasing the number of non-performing loans of the banking portfolio.

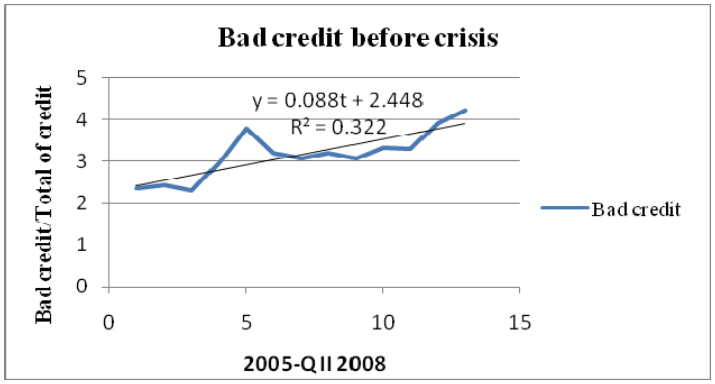
Fall of growth rate of GDP. This tendency was more after the financial crisis and economic turmoil. Trend statistically insignificant decrease of ΔGDP was caused by: difficulties encountered in the business of financing from the banking sector and lack of external demand, the fall in consumption and investment due to not lending the families from banks and reduction of income from remittances. The sectors most affected by the crisis and GDP were negatively affected construction and industry. Interest rates have had little impact on the deterioration of the indicators of problem loans to total loans.

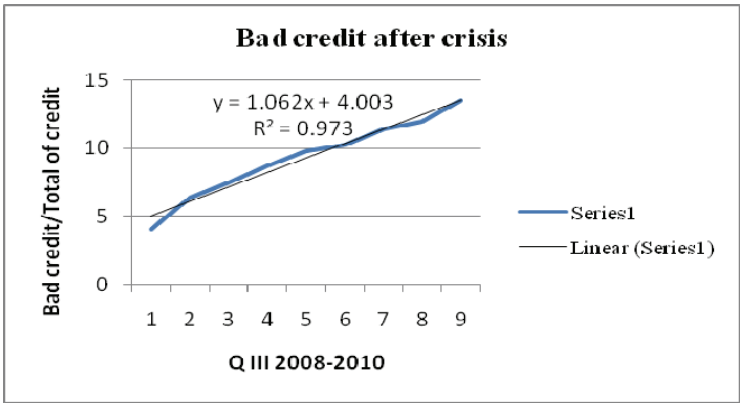
Problematic loans also increased significantly due to the negative effects of the financial crisis and economic turmoil. Global economic and financial crisis led to a reduction of incremental credit offered, in terms of the existence of uncertainly in financial markets in the world, the crisis of confidence among the leading operators in these markets, lack of liquidity and the bleak prospect for economic growth global. Reduce of incremental credit, an average of 50% led to increased non-performing loans ratio to total loans provided by our banking system. The crisis led to a deterioration of macroeconomic indicators, which negatively affected the deterioration of the microeconomic environment where individuals develop their activities and businesses. Growth rate ALL/EUR, increased unemployment, reduced income from remittances brought worsening financial situation of individuals and families being reflected in increased access to loans taken dishonor. On the other hand, businesses had significant difficulties associated with the reduction and profit or their bankruptcy. Businesses had problems to be financed by the banking sector due to the crisis, they also were faced with external demand reduction as a result of declining exports and increased financing costs due to public debt. All this led to increased non-payment of loans taken. In the period of slowing economic growth increases the possibility of deteriorating credit grade borrowers, especially lower grades of classification. This makes incremental loans are larger in this period. The upward growth were 8.8% before crisis and 106.2% pre-crisis, (Figure 5). One element to be noted is that the economic crisis led to a reduction of income from remittances. Lending to real estate occupies a significant part of GDP, and moreover it constitutes the majority of loans offered to individuals. So the deterioration of income from remittances has led directly to the deterioration of non-performing loans ratios.

Credit risk in the banking system for the period January 2005-September 2010 is not affected by short-term interest rates, medium and long term loans in the euro, ALL of the banks in Albania, the unemployment rate, the performance of exports and imports, and the performance of exchange rate ALL/U.S. dollar.

