COMPLIANCE WITH BASEL STANDARDS AND PRACTICES OF RISK MANAGEMENT - TRENDS AND CHALLENGES OF THE MACEDONIAN BANKS

Elena Parnardzieva Stanoevska

ABSTRACT

The risk management process is a continuous process that is constantly evolving. As the world changes, the activities of banks change, there is a need for new types of products, new ways and practices for operation, new software solutions. Organizational schemes, security policies, etc. are also changing. Everything leads to the emergence of new risks or the re-emergence and intensification of existing, controlled risks. There is a need for new fresh capital or more productive use of available resources for more efficient multiplication of existing capital. Therefore, permanent evolution and upgrading of the risk and capital management system is required, both domestically and internationally. The Basel standards that are being developed in order to strengthen the banking sector and introduce additional market discipline have the ultimate goal of strengthening the capital of banks and improving the practices in risk management, i.e. the financial landscape of a national economy.

In this paper special attention is given to the compliance of the Macedonian banks with the application of the Basel standards and the recommendations of the Basel Committee for Banking Supervision (BCBS) on the best practices of risk management. Primary goal is to demonstrate why is necessary domestic regulation to be harmonized with Basel standards and to what extend the Macedonian legislation complies with it. Particularly, in the paper progress is presented of the Macedonian banks in implementing the Basel III regulatory reforms in a full, timely and consistent manner. The analysis shows that Macedonian banks have made particular progress towards meeting the Basel III capital requirements. Capital and liquidity ratios are on satisfactory level and have generally remained stable in the first half of the year beside the impact of Covid-19. However, the Macedonian legislation lags behind and there is still room for further harmonization with Basel's standards and practices of risk management.

Analytic and field research was used for the preparation of the paper. Surveying as well as analysis and synthesis methods have been applied. Internet was used as a major tool to approach to data and literature. Additionally, tables and graphical methods have been employed for visual presentations during the research.

KEYWORDS

Risk Management, Capital Management, Basel standards, banks

JEL CLASSIFICATION CODES

G21, G32, F39

1. INTRODUCTION

In order to strengthen the resilience of the banking sector to financial shocks and crises and their international spillover, modern basel standards are increasingly pushing for strengthening the capital framework of the bank. They create a regulatory framework (especially Basel II) to encourage the development of risk management in the banking sector. Increased efficiency in risk management as a rule leads to reduced need for capital for certain business processes. Through integrated capital and risk management, banks should constantly adjust the available capital with the level of undertaken risks, i.e. increase the required capital to cover the risks in accordance with the growing appetite of the banks for risk.

With the advent of new and more complex financial products and technologies, banks are exposing themselves to increased risks. The challenge for any modern bank is to balance the desired, undertaken risky portfolio with capital constraints. In this regard, capital management and risk management should be considered as two complementary disciplines. By applying an efficient capital strategy complementary to the risk management strategy, banks will reduce the need for reservations, improve capital efficiency, i.e. achieve increased portfolio productivity and increased return on equity (ROE). Banks that effectively manage capital will be in a much better capital position and will be able to manage risks much more easily, i.e. they will have room to maneuver, especially in difficult market conditions faced with capital and liquidity pressures. On the other hand, the risk management system is used as a process to determine the required amount of capital necessary to cover future potential losses. The most successful banks will be those that will succeed with the help of modern information communication technology (ICT) and best practices for risk and capital management to maximize profits from existing accounts, while minimizing the amount of capital needed to cover their risk.

In order to respond to the increasingly complex modern banking system and the need for international harmonization of banking regulations, the BCBS[4] conducts a permanent audit of the Basel Standards and Practices. The urgency of the need for continuous improvement of the methods for measuring and managing the risks in the banking operations is indicated by the constant revision of the Basel standards dating back to 1988 through the implementation of the Basel I, II, III and nowadays Basel IV standards. The rapid development of ICT and the need to strengthen the banks' resilience to financial shocks have further encouraged the BCBS to create and implement new banking standards and practices. The application and monitoring of the internationally recognized experiences, and the monitoring of the universally accepted standards and codes of the banking operations, by the international banks as well as by the Macedonian banks is a necessary step for strengthening the domestic financial landscape.

Unified format of risk management in the world does not exist. The national legislation of the country, the level of development of the market economy and the level of development of the financial market are the basic determinants of the national risk management codes. In a global world we live in today, the regulatory bodies of national economies, all in order to contribute to the easier integration of domestic banks in the world financial markets, will inevitably have to follow and respect international rules and standards. However, they should always bear in mind that too many regulatory requirements mean a huge burden for banks, while reducing their ongoing profitable activities and making them less effective. On the other hand, insufficient regulatory requirements may affect the safety of the financial sector. In this context, regulators should better assess the benefits of the application of capital agreements regarding the readiness of the domestic banking system implementation. As can be seen from this paper particular attention shoud be paid when setting the timetable and assessment of the readiness of banks having sound input for practical application of capital calculations. Therefore, in order to develop a

[4] Basel Committee on Banking Supervision (BCBS) was established by the Central Bank Governors of the Group of Ten countries (G-10) + two countries in 1975: Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Sweden, Switzerland, UK Britain and the United States. In 2019, the BCBS has 45 members.

quality system for risk management and its control, it is inevitable that there is close cooperation between regulators and banks.

Through practical field research activity, an analysis of compliance of the legislation of Republic of North Macedonia (MK) with the Basel standards was conducted. Based on semi-annual data for the period 2015-2020, an analysis of the situation in the Macedonian banking system was conducted by groups of banks (large, medium and small)[5]. As a research instrument a questionnaire is also used. The questionnaire was mainly designed to provide answers to the main research aims, i.e. to capture information regarding fully and timely implementation of the Basel standards in the macedonian banking sector.[6]

2. EVOLUTION OF THE BASEL CAPITAL STANDARDS AND REGULATIONS OF RISK MANAGEMENT

The importance of having a stable system for risk management, i.e. stable banking system comes especially to the fore particularly when the economy is facing a financial crisis. Thus, in modern financial environment, the process of risk management from ordinary banking activity management quality of the loan portfolio has grown into a complex set of procedures and tools.

