EVALUATING SIGNIFICANT RISK MANAGEMENT IN THE EUROPEAN COOPERATIVE BANKS BASED ON THE REVERSE STRESS-TESTING CRISIS SIMULATION

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Abstract: *The central theme of this paper- the risk and the trends it manifests on the financial markets are of major importance in the current stage of development of the European banking sector.*
This research aims towards managing the significant risks based on the crisis simulation in the opposite direction and aims to identify the vulnerabilities existing in the specific activity of the European cooperative banks.
The boards of the European Cooperative Banks are constantly analyzing the results of the crisis scenarios, highlighting how the risks affect the capital and profit of each banking corporation, and they try through collective efforts to find the best solutions to counteract significant risks in order to maximize the profits.
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1. Introduction

Risk management in the European cooperative banks is, in our opinion, a very complex issue, that needs to be tackled with great care because of the role it plays in the international financial system.

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In order to be able to manage, evaluate and counteract risks in the current "era of risk management," we need to know them well, quantify them appropriately by calculating risk indicators that allow us to assess the static and dynamic risks by reporting to the international standard and to the historical experience of the banking companies.

In order to measure bank risks, we need to report to a benchmark that represents the standard benchmark used in the analysis.

One of the main objectives of the board of directors of the European cooperative banks is to maximize their market value under the constraint of maintaining risks at reasonable levels so that the benchmark can be represented by the expected profit through the revenue and expenditure budget. Therefore by reporting the possible losses (determined through a specific calculation) to the estimated profit, it will be possible to observe its changes.

The profile of European cooperative banks is constantly changing depending on the market parameters or on the changes that happen so often in the environment in which they operate (clients, legislation, competitors, etc.) and risk management must provide information on the size and possible deviations from the expected results.

Therefore, in this paper we will analyze the implications of the crisis simulation results on the fluctuations of profit and capital, aspects that will give the bank management boards the possibility to use these simulations both as a diagnostic tool for understanding the risk profile of banking companies and also as a forward-looking tool within the internal risk assessment process regarding on how to adjust the capital to possible risks.

2. Literature review and methodology of research

Banking risk, in our conception, can be defined as the probability that in a financial-banking transaction the desired profit will not be obtained and even a loss can appear as a result of the occurrence of unpredictable events and phenomena.

According to the Explanatory Dictionary of the Romanian language, the term "risk" derives from the French word "risqué" with the meaning of *"the possibility of reaching a danger, of having a trouble or of suffering a harm: possible danger."*

In the Concise Oxford English Dictionary, the risk is defined as a *"hazard, the possibility of a negative consequence, loss or exposure to danger"*.

The risk, over time, has been addressed in reference works both in the country and abroad, given that it is manifested in all areas of activity, all of which are at risk of loss.

A. Constantinescu et al. agree that "in a very broad sense, often used in the literature, the risk is defined as the probability of events occurring with negative repercussions on a business, on an activity, etc., events that if they occur they could generate loss, economic and financial damage, additional unforeseen expenses, or would result in the partial or full loss of the expected result."

Banking institutions are permanently at risk in their specific business, reason why they use an integrated banking risk management system that involves the existence and the functionality of policies, procedures and tools in order to identify, assess and eliminate/assume risks.

The theoretical and methodological basis of this research included the work of economists from Romania and abroad and as an information basis we also used specific laws, regulations and norms of the National Bank of Romania, data from various specialized magazines and our own works and researches on this subject.

The research methods used in order to write this paper were: retrospective analysis (historical), diachronic analysis (changes through time), normative method, induction and deduction, synthesis and comparison method, functional approach and others.

3. Elements that underlie significant risk assessment in European cooperative banks

Through business strategy and through revenue and expense budgets, the governing councils/management boards of the European cooperative banks set the goals they want to achieve annually.

The most important goals in our opinion are:

- Increasing the balance of credits by a certain percentage;
- Increasing the bank deposits from individuals, legal entities and entities without legal personality;

The risk assessment can be done on the basis of a hypothetical crisis scenario, based on historical observations and by undertaking a reverse stress-test crisis simulation, this way giving the management boards of the European cooperative banks a response to several questions, such as:

- Are there any hidden vulnerabilities that need to be fixed?

- How will the risks increase according to the objectives set to be achieved in the next year?

- Are the losses involved in the rising risks controllable losses or do they jeopardize the viability of the banking corporation?

- How high is the risk exposure?

- Is the result of the increased activity foreseen for the next year sufficiently high in order to face the risk? (Risk-Profit Report)?

