

DIGITALIZATION OF FINANCE AND THE EVOLUTION OF BANKING REGULATION: INSTITUTIONAL REVERSAL FROM THE GLASS-STEAGALL MODEL TO PLATFORM-BASED BANKING

ЦИФРОВІЗАЦІЯ ФІНАНСІВ І ЕВОЛЮЦІЯ БАНКІВСЬКОГО РЕГУЛЮВАННЯ: ІНСТИТУЦІЙНА РЕВЕРСІЯ ВІД МОДЕЛІ ГЛАССА-СТІГОЛЛА ДО ПЛАТФОРМЕННОГО БАНКІНГУ

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Abstract. *The article substantiates the theoretical interpretation of the digitalization of finance as a driver of institutional transformation in banking regulation. It is argued that the regulatory logic embedded in the Glass-Steagall model, based on functional separation, is being gradually replaced by a model of technological convergence grounded in platform-based banking. The study demonstrates that financial innovations, fintech expansion, and artificial intelligence technologies reshape not only the efficiency parameters of financial intermediation but its structural architecture, leading to an institutional reversal. The contradiction between regulatory fragmentation and digital integration is identified as a core driver of transformation in the financial system. It is shown that platform-based banking integrates functions historically separated by regulatory design, thereby reproducing systemic risks in a new digital form. Attention is paid to the implications for financial stability, regulatory policy, and risk distribution, including the transition from activity-based regulation to ecosystem-based governance. The paper examines the role of digital finance in transforming investment activity and strategies, including the logic of out-investing, and its impact*

on sustainable development through ESG integration and green transition financing. It is concluded that the future of the banking sector is determined by competition among financial architectures, in which control over digital platforms becomes a key source of systemic economic power.

Keywords: regulation, transformation, competition, financial system, banking sector, platform banking, shadow banking sector, shadow economy, financial intermediation, financial services, financial innovation, digitalization of finance, financial instability, risks, threats, fintech companies, digital economy, investment activity, investment strategies, out-investing, sustainable development, ESG

Анотація. У статті запропоновано теоретичну інтерпретацію цифровізації фінансів як чинника інституційної трансформації банківського регулювання, що змінює базову логіку організації фінансової системи. Доведено, що регуляторна модель, сформована в межах закону Гласса-Стіголла і заснована на принципі функціонального розмежування, поступово втрачає ефективність під впливом цифрових технологій, які забезпечують інтеграцію фінансових функцій без формального об'єднання інституцій. Обґрунтовано, що розвиток фінансових інновацій, фінтех-компаній і алгоритмічних систем управління призводить до формування платформеного банкінгу як нової архітектури фінансового посередництва, у межах якої різні сегменти фінансового сектору взаємодіють у спільному цифровому середовищі. Встановлено, що суперечність між регуляторною фрагментацією та технологічною конвергенцією формує передумови інституційної реверсії, яка проявляється у відтворенні інтегрованої структури фінансової системи у новій цифровій формі. Показано, що платформений банкінг забезпечує масштабування фінансових операцій, змінює характер конкуренції та підсилює роль даних як ключового економічного ресурсу. Водночас доведено, що така трансформація супроводжується формуванням нових конфігурацій ризиків, пов'язаних із концентрацією інформації, алгоритмічним прийняттям рішень і зростанням швидкості поширення фінансових шоків у цифровому середовищі. Проаналізовано зміну регуляторних підходів, що проявляється у переході від контролю окремих видів діяльності до управління фінансовими екосистемами. Обґрунтовано, що цифровізація фінансів трансформує інвестиційну діяльність та інвестиційні стратегії, формуючи логіку випереджального інвестування як боротьби за контроль над інфраструктурними вузлами фінансової системи. Зроблено висновок, що ключовим фактором розвитку банківського сектору стає не продуктова конкуренція, а конкуренція фінансових архітектур, у межах якої контроль над цифровими платформами визначає розподіл економічної влади. Наукова новизна полягає у розробці теоретичної рамки аналізу цифровізації фінансів як процесу інституційної реверсії, що дозволяє переосмислити взаємозв'язок між регуляторною фрагментацією та технологічною інтеграцією у фінансовій системі. Запропоновано інтерпретацію платформеного банкінгу не як результату технологічної еволюції, а як форми відтворення інтегрованої архітектури фінансового посередництва у цифровому середовищі без формального демонтажу регуляторних обмежень. Уточнено механізм зміни характеру фінансового посередництва через перенесення функцій інтеграції з інституційного рівня на рівень цифрових платформ, що дозволяє пояснити трансформацію розподілу ризиків і появу нових центрів економічної влади.