The Basel initiatives of the BCBS was to exchange common experiences of national regulatory bodies representatives of the Committee to adopt international guidelines and rules for calculating the level of capital reserves for banks. The first agreement was a framework detailing the measurement of capital adequacy and the minimum standards needed to be implemented in the legislation of the member representatives of the Committee or fulfilled by their banks. The first Basel Capital Accord (also known as Basel I) was adopted in July 1988. It was the first important step in building a methodological framework for risk analysis. Established the basic principles for determining the minimum capital requirements to cover only credit risk. Basel standards are evolving along with changes in the financial markets. In fact, in 1993, in order to improve the analysis of credit risk and the need to introduce market risk, Basel methodology was revised. Formula was introduced as a simple linear function:MinCapReqCrRisk = RWA * 8% = (ΣiRWi * Exposurei-exposure) * 8% for the calculation of credit risk, i.e. the calculation of the minimum capital requirement for its coverage, which should not be less than 8% of risk weighted assets. (BCBS, 2006) Market risk, identified by the banks as a growing source of risk in their operations, imposed also the need to introduce a standardized model for easier assessment. At that time, the major banks had developed their own models to assess market risk based on VaR (Value at Risk) Methodology. These models always resulted in lower required capital reserves than those calculated under the Basel methodology. Therefore, in 1996 the Basel standards succumbed to the new revision, which introduced mandatory calculation of minimum capital requirements for market risks faced by banks.

Unhealthy practices in risk management, especially credit and operational or insufficient differentiation of the different levels of risk in certain areas that encouraged bad lending and investment, played a central role in the Asian financial crisis, which occured in the period 1997-98. The crisis and the emergence and development of new banking products and tools, new methods for managing banking risks created a need for major changes in the existing Capital Accord of 1988, a revision of existing rules and standards. Under the initiative of the BCBS in 1999, a process of revision of the Capital Accord began with the aim of developing a new framework for determining the capital base. As a result of such trends, in 2004 the introduction of the new Capital Accord aimed at introducing additional discipline to the

[5] According to the National Bank of the Republic of North Macedonia (NBRNM), Macedonian commercial banks, depending on the size of their assets, are divided into three basic groups: large banks with assets greater than MKD 37.95 billion, medium-sized banks with assets between MKD 9.45 and MKD 37.95 billion and a group of small banks.

[6] Macedonia has fourtheen commercial banks out of which ten are foreign bank and one is governmental bank. Questionery was distributed to all fourtheen Macedonian banks.

market by promoting new sound practices for risk management. It has strengthened the bond of the risks to the needs of capital for their coverage and offered further processes and methods for covering risks and more flexible approach to risk management through the menu choices. Finally, it become applicable to all banks in the world.

The new Basel Capital Accord II (also known as Basel II) was an evolution of the existing Basel Capital Accord I. According to the new agreement, the amount of capital of the bank is obtained as a function of two factors: the risk profile of the bank and the techniques and methods of risk management used by the bank. Basel II comprises three pillars system which are related to:

a) In the first pillar mainly three significant banking risks are taking place and that is credit, market and operational risks. In this column offered several approaches to determining the minimum required level of capital to cover these three risks (Pillar 1);

b) The second pillar is used by banks and supervisory authorities for calculating capital requirements for all other risks that are not covered in the first pillar (eg. Interest rate risk from the banking book, concentration risk, etc.). It is supervisory review process level of capital (Pillar 2);

c) The third pillar promotes a high level of transparency in in banking operations (market discipline). (Pillar 3).

Unfortunately, liquidity risk has not found its prominent place in the Basel Capital Accord II, i.e. it was neglected. The market turbulence that started in 2007 only emphasized the large role of liquidity to the banking sector. Reduced liquidity in interbank markets and in certain structured products, as well as the return of growing off-balance sheet commitments led to serious liquidity problem and to decline in most banks in the world. The poor and insufficient capital disposable to the international banks represents one more sparkle to fuel crisis. As a result of the global financial crisis, national financial regulators and international financial organizations have taken significant actions to strengthen the financial system and increase its resistance. In this respect, particular importance were the activities of the BCBS. The Committee made changes in different parts of the existing capital framework Basel II agreement and adopted a new draft amendments to the Basel Capital Accord in 2010, also known as Basel III. It consists of two documents: Basel III: Global Regulatory Framework for More Resistant Banks and Banking Systems and Basel III: Global Framework for Measuring and Monitoring Liquidity Risk and Liquidity Risk Standards (Basel, 2010)

The purpose of Basel III was, first, to strengthen the capital framework, i.e. increase the quality and quantity of capital of banks and secondly, the introduction of international liquidity standards. The novelties in the strict standards of Basel III proposed two additional amounts of capital requirement (capital buffer), and mandatory capital requirements and procyclical capital and the introduction of an additional instrument to protect the level of capital the banks expressed through rate of indebtedness. To counteract the rate of capital adequacy, which aims to cover risk assets, the leverage ratio is to cover all assets of banks. The main goal of all changes under Basel III in terms of capital is that the core capital needs to be increased. Namely, ordinary shares and retained profits have proven to be the only one that can be considered to cover losses during the financial crisis. Basel III also allows unification of the definition of capital between the members of BCBS.

