Components of Financial Stability of Credit Institutions: A New Perspective and New Horizons

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Abstract: The article discloses a financial model characterizing the stability of credit institutions. In addition to the traditional quantitative indicators of the bank's activities, such as capital, assets, profit of the credit institution and others, relative indicators are of particular importance for assessing the effectiveness of banking activities. It is necessary to evaluate both quantitative and qualitative indicators of the activity of credit institutions, the synergy of which will enable them to identify the components of financial soundness and their assessment. An assessment of the financial stability of an individual credit institution is possible only based on the results of a comparison with the industry average components of financial stability. Particular attention is paid to such a component of assessing the financial stability of banks, as the effectiveness of the settlement of troubled debts. The authors of the article developed an alternative system for choosing a strategy for resolving the problem debt of credit institutions based on the qualimetric model.

The idea and motivation (idea, purpose, motivation)

The idea of the analysis is to study the validity and completeness of the hypotheses in accordance with which a study was made of financial stability of credit institutions and its impact on the willingness of customers and investors of banks to place their funds with them, as well as their possible outflow or counteraction to it depending on compliance their market discipline, the level and quality of risk management, as well as the availability of transparent and reliable information about the financial situation.

Keyword: Finance, bank, financial stability.

INTRODUCTION

New Developments in the Development of Banking Activities

In Russia, banks continue to operate under difficult conditions. As of January 1, 2018, 561 banks operated, and assuming the same rates of decline in their number over the past few years, in four years the number of credit institutions will be halved and will amount to approximately 250-300 institutions.

It is not without reason in this connection that it is considered that:

– First, to modernize the regulation of the banking sector at the macro level;

– Secondly, to improve banking models at the micro level.

A feature of the modern development of banks is that they continue to work when old problems are not solved and at the same time new ones arise, with which it is not yet clear how to fight.

Among the former problems remain such as:

– The emergence of bubbles in the financial market;

– Lending to non-creditworthy customers;

– Presence of bad loans.

The new problems include:

– Demographic trends;

– Reducing the pace of economic development;

– Growing savings and reducing investment;

– Transition to the digital economy.

Organizationally, these two problems have come to the fore and, in our view, are key.

The presence of these problems activates the search for more efficient models of banking activities. Often such a model is associated with the development of new banking technologies. Using more advanced information technologies, banks are able to reduce costs and increase revenues. Modern technologies are becoming attractive for a client who receives from their use often better conditions than in interaction with banking structures.

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Despite all the positive significance that digitalization has, the construction of a model of banking activity by the type of a company that performs banking operations with the help of modern technical means can not become a decisive construction ensuring the efficiency of banking activities. It is known that technology is only the way that banks produce their product.

The main thing in the bank's activity is not the invention of new, more advanced technologies, but its activity as a monetary institution, a credit center and cash payments, their analysis and management. Fundamental, we are presented, not the scale of the transformation of banking activities, but the nature of those economic relations that are formed between economic entities.

Bank Business Model: Point of View

Regulation of banking activities should also affect the improvement of business models[1] of credit institutions. This improvement should be related to such areas as:

1.   The effectiveness of the model (economic, social and organizational side, optimization of the cost structure);

2.   Restore a broader trust based on a client-oriented approach, enhance the culture of banking services, preserve the regional presence;

3.   Definition of strategic directions of development, including cooperation with fintehs, development of digital technologies.

Unfortunately, the business model, the model of modern banks, remains incomprehensible neither from the theoretical, nor from the practical side. Most often, this model is associated with overcoming current negative phenomena in the activities of credit institutions, is weakly related to the need to improve the efficiency of banking activities. And even where an exemplary model is recognized that is deployed to improve the efficiency of banking, its understanding boils down to obtaining more income sufficient to achieve adequate equity.

Meanwhile, from the point of view of the modern theory, efficiency has several sides. The economic side affects not only the income, but also the increase in the cost of capital, the quality of the banking product, and so on. The social side and the organizational (operational) side are also essential in the formation of the model. The effectiveness of business models is a complex characteristic of banking activity, the absence of one of its sides makes the banking business model detrimental both for the bank and for social development.

Russian banks still have to decide on what should be considered a model of their development, as well as the business model of their individual varieties. Often, the chosen model focuses banks on increasing risk-oriented activities. This applies to both large monetary institutions and regional banks that reduce their territorial representation in the region.

The growth of the efficiency of capital can be ensured by simplifying supply, strategic sourcing, introduction of information technology processes, wider participation in such segments as Private Banking and operations in the capital market. According to some experts[2], there is expected growing specialization and differentiation of business models. Banks, meanwhile, will have to regain public trust, strengthen their focus on clients' requests, ensure a balance between the interests of their various groups.

Future Bank Models

The new model of the bank is expedient, in our view, to represent not so much through the prism of industrialization of banking activities, but rather in strengthening its role as a social and social institution.

