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**ROLE OF FINANCIAL AND CREDIT INSTITUTIONS IN THE
REGIONAL ECONOMIC DEVELOPMENT**

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Abstract

The issue of the role of the financial and credit services occupies one of the central positions in economic studies. The need to achieve the present-day goals of socioeconomic development of the regions in the context of the increasing financial restraints determine the need to form a financial structure with the purpose of creating the necessary background for stable economic dynamics. This paper analyzes the main provisions that concern the interrelation of financial indicators and economic growth, and summarizes the results of the empirical studies of the role of financial and credit institutions in regional economies through the example of the subjects of the Volga Federal District. The effect of the activity of financial and credit institutions on the economic growth of regions was analyzed using a group of indicators. The studies revealed a significant positive connection between the functioning of the financial institutions and the regions' economic development through the distribution of resources and the implementation of the function of financial intermediation. However, the phenomenon of inhomogeneity of the regions' financial development limits the access of financial subjects to free liquid capital and leads to the state of "financial repression", suppression, and retardation of the economic growth. Altogether, the mechanism of generating changes and transferring the impulses to the economy, ensured by the financial service sector, and the nature of the factors that determine the development of the financial sector itself, continue to be highly topical for research.

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1. Introduction

Resolution of the socioeconomic issues of the development of a country, whose power structure and economy provide for regional division, depends immediately on its regions because it is there that a significant economic potential is concentrated. The foundation of the Russian Federation as a federated state is constituted by the regional economic structure and the economic base of its subjects, whose levels of maturity and development vary significantly in terms of investment and enterprise activity, as well as production and other components of the economic potential.

Western science, within the framework of the accumulation of capital designed by (Hicks, 1969) pays significant attention to the role of the financial and particularly the banking sector in stimulating economic development, which manifests in the "availability of liquid capital" through specific functions of credit institutions that mobilize and efficiently allocate temporarily free resources and generate positive accompanying effects (Alekseev, 2009). The rate of economic growth and level of development of financial institutions are interconnected and interdependent (Ajupov, 2013). Correspondingly, the regional development of the financial infrastructure is relevant for the country with significant territory within its national borders and acts as a factor of economic security, ensuring not only the conditions for centralized redistribution but also the market-based accumulation of sufficient financial resources for extended reproduction and development of economic subjects in the regions. The availability of a stable and fully functional system of financial and credit institutions that are actively involved in extended reproduction in the regions is highly important in the modern context.

2. Problem Statement

The distinction of the model of development of Russia's financial market is the domination of the banking service market as a basic sector of the financial infrastructure and a high concentration of credit organization in the European part of the country. The share of regional banks decreases annually and the network of branches of banks from other towns, whose activities in the regions are aimed at the interests of the head office, grows steadily, which often leads to flight of financial resources from the regions. This circumstance does not allow to fully engage the financial and credit mechanisms of stimulating economic growth in the regions. The dynamics of the total number of banks operating in Russia broken down by federal districts (FDs) is shown in Table 01.

Table 01. Number of active banks by regions

Number of active banks by regions	Number of banks, units				Share of banks, %
	2014	2015	2016	2017	2017
Central FD	504	434	358	319	56.9
Northwestern FD	64	60	49	43	7.7
Southern FD	43	37	38	35	6.2
North Caucasian FD	28	22	17	17	3.0
Volga FD	92	85	77	71	12.7
Ural FD	35	32	29	26	4.6
Siberian FD	44	41	37	32	5.7
Far Eastern FD	22	17	18	18	3.2
Crimean FD (part of Southern FD since 2017)	2	5	-	-	-

The data from Table 01 show the high degree of concentration of banks in the Central FD, which houses over 56% of all active banks. More than 49% of banks are registered and have a head office in Moscow, where the highest degree of availability of credit services to the population is observed: one bank per each 44.4 thousand people (Zlyvko, 2012). Accordingly, the degree of availability of banking services to the population in Moscow is 2.5-3 times higher than the average in the other regions of Russia (Ajupov, Kurmanova & Abelguzin, 2016). The demand for the services of the regional bank network is upheld by the insufficient number of financial intermediaries. The development of non-bank credit institutions in the regions is insufficient and has a steady declining trend.