In December 2017, the Basel Committee’s oversight body, introduces additional changes to the global bank capital requirements and has finalized the Basel III in the new Basel Accord (Basel IV). Regulators argue the changes should not be treated as a distinct round of reforms but simply as completing reforms of Basel III. The new package include elements referring to: revision of standardized approach for credit and operational risk, revisions to the credit valuation adjustment (CVA) framework, limit the reduction in capital that can result from banks' use of internal models (internal rating-based - IRB) for credit risk, higher leverage ratio (leverage ratio buffer) for global systemically important banks (G-SIBs), a standardised floor (aggregate output floor), so that the banks’ risk-weighted assets (RWA) generated by internal models will always be at least 72.5% of the requirement under the standardized approach by the Basel III and more detailed disclosure of reserves and other financial statistics.The

revised standards will take effect from January 2023 with the output floor to be phased in over five years and finalized on January 2028.[7]

Table 1: Evolution of Capital Agreements

Basel I	Basel II	Basel III	Basel IV
Focus on a credit risk In 1996 year includes market risk	- Application of internal processes for risk management by financial institutions - Better overview for supervisors - The market discipline	- Strengthening the quality and quantity of the capital - Introducing procyclical allowance for credit losses Focus on liquidity risk	- Finalized Reforms (Revising and completing Basel III reforms in direction towards further strengthening the quality of the capital framework)
Offers measures applicable to all	- Enhanced flexibility and complexity - Incentive for better risk management - Grouping for determining the value of assets and risks - Enhanced sensitivity risk business sectors and classes of exposure	- Tighter capital requirements Scarcity of resistance to potential liquidity problems and protect the long-term structural mismatch of assets - Stronger treatment of hypo. / home loans in foreign currency - Limiting the unsustainable level of growth of the Bank's balances	-Tighter capital and liquidity requirements - Limit the reduction in capital that can result from banks' use of internal models under the IRB approach (credit risk) -Leverage ratio buffer for Systematically Important Financial Indtitutions
Extensive structure	More dimensional	Less national discretions	Less banks discretions

Source: Summarized by the author

The risk management process is a continuous process that is constantly evolving. As the world changes, the activities of banks change too. And thus, a need for new types of products emerges, but also new ways and practices for operation and new software solutions. The organizational schemes, security policies, etc. are additionally changed. All this leads to the emergence of new risks or recurrence of already existing, controlled risks. Therefore, there is a need for permanent evolution and upgrading of the risk management system, both internationally and domestically.

3. NATIONAL CODES OR UNIFIED FORMAT FOR RISK MANAGEMENT

The specific position of the banks in the economy and their central role in the overall growth and development of a country logically imposes the need for high regulation. The regulation of the banking industry is a world trend, which is increasingly intensified. The high regulation of banking is not state and incompatible with the market aspect of operations. On the contrary, it refers to standardization in the work and respect for written and unwritten rules and regulations (Basel standards adopted as a written document or, for example, unwritten rules at the London Stock Exchange). It is about huge liberalization, caused primarily by globalization, the opening of markets, that is, their connection in the world.

The Basel directives and standards as a unified format for risk management at the beginning of their development were a privilege of the ten member countries of the BCBS. However, with their constant adjustment and improvement they became applicable to all banks in the world. Today, the Basel standards are widely accepted by national regulatory authorities in many countries worldwide. The advantage of the Basel standards is that they do not dictate the form or operational detail in the creation of policies and procedures for risk management. BCBS have no supernational force and their conclusions

[7]Initially, the reforms were supposed to take effect from 1 January 2022 (with exception of the output floor to be ended on January 2027). However due to Covid-19 crisis, they are postponed for one year.

have no legal force. They only provide guidance and allow national regulators to develop their own procedures and choose approach to risk management that is most suitable for their financial infrastructure. Additionally, despite the proposed models banks are allowed to develop and use internal models for calculating risks. If banks approach to creating their own models, then they must meet certain qualitative and quantitative standards and be subject to approval by their national regulators. In other words, the strict rules of the Basel standards and directives standardize by each national regulator individually.
The main objective of each national regulator in terms of the process of risk management is to identify and adopt rules and guidelines that can apply with the least possible costs of implementation and to provide protection against possible failures or spillover of individual small banking crises in major systemic problems, that will threaten the entire financial market. In view of the process of risk management, regulators focus primarily on (A Risk Management Standard, 2002):

- market monitoring and supervision of the banking system;
- setting limits for determination of impairment, i.e. special reserve;
- publish data and information on: market values of financial instruments, the movements of financial markets, especially the development of the banking sector, policies for risk management, capital costs, etc;
- site and off-site controls of the banking system, consent to the applicability of the models and the grouping of funds;
- cooperation and exchange of information between regulatory authorities at national and international level;
- developing procedures for action in emergencies.

It is independent of each national regulator's decision whether to approach a unified risk management format (application of international standards and rules) or to seek to establish and apply national regulatory rules and practices in accordance with the needs of its economy.

In a global world we live in today, the regulatory bodies of national economies will inevitably need to respect international rules and standards. Only in this way they will contribute to easier integration into the global financial markets, such as their national and their domestic banks. Implementation, compliance and continuous monitoring of international rules and standards for each national regulator is one of the prerequisites for building the foundations solid domestic banking architecture. In order to strengthen resilience to financial shocks and crises and their spillover international regulators increasingly proceed with introducing strict financial standards. Thus, in countries where risks in the banking sector are high, regulators also determine additional capital, i.e. the calculation of the required capital to cover the risks above the Basel minimum.

4. RISK AND CAPITAL MANAGEMENT IN MACEDONIAN BANKS AND THEIR COMPLIANCE WITH BASEL STANDARDS AND PRACTICES

The commercial banks in the MK, in accordance with the legal regulations and regulatory requirements, have made significant progress in developing the processes of risk and capital management. From the conducted research (according to which 100% of the banks responded positively), it is known that all Macedonian commercial banks within their business have already implemented an adequate risk management system, i.e. have established special practices (responsibilities, policies and controls) for management of the risks.

Risk management in the banking system of the MK is regulated in accordance with the Risk Management Decision of the NBRNM.[8] The more important elements of the management of individual

[8] Risk Management Decision published in the Official Gazette of the MK by NBRNM 113/19, 69/20)

risks are defined in special bylaws adopted on the basis of the Law on Banks and appropriate annexes as an integral part of the Decision. The risk management systems differ from bank to bank, i.e. each bank is obliged to establish its own material risk management system to which it is exposed in its operations. In that regard, the risk management system of Macedonian banks is a function of the factors such as: a) size of the bank, b) volume and complexity of business activities, c) level of education of staff, d) quality of bank management and e) application of appropriate information technology.

