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PUBLIC-PRIVATE PARTNERSHIP AS A FACTOR OF EFFECTIVENESS OF INTERACTION BETWEEN THE BANKING AND REAL ECONOMY SECTORS OF THE REGION

Liliana R. Ikhsanova*, Adelya R. Garipova

¹Department of Banking Business, Kazan Federal University, RUSSIA

ABSTRACT

The purpose of this study is to substantiate the need of use of public-private partnership (PPP) in the interaction of banking and real sectors of the economy, especially when financing the capital-intensive infrastructure projects, or low-profit economic sectors (health care, culture). The authors' position is founded on the results of the analysis of development indicators of the Republic of Tatarstan (RT), carried out under the conditions of gradual adaptation to modern economic trends. On the basis of economic and mathematical modeling, the positive influence of factors (investments in fixed capital and gross regional product) for lending to real sector of the Republic of Tatarstan was proved in the study. The volume of loans to real sector of the economy was forecasted up to 2020, taking into account three variants of development (pessimistic, optimistic, baseline). To ensure the sustainable development of the regions, and effective functioning of regional market of banking capital, it is necessary to study the regional differences in the structure of production, the investment attractiveness of the region, and simultaneous formation of a complex of macroeconomic conditions, including the deployment of a system of active development institutions, primarily banking, as well as public-private partnership.

INTRODUCTION

The need to increase the participation of banks in the dynamic development of the region follows from the interdependence of successful development of banking system and the economy as a whole. On the one hand, commercial banks are interested in a stable economic environment, which is necessary condition for their activities. On the other hand, the stability of economic development largely depends on the degree of soundness and elasticity of banking system, its effective functioning. At the same time, since the interests of an individual bank as a commercial entity, are oriented toward maximizing profits at an acceptable level of risk, the participation of banks in financing the economy is carried out only if there are favorable conditions.

Russian and foreign experts examined various aspects of interaction between the banking and real sectors of the economy at the regional level. In the process of searching the ways to improve the effectiveness of this interaction, special attention was paid to public-private partnerships in financing the real sector of the economy.

Some researchers, based on the study of regional and sectoral structure of interaction between banking and real sectors of the economy, believe that the decrease in the quality and intensity of interaction between the banking and real sectors of the economy is due to the inaccessibility and inadequacy of bank resources to the needs of regional economy subjects, as a consequence of total growth of financial and economic risks (Rakhmetova A.M. (2015)). At the same time, state intervention in the relationship between banking and real sectors of the economy, without complex stimulation of private initiative of the subjects from both sectors, has a short-term post-crisis effect. It is not effective from the point of view of simultaneous achievement of internal and external interaction effects [1].

The researchers paid special attention to the prospects of public-private financing of infrastructure projects, which are capital intensive and very important for the development of the region (Protopapas et al. (2012)) [2, 3]. The interrelation between infrastructure financing and increase in the efficiency of regions was revealed in the studies. Thus, according to the investigations of P. Arbués, J.F. Baños & M. Mayor (2015), the direct impact of transport infrastructure on the economy of the region is manifested through the following factors: employment growth in the construction sector during the period of infrastructure formation, reduction in fuel consumption, saving of time. Herewith, the indirect impact includes: increase in the productivity of regional economy, optimization of companies' location, gain in the efficiency of household activities [4].

In comparison with 2015, the rate of development of Russian market of PPP projects in 2016, in quantitative terms, was equal to 124.5%. In 2016, there was also a positive dynamics in the growth of PPP projects market in monetary terms. The adverse trend of 2015 on the negative dynamics of private investments attraction in infrastructure projects was reversed. Mildly speaking, it can be said about overcoming the negative factors of the post-crisis period, influencing the market of PPP projects in 2015 [5]. The data on the dynamics of PPP projects number for the period 2013-2016 indicate a positive trend of growth, especially in 2016, when the growth rate amounted to 150.06%, compared to 2013. The main reason for many organizations to participate in PPP was the increasing need in services, primarily in those branches, which are capital-intensive and low-profitable.