Ключові слова: регулювання, трансформація, конкуренція, фінансова система, банківський сектор, платформений банкінг, тіньовий банківський сектор, тіньова економіка, фінансове посередництво, фінансові послуги, фінансові інновації, цифровізація фінансів, фінансова нестабільність, ризики, загрози, фінтех-компанії, цифрова економіка, інвестиційна діяльність, інвестиційні стратегії, випереджальне інвестування, сталий розвиток, ESG

Introduction. The historical evolution of banking regulation demonstrates that institutional changes in the financial system are reactive, responding to crisis phenomena associated with excessive risk concentration and the functional integration of financial institutions. The Glass-Steagall Act established the principle of structural separation as a basic condition for ensuring financial stability, institutionalizing the separation between commercial and investment banking, and

limiting the risk of spillover between financial system segments. This model corresponded to the logic of the industrial economy, in which efficiency was achieved through functional specialization, and stability was ensured through institutional barriers.

The digitalization of finance radically changes this logic, as the development of financial technologies, platform business models, and algorithmic management systems blurs boundaries between financial sectors, forming integrated digital ecosystems. Banks, fintech companies, and non-banking institutions interact within a single infrastructure, where financial services are integrated with non-financial services and financial intermediation takes on a platform character. In such conditions, the regulatory paradigm, based on the principle of separation of functions, is transformed towards technological integration. The contradiction between regulatory fragmentation and digital convergence forms an analytical basis for interpreting modern processes as institutional reversion, i.e., the gradual reproduction of the integrated structure of the financial system in a new technological form without the formal dismantling of regulatory restrictions. This process has fundamental consequences for financial stability, since the integration of functions is accompanied by data concentration, algorithmic decision-making, and an increase in the speed of the spread of financial shocks in the digital environment.

The relevance of the study lies in the fact that financial innovations serve not only to increase efficiency but also to transform the financial system, changing the mechanisms of risk distribution, the nature of financial intermediation, and the logic of interaction between market participants. At the same time, the digitalization of finance creates new challenges for regulatory policy, requiring a transition from controlling individual activities to managing complex financial ecosystems.

The purpose of the article is to substantiate the digitalization of finance as a factor in the institutional reversion of banking regulation and to identify the mechanisms through which the development of platform-based banking changes the functional logic of financial intermediation and the architecture of the financial system. Achieving this goal involves the sequential solution of several analytical tasks, for which appropriate research methods were used. The method of structural-logical analysis was used to identify the relationship between the regulatory fragmentation inherent in the Glass-Steagall model and the technological convergence arising from the digitalization of finance, thereby substantiating the category of institutional reversion as an analytical tool for research. The comparative method was used to compare the industrial model of banking regulation with the modern digital architecture of financial systems, enabling identification of a shift in the principles of organizing financial intermediation from functional separation to platform integration. The method of theoretical generalization was used to develop a holistic concept of the transformation of the financial system, particularly to interpret platform banking as a means of reproducing an integrated structure of financial intermediation in the digital environment. Additionally, elements of the system approach were used to analyze the financial system as a holistic ecosystem in which banks, fintech companies, and digital platforms interact, enabling us to reveal the changing nature of risk distribution and the emergence of new centers of economic power.

Literature review. Modern research on the transformation of financial systems under digitalization emphasizes the growing role of digital technologies, data, and financial innovations as key drivers of structural change, reshaping financial intermediation, expanding access to financial services, and simultaneously generating new forms of asymmetry and systemic risk (*Desyatnyuk & Ptashchenko, 2025a; Desyatnyuk & Ptashchenko, 2025b; Desyatnyuk et al., 2025; Krysovaty et al., 2024*). Within the framework of analyzing global structural transformations, attention is focused on the reconfiguration of financial intermediation, the erosion of institutional boundaries, and the increasing complexity of financial ecosystems, which are shaped by the interaction of digitalization, global competition, and regulatory change (*Calomiris & Haber, 2014; Allen et al., 2021; Philippon, 2019*).

A separate strand of research develops the understanding of financial technologies as a systemic factor transforming the architecture of financial markets, where fintech is interpreted not only as a technological tool but as a driver of new models of financial intermediation based on data, digital platforms, and algorithmic decision-making (*Arner et al., 2016; King, 2018; Skinner, 2020*). In this context, digital infrastructures and financial platforms are increasingly viewed as spaces of strategic competition, within which control over data flows, technological standards, and user interfaces

determines the positioning of financial institutions and national economies in the global system (Rochet & Tirole, 2003; Parker et al., 2016).

