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ACTIVATION OF INNOVATION PROCESSES IN BANKS AS A RESULT OF THE IMPLEMENTATION OF BASIC BASEL ACCORD PROVISIONS

Changes in banking regulation and control, inherent in the Basel Accord provisions, are one of the sources of innovation in banks. Any changes, both inside and outside an organization, provide business entities with a number of opportunities for further development. In this context, analysis and study of the prospects offered by the introduction of new Basel II, 2.5 and III provisions hold particular importance and relevance. This article provides an overview of the changes in banking regulation, and shows their impact on innovative reforms in the banking sector.
JEL: G21; G28; O31

1. Introduction

Reliability and stability are fundamental conditions for the operation not only of any bank, but of the entire banking sector as a whole. These conditions are achieved through effective regulation and supervision by the relevant authorities. With the continuous development of financial products and services, the issues linked to the control and supervision of banking structures are of particular importance and relevance. Furthermore, it should be noted, that the activities of banks affect the operation of other business entities. Accumulating risks in the banking system lead to negative consequences in the real economy. Crises arising in the banking sector indicate the need to change the regulatory system and the global financial crisis of 2008 was no exception, forcing regulatory bodies to take appropriate action. The adoption of the Basel Accord is the response to the problems which arose in the banking sector. Their implementation brought about an increasing complexity of and constant development of the banking sector, and radical changes in its regulation. This is a source of opportunities for banks and a stimulating factor in the strengthening of innovation.

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The financial sector is characterized by stricter regulation than in any other area of business; regulation by controlling bodies is a great incentive for innovation in this area. This regulation encourages firms to bypass it for the reason that it limits the ability to make a profit. This situation is leading banks to develop financial innovation.

The basis of any innovation process is change, occurring both inside and outside an organization. Changes always bring with them the potential to create something new and different. The essence of consistent innovation is therefore found in the well-aimed and organized search for changes, as well as in the sequential analysis of the opportunities that those changes bring for economic and social innovation (Drucker, 2007).

However, several studies have shown that the introduction of the Basel Accord will have a negative impact on economic growth. For example, IMF studies have shown, that an increase in capital requirements for 20 systemically important banks by one percent would lead to an average loss of 0.12 percentage points in GDP, while the average level for 40 banks, would total a loss of 0.2% (Roger, Vitek, 2012). A study by the OECD shows that the implementation of Basel III will lead to an increase in credit spreads by 2015: Europe will see an increase of 18.6%, USA – 12.3%, and Japan – 14.3%. By 2019, the increase in credit spreads for the EU is projected to be 54.3%.[3]

In order to ensure the long-term and stable development of the financial system, it is necessary and unavoidable to change banking regulation. Therefore, solving the problem of overcoming the negative effects through constructive innovation reform based on a constant search for new growth opportunities is of the utmost importance and urgency. This problem lies at the heart of this study.

2. Research methodology

The purpose of this paper is to study the changes occurring in banks as a result of the introduction of new regulatory standards, to identify the key trends and directions of development in the banking industry, and to show the opportunities for sustainable development on the basis of innovation which are opened for banks by introduction of new standards. The results of the study may be useful for regulatory authorities; in so much as they will more accurately identify the specific characteristics of regulation objects and aid in choosing a policy for the introduction of new regulatory standards, which will stimulate the development of banks and the economy. For banks, the identification of best practices for the implementation of international standards will allow them to take into account existing problems and foresee opportunities for further development.

In order to achieve this goal it is necessary to study the following areas:

- The basic stages of the implementation of the Basel Accord;
- The impact of the new regulatory standards on key performance indicators and the strategy of the leading foreign banks as well as, the development of the real economy;

[3] The official website of OECD URL: http:// www.oecd-ilibrary.org/.

- Identifying ways to meet new regulatory restrictions, and the evaluation and forecast of the impact of the Basel Accord on the innovation activity of Russian banks.

The aim of this research is innovation processes in banks as a result of the introduction of the new regulatory standards. The subject of this research is the collective relations involved in the structural transformation of banks in order to comply with international regulatory requirements.Specific innovative products aren't given in research, because it is internal insider information. Besides, it should be noted that studying of innovative financial instruments is beyond the scope of this research, because the purpose – to show opportunities in the long term, and the financial instrument is a short-term innovation on concrete changes in certain circumstances. The set of works (Sorescu, Spanjol, 2008; Bhaskar, 2009; Mabrouk, Mamoghli, 2010) that show the positive influence of innovations on competitiveness is written. It was the basis to consider this issue solved. Therefore the research of influence the innovation on competitiveness wasn't included in range problems of this study.

In general, the authors are interested in the influence of new regulatory standards on the specifics of the banking business including organizational changes, process innovations.

The following research methods were used in this paper: analysis and synthesis of theoretical and practical material, comparative analysis, and statistical research methods (correlation analysis and time series analysis). Information used in the research was collected from statistical data of the Central Bank of the Russian Federation, banks' annual reports disclosing key performance indicators, Internet resources devoted to the problems under consideration, and articles from economic journals.

The impact of new conditions of regulation on the functioning of banks and their innovation activity is the difficult predicted process. In order to explore the impact of the new regulatory standards on banks, a qualitative analysis of annual reports, development priorities, and key changes in the strategy of financial institutions was carried out, as well as a quantitative analysis of key indicators. At the same time it is impossible to carry out a qualitative analysis in large quantities of the banks, because it requires careful studying of changes in each of them. Therefore the study included seven leading European banks. European banks were chosen as the object of study, because European countries are among the leaders in the introduction of the new regulatory standards. It should be noted that the chosen banks are systemically important; they form the main tendencies of development in the banking business.