Banking system and banks show a positive reaction react to adverse economic situations. Continued growth of the consumer price index and exchange rate ALL/EUR,

has significantly influenced the deterioration of credit quality through reducing the financial viability of borrowers. On the other hand, the effects of global financial and economic crisis were felt, and in Albania, through restriction of lending activity, the fall of incremental gross domestic product and the deterioration of some other macroeconomic indicators. The latter contributed even more to the growth of loans in Albania. So, for the period 2005-2010, the banking system have had a significant impact on macroeconomic factors.





The data to draw the graph from Albanian Bank

Figure no. 5 The tendency of bad credits befor and after cirisis

Although the results of the analysis show that specific economic factors have significant impact on the value of credit risk in the banking system, we can not consider the influence of other factors that were not explained analysis-limitations of model search. These factors represent those factors that may influence the risk of credit for the period reviewed.

Recommendation

The average CPI rates rising by a quarter to another, for the period 2005-2010, are higher than average upward exchange rate ALL/EUR (65.5% versus 36.1%). Yet examining the correlation coefficients of the model multi factorial, shows that the exchange rate ALL/EUR has more influence on the level of nonperforming loans in Albania for the period 2005-2010. The instability of exchange rate variation explains

72.3% of credit risk, while the volatility of CPI variation explained 52.7% of credit risk. This is explained by the fact that the bulk of the loans offered by our banking system are in euro and it is evident that a portion of borrowers Albanians have a mismatch between the credit and currency inflows of income. Reports "unhedged" have been 3.74%, 5.7% and 9.6% respectively for the years 2007, 2008 and 2009. Albanian borrowers have preferred this option because of lower interest rates in euro loan and trust for greater durability of the euro. This has led to greater impact and assessment of the euro in the deterioration of portfolio quality banking system. Therefore we conclude that the banking system is highly exposed to exchange rate volatility ALL/EUR, with directly affects the quality of our banking loan portfolio. For this reason, banks should implement a more balanced policy lending by increasing the share of loans in national currency. They can give loans in EURO to persons who have income flowing to the euro. It should also managed to net foreign exchange position of banks' balance sheets, which is currently low value, significantly limiting the size of possible losses.

One other important factor that can affect the credit quality of the banking portfolio price is volatility of real estate. A reduction in the price of real estate affects the collateral value of real estate loans, exposing banks to big losses. U.S. credit crunch should be taught to our bankers. They need to give important qualitative analysis of the borrower, assessing current flows and future cash should not rely solely on physical collateral. Growth of loans to real estate and its dominance to total loans exposes banks to risk real estate depreciation.

Based on the forecasts of macroeconomic indicators expected deterioration of portfolio quality indicators banking. Therefore, banks seem to establish sufficient reserves for the risk of loan losses. Relying on the portfolio of loans banks have to identify clients with problems of temporary and surmountable by creating policies to support and increase the likelihood of payment. As for clients who are assessed with low chance of repayment of the loan, banks must follow legal procedures for the execution of guarantees and collateral to recover a greater amount of the loan. For new loans based on the experience of banks with problems faced in the loan portfolio and the reasons it is necessary to have a better distribution sector and a more reasonable balance between public and private project, and between business enterprises or families, between forms of giving credit in ALL or in foreign currency etc. being directed lending in order to minimize the exposure of banks to more problematic forms and low concentration in its entirety.

The results of our analysis may be applicable to other financial institutions, insurance companies, pension funds etc. the risk management of their financial investments. They may be applicable to special economic sectors, e.g. analysis can be made of the impact of macroeconomic factors in sector loans to trade, or construction, etc. They may be applicable to the loan portfolio by currency, e.g. analysis can be made of the impact of macroeconomic factors on credit loans in foreign currency or ALL. Or the results of our analysis may be applicable to the loan portfolio by purpose of use, analysis can be made of the impact of macroeconomic factors in credit loans for real estate, and finally the results of our analysis may be applicable to the loan portfolio by subject, business or individual, according to the schedule, etc.

Since the banking system appeared positive feedback on the macroeconomic situation in the country, banks should stress the stress-test analysis. This analysis assesses the various scenarios the main macroeconomic indicators and based on the probability of occurrence of these scenarios take measures to cope with the loss of

various banking portfolio. Banks should strive to be the analysis more accurate, more frequent and performed on more advanced forecasting programs.

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