At the same time, research on artificial intelligence highlights its transformative role in financial decision-making processes, demonstrating that algorithmic systems increase efficiency and predictive capacity while generating new systemic risks related to opacity, interdependence, and the potential for synchronized failures across interconnected financial networks (Acemoglu & Restrepo, 2018; Brynjolfsson et al., 2021). These processes are accompanied by the emergence of new asymmetries in access to technological infrastructure and data, further complicating the financial sector's regulatory landscape (Desyatnyuk et al., 2025).

The integration of digital transformation with broader economic processes is also reflected in studies linking financial innovation to structural changes in the global economy, where digital technologies are seen as factors that enhance financial stability, enable new investment models, and influence the allocation of financial resources (Desyatnyuk & Ptashchenko, 2025c). At the same time, these approaches reveal the growing interdependence between financial, technological, and regulatory risks, which requires a rethinking of traditional regulatory frameworks.

The combination of these approaches provides a theoretical basis for analyzing digital transformations of the financial system, in which technological change, institutional evolution, and new forms of economic interaction are considered as interrelated factors shaping the restructuring of global financial architecture. However, despite the significant body of research, the existing literature remains fragmented, as studies of fintech, platform economics, and banking regulation are rarely integrated into a unified analytical framework.

This fragmentation limits the ability to explain the systemic consequences of digitalization, particularly the interaction between regulatory fragmentation and technological convergence. In most studies, digitalization is treated primarily as a source of efficiency gains, while its role as a driver of institutional transformation remains insufficiently conceptualized. This creates the need for a theoretical reinterpretation of digitalization as a process of institutional reversal, enabling platform-based banking to be analyzed not merely as a technological outcome but as a reconfiguration of financial intermediation within a digital environment.

Main results of the research. The modern transformation of the financial system should be considered a change in the principles governing the distribution and combination of financial intermediation functions across different types of financial institutions. Within the industrial model of banking regulation, the function of accumulation of savings and lending was assigned to deposit banks, while the functions of underwriting, investment, and securities transactions were carried out by investment institutions, and risk management and derivative financial instruments were concentrated in specialized market segments, which ensured the limitation of risk transfer through institutional delimitation of types of activities. The further development of financial markets led to a gradual blurring of these boundaries, as a result of which there was a combination of previously separated functions within universal banking structures, where one institution simultaneously carried out the accumulation of resources, lending, investment operations, and risk management, which increased the efficiency of activities, but at the same time complicated risk control. The Gramm-Leach-Bliley Act of 1999 legally completed the dismantling of the main restrictions of Glass-Steagall, allowing the creation of financial holding companies with a combination of banking, insurance, and investment activities, while the Volcker Rule, introduced under Section 619 of the Dodd-Frank Act of 2010, restored partial unbundling only in the proprietary trading segment (Gramm-Leach-Bliley Act, 1999; Dodd-Frank Act, 2010, Section 619). The digitalization of finance forms a new stage of this evolution, within which the specified functions are no longer rigidly tied to separate institutions, but are implemented in a distributed digital environment through platforms and technological infrastructures, which allows them to be integrated without formal institutional unification, changing the very principle of the organization of financial intermediation and creating the prerequisites for institutional reversion (Calomiris & Haber, 2014; Allen et al., 2021). Such dynamics are consistent with D. North's view that institutions change incrementally and path-dependently, while technological conditions evolve more rapidly, creating a structural gap between the regulatory logic and the actual organization of economic interaction (North, 1990). In terms of O. Williamson's transaction cost theory, the transfer of integration from the level of the banking organization to the

level of the digital infrastructure means a change in the way of minimizing the costs of coordinating financial intermediation, in which the market and hierarchy are replaced by a network (*Williamson, 1985*).

A qualitative change is occurring with the digitalization of finance, shifting the integration of functions from the institutional level to the technological infrastructure. If, in previous models, the combination of deposit and credit intermediation, investment operations, and payment services required organizational unification within banking groups, then in the digital environment, these functions can be implemented by different participants and integrated through platforms, digital interfaces, and algorithmic interaction systems. This means that institutional boundaries, which previously served as the main tool of regulatory control, lose their effectiveness, as actual integration occurs outside the formally defined structures. In such conditions, the very nature of financial intermediation changes, ceasing to be tied to a separate institution and acquiring a network character. The functions of attracting, allocating, making payments, and managing risk are distributed among different participants who interact within a single digital environment. This leads to the formation of a new architecture of the financial system, in which the key element is not the bank as an organization but the platform as an infrastructure that coordinates economic interactions and integrates financial services (*Arner et al., 2016; King, 2018*).