The study analyzed a range of trends in economic indicators covering the period from 2009 to 2013. For the purpose of this research it is important to trace the influence of Core tier 1 ratio on other indicators of activity, because this indicator characterizes the financial stability of bank more than tier 1 ratio. It should be noted that the Core tier 1 ratio at a number of banks is not selected before 2009. Therefore for research the data were collected for five years.

The correlation coefficients were studied between the following variables: Core tier 1 ratio and Net profit (loss); Core tier 1 ratio and Total asset; Core tier 1 ratio and Loans, Risk-weighted assets and Net profit (loss); Core tier 1 ratio and RWA, Loans and Net profit. The correlation coefficients were calculated by the following formula (1):

$$\text{Correl (X,Y)} = \frac{\sum(x-\bar{x})(y-\bar{y})}{\sqrt{\sum(x-\bar{x})^2\sum(y-\bar{y})^2}} \quad (1)$$

The main purpose of the correlation analysis is not the formation the concrete instructions, the strategy of development for concrete banks, the main objective of this analysis is the identification the preconditions for innovation justification and explanation of implemented innovations. The conclusions of the correlation analysis have rather hypothetical character.

The main source of information for the research conducted in section 4.1 is the bank's official website. As a rule, all sites have restrictions on use of information that didn't allow to disclose the concrete names of banks. Table 4, which presents the innovative transformations in banks, is created on the basis of the analysis of information containing in the annual reports of banks. It does not use quantitative indicators, and matching of the studied banks to the selected criteria on the basis of the analysis of information was estimated.

Also included in the quantitative analysis are 80 of the largest Russian banks, according to size of net assets as of 01.04.2014. The method of grouping, analysis of averages and time series analysis are used in this research. The introduction of Basel agreements in practice of banking business is a multi- stage process having the specifics in the different countries of the world that finally leads to uneven implementation in temporary aspect. Russia lags behind from European countries on rates of introduction of Basel agreements (Korableva, Kalimullina, 2014). Russia didn't collect statistics, comparable with statistics of foreign banks. Therefore the structure of section 4.2 differs from section 4.1.Considering a variety of opinions among the Russian scientists and experts regarding the implementation of the Basel Accord in Russia, the authors in section 4.2 tried to show and predict the positive effects from introduction of Basel in the long term as opposed to short-term problems related to high-level costs.

The scientific research consists of the following sections: the stages of the Basel Accord implementation, the influence of international regulatory standards on the activities of leading foreign banks where new ways to overcome regulatory restrictions are being implemented, a forecast of the impact of the Basel Accord on the innovation of Russian banks, and conclusions.

3. Stages of Basel Accord implementation

In July 1988, Basel I (Basel Capital Accord) was adopted, with the aim of creating conditions for a stable and reliable banking system, as well as creating uniform rules for the regulation of banks doing business in international markets. In order for financial institutions to form a minimum level of resources to ensure the stability of the banking sector, the Committee on Banking Supervision proposed a capital structure, consisting of two levels: Tier 1 (core capital) and Tier 2 (supplementary capital). It imposed limits on the amount of additional capital (Tier 2 must not exceed the amount of Tier 1), and imposed limits on subordinated debt, which must not exceed 50% of Tier 1 elements. Minimum capital adequacy was set at 8% of risk-weighted assets (BCBS, 1988). It was then believed that credit risk was the main threat to banking stability, and so for the most part developed standards were aimed at minimizing that risk. The simple standardized approach was used to calculate risk.

Thus, Basel I, the main banking regulations are aimed at the formation of a capital base which is able to absorb risks which may arise in the future. The adopted document is an important step in building banking regulation policy, but it cannot prevent the occurrence of financial crises. We should not forget that the interests of the regulatory bodies and the banks are not the same: controlling organs are interested in building a stable system to fulfill the needs of the economy, while banks are focused on making a profit, which is always associated with particular risks, the level of which depends on the policies implemented by the bank and its development strategies.

The development of various criteria and restrictions by regulatory bodies will inevitably encourage banks to invent mechanisms to minimize the impact of the limitations in order to maximize profits. It is therefore necessary to develop measures to improve the transparency of banking in parallel. Such a forecast for the development of the situation in the banking sector is reflected in Basel II (International convergence of capital measurement and capital standards), the structure of which consists of three pillars designed to complement each other: minimum capital requirements, the supervisory review process and market discipline. The minimum capital adequacy requirements remained at the same level, which should cover credit, market and operational risks. The capital structure consists of three components which can be used to cover market risk Core capital (Tier 1), secondary capital (Tier 2), and tertiary capital (Tier 3). The complexity of the banking sector had an effect on the development of the tools used to assess the risks taken. As a result, Basel II allows banks to use alternative methodology, based on the internal rating systems (IRB approach), to calculate capital requirements for credit risk management. The following approaches are approved for operational risk assessment: the basic indicator approach, the standardized approach, and the advanced measurement approach (AMA) (BCBS, 2004).

Creating a stable banking system is impossible without building a balanced and well-considered risk management strategy in each bank covering all the possible threats that may arise, and not just those that are listed in the first component of Basel II. Without ensuring transparency and accountability to the regulatory authorities, the beneficial effect of the introduction of capital adequacy requirements will be minimal. All this is reflected in the development of the second pillar of the Basel Accord - the supervisory review process. The third component (market discipline) is aimed at banks disclosing information about the structure and adequacy of capital, about risk exposure, and risk assessment (BCBS, 2004). This will allow participants in the market to make informed investment decisions, which should encourage banks to work proficiently in the field of risk management, assessing capital adequacy, etc.

