

The Capital Requirements (Basel III) and the Banking Sector Business Activity

I.V. Larionova, E.I. Meshkova* and S.V. Zubkova

Department of Financial Markets and Banks, Financial University under the Government of the Russian Federation, Moscow, Russian Federation

Abstract: Active development by international organizations and national regulators of the emergent standards purporting prevention of crises and increase of banking stability is typical for the last years. However, practical implementation of the standards is not so definitive. This article is devoted to the analysis of impact of new requirements in the field of control over the quality and adequacy of the capital of banks, introduction of the additional parameters of risk-related load on the basis of financial leverage on business activity of banking sector.

The issue of correlational study of capital adequacy ratio of banks and their credit activity was considered by different scientists over the last years; however, no decisive results were obtained. At the same time, the belief on the change of capital requirements and bank loans prevails. Generally, after strengthening of capital requirements, the banks reduce the loan growth. The authors of research prove this conclusion for the Russian economy.

Following carried out analysis, the conclusion was also drawn that against the background of essential excess of the planned level of financial leverage, banks generated a highly risky asset portfolio, where the new standard did not address. It is the authors' opinion that for the purpose of impact on financial activity, the leverage levels must be differential for banks having various business models.

Keywords: Basel III, capital adequacy, financial leverage, banking sector, regulation, financial stability, business model, risk.

DEVELOPMENT OF CONTROL OVER THE QUALITY AND ADEQUACY OF THE CAPITAL OF BANKS

The current practice of introduction of Basel Committee on Banking Supervision international standards testifies that countries having various levels of economic development are actively implementing them. Such unanimity is driven by the series of circumstances:

- striving to gain transparency and comparability of evaluations of the financial stability of banking systems of various countries in order to create equal opportunities for cooperation in such a manner;
- desiring to protect activities of money-and-credit institutes from the outer shocks and create conditions for the adequate protection in case of realization of risks caused by intra-economic issues;
- to strengthen financial capacity of banks by means of more measured system of capital structuring, exclusion of the elements incapable to absorb losses, creation of special buffers capable to protect the capital or restrain activity depending on the cyclical phase;

- to form liquidity buffers based on assessment of risks relating to inbound and outbound flows of funds, ensure a reliable estimate of available funding, if such need arises, etc.

To be sure, the new regulatory requirements are aimed at ensuring of financial stability by means of a stricter assessment of risks and formation of the adequate sources of their absorbing.

At the same time, the analysis and collation of international practice of the implementation of international regulation standards testify that some countries, which are usually developing, use various exemptions as a response reaction to peculiarities of the economic development in these countries (Collective of authors, eds. I.V. Larionova, 2018).

Also, the concern remains unclear that transition to international standards results in deceleration of the economic growth.

Primarily, many researchers suggested more or less prominent deceleration of the economy resulting from the increased capital and liquidity requirements in the scope of Basel III standards implementation. Among them is, for example, the Institute of International Finance, which predicted that for the purpose of absorbing of the increased capital requirements to the banks, rates on credit would have to be raised, and this would impact on the volumes of loans reduction. Other

*Address correspondence to this author at the Department of Financial Markets and Banks, Financial University under the Government of the Russian Federation, Moscow, Russian Federation; Tel: 7-495-615-72-75; E-mail: bibm@fa.ru

Table 1: Impact of Basel III Standards on the Key Indicators of Macroeconomy and Banking Sector

	Impact on capital dimension (trn. \$)	Impact on credit interest rate (basis points)	Impact on volume of loans (%)	Impact on GDP level (%)	Impact on GDP growth (pct)
BIS (1)	---	15	-1.4	-0.19	-0.04
OECD(2)	---	50	---	---	-0.79
IMF(3)	---	71	-5.8	---	---
European Commission(4)	---	66	---	-0.83	---
IIF	1.3	364	-4.8	-3.2	-0.7

Source: Institute of International Finance (2011) "The cumulative impact on the global economy of changes in the financial regulatory framework" <http://www.iif.com/emr/resources+1359.php>.

¹Forecast for the period up to 2015.

²Forecast for the period up to 2015 (at loan interest rate — up to year 2019).

³Long-range forecast (time slot is not specified).

⁴Forecast up to year 2019.

international organizations made negative forecasts too (Table 1) (Institute of International Finance (2011)).

More cautious lending policy of the banks under conditions of the growing pressure of various regulation and supervision aspects, according to estimates of experts, will also contribute to reduction of availability of credit resources. Consequentially, it is estimated that implementation of Basel III would cause slowing of GDP growth rate (although its dynamics might remain positive). Data in Table 2 show quantitative estimates of such impact (The tabulated indices are based on simulated event assuming that capital standards expected to be implemented in regulating practices in 2015 and 2019 are implemented nowadays. 2. % p.p. — percentage points).

However, after a lapse of a series of years from the beginning of implementation of Basel III requirements by the countries, fairness of negative outlooks for a long-run period in regard to developed economies is challenged, even if reported that there are no sufficient empiric data for evaluation of the impact of

macroprudential standards on lending (Majcher P., 2015). For example, Cecchetti S.G. points out that notwithstanding that requirements for banks' capital were sufficiently increased, credit spreads scarcely changed, bank interest margin dropped, and volumes of credits grow. The same author maintains that macroeconomic impact of the increase of capital requirements after crisis was either imperceptibly little or counterbalanced by monetary policy actions, i.e. by low rates and unconventional monetary actions (Cecchetti, S.G., 2014). It was also reported that despite the permanent developing of capital adequacy ratio since the crisis, large global banks continued to expand lending (Cecchetti, S.G., 2014).