Banking laws and regulations in the MK are mostly in compliance with the Basel standards recommendations for calculating capital requirements covering risks. Macedonian banks are working under the three pillars concept of Basel II – framework. The assessment of the level of capital required to cover the risks in the Macedonian banking system is regulated by the Decision on the methodology for determining the capital adequacy.[9] By implementing the decision, i.e. by introducing the need to assess the level of capital required to cover operational and market risk, the range of risks for which Macedonian banks are required to determine capital requirements in accordance with Basel II has been expanded.

Regarding the approaches used for regulatory capital calculations, the capital required to cover the credit risk, in accordance with the Macedonian regulations, is determined by all banks only in accordance with the standardized approach (IRB approach is not yet legaly regulated). Regulatory capital required to cover the operational risk, is determined by all banks only with a basic indicator or standardized approach (Advance Measurement Approach-AMA is still not legally regulated). From the conducted field research and taking into account the answers given by the questionnaire, it is known that most of the Macedonian banks use the basic indicator approach to the capital calculation needed to cover the operational risk, only a small number of banks from the group of large and medium banks apply standardized approach. The minimum required capital to cover the market risks is legally regulated. However, Macedonian banks have identified the market risk as well as all other risks (except the credit, the operational and the foreign exchange risks) as non material risks and do not calculate regulatory capital for them. This shows that Macedonian banking books are mainly lending books.

By legally defining the process of determining the internal capital of the bank[10], the legal regulations in the MK was harmonized with the recommendations of the second pillar of the Basel Agreement II for providing a supervisory assessment of the established level of capital. The NBRNM has accepted the recommendations of the Basel Committee for Effective Corporate Governance (third pillar of Basel II), and have implemented them in the Banking Law, the Decision on Basic Principles and Principles of Corporate Governance in Banks[11] and the Corporate Governance Circular in banks.

From the aspect of the calculation and the need for allocation of internal capital to cover the risks, most of the Macedonian banks stated that for all risks that are not treated within the regulatory requirements, the calculation is performed on a cumulative basis. Namely, individual calculation of the required capital to cover strategic, reputation, regulatory, legal risk, money laundering risk, risk of inadequate information systems and risk of using external services is performed by less than 23% of Macedonian banks, primarily banks from the group of large and medium-sized banks. Most of the banks belonging to the group of small banks stated that in their business operations these risks are not identified as materially significant risks, i.e no internal capital is calculated and allocated for them. The results of the research only confirm that the banks in the MK (especially the smaller ones) have a relatively lower level of sophistication of the risk management systems and the tools at their disposal within that framework. In addition, the small underdeveloped market for derivatives, new electronic products and services (electronic applications and software programs) only confirms the conservative approach to banking by domestic banks.

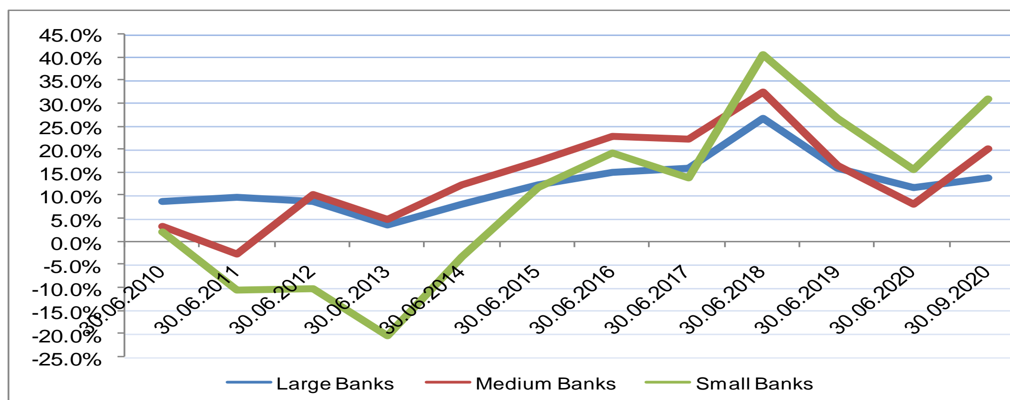
[9] Decision on the methodology for determining the capital adequacy published in the Official Gazette of the MK by NBRNM no. 47/12, 50/13, 71/14, 223/15, 218/16 и 221/18, 181/19, 116/20 и 167/20

10 Risk Management Decision published in the Official Gazette of the RNM by NBRNM no.165/12)

[11] Decision on the rules for good corporate governance in a bank published in the Official Gazette of the MK by NBRNM 24/18, 113/19)

Compared to the banks in the highly developed countries, Macedonian banks are smaller, with narrow range of activities focused only on commercial loans and products and they most often apply simplified risk management approaches. In other words, Macedonian banks most often apply risk management approaches that are based more on the methodologies (for example: for calculating the capital), prescribed by the regulator with certain additions from a quantitative and qualitative aspect, as well as from the aspect of the range of risks that are subject to scope. The high costs and the need to invest in advanced analysis, decision modeling and optimization, database formation, expertise (trained staff), and development of new ICT, will be a future challenge for banks to properly and efficiently manage all risks taken. The fact that the risk management is mainly focused on the basic risk approaches (credit, operational, liquidity risk) and is still underdeveloped for other risks is likely to imply the need for increased bank development which will incur additional costs. Costs that Macedonian banks are likely to cover either from its own growth (rise of average return on equity-ROAE rates) or by outside investments. The chart below shows the rate of return on average capital by groups of Macedonian banks, from which it can be seen that the rate decreased in each of the above groups of banks, especially in the time frame of implementation of Basel II (2012-2013) and Basel III (2017-2019) standards.

Figure1: Average return on capital by groups of banks



Source: NBRM, Banking Supervision and Regulation, Reports on the Banking System of the Republic of Macedonia, www.nbrm.mk

Amendments to the Banking Law on October 2016 and the amendments to the Regulation on the methodology for determining the capital adequacy from December 2016-17, enable the full harmonization of the domestic regulations with requirements of Basel III in relation to:

- the obligation to maintain protective layers of capital and
- structure of banks' own funds, as well as with
- the relevant provisions of European regulation 575/2013 on prudential requirements for credit institutions and investment firms.