Later, in July 2009, Basel 2.5 (Enhancements to the Basel II framework) was adopted. In calculating capital adequacy, not only credit, market and operational risks were taken into account, but also the migration risk, focusing on the development of methods to assess market risk. The second component reveals specific areas of risk management: risk concentration, off-balance sheet exposures and securitization exposures, reputational risk, and implicit support risk, as well as, evaluation practices, liquidity risk management and supervision, reasonable practice of stress testing, and reasonable compensation practices. In addition, internal risk control was also added (BCBS 2009). The main change in the third component was that banks should reflect their actual risk profile, and also added a qualitative requirement explaining the significant changes in the amount of quantitative information that occurred since the last reporting period.

The development of innovative financial instruments, which initially did not receive suitable regulation by supervisory bodies, led to a banking crisis, and then to a liquidity crisis and finally to the global economic crisis. The global financial crisis exposed weaknesses in banking regulation and showed that Basel II did not put in place significant restrictions on the risks taken by banks. These events could not but affect the changing conditions of banking control and supervision and, as a result, Basel III was adopted. Changes we made to the structure of capital, and the formation of a capital conservation buffer and countercyclical capital buffer were required, which increased the required level of capital adequacy. In addition, the new liquidity standards (LCR, NCFR) were implemented, and the second and third components were updated (which focus on the risks associated with derivative financial instruments, securitization, and information on remuneration to employees), risk estimation was tightened, and the number of types of risks was increased in the calculation of adequacy capital (BCBS 2011a, b, 2013). As a whole, the set of measures was aimed at ensuring the stability and reliability of the banking system, as well as producing a real reflection of the risks taken by financial institutions. The measures represent a positive shift in the scope of strengthening the financial sector (White, WR, 2014; Strel'nikov EV, 2013, Popov K., Yudenkov JN, 2011); however, work must constantly be carried out to resolve the problem of a shadow banking system developing (Blundell-Wignall Adrian, Atkinson Paul, 2010, Bondarchuk PK, Totmjanina KM, 2011), the problem of creation an optimal regulation ensuring the stable development of the banking system (Nouy, 2008; Teakdong, Bonwoo, Minsoo, 2013; Beck, 2013) and the problem of strengthening corporate governance (Kirkpatrick, 2009; Wehinger, 2008; Shelepov, 2012). Besides, it is necessary to pay attention to a problem of providing an optimum level of development the financial sector ensuring economic growth (Hook Law Siong, Singh Nirvikar, 2014). In addition, the use of internal models for risk assessment gives rise to systematic arbitration by supervisory authorities, which reduces efficiency (Blundell-Wignall, Atkinson, Roulet, 2013).

Theoretically, the adoption of the Basel Accord can strengthen the banking sector and reduce the probability of financial crises, but the practical implementation is different. Basel I, II, and III are sets of standards, which are implemented into a dynamic environment with a large number of participants, whose aim is to make a profit, which leads to unpredictable consequences in its implementation.

U.S. and European banks could never have accumulated such large amounts of securitized mortgages if 'AAA' rated securities had not been taken into account with a zero risk factor. This example in particular shows the essence of the problem with Basel II: despite the complex mathematics and flawless formulas, the real difficulty lies in the inability to obtain accurate statistical estimates of models' basic input characteristics (Matovnikov, 2012).

In order to achieve a positive effect from the introduction of the new regulatory standards, it is imperative that supervisory bodies see the situation as a whole, receive reliable information from banks, carry out continuous monitoring of innovative financial instruments, are able to make accurate forecasts of the impact of financial innovation on economic development, prevent crisis developments with timely measures, and weigh the assets of bank balances in accordance with the actual level of risk.

4. Results

4.1. The influence of international regulatory standards on the activities of leading foreign banks

The boosting of the innovation processes in banking as a result of the introduction of the new regulatory standards is reflected in the writings of many experts (White, 2014; Ziyadullaev, Kurguzov, Kravchenko, Kibardina, 2011), some of whom predict a decline in traditional active and passive operations (Uljukaev, 2012). Before the introduction of the main provisions of Basel III, modern banks should (step-by-step) solve a broad range of current issues relating to the radical improvement of structures, improve quality of, and reduce the risk linked with, banking investments, improve the quality of both bank lending and liquid assets, increase the requirements for bank staff (especially those conducting actuary banking and risk management) (Volovnik, Ziyadullaev, Kibardina, 2011). In addition, there is a need for more detailed analysis of changes occurring in the banking industry.

Reports from the world's largest banks show a steady decline in the RWA indicator and further work by financial institutions in this direction. This is a positive trend, and is of considerable importance as it has made a real improvement in asset quality, as only in this case, can there be a strengthening of the banking system, and can investors make informed decisions. Annual report indicators from foreign banks suggest that the process of optimizing the structure of balance sheets in accordance with the Basel Accord is now taking place, the result of which is increased financial stability and the ability to raise capital on favorable terms. In addition, an orientation to improve regulatory capital ratios can be noted in the annual reports of the banks studied. This is confirmed by Core tier 1 ratio performance indicators, shown here in Table 1.

It should be noted that foreign banks meet both LCR and NSFR indicators; they keep risk management models up to date in accordance with Pillar 2, as well as disclose the necessary information in keeping with Pillar 3. Chief executives of foreign banks are convinced that the first financial institution to implement Basel III will receive a number of competitive advantages and increase its organization's credibility in the eyes of consumers of its financial services.

