"Dimitrie Cantemir" Christian University
Knowledge Horizons - Economics
Volume 9, No. 2, pp. 80-87
P-ISSN: 2069-0932, E-ISSN: 2066-1061
© 2017 Pro Universitaria
www.orizonturi.ucdc.ro

RISK MANAGEMENT RELATED TO THE PROVISIONS OF THE BASEL III AGREEMENT

Diana GORUN[1], MIRELA NICULAE[2]

1Faculty of Law, Romanian-American University, Bucharest, Romania
2Faculty of Finance, Banking and Accountancy, Dimitrie Cantemir Christian University, Bucharest Romania

Abstract *This research is a starting point for the advanced study of the management of risks related to the provisions of the Basel III Agreement. The diversity of banking risks has recently seen an upward trend following the increase of competition between banks, the growth of international financial markets and the diversification of financial products and services. In order to strengthen the stability of the financial system, the implementation of the requirements under the Basel III Agreement is required.*

Key words:
Basel III Agreement, Banking risk, Risk management, Risk management function
JEL Codes:
G21, G28, G32, K20, K30

1. INTRODUCTION

The diversity of banking risks has been on the rise in recent years as a result of increased competition between banks, the growth of international financial markets, and the diversification of financial products and services.

The changes that have taken place on the financial and banking markets in recent years have led to major changes in risk in banking institutions. The issue of bank risks is dealt with in the context of international and domestic legislation governing the calculation of minimum capital requirements for the main banking risks. (Drăgan, 2013)

One of the most important concerns about the transformations occurred in the banking system is the risk management strategy, through various methods and procedures, which have been achieved through international measures and regulations. (Cosma, 2014). In a macro-prudential approach, the reform proposed under the Basel III Agreement seeks to strengthen the resilience of the financial system to shocks by strengthening the capitalization of the banking system and liquidity.

2. LITERATURE REVIEW

The field literature comprises studies that support the role as a major pillar of the capital in supporting financial stability. Most researchers who have approached this issue come to the conclusion, supported by Caruana (2012) or by Brei and Gadacnez (2012), according to which more capital and better quality are the way that can lead to strengthening the resilience of the financial system to shocks. (Bors, 2015).

The supply of liquidity is essential in fighting a crisis, but the banks' ability to create liquidity is closely linked to the leverage effect. At the same time, the leverage effect, besides being closely correlated with the size and quality of the capital base, is also one of the causes of the phenomenon of pro-cyclicality specific to financial activity. (Bors, 2015).

Nier et al. (2008) also show that there is a direct link between the level of the aggregate capital of the entire banking system and the probability of bankruptcy of banks in the system, given that a low level of the aggregate capital weakens its resilience, seen as a whole, by enhancing the systemic risk and contamination effect. (Bors, 2015).

The Basel III Agreement seeks to combine the micro-prudential and macro-prudential supervision while being both a risk-management framework at the bank level (taken from Basel I and Basel II) and a

systemic risk management framework at the banking system level (Darovannaia, Gorobet, 2012).

The term of risk management does not have a universally accepted definition. In general, the term of risk management used in financial institutions is the set of policies and procedures that financial institutions have implemented to manage, monitor, and control their exposure to risk. (Dedu, Nechif, 2010).

One of the more relevant definitions for risk management is that given in 2009 by D. Hubbard - Risk management consists of identifying, assessing and prioritizing risks - followed by coordinated and economic application of resources to minimize, monitor and control the probability and/or the impact of unfortunate events or to maximize opportunities. (Andrew, 2017).

Because treating each bank individually and not as part of a system has led to erroneous predictions of risk developments, more and more authors have expressed concern over systemic risk in recent years. Thus, Kaufman (1995), Flannery (1999), De Bandt and Hartmann (2000) are just a few of the authors who have studied systemic risk as an event that has effects on the entire banking system. (Dragan, 2013).

3. METHODOLOGY OF RESEARCH

The CRD/CRR IV legislative package is the legal framework governing prudential supervision, the supervisory framework and the prudential requirements applicable to credit institutions and investment firms in the Member States of the European Union.

The CRD/CRR IV package (consisting of European Directive No. 2013/36/EU which requires implementation in the Member States' legislation and EU Regulation 575/2013, which is directly applicable in the legislation of the EU Member States) represents the implementation at the level of the European Community of the Basel III Agreement of the Basel Committee on Banking Supervision, an agreement that sets new capital requirements for financial institutions in response to the situations encountered during the crisis in recent years.