The most significant change to the Law refers to the obligation for banks to maintain the so-called protective layers of capital. The main objective of the protective layers of capital is to provide increased protection of the banks' solvency position, especially in conditions of significant increase in the realized losses. There are four types of capital buffers prescribed:

a) capital conservation buffer determined at the level of 2.5% of the risk weighted assets;
b) counter-cyclical capital buffer which may amount up to 2.5% of the risk weighted assets, or higher, depending on other systemic indicators and aims to limit risks associated with the credit growth.

c) the three systemically important banks identified by NBRNM should achieve a protective layer of capital (capital buffer) for systemically significant banks in the interval between 1% and 3.5% of the risk weighed assets; and

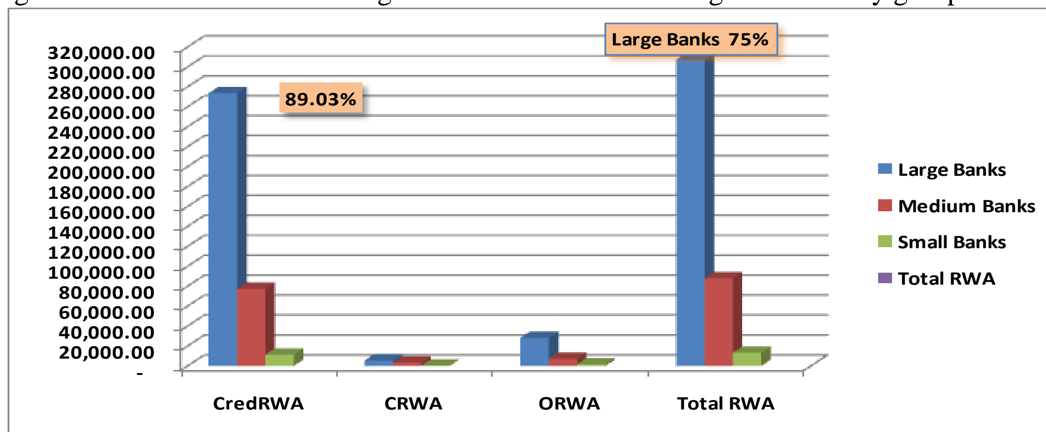
d) systemic risk capital buffer which may range from 1.0% to 3.0% of the risk weighted assets and is introduced by the Governor of the NBRNM in order to limit the risk of disrupting the financial system or the national economy. This capital buffer can be different for different banks or groups of banks.(NBRNM, 2020)

According to the existing Macedonian regulation, the adequate level of capital required to cover the risks with Macedonian banks is the sum of the capital required to cover the:

- credit, foreign exchange, operational risk, as well as for market risks;
- settlement / delivery risk;
- risk of the other contracting party and the risk of price changes of goods;

The capital requirements for risk coverage in almost all commercial banks in the MK are mainly based on credit risk analysis. Namely, credit operations are the most dominant activities of Macedonian banks. Most of the assets of the Macedonian banks are affected by the credit risk, i.e. most of the impairments are a result of this risk (assets weighted according to credit risk as of June 30, 2020 participate with 89.03% in the total assets weighted at risk level of the banking system of the RNM). One can conclude that the credit risk of the Macedonian commercial banks is still the primary risk in their operation.

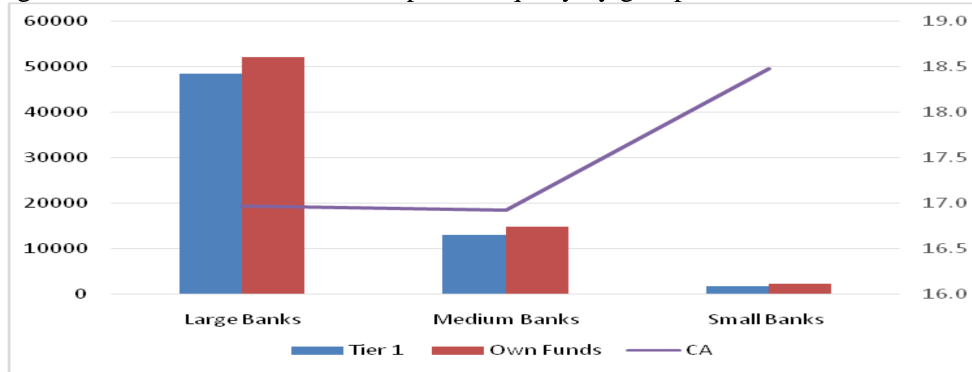
Figure 2: Share of credit risk weighted assets in total risk weighted assets by groups of banks



Source: NBRM, Banking Supervision and Regulation, Reports on the Banking System of the Republic of Macedonia, www.nbrm.mk

According to the existing Decision on methodology for determining the capital adequacy, the structure of the core capital is harmonized with the proposed changes in the capital framework under Basel III. Namely, the share capital can consist only of items which in accordance with the new capital requirements are defined as common share capital. Therefore, it can be expected that the Macedonian banks meet the new rates of capital adequacy, stated in the proposed reform. In order to check such expectations, an analysis follows the current capital ratios in the Macedonian banking system. The analysis was conducted by groups of banks (large, medium, small) based on semi-annual data for the period from 2015 to 2020.

