



BANKING RATING IN ROMANIA. A COMPARATIVE ANALYSIS BETWEEN CAAMPL AND PEARLS MODELS

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Abstract

In this paper the author presents the evaluation method of the crediting risk in 20 Romanian banks, based on the unique rating systems called CAAMPL and PEARLS models. The content of each component of this system is taken into consideration and also the group of values attached to every component of credit risk analysis is highlighted. Finally, the main measures that a bank has to take in order to limit credit risk are presented.

Keyword: ratings, capital adequacy, assets quality, liquidity, profitability, management

JEL Classification: G21

I. Literature Review

Many authors consider in their papers the rating as a bankruptcy measurement option in the bank activity. In their papers a lot of analysts tried to connect banks difficulties with their rating.

In the run-up to the financial crisis of 2007-2008, market participants relied heavily on the ratings that credit rating agencies assigned to financial instruments, including mortgage-backed securities, in order to determine creditworthy investment

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options. As mortgage holders began to default on their loans and many highly rated securities lost value, the poor quality of these ratings became apparent. Policy makers pondering financial regulatory changes to avoid future catastrophes should understand how regulatory actions facilitated a non-competitive credit rating industry and propelled its members into the center of the bond information process, which in turn contributed to the financial crisis of 2007-2008.(White, 2009)

A credit rating agency is a potential source of information for market participants who are trying to ascertain the creditworthiness of borrowers. Essentially, rating agencies offer judgments (they prefer the word "opinions") about the quality of bonds issued by corporations, governments (including U.S. state and local governments, as well as "sovereign" issuers abroad), and mortgage securities. These judgments come in the form of letter grades. The best-known scale is that used by Standard & Poor's (S&P) and some other rating agencies: AAA, AA, A, BBB, BB, etc., with pluses and minuses as well.

John Moody published the first publicly available bond ratings (mostly concerning railroad bonds) in 1909. Moody's firm was followed by Poor's Publishing Company in 1916, the Standard Statistics Company in 1922, and the Fitch Publishing Company in 1924. These firms sold their bond ratings to bond investors in thick rating manuals. In the language of modern corporate strategy, their "business model" was one of "investor pays." (White, 2009)

China's commercial banks are confronted with fierce competition from advanced big commercial banks abroad, which have much better performance in non-performing loans (NPLs) than China's commercial banks. In this case, efficiency rating and ranking of China's commercial banks are of great importance. We treat the rate of non-performing loans (NPLs) as an undesirable output from the operating process of commercial banks and utilize cross efficiency of DEA (Data Envelopment Analysis) to evaluate and rank China's commercial banks between 2006 and 2008 horizontally and vertically. (Song, Wang, 2012)

Sovereign credit ratings are becoming increasingly important both within a financial regulatory context and as a necessary prerequisite for the development of emerging capital markets. Using a comprehensive dataset of rating agencies and countries over the period 1989-1999, the paper demonstrates that artificial neural networks (ANN) represent a superior technology for calibrating and predicting sovereign ratings relative to ordered probit modeling, which has been considered by the previous literature to be the



most successful econometric approach. ANN has been applied to classification problems with great success over a wide range of applications where there is an absence of a precise theoretical model to underpin the relationships in the data. The results for sovereign credit ratings presented here corroborate other researchers' findings that ANN is highly effective classifiers. (Bennell, Crabbe, Thomas, Gwilyan, , 2006)

In other papers we met some studies on the influence of the state of the business cycle on credit ratings. In particular, we assessed whether rating agencies are excessively procyclical in their assignment of ratings. This analysis is based on a model of ratings determination that takes into account factors that measure the business and financial risks of firms, in addition to indicators of macroeconomic conditions. Utilizing annual data on all US firms rated by Standard & Poor's, we find that ratings do not generally exhibit excess sensitivity to the business cycle. In addition, the authors document that previously reported findings of a secular tightening of ratings standards are not robust to a more complete accounting of systematic changes to measures of risk. (Amatoa, Furfineb, 2004)

