

Assessing the impact of supply chain financing using blockchain technology on credit risks in the banking sector of the Russian Federation

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Abstract

© ExcelingTech Pub, UK. Traditional supply chains rely on banks to support the related financing activities and services. With the emergence of blockchain technology, more and more companies in different industries have considered using it to support supply chain finance. Despite the very high interest from international and national financial institutions, and also enterprises from the real sector of the economy demonstrated in the distributed data storage technology, studies on the problems of assessing the use of the supply chain platform potential in the socioeconomic environment, and their theoretical understanding can be met vary rarely. As a rule, existing works reveal either the technical side of the object of study, or the regulatory or legal aspects of the applicability of supply chain technologies in the national economy. This paper attempts to overcome this conditional vacuum of understanding in order to make up for conditions with questions revealing other aspects of the subject of research, for example, such as the economic and social effects of introducing blockchain technologies into the activities of business entities. The banking sector of the national economy of the Russian Federation was chosen as the object of research. The research subject is the relationship built between participants in the financial market on the basis of supply chain technologies and the resulting effects expressed in the potential to reduce the credit risks of banks due to non-fulfilment, untimely or incomplete fulfilment of financial obligations by debtors. In the course of the study, the main directions that reduce the risks under consideration as a result of minimizing opportunistic models of behavior are substantiated and possible economic effects for the Russian banking system as a result of the use of blockchain technologies are identified. The opportunities for supply chain finance offered by possible applications of blockchain technologies in the supply chain and the capacity of this technology to deal with the existing barriers and pain points. The most important result of the work is the developed algorithm for determining the parameters for reducing the credit risk capital for as a result of the penetration of supply chain technologies into the banking environment.

Keywords

Blockchain technology, Credit requirements, Credit risks, Financial results, Financial system, Reserves for possible losses, Supply chain technology, Transaction costs

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