Within the framework of such transformation, there is a change not only in the organizational form of financial intermediation, but also in its resource base, as data and the capabilities to process them become key factors. If, in the traditional banking model, information served an auxiliary function, ensuring creditworthiness assessment and risk management, then in the digital economy, it becomes a central resource that determines the ability to make financial decisions and to build competitive advantage. This means that the function of processing financial information extends beyond the bank's internal procedures and becomes an independent segment of activity that can be separated and performed by specialized technological actors. As a result, a new configuration of financial intermediation arises, in which control over data and their processing algorithms becomes more significant than control over capital as such (*Parker et al., 2016*). This shift is conceptualized by S. Zuboff as a transition to a regime in which data on the behavior of economic agents is transformed into an independent resource of accumulation, changing the nature of market relations (*Zuboff, 2019*), while N. Srnicek interprets control over the infrastructure of interaction and the logic of data extraction as the basis of a new business model of platform capitalism (*Srnicek, 2017*).

This shift is changing the coordination mechanisms in the financial system, as decision-making increasingly relies on algorithmic models that integrate large datasets and automate key operations. This applies not only to credit scoring or portfolio management, but also to payment systems, customer identification systems, fraud prevention, and risk monitoring. In such a situation, functions that were previously performed within a single institution are distributed among multiple participants who interact through a digital infrastructure that enables coordinated work. It is this mechanism that creates the prerequisites for the actual combination of financial functions without their institutional merger.

In this context, it is appropriate to discuss institutional reversion as a key analytical principle that helps explain modern changes. We are talking about the reproduction of the integrated model of financial intermediation, characteristic of periods of universal bank dominance, but in a fundamentally new form, in which integration is implemented through technological mechanisms. Such a reversion is not a simple return to previous states, as it is accompanied by changes in the carriers of functions and in the mechanisms of their interaction. If earlier integration meant the concentration of functions within a single organization, now it means their coordination within a digital platform that ensures interaction between different participants. This, in turn, changes the object of regulatory influence, since traditional approaches that focus on controlling individual activities or institutions are insufficient for managing risks in the networked financial system. Regulation should consider not only the characteristics of individual entities but also the structure of their interaction, data exchange channels, and algorithmic decision-making mechanisms. As a result, there is a need to transition from regulating activities to regulating interaction, which means a fundamental change in the logic of financial policy.

The transformation of coordination mechanisms and the distribution of functions directly affect

the nature of systemic risks, which, in the digital economy, acquire a network character. While in the traditional model, risks were tied to the balance sheets of individual institutions and could be localized through regulatory constraints, in the modern financial system, they are formed through interactions among different elements of the digital infrastructure. This means that sources of instability can be not only financial imbalances, but also technological failures, algorithm errors, or disruptions in data flows that can quickly spread through interconnected systems (*Acemoglu & Restrepo, 2018; Brynjolfsson et al., 2021*). The network nature of systemic risks was empirically substantiated by E. Haldane and R. May, who showed that in a closely interconnected financial system, stability is determined by the topology of connections, and not by the balance sheet indicators of individual institutions, and the risks themselves have a nature similar to the propagation of shocks in ecological networks (*Haldane, 2009; Haldane & May, 2011*). This provision, formulated in relation to traditional banking networks, becomes increasingly relevant in the platform architecture of finance, where the density and speed of connections are qualitatively higher.

The change in systemic risks naturally leads to a transformation of competitive dynamics in the financial sector, since it is risks and the methods of their management that determine the market structure and the behavior of its participants. In the traditional model, competition took place between banks as institutions that competed for deposits, borrowers, and access to capital, using price and product instruments. In the digital economy, this logic changes, since control over the infrastructure through which economic agents interact becomes crucial. This means that competition shifts to the plane of financial architectures, where not only the creation of value but also control over the channels of its distribution and access to customers become key (*Allen et al., 2021; Philippon, 2019*). An institutionalized example of such a transformation is the second European Union Payments Directive (*Directive (EU) 2015/2366, PSD2*), which obliged banks to provide licensed third-party providers with standardized access to customer accounts through open programming interfaces and introduced the figures of payment initiation and account information service providers, which perform financial intermediation functions without having the status of a bank (*European Parliament, 2015*). Regulatory policy itself here acts as a factor in the transfer of intermediation from the level of banking institutions to the level of network interactions, which corresponds to the logic of institutional reversion: integrated functionality is reproduced at the platform level without the formal abolition of prudential separation. In such conditions, platforms that integrate payment services, lending, investment operations, and data processing acquire systemic significance and become new centers of economic power. They determine the rules of market access, establish standards for interaction, and perform coordination functions previously inherent in the banking system. This leads to a shift in the role of banks, which, from being the main organizers of financial flows, become participants in broader ecosystems, where their functions can be partially replaced or supplemented by technological solutions.

