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Analysis of Performance Measures in the Banking System

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ABSTRACT

The complex and delicate character of the problem of banking performance, in the context of harsh competition and the emergence of multiple risks, impose on the banks the permanent evaluation of the behavior and the analysis of internal activity. In the context of the fast changes that take place in national economies lately, starting points towards a new banking order must be based on new models of banking management. The macroeconomic risk factors may have a significant impact on the performance of a banking institution, with direct implications on the quality of the credit portfolio, on profitability and its fructification and, finally, on the entire banking system. The evaluation of a bank's profitability is done with the aid of the banking performance indicators, which reflect a multitude of aspects regarding the degree of profit realization, managerial and operational efficiency. *The most important objective that banks which want to assume the responsibility of running a successful practice will be the identification of market needs and the choosing of a strategic position in this market, in the context of banking performance and minimal risk.*

1. Introduction

The complex and subtle aspect of the performance in the banking system, viewed in the actual context of a severe competition and related to multiple risks, requires to the banks a permanent evaluation of their behavior and analysis of the internal activity. In the context of the rapid changing emerged in national economies , the beginning of a new banking era premises are already created.
The most important objective for the banks interested to develop a profitable activity, is to identify the market needs and to choose a strategic position on that market, reaching banking performance with minimum risk.

The performance can be defined as the measured level of the stability of a bank activity characterized by low risk level and a normal trend for the increase of the profit from an analyzed period to the next period.

The analysis of the bank' s performance loses from its importance when we look at nonperformance due to an incorrect management policy. The level of performance is identified and measured according to a set of indicators. The non-performance is easy to detect by a specialist just by studying the s structure of the bank's balance sheet.

A competitive information system **-** the information system represents an indispensable tool for the decision making process and also for the communication between the central unit and the branches.;

- ***Markets selection and the relevant products*** - within the elaboration of the strategic plans, the managers should consider other existent financial institutions , their products and services available on the market and only after concluding these steps, to select the markets and the products. Within this selection process the bank should take into consideration the economic power, the experience and the economic dynamics.
- ***Bank's personnel retribution, according to performances*** **–** the preservation of efficient managers should be a first objective in the retribution plan;
- ***Knowledge of financial techniques and instruments*** **-** the banks should evaluate the effects of using financial instruments from the perspective of the revenues and potential related risks; a good understanding of the financial instruments and techniques is vital for the banking management.
- ***A sound financial management*** **-** complies a prudent management**,** certain restrictions concerning high risk levels accepted for credits.
- ***Elaboration of strategies*** **-** required in order to asses the revenues from the perspective of risks, also provides solutions to face the changing and to address the the risks.

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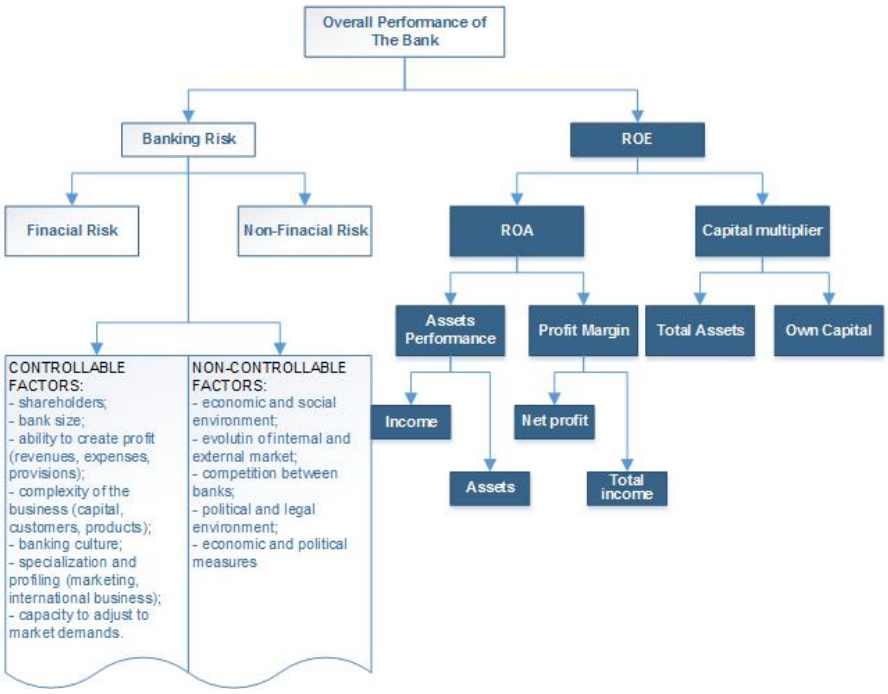

The representation of the bank's performance according to classic model – Du Pont system,(see above) which compares the profit and the risk by balancing the earnings with the losses

The importance of the risk/profit ratio

The bank's management makes two questions:

1. What risk level should bear the bank in order to increase the profits?

2. Level of each type of the risks taken by the bank?

The final objective of the banking activity is to obtain the performance required for a normal operation/activity and even to create the possibility to develop it. The calculation of the risk indicators allows a better interpretation of their importance through the assessment of causes, outcomes and consequence in time on the bank's profitability. The risk indicators become more relevant when putted in the general context of the market. The final objective of the banking management being represented by the maximization of the revenues and minimization of the risks.

