
Improving the Bank Reliability Evaluation Framework

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Abstract:

Due to recent insolvency, bankruptcy, rehabilitation, license withdrawals of commercial banks, and lack of proper deposit insurance framework, the significance of bank reliability (BR) evaluation framework' improvement rapidly increases. The paper reveals that the Russia's banking system needs further development of existing reliability evaluation frameworks.

BR evaluation framework consists in defining the basic criteria that effects the reliability in common. Legal entities as well as individuals are involved into banking system when being credited or committing a deposit, that's the reason why high reliability is relevant for all economic actors.

The paper reveals some features of adapting the conventional CAMELS reliability evaluation pattern to the Russian economics. A set of additions based on pros and cons of CAMELS is suggested. In addition to modified calculation terms, CAMELS framework is suggested to be adjusted via embedding into RiCAMELS framework considering the additional IT-equipment feature of iCAMELS. Herein RiCAMELS represents the embedding of iCAMELS into Russian economics and banking system. The paper highlights the so-called IT-index explaining the IT-equipment ratio from 0 to 100. Thus, RiCAMELS is considered to be an IT-oriented and Russian banking system-embedded CAMELS framework with an extra scale of reliability evaluation.

Keywords: Reliability; evaluation; capital; management; liquidity; assets; risk; iCAMELS; RiCAMELS.

JEL Classification Codes: F60, F63, O35, O44

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1. Introduction

Improving the bank's reliability evaluation in Russia is a task of current interest due to unsustainable commercial banks' activity conditions and rapidly increasing of the customers' and international partners' demands in quality and range of services that depends on the bank's IT-equipment. Due to recent insolvency, bankruptcy, rehabilitation, license withdrawals of commercial banks, and lack of proper deposit insurance framework, the significance of bank reliability evaluation framework' improvement rapidly increases.

Reliability evaluation consists in defining the basic criteria that effects the reliability in common. Legal entities as well as individuals are involved into banking system when being credited or committing a deposit, that's the reason why high reliability is relevant for all economic actors.

It's impossible to define "Bank reliability" now. Economic papers and books contain lots of BR definitions. Some states that BR is an ability of a bank to meet all the commitments with no delays. Others suggest BR to be a "probability of bank's activity compliance with the certain criteria within the certain time period. A. Kasyutin (2005) notes that BR is a certain state of bank, formed by a set of factors. Thus, identifying the factors is vital in evaluating the BR.

Russia's Federal laws "On the Central Bank of The Russian Federation" and "On Banks and Banking Activities" reveal the BR term in another way, namely via sustainability of banks and credit institutions without explanations. Moreover, both sustainability and reliability are considered equal, but the first one is suitable for the banking system in common whereas reliability is a definite bank's feature.

Taking all the specifics and terms into consideration we suggest the BR as following: the certain financial and economic state of bank to meet the investors and creditors' commitments.

The question of proper bank's capital evaluation is a crucial issue of banks and regulators. Banks usually underreport the capital rate to increase the profitability of assets, but regulators require increasing rates to reduce the risk of bankruptcy. This issue implies the bank capital adequacy evaluation as a BR indicator. Capital adequacy of the bank determines the trust level of customers and the state in the bank. Therefore bank should maintain the capital adequacy level to keep the banking system stable.

For years commercial banks have been trying to create the system of standards to estimate the capital adequacy level. Capital to deposits amount ratio was the first and the simplest way. The rate of 10% was established. Therefore the bank could cover only a tenth of deposits in the case of the mass outflow. Later the new

indicator of capital to assets ratio was established.

The average rate was considered at not less than 20%, and now this rate is below the norm. Current indicator allows estimating the total losses of the bank without affecting depositors.

Mostly banks develop their own measures and indicators that include, as a rule, the bank's activity in general and capital evaluation is only a stage of it. Capital evaluation frameworks are different in Russia and worldwide because of banking systems' distinctions.