3. Research Questions

Financial cooperation among credit institutions conveys an added stimulating impulse to economic development, including that through the efficient redistribution of capital. The studies by Bayoumi and Melander (2008) showed that the decrease in the level of business loans by 2.5% leads to the 1.5% decrease in gross domestic product.

The main indicator of the regional statistics used to analyze the condition and dynamics of the development of the regional economy, its industry structure, and the role of individual regions in the economy of the country is the gross regional product (GRP). This indicator characterizes the level of economic development and the results of the activities of all business entities and financial and credit institutions in the region. When implementing the programs of social and economic development of the regions, the key issue is attracting and the efficient use of investments, the increase in which has a multiplying effect on the growth of the regional product. In order to increase the GRP, various investment sources are engaged, including borrowed funds from the financial market. The main intermediaries in this process are financial and credit institutions.

Table 02 provides the structure of the sources of investments in the fixed capital from the regional point of view in the Volga Federal District (VFD) as a whole and by its separate subjects.

Table 02. Structure of investments in fixed capital by source (average value during 2015-2017), %

Region	Owner's funds	Attracted funds	Among them:	
			Credits From banks	Treasury Funds
Republic of Tatarstan	59.6	40.4	13.9	13.7
Republic of Bashkortostan	55.7	44.3	15.6	14.9
Samara Oblast	55.4	44.6	11.9	10.9
Nizhny Novgorod Oblast	49.2	50.8	14.5	16.6
Perm Krai	65.4	34.6	8.9	8.7
Udmurt Republic	53.9	46.1	5.1	20.9
Ulyanovsk Oblast	38.1	61.9	10.4	16.5
VFD	53.6	46.4	12.8	13.8

In general across the VFD, the main sources of investment funding of the fixed capital are owner's equity (53.6%), the share of outside funding is 46.4 %, including 12.8% of bank loans and 13.8% of treasury funding. The highest concentration of equity as a source of investment is observed in the economy of Perm Krai (65.4%) and the lowest is seen in the economy of Ulyanovsk Oblast (38.1%). The share of bank loans

in the total volume of investment funding of the fixed capital in average across the VFD is 12.8%. Whereas the shares of a credit sources range from 5.1% to 15.6%. According to the Concept of Long-Term Social and Economic Development of the Russian Federation through to 2020, the share of banks in the sources of investment to the fixed capital should reach 20-25% by 2020, which is a rather complicated task given that the share of investment credits in the total volume of loans issued by banks has a stable downward trend.

4. Purpose of the Study

The purpose of this study is to assess the role of financial and credit institutions in the socioeconomic development of the regions, which would allow to develop recommendations for the expansion of forms, methods, and directions of the region's cooperation with financial and credit institutions for the benefit of ensuring the economic growth.

5. Research Methods

In order to assess the interconnections between the level of development of financial and credit institutions and the rate of economic growth at the regional level, this research employed correlation and regression models where the resulting indicators are the gross regional product and certain factor indicators, which can be attributed to the indicators of the activity of financial and credit institutions. The following variables were selected as the most representative financial indicators: volumes of lending to business entities and businesses and individuals, volumes of attracting investment funds from the population and business entities (deposits), investments into fixed capital per capita, etc. The scope of the study included individual subjects of the Volga Federal District (VFD).

6. Findings

The interaction between the banking and real economy sectors is manifested, above all, in the process of lending. The data from Table 03 indicates the presence of a strategically significant high degree of connection between the GRP dynamics and the level of lending. The average correlation coefficient across the VFD is 0.931. At the individual subject level, the correlation coefficients vary in the range between the high and very high positive connection. However, for Ulyanovsk Oblast, the value of the correlation coefficient does not exceed 0.3, which signals the weak connection of the economic growth values and financial indicators. In essence, bank lending in this region acts as an auxiliary mechanism for reproduction. The minimization of its influence is related to the insufficient development of the sector of financial services.

Table 03. Correlation between GRP and the indicators of lending to business and population

	Debt on loans issued by credit organizations to legal entities and population	
	Determination coefficient (R)	Correlation coefficient (r)
Republic of Tatarstan	0.999	0.998
Republic of Bashkortostan	0.738	0.859
Samara Oblast	0.986	0.993
Nizhny Novgorod Oblast	0.615	0.784
Perm Krai	0.857	0.735
Udmurt Republic	0.949	0.974
Ulyanovsk Oblast	0.072	0.268
VFD	0.866	0.931

According to the parameters of the regression equations, the growth of commercial banks' credit resources by attracting funds from the population and organizations facilitates the growth of GRP of the subjects of the Volga Federal District, where a direct and substantially high degree of connection is observed (Table 04).