Bridges J. *et al.* maintained that: after increasing of capital requirements, banks form capital buffers over the standard minimum, and for this purpose restrict lending, which takes 3-4 years as a general rule (Bridges, J. *et al.*, 2014). Reduction of lending manifests itself more significantly in real estate crediting sector, and to a lesser degree in other segments. Such a reduction is temporary and reaches

Table 2: Impact of the Capital Standards of Basel III on GDP Dynamics

	GDP dynamics (in %)										Annual average rate of GDP growth (%pct)	
	Year 1		Year 2		Year 3		Year 4		Year 5			
	2015	2019	2015	2019	2015	2019	2015	2019	2015	2019	2015	2019
USA	-0.01	-0.05	-0.04	-0.20	-0.07	-0.34	-0.10	-0.49	-0.11	-0.59	-0.02	-0.12
Euro zone	0.00	0.00	-0.04	-0.13	-0.17	-0.51	-0.26	-0.76	-0.39	-1.14	-0.08	-0.23
Japan	0.00	0.00	-0.05	-0.12	-0.07	-0.18	-0.17	-0.41	-0.19	-0.47	-0.04	-0.09
Weighted average value	0.00	-0.02	-0.04	-0.16	-0.11	-0.38	-0.17	-0.58	-0.23	-0.79	-0.05	-0.16

Sources: Slovák, P. & Cournède, B. (2011) Macroeconomic impact of Basel III OECD Economic Department, Working papers No.844. [Electronic resource] // URL: <http://www.oecd-ilibrary.org/docserver/download/5kghwnhkjs8.pdf?expires=1380890687&id=id&accname=guest&checksum=A6CFB6A765C594EF21DA97074ECACE8B>

0.8% of the quarter growth of loans. Gradually, after the banks accumulate capital, growth of lending comes back to its long-term trend.

Therefore, western researchers conclude that harder capital requirements do not result in significant, permanent economic costs in the long-term. On the other side, in a transition phase, higher buffers may have negative influence on the growth of lending and GDP.

All these and other questions, to which no decisive answers exist, induce the need for analysis and evaluation of the first results of Russian banking sector in the implementation of Basel Committee on Banking Supervision international standards in present-day conditions.

The evaluation of the current position of Russian commercial banks testifies that negative trend in key macroprudential indicators in banking sector is reported against the background of persistent difficult situation in economy. Risk profile of commercial banks is characterized with a growth of non-earning assets share, and downward dynamics of portfolio credit quality is observed. The consequences or risk build-up are reduction of profitability of activity and quality of banks' income source, and, as a consequence, negative trend of capital adequacy ratio.

Let's consider indices indicative of the level of risks of the Russian banking sector (Figure 1) and capital adequacy for their absorption. The basic index indicative of sustainability of banks, – capital adequacy ratio – shortened almost twofold since post-crisis 2009: from 20.9 to 11.8 per cents. At the same time, share of

non-earning loans in loan portfolio of the bank constituted 10.2% having reached the highest level during the same period.

We have a very significant indicator for the banking sector: non-performing loans net of provisions to capital ratio. This indicator actually characterizes the loss of banking capital. Its level grew from 12.1% (following the results of year 2009) to 18.4% (following the results of year 2017), which means: almost 20% of capital of the banking sector may be actually absorbed with bad debts.

In all fairness, we should emphasize that examples of extraordinarily high level of this index are prominent in separate economies, for example, in Greece and Italy the current coefficient level exceeds 80% (Figure 2).

At the same time, statistical data testify that level of capital adequacy ratio following the results of year 2017 in a whole for banking sector of Russia has one of the lowest values versus European countries – 12.7% (Figure 3).

Data portrayed on Figure 4 demonstrate some increase of coefficient level ensured at the expense of the conducted additional capitalization of Russian banks and a series of regulatory exemptions adopted due to devaluation of the rouble in 2014. Credit institutions were allowed to set apart negative revaluation of securities susceptible to market risk; to use 01.10.2014 rate for evaluation of currency assets and liabilities; not to form provisions for loans granted to debtors who suffered from imposition of sanctions of foreign countries, on restructured loans at loan

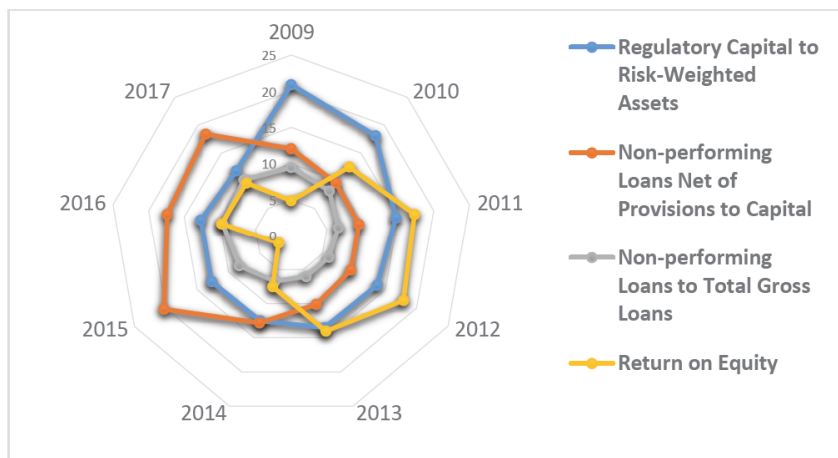


Figure 1: Indicators of financial stability of the Russian banking sector.

