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Manuscript



GAIDA Aleksandr Sergeevich

**DIGITAL ASSETS AS A FACTOR IN THE RESILIENCE
OF THE RUSSIAN FINANCIAL SYSTEM**

5.2.4. Finance

Abstract
of the dissertation
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Research supervisor:
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Elena Anatolyevna Kachanova

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Relevance of the research

Digital assets have become widely used beyond their original cryptocurrency market segment. Their various forms are now used in investment transactions, fundraising and payments, including cross-border payments. The expansion of these practices is changing certain mechanisms of financial intermediation while creating new sources of risk. To assess the implications of this process, it is necessary to determine the extent to which the use of digital assets is associated with the financial system's ability to maintain its core functions under stress.

In Russia, this issue is also linked to changing conditions for international payments and periods of heightened exchange rate instability. External restrictions and episodes of capital outflows have increased market participants' interest in financial instruments that can operate outside parts of the traditional payment infrastructure. At the same time, Russia is developing a regulated market for digital financial assets and the digital rouble, while maintaining restrictions on the use of private cryptocurrencies and permitting their limited use in cross-border payments. Under these conditions, digital assets may help maintain payment continuity and support the adaptation of the financial system. However, they may also create risks of currency substitution, capital movements through non-bank channels and the transmission of external shocks to the Russian financial market.

The systemic implications of these processes remain insufficiently studied. Available data do not permit a comprehensive assessment of the involvement of Russian households and financial institutions, while existing studies often examine individual instruments and risks in isolation. This creates a need, in both research and practice, for a comprehensive assessment of the channels through which digital assets affect financial stress and the resilience of Russia's financial system.

Existing research on the topic

The classical foundations of macroeconomic and monetary theory were established in the works of J. M. Keynes, M. Friedman and H. Minsky, whose ideas on financial market instability have significantly influenced the contemporary understanding of financial system resilience. Fundamental concepts of financial crises and market instability are presented in the works of F. Allen and D. Gale, as well as C. Reinhart and K. Rogoff.

As the economy becomes increasingly digital, particular attention is paid to research on blockchain technologies and cryptoassets, including the works of D. Tapscott, S. Corbet et al. Recent empirical and comparative legal studies on the regulation of cryptocurrency and tokenised asset markets have been conducted by G. Giudici and S. Adhami, M. Frediani, D. Zetzsche et al., and D. Howell et al.

Russian academic literature includes a substantial body of work on digital currencies, tokenisation and their effects on financial system resilience. Theoretical and methodological aspects are examined in the works of T. N. Agapova, S. A. Andryushin, and D. A. Kochergin and A. I. Yangirova, who study how digital currencies affect Russia's monetary and payment systems.

Issues concerning the introduction of the digital rouble and the legal aspects of its regulation are addressed in the works of I. Yu. Potashova and S. N. Gonta, and G. V. Pusurmanov.

The use of blockchain, DeFi and cryptocurrencies in Russian practice is examined in publications by A. Genkin and A. Mikheev, M. V. Molchanov, O. Yu. Kuzmina and G. S. Panova.

The institutional, economic and legal framework of Russia's digital economy is analysed in studies by A. V. Keshelava and I. L. Khaet, and A. P. Tsypin et al.

Despite extensive research on digital assets and their individual types, their combined impact on the resilience of Russia's financial system has not been fully explored. The mechanisms of this impact and the associated systemic risks require further study, particularly in view of the specific features of Russia's institutional environment. Another unresolved issue concerns the conditions under which the integration of digital assets can support the development of the financial system without weakening its resilience.

The aim of the research is to develop analytical tools for assessing the impact of digital assets on the resilience of Russia's financial system and to substantiate practical recommendations for their regulated integration into the national financial system.

To achieve this aim, the following research objectives must be addressed:

- 1) Examine the economic nature and development of digital assets, identify their main types and functions, and determine their role in the transformation of the financial system.
- 2) Clarify the concept of financial system resilience and the systemic risks associated with the use of digital assets, define the criteria for assessing resilience, and identify the main channels through which digital assets affect Russia's financial system.
- 3) Develop an approach to applying a behavioural criterion for classifying digital assets in order to identify the economic functions they actually perform in the Russian financial context.
- 4) Empirically assess the relationship between changes in the capitalisation of the global cryptoasset market and the level of financial stress in Russia.
- 5) Develop and test an integrated methodology, adapted to Russian conditions, for assessing the systemic impact of digital assets on

Russia's financial system, combining stress scenario analysis, proxy-based network analysis, a risk indicator dashboard and an assessment of regulatory implications.