Table 04. Correlation of GRP and attracted credit resource indicators

Region	Investments (deposits) by individuals attracted by credit organizations		Deposits from businesses attracted by credit organizations	
	Determination coefficient (R)	Correlation coefficient (r)	Determination coefficient (R)	Correlation coefficient (r)
Republic of Tatarstan	0.930	0.964	0.958	0.979
Republic of Bashkortostan	0.722	0.850	0.794	0.891
Samara Oblast	0.875	0.935	0.967	0.983
Nizhny Novgorod Oblast	0.779	0.882	0.786	0.887
Perm Krai	0.827	0.909	0.494	0.703
Udmurt Republic	0.843	0.918	0.832	0.912
Ulyanovsk Oblast	0.914	0.956	0.943	0.890
VFD	0.856	0.925	0.974	0.987

As it is known, the main source of the bank sector's credit resources are deposits from the population and the funds on organizations accounts, including deposits. Taking into account the role of loans in economic development, one can only admit that the positive dynamics of attracting credit resources is an important component of regional growth. The positive trend in the increase of average deposit values by individuals in the regions indicates the increase in people's well-being and lays the foundation for the further increase of the level of consumption, which signalizes the significance of this indicator of regional economic growth. The analysis of per capita income of the population and individual deposit dynamics shows the high degree of correlation dependence between these indicators in all regions, which allows one to state the increase of the population's inclination towards savings (Table 05). The excess of the population's income over expenses determines the savings potential, which, in turn, affects the amount of funds attracted by banks. Regardless of the fact that the return on bank deposits does not exceed the inflation, such deposits remain a popular investment instrument among Russia's population.

Table 05. Correlation between per capita income and the indicators of attracting the population's savings to deposits

Region	Investments (deposits) from population attracted by banks	
	Determination coefficient (R)	Correlation coefficient (r)
Republic of Tatarstan	0.751	0.867
Republic of Bashkortostan	0.807	0.898
Samara Oblast	0.593	0.770
Nizhny Novgorod Oblast	0.819	0.905
Perm Krai	0.953	0.976
Udmurt Republic	0.885	0.941
Ulyanovsk Oblast	0.611	0.781
VFD	0.862	0.928

Further research identified the degree of dependence between the investments in fixed capital per capita of the population and such indicators as deposits from individuals attracted by credit organizations and debt on loans issued to organizations and the population (Table 06).

Table 06. Correlation between investments to fixed capital per capita and indicators of financial and credit institutions' activity

Region	Investments from the population attracted by credit organizations		Loans issued to enterprises and the population	
	Determination coefficient (R)	Correlation coefficient (r)	Determination coefficient (R)	Correlation coefficient (r)
Republic of Tatarstan	0.999	1.00	0.922	0.960
Republic of Bashkortostan	0.951	0.975	0.416	0.645
Samara Oblast	0.067	0.259	0.459	0.678
Nizhny Novgorod Oblast	0.995	-0.997	0.110	-0.331
Perm Krai	0.025	0.157	0.526	-0.726
Udmurt Republic	0.335	-0.579	0.000	0.018
Ulyanovsk Oblast	0.999	0.999	0.004	-0.063
VFD	0.795	0.891	0.917	0.957

In the considered regions, no regularities of the connection between the aggregated indicators of investment in the fixed capital and the amounts of loans issued and deposits attracted are observed. It is important to take into account that credit organizations from other regions don't always rush to invest in the economy of the regions where there are active operations to attract the population to invest in deposits. In fact, loan financing is aimed at funding the population's "delayed" consumption and current operational activity of businesses, particularly the replenishment of the circulating assets. The volumes of financial investments of medium and large enterprises substantially exceed the volumes of investment in fixed capital. The role of bank loans in the process of investment remains insignificant in certain regions. Furthermore, it is necessary to note the downward dynamics of investment lending by banks to Russian real economy enterprises. Considering this fact, the existence of the reverse correlation is quite logical.