KEY WORDS

public-private partnership, interaction of banking and real sectors of the economy, the Republic of

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*Corresponding Author

Email:
liliana19@mail.ru

METHODS

The Republic of Tatarstan is traditionally one of the leading regions of the Russian Federation in terms of key macroeconomic indicators. The Republic ranks 6th among the subjects of the Russian Federation for the volume of gross regional product; it ranks 4th for agricultural output, 3rd for investments in fixed capital, 5th for industrial production and construction, 8th for retail turnover, 6th for new housing supply [Table 1] [6, 7].

Table 1: Rating of the Republic of Tatarstan among the subjects of the Russian Federation and the regions of Volga Federal District [4, 5]

Macroeconomic indicators	Among the subjects of the Russian Federation		Among the regions of Volga Federal District	
	2015	2016	2015	2016
Volume of gross regional product	6	-	1	-
Industrial output	5	5	1	1
Agricultural output	4	-	1	-
Milk production	2	1	2	1
Investments in fixed capital	4	3	1	1
Scope of work performed for the type of activity "construction"	5	5	1	1
New housing supply	10	6	2	2
Retail turnover	9	8	2	1
Nominal average monthly salary of one employee	27	28	1	2
Natural increase per 1,000 population	13	12	1	1
The level of recorded unemployment	13	13	4	3

In 2016 in the Republic of Tatarstan, despite the persistence of geopolitical tension and sanctions regime, the key macroeconomic indicators showed stable dynamics, exceeding the average Russian trends. Information on the sources of financing of attracted investments in fixed capital is presented in [Table 2].

Table 2: The sources of financing of attracted investments in fixed capital of the Republic of Tatarstan, % [8]

Indicators	2012	2013	2014	2015	2016
Investments in fixed capital, total	100	100	100	100	100
Attracted funds, including	52,5	48,2	38,7	34,3	28,2
bank credits	9,5	16,9	13,9	11	9
borrowed funds of other organizations	4,1	1,7	3,1	3,1	5,1
budgetary funds	23,7	18,7	10,9	11,6	8,9
extrabudgetary funds	1,9	1,7	2,4	3,4	2,9
other	13,3	9,2	8,4	5,2	2,3

Credits account for the largest part of the attracted investments, according to the results of 2016. [Table 3] presents data on the loans, granted to legal entities and individual entrepreneurs in the Republic of Tatarstan from 2012 to 2016.

Table 3: Loans, granted to legal entities and individual entrepreneurs in the Republic of Tatarstan, million rubles [9]

Indicators	01.01.2013	01.01.2014	01.01.2015	01.01.2016	01.01.2017
Loans, total	612 487	743 297	744 928	908 484	1 657 682
Indebtedness	480 056	538 024	664 573	832 120	804 868
including overdue	15 474	18 799	17 874	19 607	20 760

The Republic of Tatarstan ranks tenth in the rating of "Agency for Strategic Initiatives", due to the wide practice of implementing municipal concessions in housing and utilities infrastructure, and successful investment projects in health care [10].

The data on the ranking of Russian regions in terms of the level of PPP development and compliance with the established KPI for 2016 are presented in [Table 4]. Designations:

- KPI - the set value of the indicator for the level of PPP development in the subject of the Russian Federation for 2016;
- achievement of KPI - the difference between the final indicator and the set value for 2016;
- IP – summery integrated indicator of rating analysis of the subject of the Russian Federation for 2016.

Table 4: The rating of Russian regions by the level of PPP development and compliance with the established KPI for 2016 [11]

Regions	IP -2016, %	IP -2015, %	Difference, %	Rank in 2016	Rank in 2015	KPI-2016, %	Achievement of KPI, %
Moscow	90,1	60,2	29,9	1	1	75	15,1
Moscow Region	82,7	47,9	34,80	2	8	55	27,7
Samara Region	82,7	59,6	23,10	3	3	62,5	20,2
Novosibirsk Region	72,5	57,40	15,20	4	4	67	5,5
St. Petersburg	70,2	59,9	10,30	5	2	80	9,8
The Republic of Tatarstan	66,1	43	23,10	8	10	66	0,1

Despite the positive dynamics of most of the indicators, credit institutions failed to realize their potential fully in the investment process. At the same time, it should be noted, that further interaction between banking and real sectors of the economy is largely determined by the objective economic conditions, in which the banking sector is developed, and therefore it has to be stimulated by joint efforts of lending institutions, the Bank of Russia and the state.