The answer to these questions facilitates the understanding of the banking company's risk profile and can be used as a forward-looking tool within the internal assessment process of adapting to risks and of eliminating or decreasing them.

In the assessment of significant risks, the analysis committees start evaluating by taking into account all the elements that make up the internal and external environment of the cooperative banks.

4. Reverse stress-testing crisis simulation in cooperative banks from the CREDITCOOP network

We begin the risk analysis by describing the external environment in which the cooperative banks (cooperative credit organizations) in the CREDITCOOP network are operating. Growth rates for the euro area and the EU have exceeded the estimates made in 2017, continuing the transition from economic recovery to expansion. It is estimated that the euro area and the EU economies have increased by 2.4% in 2017, the fastest growth rate in the last decade. These robust results are expected to continue as well in 2018 and 2019. Growth projections for 2018 and 2019 were also adjusted to a higher value than projected in November 2017, both for euro area economies and also for EU economies: from 2.1% to 2.3% for the current year and from 1.9% to 2.0% in 2019. On one hand, this is due to the existence of conditions that are favorable to the resumption of economic expansion, in Europe, based on the continuous improvement of the labor market situation and the fact that the indicator of economic sentiment is currently at particularly high rates, and on the other hand because of a more robust recovery (than the one expected) of the economic activity and global trade.

Romania's economy will continue to grow between 2018 and 2019, but at a slower pace than expected in 2017, according to the revised estimates of the European Commission. Economic growth will slow down from 6.7% in 2017 to 4.5% in 2018 and 4% in 2019, according both to the European Commission's economic forecast, and according to the estimates from the European Commission's Spring Economic Forecast. The slowdown in Romania's economic growth in 2018 and 2019 will be due to the moderation of private consumption, that was the main engine of the economy in 2017, taking into consideration the fact that inflation will affect negatively the households' disposable income and also that the people’s wages will not grow at an accelerated rhythm. Despite all of these, Romania's economy will continue to be supported by consumption, as predicted by the European Commission.

In this context, Romania risks facing problems such as: having to borrow at least about 27 billion lei to finance the projected budget deficit (2.97% of the Gross Domestic Product on cash or 2.96% of GDP on the European standard ESA) and about 47 billion lei to refinance the public government debt (with economic growth likely to be lower than 5.5% of GDP (real growth), the budget deficit will increase), aspects that can be decisive for the national currency quote and for the interest rate developments in 2018. The Ministry of Public Finance will directly access the private sector for financing, putting pressure on deposit rates and reducing liquidity in the banking sector.

Regarding the annual inflation rate, it reached 3.3% in December 2017, and at the end of the year 2018, according to the 2018 macroeconomic situation report and its projection for the years 2019-2021 prepared by the The Ministry of Public Finance, will register about 2.6%.

Under these circumstances, in order to identify the significant risks that may be subject to the crisis simulations, besides analyzing the external environment in which CREDITCOOP cooperative credit organizations operate, in order to assess the risks that they may face in 2018, The Audit and Risk Management Committee took into consideration the nature and composition of the portfolios of the CREDITCOOP Cooperative Central Bank and the CREDITCOOP network as a whole.

The main issues that have been taken into account are the following:

- Credit cooperative organizations in the CREDITCOOP network perform operations only in national currency;
- CREDITCOOP credit cooperative organizations mainly carry out traditional banking activities, respectively attracting sources from

the population and placing them in retail loans (most of them, at least);

- The loan portfolio of credit cooperative organizations in the CREDITCOOP network consists mainly of loans of small amounts (the average value of a loan granted is about 13,000 lei) granted to over 95% of the cooperative members;
- The CREDITCOOP Cooperative Central Bank's securities portfolio consists mainly of treasury certificates (CTNs) that fall under the category of low-risk investment instruments;
- The development strategy for 2018 of CREDITCOOP Cooperative Central Bank foresees a moderate increase in activity.

4.1. Network Presentation

The CREDITCOOP cooperative credit network is the aggregate of the central bank and cooperative banks affiliated to it in order to manage their common interests, centralized follow-up of legal provisions and framework regulations compliance, applicable to all affiliated cooperative banks by exercising supervision and administrative, technical and financial control on their organization and operation. Cooperative banks are credit institutions constituted as autonomous associations of individuals united voluntarily in order to fulfill their common economic, social and cultural needs and aspirations, whose activity is mainly carried out on the principle of helping cooperating members.