Basel II Accord - Characteristics and objectives

The New Basel II Accord is the result of the initiative of the banking supervision authorities in order to promote and strengthen supervisory and risk management practices globally. The New Accord consists of three major pillars (components): *minimum capital adequacy ratio, supervisory review process and market discipline.* The safety and soundness of the financial system can be attained only by the implementation of these three pillars.

Pillar no 1

Minimum capital adequacy ratio represents 8% of the RWA (risk-weighted assets), calculated in accordance to the credit risk, market risk and the operational risk. Therefore the capital requirement will have three components are determined separately: capital requirement to cover credit risk (CR), the capital requirement for market risk (MR) and the capital requirement for operational risk (OR).

The capital adequacy rate (CAR) will be calculated according to the formula:

$$Ps = \frac{\text{Salaries and related expenses}}{\text{Operation expenses}} \times 100$$

Pillar no 2

Each bank should rely on internal procedures, for the evaluation of its own capital adequacy ratio based on a thoroughly assessment of the portfolio risk. Basel II considers that the bank management has the most complete understanding /risk assessment of the portfolio and has also the responsibility in the decision making process and in the implementation of the required actions.

Also, considers the improvement of the communication / dialog between banks and supervisory authorities in order to identify and promptly address to deficiencies through actions which either would mitigate/reduce the risk or increase the capital.

Pillar no 3

The Basel Committee considers market discipline as an important element for the promotion of a sound and stable financial and banking system. The publication of relevant information by the banks leads to a better information of the market actors, investors, depositors, etc and facilitate an efficient market discipline. According to pillar no 3 provisions, the information disclosed by a bank (with few exceptions), are not required to be audited by an external auditor, a detailed check carried on by the internal audit being considered satisfactory. Any significant discrepancies between reports and the audited accounting reports are to be explained by the respective bank.

Basel III Accord

The New Basel III, approaches in an integrate manner the risks problem, considering their complexity, emphasizing the causes of the financial crisis and provides a set of measures for a gradually implementation within the entire banking system. According to Basel III the minimum common equity capital ratio will be 4,5%, twice the present level (2%, according to Basel III), to which a liquidity supplement of 2,5% will be added. The implementation process of the new provisions will start in January 2013 and is estimated to be finalized until January 2019.

Targeted reforms

- Microprudential approach - contributes to increase the endurance of each individual bank through the stress periods.
- Macroprudential approach - identifies a large scale set of risks that can develop within the banking sector as well as their procyclical amplification in time.

2. Analysis of the banking performance indicators

Banking performances represents a highly important tool in the analysis performed by bank's managers, stakeholders and all other actors on the financial markets involved in business relationships with the banks. The bank profitability represents an important objective of the bank administration focusing the:

- optimization of bank's resources and placements;
- intra and inter bank funds transfer ;
- rationalization of the operational expenditures ;
- collection in due time of the interests;
- promotion of new banking products and services;
- increase of the number of clients etc.

The main indicators of the bank's profitability are:

- Return on equity reflects the efficiency of the own capital use and is expressed by the net income to capital ratio.
- Assets return, expressed as net income and total assets ratio, reflects the efficiency of assets use.
- The capital multiplier, defined as the total assets to own capital ration, shows the global efficiency of the own capital use.
- Profit margin, shows the percentage of profit from the total operational income. A ratio of profitability calculated as net income divided by revenues
- Utilization of assets, defined as the report between total income from operations and total assets

2.1. The analysis of the banking profitability

The analysis of the profitability represents a main coordinate in the banking management aiming: bank resources and placements, optimization of transfers in lei and intra and inter bank transfers, rationalization of operational expenses, increase of bank's personnel productivity, launching of new products and services, reaching new clients etc. Specialty texts present a way of calculating the bank's profitability, by determination of 9 steps for covering the expenses. Thus:

STAGE	COMPARABLE ELEMENTS
1	Interest revenues - Interest expenses
2	Income from fees and commissions - operating expenses
3	Income benefits and financial services - financial services benefit expenditure
4	Extraordinary income - extraordinary expenses
5	Other income - other expenses
6	Resource surplus income - expenses related to resource scarcity
7	Income from interest on the minimum reserve requirement - the minimum reserve expenditures Failure
8	Revenues from provisions - provision expenses
9	Income distributed imposed - shared expenses imposed