The change in competitive logic is directly related to changes in the strategies of economic agents, among which the transformation of investment behavior plays a key role. In the traditional model, investments were considered as a tool for expanding activities or increasing efficiency within the existing market structure. In the digital economy, they increasingly shape this structure, aiming to create and control infrastructures that determine the market's future configuration. It is in this context that the logic of out-investing emerges, which involves allocating resources to segments that do not yet deliver maximum profit but have the potential to become key elements of future financial ecosystems. This primarily concerns investments in platforms, data processing systems, algorithmic decision-making models, and digital interfaces that enable customer access and financial flows. This approach shifts the focus from optimizing current financial results to ensuring strategic control over the economic interaction environment (*Parker et al., 2016; Philippon, 2019*).

Out-investing involves changing the time horizons of decision-making, as economic agents are willing to accept short-term losses or reduced profitability in exchange for long-term dominance in key segments. This means that the criteria for investment effectiveness are expanding to include not only financial indicators, but also the ability to form dependencies of other market participants, set standards, and control value distribution channels. As a result, investments are turning into a strategic positioning tool that determines the distribution of economic power in the financial system. At the same time, such a transformation of investment activity is accompanied by increased complexity and

uncertainty, as it is associated not only with financial risks but also with technological and information risks. Investments in digital infrastructure require consideration of factors related to the reliability of technologies, data security, and the stability of algorithmic systems, which complicates decision-making and increases the need for risk management. This creates additional barriers to entry and contributes to the concentration of resources in the hands of those actors who can combine financial and technological competencies. In essence, the change in the logic of competition and investment activity is an interrelated process that shapes a new architecture of the financial system, in which control over infrastructure, data, and interaction mechanisms becomes a determining factor in development. It is in this plane that institutional reversion manifests itself as the reproduction of an integrated model of financial intermediation in a digital environment, where functions are combined not through institutional consolidation, but through technological coordination.

In parallel with the shift in investment behavior, regulatory approaches are being reoriented to address the inconsistency between traditional instruments and the new financial system structure. Regulation, built on the control of individual activities and institutional boundaries, faces limitations, since in the digital environment, the functions of attracting, allocating, making payments, managing risk, and processing information are implemented in a distributed manner. This means that one and the same financial transaction can include several participants, each of which formally belongs to different market segments, but is part of a single process. In such conditions, there is a need to transition from a regulatory framework focused on individual functions or institutions to one that accounts for the interdependence of the financial system's elements. The object of regulatory influence is not only the activities of individual entities, but also the architecture of their interaction, including digital platforms, data exchange protocols, and algorithmic decision-making mechanisms. This requires expanding the financial policy toolkit to combine elements of prudential supervision with oversight of technological infrastructure.

Within the framework of such transformation, the functional meaning of compliance also changes, ceasing to be an auxiliary tool for ensuring compliance with established norms and becoming an infrastructure mechanism for regulatory coordination. If, in the traditional banking model, compliance was associated with monitoring compliance with requirements in the areas of combating money laundering, terrorist financing, data protection, and sanctions regulation, then in the platform architecture of finance, it is integrated into the process of financial transactions itself through algorithmic monitoring and data processing systems. This means that compliance is transformed into embedded regulation, in which control is exercised not *ex post facto* but in real time through digital infrastructures that ensure the functioning of financial ecosystems. Such a transformation is directly related to institutional reversion, as it allows the restoration of the integration of control functions without reverting to rigid institutional demarcation. In parallel, the growth of financial intermediation segments operating outside traditional banking regulation reflects the structural market response to the limitations of a model built on institutional boundaries. Digital technologies lower entry barriers and enable the implementation of individual financial intermediation functions in a distributed manner, contributing to the development of a shadow banking sector in which integration of functions occurs outside the traditional regulatory framework.