The trivial "pumping" of the economy with credit funds has a sufficiently low efficiency from the point of view of its effect on increasing the GRP (Lucas, 1988). Consequently, the activation of the stimulating role of financial and credit institutions implies not only increasing the total volume of loans to

the regional economy but also refocusing the credit resources towards the investment goals of development and expansion of production and improving the efficiency of direct investments.

Further research concerned the activity of insurance companies and their influence on the regional development indicators. In recent years, the Russian market of insurance services was characterized by a decrease in the number of insurance organizations as a result of their licenses being revoked due to insufficient capitalization and identification of unethical insurance organizations, as well as mergers and acquisitions in the insurance market.

According to Table 07, four regions (the Republic of Tatarstan, the Republic of Bashkortostan, Perm Krai, and Ulyanovsk Oblast) out of seven observed ones display a high correlation dependency between the GRP and the amounts of insurance premiums and compensations. The remaining regions (Samara Oblast, Nizhny Novgorod Oblast, and the Udmurt Republic) show a reverse connection.

Table 07. Correlation of GRP and insurance company activity indicators

Region	Insurance premiums		Insurance compensations	
	Determination coefficient (R)	Correlation coefficient (r)	Determination coefficient (R)	Correlation coefficient (r)
Republic of Tatarstan	0.781	0.884	0.995	0.991
Republic of Bashkortostan	1.00	1.00	0.764	0.874
Samara Oblast	0.60	-0.775	0.006	-0.079
Nizhny Novgorod Oblast	0.917	-0.958	0.957	-0.978
Perm Krai	0.920	0.959	0.996	0.993
Udmurt Republic	0.637	-0.798	0.781	-0.884
Ulyanovsk Oblast	0.957	0.978	0.904	0.951
VFD	0.173	-0.416	0.131	0.362

It is obvious that the more developed and economically prosperous a region is, the more is the amount of insurance premiums received by the insurers. The difference in the share of insurance in a region's gross regional product characterizes the uneven rates of the development of the regions' insurance sector and economy. Official statistics of the assessment of the regional insurance market are drawn up as a sum of indicators of the insurance companies, whose head office is located outside the regions. Since the largest branch networks are owned by Moscow-based companies, a significant part of the money collected in the regions is statistically attributed to the Central Federal District. The share of insurance premiums collected in certain regions in the total volume of the premiums collected by Moscow-based companies can vary from 20 to 90%.

To provide a complex assessment of the level of development of financial and credit institutions, an aggregated indicator was proposed, called the "Index of development of the regional financial services sector" (IDRFSS), which represents the arithmetic mean of the sum of five specific values, whose contribution in the formation of the total index is considered to be equal. The ranking of ten regions of the Ural and Volga Districts according to this indicator is shown in Table 08.

Table 08. Index of development of the regional financial services, %

Region	Ratio of the indicator in rubles across the regional bank sector to the total indicator of the region's banking sector, %					IDRFSS
	Credits to enterprises	Credits to population	Funds on business accounts	Deposits from businesses	Deposits from population	
Republic of Tatarstan	50.60	67.08	72.44	85.18	58.70	66.80
Sverdlovsk Oblast	24.48	69.14	36.51	82.01	50.60	52.55
Samara Oblast	4.42	10.36	28.90	67.23	25.50	27.28
Chelyabinsk Oblast	12.03	20.27	33.28	19.26	22.87	21.54
Orenburg Oblast	12.98	20.53	25.69	31.21	16.38	21.36
Udmurt Republic	7.61	35.43	21.04	5.00	25.47	18.91
Nizhny Novgorod Oblast	6.79	6.59	13.94	9.20	12.81	9.87
Republic of Bashkortostan	6.72	2.93	7.55	15.19	12.02	8.88
Perm Krai	5.16	8.88	6.95	9.27	6.36	7.32
Ulyanovsk Oblast	5.18	1.82	4.47	5.57	4.56	4.32

For the purposes of assessing the level of social and economic development of the region, the indicator called the "Index of social and economic development of the region" (ISEDR) was calculated, which represents the aggregated indicator including the main data for ten equivalent key indicators of socioeconomic development: 1) gross regional product per capita; 2) fixed capital investment per capita; 3) per capita income of the population per month; 4) monthly average nominal salary of the population; 5) population employment rate; 6) return of taxes, tariffs, and other mandatory payments to the treasury per capita; 7) central funds in the economy; 8) retail turnover per capita; 9) total residential area, per capita average; 10) number of students enrolled in higher education institutions per 10,000 of population. The priority is given to the specific indicators that characterize the efficiency of development in the best way (Table 09). The ISEDR shows that "approximated" rank that a region of Russia holds according to its social and economic indicators.