Table 1

Core tier 1 ratio variation, 2009-2013 (%)

Leading banks from the following countries:	Core tier 1 ratio			
	Absolute growth 2009-2013	Series average	Average annual growth	Growth rate, 2009-2013
Great Britain	4.20	11.10	9.67	44.68
Netherlands	3.90	10.21	10.67	50.00
Italy	1.13	9.21	3.18	13.34
France	3.70	10.11	9.97	46.25
Switzerland (2009-2012)	7.10	14.95	16.88	59.66
Germany	4.10	10.09	10.13	47.13
Switzerland (2010-2012)	5.80	11.65	26.41	59.79

Source: the author's calculations are based on information provided in annual reports

The results of the analysis of key performance indicators over the past five years (2009 - 2013) are presented in Table 2.

Table 2

Variation of banking activity, 2009-2013 (%)

Leading banks from the following countries:	Net profit (loss)		Total assets		Loans	
	Average annual growth	Growth rate, 2009-2013	Avera-ge annual growth	Growth rate, 2009-2013	Average annual growth	Growth rate, 2009-2013
Great Britain	27.70	165.91	3.10	12.98	4.68	20.06
Netherlands	32.77	210.77	-1.81	-7.05	-2.11	-8.17
Italy			-2.31	-8.93	-3.22	-12.28
France	-4.26	-15.99	-3.29	-12.52	-3.43	-13.03
Switzerland	12.31	59.11	-6.84	-24.67	1.87	7.69
Germany	-39.12	-86.26	1.79	7.35	9.90	45.90
Switzerland	-17.53	-53.75	-4.09	-15.38	1.02	4.16

Source: the author's calculations are based on information provided in annual reports

A decline in lending can be seen in the figures for some banks, which is a negative trend; however, it should be noted in annual report that these banks operate in the sphere of increasing opportunities for access to financial resources, as can be seen by the constant development of new banking products. A decrease in assets can be observed practically in all banks, suggesting a decline in the banking sector. However, many banks show a trend in the reduction of risk-weighted assets, which is a positive development, given the fact that a stabilization of the banking system is taking place. Overall, the primary examination of banking activity shows that it is impossible to discuss any definitive and unambiguous impact of the new regulatory standards on the key performance indicators of banks, although there has been deterioration in the financial position of most of the banks included in the study, during implementation period of the new regulatory standards.

A correlation analysis was carried out (see Table 3) in order to more closely examine the impact of new capital requirements on key performance indicators.

Calculations show that, in the banks observed, there were large variations between the indicators obtained. Undeniably, the banks differ by way of their business models, management methods, initial financial strength, and the levels of risks taken. This lays the foundation for further development of both the interrelationship of key performance indicators, as well as the strategy for reform in order to meet the new regulatory requirements. A relationship between CET 1 and credit volumes acquires different strength and direction. A strong inverse relationship between measures has a negative impact on economic growth, because with an increase in CET 1, banks reduce their lending volumes. A strong direct relationship between CET 1 and credit volumes reveals the opposite situation.

Table 3

Correlation coefficients

Leading banks from the following countries:	Core tier 1 ratio/Net profit (loss)	Core tier 1 ratio/ Total asset	Core tier 1 ratio/ Loans	Risk-weighted assets/Net profit (loss)	Core tier 1 ratio/ RWA	Loans/Net profit
Great Britain	0.6089	0.8709	0.8881	0.1544	-0.5370	0.6393
Netherlands	0.4619	-0.429	-0.6002	-0.1501	-0.9344	0.1477
Italy	-0.2090	-0.2404	0.0994	0.5973	-0.8674	0.9362
France	-0.3025	-0.9129	-0.9842	0.2300	-0.9556	0.4192
Switzerland	-0.4845	-0.6823	0.7749	0.31432	-0.4690	-0.5456
Germany	-0.7945	-0.0964	0.2813	-0.0095	-0.1540	-0.5126
Switzerland	-0.8075	-0.9585	0.8762	-0.6213	0.9639	-0.5893

Source: the author's calculations are based on information provided in annual reports

The last column (Table 3) shows the relationship between net income and the volume of loans. A substantial difference in the degree and direction of the links between the indicators being studied in the period in question can be seen, which once again confirms the fact that banks utilize different methods for managing lending and the risks they take. As a whole, the correlation analysis, to some extent, reflects the problems that must be addressed by banks. The ways to overcome these difficulties lay the groundwork for constructive and innovation reform. For banks, with their significant inverse relationship between Core tier 1 ratio and Net profit (loss), the solution is the search for new sources of income; for banks, with their high inverse relationship between Core tier 1 ratio and Loans, it is to increase the availability of financial resources. In situation when an increase Core tier 1 ratio did not have a negative impact on net profit, assets and the volume of loans, the achieved results need to be maintained and updated on a regular basis in line with changes in operating conditions. In situation when there is no significant relationship between Core tier 1 ratio and profit, assets, and loans, the development strategy still needs to be updated, given the fact that the analysis showed a deterioration of key performance indicators.

Analysis of statistical indicators alone is not enough for forecasting and identifying major trends; it is important to track qualitative changes taking place in banks, due to the fact that they shape the future, and correlation analysis is focused on the past. In addition, although profit is an important indicator, we cannot ignore the sustainable and stable development of banks, whose foundations lay timely changes in management strategy in accordance with changing conditions. Therefore, the study of business models and key changes in banking strategy is the next stage of research, which will form a clearer impression of what changes occur in banks, in connection with the introduction of the new regulatory standards.