In a broader theoretical perspective, this shift can be interpreted through the concept of re-embedding, proposed by K. Polanyi regarding the relationship between economic action and social structure (Polanyi, 1944) and developed by M. Granovetter in its application to economic networks (Granovetter, 1985). Financial activity, partially freed from the institutional framework of the industrial age, is re-embedded in a new infrastructural fabric formed by digital platforms, data exchange protocols, and algorithmic compliance mechanisms. Empirically, this process is captured in the EU Regulation on the Digital Operational Resilience of the Financial Sector (*Regulation (EU) 2022/2554, DORA*), which entered into full application on 17 January 2025 and for the first time established unified requirements for ICT risk management in twenty categories of financial institutions, as well as introduced direct supervision of critical third-party ICT service providers (European Parliament, 2022). The Regulation on Markets in Crypto-Assets (*Regulation (EU) 2023/1114, MiCA*), which is fully applicable from 30 December 2024, integrates the crypto-asset segment and its service providers into a unified regulatory framework (European Parliament, 2023). The combination of DORA and MiCA captures the transition from regulation built on functional

separation of activities to regulation that encompasses the architecture of the digital financial ecosystem.

The change in regulatory logic is also driven by the need to account for new types of risks arising in the digital financial system. These are risks that are associated not only with financial indicators but also with the technological characteristics of the system, including the stability of digital platforms, the reliability of algorithms, and data security. This means that the regulator must assess not only the financial stability of individual institutions but also their roles within the network structure and potential channels for the spread of shocks through digital infrastructures. (*Acemoglu & Restrepo, 2018; Brynjolfsson et al., 2021*). The issue of concentration of economic power in digital financial ecosystems is of particular importance. Control over platforms and data allows individual actors to determine the conditions of access to financial services, set standards of interaction, and influence the allocation of resources. This creates risks of monopolization and restrictions on competition that cannot be effectively regulated by traditional antitrust instruments focused on market share or price indicators. In the digital environment, the parameters of control over infrastructure and data become key, requiring the adaptation of approaches to assessing market power (*Parker et al., 2016*). The geo-economic dimension of the transformation of the financial system manifests in competition for control over global digital financial infrastructure. States and large corporations are investing in developing their own technological platforms, payment systems, and data exchange standards to ensure autonomy and reduce dependence on external solutions. This leads to the formation of alternative centers of influence and to the fragmentation of the global financial system, in which different regulatory regimes and technological ecosystems coexist and compete (*Allen et al., 2021; Philippon, 2019*).

Within such processes, the interaction between banks and fintech companies takes on new characteristics, combining competition and cooperation. Banks, on the one hand, retain access to financial resources and client bases; on the other hand, they are forced to adopt technological solutions to remain competitive. Fintech companies, in turn, use flexibility and technological specialization to quickly scale and enter different segments of the financial market. This forms a complex system of interdependencies, in which none of the participants can fully control the processes, yet each seeks to consolidate key positions within the digital infrastructure. These changes indicate that the financial system is moving to a state in which its functioning is determined not so much by the institutional structure as by the configuration of interactions between various actors within the digital environment. It is this configuration that determines the distribution of risks, access to resources, and the nature of economic power, which makes it the central object of both scientific analysis and regulatory policy.

The shift of the object of regulatory influence to the level of interactions and digital infrastructures necessitates a review of the instruments and principles of financial policy, since traditional mechanisms focused on balance sheet indicators and the activity standards of individual institutions do not adequately account for the network nature of the modern financial system. In the digital environment, the parameters of relationships, the speed of information exchange, the degree of dependence between participants, and the architecture of data flows that form new channels of risk and impact transmission become key. This means that regulatory policy must consider not only the individual characteristics of subjects, but also their position in the system of relationships, which determines the potential for the emergence and spread of shocks. A change in analytical focus leads to the development of approaches that treat the financial system as a complex adaptive ecosystem, in which the behavior of individual elements is determined not only by their internal parameters but also by their interactions with other elements. In such a system, stability is not a static characteristic but is formed through constant interaction, which requires new approaches to ensuring it. The regulator is forced to consider not only the probability of risks, but also the mechanisms of their spread, which are associated with the topology of network connections and the nature of information flows (*Acemoglu & Restrepo, 2018*).