The process of adopting the CRD/CRR IV package was completed in 2013 and published on 27 June 2013 in the Official Journal of the European Union:

- Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on the access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and abolishing Directives 2002/87/EC and 2006/49/EC.
- Regulation no. 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending (EU) Regulation No. 648/2012.

According to ASF Romania, the new rules address some of the vulnerabilities identified for credit institutions/ investment firms during the financial crisis, such as insufficient capital, which required unprecedented support from domestic authorities. More prudential requirements for credit institutions/investment firms are implemented by imposing sufficient reserves of capital and liquidity.

According to Directive 2013/EU of the European Parliament and of the Council of 26 June 2015 on the access to the activity of the credit institutions and the prudential supervision of the credit institutions and investment firms, amending Directive 2002/87/EC and abolishing Directives 2006/48/EC and 2006/49/EC, taking into account the technical criteria set out in Article 98, the competent authorities shall review the arrangements, strategies, processes and mechanisms implemented by the institutions to comply with this Directive and Regulation (EU) No 575/2013 and evaluate:

(a) risks to which the institutions are or might be exposed;

(b) risks that an institution poses to the financial system taking into account the identification and measurement of systemic risk under Article 23 of Regulation (EU) No 1093/2010, or recommendations of the ESRB, where appropriate;

(c) risks revealed by stress testing taking into account the nature, scale and complexity of an institution's activities.

According to Directive 201336/EU of the European Parliament and of the Council of 26 June 2013 on the access to the activity of the credit institutions and the prudential supervision of the credit institutions and investment firms, amending Directive 2002/87/EC and abolishing Directives 2006/48/EC and 2006/49/EC, in addition to credit, market and operational risks, the review and evaluation performed by competent authorities pursuant to Article 97 shall include at least:

(a) the results of the stress test carried out in accordance with Article 177 of Regulation (EU) No 575/2013 by institutions applying an internal ratings based approach;

(b) the exposure to and management of concentration risk by institutions, including their compliance with the requirements set out in Part Four of Regulation (EU) No 575/2013 and Article 81 of this Directive;

(c) the robustness, suitability and manner of application of the policies and procedures implemented by

institutions for the management of the residual risk associated with the use of recognised credit risk mitigation techniques;
(d) the extent to which the own funds held by an institution in respect of assets which it has securitised are adequate having regard to the economic substance of the transaction, including the degree of risk transfer achieved;
(e) the exposure to, measurement and management of liquidity risk by institutions, including the development of alternative scenario analyses, the management of risk mitigants (in particular the level, composition and quality of liquidity buffers) and effective contingency plans;
(f) the impact of diversification effects and how such effects are factored into the risk measurement system;
(g) the results of stress tests carried out by institutions using an internal model to calculate market risk own funds requirements under Part Three, Title IV, Chapter 5 of Regulation (EU) No 575/2013;
(h) the geographical location of institutions' exposures;
(i) the business model of the institution;
(j) the assessment of systemic risk, in accordance with the criteria set out in Article 97.

In order to strengthen the stability of the financial system, it is necessary to implement the requirements under the BASEL III Agreement.

Table 1. **Transition to BASEL III/CRD IV**

	2014	2015	2016	2017	2018	2019
Minimum requirement of own capital at base level I	4,0%	4,5%	4,500%	4,500%	4,500%	4,5%
Capital preservation buffer (own funds of base level 1)			0,625%	1,250%	1,875%	2,5%
Minimum requirement of own capital at base level 1 + Capital preservation buffer	4,0%	4,5%	5,125%	5,750%	6,375%	7%
Capital anti-cyclical buffer			≤ 0,625%	≤ 1,250%	≤ 1,875%	≤ 2,5%
Minimum requirement of own capital at base level 1	5,5%	6,0%	6,000%	6,000%	6,000%	6,0%
Minimum capital requirement	8,0%	8,0%	8,000%	8,000%	8,000%	8,0%
Minimum capital requirement + Capital preservation buffer	8,0%	8,0%	8,625%	9,125%	9,875%	10,5%
Systemic risk buffer (optional)	1% - 3% (5% or more)					

Source: Ștefan Cristian (2013), New regulation framework of the banking system at EU level, National Bank of Romania

4. DATA ANALYSIS AND RESULTS

The Cooperative Central Bank CREDITCOOP is the credit institution established based on the association of cooperative banks from Romania in order to manage their joint interests, to pursue in a centralized manner the observance of legal provisions and applicable framework regulations by means of supervision and administrative, technical and financial control on their organization and operation.

The risk management function is actively involved in the preparation of the strategies of the Cooperative Central Bank CREDITCOOP as regards the management of significant risks and in all the decisions on their management, offering a comprehensive image of the entire range of risks to which the credit institution is exposed.