The information provided in the Annual Reports showed that in 2009 there was a turn towards greater customer focus. Moreover, this trend is confirmed by the report of the World Economic Forum 2012, 'Rethinking financial innovation. Reduction of negative effects while maintaining the advantages', where one of the ways to overcome the negative effects of the introduction of financial innovation is to apply a strategy focused on consumer interests. The formation of client-oriented trends is due to the financial crisis, as well as the regulatory environment, as a transition to internal methods of risk assessment is not possible without detailed and comprehensive information about clients. Furthermore, client-oriented focus can be considered a new source for increasing income from banking, because in this case, a careful study of the needs of consumers reduces the risk of innovation and contributes to the emergence of financial products that customers actually need, which ultimately ensures the necessary sales and profits.

The further strengthening of client orientation can be observed in the form of changes in corporate culture, which are being developed in the direction of increasing transparency and accountability.

The introduction of the new regulatory standards has had a significant impact on risk management and capital management practices. For example, several banks created a model of economic capital which takes into account and measures all the risks encountered in its activities. Banks separate capital into two levels: economic and regulatory.

The Basel Accord stipulated that banks adapt to the new conditions, including reducing costs. In 2013, the annual reports of the foreign banks studied in this paper showed continuing work on programs for the optimization and improvement of production efficiency. One of the developments in this area is the updating of IT systems. The new system implemented in some banks is attuned to the features of the Basel standards, supporting regulatory reporting, internal management data, information disclosure, and centralized data risks. IT systems are a technical tool for the introduction of the new regulatory standards, and are a mirror image of the changing processes for managing capital, and assessing and minimizing risks. We can therefore assume that the introduction of Basel into all banks is accompanied by either the upgrading of the current IT infrastructure, or the creation of a new system. The systematization of key innovation reforms taking place in the banks during the study period is presented in Table 4, where the areas on which the banks focus and accentuate are highlighted.

Comparing Tables 2, 3 and 4, it is evident that the banks experiencing more difficulties are focused on innovation reform. Thus, it can be argued that the regulatory control creates incentives for innovation, but the specific level of innovation activity is defined by problems the banks are facing.

Table 4

Innovation activity of foreign banks

Leading banks from the countries:	Innovation – Central strategy element	Develop-ment of innovation culture	Develop-ment of client-orientation	Optimi-zation	Development of new products	Renewal of culture	IRB
Great Britain			+	+	+		+
Netherlands			+	+	+		+
Italy	+		+	+	+		+
France	+	+	+		+		+
Switzerland			+	+	+		+
Germany		+	+	+	+	+	+
Switzerland			+	+	+		+

Source: Author's calculation based on information of annual reports and information presented on official website of analyzed banks.

Overall, in the period under review, the banks adapted to the new regulatory environment by greatly strengthening their competitive advantages. While quantitative analysis revealed problems in the banking industry, qualitative analysis produced solutions. Foreign banks responded to the new regulatory standards through the optimization of business processes, a focus on improving productivity and efficiency, work in the field of increasing the availability of financial resources, the development of new financial products and services, client-orientation and not only the identification of customer needs, but also a high level of responsibility for their activities, and transparency of transactions and business conduct.

4.2. A forecast of the impact of the Basel Accord on the innovation activity of Russian banks

Generally, the Central Bank of Russia's administration is in keeping with the timeframe for the implementation of provisions as set by the Basel Committee, with the main priority being to gradually improve the quality of the banking system without significant sharp qualitative and quantitative changes. The gradual introduction of these standards can neutralize the negative effects for any given bank, which in the medium and long-term, means not only an increase in stability for that bank, but also an increase in the confidence of their partners, which will eventually be transferred into favorable conditions to attract capital.

According to information from the Central Bank of the Russian Federation dated October 7, 2013, the introduction of LCR is planned for January 1, 2015, Pillar 3 (market discipline) is planned from 2015, and the use of the IRB approach after 2014. Bank of Russia Instruction № 2519-U (13.11.2010) ordered credit institutions, starting from the 2011 annual report, to use explanatory note formatting to provide information on payments (remuneration) to key management personnel (OM Akimov, 2012b). In June 2011, the Bank of Russia issued Letter number 96-T, which contained the minimum standards for the organization of

Internal Capital Adequacy Assessment Process (ICAAP) in credit institutions. The adoption of this document was implemented as part of the second component of Basel II.

It should also be noted, that on October 25, 2013, in order to implement Basel III, the following documents were changed: Bank of Russia Instruction № 139-I (03.12.2012) 'On statutory ratios of banks', Bank of Russia Regulation № 395-P (28.12.2012), 'On methodology of determination of the amount and assessment of sufficiency of own capital of credit organizations (Basel III)'; Bank of Russia Regulation from № 215-P (10.02.2003), 'On the Methodology for Assessing Credit Organizations Own Funds (Capital)'; Bank of Russia Regulation № 387-P (28.09. 2012), 'On the calculation of market risk by credit institutions', to name but a few. In general, the change to Regulation № 395-P, aims to enhance the clarity of calculating indicators (clearly defined stages for the exclusion from capital calculation of any particular indicator, and dates determining the inclusion of indicators into the calculations of equity capital). Income and outgoings from derivative financial tools are included in the full calculation of capital; profits must be confirmed by auditing firms and not individual auditors.

According to Instruction №139, Russian banks must calculate the minimum adequacy ratio of base capital and internal funds. In addition, it specifies criteria for the recognition of derivative financial instruments. In calculating the capital adequacy ratio, the size of risk of change to the value of credit requirements is taken into account as a result of deterioration in the credit quality of a counterparty. More detail is disclosed providing a list of credit requirements included in first class assets, and asset allocation classes were updated. These changes are indicative of movement in the direction of the international method for determining the adequacy of funds. The structuring of capital in terms of quality allows a more accurate viewing of the real financial situation in credit institutions, and their genuine level of financial stability.