To do this, a new model of banking activity should be more effective, not in the narrow view that has now developed in practice, but in the understanding of efficiency as an integrated characteristic of banking activities.

The effectiveness of banking activities is an integral characteristic of the banking institution from the economic, social and organizational side. Economic efficiency, in turn, as the core, the core of the whole model - is not so much a quantitative as a qualitative result of banking activity. Among the most important

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[1]Hereinafter the New models of banking activity in the modern economy, monograph ed. Lavrushina OI-M .: Knorus, 2017. 167s.

[2]Ibid

economic characteristics (indicators) of efficiency, it is important to include not only income, but also an increase in the value of the capital, the quality of the banking product, its.

Indicators of economic efficiency of banking activities can be such qualitative components as profitability of bank assets and capital, growth of market value of bank shares, ratio of bank's operating expenses to its operating revenues. This characteristic of the bank can be correlated with both macroeconomic indicators of development, and indicators that characterize the specificity of banking activities in the field of regulating money turnover, ensuring its elasticity. Useful indicators for assessing performance here may be quality indicators of the credit portfolio of the credit institution, including the share of overdue payments on bank loans.

The transition to new models of the bank will inevitably be accompanied by its more capacious character, associated with the realization of its social side. Banks will be most effective if their future financial model of activity becomes closer to the interests of customers, will most satisfy their changing needs.

Customer-Oriented Model

The bank from the perspective of its future model is a client-oriented bank. At the same time, the industrialization of banking operations becomes an indispensable attribute of client-orienteers. Client-oriented approach is not only current, everyday, faster and more economical services, creating mutual benefits for the bank and client, but also building relationships between the bank and the client, in which customer support orientation is organically taken into account in customer-oriented and commercial services, this formation of long-term, stable and mutually beneficial relations. The transition to a client-oriented model inevitably involves targeting this model of all the bank's divisions, proposes the creation of a system of material incentives, is defined as an official requirement, becomes part of the entrepreneurial culture.

According to modern approaches, the client-oriented model of banking activity includes a better understanding of the client and his needs, involving the client in the formation of the product price and innovative processes, developing individual customer service, the principles of a differentiated approach to this service, expanding customer service to support its

market position, optimization of the organizational structure of the bank and its business processes.

The business model, focused on customers, takes into account their individuality, involves the use of modern information technologies, the preservation of the image of an honest and competent bank. Adhering to this model, the bank also retains its participation as a center for corporate services, it can ensure the integration of investment banking and international trade finance into it, and, if necessary, improve the quality of expertise in key economic sectors.

Social Models of the Bank

Linking more effective activity of the bank with the development of its social orientation, it should be noted that, unfortunately, in the scientific sense, the social orientation of banks is not disclosed in detail and legally clearly not indicated. Social, ethical, ecological banks are treated as banks of the same line of business. All of them as from the general category of social banks, first of all, guarantee that the clients' money will be directed to ecological, educational and cultural projects. The priorities of corporate social responsibility are: ensuring the quality of products and services, ensuring the availability of financial services, responsible financing, offering socially-oriented products and services. Characteristics of the social efficiency of the bank can serve as indicators such as the proportion of socially-oriented products, the level of loyalty of bank customers, the return on social investment relative to the resources spent, the level of wages of bank employees relative to the average wage in the region, etc.

The surveys of the financial sector conducted in the West show that every second manager of the financial sector is sure that social banking will become a long-term trend in the banking system.

Unfortunately, in Russia the ideology of social banking has not been properly developed, therefore, the Russian banking community faces a difficult and long-term way of actually filling its activities with moral and ethical content.

The Model of a Bank of Distressed Assets

International experience suggests how it would be possible to reduce the burden on the budget, creating, for example, a banking institution of distressed assets. Such a bank, created to stabilize the banking system, could specialize in resolving distressed assets, and

improve asset management practices, including when purchasing distressed debts and liquidating them.

The purchase of distressed assets with their subsequent redemption could be an alternative to buying a troubled bank at the expense of public resources.

Directions of Perfection of Bank Business Models[3]

Improvement of regulation and business models of banking activities should be continued. In general, it seems to us that the new phenomena that are observed in the banking sector both in Russia and abroad, necessitate:

1. Further improve the regulation of banking activities, including by increasing the responsibility of economic entities for the losses incurred, expanding the possibility of applying internal risk management models, developing the principles of differentiated regulation of banking activities;

2. Modernization of own business models of credit organizations, restoration of wider trust to them. This can be done on the basis of deepening and expanding relations with consumers of banking products and services, adapting banking activities to changes in customer behavior, enhancing the culture of banking services;

3. Transition to the assessment of the effectiveness of banking activities from the economic point of view, as well as from the social and organizational side, the significant optimization of the cost structure in the production of banking products and services;

4. A clearer definition of strategic directions for development;

5. Continuous use of modern digital technologies in the interests of accelerating economic development.

6. The development of production should remain the center of social development. More attention should therefore be paid to strengthening the

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[3]O. Lavrushin "In Search of Effective Models for Development of Banking Activity" in the monograph "Search for the Development of the Banking System of Russia", ed. Sokolinskaya N.E., Riga, SIA FINANCU UNIVERSINANTE, Riga, 2018, p.267

role of banks in raising labor productivity, reducing public spending, and accelerating economic development.

