DEVELOPMENT AND APPLICATION OF METHODS OF DETERMINING COMBINED STANDARDIZED INDICATOR OF ASSESSMENT OF FINANCIAL CONDITION OF BANKING SECTOR IN THE REGION

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ABSTRACT

The present study aims to develop new methods for determining combined standardized indicator for assessment of financial condition of banking sector in the region at present time major transformations of structures, mergers and takeovers are taking place in banking sector of Russia under the supervision of the Central Bank of Russia. In these conditions, the development of assessment methods for both the banking sector of the entire state and the state and development of the banking sectors of the regions are taking on particular urgency. The current methods of analysing the banking sector have a number of shortcomings. The problems of assessing the financial condition of a credit institution have been developed further, but it is not always possible to assess the development of the banking system in the region or in the country's district using them.

The authors propose methods for determining the combined standardized indicator that allows us to compare the state of the banking sector of one region with similar indicators in other regions both on a certain date and in dynamics based on the accounting statements of credit institutions and can be used by regional authorities and supervisory bodies to monitor financial condition and sustainability of the regional banking sectors.

Keywords: Banking Sector, Standardization, Regional.

INTRODUCTION

Topicality

At present time major transformations of structures, mergers and takeovers are taking place in banking sector of Russia under the supervision of the Central Bank of Russia. In these conditions, the development of assessment methods for both the banking sector of the entire state and the state and development of the banking sectors of the regions are taking on particular urgency (Ilyasov, 2012). The current methods of analysing the banking sector have a number of

shortcomings. The problems of assessing the financial condition of a credit institution have been developed further, but it is not always possible to assess the development of the banking system in the region or in the country's district by using them. It is not always possible to build a rating model with the definition of the final standardized indicator taking into account the significance of financial performance indicators, which characterizes all aspects of banking organizations activity (Khorasani & Almasifard, 2017). Therefore, the problems of development of methods for the comprehensive assessment of the financial situation of the banking system of the region based on the combined normalized indicator are urgent.

The authors propose methods for determining the combined standardized indicator that allows us to compare the state of the banking sector of one region with similar indicators in other regions both on a certain date and in dynamics based on the accounting statements of credit institutions and can be used by regional authorities and supervisory bodies to monitor financial condition and sustainability of the regional banking sectors.

The Theoretical Basis for Research

The works of the following scientists and specialists are devoted to the problems of development of the banking system both at the state level and at the level of individual regions: Buryak, (2015); Ilyasov, (2012); Mukhanova & Naminova, (2016); Oveyan (2015); Sayadyan (2014); Filimonova (2017); Khromov (2013).

The assessment of the financial condition of the bank and its current problems are analysed in the works of Budasov (2016), Volkova (2016), Mikulyak & Haiduk (2014), Zharova (2014), Rudneva & Zaitseva (2015), Kazarenkova (2014), Melnikov (2016).

However, the problems of assessing the financial state of the banking system in the region have been understudied.

METHODS OF RESEARCH

In the process of research general scientific methods of cognition were used: Methods of induction and deduction, analysis and synthesis, classification and grouping, abstraction and observation.

RESULTS AND DISCUSSION

The essence of the developed methods for calculating the combined standardized indicator is that in the process of assessing the financial situation of the banking sector in the region, the following situations occur: The availability of different dimensions of indicators of credit institutions and the different importance or sufficiency of the indicators.

Proceeding from the above-stated problems, the solution based on linear transformation of outgoing indicators is offered. The essence of the method is that the calculation of the transformed not dimensioned indicators is determined based on the following formula:

$$K_i = \alpha_i K_i(x) + \beta_i \qquad (1)$$

where, β_i-constant coefficients values of which are determined depending on whether the specified indicators K_i are maximized or minimized (Mikulyak, 2014).

Substituting the values of α_i in the formula to determine the transformed indicator, we get:

$$K_i = K_i(x) \div K_i^* \qquad (2)$$

The resulting transformed indicator satisfies the requirements: Zero dimensions, the common origin of all indicators calculation, a single interval of variation.

To calculate the standardized indicators of the banking sectors development, we use the following formula:

$$K_{max} = \frac{K_{max} - K_i}{K_{max} - K_{min}} \qquad (3)$$

The state of the region banking sector is determined by the value of the normalized coefficient for the given region and is compared with the corresponding value of the normative aggregate coefficient reflecting the normative value for the regions belonging to the group of a stable, satisfactory, unsatisfactory and critical state.

The state of the region banking sector is considered stable if it is less (or equal to this value) than the value of the normative aggregate coefficient for a group of stable regions.