The CREDITCOOP Co-operative Central Bank's mission is to ensure capital adequacy for risk and liquidity across the entire CREDITCOOP network, to carry out specific activities primarily and, above all, to carry out these activities in the interest of affiliated cooperative banks and as well, in order to provide the banking services needed in general by non-financial network customers and also by cooperative members, in particular. The CREDITCOOP Cooperative Central Bank’s activity is primarily and predominantly in the interest of affiliated cooperative banks and it unfolds in order to ensure capital adequacy and adapting to risks (managing risks), across the entire network. Credits granted by the CREDITCOOP Cooperative Central Bank to legal persons other than affiliated credit cooperatives may not exceed 20% of its assets. According to their profile, cooperative banks, for more than 150 years operate on a determined territorial range that can not intermingle within a credit cooperative network.

4.2. The activity's specific

Cooperative credit organizations (CREDITCOOP Cooperative Central Bank and Cooperative Banks) only perform operations in national currency, and the activity is circumscribed to a traditional banking activity based on attracting sources from the population and placing them in retail loans, especially for individual clients. The credit portfolio of CREDITCOOP cooperative credit organizations consists mainly of small-value loans (the average value of a credit granted is less than EUR 3,000), granted over 95% to the cooperating members.

Regarding the CREDITCOOP Cooperative Central Bank, besides its responsibilities towards the cooperative banks network, it also offers a range of banking products and services to its clients, among which the most representative are the acceptance of deposits, (including settlement of receipts and payments between affiliated cooperative banks), transfer of funds, transactions on behalf of the clients, etc. As all cooperative banks, the CREDITCOOP Cooperative Central Bank of Romania operates only in Romania and only in the national currency and does not own assets that it actively trades (does not have a trading portfolio).

Both the CREDITCOOP Cooperative Central Bank and the cooperative banks do not carry out currency activities and do not operate cards and all of the other activities operated by them are traditional banking activities, therefore they present a very low complexity.

4.3. The definition of the reverse stress-test scenario

The definition of reverse stress-testing, establishes that this concept represents the process of identifying the moment when the business model of a credit institution becomes unviable, by taking into consideration the circumstances that would cause this to happen.

Considering the definition of the reverse stress test scenario and the fact that the central bank and the cooperative banks can not function independently of each other, a single reverse stress-test scenario will be built.

4.4. Current situation - identifying when the business model becomes unviable

The CREDITCOOP network consists of 800 units representing approximately 17% of the total of 4,623 units existing in the banking system in Romania.

On the 30th of September 2017, according to the latest data submitted by the NBR, CREDITCOOP has a market share of 0.29%. Moreover, on the 31st of December 2017 the CREDITCOOP network holds a market share of 2.19% on credit consumer in lei granted to households.

At the CREDITCOOP network level, consumer credits are mainly granted to cooperative members, and by the end of 2017 in the balance there were approximately 100,000 loans granted to individuals. The indicators reflecting the banking performance recorded at the CREDITCOOP network in 2017 had the following levels:

Indicator	CREDITCOOP Network	Banking system
Net profit rate	2,42%	-
Overall rate of return	2,48%	-
ROE (return on equity)	1,27%	12,14%
ROA (return on assets)	0,34%	1,35%

4.5. Identifying vulnerability

As it can be seen from the table above, the profit margin is small compared to the level recorded in the banking system, because the costs generated by the operation of a network of 800 units are quite high.

If this profit margin was affected by higher spending or interest rate cuts, the CREDITCOOP network could suffer losses, which would further reduce the capital.

4.6. What must happen in order for the business model to become unviable

The business model could become unviable if the Romanian Parliament would approve the capping of the annual effective interest rate on consumer loans to households at 18%, because in the Romanian banking market, besides the 35 credit institutions and a significant number of CARs (”Mutual Help Houses”- Cooperative Houses by Mutual-Assistance), there are also a number of 194 IFNs (Non-banking Financial Institutions) and and the annual effective interest rate cap on consumer credit would lead to increasing the competition on the sector of loans granted to non-banking clients, a sector in which the CREDITCOOP cooperative organizations also operate and which represents the main income-generating activity for them.

In 2017, in the CREDITCOOP network, the volume of income generated by household lending accounted for approximately 74% of the total income earned.