Better business models of the bank should be deployed to diversify the service of its customers. Therefore, building a financial model for the stability of credit institutions should be ranked by the type of the listed applied models of the bank.

LITERATURE REVIEW AND HYPOTHESES

Banks are currently one of the most effective and stable institutions in the banking system of Russia, which is primarily ensured by the democratic form of their management, the lack of inclination to unjustified risks, and the existence of specific insurance mechanisms for depositors' funds.

At the same time, in the conditions of aggravation of competition in the banking market and the emergence of new restrictions and sanctions, these institutions face potential threats of losing a part of their clients and thereby a stable resource base in the form of their own funds. Some of these threats are related to the introduction of Basel-3 requirements, the requirements for the provision of transparent and understandable information, from which it is possible to fairly accurately assess the stability of the bank, and hence the reliability of the funds stored in it.

Based on the hypotheses examined, the study concludes that the maintenance of financial stability of banks and the Russian banking system is possible on the basis of a financial model that is, in our opinion, a fairly effective tool for assessing both quantitative and qualitative indicators of credit institutions, which will identify the components of financial sustainability and their fair assessment. The financial stability of an individual lending institution, according to the authors, is possible only based on the results of comparison with the industry average components of financial stability and the type of the model used by the bank. In turn, this will lead to the preservation of the client and resource base of banks, provided that this will be ensured by a properly constructed risk management system, taking into account the proposed model and the transparency of the activities of these credit institutions, confirmed by open and accessible reporting.

Normative documents of the Basel Committee interpret financial sustainability as a set of normative

values of the indicators necessary to ensure the stable operation of the bank[4]. A commercial bank is recognized as financially sustainable, the results of its activities are in line with the requirements established by the committee.

The new requirements mentioned in Basel III affect many aspects of the bank's activities, but for the assessment of sustainability, the most appropriate are the regulation of capital and liquidity.[5]

Researchers consider the stability of a credit institution as an aggregate of types of financial stability:

1)   financial - stability in terms of financial and economic indicators of the bank's condition (profit level, volume and structure of own funds, sufficiency of liquidity, etc;

2)   organizational and structural - the stability of the organizational structure of the bank on the basis of internal documentation;

3)   functional - the stability of the implementation of specific operations or services of the bank, the allocation of specialization of the bank or the desire for universality;

4)   commercial - stability in relations with specific types of business, in relations with the state, creditors, investors;

5)   capital - stability in terms of equity (capital) of the credit institution as a reliable source of funds for the functioning of the bank.

The authors concern the following characteristics of financial stability: dynamism, long-term direction, counteraction to external negative factors, complexity, quality of the process of movement (but not the bank itself as an object, O.I. Lavrushin [6]notes), taking into account their ranking according to the type of bank models used in the introduction.

Financial stability is a characteristic of the bank's activity in dynamics, which quantitatively and qualitatively can be expressed in certain parameters.

The assessment of the bank's financial stability is based on criteria, i.e. is estimated based on some characteristic. For example, capital adequacy, liquidity, asset quality, profitability. Then the criteria are concretized to a set of certain indicators, the evaluation of which in the aggregate gives an idea of the state of each criterion.

UI Bayram considers the division of methods into foreign and domestic methods more widespread[7]. Foreign methods are divided according to the first classification into rating, statistical, complex and coefficient analysis. The Russian are divided into author's methods and methods of the Central Bank of the Russian Federation, which can be attributed to comprehensive methods of assessing financial sustainability.

The approach of the Bank of Russia provides for obtaining a reliable picture of the current financial situation of the bank, the current trends of its change and the forecast for a period of up to 1 year, including possible unfavorable changes in external conditions. A number of formalized and non-formalized criteria are envisaged.

In the process of evaluation dozens of indicators are considered, to which certain points have been made, according to their results an integrated indicator of financial stability is considered. The final assessment of the bank is based on the professional motivated judgment of the analyst, and since the CBR has the most complete information on the activities of all banks based on both official reporting forms and internal information, this approach can be assessed as the most reliable one.