Table 09. Index of social and economic development of the region (ISEDR)

Region	Rank held by the region according to its social and economic indicators										ISEDR
	1	2	3	4	5	6	7	8	9	10	
Republic of Tatarstan	14	10	17	30	12	15	8	13	36	7	16.2
Sverdlovsk Oblast	20	33	14	26	30	33	6	4	44	27	23.7
Samara Oblast	25	25	27	40	10	17	13	24	41	17	23.9
Chelyabinsk Oblast	44	50	47	29	29	36	15	51	42	23	36.6
Orenburg Oblast	24	29	57	53	43	13	24	57	45	48	39.3
Udmurt Republic	42	61	48	52	11	18	41	59	70	21	42.3
Nizhny Novgorod Oblast	35	40	21	43	17	32	17	20	28	33	28.6
Republic of Bashkortostan	36	34	26	45	54	30	18	18	49	39	34.9
Perm Krai	23	30	18	31	65	20	9	26	65	50	33.7
Ulyanovsk Oblast	60	38	56	62	48	47	57	64	28	28	48.8

To confirm the hypothesis that the level of development of the financial infrastructure influences To confirm the hypothesis that the level of development of the financial infrastructure influences the level of

social and economic development of regions, a (linear) mathematical statistical model was built that characterizes the interconnection between the Index of social and economic development of the region (ISEDR) and the Index of development of the regional financial services sector (IDRFSS).

$Y=41.47-0.36X$, where Y is the Index of social and economic development of the region (ISEDR); X is the Index of development of the regional financial services sector (IDRFSS).

The statistical characteristics of the model indicate that its significance level is acceptable and it can be used to forecast the level of a region's social and economic development because the correlation coefficient is 0.68; the degree of accuracy of the model's description of a process R-squared is 0.68, which means that the model's credibility is 68%; the confidence probability is 0.95; the credibility according to the level of significance of the F-test (significance $F=0.01058$) is significantly below 0.5 and, consequently, the model is significant.

7. Conclusion

This way, the stimulating effect of financial and credit institutions on the dynamics of economic growth is confirmed by the statistically substantial correlation of the parameters based not the performed empirical studies. This assertion is also confirmed by the statistical quality of the models. That said, the results of the research require a prudent and cautious interpretation from the perspective of the optimal level of credit funding correlated with the value of the GRP since the uncontrolled increase of investment in financing the current needs of the population and business entities at the expense of the investment projects for development can generate risks for the macroeconomic stability in the long term. The interaction between financial and credit institutions and the real economy should be viewed through the lens of the concept of development, distinguishing between the participation of financial institutions in the "everyday business circulation" that implies monetary mediation of the conventional business processes and the "process of development" that requires the activation of the market financing of investments (Schumpeter, 1992).

A region with a developed financial and credit infrastructure in terms of the inter-regional movement of capital in different periods of time can be both a "donor" and a "recipient", but, in any case, it turns out to be in a more stable economic situation, which determines the region's economic system's capability for growth. Accordingly, the economic development of the regions with an insufficient degree of availability of financial services to the subjects of the economy that are experiencing a severe shortage of capital will enter the state of the so-called "financial repression" (Lucas, 1988), the suppression and retardation of economic growth. In this regard, a better mechanism of financial intermediation can be built through increasing the quality and availability of financial services, creating legal and infrastructure conditions for organizing a country-wide network of financial institutions that would ensure the homogeneity and equal access to the financial space and "the opportunity to obtain the necessary liquid funds" (Sharpe, 1964; Yusupov, Yangirov, Akhunov, & Toktamysheva, 2014); and substantially increasing the assets on non-bank financial institutions of the level of coverage of economic risks with insurance from the current 10-15% to 50-60%.

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