2.2. Indicators to assess the overall efficiency of the bank's activity

Return **(R)** $R = \frac{\text{Gross profit}}{\text{Total expenses}} \times 100$

Productivity of the bank's personnel **(Wlb)** $Wlb = \frac{\text{Gross profit}}{\text{Average employees number}}$

Salaries weight in total operational expenses **(Ps)** $Ps = \frac{\text{Salaries and related expenses}}{\text{Operation expenses}} \times 100$

Degree of expenses coverage by salaries **(Gas)** $Gas = \frac{\text{Fees colected}}{\text{Salaries + related expenditure}} \times 100$

Degree of coverage of bank's operational expenses ***(Gacf)*** $Gacf = \frac{\text{Fees colected}}{\text{Operation expenses}} \times 100$

2.3. Indicators for the evaluation of the assets quality

The evaluation of the bank's assets is of a major importance for the overall analysis of the bank's performance. The indicators of the quality of the assets highlight the assets structure from both the performance the capacity to produce income points of view

The share of non-performing assets to total assets **(PAn)** $PAn = \frac{\text{Non performing assets}}{\text{Total assets}} \times 100$

The share of overdue loans in total assets or total loans **(PCr.r)** $PCr.r = \frac{\text{Outstanding loans}}{\text{Total assets}} \times 100$

The share of provisions for non performing loans and total loans outstanding interest **(PPCr.r)**

$$PPCr.r = \frac{\text{Provisions for non performing loans and total loans outstanding interest}}{\text{Total loans}} \times 100$$

To assess the quality of assets can use other indicators such as:

- share of net losses from loans in total loans outstanding;
- the share of loss provisions to net loans and interest;
- share in total loans outstanding interest;
- share of total outstanding interests for outstanding loans;

2.4. Indicators to assess the solvability and the liquidity

The solvability indicators reflect the bank's capacity to support the entire activity by its own capital.

Solvability indicators **(S)**

$S = \frac{\text{Own capital}}{\text{Total assets}} \times 100$; $S = \frac{\text{Own capital}}{\text{Loans}} \times 100$; $S = \frac{\text{Own capital}}{\text{Funds raised}} \times 100$

Another important indicator is the capital adequacy rate which is determined by two main factors:

- the level, structure and quality of the assets according to the risk;
- the level of the capital or of own funds.

Liquidity of assets **(LAl)** $LAl = \frac{\text{Cash + Tovernment titles + Interbank operations}}{\text{Total assets}} \times 100$

Credits liquidity **(Lcr)** $Lcr = \frac{\text{Total loans}}{\text{Total assets}} \times 100$

Safe assets liquidity **(LAs)** $LAs = \frac{\text{Cash + Tovernment titles + Deposits}}{\text{Total assets}} \times 100$

Interbank liquidity **(Li)** $Li = \frac{\text{Money market assets}}{\text{Money market liabilities}} \times 100$

2.5. Indicators to asses the profitability and return

Indicator of the return of equity **(ROE-Return of Equity)** $ROE = \frac{\text{Net income}}{\text{Total own funds}} \times 100$

Indicator of the return of assets **(ROA – Return of Assets)** $ROA = \frac{\text{Net income}}{\text{Total assets}} \times 100$

Funds multiplier **(EM)** $EM = \frac{\text{Total assets}}{\text{Total own funds}}$

Financial internal rate **(Rrf)** $Rrf = \frac{\text{Net income}}{\text{Own capital}} \times 100$

Economic internal rate **(Rre)** $Rre = \frac{\text{Net income}}{\text{Assets}} \times 100$

Leverage effect **(Ep)** $Ep = \frac{\text{Assets}}{\text{Own capital}}$

Net profit rate (**Rpn)** $Rpn = \frac{\text{Net income}}{\text{Total revenue}} \times 100$

Asset turnover **(Rua)** $Rua = \frac{\text{Total revenue}}{\text{Assets}} \times 100$

Net interest rate **(Mnd)** $Mnd = \frac{\text{Net interest revenues}}{\text{Income generating assets}} \times 100$

2.6. Indicators to asses the incomes and costs

The share of interest income to total assets **(Pvd)** $Pvd = \frac{\text{Interestincome}}{\text{Totalassets}} \times 100$

Share of non-interest income in total assets **(Pvas)** $Pvas = \frac{\text{Income from sources other than interest}}{\text{Total assets}} \times 100$

Rate of interest expense **(Rcd)** to total assets $Rcd = \frac{\text{Interest expense}}{\text{Total assets}} \times 100$

The levels of the performance indicators represents important references in reading and understanding of the bank information for an adequate use. These information should be interpreted from the perspective of past performances, present ones and forecasts. For each of these stages, but especially for the forecasting, more then only one alternative, assumptions should be taken into account, in order to have an objective decision making process concluded with the optimal decision.

