


ФИНАНСЫ И БАНКОВСКОЕ ДЕЛО

Next-Generation Banking Technologies in the Context of Digital Transformation

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Բանկային տեխնոլոգիաների հաջորդ սերունդը՝ թվային վերափոխման համատեքստում Սարգսյան Հայկ Ա.

Տնտեսագիտության թեկնածու, դասախոս, Ֆինանսական շուկաների և ինստիտուտների ամբիոնի Կիրառական ֆինանսների ֆակուլտետ, Հայաստանի պետական տնտեսագիտական համալսարան (Երևան, ՀՀ)

Ամփոփագիր. Վերջին միտումները բանկային ոլորտում ցույց են տալիս տեխնոլոգիական և մշակութային էական փոփոխություններ, որոնք փոխում են բանկերի դերերը, բիզնեսի ռազմավարությունները և հաճախորդների սպասելիքները: Բնականաբար, արհեստական ինտելեկտը այս փոփոխությունների գլխավոր խթանող ուժն է, բարելավելով բանկերի գործառնական արդյունավետությունը, հնարավորություն ընձեռելով անհատականացված ֆինանսական ծառայությունների մատուցմանը և բարելավելով ռիսկերի կառավարման մեթոդները: 2024 թվականի KPMG-ի զեկույցը [15] ցույց է տալիս, որ կազմակերպությունների 71%-ը արդեն ընդունել են ԱԲ տեխնոլոգիաները ֆինանսների ոլորտում, ինչն ենթադրում է ներդրման վերադարձի ապահովում: ԱԲ-ն լայնորեն կիրառվում է ֆինանսական հաշվետվությունների պատրաստման, գանձապետական համակարգի, ռիսկերի կառավարման և հարկաբյուջետային քաղաքականության մեջ, իսկ կազմակերպությունները մշակել են պատասխանատու ԱԲ չափորոշիչներ՝ նրա էթիկական կիրառման համար: Բաց բանկային մոդելը խթանում է համագործակցությունը բանկերի և երրորդ կողմերի միջև, ինչը հանգեցնում է նորարարական լուծումների և ավելի ընդգրկուն հաճախորդների բազայի ընդլայնման: Հաճախորդների սպասելիքների փոփոխությունները ևս ազդում են բանկերի վրա, որպեսզի նրանք ավելի հարմարեցված ծառայություններ առաջարկեն՝ օգտագործելով տվյալների վերլուծություն: Բյուջեյն տեխնոլոգիան ապահովում է տվյալների անվտանգությունը և թափանցիկությունը՝ ավելացնելով վստահությունը փոխհատուցման վճարների և խելացի պայմանագրերի նկատմամբ: Ավտոմատացված բանկային գործընթացները, ուժեղացված կիրառական տնտեսագիտությունը և բարելավված տվյալների պաշտպանությունը նվազեցնում են ծառայությունների ծախսերը՝ միաժամանակ բարձրացնելով անվտանգությունը: Ներբանկինգի անը՝ հատկապես թվային բանկերի միջոցով, առաջարկում է ավելի արագ, հարմարավետ և արդյունավետ ծառայություններ: Այս տեխնոլոգիական առաջընթացները ոչ միայն բարձրացնում են բանկերի մրցունակությունը, այլև ստեղծում են հնարավորություններ ավելի արդյունավետ և հաճախորդի կողմնորոշված ծառայությունների մատուցման համար: Ժամանակի ընթացքում այս փոփոխությունները կարող են ամբողջովին փոխել բանկային գործունեության բնույթը:

Հանգուցաբառեր և բառակապակցություններ՝ թվային վերափոխում, հաջորդ սերնդի բանկինգ, կենտրոնական բանկերի թվային արժույթներ, ներբանկեր, ֆինտեխի նորարարություն, արհեստական բանականությունը բանկային ոլորտում, բաց բանկային համակարգ, կիրառական տնտեսագիտություն, վճարումներ իրական ժամանակում:

Следующее поколение банковских технологий в контексте цифровой трансформации

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Аннотация. Недавние тенденции в банковском секторе указывают на значительные технологические и культурные изменения, которые формируют новые роли банков, бизнес-стратегии и ожидания клиентов. Искусственный интеллект является основным драйвером этих изменений, повышая операционную эффективность, позволяя предоставлять персонализированные финансовые услуги и улучшая методы управления рисками. Согласно отчету KPMG за 2024 год, 71% организаций уже внедрили технологии ИИ в финансовом секторе, что привело к значительным возвратам на инвестиции. ИИ широко используется в подготовке финансовой отчетности, казначейских системах, управлении рисками и налоговой политике, при этом организации разрабатывают руководящие принципы ответственного использования ИИ для обеспечения этического применения. Модель открытого банкинга способствует сотрудничеству между банками и третьими сторонами, что приводит к инновационным решениям и расширению клиентской базы. Изменение ожиданий клиентов также оказывает влияние на банки, заставляя их предлагать более адаптированные услуги с использованием анализа данных. Технологии блокчейн обеспечивают безопасность данных и прозрачность, повышая доверие к платежам и смарт-контрактам. Автоматизация банковских процессов, усиленная кибербезопасность и улучшенная защита данных снижают затраты на услуги, одновременно повышая уровень безопасности. Рост нео-банкинга, особенно через цифровые банки, предоставляет более быстрые, удобные и эффективные услуги. Эти технологические достижения не только повышают конкурентоспособность банков, но и открывают возможности для более эффективного и ориентированного на клиента предоставления услуг. Со временем эти изменения могут радикально изменить природу банковских операций.

Ключевые слова и словосочитания: цифровая трансформация, банковское дело следующего поколения, цифровые валюты центральных банков, необанки, финансовые технологии, искусственный интеллект в банковском деле, открытое банковское дело, кибербезопасность, платежи в реальном времени

Introduction. The banking sector is undergoing a profound transformation driven by technological advancements and shifting customer expectations. Digital transformation, accelerated by innovations in artificial intelligence, blockchain, and fintech, is reshaping the way banks operate and engage with their clients. These changes are not only enhancing operational efficiency but also fostering the development of more personalized and accessible financial services. As customer needs evolve, banks are increasingly adopting technologies like open banking and neobanks to provide tailored services and improve the overall customer experience. Furthermore, the rise of digital currencies, such as Central Bank Digital Currencies, and the integration of cybersecurity measures are pushing the boundaries of secure and seamless financial transactions. The next-generation banking technologies are setting the stage for a more connected, efficient, and customer-centric financial ecosystem, where innovation and sustainability drive the future of financial services. This ongoing digital revolution is redefining the role of banks in the modern economy.

Literature Review. According to Gyau et al. (2024), artificial intelligence technology innovation significantly enhances banks' financial performance, particularly return on assets, across a diverse panel of 20 countries. The study identifies economic growth and information and communication technology (ICT) development as critical contextual enablers that amplify AI's effectiveness. However, diminishing marginal returns are observed over extended periods, suggesting that sustained innovation may lead to inefficiencies or increased operational costs. Additionally, non-performing loans adversely impact profitability, while

regulatory capital and economic growth contribute positively. The authors recommend fostering AI innovation ecosystems, modernizing regulatory frameworks, and strengthening ICT infrastructure to fully realize AI's transformative potential in the banking sector [11].

According to Broby (2021), the theory of banking must be revisited in light of digital transformation, which is redefining the structure and function of financial intermediation [7]. Drawing on the foundational work of Klein (1971) and reinterpreting Schumpeter's (1911) classical views, the paper examines how fintech innovations, internet connectivity, and open banking reshape trust, competition, and the intermediary role of banks [14, pp. 205-218; 20]. Key challenges identified include the moral hazard posed by undercapitalized challenger banks, the adequacy of deposit insurance in a digitized context, and the rise of peer-to-peer lending platforms. The paper raises important questions about online bank runs, establishing digital trust, and the nature of cross-border financial competition. It emphasizes the growing disintermediation of traditional banking and the cost-reducing impact of technology, while reaffirming the continued relevance of capital adequacy and credit risk. Broby concludes that despite profound technological shifts, trust, deposit-taking, and regulatory oversight will remain central to banking. The study calls for renewed empirical inquiry and theoretical adaptation in response to an evolving digital financial landscape.