Source: Prepared by authors according to IMF data.

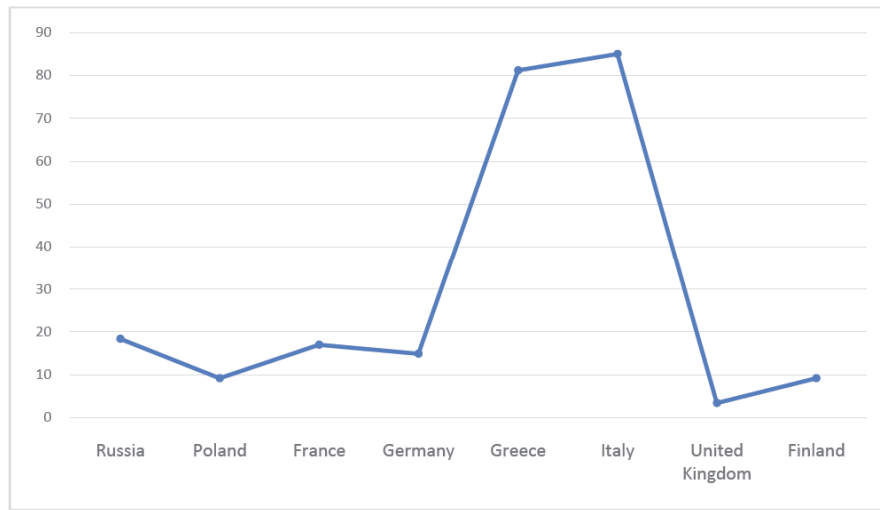


Figure 2: Non-performing loans net of provisions to capital ratio of the banking sector. Source: Prepared by authors according to IMF data.

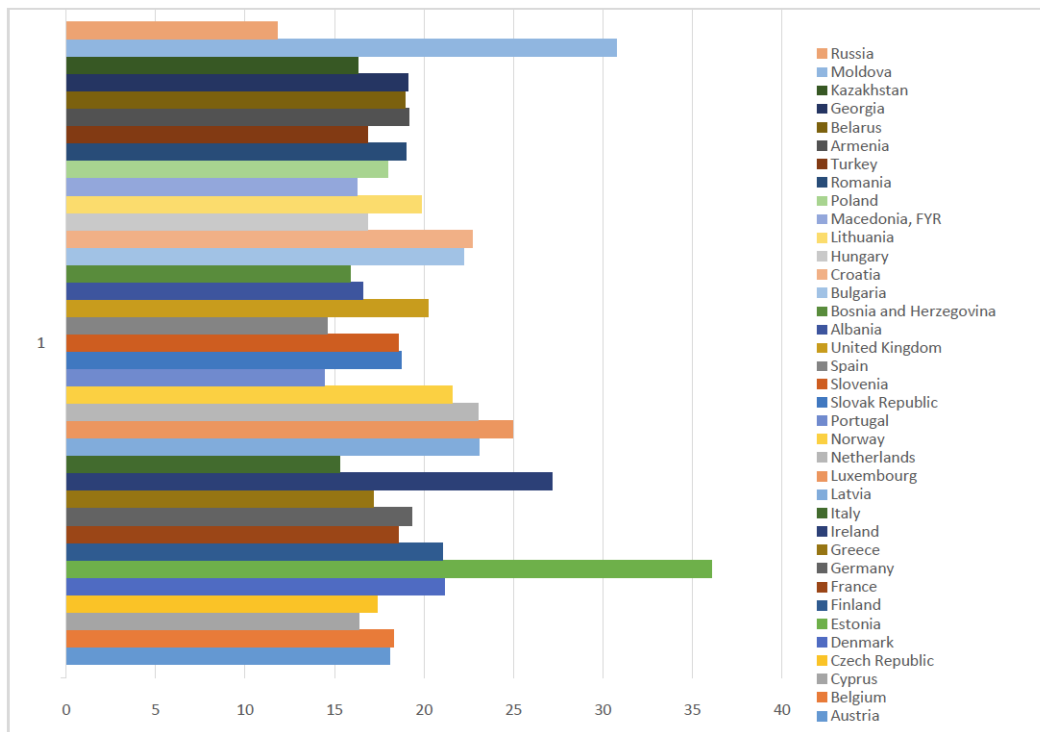


Figure 3: Capital adequacy ratio for European countries, in per cents. Source: Prepared by authors according to IMF data.

currency change. In addition, it was decided to conduct additional capitalization of banks. The above measures made it possible for banking sector to massively scale up capital adequacy ratios, reduce the magnitude of assets risk, by which some change of dynamics of capital adequacy ratio as of January 01, 2015 is explained.

When analysing dynamics of loans extended by credit organizations to non-financial sector of economy, it is seen that despite some growth of index in absolute

terms over the last years, decline of this index is visible (particularly, in relation to GDP level) (Figure 5). It should be noted that dynamics of adequacy of aggregate capital of the banking sector and of correlation between loans to non-financial organizations and population against GDP demonstrate similar trends.