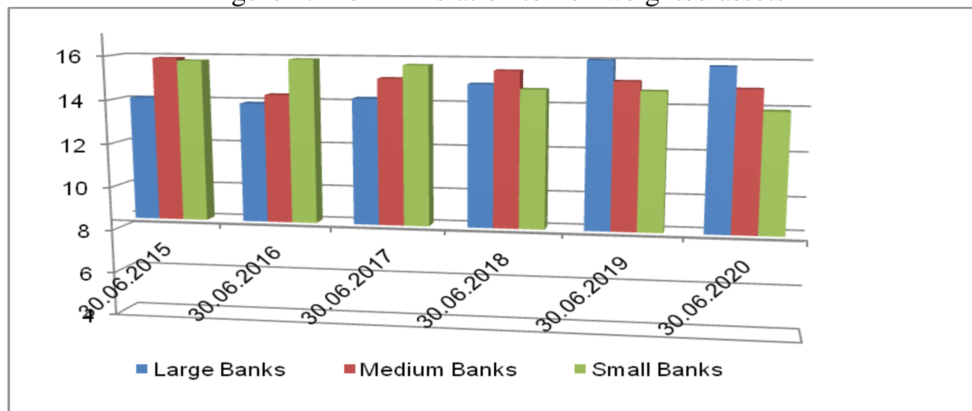
Figure 3: Tier I, Own funds and Capital adequacy by group of banks as of 30.06.2020



Source: NBRM, Banking Supervision and Regulation, Reports on the Banking System of the Republic of Macedonia, www.nbrm.mk

Macedonian banks have increased the level and participation of the basic elements in the Tier I. Analyzed by group of banks as of 30.06.2020 Regular core capital (Tier I - Common Equity), that according to the Macedonian legislation should be min 4.5% of the risk weighted assets, amounts to around 15.8% in the large banks, 14.4% in the medium banks, 13.9% in the small banks. Core capital (Tier 1), that according to the legislation should be min 6% of the risk weighted assets amounts from 15.8% in the large banks, 14.8% in the medium banks, 13.9% in the small banks. The results in chart 4 below shows that the core capital rate of all groups of Macedonian commercial banks in the entire analyzed period of time is a satisfactory indicator and is above the rates provided by the proposed reform of Basel III. The slight decline in the group of small banks is primarily due to the increase in risk weighted assets and recapitalization by investing in Tier II.

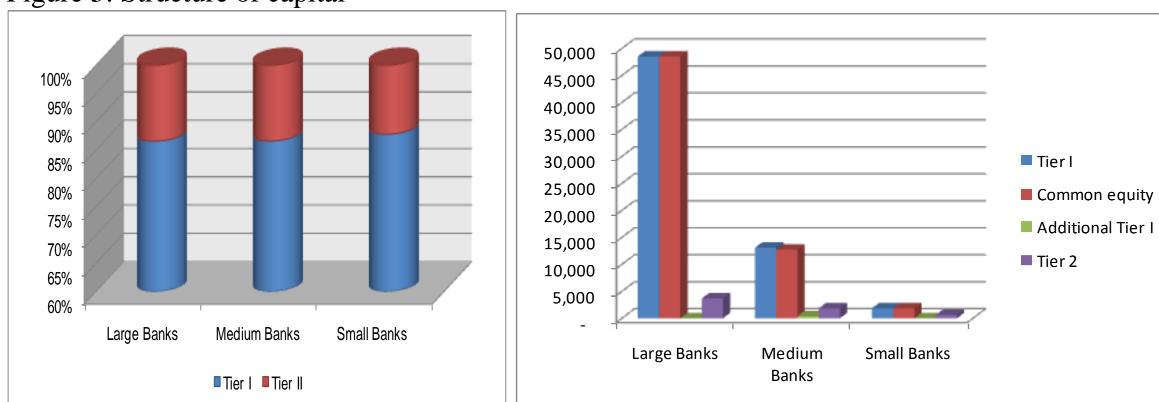
Figure 4: Tier I in relation to risk weighted assets



Source: NBRM, Banking Supervision and Regulation, Reports on the Banking System of the Republic of Macedonia, www.nbrm.mk

Analyzed from the aspect of the types of capital (core and additional) and their share in the total capital, it can be concluded that Macedonian banks (especially the group of large banks that cover 75% of the total banking risk weighted assets) have relatively high quality capital. Hence, in the structure of its own funds, as it is shown in the Chart 5 below, dominant position has the Tier I (bank's common equity capital). Namely, in all banks the share of the core capital (Tier I) of the total capital is over 75% (in the group of large banks 93%, in the group medium-sized 87% and small banks 75%). The share of additional capital (Tier II) in the total capital is below 20% (in the group of large banks 7%, medium-sized banks 12% and in the group of small banks 24%)

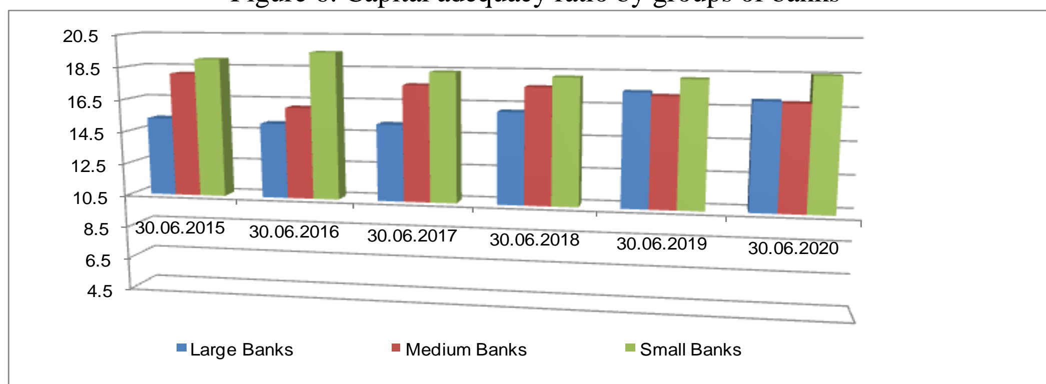
Figure 5: Structure of capital



Source: NBRM, Banking Supervision and Regulation, Reports on the Banking System of the Republic of Macedonia, www.nbrm.mk

Similar results can be obtained if the values of the capital adequacy ratio of Macedonian banks are analyzed.[12] Analyzed in the past five years by groups of Macedonian banks, the capital adequacy ratio tends to increase. At the end of the second quarter of 2020, the capital adequacy ratios of the three groups of banks ranged from 17% in the group of large banks, 16.8% in the group of medium-sized banks to 18.5% in the group of small banks. Namely, as it demonstrated in the chart 6 below, they are not only within the legally prescribed minimum of 8%, but are also above the rate of 10.5%, according to Basel III. Compared to 2015, the capital adequacy ratio rose by 11% in the group of large banks and decreased by 6.6% in the group of medium-sized banks and 2.6% in the group of small banks, respectively.