Credit ratings convey credit risk information to participants in financial markets, including investors, issuers, intermediaries, and regulators. Accurate credit rating information plays a crucial role in supporting sound financial decision-making processes. Most previous studies on credit rating modeling are based on accounting and market information. Text data are largely ignored despite the potential benefit of conveying timely information regarding a firm's outlook. To leverage the additional information in news full-text for credit rating prediction, the researchers designed and implemented a news full-text analysis system that provides firm-level coverage, topic, and sentiment variables. (Lu, Tsai, Chen, Hung, Li, 2012)

In recent papers the effects of sovereign rating actions on the credit ratings of banks in emerging markets are analyzed using a sample from three global rating agencies across 54 countries for 1999–2009. Despite widespread attention to sovereign ratings and bank ratings, no previous study has investigated the link in this manner. The authors find that sovereign rating upgrades (downgrades) have strong effects on bank rating upgrades (downgrades). The impact of sovereign watch status on bank rating actions is much weaker and often insignificant. The sensitivity of banks' ratings to sovereign rating actions is affected by the countries' economic and financial freedom and by macroeconomic conditions. Ratings of banks with different ownership structures are all influenced strongly by the sovereign rating, with some variation depending on the



countries' characteristics. Emerging market bank ratings are less likely to follow sovereign rating downgrades during the recent financial crisis period.(Williams, Alsakka, Gwilym, 2013)

The pattern of disagreement between bond raters suggests that banks and insurance firms are inherently more opaque than other types of firms. Moody's and S&P split more often over these financial intermediaries, and the splits are more lopsided as theory here predicts. Uncertainty over the banks stems from certain assets, loans and trading assets in particular, the risks of which are hard to observe or easy to change. Banks' high leverage, which invites agency problems, compounds the uncertainty over their assets. These findings bear on both the existence and reform of bank regulation. (Donald P, 2002)

In recent years credit rating agencies have started rating firms who have not asked for a rating. Recipients of unsolicited ratings argue that the assigned ratings are too low and reflect a lack of comprehensive knowledge of the rated firms. Authors set out to examine these claims using a comprehensive and international sample of 1,060 bank ratings. Our results show that there is a significant difference in the distributions of ratings, and the shadow group has lower ratings. The results also indicate that banks that received shadow ratings are smaller and have weaker financial profiles than banks that have other ratings. This explains, in part, the lower ratings. In addition, they develop a model to explain bank ratings. The two-step treatment effects model shows that bank size, profitability, asset quality, liquidity, and sovereign credit risk are important factors in determining bank ratings. (Poon, Firth, 2005)

In our paper we evaluate 20 Romanian banks ratings over a period of 10 years, using CAAMPL model and PEARLS models.

II. Methods and Results

In order to prevent the bankruptcy in banking business, the Romanian banks have built a rating system based on specific indicators. Problems with credit, liquidity, and fraud are the most common primary causes of bank failures, and combinations of these misfortunes are often seen. Capital inadequacy for the risks being run is by definition an almost universal secondary cause, the prelude of banking insolvency [Cade, 1999]. Also important causes for banking insolvency are: assets quality, management, profitability and



banking liquidity. That's why a rating system has been built for the banks in Romania in order to prevent banking insolvency.

The rating system used in banks in Romania represents an efficient working instrument for evaluating credit corporations in order to identify in due time those units where a deterioration of the economic and prudence efficiency indicators might take place or there might appear inadequate trends thus requiring an increased attention of the Romanian banks.

RATING SYSTEM CAAMPL

CAAMPL system bases on the evaluation of five components, reflecting in a uniform and thorough manner the performances of the credit corporation, according to the applicable legislation and regulations in force.

The specific analysis components of CAMPL system are:

- Capital adequacy (C)
- Assets quality (A)
- Equity (A)
- Management (M)
- Profitability (P)
- Liquidity (L)

Each of the five components are evaluated through a value scale between 1 and 4, where 1 represents the most performing level, while 4 represents the lowest. Four of the five components (C – capital adequacy, A – assets quality, P – profitability and L – liquidity) are analyzed according to several indicators, for which four intervals and four corresponding ratings are determined.