When evaluating the financial status, Central Bank of Russian Federation applies the Decree №3277 "On the bank's financial sustainability evaluation framework". It's used mostly for the banks included into deposit insurance system. The Decree №2005-U "On financial analysis of banks" is applied to other banks.

However, the basic problem is that in Russia, in contrast to banking systems abroad, commercial banks are categorized on the basis of non-fulfillment of the Central Bank's standards. Banking systems abroad are based on expert evaluations of the BR milestones.

In Russia the popular balance sheet analysis method is not so efficient because balance sheet indicators do not provide enough sufficient data on the bank capital's value and adequacy.

2. Theoretical, Informational and Empirical, and Methodological Grounds of the Research

Russian banking system has a lack of optimal BR and capital evaluation framework. It is notably that Russian banking system is still emerging, thus it is highly important to develop both of the evaluation measures and systems, study and adopt foreign equivalents to Russian banking system and economics.

CAMELS (CAMEL) is one of the most convenient and easy-to-understand banks evaluation systems and was designed in 1978 by US Federal Reserve System. This system is used by regulators in most of the emerging countries to develop own frameworks of bank stability evaluation systems. However, in the 80s there were no questions about the role of IT and technical progress in development of the banking system just because it was not predictable.

CAMELS stands for:

- C – capital adequacy. Shows if the capital is adequate to protect the deposits.
- A – asset quality. Shows the degree of recovery focusing at the financial impact of the problem credits.
- M – management. Defines the quality of management based on the results of

bank's activity.

- E – earnings. Evaluates the efficiency of the bank's activity and the income adequacy level for further development.
- L – liquidity. Shows the bank liquidity in terms of meeting the commitments.
- S – sensitivity to risk. Shows the impact of market risks at the bank activity i.e: interest risk, currency risk, risk of loss.

Each of the components is evaluated on the scale from 1 to 5, and only then the conclusion is drawn.

We shall consider CAMELS by stages, starting with capital adequacy. Bank's capital adequacy is vital for banking activity. The higher capital adequacy ratio, the more likely saving the depositors' funds and surviving in crisis. Notably that Russia has a similar index. Central Bank of Russia has set H1 as capital adequacy ratio.

The structure of capital should be considered before calculating capital adequacy ratio. Aggregate capital includes basic (I level) and additional (II level) capital. The basic one includes authorized capital, share premium, reserve and other funds established by earnings from prior years. Additional capital includes revaluation from fixed assets, reserves for possible losses from loans and other debt instruments. The further step is calculating risk assets to compare with the bank capital. Risk assets enclose probability of losses. To calculate them we should subtract credit losses' reserve, cash funds, correspondent banks' nostro funds, securities, and repurchase agreements.

We consider that CAMELS framework should be adapted to the Russian banking system via modifying a set of coefficients and threshold, add new indicators and improve the bank capital evaluation system.

The first indicator to calculate is ratio of fixed capital to risk assets

$$D1 = \text{Fixed capital/Risk assets} * 100\%$$

The significance of this ratio is explained if the bank could cover risk assets with its own funds. The accuracy of the ratio is formed by risk assets whereas own funds are free of risk and not used for calculation purposes. The ratio should be resulted in more than 4%. We consider replacing the risk assets for total loan debt value.

$$D1 = \text{Fixed capital/Total loan debt} * 100\%$$

Normative value of the ratio should be compared with average outstanding credits in Russia. Averagely, the amount of outstanding credits is 10-15% for the past five years. Thus, the D1 value should be not less than 15%.

The second indicator we consider is D2 (capital adequacy). In CAMELS we compare the total capital with risk assets. The normative value is not less than 8%

$$D2 = \text{Total bank capital} / \text{Risk assets} * 100\%$$

All the assets are considered as risk assets there.