Hughes, Seddon, and Dwivedi (2023) investigate the complex challenges of digital transformation in the FinTech sector through a mixed-methods approach combining Interpretive Structural Modelling, Analytical Hierarchy Process,

and expert interviews. Their findings reveal critical interdependencies among transformation factors, emphasizing the necessity of digital infrastructure investment, stakeholder support, and a digital mindset. The study offers methodological innovation and valuable insights into organizational adaptation under regulatory pressure and technological disruption [12, pp. 1-19].

Feyen et al. (2021) develop a structural framework grounded in economic frictions and forces to analyze the digital transformation of financial services. They demonstrate how technological advances lower transaction costs and unbundle services, while persistent scale economies and network effects drive market concentration, necessitating coordinated regulatory responses to preserve competition, stability, and inclusion [8].

Bi and Bao (2024) conceptualize the transformative impact of artificial intelligence on credit risk management in banking. Through advanced analytics, deep learning, and real-time monitoring, AI systems enhance predictive accuracy, optimize credit decision-making processes, and fortify early warning mechanisms—contributing to a paradigm shift in financial risk governance under digital transformation pressures [6].

Stefanelli, V., Manta, F., & Toma, P. (2022) examine European banks' strategic responses to digital transformation driven by Fintech emergence. Introducing the "invisible bank" concept, the study explores how API-based integration, open banking, and external partnerships redefine traditional banking. The authors discuss critical regulatory, managerial, and structural implications, especially regarding customer engagement, platform-based competition, and the evolving supervisory frameworks in a digitized financial ecosystem [21].

According to Meah (2024), the integration of digital technologies, including artificial intelligence, blockchain, and mobile banking, is transforming the financial sector. Meah argues that these advancements significantly improve operational efficiency, enhance security protocols, and provide more personalized customer experiences. He suggests that the continued evolution of digital banking will be crucial in meeting the demands of a tech-savvy global consumer base [17].

According to Shujie Feng (2024), the integration of Artificial Intelligence into financial services has significantly enhanced operational accuracy, efficiency, and capabilities. AI has transformed risk assessment processes through deep learning and machine learning, utilizing both traditional and unconventional data sources like social media. Feng emphasizes AI's role in improving fraud detection, personalizing customer experiences, and enhancing financial forecasting,

algorithmic trading, and regulatory compliance. He also highlights AI's potential in reshaping Environmental, Social, and Governance models, offering more accurate predictions and improving corporate sustainability [9, pp. 19-24].

Balou and Loison (2025) investigate Generation Z's (born 1997-2001) preferences and behaviors in digital banking in Canada, revealing a strong inclination towards mobile banking, trust in security measures, and a preference for ethical and personalized marketing. The study highlights the significant role of family influence over social media in banking decisions. It emphasizes that financial institutions must adapt to these preferences by offering mobile-friendly, secure platforms with culturally responsive features. The research suggests that future studies should examine the evolving impact of emerging technologies like blockchain and AI on Gen Z's banking behaviors [3].

Kandpal, Ozili, Jeyanthi, Ranjan, and Chandra (2025) critically examine the transformative effects of digital finance on the banking and financial services sectors. The authors assert that innovations in digital finance are disrupting traditional banking models, necessitating digital transformation for financial institutions to remain competitive. Furthermore, they emphasize that regulatory, technological, and geopolitical factors will play a decisive role in shaping the future evolution of the industry. This shift towards digitalization is expected to redefine market dynamics and customer engagement strategies in the financial services landscape [13, pp. 171-180].

McKinsey & Company (2024) outlines that the integration of artificial intelligence in the banking sector must evolve from isolated pilot programs to enterprise-wide transformation. This shift necessitates a strategic overhaul across customer engagement, decision-making, technology modernization, and the implementation of platform-based operating models. Institutions adopting an "AI-first" approach are positioned to extract substantial business value through aligned digital transformation initiatives [16].

