

## **Methodology for assessing the impact of the diffusion of blockchain technologies on the development of the national economic system (illustrated by the example of the Russian Economy)**

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### **Abstract**

Distributed data storage technologies are becoming an integral part of the modern economy. In this regard, today it is very relevant to a search for formalized approaches to assessing the impact of blockchain technologies on key parameters of macroeconomic generations. The subject of the research is the system of relations between economic entities of the national economy, associated with the perception of blockchain technologies that permeate economic processes. The aim of the study is to develop a methodological toolkit for scenario forecasting of possible consequences for the national economy of the introduction of blockchain technologies into the economic sector. The authors apply methods of cointegration analysis, scenario modeling, substantiation of the studied patterns by methods of regression analysis, etc. The authors use works of foreign and Russian scientists, official data of the Federal State Statistics Service of the Russian Federation as an information and statistical database. The authors systematize positive and negative externalities; propose an algorithm for studying the influence of blockchain technologies on the dynamics of GDP through the transformation of the key parameters of the functioning of the financial and real sectors of the economy; build a model and assess the possible impact on GDP of the integration of blockchain technologies into the economy. As a result, the authors make the following conclusions: to the greatest extent, the integration of blockchain technologies into the business processes of the national economy affects the change in the financial results of credit institutions, an increase in capital liquidity of economic agents, as well as the acceleration of the processes of socialization of channels of access of business entities to financial markets (expanding access of economic agents to exchanges). Scenario modeling of changes in these factors made it possible to establish that the potential for additional GDP growth in the Russian economy can reach about 1% per year as part of the integration of distributed data storage technologies into the system of economic relations. The developed and approved methods for the formalized assessment of the impact of blockchain technologies on the dynamics of economic growth create the basis for clarifying methodological approaches to the study of the problem posed, open up new opportunities for holding discussion platforms on this topic.

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## Keywords

Blockchain systems, Blockchain technologies, Cointegration, Dynamics of economic growth, Financial sector of the economy, GDP, Modeling, Risks, Scenario analysis

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