It is worth mentioning that by the middle of 2017, the population loans granted by the NFCs reached a level of 6.6 billion lei, which represents approximately 17.5% of the total consumer credit in MDL granted to households by credit institutions (37, 57 billion lei). Interest capping could lead to a migration of potential clients of credit institutions to NFCs as they could benefit from loans with advantageous interest without having to justify their income or meet other criteria that a credit institution must demand from its clients (the maximum degree of indebtedness, the minimum degree of collateral coverage), having this way, an impact on the reduction of the volume of credits granted and implicitly on the reduction of interest income.

In addition to all of the above, the capping of the minimum indebtedness rate at a maximum of 35% announced by the NBR could also lead to a reduction in the volume of credits granted and implicitly to the reduction of the related incomes. All these legislative changes could have major negative effects on the profitability of the CREDITCOOP network in the event that other revenue-generating activities would not be developed within the network.

5. Conclusions

The vulnerabilities identified as a result of the reverse stress-test crisis simulations that the board of directors of the cooperative banks analyzes are designed to assess in an anticipatory manner the risks to which the cooperative bank/CREDITCOOP network may be exposed in a period of economic uncertainty and to provide the management boards with an overview of the significant risks to which the cooperative bank/ CREDITCOOP network is or might be exposed.

From the researches we can conclude that in 2018 both the cooperative banks, individually and the CREDITCOOP network as a whole, may face significant reductions of the estimated profits if they will be confronted with the simultaneous manifestation of the main categories of risks that may appear in the activity they carry out.

Bibliography

Badea, L., Socol, A., Drăgoi, V. & Drigă, I.(2010), *Banking risk management,* Bucharest, Economică Publishing House.

Bernard, Y., & Colli, J.,C., (2000) *Economical and financial vocabulary*, Humanitas Publishing House, Bucharest.

Constantinescu, A., (2014) History, *Performance and Risk Management in Credit Institutions - Application to Cooperative Bank Unirea Brașov*, PhD Thesis abstract, Sibiu,.

Constantinescu, L.A. (2008), *Efficient management of cooperative banks in a modern, european Romania*, Brasov, Lux Libris Publishing House.

Constantinescu, L.A. (2009), *Credit institutions and the transactions carried out in Romania*. Braşov: Lux Libris Publishing House.

Constantinescu, L.A. (2010) *Financial Banking Management*, Brasov, Lux Libris Publishing House.

Constantinescu, L.A. & Stefănescu, C., (2010) *Risk Management In Credit Institutions - New Trends* Review of General Management 12(2), 51-59

Constantinescu, L.A. (2011) *Risk management strategies and solutions for 21 century europeVolume 14, Issue 2,* Review of General Management 14(2), 151-158

Gallati, Reto (2003), *Risk Management and Capital Adequacy*. McGraw-Hill Publishing House.

Giurgiu, A., I.,(1995) *Financial Mechanism of the Entrepreneur*, Dacia Publishing House, Cluj-Napoca,;

Hull, John C. (2012). *Risk Management and Financial Institutions*, Prentice Hall, European Integration - Realities and Perspectives,

Koch, R., (2001) Finance Dictionary, *Teora Publishing House*, Bucureș ti,.

Mihalciuc, M., (1995) *Poliglot explicative dictionary*. *Temporary terms in the market economy*, Enciclopedică Publishing House, Bucureşti,

Nițu, I., (2000) *Banking risk management, Expert Publishing House*, Bucharest,

Petrescu, I. (2006), *Crisis Management*. Bucharest, Expert Publishing House.

*** BCBS, Basel Committee on Banking Supervision, 2003

*** Concise Oxford English Dictionarz, Fifth Edition, 1995

*** National Bank of Romania Rules no.17/2003 for the organization and internal control of credit institutions and significant risk management and the organization and functioning of the internal audit of credit institutions, amended.

*** National Bank of Romania Rules no.18/2009 for the organization and internal control of credit institutions and significant

*** Law no 31/1990, republished with amendments and completions

*** Law no. 227 of 4 July 2007 for approval, amending and supplementing Government Emergency Ordinance no. 99 of 6.

*** Law no. 270 approving Government Emergency Ordinance no. 25/2009 for amending and supplementing Government.

*** Legea nr. 441/2006 - Lege pentru modificarea şi completarea Legii 31/1990 privind societățile comerciale şi a Legii 26/1990 privind Registrul Comerțului, republicată 434 (Monitorul Oficial, partea I nr. 955/2006).

*** Emergency Ordinance no. 25 of 18 March 2009 amending and supplementing.

*** Government Emergency Ordinance no. 99/2006 on credit institutions and capital adequacy (Official Gazette, Part I no.179 of 23 March 2009)