We consider that an adequate capital base serves as a safety net for a variety of risks to which an institution is exposed in the course of its business. Capital absorbs losses, and thus provides a basis for maintaining depositor confidence in a bank. On the other hand, the banking sector's assets comprise items that are a reflection of individual banks' balance sheets, although the structure of balance sheet may vary significantly depending on business orientation, market environment, customer mix, or economic environment. Also, the financial soundness and performance of a banking system ultimately depend on the boards of directors and on senior management of member banks. Of course, the profitability, in the form of retained earnings, is one of the key sources of



capital generation. A sound banking system is built on profitable and adequately capitalized banks. Finally, liquidity is necessary for the banks to compensate for expected and unexpected balance sheet fluctuations and provide funds for growth [Greuning, Brajovic Bratanovic, 2003].

The value intervals for each measure are determined starting with the specific circumstances existing in the Romanian banks.

The calculation basis of the indicators defining the four components is represented by the financial-accounting and prudence reporting, as well as by the check balances transmitted by the Romanian banks.

The evaluation of the five specific performance components (CAAMPL) represents the essential criteria for determining the composed rating, which implies the granting of a score from 1 to 4. A significant amount in the classification of a credit bank in one of the three composed ratings is held by the rating corresponding to management.

In the case in which at least one of the components has been evaluated with 4, the composed rating attributed to the banks cannot be superior (1 or 2).

Thus, each bank receives a rating for each analysis indicator, for each CAAMPL components and, in the end, a composed rating and a final score that represents the total score given to the indicators defining CAAMPL elements.

The ratings corresponding to CAAMPL components may be updated as a result of the analysis of the inspection actions at the headquarters of the bank.

In order to accurately appreciate the risks included by the activity of the bank, besides the indicators used in determining the ratings corresponding to the four measurable CAAMPL components, there have been determined a series of indicators, analyzed according to the trend and network average.

THE CONTENT OF CREDIT RISK COMPOSITE CAAMPL RATINGS

Composite Rating 1

Banks classified in this group are valid under all aspects and generally have at least three of the five components evaluated with rating 1.

Any deficiency is minor and may be easily controlled in the current activity by the administration council and the current leadership of the company.

Thus, Banks are able to cope with the real difficulties and resist to market fluctuations.



They operate according to the regulations and laws in force and present the strongest performances and risk administration practices according to the size of the entity, its complexity and risk category.

Composite rating 2

Banks classified in this group require a certain degree of concern from the Central Fund regarding one or several of the five components mentioned above.

These units present a combination of deficiencies that might vary between the qualifications moderate and severe.

In this case, the management has to prove the dimension of the capacity and the desire of the banks of solving the problems in an efficient manner and in due time.

Generally speaking, these Banks are less bale of coping with market fluctuations, due to their increased vulnerability to external influences, in comparison to the units classified by composed rating 1. Moreover, these Banks may find themselves in significant conflict with the applicability of the regulations and laws in force.

Risk administration practices may be unsatisfactory as compared to the dimension of the unit, its complexion and risk category.

Banks classified in this rating group require a more careful supervision then a routine supervision, even if their downfall seems unlikely, given the general potential and their financial capacity.

Composite Rating 3

Banks classified in this group are generally characterized by uncertain or risky practices or circumstances. In this case there appear serious financial and managerial problems leading unsatisfactory performances.

The issues emerging with these banks migrate from severe deficiencies to critical deficiencies, which have not been solved in a satisfactory manner by the present leadership or the administration council of the unit.

Generally speaking, the Banks from this group are unable to resist market fluctuations.

There is a significant possibility of not respecting the laws and regulations in force. Management practices are, generally speaking, unacceptable as far as the dimension, complexity and risk type of the company are concerned.



A through supervision is a must, a fact that, in most of the cases, leads to decisive actions for solving the problems of these units.

The downfall of the Banks from this group is possible unless the problems or deficiencies are solved in due time and in a satisfactory manner.

Composite Rating 4

Banks from this group present unsatisfactory and risky practices or circumstances; have a critical performance, sometimes with thorough inadequate risk administration practices as compared to the size of the unit, its complexity and risk category, requiring the most severe concern as far as supervision is concerned.

The dimension and gravity of the problems surmount the capacity or the desire of the company's leadership to control and repair.

In such circumstances there is required a careful and permanent supervision.

The downfall of the Banks from this group is most likely.