It should be noted that financial stability is assessed by the Bank of Russia in the following groups of indicators, with a generalizing result for each of them, and assigning it an "satisfactory" or "unsatisfactory" rating:

1)   a group of indicators of equity (capital) (sufficiency and quality of capital);

2)   a group of asset indicators (the quality of loans and other assets, the completeness of reserves formed for possible losses and concentration risks);

[4]Source: [electronic resource], URL: http://www.bis.org/bcbs/publications. htm?a=1&from=01012014&mp=any&pi=title
[5]Source: Bank for International Settlements / International regulatory framework for banks, [electronic resource], URL: http://www.bis.org/bcbs/ basel3.htm?m=3%7C14%7C572
[6]Evaluation of the financial stability of a credit institution: a textbook / team of authors, ed. OI Lavrushina, ID Mamonova. - 2 nd ed., Sr. - Moscow: Knorus, 2013. P.28

[7]Bayram, UR, Paramonov, A. V., Zikiriyaev, S.I. / Advantages and disadvantages of methods for assessing the financial stability of commercial banks / Journal: Symbol of Science, № 6-1. 2016. P. 136
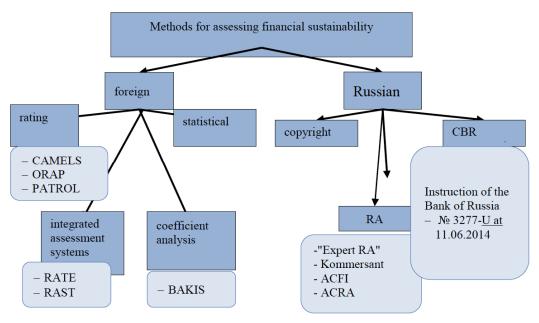
Figure 1: Russian and foreign methods of assessing financial sustainability.

3)   a group of profitability indicators (profitability of assets and capital, income and expenditure structure, profitability of certain types of transactions and the bank as a whole);

4)   a group of liquidity indicators (short-term, medium-term and long-term liquid positions of the bank, a risk indicator for large creditors and depositors);

5)   a group of indicators of the quality of bank management (risk management system, the state of internal control, including in the field of combating the legalization (laundering) of proceeds from crime and financing of terrorism, the quality of business planning);

6)   group of indicators of transparency of ownership structure

It is planned to calculate the aggregate indicator for each group and form a judgment on the final rating at the final stage, according to which the bank's financial stability is recognized as sufficient if the assigned rating is "satisfactory" to the summarizing result for each of these groups of indicators.

The bank's own funds are the basis of its activities, fulfilling a number of important functions and ensuring the stability and reliability of the organization. The sufficient level of capital certifies the clients and creditors of the bank in its financial stability. This caused a special attention of the supervisory bodies to

the value of their own funds, and the capital adequacy ratio is listed as one of the most important in assessing the bank's stability.

When assessing the index of assets, it is accepted to analyze not the volume of assets, but their quality, riskiness. L. Yu. Piterskaya and A. V. Golub outline the following factors for assessing the quality of assets:

•   the amount of highly liquid and liquid assets and "bad" (overdue loans, receivables, illiquid securities, unrealizable real estate) assets;

•   the degree of risk;

•   amount of interest income and overdue loan debt (indirect indicators of loan portfolio quality);

•   the size and structure of low-yield assets;

•   the degree of impairment of assets invested in securities;

•   level of immobilization of assets;

•   fines, penalties, etc [8]

•   the position of the bank in the market of urgent transactions, guarantees, pledges and other off-balance positions.

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[8]Piterskaya L. Yu., Golub A. V / Methods of financial stability and reliability assessment of commercial Bank: Russian and foreign experience, journal: Economics and management in the XXI century: development trends, №12, 2013. P.161-162.

The evaluation is completed by calculating the group's aggregative indicator, taking into account the scoring and weighting of each indicator.

In the study, O. and Lavrushin notes that in terms of asset valuation, the methodology of the Central Bank is aimed at studying the degree of their riskiness, while in the foreign models it is aimed at the quality of assets, which is determined through the riskiness, profitability and liquidity of assets.[9]

Undoubtedly, liquidity management aimed at maintaining its optimal level is an important component of financial sustainability. There is an inverse relationship between the level of liquidity of the bank and its other most important characteristic - profitability (profitability). From how the bank manages to resolve the contradiction between these characteristics, the general state of its stability depends.

In the group of profitability indicators, a special interest is given to the interest margin coefficient, as the interest margin is a result of the traditional directions of the bank's activity and a stable source of profit formation of the bank. The Bank's profitability assessment assumes a comprehensive analysis of such aspects of activity as volume and structure of income and expenses in dynamics, profitability of the bank and its operations, sources of profit, etc.

Group of indicators of quality of bank management. In our opinion, the reason for bankruptcies in the world is precisely the inadequate quality of management, inefficient management.

The approach of the Bank of Russia appears to us as a comprehensive analysis of the bank, allows us to form a generalized indicator, which, unfortunately, does not characterize the degree of stability of the bank.

Therefore, from a methodological standpoint, new, unformalized criteria are very important, as well as mandatory disclosure of the results of assessing financial soundness.