The next indicator is calculated as fixed capital to risk-adjusted assets and explains how the bank covers its assets with capital. The norm is not less than 10%.

$$D3 = \text{Fixed capital} / \text{Risk-adjusted assets} * 100\%$$

All the assets are considered as risk assets there.

$$D4 = \text{Total immobilized assets} / \text{Bank assets}$$

Total immobilized assets in Russian banking system include:

- net tangible assets;
- capital investments over the dedicated limits;
- overdue for loans over the reserve;
- extra funds of exceeding the financial support;
- reserve funds deposited at the Bank of Russia.

The indicator highlights the degree of bank funds' immobilization. The capital could be withdrawn from circulating and invested into building and past due debts.

It is a fact that sometimes immobilized assets exceed the capital causing disability of the capital to perform its primary function of being the guarantor of the investors' funds and other bank's liabilities.

D5 indicator highlights the ability of the bank to cover investors' funds with its capital.

$$D5 = \text{Bank capital} / \text{Investors' funds} * 100\%$$

The sixth index needs the bank assets to be divided into:

- liquid assets;
- low liquid assets;
- doubtful assets;
- bad assets.

The indicator shows the adequacy of the capital net of "low-quality" assets.

$$D6 = (\text{Bank capital} - \text{"low-quality" assets}) / \text{Bank assets}$$

The conclusion could be made only after calculating all these indicators. Capital adequacy is evaluated on a scale from 1 to 5.

- Score of 1 – strong capital. Explains the strength of the capital to the risk and doubtful assets.

- Score of 2 – sufficient capital. Explains the sufficient strength of the capital to the risk and doubtful assets.
- Score of 3 – moderate capital. The amount of the capital is not enough to cover the risk assets.
- Score of 4 – marginal capital. The amount of the capital is not enough. Net assets of the bank interfere with capital stock.
- Score of 5 – insufficient capital. The score is given only when risk assets are detrimental to the capital.

The basic feature of CAMELS is in the standardized approach in banks evaluation. Ratings for each indicator highlight the scope of its improving. Comprehensive score stresses the degree of intervention required by regulators.

We should note the disadvantage of CAMELS namely expert (subjective) scores, so the quality of the evaluation completely depends on the experts' skills. Some of the indicators could be calculated in absentia basing on the documents received by the Central Bank. Others need to be calculated directly in sight while inspecting. Supervisors consider bank capital as the primary source of deposits' guarantee. Banks with high-score capital could suffer losses without affecting the investors' funds.

Management is an inherent feature of CAMELS. Indicators of management are evaluated only after examining other values. Management evaluating starts from evaluating the "perfection" of the bank. Banks with high-score management should have adequate capital, sufficient assets, income, and liquidity. So, the CAMELS supervisors do not evaluate management until receiving other scores. It is highly important to evaluate management both on the management improving service's strategy and regulation authorities' basis. Strategy generates specific frames for banking activity key indicators such as loans, foreign currency, and liquidity. Management improving service coupled with authorities provides proper banking policy and strategy implementation.

Management indicators should be evaluated depending on the bank's fulfillment of regulatory norms and standards including timely reporting to the Central Bank.

Final stages of the evaluation include analysis of lower-level management to reveal the prospective top-management staff. Notably that banks with "good" liquidity rates should meet all the commitments without losses.

3. Results

Development of the banking culture should be the one of the most important features of Russian banks and banking activity in common.

We stress the set of problems such as:

- Increasing of bank managers' responsibility for the commitments
- Improving the transparency of banking activity
- Improving the culture and skills of managers and shareholders. It is important to avoid doubtful transactions leading to overestimation of financial state of banks.

Central Bank of Russia has prepared a set of standards to solve the problems we noted before. However we should note that no regulators' efforts would be effective without proper banking community support.

Obviously that CAMELS is not completely suitable for Russian banking system. Many of the indicators are calculated when analyzing the documents received by regulators. Russian banking system's framework makes such evaluation highly complicated.

Firstly, it is connected with lack of skillful expert services providing collection, compilation, and publishing of the data on commercial banks in Russia, like it is used to be in CAMELS' countries. Secondly, some of the international indicators could not be properly calculated for Russian banks.