Ratings 4 and 5 require a fast action.

The evaluation criteria determined for the five components CAAMPL do not have an exhaustive character for the examiner, they are barely indicative.

In our case compound rating and quantitative rating were calculated as follows:

Compound rating = 20% * (I qualitative) Rating + 80% * (I quantitative) Rating

(I quantitative) Rating = 25%* (C) Rating + 25%* (A) Rating + 25%* (P) Rating + 25%* (L) Rating

As a result of the analyses conducted on a sample of 20 Romanian banks, their rating is as follows:

CAAMPL										
C. CAPITAL ADEQUACY										
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Solvency report 1	32,78%	24,24%	19,13%	19,45%	21,62%	31,76%	39,31%	45,57%	41,46%	50,59%
Rating	1	1	1	1	1	1	1	1	1	1
Solvency report 2	14,19%	12,02%	10,82%	10,98%	12,40%	11,91%	12,57%	11,63%	14,64%	15,47%
Rating	1	1	1	1	1	1	1	1	1	1



Equity ratio	10,72%	9,39%	8,68%	8,72%	10,07%	9,12%	9,24%	8,27%	10,86%	11,30%
Rating	1	1	1	1	1	1	1	1	1	1
Social capital ratio	209,14%	195,70%	178,48%	197,99%	161,73%	163,53%	135,65%	120,00%	174,88%	183,07%
Rating	1	1	1	1	1	1	1	1	1	1
Adequacy Rating	1	1	1	1	1	1	1	1	1	1
A.SHAREHOLDING										
TOTAL SHAREHOLDING COMPOUND RISK	1	1	1	1	1	1	1	1	1	1
A. ASSET QUALITY										
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Overall risk ratio	68,77%	71,52%	71,37%	71,51%	73,14%	69,64%	67,60%	65,27%	68,67%	68,06%
Rating	4	4	4	4	4	4	4	4	4	3
Debt rate	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Rating	1	1	1	1	1	1	1	1	1	1
The share of overdue and doubtful debts to total assets	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Rating	1	1	1	1	1	1	1	1	1	1
Share of loans granted	55,18%	60,09%	60,51%	61,70%	64,70%	59,10%	56,44%	53,65%	58,48%	55,41%
Rating	3	4	3	3	3	4	3	3	3	3
Share of loans granted to customers from total sources	62,42%	66,32%	66,27%	67,60%	71,95%	65,03%	62,18%	58,49%	65,60%	62,46%
Rating	4	4	4	4	3	4	4	3	3	3



Asset quality rating	2	2	3	3	3	2	2	3	3	3
M. MANAGEMENT										
TOTAL MANAGEMENT COMPOUND RISK	1	1	1	1	1	1	1	1	1	1
P. PROFITABILITY										
The rate of return on assets (ROA)	2,34%	2,02%	1,49%	2,45%	2,33%	0,32%	0,45%	0,51%	1,17%	1,27%
Rating	4	4	4	4	4	5	5	5	4	4
The rate of return on equity (ROE)	21,79%	21,52%	17,12%	28,14%	23,16%	3,49%	4,89%	6,20%	10,77%	11,22%
Rating	1	1	1	1	1	5	4	3	2	1
Profitability rating	3	3	3	3	3	5	5	4	3	3
L. LIQUIDITY										
Liquidity indicator	1,13	1,10	1,14	1,13	1,14	1,14	1,13	1,10	1,13	1,13
Rating	2	2	2	2	2	2	2	2	2	2
Immediate liquidity	21,36%	25,53%	26,60%	23,35%	24,04%	17,75%	18,58%	19,10%	18,80%	14,35%
Rating	5	5	5	5	5	5	5	5	5	5
Rate of loans granted to customers in deposits from customers	72,64%	73,90%	79,54%	81,09%	80,63%	75,79%	69,77%	62,79%	70,77%	67,22%



Rating	1	1	1	1	1	1	1	1	1	1
Liquidity rating	3	3	3	3	3	3	3	3	3	3
COMPOUND RATING	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
TOTAL COMPOUND RISK	2	2	2	2	2	2	2	2	2	2

It is therefore apparent that banks fall into rating 2 category for the entire period analyzed.