6) Substantiate practical recommendations for adapting Russia's financial institutions, infrastructure and regulation to the phased integration of digital assets, based on a comparative assessment of strategic approaches to their implementation.

The object of the research is Russia's financial system as an integrated mechanism that ensures the resilience and stability of the national economy.

The subject of the research comprises the mechanisms and channels through which digital assets affect the resilience of Russia's financial system, the resulting economic consequences and systemic risks, and the regulatory conditions for integrating digital assets into the national financial system.

Compliance with the research specialty specification. The dissertation meets the requirements of the official specification for research specialty 5.2.4. Finance (Economic Sciences), established by the Higher Attestation Commission (VAK) under the Ministry of Science and Higher Education of the Russian Federation: item 34, "New technologies in the financial sector and their impact on financial services markets. Digital financial technologies (fintech). Digital financial assets"; item 24, "Financial markets: typology, specific features and functioning. Regulation of financial markets"; and item 22, "Financial instruments and transactions involving them".

The theoretical and methodological foundations of the dissertation draw on fundamental works by Russian and international scholars in financial theory, the digital economy and financial market regulation, as well as the concepts of financial system resilience and systemic risk. The theoretical framework incorporates ideas from monetarism, post-Keynesian economics and behavioural

finance. The analysis of systemic risk also draws on recent developments in macroprudential regulation. A separate group of sources comprises materials published by the Bank of Russia and international financial organisations, including the IMF and the Bank for International Settlements.

The methodological framework of the research comprises formal logic, induction and deduction, analysis and synthesis, comparison, analogy and description, as well as systematisation and grouping. Historical analysis was used to examine the development of digital assets, while comparative analysis was applied to approaches to their regulation. The quantitative component of the research relies on statistical and econometric modelling, including regression analysis. Tables and graphical interpretation of data were used to present the findings.

The data and empirical basis of the research comprises statistical data from the Bank of Russia and materials published by international financial organisations. The market analysis uses information from cryptocurrency exchanges and online investment platforms, as well as materials from research and consulting organisations. The main dataset covers 2015-2025. The econometric analysis is based on monthly observations from January 2019 to December 2024. Selected statistical and regulatory materials have been updated to reflect developments as of 2026.

The scientific novelty of the dissertation lies in the development and application of analytical approaches that account for the specific ways in which digital assets affect Russia's financial system. The research proposes a behavioural criterion for their classification and provides an empirical assessment of the relationship between global cryptocurrency market conditions and financial stress in Russia. An integrated methodology has been developed to analyse systemic impacts, taking into account the availability of Russian data and existing

institutional constraints. The findings are used to substantiate recommendations on the sequence of integrating digital assets into Russia's financial system.

The scientific novelty is demonstrated by the following findings, obtained by the author personally and submitted for defence:

- 1) A theoretical and methodological approach has been developed for applying a behavioural criterion to the classification of digital assets in the Russian financial context. It identifies the economic functions they actually perform based on observed patterns of use. Unlike classification systems based primarily on formal legal, technological or stated functional characteristics, the proposed method focuses on actual practices in the circulation and use of digital assets within a specific institutional and market environment. This makes it possible to account for changes in a digital asset's economic role over time, identify discrepancies between its formal design and actual use, and interpret the resulting regulatory and analytical constraints more accurately (items 22 and 34 of the VAK research specialty specification).

- 2) A positive relationship between changes in global cryptocurrency market capitalisation and the level of financial stress in Russia has been identified and empirically substantiated. This relationship is statistically significant outside the period of the structural shock in early 2022. The finding allows external cryptocurrency market conditions to be regarded as an additional channel of vulnerability for Russia's financial system, without constituting an independent or dominant cause of financial instability (item 34 of the VAK research specialty specification).

- 3) An integrated methodology for assessing the systemic impact of digital assets on the financial system has been developed, adapted to Russian conditions and tested. It combines stress scenario analysis, proxy-based network analysis, a risk indicator dashboard and a module for assessing regulatory implications. Unlike existing approaches in which

these methods are applied separately, the proposed methodology formalises their combined application within a single analytical sequence. It takes into account limited input data, sanctions pressure, risks associated with capital movements and changes in the behavioural incentives of economic agents in Russia's financial system (item 34 of the VAK research specialty specification).

4) A set of recommendations has been developed for integrating digital assets into Russia's financial system, adapted to its institutional environment and the conditions imposed by sanctions. The recommendations differentiate measures according to the systemic risks identified and provide a comparative assessment of strategic approaches across five dimensions of implementation burden. The resulting assessments substantiate the priority and sequence of the proposed approaches, taking into account their expected effects, institutional constraints and time horizons (items 24 and 34 of the VAK research specialty specification).