Let us consider the application of the method for determining the aggregate assessment based on the coefficients included in the system of criteria for monitoring the stability of the banking sector in the example of the regions of the Volga Federal District.

There were 14 regions in the Volga Federal District in 2015 (Ilyasov, 2012).

Let us introduce the indicators of the development of the banking sectors of the Volga Federal District as follows. Number of operating credit institutions (KO)-K1; Number of branches of operating KO (CI–credit institutions) -K2; Grouping of KO(CI) by the amount of registered authorized capital (from 60 to 150 million roubles.) -K3; Grouping of KO(CI) by the amount of the registered authorized capital (from 150 to 300 million roubles.) -K4; Grouping of KO(CI) by the amount of registered authorized capital (from 300 to 500 million roubles) -K5; The grouping of KO(CI) by the amount of registered authorized capital (from 500 to 1 billion roubles) -K6; Grouping of KO(CI) by the amount of registered authorized capital (from 1 to 10 billion roubles) -K7; The volume (of investments) of deposits of individuals in roubles and foreign currency attracted by KO(CI) -K8; The volume of deposits of legal entities in roubles and foreign currency attracted by KO(CI)-K9; The funds of enterprises, organizations, institutions (state, non-state, in the accounts of organizations that are on the estimated financing of banks, on the accounts of non-residents, as well as on customers' accounts in precious metals) in accounts of credit institutions -K10; Budget funds in the accounts of the KO(CI) (federal, subjects of the federation and local budgets, other budgetary funds of non-budget funds, based on the place of raising funds) -K11; The volume of issued deposit and savings certificates and bonds is K12; Funds of natural and legal persons attracted through promissory notes issuance-K13; The amount of debt owed to CI RF by natural persons-K14; The amount of debt owed to CI RF by legal persons and individual entrepreneurs is K15; The amount of debt owed to CI RF by natural persons for the purchase of a housing is K16; The amount of debt owed to CI RF by natural persons for the purchase of housing in the form of mortgage housing loans-K17; The volume of loans issued to legal persons and individual entrepreneurs is K18; The volume of loans provided to natural persons is K19; The volume of loans provided to natural persons for the purchase of housing is K20; The volume of loans provided to natural persons for the purchase of housing in

the form of mortgage housing loans-K21; Data on the amounts of bills recorded by bond credit institutions-K22; The volume of investments of CI in securities (debt obligations, shares, participation in subsidiaries and dependent companies, etc.) -K23; Financial performance of the operating KO(CI) profit (+), losses (-) -K24 (Yashina, 2016).

To determine the type of financial condition of a region and classify it as a type with a stable and unstable financial condition, it is important to establish normative indicators for all twenty-four coefficients that characterize the financial state of regions by the groups of capital assessment, assets, profitability and liquidity. Undoubtedly, in most methods the specified standards are given.

We propose to establish normative on the basis of the most successfully developing and efficiently operating banks, based on the groups of credit organizations formed on the territorial principle (Yashina, 2016).

As an important characteristic of successfully developing and efficiently operating banks, we propose to use the aggregate index of availability of banking services (Ohorodova, 2016).

Table 1 shows the final normalized indicators of the regions of the Volga Federal District for the year 2015.

Summation of all standardized indicators determines the final aggregate standardized indicator that reflects the entire range of activities of financial organizations and characterizes the effectiveness of management of the banking sector in the Volga Federal District (Yashina, 2016).

Table 2 presents the normalized indicators that characterize the state of the banking sector in the regions of the Volga Federal District, calculated according to the proposed methods.

Table 1 THE FINAL INDICATORS OF THE DEVELOPMENT OF THE BANKING SECTORS OF THE VOLGA FEDERAL DISTRICT IN 2015			
No.	Name of region	The final indicators of the development of the banking sectors of regions	Point
1	Nizhny Novgorod oblast	13.89	3
2	Republic of Bashkortostan	14.21	4
3	Mari El Republic	19.81	14
4	The Republic of Mordovia	19.03	11
5	Republic of Tatarstan	6.35	1
6	Udmurt republic	18.79	8
7	Chuvash Republic - Chuvashia	18.81	9
8	Perm oblast	17.12	7
9	Kirov oblast	18.94	10
10	Orenburg oblast	16.56	5
11	Penza oblast	19.59	13
12	Samara oblast	10.48	2
13	Saratov oblast	16.65	6
14	Ulyanovsk oblast	19.05	12
15	The average normative H15	16.45	-