THE RATING SYSTEM PEARLS

Numerous financial indicators have been promoted worldwide as well as fixed rules for financial institutions, but few of them were gathered in an evaluation program capable of measuring both individual components as well as the system as a whole.

Since 1990, the World Council of Credit Unions (WOCCU) uses a set of financial indicators called “PERLAS” or “PEARLS”.

Each letter of the word PEARLS measures key areas of credit union operations: Safety, Effective financial structure, Rate of cost and revenue, Liquidity, Assets and their quality and Signs of growth.

The system helps managers to find core solutions to the serious shortcomings of their institutions. For example, PEARLS system is able to identify a credit institution with a weak institutional capital and can also identify the likely causes (e.g. insufficient gross income, excessive operating expenses or significant loss resulted from default loans).

Using the system allows managers to quickly and accurately identify problem areas and make the necessary changes before problems worsen. In fact, PEARLS is an “early warning system” that provides managers valuable information.

Using standardized financial indicators eliminates various criteria used by credit institutions in evaluating their operations.

This system helps create a universal financial language that everyone can speak and understand. An important result can be considered improved communication which



allows a better understanding of basic concepts along with a commitment to achieve uniformity of quality and a strengthening of each institution at an individual scale, by improving deficient operational areas.

The combined use of standardized accounting system and performance indicators PEARLS generates a new type of information: comparative rankings among credit unions.

Before adopting this system, comparing two credit unions was impossible because of the different existing criteria and reporting forms.

Financial information standardization eliminates diversity and provides an efficient and effective tool for comparing the performance of credit institutions on a national scale.

Objectivity is a very important aspect of the PEARLS comparative ratings. Qualitative or subjective indicators are not included in rankings.

This is a major difference from the American system CAMEL which gives the management team a numerical classification based on the examiners' subjective and general judgment. By avoiding subjective assessments, it is possible to submit objective reports to credit unions, reports that are based on financial information extracted from institutions' balance sheets.

System's objectivity allows open discussion of problems with the managing board and management teams.

The system is useful especially in situations where the credit union is rated at the bottom of the ranking table. No more time is wasted in debating different viewpoints and management can focus on seeking solutions to the problems affecting the institution.

Besides its usefulness as a management tool, PEARLS system provides the framework for a unitary supervision. The supervisory institutions can use financial indicators generated by PEARLS to conduct quarterly or monthly analysis of all key areas of the business of credit institutions. These evaluations are very important for the observation of *trends and in order to detect deficient operating areas* of the affiliated institutions.

By standardizing key financial indicators, all stakeholders are interested in the same thing: *what is important for the one who analyzes is also important for the credit union manager.*



Introducing the PEARLS evaluation system may change the role of inspectors from the supervisory institution to verifying the financial information used to calculate the indicators. If errors are found, these are relatively easy to correct and often gives the management team the opportunity to make an analysis of the operations of the institution.

PEARLS system is unique and different to other monitoring systems. It was initially designed as a *management tool* and then became an effective *supervision mechanism*. Each letter of the PEARLS word addresses to a different field, but essentially to the credit union.

P = Protection

Adequate protection of assets is a core component of the new model of credit union. Protection is measured by comparing the provisions made for loan losses with the value of the outstanding (delinquent) loans. Protection is considered to be adequate if the institution has sufficient provisions to cover 100% of loans overdue for more than 12 months and 35 % of loans overdue between 1 and 12 months.

PEARLS system evaluates the level of protection in the credit union by comparing delinquency (overdue) provisions to loans.

E = Effective financial structure

The financial structure of a credit union is the single most important factor in determining the growth potential of earning capacity and in general of the financial strength.

PEARLS system measures the assets, liabilities and capital (own funds) and recommends “ideal structure” of the institution.

PEARLS monitoring system measures the institutional capital through a key indicator that is linked to other operational areas. If deficient, it can easily signal the operational areas where there are potential weaknesses.

R = Rate of cost and revenue

PEARLS system separates all essential components of the net profit (income) in order to help the management to calculate investment gain and to assess operational costs.

In this way, PEARLS demonstrates its importance as a management tool.

Unlike other systems that calculate the profit on the basis of average assets, PEARLS calculates profit on the investment in progress.