First and foremost, we should highlight the importance of accepting the IFRS to evaluate the bank capital in a proper and more detailed way. Moreover, the Central Bank of Russia divides commercial banks into groups that are far different from CAMELS.

CAMELS include management quality, banking policy, standards' and laws' compliance indicators. Russian banks are not used to consider indicators noted before. Russian banking system should establish the National Evaluation Framework to analyze the financial activity of banks.

4. Conclusions and recommendations

We consider that classical CAMELS framework needs to be supplemented with actual data on features of particular banking system. In addition to basic indicators we noted before, CAMELS is suggested to transform into RiCAMELS framework, where iCAMELS complements the CAMELS with the IT-equipment ratio ("i" character), and RiCAMELS represents iCAMELS' adapting for Russian banking system ("r" character). We suggest maintaining IT-equipment scores and evaluate them from 0 to 100 at maximum IT-equipment level. Thus, RiCAMELS is an IT and Russian banking system-oriented CAMELS framework.

We consider IT there as a complex of methods of investigating, collecting, handling of data and its implementing in addition to methods and approaches of computers' application while collecting and handling the necessary data. IT are designed to meet the challenges of managing the data, labour, and resources flow in a most

efficient way. IT as a tool of improving the efficiency of banking activity should be implemented thoughtfully. Positive effect is obtained only when managers are stuck to the specific strategy. IT allows using the data on depositors' demands in a most efficient way. Today it is possible to automate almost every business process in the bank. IT could be introduced in following:

- 1) Front office of the bank
- 2) Back office of the bank
- 3) Bank's accounting dept.

Front offices are automated through:

- Keeping deposits, i.e. automating depositors accounts including non-cash and reporting transactions' service.
- Securities transactions, i.e. automating securities' purchase and sale transactions.
- Public payments, including analyzing and further classification for analytical reporting.
- Currency exchange transactions, including automation of calculating ratios, fees, rewards.
- E-money transfers. Automating e-transfers allows speeding up and making the transfer safer with additional notes to addressee.
- Internet-banking for convenient funds management remotely.
- SMS-banking.
- Call center. Automating the call center allows increasing the efficiency of the staff in addition to optimizing the customers and interdepartmental relations

Back office of the bank could be automated via:

- Custodial operations management. Automating of custodial operations stands for convenient monitoring and managing of transactions of individuals and legal entities.
- Credit operations management. IT there stand for maintaining credit contracts with individuals and legal entities.
- Maintaining management accounting including budgeting and financial responsibility centers' analyzing, and generating the management reporting according to various standards.

Accounting department.

IT allows complete automating of accounting and reporting operations of banks as well as providing security data.

CAMELS caused adopting IT as an objective need, since the development of the banking system is no longer possible without IT. For instance, 2016s IT expenditures of VTB24 totaled about 10 billion rubles and will be revised in 2017 at least at 10-20% higher. Moreover, VTB24 calculate IT-costs separately, which are at 2,5-3 billion rubles per year. Other Russian banks follow the similar way. IT tends

to increase in quality, security, transactions' speed along with introducing CAMELS.

We suggest a point system to evaluate the role of "i" in modified RiCAMELS framework. The highest score is 100, as we noted before:

0-20 points – IT are not introduced as required by staff and customers;

20-40 points – minimally acceptable level of IT application;

40-60 points – average level of IT application;

60-80 points – satisfactory (good and excellent) level of IT application;

80-100 points – the highest IT application level peculiar to world leading banks, which invest lots of funds into venture IT.

German Gref notes that IT level of Russian banks is less developed than foreign competitors' ones. IT points of development depend on macroeconomic, external, political, and other factors affecting the liquidity rates along with funds' outflow, low demand in mortgage services etc.

However, crisis is a "point of inflection" when searching for development opportunities. Thus, introducing RiCAMELS into Russian banking system should initiate positive changes like new opportunities for growth and development.

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