Figure 6: Capital adequacy ratio by groups of banks

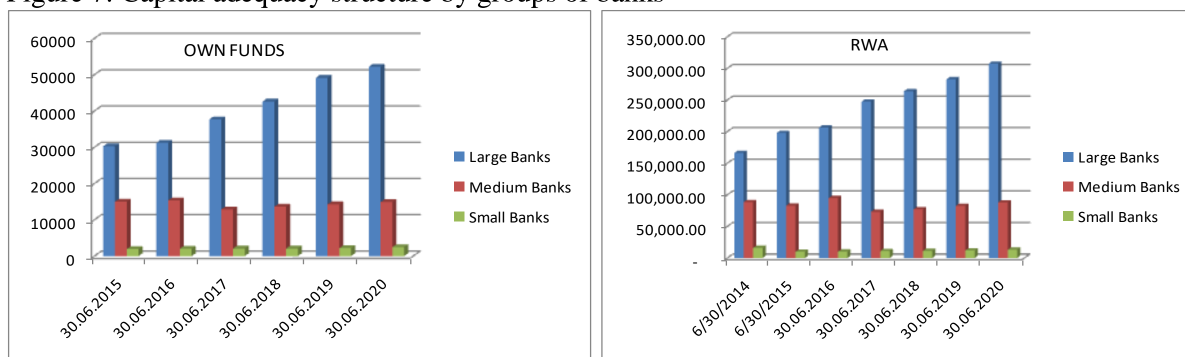


Source: NBRM, Banking Supervision and Regulation, Reports on the Banking System of the Republic of Macedonia, www.nbrm.mk

Analyzed in terms of own funds and risk-weighted assets, it can be concluded that the decrease in capital adequacy, i.e. the weakening of the solvency position, especially in the group of small and medium-sized banks, is primarily a result of increased risk-weighted assets and a slight decline in own funds at the medium-sized banks.

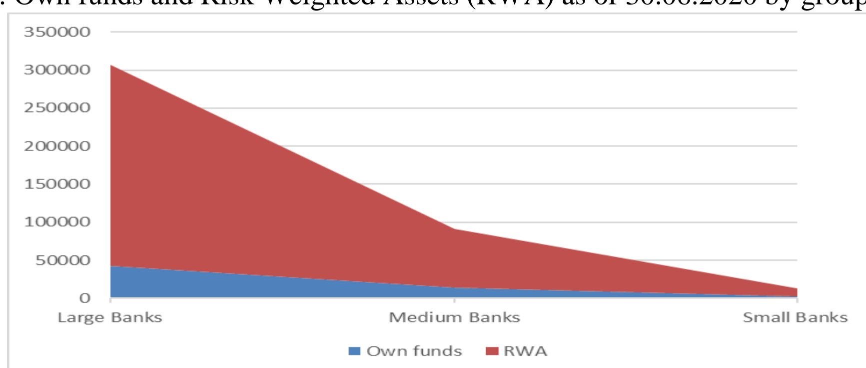
[12] According to the Decision on the methodology for determining the capital adequacy regulatory, all Macedonian banks should have capital adequacy ratio no less than 8%.

Figure 7: Capital adequacy structure by groups of banks



Source: NBRM, Banking Supervision and Regulation, Reports on the Banking System of the Republic of Macedonia, www.nbrm.mk

Figure 8: Own funds and Risk Weighted Assets (RWA) as of 30.06.2020 by groups of banks

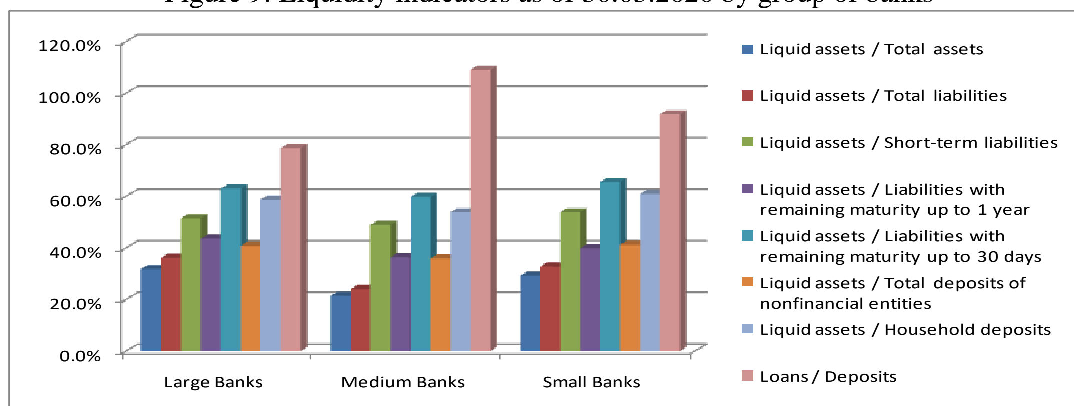


Source: NBRM, Banking Supervision and Regulation, Reports on the Banking System of the Republic of Macedonia, www.nbrm.mk

As of June 30, 2020 the group of large banks (five banks) covers 75% of the Own Fund and 75.21% of the RWA of the total Macedonian banking sector. Macedonian banks meet the newly prescribed rules under Basel III for the capital adequacy ratio, in terms of both capital quality and quantity. The same conclusion applies to the rate of indebtedness (leverage). Regarding the leverage ratio (leverage ratio) which is introduced by the Basel standards as an additional instrument for protection of the level of capital of banks, all Macedonian banks are above the proposed minimum leverage rate of 3%. Namely, as of June 30, 2020, the rate calculated as the ratio between the share capital and the total balance sheet and off-balance sheet assets of the banks has the same value in the group of large and medium-sized banks 10.5% whereas in the group small banks it also reaches the approximate value of 10.7 %. The results of the analysis show that the level of indebtedness in the MK is approximately the same in all three groups of banks, despite the fact that large banks finance most of their activities with other sources of funds.

