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Indicators of convergence assessment of real and banking sectors of the economy

Abstract. In modern conditions, the major prerequisite of economic and social development of the country is the sustainable growth of the national economy, which is why the improvement of the efficiency of all the sectors functioning is of great importance. The effectiveness of cooperation of real and banking sectors of the economy can be assessed in two ways - through the assessment of quality and profitability of enterprises and organizations for which banking services are being provided by commercial banks (mostly crediting), and from the standpoint of businesses and organizations through the assessment of the efficiency of bank loans usage as a source of enterprises' financing. The diversity of the forms of real and banking sectors interaction is determined by the objective interdependence of their development. Interdependence and convergence of real and banking sectors of the economy has been determined by the developed macroeconomic indicators (ConverS). The approbation of methodology has been realized for the Russian economy for the years of 2010-2015. As a result, we can suggest the creation of a sustainable development strategy for real and banking sectors of the economy based on the effect of convergence.
Keywords: Banking Sector; Real Sector; Convergence Effect
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Анотація. У статті обґрунтовано необхідність оцінки ефекту конвергенції банківського й реального секторів економіки. Відповідно до поставленої мети дослідження розроблено систему показників оцінки конвергенції банківського й реального секторів економіки (показники ConverS). За результатами апробації розробленої методики зроблено висновок про зростання взаємозалежності та зближення інтересів досліджуваних секторів економіки. Виявлено регрес-фактори, що стримують конвергенцію банківського й реального секторів. Розроблено заходи мінімізації впливу регрес-факторів, реалізація яких сприятиме зростанню як досліджуваних секторів, так і економіки в цілому.
Ключові слова: банківський сектор; реальний сектор; ефект конвергенції.

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Аннотация. В статье обоснована необходимость оценки эффекта конвергенции реального и банковского секторов экономики. В соответствии с поставленной целью исследования разработана система показателей оценки конвергенции реального и банковского секторов (показатели ConverS). По результатам апробации разработанной методики сделан вывод о растущей взаимозависимости и сближении интересов исследуемых секторов экономики. Выявлены регресс-факторы, сдерживающие конвергенцию реального и банковского секторов. Разработаны мероприятия по минимизации влияния регресс-факторов, реализация которых приведет к росту как исследуемых секторов, так и экономики в целом.
Ключевые слова: банковский сектор; реальный сектор; эффект конвергенции.

1. Introduction. Modern economic and political environment realities determine the need for prompt radical economic, social and institutional reforms. Special attention should be paid to the reforming of conditions, traditions and practice of real and banking sectors cooperation in Russia.

In our opinion, the approach to the regulation of banking and production activities formed before the financial crisis of 2008, demonstrated to some extent its effectiveness [1]. At the same time, under current conditions of a high degree of uncertainty and significant shortage of financial, human and time resources, this approach turned out to be ineffective. It is explained by a number of drawbacks including the following:

1) the taken measures are reactive, which is evinced by the absence of proactive regulation of banking and production spheres;

2) short-term objectives of the development of banking and production activities prevail over long-term objectives;

3) activity of regularity authorities is of a close, contradictory nature;

4) subjects of the banking activity are non-resistant to the regularity authorities.

Levelling of the mentioned drawbacks is possible only within the new approach, which core will be the strategy of the sustainable development of banking and real sectors of the economy on the basis of the convergence effect [2]. The specific feature of the proposed approach is the incorporation of the two biplane objectives of interaction of the studied sectors. They are:

1) A commercial effect. For banks this involves active growth of banking transactions profitability providing that the

level of risks is acceptable. For businesses this means profit maximization on condition of minimization of the cost of credit resources and the growth of the efficiency of available assets allocation.

2) A social effect. For banks this involves improvement of the accessibility of banks' services. For businesses this is improvement of the availability of products for consumers through the implementation of programs of mortgage, consumer and automobile lending.

