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The BASEL III impact on the Romanian Banks's Solvency

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ABSTRACT

In the context of new reforms that pitched in due to the economic and financial crisis effects occured in 2007-2008 period, the Basel Committee on Banking Supervision (BASEL) introduced a set of internationally agreed measures (BASEL III).These measures are aimed at enhancing the regulation, supervision and risk management that banks are exposed to and they had a gradual implementation starting from 1st January 2014 until the end of 2018. The main objective of this study is to analyse the impact of capital requirements imposed by the Basel III Agreement on the stability and solvency of the Romanian banking system. The research methodology was based on quantitative analysis and direct observations on the specific documents published by the credit institutions analyzed the websites of the regulatory bodies, the Central European Bank, the National Bank of Romania.

INTRODUCTION

Against the backdrop of the economic and financial crisis triggered at the international level after 2008, it has been observed in the financial banking system area a deterioration on the banks portfolio quality as a result of excessive risks exposures. As the business sector entities (both corporate and retail) faced with a series of problems in their partnerships, the effects of these "syncopes" have manifested themselves in the banking system as an echo because the role of banks is to support the business environment through the banking products and services that they can offer, but if the business environment is unstable, this instability could have an implicit impact on the banks' performance (Bunea, Siminica, Turlea, 2015). At the same time, a number of questions related to the credibility, to the solidity of banks, independent of the capital form, respectively domestic or as a component of a multinational holding, have arisen, like a „boomerang"(Iacovoiu, Stancu, 2017).The crisis at the financial and banking sector level has undoubtedly expanded on the public finances, so the necessity for austerity programs has emerged: "*the emergence of this critical situation calls for a concerted effort at the level of the European Union with a view to stabilizing the banking financial system, the deficiencies and irregularities, the prevention of such future crises and, last but not least, the promotion of sustainable economic growth*" (European Commissioner Michel Barnier) (European Commission, 2012)

In this context, BASEL's Supervisory Committee has expanded capital requirements, both quantitative and qualitative, introduced the new liquidity requirements, revised the debt and the credit risk ratio for banks from this committee member countries. All these new requirements had a gradual implementation starting from 1st of January 2014 until the end of 2018.

The Basel III requires credit institutions to have a minimum level of basic own funds of 4.5% of risk-weighted assets (significantly higher than at least 2%, applicable under Basel II regulations). The total capital requirement (which includes both Tier 1 and Tier 2 own funds) remains at the level of 8% of risk-weighted assets. The additional requirements imposed by the new agreement - requirements transposed into national law by Regulation no. 5/2013 on prudential requirements for credit institutions - involve: the establishment of a capital buffer (in the form of 2.5% of the risk-weighted assets of base level 1 own funds) and a requirement for the setting up of an anti-cyclic buffer capital (up to 2.5%).

Thus, the study aims to investigate the indicators evolution of the banks from the Romanian banking system, both with domestic capital and mixed or foreign capital, in order to assess the degree of implementation and application of the new regulations at the level of the Romanian banking system, to make a series of recommendations following this analysis. The sample surveyed included all banks from the Romanian banking system, analyzing the financial information and their evolution between January 1, 2014 and June 30, 2018. The processed information was extracted from the banks official websites as well as from the National Bank of Romania.

1. REVIEW OF THE SCIENTIFIC LITERATURE

The banking and financial companies offer a wide range of products and services that are essential to the optimal operation of both business entities, nationally and internationally (Bunea,2014). As a result of the financial crisis, the banks, like the other entities from the business environment, face a number of risks, but unlike other organizations, the failures that could be triggered by the banks can have systemic effects (Stulz, 2014). The banks must therefore limit their exposure to risks in order to prevent new economic and financial crises.Equally, all the business entities need to identify a certain level of exposure to risks that enable them to increase their financial profitability and to remain competitive into the industry market. Consequently, the focus is on identifying the appropriate risk exposure levels and the proper management of these risks (Dinu, Bunea, 2018).

In the literature, the market risk and the credit risk have been extensively studied, identifying the aspects of credit risk assessment, the quantification and the price (Duffie at Singleton, 2012) and Lando (2009) as well as definitions and a series of methods of measuring market risk (Artzner et al., 1999). The strategic risk issues focused on losses or decreases in earnings, were treated much more succinctly due to the difficulty in defining and quantifying them (McConnell 2016).