Figure 1. **Risk management function at the level of the Cooperative Central Bank CREDITCOOP**

Source: compilation of authors

According to the Report on Transparency and Information Disclosure Requirements, 2016 and in accordance with Regulation no. 5/20.12.2013 on prudential requirements for credit institutions and Regulation no. 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending (EU)Regulation no. 648/2012, risk management at the level of the Cooperative Central Bank CREDITCOOP involves the prevention, monitoring and limitation of exposures of credit co-operative organizations to risks, as well as the determination of the level of undertaking certain risks so that, at the time of their occurrence, the cooperative credit organizations have the ability to overcome the adverse financial impact that they can entail.

Table 2. **Risk management at the level of the Cooperative Central Bank CREDITCOOP**

TYPES OF BANKING RISKS	SCOPE OF COVERAGE
Credit risk	✓ The credit risk strategy for 2016 comprises the credit categories that cooperative credit organizations promote, classified per categories of clients ✓ Observance of the limits stipulated under the Norms concerning the loans granted by CCO, as follows: - The balance of the loans granted to natural and legal persons – cooperative members shall not exceed 15% of the cooperative banks' assets - The balance of the loans granted to legal persons – other than the affiliated cooperative banks, by the branches of the Cooperative Central Bank CREDITCOOP shall not exceed 20% of the Cooperative Central Bank CREDITCOOP's assets ✓ The 15% of the cooperative banks' assets can be amended under decisions of

	the Board of Administration of the Cooperative Central Bank CREDITCOOP without exceeding the limits of 25% of the cooperative banks' assets stipulated under art 340 of EGO 99/2006 on credit institutions and capital adequacy, passed under Law no. 227/2007, as further amended and supplemented.
	✓ Credit risk sub-categories: - Counter-party risk - Concentration risk - Residual risk arising from the diminishing techniques of the credit risk
Market risk	✓ Interest rate risk management: - Growth and diversification of funding sources on short and medium term - Active and passive interests on the banking products offered to clients, which would be attractive and interesting
	✓ Main occurrence forms of the interest rate risk: 1. Interest margin risk ▪ Gross interest margin ▪ Adjusted gross interest margin ▪ Net banking interest margin ▪ Interest income 2. Interest rate change risk
Liquidity risk	✓ Monitoring of a series of assessment indicators: - Liquidity indicator - Immediate liquidity - Loans granted to clients in deposits attracted from client - Availabilities and demand deposits in sources attracted from clients (specific indicator that assesses liability volatility) - Weight of liquid assets in the total assets - Weight of liquid assets in the debts concerning clients - Level of expenses with paid interest at the loan facilities granted by the Cooperative Central Bank CREDITCOOP or by the National Bank of Romania, as the case may be. ✓ The availability of significant liquidity and obtaining a significant amount of cash is done by using both internal and external sources.
	✓ Risk sub-categories: - Refunding risk - Market liquidity risk

Operational risk	The operational risk management comprises: ▪ Risk awareness ▪ Risk identification and assessment ▪ Event monitoring ▪ Regulation risk assessment ▪ Stress test/analysis of crisis scenarios
	✓ Risk sub-categories: - Internal risks arising from people, processes and systems - External risks - Legal risks
OTHER RISKS	
Reputation risk	The reputation risk is monitored by: • Using an internal risk of warning indicators • Monitoring the risk level related to this category
Strategic risk	Relating to the level indicated in strategies are: - Level of affective the portfolio by the risk factors - Level of risk concentration related both to the portfolio and own funds - Recorded profitability - Evolution of the main efficiency and risk indicators - Observance of undertaken risk level
Clearing risk	BCCC has access to the 3 electronic payment systems (ReGIS, SENT and SaFIR), also facilitating the clearing for the cooperative banks from the CREDITCOOP network. The clearing/delivery risk is reported by the Treasury, Operations, Clearing Department to the Risk Management Department.
Inter-concentration risk	It is generated by the interactions between the exposures to different types of risk, per different categories of risk, which are entailed by a risk factor or more risk factors in such interaction.

Source: compilation of authors based on the *Report on the transparency and information publication requirements,* Cooperative Central Bank CREDITCOOP, 2016

5. CONCLUSIONS

The new standards imposed by the BASEL III agreements impose higher capital requirements and better quality with a view to improving the risk management system as well as increasing the transparency and disclosure requirements of banking companies (credit institutions).

These measures impose higher requirements for credit institutions as regards capital adequacy, liquidity and the leverage effect.

Thus, the imposed requirements are designed to improve the ability of credit institutions to withstand shocks through effective risk management and under substantially increased transparency.