By separating the income and expenses on the aforementioned areas, PEARLS indicators may point out correctly the reasons why a credit union does not produce enough income.

L = Liquidity

Effective liquidity management skills will become more important as more or bigger social funds are attracted.

A = Assets and their quality

An unproductive asset is the asset that does not produce income. Excess of unproductive assets negatively affects the income of the credit union.

S = Signs of growth

The only way of preserving the value of assets is strong, accelerated growth of assets, sustained by efficiency. Growth in itself is not sufficient. The advantage of PEARLS system is that it links growth to profitability, as well as to other key areas by evaluating the power of the entire system.

“PEARLS” INDICATOR SYSTEM

AREA	PEARLS	DESCRIPTION
P PROTECTION	P1 = 100%	Provision for loan losses /Overdue loans >12 months
	P2 = 100%	Net Provision/Necessary provisions for overdue loans (delinquent) between 1 - 12 months
	P3 = Yes/No	Full settlement of overdue loans >12 months
	P4 = Minimum	Full settlement of overdue loans / total loan portfolio
	P5 = 100%	Accumulated recoveries of settled loans/Accumulated settlements of loans
	P6 = 110%	Solvency



	P7	Provisions for losses on investments / Unregulated investments
E= EFFECTIVE FINANCIAL STRUCTURE	E1 = Between 70-80%	The net balance of loans / Total assets
	E2 =Max. 20%	Liquid investments / Total assets
	E3 = Max. 10%	Financial investments / Total assets
	E4 = 0%	Non-financial investment / Total assets
	E5 = Between 70-80%	Members' Social Fund / Total assets
	E6 = Max. 5%	External loans (borrowed funds) / Total assets
	E7 = Max.20%	Initial Social Fund of the members / Total assets
	E8 = Min 10%	Institutional Capital / Total assets
	E9 = Min 10%	Net Institutional Capital / Total assets
A = ASSETS AND ASSET QUALITY	A1 <= 5%	Total outstanding (delinquent) loans / Total portfolio loans
	A2 <= 5%	Unproductive assets / Total assets
	A3 >= 100%	(Net funds with zero cost)* / Unproductive assets

*** Funds with zero costs are represented by debts with no interest rate + transitional capital + institutional capital**

AREA	PEARLS	DESCRIPTION
R = COST AND REVENUE RATES	R1 = Interest on loans to members	Net income from loans / Net average portfolio of loans



	R2 = Market interest	Liquid Investment income / Average of current assets
	R3 = Market interest	Income from financial investments / Financial investments average
	R4 \geq R1	Income from non-financial investments / Non-financial investments average
	R5 = Market interest	Financial cost: Interest on social fund / Members social fund average
	R6 \leq R5	Financial cost: Interest on borrowed funds (external credit) / Average borrowings (external credit)
	R7 \geq R5	Financial cost: Interest on initial social fund / members initial social fund average
	R8 = Sufficient for covering R9 R10 and for capital increase	Gross margin / total assets average
	R9 = 3% - 10%	Operating expenses / total assets average
	R10 = sufficient for estimated losses	Provisions for risk assets / assets average
	R11 = Amount needed	Occasional revenues or costs / assets average
	R12 = Sufficient for reaching E8 objective	Net income / assets average
L = LICHIDITATE	L1 = Min 20%	Productive and unproductive liquid assets - short-term debt / members total social fund
	L2 = 10%	Liquidity reserves / total social fund



	L3 < 1%	Unproductive liquid assets / total assets
S = SEMNE ALE CRESTERII	S1 = Sufficient for reaching E1 objective	Increase in net loans
	S2 = Sufficient for reaching E2 objective	Increase in liquid investments
	S3 = Sufficient for reaching E3 objective	Increase in financial investments
	S4 = Sufficient for reaching E4 objective	Increase in non-financial investments
	S5 = Sufficient for reaching E5 objective	Increase in members social funds
	S6 = 0	Increase in borrowed funds (external credit)
	S7 = Sufficient for reaching E7 objective	Increase in members initial social fund
	S8 = Sufficient for reaching E8 objective	Increase in institutional capital
	S9 = Sufficient for reaching E9 objective	Increase in net institutional capital
	S10 = Minimum 5%	Increase in the number of members
	S11 = Higher than inflation	Increase in total assets