The studies conducted by the experts of International Monetary Fund as recently as in 2012 testified the fact (De Nicolò G., Gamba A., Lucchetta

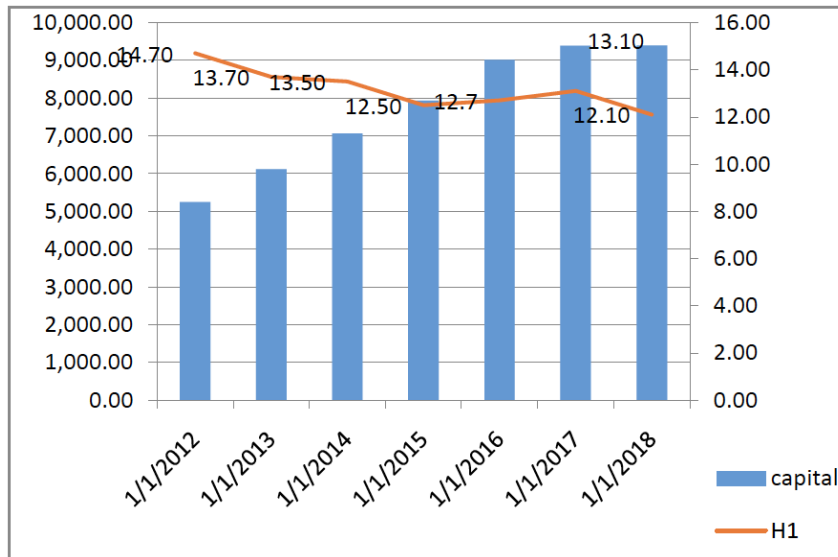


Figure 4: Dynamics of absolute ratio of equity capital of the banking sector and aggregate capital adequacy ratio (S.B. Popov, A.P. Storchak. 2015).

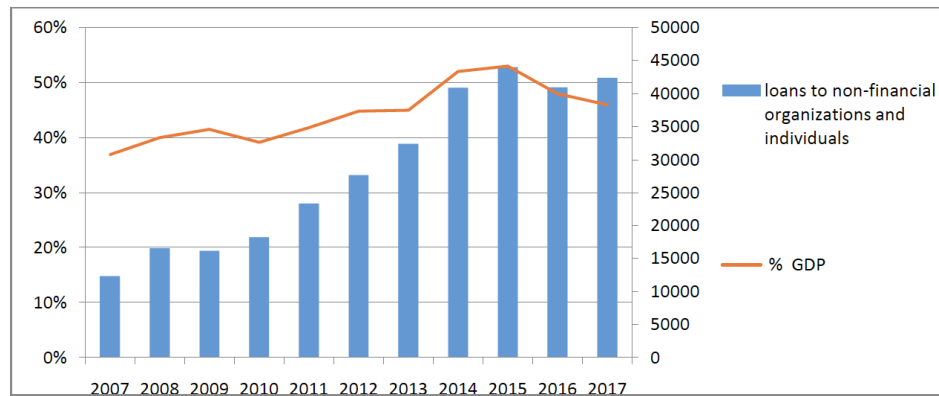


Figure 5: Dynamics of the index of loans extended by credit organizations to non-financial sector of economy in absolute terms and against GDP. Sources: Prepared by authors according to data of the Bank of Russia.

M.), that efficiency is higher at moderate regulation of the capital of banks, as lending volume grows, probability of default decreases, operating efficiency and welfare of the community increases. By way of contrast, if capital requirements get stringent, benefits are levelled out devolving into cost escalation notwithstanding the low level of probability of default, as lending activity slows down as well as performance and welfare of the community ratio, accordingly. In other words, U-shaped dependence is formed between bank lending, efficiency, welfare and degree of stiffening of capital regulatory requirements. This conclusion is compliant with understanding that not only primary effect of regulation – growth of the supply of capital of each commercial bank – should be considered, but that secondary: operating efficiency decline, slowing of lending, etc. too. In this case, it must be understood that the last negatively affects not

only the rates of development of the economy in a whole, but also quality indices of the loan portfolio, as the effect of aging of portfolio not replenished with the new loans of good quality manifests itself.

Alongside statistical data and evaluation of them, the problem of levelling out of the possible negative impact of Basel III standards on the economic growth is being actively discussed in the scientific community. Some scientists propose to more actively apply measures of monetary policy providing commercial banks with additional resources, bringing down the standards of legal minimum reserves, adjusting the level of refinancing rate and carrying out transactions with public securities in the open market (V.M. Usoskin, B.Iu. Belousova. M.V. Klintsova, 2013). Others propose not only further build-up of capital in order to increase sustainability of banks, but also to solve such issues as

combating the practice of financing by banks of affiliates, lowering risks concentration and improvement of competition in the financial market (M.lu. Matovnikov, 2012).

Slowdown of lending and economic growth during the first years of implementation of Basel Committee on Banking Supervision standards is reported even for economically developed countries without pressure on the part of international sanctions. This tendency manifests itself particularly clearly in Eastern European countries, which had some problems in terms of capital and liquidity during post-crisis years. However, negative impact of non-monetary regulation of Basel III and its possible influence on the economic growth may be slackened or prevented by monetary policy methods, which will be aimed at money-and-credit expansion.