Research Methodology. This study utilizes a mixed-methods approach combining qualitative and quantitative methodologies to explore the impact of emerging technologies on digital banking transformation. The qualitative analysis involves a systematic review of secondary literature, including academic journals, institutional reports, and policy papers from reputable sources such as the World Bank, the Bank for International Settlements, and McKinsey & Company. This analysis focuses on identifying key technological innovations, such as artificial intelligence, central bank digital currencies, open banking, and neobanking, and their influence

on the banking sector's operational structure and market dynamics. The quantitative component draws on secondary data to assess industry trends and growth trajectories, particularly in the areas of real-time payments, digital currencies, and fraud prevention technologies. Key data sources include reports from Mordor Intelligence, The Business Research Company, and StartUs Insights. Statistical tools such as compound annual growth rate (CAGR) are employed to evaluate market adoption and future projections. Additionally, the study adopts a comparative framework to contrast technological adoption and regulatory readiness across regions, comparing developed economies (e.g., the EU, U.S., China) with emerging markets (e.g., Nigeria, India, Jamaica). This research is focused on macro-level analysis and does not involve primary data collection or case-specific studies, providing a broad overview of the ongoing digital banking transformation. This research methodology ensures a comprehensive understanding of technological advancements in banking while supporting evidence-based policy recommendations and strategic insights.

Analysis. According to David R. Prasser, the banking industry in 2025 is undergoing a significant transformation led by technological innovation and data-centric strategies. Based on insights from the Banking Innovation Map, Prasser emphasizes the impact of startups and scaleups in accelerating developments such as digital currencies, Banking-as-a-Service (BaaS), embedded finance, real-time payments, and AI-driven automation. These innovations enhance operational efficiency, reinforce cybersecurity, and redefine customer engagement.

The top 10 banking trends shaping this evolution include [19]:

- Cybersecurity & Fraud Prevention through AI-based threat detection,
 - AI-driven Banking Automation improving efficiency and service,
 - Digital Currencies like CBDCs transforming transactions,
 - Real-Time Payments meeting immediate liquidity needs,
 - Banking-as-a-Service expanding access via API-driven models,
 - Open Banking promoting data sharing and innovation,
 - Neobanks offering digital-first, low-cost services,
 - Embedded Finance integrating financial tools into everyday platforms,
 - Customer Data Analytics enabling personalization and risk management, and

- Digital Identities ensuring secure, seamless access in remote environments.

The rapid adoption of digital banking services like digital payments, lending, credit services, treasury management, and more is expanding the cyber-attack surface. Also, the collaboration of banks with external vendors to improve services introduces cyber risks. Phishing is another major threat in banking, where cybercriminals use fake emails, texts, or websites to steal account details, passwords, or personal data.

The fraud detection and prevention market for 2025 is comprehensively segmented into several key categories based on various dimensions. In terms of fraud types, the market is divided into check fraud, identity fraud, internet or online fraud, investment fraud, payment frauds, insurance fraud, and other types of fraud. Specifically, check fraud is further categorized into forged, counterfeit, and altered checks. Identity fraud includes identity theft, synthetic identity fraud, and account takeover. Internet fraud encompasses phishing scams, online auction fraud, and e-commerce fraud. Payment fraud includes credit card fraud, mobile payment fraud, and ACH fraud, while insurance fraud is divided into health, auto, and property insurance fraud. Additional fraud types include tax, charity, and employment fraud.