Regarding the operational risk, it is associated at the banks level with the risk of production of a contingency, risk defined by Schroeck (2002) as the risk of recording losses due to failed internal processes or systems, fraud complaints that can be caused by an unpredictible event. Basically, that is the operational risk definition given by the Basel Committee on Banking Supervision (2006, 2009), the European Parliament (2013) and Sweeting (2011). Into the operational risk definition, the European Parliament also does not include external events resulting from the strategic risk (European Parliament, 2013), thus covering only a part of the operational risk definition elements given by Schroeck.

The Basel Banking Supervision Committee (2011) explicitly excludes the strategic risk elements from the operational risk, defining this risk as the risk of loss as a result of internal processes, of persons or of inadequate or deficient systems. Thus, this definition excludes both the strategic and the reputational risk.

In the strategic risk definition given by Slywotzky and Drzik (2005), they stress that this type of risk may stem from a series of external events and factors that could adversely affect the company financial performance. The authors identify as a determinant of strategic risk a wide range of external events as well as an extended spectrum of risk management. Among them we mention the deterioration of the margins in the industrial sectors, the evolution of the technological systems, the erosion of the brands, the increase of the competitiveness, the inadequate satisfaction of the customers 'requirements, the stagnation of the market evolution, the deterioration of the clients' confidence in the products and services offered, the failure of certain projects (Filip, at all., 2016).

Doff (2008) provides a definition of the business risk and he asks whether this type of risk can be assessed in the context of an economic capital. Thus, Doff addresses the business risk in the banking sector and analyzes the potential situations where the economic capital can be an appropriate solution capable of absorbing the losses that can be determined by the exposures to the risks. Business risk is defined as the probability of occurrence of financial losses as a result of changes in the competitive environment and how that entity would adapt to these changes in a timely manner. The author uses two determinants, namely "adaptation to change" and "competitive environment", classifying different combinations in: low, medium or high business risk.Moreover, Doff (2008) distinguishes between the two components of the changes that may occur into the competitive environment. First of all, there may be changes that may be gradual or steep. Secondly, the changes that may occur may be temporary or permanent. The author argues and concludes that only the emergence of the combination - steep temporary changes - and abrupt permanent changes - must be interfered with or attenuated by a "capital buffer".

According to McConnell (2012), the strategic risk is the most important type of risk in any entity, the author presenting a number of issues that distinguish the strategic risks from the risks associated with the executive activity. The author (McConnell, 2012, 2013) shows that both banks and financial companies have shown a lack of adequate strategic risk management to expose themselves, affecting their financial performance. McConnell (2013) demonstrates, by way of example, how institutions with aggressive growth strategies have been unable to manage their inherent risks, while highlighting the need for appropriate policies and systems risk management and the role of regulatory authorities in monitoring and ensuring the optimal implementation of these policies.

As regards the term "economic capital", this has, in the literature, several definitions. According to Sweeting (2011), the economic capital is a surplus of the cash assets or the cash flows required in the event of an unexpected fall in the value of assets or an increase in the level of liabilities within the specific exposure limits for a predetermined period.The Basel Banking Supervision Committee (2009) also defines the economic capital as a set of the bank procedures or the executive activities that aim at assessing risks and covering the impact of risky activities on bank financial performance. Thus, the definition given by the Basel Banking Supervision Committee differs from that of Sweeting (2011), considering the economic capital as a measure of the banks in assessing the risk exposures rather than as a "buffer" of capital .

Into the context of banks' risk management, the economic capital is not a mandatory capital buffer, as is the regulatory capital under Basel 1 Pillar 1. In practice, at the banks level, there is not only one methodology for assessing the economic capital.

Thus, the banks use different processes and models for the internal risk assessment (Aas and Puccetti, 2014). According to the Basel Banking Supervision Committee (2015), an important symptom in the banks assessment is the decline in profitability indicators, arguing that supervisors should include the early warning into the business model assessment and clearly indicating that the minimum profitability is greater than zero.