The studied objectives of the interaction of banking and industrial sectors are in inverse relations to each other, i.e. the growth of the commercial effect leads to the reduction of the social effect and vice versa. The prospects of the sustainable interaction of the studied sectors in this case are determined by the condition of the mutual achievement of the optimum of social and commercial interests. The incentives of this convergence is in our opinion impossible or very challenging under conditions of traditional approaches application and requires new methods of regulation of banking-production activities.

Anachronism of traditional approaches, absence of a valid methodology of determination of the tightness of the convergence of the sectors under study determines the importance of the development of a methodology for the assessment of banking and real sectors convergence.

2. Statement of the Research Problem. The key problem of the research is connected with the creation of a system of indicators characterizing the effect of convergence of banking and production activities, development of the method for their calculation and testing based at data of the Russian banking and real sectors of economy.

Convergence assessment is one of the key conditions for the creation of the strategy of efficient development for banking and real sectors of the economy. The need for the assessment of the convergence of the sectors under study is determined in our opinion by such factors as:

1) absence of the universal indicator of the symmetrical development of banking and real sectors of the economy;

2) assessment of the convergence of the sectors under study for determination of the nature and courses of the credit organizations of in the financing of the industrial sector modernization;

3) assessment of the capabilities and prospects of the sectors interaction under condition of globalization, exchange rate and sanction shocks;

4) planning and working out of development strategies supported by the assessment of convergence indicators.

As a result, a multilevel need for quantitative and qualitative assessment of convergence indicators is being observed:
- at the macro-level - for comparative diagnostics of regions, analysis of the effectiveness of regulator's impact on the financial-credit system;
- at the meso-level - for the creation of a financially balanced and sustainable regional economic system;
- at the micro-level - for the solving of some economic problems connected with bank lending.

3. Brief Literature Review. The basis of the banking and real sectors' interaction efficiency assessment is laid in the research of such foreign scholars as Peter S. Rose and Sylvia S. Hudgins (2008) [3], Paul A. Samuelson and William D. Nordhaus (2010) [4], as well as modern Russian researchers O. I. Lavrushin (2013) [5], N. E. Egorova (2002), A. M. Smulov (2002) [6] and others.

At the same time, the issues connected with the assessment of the level and nature of banking and real sectors convergence and the creation of a valid system of indicators for convergence assessment have not been thoroughly studied by foreign and Russian academic economists.

4. Purpose. The objective of the research is the creation of a system of convergence assessment indicators for banking and real sectors of the economy in terms of the improvement of their interaction efficiency and the

usage of the obtained results as methodological guidelines for the working out of a strategy of efficient development for these sectors of the economy.

5. Results. The undertaken study shows a high degree of interdependence of real and banking sectors of the national economy. The banking is an infrastructural sector; therefore, banks are a sort of a «blood circulatory system» for the real sector. At the same time, the real sector determines the «blood current rate», providing functioning of the banking sector [7]. In our opinion, in the system «real sector-banking sector», the real sector is primary, and the development of the banking sector can be relied upon only in case of sustainable and dynamic development of the real sector. At the same time, the infrastructural nature of the banking sector conditions the convergence of the sectors under study by the quality and set of the following functions realized by credit organizations:
- financial-intermediate - the banking sector plays the role of a financial intermediary amalgamating interests of economic entities having at their disposal idle financial resources and entities having a need for these resources;
- saving and depository - commercial banks attract idle monetary assets of economic entities on deposits and pay interests [8];
- investment - banks as institutional investors channel resources to the most upcoming paying industries;
- encouraging - accruing interests in credits commercial banks encourage borrowers to improve production efficiency. Moreover, consumer loans accelerate sales and eventually, consumer goods manufacturing.

As a result, implementing its functions the banking sector meets the following real sector's needs:
- need for financing - procurement of funds in the form of long-term and short-term credits and loans;
- need for idle cash allocation, reflecting cash flows in investment activities in order to use free funds effectively [9];
- need for the rationalization of the financial assets turnover, expressed in the necessity to provide safe-keeping of available assets, optimization of their flow and use [10].