As of February 1, 2014 there were 998 banks registered in Russia (Central Bank of the Russian Federation, 2014), which differ in their levels of development, financial condition, policy, and strategy development; Therefore, the Basel Accord will, unquestionably, effect each of them differently. In numerous interviews with the management of Russian banks, differing views on the impact of the international standards for capital regulation on Russian banking were expressed; however, at the same time, key areas of the development of the idea of banking practices can be identified. The management of 'Pervobank' (A. Goncharov), OJSC 'Commercial Bank' Rosbank (I. Antonov), OJSC Bank 'Russian Financial Corporation' (A. Nechaev), JSC Commercial Bank 'Bank Handicap' (S. Balakin), and OAO 'Gazprombank' (W. Shibaev)[4], as well as experts (Chernikova, Zaernyuk, 2012; Vekshina, Kozlova, Trineeva, 2013) believe that an increase in capital adequacy requirements will lower lending rates and increase credit costs. Some scholars hold the opposite position (Filippova, 2011, Matovnikov, 2012, Strel'nikov, 2013); M. Matovnikov believes that Basel III innovation in Russian banks, in general, is not a terrible thing, as world capital requirements have moved closer to the requirements of the Bank of Russia, besides, the delay and inadequacy of measures can be disastrous for the economy

[4] The general opinion is formulated on the basis of information published on the official website of the Association of Russian Banks

(Val'ko, 2013). As for the readiness of Russian banks for the introduction of the Basel Accord, banking business circles and experts (Vasilenko, Knyazev, 2013) have different opinions, and some believe that the regional banks are better prepared to innovate in the area of supervision and regulation[5]. This position is based on the statistics of the Central Bank: As of 01.01.2013, banks' capital adequacy, which is controlled by the state, stood at 13.2%, while medium and small banks in the Moscow region stood at 18.8%, and for medium and small banks in other regions this figure was 18.1% (CBR, 2012). In their article, V.M. Usoskin, V.Y. Belousova, and M.V. Klintsova summarized that the practical application of Basel III will create significant difficulties for small banks in the formation of additional capital, reduce access to credit for small and medium-sized enterprises with low and even normal credit ratings, worsen prospects for the development of mortgage, etc. (Usoskin, Belousov, Klintsova, 2013).

On the first reading of the Basel Accord, we can predict that the reduction of tools to be taken into account when calculating capital, the support of sufficient liquidity, the provision of coverage for long-term assets by long-term liabilities will, in the short term, reduce the ability to build capital and lead to the curbing of banking development.

A deeper understanding of the current situation leads to a different conclusion. For individual banks whose ratios are closer to threshold values and which are not able to raise capital, a similar situation can occur; however, if we consider the entire banking sector as a whole, it is premature to draw such conclusions without quantitative analysis. This mechanism will impact on economic development if the need for financial resources will exceed supply by banks. This will lead to higher costs for loans and reduce their availability. As a result, supply and demand in the market will stabilize. If the introduction of the new standards into the market does not cause a lack of financial resources, there can be no concerns about the negative impact on economic growth.

It is also necessary to consider in more detail the impact on the curbing of banking (loss of customers and loss of profits). Here, there are also different possible outcomes. If customers move from one bank to another, we can unquestionably talk about the insolvency of the first bank, which could remedy the situation through innovation reform of their business strategy.

If clients, due to the implementation of the international standards, are not be able to obtain financing in any bank, borrowers will need to rethink their development strategy, to draw attention to the risks of a project, as well as provide quality financial planning. When it comes to the financing of industries with an initially high level of risk (agriculture, industry, etc.), banks will need to develop financial instruments, which will contain mechanisms to realistically minimize the risks.

To obtain more reliable conclusions statistical data should be considered. Since February 2014, Russian banks have been counting ratio H 1.1 under Basel III. With this, the first quantitative data appeared, the analysis of which is presented in tables 5, 6, and 8. Included in the analysis are 80 of the largest banks, according to size of net assets as of 01.04.2014.

[5] The official website of the Association of Russian Banks URL: http://arb.ru/

Table 5

Average performance level H1.1, H1.2, H1.0 (01.02.14 – 01.04.14)

No	Banking Group	Net assets (billion Roubles) on 01-04-2014	Share in total assets (%)	Normative value of H1.1 (%)	Average H1.1 level for 01.02.14-01.04.14 (%)	Minimum acceptable H1.2 value (%)	Average H1.2 level for 01.02.14-01.04.14 (%)	Minimum acceptable H1.0 value (%)	Average H1.0 level for 01.02.14-01.04.14 (%)
1	State-controlled banks	35354	68.3		9.2		9.2		13.3
2	Large banks controlled by foreign capital (including under the influence of Russian residents)	5765	11.2	5	10.5	5.5	10.5	10	13.9
3	Large private Banks	9903	19		8.5		8.6		12.2
4	Medium and small banks (Moscow region)	605	1.2		8.8		9.0		12.5
5	Medium and small regional banks	163	0.3		8.2		8.2		11.8
	Total	51790	100		9.3		9.4		13.0

Sources: Author's calculations based on information from The Central Bank of the Russian Federation (www.cbr.ru) and information from www.banki.ru.

The statistics show that the greatest level of capital adequacy is found in banks with foreign capital. We can also conclude that state-controlled banks are more prepared for the adoption of new capital adequacy ratios than large private banks. Most Russian banks from the group of largest banks, according to size of net assets have an H1.1 level ranging between 6.8 and 8.44% (see Table 6), and a substantial number of those are between 5.17 and 6.8%. These values exceed the regulatory requirements established by Russian legislation, but are not high enough to compete in international markets. In addition, it must not be forgotten that Basel III requires the creation of a counter-cyclical capital buffer and a capital conservation buffer and, according to preliminary estimates, applying the requirements of Basel III in full, H1 in separate groups of credit institutions may fall below the critical threshold of 10%. This, for the most part, will affect large and rapidly growing banks, for which the search for sources of capital will become a priority (Handurev, 2012).