The study conducted for the period of 2013-2017 of such indices of the Russian commercial banks as dynamics of H 1.0 capital adequacy ratio, volume of regulatory capital and credit exposure did not reveal correlation dependence of slowdown of lending to corporate clients and natural individuals on introduction of Basel 2 and 3. In twenty of the largest in terms of assets credit organizations, credit exposure growth constituted 130%-140% at the average for the period under examination. Based on the obtained results, it may be concluded on availability of other factors restraining or promoting bank lending except for strengthening of capital requirements for the Russian commercial banks.

In this context, it seems appropriate to take a set of measures for raising of efficiency of implementation in Russia of Basel Committee on Banking Supervision standards taking into account peculiarities of national economy and using both monetary and non-monetary instruments.

- A) Under conditions of macroeconomic uncertainty and heterogeneity of the Russian banking sector, it is seen no rationale for increasing of the regulatory mark-up for maintenance of capital adequacy, as its introduction is aimed at formation of the capital in excess of standard minimum in order to withstand shocks during stresses. Russian banking sector is in difficult situation influenced by external and internal risks, and is not prepared for buffer formation.
- B) In support of banking sector plus easing or levelling out of this negative outcome of the new

regulatory capital requirements, a distinct public policy of stimulation of lending by banks of real economy sector and implementation of innovation technologies is required.

- C) Making use of experience of the developing countries, it is thought to be expedient to a greater extent to apply regulatory measures aimed at softening of capital adequacy calculation without violation of compliance with the Basel Committee on Banking Supervision standards as well.

INTRODUCTION OF FINANCIAL LEVERAGE INDICATOR

In January 2014, a standard dedicated to the basics of determining the financial leverage indicator was adopted (Basel Committee on Banking Supervision, January 2014), and in April 2016, a consultative document providing for the revision of the previously published standard was published (Basel Committee on Banking Supervision, April 2016).

In Russia, the leverage indicator is currently calculated by banks for reporting purposes and has been disclosed on an individual basis since January 1, 2015, and on a consolidated basis since January 1, 2016. The Bank of Russia has developed and published recommendations for the calculation of financial leverage by credit institutions in accordance with the provisions of the BCBS's Basel III (Letter of the Bank of Russia dated July 30, 2013).

At the same time, the idea of using leverage in the analysis and regulation is not new. A similar measure has been in place in Canada and the United States since the early 1980s (Crawford *et al.* (2009), D'Hulster (2009)). For example, Canada introduced the leverage ratio back in 1982 due to the rapid build-up of assets by banks without an adequate increase in the capital base. The United States introduced the ratio in 1981 in connection with the concerns about the safety of banks due to a decrease in the capitalization of banks and a series of bankruptcies (Wall and Peterson (1987), Wall (1989)). The requirement to calculate and maintain the financial leverage ratio for large banking groups was introduced in Switzerland in 2009 (FINMA (2009)). Similar requirements were recently proposed in other jurisdictions (BCBS (2014)). (Michael Brei and Leonardo Gambacorta, November 2014).

At the same time, experts do not agree on the regulation of banking activities through financial leverage, arguing mainly about its non-cyclical nature.

Some experts believe that, under favorable economic conditions, banks will be interested in increasing their credit portfolios (regardless of risk assessment). The consequence of the implementation of such a credit policy will be a decline in the leverage ratio to a regulatory minimum, which will force banks with limited capital to either increase their capital base or limit credit activity. In this regard, the leverage ratio effect will be countercyclical, i.e. it will be lower during the economic boom and high during the recession. At the same time it is assumed that the capital adequacy and leverage ratios will complement each other: the leverage ratio will indicate the potential maximum losses that can be absorbed by the capital, and the requirements based on the risk assessment will cover the bank's ability to absorb potential losses.

Currently, works are created abroad in which attempts are made to assess the potential effectiveness of financial leverage, which has been newly introduced in the banking regulation practice.

For example, Michael Brei and Leonardo Gambacorta (2014) tried to prove the thesis that Basel III's leverage is more countercyclical (less procyclical) than other capital ratios, and to assess whether the results in "good times" differ from those in a crisis period. To do this, the authors compared the new definition of the financial leverage ratio with alternative ratios: capital to risk-weighted assets ratio (main indicator of capital adequacy) and capital to total assets (so-called accounting leverage). The primary results of the study obtained by the authors were as follows:

1. In favorable macroeconomic conditions, the new leverage indicator is more countercyclical (less procyclical) than other ratios.
2. In the opinion of experts, the countercyclical nature of the leverage is manifested in connection with the expansion of contingent liabilities due to the inclusion of guarantees and other off-balance-sheet credit commitments.
3. All three coefficients calculated on the basis of fixed capital are less countercyclical in nature (more procyclical) during a crisis period. In the opinion of the authors, this is due to a decrease in the correlation of the denominator of the ratios (including lending) with cyclical measures related to writing off debts or reducing lending.

There are other reasons, according to which the financial leverage indicator is considered as an

effective banking regulation instrument (Michael Grill, Jan Hannes Lang and Jonathan Smith). One of these reasons is that high-leverage banks have a low ability to absorb losses and are possibly less resistant to shocks. A particular danger is the build-up of excessive leverage in the banking sector as a whole, which was recorded prior to the financial crisis. Limiting the overall level of financial leverage in the banking sector ensures that banks with a high proportion of low-risk assets have the additional ability to absorb losses. Thus, leverage can be a more effective measure for combining the total risk and protection against occasional (and highly correlated) losses in the financial system that are not fully covered by capital, the sufficiency of which is assessed with consideration for the risk.