Affiliation of the studied function and value components of the interaction of banking and real sectors enables creation of a system of indicators of their convergence, indicators ConverS - after «Convergence of Real and Banking Sectors». The developed ConverS indicators system supplements the following requirements: creation of a system of indicators based on international financial reporting standards; time and geographical comparability of indicators; limitation of the number of indicators to improve their clearness and assessment efficiency (Table 1). The data of ConverS indicator system testing are presented in Figure 1.

The share of the banking sector in the financing of the real sector of the economy (indicator I_1) is still rather high; in 2015, it was 7.8% in the total investment in equity, which is 2.8 percentage points less than in the previous year, and 1.2 percentage points less than at the beginning of the research in 2010.

Indicator I_2, describing the ratio of the volume of credits attracted by the real sector and the volume of credits provided by the banking sector, makes it possible to estimate to what extent the banking sector fulfils its function [13]. For the studied period, this indicator did not reach 1, so, the banking sector does not meet real sector's needs for credit resources for 37% as for 2015.

Tab. 1: **System of indicators of the real and banking sectors convergence assessment**

| No.	Indicator	Method of calculation	Economic substance
1	Investment wrap indicator (I_1)	$I_1 = \dfrac{\text{Bank loans}}{\text{Investment into common equity}}$	Share of bank loans in investments into common equity
2	Credit wrap indicator (I_2)	$I_2 = \dfrac{\text{Loans obtained by the real sector}}{\text{Gross loans}}$	Ratio of loans obtained by the real sector to the loans provided by the banking sector
3	Credit activity indicator of the real sector (I_3)	$I_3 = \dfrac{\text{Bank loans to the real sector}}{\text{GDP}}$	Share of corporate lending in GDP

Source: Authors' elaboration
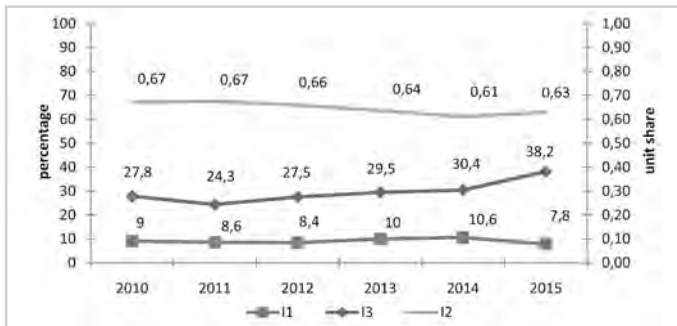
Fig. 1: **Assessment of ConverS indicators characterizing real and banking sectors of the Russian economy**
Source: Calculated by the authors according to data from [11] and [12]

Therefore, the participation of bank capital in financing enterprises remains moderate. This is explained by the inefficiency of the financial intermediary function of the financial market, since the existing needs of the real sector go beyond the capabilities of the banking sector in fixed assets financing [14]. However, processes taking place in the financial-credit sphere show the increasingly important role of banking resources in the development of the real sector of the economy, as evidenced by the dynamics of the indicator I_3.

6. Conclusion. Thus, the analysis of the developed indicators of convergence assessment (ConverS) reveals growing in-terdependence and convergence of interests of the sectors of the economy under study. The next stage of the strategic regulation of banking and production activities is the determination of the factors restraining the convergence of banking and real sectors. The following factors should be mentioned as such regress-factors:

- an exceed of the territorial concentration of banking sector assets in comparison with the real sector of the economy;
- a gap between bank assets and production capabilities of regions;
- the banking sector does not meet the requirements of expanded production investing and technological revamp of enterprises, which hinders their effective operation and affects negatively the dynamics of the economic growth;
- the insufficient level of capitalization of commercial banks, which significantly restricts their possible participation in GDP reproduction [15-16];
- local monopolization of regional banking services by partially owned by the government banks;
- the significant impact of the interpenetration and interdependence of the executive authorities and regional large businesses on the direction and pace of the development of the sectors under study, the efficiency of their functioning.

Elaboration of measures for minimization of the presented regress-factors will make it possible to increase the effect of convergence of real and banking sectors of the economy in the achievement of their objectives, which will eventually lead not only to the growth of the sectors under study, but the economy as a whole.

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