Theoretical and practical significance of the research

The theoretical significance of the dissertation lies in the further development of theoretical and methodological approaches to analysing the impact of digital assets on the resilience of Russia's financial system. The research clarifies the nature, mechanisms and channels of this impact, proposes an approach to applying a behavioural criterion for classifying digital assets, and develops an integrated methodology for assessing their impact that is adapted to Russian conditions. This methodology combines stress scenario analysis, proxy-based network analysis, a risk indicator dashboard and an assessment of regulatory implications. The practical significance of the research lies in translating its findings into specific recommendations for the phased and regulated integration of digital assets into Russia's financial system. The findings can be used by federal executive authorities, the Bank of Russia, other relevant

regulators and financial market participants to improve the legal and regulatory framework, develop macroprudential policy measures and determine priorities for the digital development of the financial sector.

Presentation and discussion of the research findings. The findings were presented and discussed at the following academic conferences:

- 6th International Scientific and Practical Conference "Transformation of Russian Science in the Era of the Information Society". Moscow, 2024.
- 32nd International Scientific and Practical Conference "Current Trends in the Development of Science and the Global Community in the Era of Digitalisation". Moscow, 2025.
- 12th International Scientific and Practical Conference "The Organisation of the Modern World in the Digital Era". Moscow, 2025.

Nine works on the dissertation topic have been published, with a total length of 5.2 printed sheets.

The author's publications based on the dissertation include:

Articles in journals included in the list recommended by Russia's Higher Attestation Commission for publishing the main scientific findings of dissertations submitted for the degrees of Candidate or Doctor of Sciences:

- Gaida, A. S. Raising Finance for Startups through Digital Token Offerings: International Practice. Municipality: Economics and Management. 2023. No. 4. Pp. 13-21.
- Gaida, A. S. The Digital Rouble as a Factor in Russia's Financial Resilience. Innovations and Investments. 2024. No. 10. Pp. 422-426.
- Gaida, A. S. Tokenisation of Real Assets in Russia: Opportunities and Regulatory Barriers under Sanctions Pressure. Financial Markets and Banks. 2025. No. 5. Pp. 212-218.

Other works by the author:

- Gaida, A. S. Analysis of the Risks of Cryptocurrency Transactions. EGO: Economy. State. Society. 2023. No. 4. Pp. 21-25.
- Gaida, A. S. Blockchain in Russia's Banking and Financial Sector. Transformation of Russian Science in the Era of the Information Society: Proceedings of the 6th International Scientific and Practical Conference. Moscow: Centre for the Development of Education and Science, 2024. Pp. 26-30.
- Gaida, A. S. Global Financial Integration and Digital Assets: A Threat or a Factor in Resilience? The Organisation of the Modern World in the Digital Era: Proceedings of the 12th International Scientific and Practical Conference. Moscow, 2025. Pp. 90-94.
- Gaida, A. S. Cryptocurrencies and Sanctions: How Blockchain Can Help Russian Businesses under Restrictions. Current Issues of the Modern Economy. 2024. No. 9. Pp. 9-15.
- Gaida, A. S. The Application of Blockchain Technology in Financial Markets. EGO: Economy. State. Society. 2023. No. 2 (51). Pp. 21-25.
- Gaida, A. S. Digital Assets and Currency Controls: Risks to the Resilience of Russia's Financial System. Current Trends in the Development of Science and the Global Community in the Era of Digitalisation: Proceedings of the 32nd International Scientific and Practical Conference. Moscow, 2025. Pp. 489-493.

The structure of the dissertation follows the requirements for Candidate of Sciences dissertations and is designed to achieve the research aim and address its objectives. The dissertation consists of an introduction, three chapters, a conclusion, a bibliography and appendices.

The first chapter sets out the theoretical and methodological foundations for the study of digital assets and traces their development in Russia. Particular attention is paid to existing approaches to classifying digital assets and the specific features of their regulation.

The second chapter examines the impact of digital assets on the resilience of Russia's financial system. It considers methods for assessing systemic risks and the main channels through which they are transmitted. On this basis, an adapted analytical methodology is developed for assessing the systemic impact of digital assets on the Russian financial system.

The third chapter develops recommendations for the regulated integration of digital assets into Russia's financial system. It analyses their potential uses and the conditions necessary for the practical incorporation of digital instruments into the existing institutional environment. It also provides a comparative assessment of the expected effects and implementation costs of the proposed measures.

The conclusion summarises the research findings and sets out the main theoretical and practical conclusions. It also identifies possible directions for the further development of digital asset regulation with a view to strengthening financial system resilience.