In order to identify the factors, affecting the volume of loans to the real sector of the Republic of Tatarstan, economic and mathematical modeling was performed. The data for the last 3 years in the monthly section (from January 2014 to December 2016) was selected for the study. The choice of the factors, affecting the investigated indicator, was made on the basis of qualitative and quantitative analysis of the investigated phenomena. The information for the correlation analysis for 2014, 2015 and 2016 was taken from the Bank of Russia website, Federal State Statistics Service, data of relevant ministries.

The following parameters were analyzed in the model:

- Y - the volume of lending to legal entities of the Republic of Tatarstan, million rubles (dependent variable);
- X1 - gross regional product of the Republic of Tatarstan, million rubles;
- X2 - the level of inflation, %;
- X3 - the key rate, %;
- X4 - the average number of employees, working in the economy of the Republic of Tatarstan, thousand people;
- X5 - investments in fixed capital of the Republic of Tatarstan, million rubles;
- X6 - overdue indebtedness of the enterprises of the Republic of Tatarstan to credit organizations, million rubles;
- X7 - deposits of legal entities in credit organizations of the Republic of Tatarstan, thousand rubles;
- X8 - loss-making organizations of the RT, %, characterizing the ratio of financially non-productive organizations to the total number of enterprises in the region;
- X9 - debts of the RT enterprises to credit organizations, million rubles.

Regression analysis was carried out for four main factors, which have a correlation with the volume of corporate loan portfolio for 2014-2016 [Table 5].

Table 5: Regression analysis data

Independent variable	Coefficient	Standard error	t-statistics	p (or α)
Y	93681453,13	16558432,12	5,66	0,01
X ₁	4,85	1,14	4,26	0,01
X ₅	3,90	1,01	3,85	0,01
X ₇	0,01	0,01	0,51	0,61
X ₈	-12714,70	27096,01	-0,47	0,64
X ₉	-1,08	1,13	-0,95	0,35

Thus, based on the results obtained, the regression equation will be the following:

$$Y = 93681453,13 + 4,85x_1 + 3,90x_5 + 0,01x_7 - 12714,70x_8 - 1,08x_9,$$

where Y is the volume of lending to legal entities, million rubles;

- X1 - gross regional product of the Republic of Tatarstan, million rubles;
 X5 - investments in fixed capital of the Republic of Tatarstan, million rubles;
 X7 - deposits of legal entities in credit organizations of the Republic of Tatarstan, thousand rubles;
 X8 - loss-making organizations of the RT, %;
 X9 - credit debts of the enterprises of the Republic of Tatarstan, million rubles.

RESULTS

Based on the obtained model, the volume of lending to real sector of the economy of the Republic of Tatarstan was forecasted for three scenarios (pessimistic, baseline, optimistic) [Table 6]. Predicted values of corporate lending in the Republic of Tatarstan are presented as progressive total, on a quarterly basis.

Table 6: The results of forecasting of lending to legal entities of the Republic of Tatarstan, million rubles

Date	Volume of lending to legal entities		
	Optimistic forecast	Baseline forecast	Pessimistic forecast
01.01.2018	1711607,41	1433209,67	1154811,93
01.04.2018	1107458,04	822381,91	537305,79
01.07.2018	1401337,26	1109456,3	817575,35
01.10.2018	1629389,45	1330580,08	1031770,71
01.01.2019	1923350,83	1617460,72	1311570,61
01.04.2019	1319689,8	1006632,97	693576,13
01.07.2019	1614046,59	1293707,36	973368,12
01.10.2019	1842566,01	1514831,14	1187096,27
01.12.2019	2057583,21	1724856,16	1392129,12