Table 2 — STANDARDIZED INDICATORS FOR THE DEVELOPMENT OF BANKING SECTORS IN THE REGIONS OF THE VOLGA FEDERAL DISTRICT FOR 2015																							
VFD regions (oblasts)	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K14	K15	K16	K17	K18	K19	K20	K21	K22	K23	K24
Nizhny Novgorod oblast	0.55	0.88	0	0.77	0.20	1	0.77	0.19	0.60	0.41	0.99	0.82	0.74	0.53	0.85	0.85	0	0.34	0.40	0.39	0.19	0.77	0.82
Republic of Bashkortostan	0.55	1	0.33	0.88	0	0.33	0.88	0.37	0.14	0.63	0.90	0.89	0.98	0.51	0.96	0.87	0.22	0.10	0.14	0.19	0.77	0.88	0.90
Mari El Republic	0.95	0.92	1	1	1	1	1	1	1	1	1	0.99	0	0	0	0	1	1	1	1	0.98	1	0.99
The Republic of Mordovia	0.86	0.98	1	0.88	0.40	1	1	0.97	0.99	0.98	0.98	1	0.02	0.08	0.02	0.01	0.97	0.99	0.98	0.98	0.97	0.99	0.98
Republic of Tatarstan	0	0	0.33	0.22	0.80	0.33	0	0.04	0	0	0	0.03	1	1	1	0.99	0	0.13	0	0	0	0	0.48
Udmurt republic	0.96	1	1	1	0.60	1	1	0.83	0.92	0.86	0.99	0.94	0.28	0.04	0.39	0.33	0.91	0.78	0.70	0.70	0.67	0.96	0.96
Chuvash Republic - Chuvashia	0.86	1	0.66	0.77	0.80	1	1	0.89	0.94	0.95	0.99	0.96	0.15	0.11	0.24	0.26	0.95	0.87	0.78	0.78	0.89	0.99	0.99
Perm oblast	0.82	1	0.66	0.88	1	1	0.77	0.43	0.69	0.52	0.99	0.84	0.81	0.59	0.94	0.88	0.52	0.29	0.36	0.35	0.94	0.89	0.95
Kirov oblast	0.91	1	1	1		0.66	0.88	0.85	0.97	0.94	0.99	0.97	0.16	0.02	0.16	0.14	0.96	0.86	0.81	0.82	0.99	0.94	0.92
Orenburg oblast	0.69	1	0	0.88	1	0.33	0.77	0.73	0.91	0.87	0.99	0.99	0.44	0.15	0.43	0.45	0.86	0.57	0.63	0.63	0.47	0.89	0.93
Penza oblast	1	1	1	0.88	1	1	1	0.85	0.98	0.93	0.99	1	0.14	0.03	0.10	0.08	0.98	0.88	0.89	0.90	0.99	0.99	1
Samara oblast	0.14	0.88	0	0	1	0	0.55	0	0.59	0.44	0.99	0	0.92	0.52	0.96	1	0.27	0	0.23	0.22	0.61	0.47	0
Saratov oblast	0.64	0.68	0.33	0.66	0.40	1	1	0.56	0.91	0.79	1	0.97	0.43	0.15	0.37	0.39	0.74	0.63	0.66	0.66	0.97	0.96	0.78
Ulyanovsk oblast	0.91	0.96	0.66	0.77	1	1	1	0.86	0.99	0.93	0.99	0.99	0.23	0.06	0.21	0.21	0.90	0.84	0.78	0.79	1	0.99	0.99
The average normative H15	0.70	0.88	0.57	0.76	0.73	0.76	0.83	0.61	0.76	0.73	0.91	0.81	0.45	0.27	0.47	0.46	0.66	0.59	0.60	0.60	0.75	0.84	0.84

CONCLUSION

The financial indicators of the VFD regions condition, presented in Table 2, indicate that in 2015 the following four regions had a stable financial condition: Republic of Tatarstan, Samara oblast, Nizhny Novgorod oblast, Republic of Bashkortostan.

The following regions had unstable financial condition following the results of financial activities: Republic of Mari El, Republic of Mordovia, Udmurt Republic, Chuvash Republic - Chuvashia, Perm region, Kirov oblast, Orenburg oblast, Penza oblast, Saratov oblast, Ulyanovsk oblast.

The methods proposed by the authors can be used to compare the specific condition of the banking sector of one region with similar indicators of other regions both on a certain date and in dynamics on the basis of accountant statements of credit institutions and can also be used by regional authorities, as well as supervisor authorities to monitor the financial condition and the sustainability of the regional banking sectors.

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