The next issue actively investigated by foreign authors is the establishment of a relationship between the level of banks' leverage and the quality of revenue and capital management. As a result of the study conducted by a number of authors (Michael J. Gombola, Amy Yueh-Fang Hob, Chin-Chuan Huang, 2016), they managed to prove that banks with high leverage are more prone to revenue and capital management than banks with a low financial leverage during its growth (Michael Grill, Jan Hannes Lang and Jonathan Smith, 2015).

Despite the positive assessment of the leverage indicator for the banking sector, there are some concerns about its application. Often, the leverage indicator is criticized by market participants and other concerned parties in the following regards:

- the indicator's insensitivity to risks (Michael Grill, Jan Hannes Lang and Jonathan Smith, 2015);
- application of different methods in calculating various indicators that assess capital adequacy and leverage (Charles M. Horn .2013).

In other words, the financial leverage indicator, in the opinion of a number of foreign researchers, has certain shortcomings, but it has a potential for countercyclical regulation of the banks' credit activity, and this potential is assessed above other regulatory standards currently applied.

At the same time, in their reasoning, some authors focus on limiting the risk of expansion of business activity within direct and indirect liabilities. It is known that the maximum value of such an expansion is $\geq 3\%$, which means that banks will be able to expand their

business activity by attracting up to 30 loan units per 1 capital unit, which is 2.5 times higher than the capital adequacy level. In other words, the regulators assume that in assets and off-balance transactions (when calculating the leverage denominator) the risk potential amounts to approximately 240%. This quantitative assessment is subject to statistical generalizations and will vary from country to country. In emerging markets, including Russia, the ability to form assets with risk-free instruments is limited due to insufficient development of the financial market, securitization of assets and sanctions restrictions. In these conditions, the risk potential will most likely be concentrated in the loan portfolio, whose quality remains low in the conditions of the economic recession, and the resource supply has serious limitations on the urgency and sensitivity to any external factors. At the same time, we believe that the high leverage value, which means that the bank has a low risk potential (the volume of assets is small), may indicate insufficient confidence in the bank from creditors, flaws in financial stability, etc. As well as for the classical capital adequacy ratio, an equally important factor in overvaluing the risk potential is the loss provisions, the restoration of which significantly affects the financial result, and hence the bank's capital. At the same time, significant surpassing of the established standard leverage indicator may indicate not only a low credit leverage, but also other similarly dangerous risks in the foreseeable future.

Of course, financial leverage can claim to be an important additional tool for microregulation, but the degree of its countercyclical has not been proven yet.

The financial leverage indicator established by the Basel III Agreement can be defined as the ratio of either fixed capital or aggregate regulatory capital to a position at risk.

The aggregate position includes a balance sheet position, a position in derivative financial instruments and financing transactions using securities (Transactions include direct and reverse repo transactions, loans and securities lending, marginal lending operations where transaction costs depend on market valuations, and transactions are often subject to margin agreements), and a position in credit-related commitments recorded on off-balance-sheet accounts. This document stipulates that balance sheet items are included in the calculation after deducting loss provisions or other adjustments to the book value, however netting of loans and deposits is not allowed. The agreement was quite specific quite in regulating the scheme for calculating positions in derivatives, financing transactions using securities and off-balance instruments.

The leverage indicator introduced by Basel III is likely to have a weak effect on the banking sector as compared to capital adequacy indicators based on risk. It is advisable to use this standard at the macrolevel or as a basis for leading indicators of emerging problems in the activities of credit institutions that are used by the regulator to take preventive measures. In this case, the degree of impact on business activity in the banking sector can be tangible.

According to our estimates, the impact of the new standard on the micro- and macrolevels will manifest in the following areas (see Table 3):

One of the most pressing issues for commercial banks is the impact of the combination of new prudential norms and, in particular, leverage-based restrictions on the business model of the bank.

The concept of a business model is interpreted ambiguously in the academic literature and expert community. Some authors understand the business

Table 3: Effects of the Financial Leverage Indicator (Basel III) on the Banking Sector

Microlevel	Macrolevel
Stimulating the adoption of additional risks by banks	Lower threat of accumulation of systemic risks
Creation of incentives for banks to dispose of low-yield assets with a low level of risk	It has the potential of countercyclical regulation
It will have a significant effect on the banks: with significant off-balance-sheet credit commitments with a large share of assets in low-weight instruments in the calculation of risk-weighted assets that use advanced models of credit risk assessment and, accordingly, a lower ratio of risk-weighted assets to the total position at risk	It cannot identify the risk of deteriorating quality of the loan portfolio of banks

model as the formalized description (graphic, tabular, textual in some cases, or in the notation of a specialized software product) of a certain aspect or scope of activity of the enterprise. For example, models of strategic goals and indicators, strategic maps, business process models, organizational structure models, document library models, etc (Isayev R.).

Other authors suggest defining the business model as a set of nine blocks that reflect the logic of the company's activities aimed at making a profit. These nine blocks cover four main areas of business: customer interaction, supply, infrastructure, and financial efficiency of the company. The business model is like a strategic plan that is implemented through organizational structures, processes, and systems. (A. Osterwalder, Yves Pigneur).