According to the forecast of socio-economic development of the Ministry of Economy of the Republic of Tatarstan for 2017-2019, formed in accordance with the baseline scenario for the development of Russian economy, recommended as the main by the Ministry of Economic Development of the Russian Federation, as well as the current trends in economic development, it can be said the following [12]:

- in 2017-2019, the growth rate of investments in fixed capital in the Republic of Tatarstan in comparable prices is planned at the level 101% - 103.1%;
- the increase in the volume of investments during forecast period will be ensured by means of large-scale modernization of the republic's industry, preparations for holding the 2018 FIFA World Cup and the World Championship of professional skills according to WorldSkills standards in 2019, as well as by means of the activities of residents of special economic zones of the industrial-production type "Alabuga" and the technology-innovative type "Innopolis", as well as the territory of advanced social and economic development "Naberezhnye Chelny".

DISCUSSION

Current infrastructure in use of contractual forms of PPP in Russia is aimed at achieving the goals, defined in strategic documents, where the subjects of banking sector of the economy have an important role in ensuring the progressive innovative development of national economy.

The main problems of interaction between banking and real sectors of the region are the following: the lack of macroeconomic stability, unstable financial position of enterprises, active growth of overdue indebtedness of enterprises to credit institutions.

Among the factors, which can affect the attractiveness and effectiveness of PPP projects, implemented in the RT, it is possible to single out a complex developed engineering infrastructure. Tatarstan is provided with practically all infrastructural elements of economic and commercial activities, which differ in the types of activities, the nature and scope of performed functions, provided services, and ways of their support.

For today the innovative infrastructure of the Republic of Tatarstan includes:

- two special economic zones (zone of industrial-production type "Alabuga" and zone of technology-innovative type "Innopolis");
- technopolis "Himgrad";
- network of technoparks, the most significant of which are the innovation and production technopark "Ideya", technopark in the sphere of high technologies "IT Park", technopark JSC "KNIAT";
- industrial parks, the largest of which is the Kamsky Industrial Park "Master";
- the Center of Nanotechnologies of the Republic of Tatarstan.

In general, created engineering infrastructure is aimed at improving the technological development of small and medium businesses of the republic, as well as at solving the issues of import substitution with domestic products and technologies.

SUMMARY

Sufficiency of resources is an integral component of regional forms of interaction between banking and real sectors of the economy. In this regard, it is very important to use temporarily free public resources, within the framework of the state's incentive policy, not for the short-term resolution of problems, but for the formation of complex mechanism for the redistribution of resources, functioning in the interests of both sectors.

With the help of correlation-regression analysis, it has been shown that such factors as investments in fixed capital and gross regional product have a positive impact on lending to legal entities in the Republic of Tatarstan. The forecast of the volume of lending to the real sector of economy by regional banks proves the hypothesis, that the use of public-private partnership instruments has a potential for development in the Republic of Tatarstan. This thesis raises the question of implementing additional measures, aimed at stimulation of use of PPP mechanisms.

CONCLUSION

As a factor for increasing the effectiveness of interaction between banking and real sectors of the region's economy, public-private partnership instruments are especially important in financing of capital-intensive infrastructure projects and low-income, but socially important, sectors of the economy, such as health care, education, and culture.

- In order to ensure sustainable development of regions and effective functioning of public-private partnership instruments, it is necessary to take into account regional differences in the structure of production and the investment attractiveness of the region.
- The forecast of the volume of lending to real sector of the economy by the regional market of banking capital testifies to the need for the development of public-private partnership instruments in the Republic of Tatarstan. To this end, it is necessary to stimulate the growth of extra-budgetary investments in infrastructure projects, to improve the efficiency of pre-project preparation, as well as to implement PPP in digital economy.
- The goal of increasing the private investment in Russian infrastructure projects can be achieved through facilitating the access of private investors to large infrastructure projects, with simultaneous implementation of mechanisms for ensuring equal and fair economic conditions for participation of public and private partners in such projects [13, 14].

CONFLICT OF INTEREST

There is no conflict of interest.

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