The deployment modes for fraud detection and prevention solutions are either cloud-based or on-premises. With regard to solutions, the market covers fraud analytics, authentication systems, reporting tools, and visualization technologies, alongside other specialized fraud prevention solutions. In terms of applications, the technology is primarily used for insurance claims, money laundering detection, and electronic payment systems. The end users of fraud detection technologies are largely categorized into small and medium-sized enterprises and large enterprises. The geographical scope of the market includes diverse regions such as Asia-Pacific, Western Europe, Eastern Europe, North America, South America, the Middle East, and Africa, ensuring global applicability and reach. The specific countries covered in the report include major economies such as Australia, Brazil, China, France, Germany, India, Indonesia, Japan, Russia, South Korea, the UK, the USA, Canada, Italy, and Spain. Additional countries within this scope include Bangladesh, Thailand, Vietnam, Malaysia, Singapore, the Philippines, Hong Kong, New Zealand, Mexico, Chile, Argentina, Colombia, Peru, Austria, Belgium, Denmark, Finland, Ireland, Netherlands, Norway, Portugal, Sweden, Switzerland, Czech Republic, Poland, Romania, Ukraine, Saudi Arabia, Israel, Iran, Turkey, UAE, Egypt, Nigeria, and South

Africa. Key players driving the market are prominent companies such as IBM Corporation, Fair Isaac Corporation, Oracle Corporation, SAS Institute Inc., BAE Systems plc, DXC Technology, SAP SE, ACI Worldwide Inc., Fiserv Inc., ThreatMetrix, NICE Systems Ltd., Equifax Inc., Cybersource Corporation, Global Payments Inc.,

Experian Information Solutions Inc., TransUnion LLC, RSA Security LLC, LexisNexis Risk Solutions, Kount Inc., Feedzai Inc., Featurespace Inc., Pindrop Security Inc., Simility Inc., Signifyd Inc., Sift Science Inc., Idology Inc., and Total System Services Inc.

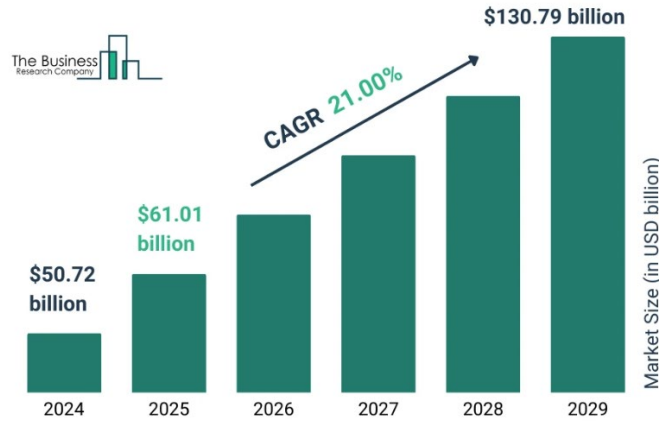


Figure 1. *Fraud Detection and Prevention Global Market Report 2025, billion USD*
 Source: The Business Research Company. (n.d.). *Fraud detection and prevention global market report.*

The fraud detection and prevention market has experienced substantial growth in recent years. It is projected to increase from USD 50.72 billion in 2024 to USD 61.01 billion in 2025, reflecting a compound annual growth rate of 20.3%. Over the subsequent period, the market is expected to continue expanding, reaching USD 139.79 billion by 2029, with a CAGR of 21.0%. This growth can be attributed to several key factors, including the increasing digitization of financial transactions, the rise of online banking and e-commerce, the growing complexity of fraudulent techniques, the need for enhanced regulatory compliance, and the expansion of mobile and online payment systems [22].

The Real-Time Payments Market size is estimated at USD 34.99 billion in 2025, and is

expected to reach USD 156.91 billion by 2030, at a CAGR of 35% during the forecast period (2025-2030).

Real-time payments typically focus on low-value retail payment systems (RPS); they differ from real-time gross settlement systems (RTGS) and distributed ledger payment systems. In addition to meeting the demands and expectations, real-time payments have generated interest from regulators, competition authorities, and payment service providers. Regulators believe that instant payments will expand access to banking services, support economic growth, provide alternatives to Visa/Mastercard networks and reduce the use of cash and cheques [18].