The banks profitability is assessed by McKinsey (2015) by comparing return on equity (ROE), which is defined as the net income after tax on equity, with the cost of equity (equity), which is also defined as the low return on equity social capital. When ROE is less than COE, the company is less attractive to shareholders. This evolution of the two indicators will cause a situation where shareholders are not willing to invest because the ROE requested is not reached. Therefore, the cost of equity is an important tool in identifying the minimum profit margin (Tornjanski et all.,2017, Máté, D., Kun, A.I. and Fenyves, V., 2016). In this context, the aim of introducing the BASEL III Regulation is to make the European banking system safer, with banks improving their ability to manage systemic risk by increasing the quality and size of capital, and renewing liquidity management (greater emphasis on quality and efficiency) (Bunea,2014).

As a matter of fact, the specialists have been warning for a long time that banks will have to consider: the efficient capital and the liquidity management, the balance sheet restructuring; as well as adjusting the business model and financial services offered to clients (Harle & Luders, 2010). This requires a thorough bank analysis, a restructuring not only of the "sake" of the structure, but also in the interest of all, from the shareholders (and potential investors), executive/internal organizational structures, to the clients and the public authorities / governments. Practically, the Basel III brings both macro and micro prudential novelties/changes (acting both on the risk management framework at banks and on the macro/systemic risk management level (Codirlasu, 2013) .

2. THE RESEARCH METHODOLOGY

The research methodology was based on the quantitative analysis and on direct observations on the specific documents published by the credit institutions analyzed, the websites of the regulatory bodies, the European Central Bank, the National Bank of Romania. The current survey included a sample of 27 banks from the Romanian banking system (out of a total of 35 credit institutions, 8 are branches of the foreign banks not included in the sample, because there is not required to publish information on corporate governance). In order to achieve these research objectives, there were identified the capital requirements indicators for the banking sector, to be included in this study, analyzing the financial information and their evolution between January 1st, 2014 and June 30, 2018. Into the Table no. 1, the capital requirements indicators for the period from January 1st, 2014 to June 30, 2018 are presented as follows:

Table 1. The capital requirements indicators

Indicator title on capital requirements	*How to measure the indicator*	*According to the norms accepted minimum capital requirements for banking (CRD IV and CRR)*
Quota Own Fund Level 1 base	Relation between core Tier 1 own funds (CET 1) and risk weighted assets	4.5%
The solvency ratio, ie the Total Own Funds Amount	Total own funds ratio (CET 1 / Tier 1 own funds + Tier 2 own funds) and risk weighted assets	8%

The capital requirements for the Banking Sector (CRR and CRD IV) consist of: the Capital Requirement Regulation (CRR) and the Directive (Capital Requirements Directive - CRD IV) applicable from 1st January 2014.The regulation requires banks to have sufficient capital buffers to cover the unexpected losses and to maintain their solvency in times of crisis. As a primary principle, the amount of capital required depends on the risk associated with the assets held by a particular bank.

The capital is assigned to certain levels of the quality and the risk. Tier 1 capital is considered to be the capital needed to ensure continuity of the activity. This capital allows a bank to continue its business and maintain its solvency. The type of Tier 1 capital considered to have the highest level of quality is represented by the so-called Basic Level 1 own funds.

The Tier 2 capital is considered to be the capital required in the case of non-continuity of activity. This type of capital allows an institution to repay the amounts owed to depositors and those owed to preferential creditors in the event of bank insolvency. The total amount of capital that banks and investment firms have to hold must be at least 8% of the risk-weighted assets. Of this value, the share of the highest-quality capital - core Tier 1 own funds - is 4.5% of the risk-weighted assets (by December 2014 between 4% and 4.5% %).