In parallel, the structure of financial services is becoming more complex, increasingly integrated with non-financial services within digital platforms. This means that financial activity is no longer an autonomous sphere and is embedded in broader economic processes related to e-commerce, social networks, digital identification systems, and other types of online interaction. As a

result, the boundaries of the financial sector are blurring, and regulation must account for cross-industry interactions, increasing the complexity and multidimensionality of regulatory decisions. The growth of digital platforms' role in the financial system is accompanied by increased reliance on technological standards and protocols that govern interaction among participants. Control over such standards allows you to set the conditions for market access and build long-term competitive advantages, underscoring the importance of the infrastructure level of the economy. This means that competition between economic agents is increasingly taking place over the opportunity to determine the architecture of interaction, rather than just to offer financial products (*Parker et al., 2016*). In this context, the nature of interaction between national regulatory regimes is also changing, as digital financial infrastructures are transnational and can operate independently of individual jurisdictions' borders. This creates a situation in which regulatory decisions in one country can affect others, and the effectiveness of national policies depends on the possibility of international coordination. At the same time, differences in regulatory approaches and technological standards can lead to fragmentation of the global financial space and the formation of alternative centers of development (*Allen et al., 2021; Philippon, 2019*).

The deepening of these processes is changing the role of banks in the financial system, with banks increasingly functioning as elements of broader digital ecosystems rather than as autonomous institutions. Their competitiveness is determined by the ability to integrate into such ecosystems, use data and technological solutions, and adapt their business models to new conditions. This means that traditional sources of competitive advantage, such as asset scale or access to capital, are gradually being supplemented or replaced by factors related to technological capabilities and network position. The change in the role of banks and the nature of financial intermediation completes the formation of a new logic of the functioning of the financial system, within which the determining factor is not the institutional form, but the way in which the interaction between the functions of attracting resources, their placement, making payments, risk management, and information processing is organized. It is this organizational approach that determines the distribution of economic power, the structure of risks, and the direction of the financial sector's development, allowing us to consider digitalization as a key factor in its institutional transformation.

In this logic, *out-investing* is not a separate episode, but a mechanism through which economic agents consolidate their positions in the new architecture of the financial system. It is about changing the content of investment activity from placing capital to generate income to forming control over the nodes of the digital infrastructure through which financial intermediation is carried out. As a result, investments are directed primarily into platforms, interaction interfaces, data processing systems, algorithmic risk assessment models, and channels of access to client bases that determine the rules of the market and the possibilities of participation in it. This logic assumes that investment decisions are made not so much on current profitability indicators but rather on the potential to control future value flows. This means a shift in investment rationality from optimizing profitability to ensuring a strategic position in the system of interactions. In this sense, *out-investing* is associated with the creation of infrastructural advantages that enable long-term influence over resource allocation and access to financial services (*Parker et al., 2016; Philippon, 2019*).

An important characteristic of this approach is the change in investment time horizons, as economic agents are willing to accept short-term losses or reduced profitability in exchange for future control over key market segments. This creates a new configuration of incentives, in which investments are used to shape the market structure rather than just maintain it. As a result, competition between financial and technological actors takes on the character of a struggle for dominance in strategically important elements of the digital infrastructure. *Out-investing* also changes the nature of the interaction between banks and fintech companies, as both groups of participants use investments to consolidate their positions in digital ecosystems. Banks invest in technological solutions to maintain customer access and expand the functionality of their services, while fintech companies use investments to scale their platforms and create alternative channels of financial intermediation. This leads to the formation of a complex system of competitive-cooperative relations, within which the boundary between competition and cooperation is determined by the strategic goals of the participants.

The growth of the role of *out-investing* also has a geoeconomic dimension, as control over

digital financial infrastructure becomes an object of competition not only between companies but also between states. Investments in payment systems, digital currencies, data processing infrastructure, and technological standards are used to ensure economic sovereignty and influence global financial processes. This leads to the formation of alternative financial ecosystems that operate under different technological and regulatory approaches (*Allen et al., 2021*). Changing the logic of investment activity completes the formation of a new architecture of the financial system, in which control over infrastructure, data, and interaction mechanisms determines the distribution of economic power. In this context, *out-investing* acts not only as a tool of economic strategy but also as a key mechanism of institutional transformation, ensuring the transition from an institutionally organized to a platform model of financial intermediation.

The deepening of the outlined processes means that the financial system is moving into a state in which its structural characteristics are determined not so much by a set of institutions as by the configuration of the connections between them. In such a system, the functions of attracting, allocating, making payments, managing risk, and processing information are no longer rigidly assigned to individual entities, but are implemented in a distributed environment where interaction is ensured by digital platforms and technological protocols. This means that the financial system acquires the properties of an infrastructure network, in which the parameters of interaction, the speed of information exchange, and the structure of data access become key. A change in how financial functions are organized leads to the formation of a new logic of the distribution of economic power, determined by the ability to control not only resources but also the channels of their circulation. Control over platforms, algorithms, and data flows enables you to influence decision-making by other market participants, set access rules, and establish interaction standards. As a result, economic power is concentrated among actors occupying key positions in the network structure, regardless of their formal status in the financial system.