Financial stability of the bank is certainly important for those involved in the process of working with the bank: this is the Central Bank, for which the stability and sustainability of each bank is important for fulfilling

its task in supporting the stable operation of the banking sector in the economy; this is the population that acts for banks as investors. The CBR has access to the internal information of credit institutions, can assess the financial stability of any bank and, depending on the results obtained, to take the necessary actions in each specific case. From the position of depositors, the question is quite complicated. The decision on which bank to open a deposit is mainly based on the terms offered by banks (in terms of profitability) and whether the bank is a participant in the deposit insurance system (in terms of reliability).

Therefore, remote indicators are important indicators that most fully reflect the stability and security of the bank for the savings of a potential depositor, based only on official reporting.

So, in particular, the following regularity is observed: the larger the bank, the more stable it is. To compare a particular bank to others, its size should be similar to the sample. The quantitative measure is net assets (or net assets). In addition, this indicator is used by the Central Bank and rating agencies when ranking banks to allocate segments in the banking sector by the size of the organizations. Net assets are equal to the bank's own capital (own funds) plus the bank's liabilities (depositors 'funds, balances on customers' accounts of legal entities, interbank loans and other borrowed funds).

Banks are aimed at making a profit, this is the main goal. One can not but agree that if any company works at a loss, it is a sign that it is in a difficult financial situation. In addition, the dynamics is important: if the profit of the bank decreases every year, you should be cautious. However, if the bank had a loss in the previous year, and in this case the profit, most likely, the credit organization did not form adequate reserves for problematic and doubtful loans.

There is a difficulty for a person who does not have financial education, it is quite difficult to understand accounting accounts. In this case, one can resort to the data of analytical and information agencies. According to the Central Bank of the Russian Federation, banks that have this indicator over 1.4% have a good profitability of assets.

The statement of financial results has the information necessary to estimate the net interest margin. It is the result of the traditional directions of the

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[9]Assessment of financial stability of the credit institution: textbook / team of authors ed. O. I. Lavrushina, I. D. Mamonova. - 2nd ed., erased. – M.: KNORUS, 2013. P. 139

bank's activities, the efficiency of banking operations, and therefore it expresses a stable source of profit. The best value for the Bank of Russia approach is the net interest margin level of over 5%. Calculation of interest margin can be made both on the basis of the size of the bank's total assets, and based on operating assets (directly yielding to it the income - for example, a portfolio of securities, a loan portfolio).

Another important indicator of the profitability of a credit organization is the profitability of capital. Profitability (profitability) of capital allows you to assess the success of a bank aimed at making a profit, but from the point of view of a shareholder, the higher this indicator, the greater the income the shareholder receives.

However, it should be clarified that the moment data will not be indicative, because the profit could be used to pay dividends or increase reserves, deductions to the DIA, etc. Profitability of own funds, as well as net profit, should be evaluated in dynamics. The continued unsatisfactory level of the coefficient from month to month, from year to year, means the bank's low efficiency as a profit generating company, which worsens its stability.

The calculation of the profitability of capital occurs by the ratio of the financial result (net profit or loss) to own funds. Own funds here should be calculated according to the average chronological, as well as the average assets in the net interest margin or return on assets. According to the methodology of the Bank of Russia, in order to get the best estimate of the return on capital, it is recommended to maintain it at 4%.

An indicator that own funds are of extreme interest to depositors is the fact that Article 36 of the Federal Law "On Banks and Banking" states: the right to attract deposits of individuals can be granted only to such banks, from the date of state registration less than two years. It is quite important for the depositor of the bank to make a decision on making a contribution by an individual to a particular bank in terms of financial stability of such a bank.

Hypothesis 1: For the depositors of banks, the stability of their banks is of particular importance

Hypothesis 2: Market discipline will be stronger in those banks that will assess their financial position and stability on the terms of application of the financial model proposed by the authors

Hypothesis 3: An assessment of financial stability of an individual credit institution is possible only based on the results of a comparison with the average branch components of financial stability of banks of different ranking groups according to the specifics of their financial model.

Hypothesis 4: A direct correlation between the polynomial approximation of the value of the aggregate foreign exchange earnings entering the Russian Federation and the polynomial approximation of the dynamics of changes in the loan portfolio of Russian banks

DATASET AND MODEL CONSTRUCTION

To study information in the article, the method of linear regression (linear regression) or the regression model method is also used. Linear regression consists in determining the dependence of one economic parameter on another or several parameters (called factors or regressors). The essence of the regression model is to take into account the impact on the economic parameter of each regressor with a certain coefficient, which, in general, is an estimate of the impact of this regression.

Econometric methods use a kind of regression model built on panel data. The essence is the processing of two-dimensional arrays of information (tables), where the row of the table is an economic factor, and the column of the table is a certain time characteristic of this factor.

In our case, a tabular form of data representation is used, where the lines are generalized economic indicators of banking activity, and columns are the year.

In the columns of the tables, each year is represented by several selected indicators. For clarity, we will compile a summarizing table of the listed indicators. We define some zoning - "zones": "green", "yellow" and "red" and for each criteria are selected.