Macedonian banks are in the process of introducing the new liquidity standard within Basel III, which aims to strengthen the short-term resistance of banks to potential liquidity problems and protect them against long-term structural mismatch of assets and liabilities. In May 2020, NBRNM has announced the new Decision on liquidity risk management methodology which determines the scope and elements of liquidity risk management. The Decision will enter into force and be applicable as of January 01, 2021. Activities are in progress in regards with issuing the Guidelines for implementation of the Decision on liquidity risk management of banks to comply with the requirements related to the introduction of liquidity standards. With the latest amendments to the Risk Management Decision (2019) which defines the process of determining the internal liquidity of the bank, the legal regulations in the MK have been additionaly harmonized with the recommendations of the Basel Agreement, regarding liquidity risk.

Figure 9: Liquidity indicators as of 30.03.2020 by group of banks



Source: NBRM, Banking Supervision and Regulation, Reports on the Banking System of the Republic of Macedonia, www.nbrm.mk

In the first quarter of 2020, the liquid assets of the Macedonian banking system and the liquidity indicators declined moderately. However, the liquid assets available to the Macedonian banks are still in a satisfactory volume, which enables them to properly and adequately manage the liquidity risk and to perform their business activities smoothly. The share of liquid assets in total assets remains relatively stable (at the level of about 20% at the level of small banks up to 30% in the group of large banks), and the coverage of short-term liabilities with liquid assets is satisfactory as well (which remained at the level of about 50% in large and medium-sized banks and 48.9% in small group banks). The level of indicators through which liquidity is monitored and assessed (as shown in the chart 9 above) indicates proper liquidity risk management by Macedonian banks.

Basel IV is not yet subject to regulatory analysis in the Macedonian banking system. Namely, some of the elements regulated under the new standard (eg. IRB approach for minimum capital requirements for credit risk) are neither legaly regulated nor applicable by the Macedonian banks.

All further changes in the regulations and the existing efforts of the NBRNM to further strengthen the capital position and solvency of banks in order to harmonize them with international capital agreements, will certainly affect Macedonian banks to face a possible need for recapitalization. Unlike large banks, where operating costs account for 42.7% of their total income, in the group of small (72.3%) and medium-sized banks (71.8%) these percentages are significantly higher. Employment costs (which are about 45% of the operating costs of almost all three groups of banks) in the total regular income participate with as much as 35.8% in the group of small and 32.6% in the group of medium banks as of June 30, 2020. According to the analyzed results, the price for the growing strengthening of the stability and resilience of the Macedonian banking system will be paid most by the group of small and medium sized banks. They will have to approach faster growth and development as soon as possible by exploring available cost-effective solutions or merging or taking over by larger banks.

CONCLUSIONS

In order to integrate more easily into the global financial markets, all banks, including domestic ones, will inevitably have to comply with international rules and standards. Specifically, the introduction of international rules and standards, the observance and constant monitoring of the universally accepted written and unwritten rules and customs are among the basic preconditions for building a solid domestic banking architecture. The identification and application of contemporary and more efficient ways, methods and techniques for managing risks and capital in banking operations should help Macedonian banks to increase the efficiency and profitability in their operations, i.e. to noticeably implement their strategic goals and determinations towards an expanded, more stable and more competitive banking sector. A well-established legal and institutional framework, a proper organizational set-up, adequate

control and audit during the risk management process contribute to safe and, stable operation of the bank, and is a prerequisite for its future development.

Banks that successfully match the innovations with the strong regulatory requirements will be able to achieve profitable growth and be unattainable by their competitors. Otherwise, banks will not be able to withstand the pressure of modern operations and will be easily pushed out of the financial market. Consistent and timely monitoring of internationally recognized experiences, and the application of universally accepted standards and codes of banking, by both international and Macedonian banks is a necessary step to strengthen the domestic financial landscape.

Macedonian commercial banks in accordance with regulatory requirements, show significant progress in developing risk and capital management processes. The legal regulations in the country regarding Basel standards and practices of risk management, as shown in this paper, are largely in line with the proposed recommendations of the Basel agreements and directives. Neverthless, the alignment are not in full and occurs with a delay of five to seven years. Unlike the BCBS member states which have time frames for compliance of several years, Macedonian banks are faced with the need to quickly adapt to the new legislation requirements in shorter periods of time. Regulators should always bear in mind that the application of the Basel Standards brings significant additional activities and generates costs for the banks in the process of their implementation. Many regulatory requirements mean a huge burden on banks, leading to reducing of their current profitable activities and making them less cost-effective. As confirmed by this research, the amendments in the legislation in 2012-2013 and 2017-2019 had a enormous impact on the capital position of the Macedonian banking sector (especially with the group of small and medium banks). The practical application of the new Basel agreements constantly requires: a cumulative increase in the capital strength of the bank, vast preparations and possession of know how both for the financial regulator, the supervisory bodies as well as for the banks, significant legal and regulatory changes, application of modern technology as well as intensive international cooperation between the relevant authorities. Therefore, there is a need for close cooperation between regulators and banks towards proper assessment of the benefits from the application of the Capital Agreements, in terms of setting the time frame and the domestic banks' readiness for the existence of healthy inputs for the practical application of the regulations.

Today, the Macedonian economy is facing numerous challenges related to the coronavirus pandemic. From the aspect of the origin of the capital, about 83.2% of the banking system in Macedonia (or a total of 10 banks) are with dominant foreign capital. The weak economic performance and the decline in the activities of the euro area banks, which are expected as a result of Covid-19, will broadly affect the slowdown in the economic growth of the country, and this should further influence the overall activities of the Macedonian banking system.

Macedonian commercial banks will face continuous challenges in terms of the need for permanent strengthening of their liquidity and solvency and especially in controlling the level of core capital, both in terms of the domestic economy and in terms of global developments. Only those banks possessing high rates of deposit savings and equity capital can be immune from economic and financial crises and their overflows. The strengthening of the core business income (net interest income and, above all, net commission income) along with the slower growth of operating expenses, as well as the growth of the loan portfolio (especially small loans), can only mitigate the consequences of declining quality of the loan portfolio and the growth of capital requirements. Nevertheless, banks can make significant improvements in performance and average return on capital, particularly through improved capital and risk management.

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