The functional role of banks is also being transformed, as they increasingly evolve from institutions providing a full cycle of financial intermediation into components of broader digital ecosystems. Their role is increasingly determined by their ability to integrate into such ecosystems, use data, and interact with other participants. This means the boundary between the banking and non-banking sectors is becoming less clear, and the financial system is becoming hybrid in structure. The change in interaction between financial market participants is accompanied by the complication of coordination mechanisms, which are increasingly based on algorithmic solutions and automated processes. This increases operational efficiency and the speed of information processing, but at the same time creates dependence on technological systems, thereby creating a new type of vulnerability. Risks depend not only on financial parameters but also on the quality of technological infrastructure and the stability of digital networks. Within this logic, regulatory policy must consider that the object of influence is not an isolated institution, but a system of interactions that forms the financial ecosystem. It is considered necessary to develop approaches to monitor and manage network effects, analyze data concentration, and assess the role of individual platforms in maintaining system stability. This approach allows us to move from reactive regulation to preventive regulation focused on preventing systemic failures. The completion of this analytical circuit allows us to consider the digitalization of finance as a process that changes not only the instruments but also the institutional logic of the financial system's functioning. It determines how functions are combined, the structure of interactions, the nature of risks, and the distribution of economic power, thereby forming a new architecture of financial intermediation. In this architecture, integration is carried out through technological mechanisms, competition unfolds in the infrastructure plane, and investment activity is aimed at controlling key nodes of the system, reflecting the essence of institutional reversal as a basic process in the modern development of the financial sector.

The digitalization of finance within the process of institutional reversion changes not only the way financial intermediation functions are combined, but also the principles for directing financial resources, as evidenced by the transformation of financing mechanisms for sustainable development. If, in the regulatory model shaped by functional separation, the consideration of environmental, social, and governance parameters was mainly an external add-on to financial decisions, then in the platform architecture, these parameters are integrated into the decision-making process itself through algorithmic models and digital infrastructures. This means that ESG criteria cease to function as a

post-facto assessment tool and become an internal element of digital financial intermediation, determining access to financial resources through algorithmic selection. In this context, green transition financing acquires an infrastructural character, since its effectiveness depends on the architecture of the platforms through which resources are distributed, thereby connecting it to the transformation of banking regulation from a model of institutional separation to one of technological integration. Within this logic, control over digital financial infrastructures means control over the mechanisms for directing investment flows, which turns sustainable development financing into an element of competition in financial architectures, while algorithmic project selection creates new risks of asymmetric access to financing that cannot be explained within traditional regulatory approaches and requires taking into account the network nature of the financial system.

Conclusions. The study reveals the transformation of banking regulation in the context of the digitalization of finance as a process of institutional reversion, within which the combination of the functions of attracting resources, their allocation, making payments, risk management and information processing is transferred from the institutional level to the level of digital infrastructure, which allows us to explain the discrepancy between formal regulatory fragmentation and the de facto integrated organization of financial intermediation. The change in the way these functions are integrated forms the network architecture of the financial system, in which the configuration of interactions between participants, control over platforms and data flows determine access to resources, the nature of competition and the distribution of economic power, which is increasingly concentrated in those actors that occupy key positions in the digital infrastructure, while banks transform their role and function as elements of broader digital ecosystems. In this context, institutional reversion manifests itself as the reproduction of an integrated model of financial intermediation in a new technological form, where functions previously separated for risk limitation are combined through platforms and algorithmic mechanisms, which changes the place of integration, transforms the channels of risk transfer, and defines a new logic of regulatory influence. The network nature of the financial system shapes the transformation of systemic risks arising from interactions among platforms, algorithms, and data flows, underscoring the importance of technological factors in ensuring financial stability and necessitating the regulation of interdependencies within financial ecosystems.

The shift of competition to the plane of infrastructure and standards is accompanied by a change in investment behavior, in which the logic of *out-investing* emerges, aimed at ensuring long-term control over key elements of the digital financial infrastructure and shaping the future market structure. The digitalization of finance simultaneously changes the conditions for financing sustainable development, as the efficiency of resource mobilization increasingly depends on mechanisms for distributing resources within digital ecosystems, which expand financing opportunities while also creating risks of asymmetric access to financial infrastructure. The results obtained confirm that the evolution of banking regulation in the digital economy is not a linear deregulation, but reflects an institutional reversion, within which platform banking acts as a form of reproduction of an integrated architecture of financial intermediation, which directly reveals the content of the stated research topic and determines the directions of further transformation of the financial system.

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