"Yellow" zones - a kind of transitional moment, that is, the bank has not yet broken the mandatory standards, has "average" characteristics of profitability and conducts a sufficiently risky credit policy. Indicators characterizing the organization from different angles are more or less important for the financial position of the bank. Finally, the "red" - the bank is not stable or is in a situation where the loss of stability will soon happen.

Table 1:   Generalized Components of Financial Stability and their Synergies

Reporting form	Indicators	Area estimation of indicators of the Bank		
		Green	**Yellow**	**Red**
Balance	Net worth	The characteristic size of the pot		
Form 123	Own funds			
OFR	Net profit (loss)	>0	≤0	≤0
Balance sheet, CRF	Return on assets	≥1,4%	0% – 1,4%	<0%
OFR Form 123	Return on equity	≥4%	0% – 4%	<0%
Balance OFR	Net interest margin	≥5%	1% – 5%	<1%
Form 135	The adequacy of base capital N 1.1	≥4,5%	≥4,5%	<4,5%
Form 135	Sufficiency of fixed capital of N 1.2	≥5,5%	≥5,5%	<5,5%
Form 135	Equity capital adequacy N1. 0	≥8%	≥8%	<8%
Form 135	Ratios instant liquidity N2	≥17%	15% – 17%	<15%
Form 135	Current liquidity N3	≥60%	50% – 60%	<50%
Form 135	Long-term liquidity of N4	≤100%	100% – 120%	≥120%
Form 135	Maximum amount of large credit risks N7	≤200%	200% – 800%	≥800%
Form 135	The aggregate amount of risk on the Bank's insiders N10.1	≤3%	>3%	>3%
Form 135	The standard of use of the Bank's own funds (capital) for the acquisition of shares (shares) of other legal entities N12	≤20%	20% – 25%	≥25%
Report on the level of capital adequacy to cover risks, the value of rvps and other assets	Share of high-risk assets (110%-1250%, consumer loans 140%-600%) (DPA)	<25%	25% – 35%	≥35%

Source: compiled by authors.

We summarize the selected indicators for 20 Russian banks ranked by their own funds (capital).

The Russian banking system as a whole is characterized by a high concentration of own funds (capital).

It is most expedient to consider the first 20 credit institutions with the largest performance indicators, taking into account the choice of a client-oriented model.

The requirements of legislation to the value of own funds, of course, are carried out by banks. The leader in terms of capital is Sberbank, its own funds are 3 times larger than VTB Bank's own funds (2nd place) and 58.7 times more than Home Credit Bank (20th place)/ The question arises: how relevant are the requirements to the authorized capital and the value of own funds, in accordance with No. 395-FZ "On Banks and Banking Activity"?

Table 2:   Information on the Value of Own Funds (Capital) of Banks

Place of the Bank in terms of its own funds	Equity (capital) of banks as of:		Growth for the current year, %
	01.01.2016, million rubles	01.01.2017, million rubles	
5	359 641	357 300	-0,65
30	34 592	36 061	4,25
100	7 728	7 023	-9,12
200	2 358	2 035	-13,70
500	425	347	-18,35

Source: Information on the value of assets and equity (capital) of credit institutions as of January 1, 2017 [electronic resource], URL: http://www.cbr.ru/publ/Vestnik/ves170309_026.pdf

Table 3: Rating of Client-Oriented Banks by the Volume of Equity (Capital) as of January 1, 2017, Billion Rubles

№	Credit institution	Own. means, billion rubles
1	Sberbank PJSC	3 143,4
2	PJSC VTB Bank	1 017,8
3	The Bank GPB	689,6
4	JSC "Russian agricultural Bank"	395,8
5	PJSC VTB 24	295,8
6	OJSC Bank "FC Opening"	270,4
7	AO UniCredit Bank	179,2
8	PJSC "Promsvyazbank"	152,7
9	PJSC "CREDIT BANK OF MOSCOW"	141,2
10	JSC "Raiffeisenbank"	136,5
11	JSCB ROSBANK	119,2
12	The Bank "Russian regional development Bank"	116,8
13	PJSC "BANK"	97,9
14	JSC "BM Bank"	84,9
15	JSC "AB "RUSSIA"	71,9
16	JSC CB "Citibank"	55,3
17	OOO "home Credit Bank"	53,5

Source: compiled by the authors on the basis of data from the RIA-Rating agency, [electronic resource] URL: http://vid1.rian.ru/ig/ratings/banki_07_01_17.pdf

Consider the block of indicators of profitability - this is the return on assets, capital and net interest margin. In terms of profitability of assets and capital, BM-Bank fell into the "red" zone (due to a loss based on the results of 2016).

According to the return on assets to the "green" zone, Sberbank, Gazprombank, VTB 24, UniCredit Bank, Raiffeisenbank, Rosbank, the Russian Regional Development Bank, BINBANK, Citibank and Home Credit Bank can be included.