In order to achieve the objectives, the credit institutions within the research area were identified, there was extracted and processed the information regarding the basic level 1 own funds information, the own funds level 2 and the risk-weighted assets values of each bank and each analyzed period, following their evolution into the 2014-2018 period, there were calculated the indicators on the capital requirements of the researched banks.
The individual value of each capital requirement indicator for the banking sector (CRR and CRD IV) for the period from January 2014 to June 2018 for the 27 analyzed banks is presented in Table no. 2

Table 2. The individual value of the capital requirement indicators

BANK	*The basic own-level own funds (as a percentage of the exposure value)*					*The total own funds (as a percentage of the exposure value)*				
	2014	*2015*	*2016*	*2017*	*30.06. 18*	*2014*	*2015*	*2016*	*2017*	*30.06. 18*
BCR	13%	18%	20%	19%	18.0%	20%	23%	24%	22%	21%
BRD	17%	18%	20%	20%	19.0%	17%	18%	20%	20%	19%
ALPHA	15%	16%	18%	21%	21.0%	24%	24%	23%	25%	25%
BRCI	67%	59%	90%	106%	85.0%	81%	70%	147%	179%	150%
BFER	13%	11%	10%	12%	12.0%	13%	12%	11%	12%	12%
INTESA	13%	15%	16%	17%	17.0%	13%	15%	16%	17%	17%
BPL	47%	56%	57%	62%	60.0%	53%	56%	57%	62%	55%
EXIMB	64%	64%	48%	35%	30.0%	66%	64%	48%	35%	40%
BROM	12%	14%	14%	18%	19.0%	20%	21%	21%	27%	31%
BTRL	16%	17%	18%	15%	13.3%	17%	22%	19%	21%	17%
BP	15%	16%	16%	17%	16.0%	21%	22%	20%	19%	20%
LEUMI	11%	10%	10%	22%	21.0%	16%	14%	14%	22%	21%
CEC	13%	14%	15%	15%	15.0%	13%	14%	15%	15%	16%

CREDIT AGRICOLE	9%	10%	22%	18%	18.0%	13%	14%	28%	23%	23%
Credit Europe Bank (România)	21%	19%	19%	23%	22.0%	21%	19%	19%	23%	23%
GARANTI	13%	12%	14%	16%	17.0%	13%	12%	15%	17%	17%
IDEA	5%	10%	10%	12%	12.0%	9%	14%	12%	15%	15%
LIBRA	16%	13%	12%	15%	15.0%	16%	13%	12%	15%	15%
MARFIN	11%	10%	11%	11%	11.0%	13%	12%	11%	11%	10%
OTP	15%	15%	16%	16%	16.0%	16%	16%	16%	16%	16%
PATRIA	16%	16%	17%	15%	15.0%	16%	16%	17%	15%	15%
PIRAEUS	12%	18%	17%	17%	17.0%	21%	21%	22%	22%	22%
PORCHE	26%	35%	32%	23%	23.0%	26%	35%	32%	23%	22%
PROCREDIT	15%	15%	16%	21%	21.0%	19%	19%	20%	21%	21%
RAIFFEISEN	15%	16%	15%	15%	15.0%	20%	21%	18%	17%	17%
RAIF BPL	79%	70%	69%	70%	69.0%	79%	70%	69%	70%	70%
UNICREDIT	12%	13%	12%	12%	14.3%	13%	13%	12%	15%	17%
Media	22%	22%	24%	25%	25%	25%	25%	27%	29%	29%

Source: Own projection of the authors based on the published information on the official websites of the studied banks

The information used in this research was exclusively taken from the official websites of the companies of the sample banks, on the National Bank of Romania website, from the reports on transparency and publication requirements for 2014, 2015, 2016, 2017 and June 2018 respectively, in accordance with the NBR Regulation no. 5/2013 on prudential requirements for credit institutions and Regulation (EU) No. 575/2013 on prudential requirements for credit institutions and investment firms.