Banking specialists approach the definition of this concept by identifying other criteria. Some authors believe that such a criterion is ownership of capital (N. Valentseva, M. Pomorina, 2017). In accordance with this criterion, the authors distinguish banks controlled by the state, banks with foreign capital participation, captive banks, etc.

The point of view based on such a criterion as the relationship with customers is considered promising. It is obvious that the prospects of the credit institution depend in many respects on the nature of building relationships with counterparts, as the assets and liabilities of the bank in terms of their quality depend on the client segment, the counterparties' business sustainability and their responsible behavior. In turn, the selection of the client segment and the construction of relationships with business entities is determined by the development strategy of the credit institution. Miscalculations in the strategic choice lead to the implementation of strategic risk, one of the sources of which is the business model.

In the Basel Committee's documents, strategic risk is recognized as one of the major types of risks inherent in the activities of credit institutions, and arising from wrong management decision-making, improper implementation of decisions, or inadequate response to changes in the business environment. Assessing strategic risk is challenging.

In accordance with the principles of corporate governance of the BCBN, the supervisory board and senior management of the bank should determine a development strategy, methods of risks taking, a risk

appetite definition and regulation, as well as methods of risks identifying, their measurement, management and control.

It is necessary to develop and complement the documents of the BCBN to assess the interaction of strategic risk and risk management strategies.

However, there are a number of methods that make it possible to carry out a quantitative assessment of strategic risk through an assessment of the business model of the credit institution.

It is obvious that the assessment of the business model of the bank in terms of the fundamental qualitative characteristics of strategic risk considering indicators such as market share, activity, brand quality, management, organizational structure, business reputation, customer base stability, focus on the business of the owners and a number of others, allows us to draw a conclusion about the pre-default state of the bank or, on the contrary, about the prospects of its development as soon as at the preliminary stage of the evaluation without analyzing other risks.

However, as of today, there is no common understanding of the definition of the business model of credit institutions and the assessment of strategic risk based on it among market participants either on the part of commercial banks or the Russian regulator of the banking market. Also in Russia there is no officially recognized methodology for assessing the strategic risk of a commercial bank. The auditors' report on the bank's performance for the year does not include a section on strategic risk assessment in accordance with both Russian and international standards.

Carrying out internal audit procedures of the activity for the assessment and management of the above risk is extremely difficult.

The main reasons are as follows:

- Conflict of interest between the Board of Directors approving the strategy and the Internal Audit Service, which performs its functions for the Board of Directors;
- Lack of qualified staff and resources;
- Lack of clear methodology and procedures for assessing strategic risk, including by the regulator;

- Difficulties of objective and quantitative assessment;
- Absence of the subject of audit (no strategy);
- Unclear requirements of the regulator for assessing strategic risk, which do not entail compulsory calculation of quantitative valuation indicators.

In the process of strategic risk assessing or auditing, the Internal audit department specialists have to develop a management audit procedure that assesses the quality of management within a banking strategy and a specific policy. It is advisable to use the following questions:

Does the bank have a documented strategy, including preliminary analysis and adequate objectives?

Does the bank have a strategy implementation plan and budget?

Does the bank have a performance monitoring system?

Based on the results of the answers of the questions above, a conclusion on the quality of strategic risk management in a bank should be formed.

The Internal audit department should systematically consider the strategic policy of the bank and give recommendations if there are deficiencies in strategic risk monitoring.

In the context of the formation of a new banking supervision system and the institution of curators, the officially recognized methodology for assessing the strategic risk of a business model of a commercial bank can become a preventive indicator of the pre-default state of a credit institution.

In this methodology, special attention should be given to such issues as the absence of a procedure for assessing strategic risk; the contradiction of the strategy with the resources; the discrepancy between the formal strategy and the actual one implemented by the bank's owners; low performance indicators of the strategy implemented; loss of market share, etc.

It is advisable to include in the regulator's arsenal, such as in the methodology for assessing strategic risk, the principle of setting «red flags» in the form of prudential restrictions, which will affect the business

model of commercial banks, their relationships with customers, and the development of their business activity. Given the difficult macroeconomic conditions, the availability long-term sources of funding to banks to and the market volatility, one should expect that the business model of banks can become more risk-oriented. However, the requirement to comply with capital adequacy, leverage, and short-term liquidity will force bank management to work with less risky instruments to the detriment of expansion of lending and long-term investments. In order to stimulate economic development, it is important to find a balance between these opposing processes.

CONCLUSIONS

Almost a decade of financial and economic instability affecting developed and developing countries has necessitated the search for stabilizing mechanisms in the sphere of regulation and, above all, microprudential standards of activity. This search is accompanied by the introduction of new standards. Their list is expanding, and the algorithms for calculating indicators are becoming much more complicated. The main motive for the innovations is the development of such indicators that would not be procyclical in nature.

A vivid example is the development of standards that determine the updated structure of capital, the improvement of the quality of capital elements, the modernization of the assessment of the adequacy of basic, fixed and aggregate capital, as well as its adequacy for absorbing losses. However, the study of the effect of the introduction of these standards carried out by foreign scientists and experts on the degree of pro- or countercyclicality of these indicators does not provide an unambiguous assessment. The Basel Committee, in order to overcome the shortcomings of such an assessment, among other reasons, has proposed an additional indicator - financial leverage, which allows limiting the credit leverage of commercial banks. Unfortunately, a brief history of the application of this indicator does not allow us to make scientifically grounded conclusions based on a sufficient empirical database, revealed simultaneously some problem areas.