Table 6

Grouping of Russian banks by average H1.1 level

Grouping by average H1.1 series, %, bracket		Total number of banks
5.17	6.80	13
6.80	8.44	26
8.44	10.07	14
10.07	11.71	9
11.71	13.34	6
13.34	14.98	3
14.98	16.61	2
16.61	18.25	1
18.25	19.88	0
19.88	21.52	2

Sources: Author's calculations.

Russian banks are lagging behind their foreign counterparts in terms of capital, evidenced for which can be seen in the data in Table 7.

Table 7

Common Equity Tier 1 capital ratio of leading foreign banks

Leading banks from countries:	CET 1 capital ratio, % on 31.03.2014
Switzerland	14.30
Switzerland	13.20
France	11.00
Great Britain	10.80
Netherlands	10.10
Italy	9.50
Germany	9.46

Sources: Information provided in quarterly reports (first quarter 2014).

The formation of a competitive capital structure is essential for Russian banks operating in international markets. The problem of insufficient capital lays the foundation for reformations, and it can be argued that the level of competition is an added incentive, enhancing innovation reforms linked with the introduction of Basel. H3 Liquidity level performance indicators are shown in Table 8.

In general, the H3 liquidity ratio is close to that of the LCR indicator, which was developed by the Basel Committee on Supervision and Regulation. In accordance with Basel III, on 01.01.2015 the minimum LCR level should be 60%, then each year the minimum requirements will increase by 10%, and on 01/01/2019, reach 100%. Virtually all large Russian banks, in terms of assets, meet the H3 60% level. However, the analysis of a range of trends suggests the formation of developments in the reduction of this figure, which is a negative situation creating a problem for the banks. The solution to this situation is impossible without structural changes and reforms.

Table 8

H3 Liquidity level

No	Bank	H3	Absolute growth for 06.01.13 – 01.04.2014, percentage point	Average level of series (%)	Average growth rate (%)	Growth rate 01.06.13 – 01.04.14 (%)
1	Nomoc-Bank	≥ 50%	35.29	98.12	3.20	37.08
2	Gazprom Bank		-14.20	90.35	-1.55	-14.44
3	UniCredit Bank		15.49	87.33	1.63	17.50
4	RosSiel'KhozBank		-6.50	77.80	-0.84	-8.13
5	VTB		-15.20	76.28	-2.02	-18.44
6	Sberbank Russia		-29.69	72.39	-4.06	-33.94
7	PromSviazBank		-11.40	69.39	-1.70	-15.76
8	VTB 24		-4.08	65.73	-0.67	-6.54
9	Alpha-Bank		1.00	62.72	0.17	1.73
10	Bank of Moscow		-4.45	58.38	-0.76	-7.38

Sources: Author's calculations based on information of the Central Bank of Russia, www.cbr.ru

Given the statistics showing the financial strength of banks, and the opinions of banking representatives and the business community, we have formulated the following position: In general, the Russian banking system is ready for the introduction of the new international regulatory standards, which should not have a significant impact on banking or put pressure on capital and thereby not reduce customers' access to finance, although the emergence of problems in individual banks is possible. However, the level of competition will determine the dynamics of the implementation and innovation reforms in banks.

Thus, the new international regulatory standards are, on the one hand, restrictions and, on the other, an incentive for the constructive reform of banks if they wish to continue their business. Banks which refuse to overcome problems through innovation reform will, in all likelihood, have to pay for it either by reducing their profitability, or rejecting the further continuation of their business. The opinion that not all financial institutions will be able to meet the new requirements is maintained by a number of directors in the following banks: 'Rosgosstrakh Bank' (Lee et-Vilaine), OJSC 'Commercial Bank Probusinessbank'[6], and others, as well as experts R.Y. Lugovtsov (Lugovtsov, 2012). Overall, the banking sector will become more stable as those financial institutions that cannot properly perform their functions will disappear from the market, banks will take lower level risks, which should improve the quality of borrowers, and the arising redistribution of the financial services market should become an incentive for banks to work more effectively and efficiently. The new regulatory standards affect not only banks, but also to their customers, thereby creating a dynamic external environment, which reveals a number of opportunities for innovation reform.

The implementation of measures affecting regulation and supervision will ensure the transparency of banking activities, which will also increase its fundamental competitive factor: trust. Here, the main challenge is to sustain the line between transparency of banking

[6] The official website of the Association of Russian Banks URL: http://arb.ru/.

activity, on the one hand, and trade secrets affecting competitiveness, on the other. Ensuring the transparency of banks means that financial institutions need to permanently improve their performance indicators, and pay more attention to risk management, and capital management. This is impossible without a renewal of banking products and services, as they are the primary source of income for banks and affect all their performance indicators. Transparency will force banks to operate more efficiently, since capital will move to financial institutions which are not only highly stable, but also profitable.

The disclosure of information and remuneration in banks will lead to customers of large credit institutions receiving a better idea of the quality of risk management, and for banks it will be a good benchmark for the development of their remuneration policy, taking risks into account (Akimov, 2012a). However, the positive outcomes of increased transparency in the global financial system, including an increase in long-term investment and savings (Wehinger, 2011), are only possible when its members disclose sufficient information in an obligatory order (Batsunova, 2012). In this regard, it is necessary for regulatory authorities, in accordance with national features, to develop common standards for the disclosure of information.