Source: www.woccu.com

Ratings given according to the values of the indicators selected are:



PEARLS Indicators	PLATINUM	GOLD	SILVER	Unsatisfactory (0 pct.)
	(3 pct.)	(2 pct.)	(1 pct.)	
P1				
Provisions for delinquent loans > 12 months	>=100%	>=100%	>=100%	<100%
P2				
Provisions for delinquent loans from 1-12 months	>=100%	>=100%	>=100%	<100%
P6				
Solvency	>110%	>110%	>110%	<=110%
E1				
Net loans balance/ total assets	70%-79,99%	60%-69,99%	50%-59,99% / 80%-89,99%	<50%, >=90%
E5				
Social fund balance / total assets	70%-89,99%	60%-69,99%	50%-59,99% / 90%-94,99%	<50%, >=95%
E8				
Institutional Capital / Total Assets	>=10%	5%-9,99%	3%-4,99%	<3%
A1				
Delinquency loans / gross loans balance	<5%	5%-9,99%	10%-14,99%	>=15%
A2				
Unproductive assets / total assets	<5%	5%-9,99%	10%-14,99%	>=15%
R5				
Interest paid to social fund / Social fund average	> inflation	> inflation	> inflation	< inflation
R9				
Operating Expenses / Total Assets Average	3%-9,99%	10%-12,99%	13%-14,99%	>=15%
L1				
Liquid Assets - Current Liabilities / Social Fund	>=15%	>=15%	>=15%	<15%
S10				



Increase in the number of members	>=5%	>=5%	>=5%	<5%
S11				
Increase in total assets	> inflation	> inflation	> inflation	< inflation

In the present study the situation is as follows if we take into account 8 performance criteria for the analyzed banks ratings using the PEARLS system:

PEARLS	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
P6. Solvency	32,78%	24,24%	19,13%	19,45%	21,62%	31,76%	39,31%	45,57%	41,46%	50,59%
P6 Rating	3	3	3	3	3	3	3	3	3	3
E1 Net loans balance / total assets	63,50%	64,79%	68,78%	70,60%	69,41%	66,73%	61,42%	56,07%	61,35%	58,21%
E1 Rating	2	2	2	3	2	2	2	1	2	1
E5 Social fund balance / total assets	5,13%	4,80%	4,86%	4,40%	6,23%	5,58%	6,81%	6,89%	6,21%	6,17%
E5 Rating	0	0	0	0	0	0	0	0	0	0
E8 Institutional Capital / Total Assets	24,77%	18,93%	15,35%	15,44%	17,56%	24,32%	28,89%	32,40%	30,76%	36,95%
E8 Rating	3	3	3	3	3	3	3	3	3	3
A2 Unproductive assets / total assets	5,36%	6,90%	5,33%	4,44%	4,32%	3,89%	3,82%	3,59%	3,50%	4,27%
A2 Rating	2	2	2	3	3	3	3	3	3	3
R9 Operating Expenses / Total Assets Average	20,35%	15,02%	15,09%	17,01%	22,29%	23,32%	25,28%	21,56%	22,45%	25,21%
R9 Rating	0	0	0	0	0	0	0	0	0	0
L1 Liquid Assets - Current Liabilities / Social Fund	862,84%	1132,23%	1022,92%	1105,60%	700,69%	772,04%	720,27%	769,69%	750,09%	724,12%
L1 Rating	3	3	3	3	3	3	3	3	3	3
S11 Increase in total assets	100,00%	18,94%	163,94%	171,61%	122,62%	114,45%	110,87%	119,25%	115,40%	108,53%



S11 Rating	3	3	3	3	3	3	3	3	3	3
Total points	16	16	16	18	17	17	17	16	17	16
Rating	C	B	B	B	B	B	B	B	B	B
Aggregate rating										
Rating	GOLD	GOLD	GOLD	GOLD	GOLD	GOLD	GOLD	GOLD	GOLD	GOLD
Aggregate rating grade										

It is therefore apparent that for PEARLS system the rating is also GOLD which equals rating 2 in the CAAMPL system.