At each bank level, it is necessary to take measures in order to:
- Align the internal processes of the bank with the regulations imposed by BASEL III;
- Implement the BASEL III requirements in order to optimize the risk management processes and to ensure the compliance of the bank with these standards / regulations;
- Optimize the process of verifying the adequacy of the capital at the level of the credit institution. (Nedelcu, 2014.

References

- Andrei, V. (2017). *Introducere în managementul riscului,* Babeș-Bolyai University of Cluj-Napoca www.bnr.ro/DocumentInformation.aspx?idDocument=24713&directLink=1

- Bors, I. (2015), *The impact of the foreign capital banks on ensuring financial stability on long term*, The USV Annals of Economics and Public Administration, Volume 15, Issue 1(21), pp.246-253, http://www.seap.usv.ro/annals/arhiva/USVAEPA_VOL.15,ISSUE_1%2821%29,2015_fulltext.pdf

- Brei, M., Gadanecz, B. (2012), *Public recapitalizations and bank risks: evidence from loan spreads and leverage*, BIS Working Papers No 383, Bank for International Settlements;

- Caruana, J. (2012), *Financial and real sector interactions: enter the sovereign ex machina*, BIS Papers No 62, Proceedings of conference "Financial sector regulation for growth, equity and stability", Monetary and Economic Department, Bank for International Settlements;

- Cosma, D. (2014), *Abordarea Acordurilor Basel în contextul bancar actual - rezumatul tezei de doctorat*, Oradea, http://www.uoradea.ro/display3726

- Darovannaia, A., Gorobeț, I. (2012). *Acordul Basel III: necesitatea şi carenţele implementării*, Annals of the Academy of Economic Studies of Moldova, 10th Edition, pp.187-194, ASEM Publishing, Chișinău http://www.ase.md/ro/publicatii/analele-asem.html

- De Bandt, O. and P. Hartmann (2000) – *Systemic Risk: A Survey*, ECB Working Paper No. 35, Frankfurt.

- Dedu, V., Nechif, R. (2010). *Gestiunea riscurilor bancare prin prisma acordului Basel II*, Economie teoretică şi aplicată, Volume XVII (2010), No. 2(543), pp. 85-98.

- Drăgan, O.R. (2013). *Modalităţi de analiză a riscurilor bancare – rezumatul tezei de doctorat,* Cluj-Napoca, https://econ.ubbcluj.ro/Scoala_Doctorala/rezumate/2012_2013/Oana%20Raluca%20DRAGAN%20(Santamarian).pdf

- Flannery, M. (1996), – *Financial Crises, Payment System Problems, and Discount Window Lending*, Journal of Money, Credit and Banking 28(4), 804-824.

- Kaufman G.,(1995) – *Bank Failures, Systemic Risk, and Bank Regulation,* Conference on Public Regulation of Depository Institutions, Koc University, Istanbul, Turkey in November.

- Nedelcu, M. (2014). *Impactul Basel III în performanța sistemului bancar românesc,* Managementul Intercultural, Volume XVI, No. 1 (30), 2014, pp.158-163

- Nier, E., Yang, J., Yorulmazer, T, Alentorn, A. (2008), *Network models and financial stability*, Working Papers No. 346, Bank of England.

- Ștefan, C. (2013). *Noul cadru de reglementare a sistemului bancar la nivelul UE*, Colocviul "Spre o nouă arhitectură de supraveghere a piețelor financiare în Uniunea Europeană", 18 July 2013, National Bank of Romania

- *** Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on the access to the activity of credit institutions and prudential monitoring of credit institutions and investment firms, amending Directive 2002/87/EC and abolishing Directives 2006/48/EC and 2006/49/EC, Official Journal of the European Union, L 176/338, 27.06.2013

- *** Regulation no. 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending (EU) Regulation no. 648/2012, Official Journal of the European Union L 176/1, 27.06.2013

- *** Report on the transparency requirement and publication of information, Cooperative Central Bank CREDITCOOP, 2016

Websites:

http://eur-lex.europa.eu/legal-content/ro/TXT/PDF/?uri=CELEX:32013L0036

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:176:0001:0337:RO:PDF

http://www.creditcoop.ro/despre/legislatie

http://www.creditcoop.ro/creditcoop/rapoarte-financiare

http://www.ase.md/ro/publicatii/analele-asem.html

http://www.bnr.ro/Colocviul-%E2%80%9CSpre-o-noua-arhitectura-de-supraveghere-a-pie%C8%9Belor-financiare-in-Uniunea-Europeana%E2%80%9D-9492.aspx