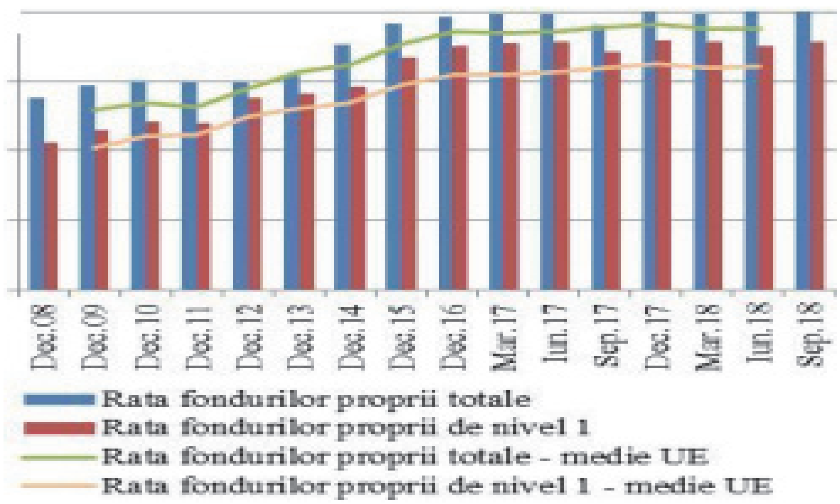
3. RESULTS AND DISCUSSION

According to the information presented in the Table no. 2 The Individual values of the capital requirements indicators, it is noted that the Romanian banking system maintains its solidity, the total own funds rate and the basic own funds rate, which are considered to have the highest level of quality, at comfortable levels. Under the capital requirements for the banking sector (CRR and CRD IV), the total amount of capital (solvency ratio) that banks have to hold, must be at least 8% of the risk-weighted assets. From this value, the share of the highest-quality capital - core Tier 1 own funds - must be at least 4.5% of the risk-weighted assets.

From the data presented in Table no. 2, it is noted that these values are much higher than the minimum rate of 8% by each bank undergoing research, the solvency ratio at the level of the banking system is at an average of 25% in 2014 and on average it is a progressive evolution to 29% by mid-2018. At the same time, the share of core Tier 1 (CET 1) in total risk-weighted assets recorded values far above the 4.5% minimum rate (established under the capital - CRD and capital requirements - CRD IV), registering an average value at the level of the banking system in Romania of 22% at 31 December, increasing gradually so that by the middle of 2018 this indicator reached a share of approx. 25%.

It results that capital adequacy ratios have been maintained at an appropriate level, strengthening the resilience of the banking sector and providing a good capacity to absorb unexpected moderate intensity losses and to support credit growth (NBR, 2018). The average level of indicators solvency ratio (total own funds ratio, Tier 1 own funds ratio) gradually increased after the economic crisis in 2008, and currently the Romanian banking sector places the lowest risk level set by the European Banking Authority (Figure 1).

Figure 1. The capital adequacy indicators of Romania and the EU (average values)



Source : BNR, ABE

In order to analyze the absorption capacity of potential bank losses, the structure of own funds registered by each entity under investigation between 31st of December 2014 and 30th of June 2018 was determined and analyzed. At the same time, the share of core Tier 1 own funds in the total own funds, as presented in Table no. 3.

As it can be seen from the table no. 3, into all researched banks, the basic own-level own funds are preponderant into the total of own funds. The smallest share of these was recorded by one bank in one year, ie 2014 (a share of core tier 1 capital of 55.36%), due to the fact that the banking company appeared on the banking market in Romania just that year (newly established bank). At the same time, out of the total of the 27 banks analyzed, for a number of 14 banks, the structure of own funds is represented by 100% of core level 1 own funds. This capital is considered to be the capital needed to ensure the continuity of activity, allowing banks to continue their activities and maintain its solvency.

Table 3. The own funds of basic level 1 ratio into the total of own funds

BANK	*The share of core Tier 1 funds (CET 1) into the total own funds*				
	31.12.2014	*31.12.2015*	*31.12.2016*	*31.12.2017*	*30.06.2018*
BCR	68.35	76.92	82.51	86.92	89.36
BRD	100.00	100.00	100.00	100.00	100.00
ALPHA	71.43	69.82	75.40	80.65	80.66
BRCI	82.36	58.75	61.22	59.85	59.85