The improvement of the banking performances as a result if the optimization of the banking management relies on the interaction of two factors: optimize the ratio between the lending and the deposit rates and, on the other hand, optimization of investment structure and resources. *Also, optimization of banking and therefore is subject to increase bank performance objective to identify, assess, manage and limit bank risk.*

3. Conclusions

The perpetual changing environment in which banks are operating, generates new opportunities but also creates complex and very diverse risks, a challenge for the traditional approaches of the banking management. The banks need to adequately address to all these aspects in order to survive to the competition and to support the economic growth induced by private sector.

Due to their profile and vocation as trading companies, a big importance in this matter should be given to the strategies for the optimization of the bank's performances, which allow optimization of the profits. The bank's performance represents an indicator of the stability and depositors trust. Higher performances of the banking system better conditions for the creation of a more efficient and dynamic economic environment.

From the management perspective there can be identified a profitability of the bank's branches, a profitability of the bank's clients, each of these segments being considered as profit centers, therefore the bank's profitability is the sum of the clients" profitability or products' profitability and bank's services.

Within the banking system, characterized by an intensive competition, the modern banks cannot afford to provide non-profitable products and services, therefore each of their function should be reflected in quantifiable contribution to the entire activity and profit. In this respect very exhaustive evaluation systems have been developed in the last decade, systems which contributes to the decision making process related to products and services relevancy.

The evaluation of the profitability of a bank is carried on banking performance indicators, which highlight aspects related to profit, management efficiency and operational efficiency.

Within the globalization context, the evolution of the Romanian banking system should be regarded as part of the European and international environment, strategic decisions are to be made in accordance with these contexts and in relation to the European integration effects on the Romanian banking system.

The globalization as a process implies the intensification and diversification of the economic relationships between the national economies of the states. The effects of the globalization are present in the banking market, the banking systems representing an important factor itself to support the globalization, due to the importance of the insurance and financial distribution for all development processes.

An illustration on a small scale of the globalization is represented by the European Union, which is, among all regional structures, the main economic model for the development in the world. Romania is part of the European development organization and aiming the integration in European Monetary Union and in the global financial system, our country needs to rely on a solid banking system which main targets are the finalization of the privatization process, harmonization of the national legislation with the community legislation, enforcement of an adequate prudential provisions and selection of the most dynamic strategic market orientations.

The new millennium context proves to be favorable for Romania, through the creation of a banking sector with strong actors capable to provide a financial interface based on efficiency and profitability, diversification and increase of the quality of the financial and banking services, increase of banking competitiveness.

References

[1]. Badea L., Socol A., Drăgoi V., Drigă I, Managementul riscului bancar, Editura Economică, București, 2010.
[2]. Brezeanu P., Triandafil C.M., Managementul financiar-bancar al riscului de faliment corporativ, Editura Cavallioti, București, 2008.
[3]. Cocriş V., Chirleşan D., Management bancar & analiza de risc în activitatea de creditare, Editura Universităţii „Al. I. Cuza" Iaşi, 2007.
[4]. Dedu V., Nițescu D.C., Basel III – între a gândi global și a acționa local, Revista Economie teoretică și aplicată, nr. 6, 2012.
[5]. Dragomir Drăgoi E.V., Managementul performanțelor bancare, Editura Bibliotheca, Târgoviște, 2007.
[6]. Matiş E.A., Managementul performanței și riscului în băncile comerciale din România, Editura Casa Cărții de Ştiință, Cluj-Napoca, 2009.
[7]. Rădoi M.A., Gestiune bancară, Editura Economică, 2009.
[8]. Spulbăr C., Management bancar, Editura Sitech, Craiova, 2008
[9]. Trenca I., Benyovszki A., Riscul portofoliului de credite bancare, Editura Casa Cărții de Ştiință, Cluj-Napoca, 2011.
[10]. Trenca I., Silvestru H., T, Managementul riscului operațional în bănci, Editura Casa Cărții de Ştiință, Cluj-Napoca, 2011.
[11]. Banca Națională a României, Basel II în sistemul bancar românesc, 2005, http://www.bnr.ro
[12]. Basel Committee on Banking Supervision, Principles for the management and supervision of interest rate risk, Supporting Document to the New Basel Capital Accord, http://www.bis.org
[13]. Basel Committee Banking Supervision, Range of practices and issues in economic capital modelling, Consultative document, 2008
[14]. Basel Committee Banking Supervision, Revisions to the Basel II market risk framework, 2009
[15]. KPMG International, Never again risk management in banking beyond the credit crisis, 2009, http://www.kpmg.com
*[16]. * * OU nr. 99/2006 privind instituțiile de credit și adecvarea capitalului.*
*[17]. * * Legea 227/2007 privind modificarea OU 99/2006.*
*[18]. * * OU 1/2012 privind modificarea OU 99/2006 și a Legii 227/2007.*