Risk assessment covers almost all key areas of banking activity, which lays the foundation for its sustainable development, and is reflected in the agreements adopted by the Basel Committee. Financial institutions have a choice: either to assess credit risks based on external valuation from rating agencies, or based on internal ratings, which should lead to a more precise definition of risk. However, the practical implementation of this provision is problematic not only in Russia but also abroad, due to a lack of information needed for the assessment of risks (Korableva, Kalimullina, 2014). Thus, we can conclude that this is impossible to only use mathematical models, because they can use initially distorted information, which creates a disparity between the real risks and the risk perceived by banks. All this leads to the possibility of constructive innovation reform in the field of risk assessment methodologies. The first banks to recognize this opportunity, and to develop their own method of risk assessment based not only on a mathematical model, but also using information as close as possible to reality, will enjoy a number of competitive advantages, first and foremost being increased financial stability. As for economizing capital, banking practitioners' opinions differed, some expect to save some capital, while others take the opposite position, believing that riskier assets require even more capital than under the standardized approach and consider the use of the IRB approach only in order to save capital to be a dead-end. The IRB approach is intended to be a more accurate assessment of risk, which when used correctly can have a positive effect not only on the development of banks, but also on their counterparties. Accurate risk assessment must be based on a thorough understanding of banking processes, financial conditions and forecasts of the further development of its customers, which ultimately leads to the maximum consideration of their needs and the formation of sound pricing for financial products and services, which may have a significant impact on the bank's customer base.

Existential proof of this process can be seen in development by foreign banks the new approaches focused on creation unique financial solutions for clients based on a thorough and comprehensive analysis of their activities, balance sheets, strategies, risks, opportunities, and additional information received from the organization's management.

In an interview, Zane Adam, managing Director for the implementation of the Basel Committee standards at ‘Alfa-Bank’ said, "As you can see from the example of Europe, where they are gaining a greater understanding of their capital, banks will unfailingly offer their customers more competitive prices, which leads to lower prices for banking products”[7]. Thus, we can conclude that the introduction of the new regulatory standards increases customer focus, and the development of financial solutions which depend on the individual client.

For banks, ensuring compliance with the international regulatory standards means a number of organizational reforms through changes in business processes. A result of this is a high-quality upgrade for IT systems, which allows the quick and consolidated accumulation of the necessary data for high-quality risk and capital management and its disclosure to Basel regulatory authorities without significant overheads.

The overall rate of implementation of the Basel Accord in a country is set by regulations, but its development strategy is developed by the bank itself and in order to create competitive advantages for financial institutions it is necessary to ensure a reasonable balance between the costs and the achieved results. In that context, attention should be paid to the activities of foreign banks. Western banks have been actively attracting capital from private investors for two years. They have also been distributing their profit via shares (not cash) and improving the quality of their assets. We can see that Western banks are already de facto running according to the rules of Basel III. The fact of the matter is that the laws may take a long time to come into force, and global competition for real capital has already begun (Pozdyshev, 2013).

If we consider the leading Russian banks, we can see them falling behind their foreign colleagues. For the present neither one of the banks don’t have permission to use internal assessment approach, in some cases these methods lead to growth the size of the reservation. However the risk departments are created in all banks. Many banks are creating divisions on introduction the Basel requirements. In addition, there is a lack of increased attention to the results of implementing the Basel Accord in Russian banks’ reports, which indicates that Russian banks have just started to work towards aligning their business models with the international requirements.

5. Conclusion

This study allows us to draw several important conclusions. Qualitative and quantitative analysis shows the unclear impact of the Basel Accord on the activities of foreign banks. The trends of key performance indicators of banks are significantly different from each other due to the different strategies in place. The qualitative analysis of annual reports

[7] Official website of the Association of Russian Banks URL: http://arb.ru/.

revealed the innovation activity of banks, aimed at solving problems which arose and providing a foundation for long-term sustainable development. This study has once again confirmed the fact that the new regulations create problems and restrictions, which stimulate innovation reform. In addition, the extent and direction of these changes determines the level of competition. In this regard, in order to form a reasonable strategy to build a stable banking sector, the study and forecasting by supervisory authorities, not only of quantitative, but also qualitative changes taking place in banks is of particular importance and relevance.

The analysis of foreign banks' annual reports from 2009 to 2013 showed the following emerging global banking trends, arising from the implementation of the Basel Accord: increased customer focus taking different forms and developing in different directions, cost reduction through the optimization of business processes, and the emergence of a culture aimed at increasing transparency and accountability. These qualitative changes lay the foundation for long-term and stable development in the banking industry and should have a positive impact on banks' financial indicators. It should also have a positive effect on the leading international organizations' forecast for reduction in economic growth.

Basel II and III create problems for banks; however they can be overcome with the help of innovation reforms, including the updating of financial products and services available at competitive prices due to high-quality risk assessment, the improvement of business processes through reporting by new standards based mostly in the updating of IT-infrastructure, and changing business processes for capital and risk management aimed at providing a true reflection of the risks taken.

In general, the changes in the regulatory environment make the management of banks pay attention to the balance and deliberation of lending policies, raising funds, investment in securities, derivatives, and so on. Most importantly, they will aid bank management in making decisions aimed at a reasonable estimate of risks taken, which in the future will mean long-term and stable development for the bank. The analysis carried out on the impact of the introduction of the new banking regulation provisions shows that the banks will receive many opportunities for constructive reforms, which must be used in order not to lose standing in the financial services market. Thus, summing up all the above, we can conclude that banks will receive a competitive advantage not only because of the accelerated introduction of the basic requirements of the new regulations, but also through the help of qualitative reforms of their activities on the basis of a competent strategy for innovation reform.

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