BFER	99.09	97.02	94.92	98.15	98.15
INTESA	100.00	100.00	99.95	100.00	100.00
BPL	84.06	100.00	100.00	100.00	100.00
EXIMB	96.93	100.00	100.00	100.00	100.00
BROM	62.49	64.81	67.44	66.54	66.54
BTRL	94.01	94.01	94.04	91.70	78.36
BP	90.86	86.64	88.59	91.61	92.31
LEUMI	100.00	100.00	100.00	100.00	100.00
CEC	100.00	100.00	100.00	100.00	100.00
CREDIT AGRICOLE	58.63	60.01	77.13	76.63	76.22
Credit Europe Bank (România)	100.00	100.00	100.00	100.00	100.00
GARANTI	100.00	100.00	96.51	96.82	96.81
IDEA	55.36	73.42	88.67	81.44	81.06
LIBRA	100.00	100.00	100.00	100.00	100.00
MARFIN	100.00	100.00	100.00	100.00	100.00
OTP	100.00	100.00	100.00	100.00	100.00
PATRIA	100.00	100.00	100.00	100.00	100.00
PIRAEUS	76.06	75.56	75.99	76.96	76.96
PORCHE	100.00	100.00	100.00	100.00	100.00
PROCREDIT	77.97	78.54	79.10	100.00	100.00
RAIFFEISEN	73.77	77.64	80.49	85.33	85.33
RAIF BPL	100.00	100.00	100.00	100.00	100.00
UNICREDIT	91.31	93.50	93.48	80.06	83.27
Media	86.04	87.82	89.97	90.21	88.36

Source: The own projection of the authors based on the published information on the studied banks official websites

At the same time, it can be noticed a favorable evolution at the level of the Romanian banking system of the average value of the share of core Tier 1 capital in total own funds, registering a gradual increase from 86.04% at 31.12.2014 to 88.36% by mid-2018. As a result of this analysis, the structure of own funds favors an absorption capacity of consistent bank losses, the introduction of the new accounting standard (IFRS 9) at the beginning of 2018 without affecting solvency, core own funds (CET 1), continuing to increase in the first 6 months of 2018, contributing to the strengthening of the solvency position at the level of the Romanian banking system.

CONCLUSIONS

In our research on the impact of the capital requirements imposed by the Basel III Agreement on the stability and solvency of the Romanian banking system, we have found that this should be a concern for all actors on the Romanian economy stage, not only banks operating into the banking sector. In a straightforward way, the solvency is the ability to pay obligations on time, which inevitably implies the existence of the own funds. It is precisely for this reason that there was a need to create the sufficient reserves in order not to generate financial imbalances.

As it results from the research carried out, the local banking system maintains its solidity, with the solvency indicators placed at comfortable levels with values well above the minimum requirements set in accordance with the CRD and CRD IV requirements, respectively 4.5% for Core Tier 1 (CET 1) and 8% for the total own funds ratio calculated as a hedge of these funds from risk-weighted assets. Moreover, there is a major concern of the banks in the Romanian banking system for the gradual increase of these indicators between 1st of January 2014 and 30th of June 2018, the new capital requirements having a gradual implementation deadline of 31st of December 2018. The maintenance of the solvency ratio above the double of the minimum threshold established under the European CRD IV / CRR regulatory framework, of 8%, was mainly driven by additional capital contribution from the shareholders. The banking system had a positive evolution mainly driven by a very positive macroeconomic evolution - not only in terms of figures, but also from the perspective of the population's confidence in the economy in general, which led to acceleration in lending.

Thus, in the context of the gradual introduction of capital requirements in line with CRD IV regulation rules, the fact that the solvency improvement at each analyzed bank was one of their major concerns. However, we appreciate that, in addition to the constant efforts to escalate the various effects of the financial crisis (mergers, changes in shareholder structures, market outlets, etc.), banks will continue to make efforts to adapt and streamline business models, internal systems, products and services offered according to the needs of the business environment, which will inevitably lead to additional costs for them.

Analyzing the positive trend of the solvency indicators between 2014 and June 2018, it can be concluded that the banks in the Romanian banking system will continue to focus their resources and efforts on the main objective of their activity, namely to ensure the financing of the national economy. In the field of new capital requirements implementation as an impact of the BASEL III Agreement, there are still many unexplored research paths, the more so as the deadline for their gradual implementation is 31st of December 2018. Thus, it can continue our approach by studying the implementation and effects of the national integration in the context of the EURO area of effective and sufficient requirements for setting up a capital buffer and an anti-cyclical capital buffer (as well as minimum capital requirements), the liquidity requirements, the bank asset quality as well as the corporate governance.

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