Capital yield of less than 4% is owned by Rosselkhozbank, Alfa-Bank, MKB, AK BARS and Bank Saint Petersburg. The remaining banks have fairly high values. On average, the sample's return on capital is 10.34% (excluding BM Bank), therefore, it is better to pay attention to banks with a profitability higher than this indicator from the represented banks: Sberbank, Raiffeisenbank, Citibank, BINBANK and Gazprombank. The average net interest margin for the 20 selected banks was 3.67%.

All the standards are fulfilled by banks, but the purpose of our research is to give a more specific characterization to the actual standards for the sample and to identify the most attractive banks that stand out from the rest. So, the trend of H1.0 is almost borderline value for all banks (excluding RRDB), which means that risk assets are adequately covered by capital.

The average value of indicators for large, systemically important banks amounted to 17.53%, 11.41% and 12.26% respectively for equity, basic and fixed capital. Accordingly, we will single out those banks that are in this range, because with these standards a strong deviation towards increasing the interest rate is not a positive characteristic: Sberbank, Rosselkhozbank, UniCreditBank, Raiffeisenbank and Citibank.

The standard of instant liquidity on average 8.3 times exceeds the established normative value, all banks were in the "green" zone. This indicates a good liquidity of banks, their ability to repay current liabilities on demand. From the sample of banks for H2, for BM-Bank the indicator is 1128.45%. On the other two indicators, all banks are also in the "green" zone. According to the current liquidity, it is equal to 203.23%, therefore, the most preferred banks will be those who are above this value: Sberbank, UniCredit Bank, Raiffeisenbank, Citibank and Home Credit Bank.

For long-term liquidity, the average value was 39.35%, which also very well characterizes the sample.

Table 4: Distribution by Zones of TOP-20 Indicators of Client-Oriented Banks, Ranked by their Own Funds as of January 1, 2017

Credit institution	Net profit / Net loss, million rubles.	Return on assets	Return on equity	Net interest margin	N1.0	N1.1	N1.2	N2	N3	N4	N7	N10.1	N12	Dra
Sberbank PJSC														
PJSC VTB Bank														
The Bank GPB														
JSC "Russian agricultural Bank"														
PJSC VTB 24														
OJSC Bank "FC Opening"														
AO UniCredit Bank														
PJSC "Promsvyazbank"														
PJSC "CREDIT BANK OF MOSCOW"														
JSC "Raiffeisenbank"														
JSCB ROSBANK														
The Bank "Russian regional development Bank"														
PJSC "BANK"														
JSC "BM Bank"														
JSC "AB "RUSSIA"														
JSC CB "Citibank"														
OOO "home Credit Bank"														

Source: compiled by the authors.

Here it is worth to mention Home Credit Bank, Rosbank, Promsvyazbank. Also I would like to mention Citibank: its instant and current liquidity indicators are too large (2.5 and 3 times more than average), and long-term liquidity is too understated (only 8.48% at 120%). This suggests that the bank mainly works with short-term assets.

Further, the standards that characterize the risk. From the proposed graduation assessment of the standard limiting the maximum size of large credit risks, VTB, Gazprombank, FC Opening, MKB, Russia were in the "yellow" zone. The bank, most of all interested in large loans - AB Russia, its N7 ratio as of January 1, 2017 amounted to 497.24% (slightly more than half of the value set by the Central Bank).

The lowest standard is observed in Raiffeisenbank and Home Credit Bank. Almost all banks were in the "green" zone, that is, H10.1 is less than 3%, in fact, it is in fact less than 1%, in accordance with H10.1 (risk of lending to insiders) and H12 (acquisition of shares / participation interests in other companies) and H12 is less than 20%, except for three banks - VTB (23.65%), Promsvyazbank (20.87%) - they are in the border zone. Bank with the lowest risk for insiders was BM-Bank, in second place - VTB (0.03%), the third - RRDB (0.09%).

According to H12, Citibank are leading (they both had 0%, that is, they did not use their own capital to buy shares or shares in other organizations), then Raiffeisenbank (0.4%) and UniCredit Bank (0,41%). Consequently, all banks from the considered conduct a moderately risky policy, all values are within the norm.

The share of high-risk assets (with risk ratios from 110% to 1250% and loans for consumer purposes with risk ratios from 140% to 600%), specified in the Report on the level of capital adequacy to cover risks, the value of the RVTS and other assets. If they total less than 25% of assets with different risk factors, the bank is awarded a "green" zone, which characterizes it as the leading non-high-risk policy.

Dataset and Model Construction

Data on the Russian banking system can be imported from the following main sources:

a.   Internet resource of the Bank of Russia www.cbr.ru

b.   Analytical resources www.banki.ru and other

c.   Thomson Reuters, Thomson Reuters Laboratory, Department of Financial Markets and Banks, Financial University http://www.fa.ru/org/dep/frib/tr/Pages/Home.aspx

d.   Blumberg system

e.   Methodologies and data of Standard & Poor's and Fitch and Moody's

f.   Processing of economic data presented mainly in tabular forms, their visualization was carried out using the MATLAB ("Matrix Laboratory") toolkit - an online version and a licensed version available to the Financial University under the government of the Russian Federation.