III. Conclusion

MEASURES FOR PREVENTING CREDITING RISK

In order to manage credit risk we take into account a lot of measures grouping into preventing measures, operative measure and curative measures.

A. Preventing measures

Any crediting operation implies taking into account a certain risk. The credit risk consists, on the one hand, of the clients' insolvency risk, which may lead to the loss of the lent sum, and, on the other hand, consists of the immobilization risk, where the client does not respect the engagement of paying back on due time the sum stipulated in the contract.

The risk resulting from the insolvency of the debtor may be overcome through the forming of guarantees. In order to grant a credit, the banks require the formation of real guarantees that would cover 150-200% of the credit's value.

The general principle to be considered in estimating the opportunity of each credit operation is that the bank does not have to grant a credit before thoroughly analyzing the possibility of recovering the lent sum in due time. Therefore, the capacity of producing income of the credit to be granted is studied. This capacity is tested through various methods of observation and evaluation and is combined with the possibility of restraining the volume of operations of the economic agents, without disturbing the economic equilibrium of its administration.



The prudence and intuition of the bank inspector have a major role in estimating risk, since, on the accuracy of these data depends the favorable result of the credit operation.

Besides the capacity of producing income, there are also checked:

- the general economic circumstances of the sector in which the economic agent performs;
- the legal engagements of the enterpriser;
- the technical and administrative organization of the respective enterprise;
- the report between own capital and borrowed capital, there is tested the possibility of altering this report in the favor of own capital;
- the relations of the enterpriser with his/her clients and employees;
- the motivation of the financing request and the immediate destination of the demanded funds;
- The economic perspectives of the respective enterprise.

Irrespective of the accuracy in making these estimations, the bank has to demand real and personal guarantees referring to the required credit. This insurance through forming guarantees is imposed as a result of the fast and unpredictable changes that may appear in the normal unfolding of an economic agent's activity.

Another important element in estimating and preventing risk is the distribution of credit between different economic agents for the purpose of dividing the risk coming from the changes in the market circumstances.

The bank also has to determine such an interest rate so that it should, on the one hand, compensate for the effects generated by the inflation and, on the other hand, to cover the refinancing rate with CENTRAL BANK. For the covering operations, the bank has to calculate a tax sufficient to cover the re-covering tax with CENTRAL BANK.

B. Operative measures

Among these, the most important are:

- drafting, under advantageous circumstances for the bank, of the crediting contract;
- checking the operations in the account of credit availability, charging the non utilization fee in the case in which the debtor does not use the money according to the crediting contract;
- charging an administration fee;



- holding back a security backup (between 3-5% of the credit value);
- checking the regularity of the checking and payments from the available account;
- controlling the strict observing of the credit's objective stipulated in the crediting contract;
 - the periodical analysis of the synthesis financial-accounting statements of the economic agents (checking balance, accounting balance sheet, profit and loss account);
 - in the case of the credits for investment, the evolution of the activities during their unfolding is controlled;
 - Following the way in which the debtor pays the contractual obligations referring to the monthly interest and credit reimbursement rate. In the case in which the obligations stipulated in the contract are not fulfilled, the bank is entitled to blocking the sums owed from the client's available account;
 - Following, during the entire period of the credit, of the mobile and immobile guarantees made by the client. In the case in which certain deficiencies are noticed, the crediting contract is stopped;
 - periodical checking of the integrity of the goods, balances and the respecting of the credit's purpose stipulated in contract;
 - In the case of not reimbursing in due time, the remaining sums are put into a special account of none reimbursed in due time credits: for these sums there are no additional fees according to the degree in which due time has been surpassed.

C. Curative measures

If from the application of the operational measures there does not result the fulfillment of the contractual obligations, the bank has the right of interrupting the crediting contract. In the case in which the debtor does not pay his/her obligations after being noticed by the bank, the bank applies extreme measures: forced execution of the real guaranties (putting them in auction and recovering the remaining amounts), recovering the amounts from granters (banks, physical entities or legal entities).

Another curative measure is represented by the formation of a reserve fund (security backup) by the repartition of certain sums from the bank's profit.

The purpose in the application of this group of measures is an efficient administration of the credit portfolio.



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