According to the analysis of data on the compliance with the level of leverage by major Russian banks against the background of a significant excess of the leverage limit outlined by the regulator, banks have formed a high-risk portfolio of assets that is not

identified by leverage – *this is the first observation*. The *second observation* is that it is expedient to establish the “red flag” for a low share of borrowed funds (direct and indirect) too, since such a trend may indicate not so much a low risk potential of the assets as more profound issues of quality and confidence in the bank. The *third observation* is that the leverage ratio should be differentiated for banks with different business models.

The business model, being an important component of the bank's success, is not subject to regulation by central banks, but at the same time it has a significant impact on financial sustainability and business prospects as it determines the focus on a particular niche, client, technology, etc. Unfortunately, the introduction of prudential standards of activities will have a direct and indirect impact on the business model of banks, which, according to our estimates, will be increasingly risk-oriented.

There is a contradiction between the objectives of banking regulation (ensuring financial stability) and the goal of increasing efficiency of the banks' activities. It appears that the task of modern regulation and supervision is to find a compromise between these goals. The solution of the problem lies in the combination of regulation and supervision with elements of incentives, which, with regard to limiting bank risks through the leverage indicator, will assume a differentiation of the indicator for banks with different business models classified by risk.

REFERENCE

- Basel III leverage ratio framework and disclosure requirements, Basel Committee on Banking Supervision, January 2014, <http://www.bis.org/publ/bcbs270.pdf>
- BIS Working Papers No. 471 “The leverage ratio over the cycle”, Michael Brei and Leonardo Gambacorta, November 2014
- Cecchetti, S.G., 2014. The jury is in. CEPR Policy Insight / No. 76, December 2014.
- Charles M. Horn, More Leverage for the Unleveraged—Basel Committee Proposes Specific Leverage Capital Framework for Banking Organizations, Morrison & Foerster, www.mofo.com.
- Cohen, B.H., 2013. How have banks adjusted to higher capital requirements? BIS Quarterly Review, September 2013, p. 25-41.

- Collective of authors, eds. I.V. Larionova, On Bringing of Banking Regulation to Conformity with the Basel Committee on Banking Supervision Standards (Basel III) under Conditions of Volatile Economic Situation. Monograph., M.: Knorus. - 2018. – 131-132
- Consultative Document. Revisions to the Basel III leverage ratio framework. Basel Committee on Banking Supervision, April 2016, <http://www.bis.org/bcbs/publ/d365.pdf>
- De Nicolò G., Gamba A., Lucchetta M. Capital Regulation, Liquidity Requirements and Taxation in a Dynamic Model of Banking. International Monetary Fund. March 2012. URL: <http://www.imf.org/external/pubs/ft/wp/2012/wp1272.pdf>
- Institute of International Finance (2011) “The cumulative impact on the global economy of changes in the financial regulatory framework” <http://www.iif.com/emr/resources+1359.php>
- Isayev R.. Comprehensive Business Model of a Commercial Bank. http://www.businessstudio.ru/articles/article/kompleksnaya_biznes_model_kommercheskogo_bank/
- Letters of the Bank of Russia dated 18.12.2014 Nos. 209-211-T On the Peculiarities of Application of the Regulatory Documents of the Bank of Russia.
- Letter of the Bank of Russia dated July 30, 2013 N 142-T “On Calculating Financial Leverage”
- Matovnikov M.Iu. Innovations in regulation: evil or blessing? // Money and credit. 2012. No. 5. P. 30-35
- Michael J. Gombola, Amy Yueh-Fang Hob, Chin-Chuan Huang. The effect of leverage and liquidity on earnings and capital management: Evidence from U.S. commercial banks, International Review of Economics and Finance, 43 (2016), p. 35–58
- Michael Grill, Jan Hannes Lang and Jonathan Smith. The Leverage Ratio, Risk-Taking and Bank Stability. Financial Stability Review, November 2015
- Majcher P. Increased Bank Capital Requirements: Neither Panacea nor Poison Procedia Economics and Finance, 2015, № 25. P 249 – 255
- Osterwalder A., Pigneur Yves. Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers. Alpina Publisher; Moscow; 2012. – p.18 <http://fictionbook.ru/static/trials/06/14/79/06147994.a4.pdf>
- Popov S.B., Storzhak A.P.. Study of Capital Adequacy of Banking Sector of the Russian Federation // Banking business. 2015. No. 9. P. 24-29.
- Slovik, P. & Cournède, B. (2011) Macroeconomic impact of Basel III OECD Economic Department, Working papers No.844. [Electronic resource] // URL: <http://www.oecd-ilibrary.org/docserver/download/5kghwnhkkjs8.pdf?expires=1380890687&id=id&acname=guest&checksum=A6CFB6A765C594EF21DA97074ECACE8B>
- Usoskin V.M., Belousova B.Iu. Klintsova M.V., Basel III: impact on the economic growth (Survey of empirical studies) // Money and credit. 2013. No. 9. P. 32-38
- Valentseva N., Pomorina M., Influence of the institutional environment on the model of the activity of the Russian banking sector // Banking. 2017. No. 2. P. 20-30.