EMPIRICAL RESULTS

Our empirical strategy is based on the analysis of the determinants of the growth of the activity of client-oriented banks and the broad use of the synergy effect of the components (main indicators) of financial stability, therefore, it is necessary to introduce not only variable data for the selected indicators in the financial model, but also to take into account their influence on the financial transparency and stability of banks different ranking groups.

An assessment of the financial stability of an individual credit institution is possible only on the basis of the results of a comparison with the average branch components of financial stability of banks belonging to the same financial model. The study substantiates the interrelation of such values as the overdue indebtedness of Russian banks, the size of the loan portfolio of Russian banks and the total foreign exchange earnings of the Russian Federation. The indicators characterizing the change in the volume of overdue debt of borrowers, the change in the aggregate loan portfolio, as well as the dynamics of the aggregate foreign exchange earnings are proposed.

Let's designate (Pi) the amount of overdue loan debt for ruble loans of legal entities and individual entrepreneurs in a month (i). Let's designate (K) the volume of the total ruble portfolio of credit institutions in a month i. In this case, the value of the month (i) varies from 01.07.2010 to 01.04.2016.

Let us consider the dependence (and its polynomial approximation) of the change in the difference of the growth shares $\Delta K_i = \dfrac{K_i - K_{i-6}}{K_{i-6}}$ and $\Delta P_i = \dfrac{P_i - P_{i-6}}{P_{i-6}}$. As for the case of overdue debt (Pi), ΔK_i it is an analogue of the derivative dependence. Let us consider the dependence and its polynomial approximation of a quantity $\Delta V_{i+1} = \dfrac{V_{i+1} - V_i}{V_i} 100\%$, that is an analog of the derivative of the value of the aggregate foreign exchange earnings Vi. The values Yi are shown in Table **5**.

Table 5:   Correlation between the Polynomial Approximation of the Value of Aggregate Foreign Exchange Earnings Entering the Russian Federation and the Polynomial Approximation of the Dynamics of Changes in the Loan Portfolio of Russian Banks

	2011 year	2012 year	2013 year	2014 year	2015 year	2016 year
Total revenues per year i V_i, billion rubles	517	524,7	527,3	497,6	343,4	375
Relative growth of income per year i+1 $\Delta V_{i+1} = \dfrac{V_{i+1} - V_i}{V_i} 100\%$		1,49%	0,50%	-5,63%	-30,99%	9,20%

Compiled by the authors.

The table shows the direct correlation established by the authors between the polynomial approximation of the value of the aggregate foreign exchange earnings entering the Russian Federation and the polynomial approximation of the dynamics of changes in the loan portfolio of Russian banks. The indicator of the difference in the dynamic indicator of the volume of overdue debt of borrowers to Russian banks and the dynamic indicator of changes in the aggregate loan portfolio of banks was introduced. It is shown that the polynomial approximation of this indicator has a direct correlation with the polynomial approximation of the dynamics of changes in the total foreign exchange earnings entering the Russian Federation.

Thus, the share of overdue debt is an indicator of the current state of the Russian economy, which in turn depends on the prices of hydrocarbon raw materials that determine the amount of foreign exchange earnings. This dependence reflects the raw material orientation of the Russian economy, which makes it possible to accurately predict the trend in the change in the volume of overdue debt, depending on the dynamics of the volume of aggregate foreign currency earnings

CONCLUDING REMARKS

The validity of hypothesis 1 is confirmed, according to which the financial stability of credit organizations and their ranking by the type of the chosen model becomes particularly important for customers of banks in the conditions of aggravation of competition in the market of banking services and the introduction of new technologies (in our example it is a client-oriented model).

The hypothesis 2 is also grounded in that the use of the financial model proposed by the authors of the assessment of the stability of banks 'activities raises the need for them to improve risk management and increase the transparency of their functioning, which will be the main argument for maintaining their clients' commitment to continuing deposit relations with the client-oriented credit institution, and increase market discipline.

Hypothesis 3 is confirmed in the fact that the assessment of financial stability of an individual credit organization is facilitated by comparison with the average branch components of financial stability of banks of the same ranking group.

The hypothesis 4 on the existence of a direct correlation between the polynomial approximation of the amount of aggregate foreign exchange earnings entering the Russian Federation and the polynomial approximation of the dynamics of changes in the loan portfolio of Russian banks is substantiated. The indicator of the difference in the dynamic indicator of the volume of overdue debt of borrowers to Russian banks and the dynamic indicator of changes in the aggregate loan portfolio of banks was introduced.

At the same time, the presented hypotheses, in our opinion, do not contain the whole complex of factors determining the financial stability of banks and affecting the behavior of their clients. Namely, the investigated factors do not take into account specific non-financial factors that have their own peculiarities in Russian credit organizations. This line of research will be reflected in our next article.

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