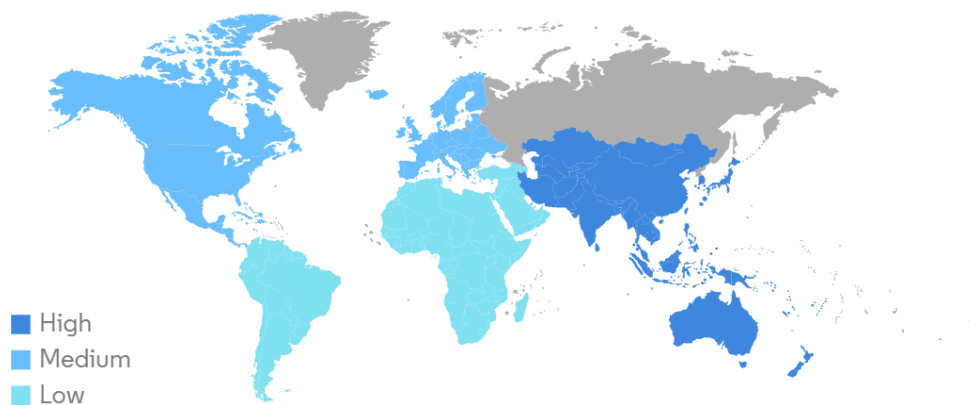


Figure 2. *Global Real-Time Payments Market – Growth Rate by Region*
 Source: Mordor Intelligence

The competitive rivalry in the Real-Time Payments Market is moderately high, as the market comprises many large vendors that command a prominent market share besides having access to well-established distribution networks. With consumer preferences changing rapidly, the Real-Time Payments Market has become a lucrative option and, thus, has attracted huge investments. The service providers are engaging in partnerships to promote product innovation. Some of the prominent vendors in the market include ACI Worldwide Inc., Fiserv Inc., Paypal Holdings Inc., and Mastercard Inc.

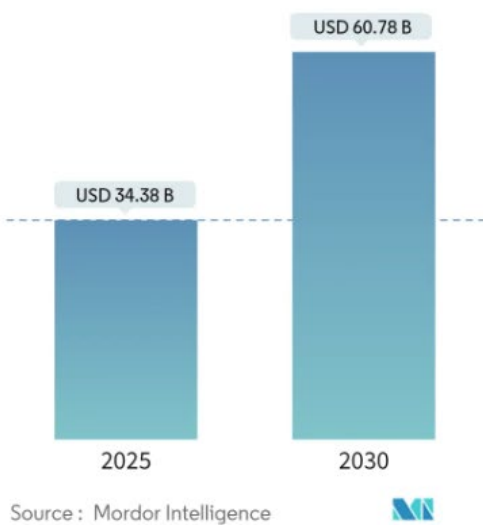
Apr 2023: Visa announced a partnership with PayPal and Venmo to pilot Visa+, an innovative service that aims to enable individuals to move money quickly and securely between different person-to-person (P2P) digital payment apps. Later in 2023, Venmo and PayPal users in the United States will be able to start moving money seamlessly between the two platforms. CRED

introduced its UPI-based P2P payments, providing its users with a new payment option. The feature enables CRED members to access 'pay anyone' through their contact list, phone numbers, or UPI IDs.

Digital currencies, including cryptocurrencies and central bank digital currencies, are rapidly reshaping global finance. In 2025, increased institutional adoption, CBDC advancements, and regulatory clarity are accelerating mainstream integration. The gambling industry, known for embracing innovation, is leveraging digital currencies for faster payments, enhanced privacy, and global access. Technologies like DeFi, NFTs, and the metaverse are redefining player experiences, while improved blockchain infrastructure drives scalability and security. With ongoing economic shifts and tech-savvy consumer demand, digital currencies are becoming vital tools in modern commerce [10].

Digital Currency Market

Market Size in USD Billion
CAGR 12.07%



Study Period	2019 - 2030
Market Size (2025)	USD 34.38 Billion
Market Size (2030)	USD 60.78 Billion
CAGR (2025 - 2030)	12.07 %
Fastest Growing Market	Asia Pacific
Largest Market	North America
Market Concentration	Low

Major Players



Figure 3. Digital Currency Market Size, billion USD

The Digital Currency Market size is estimated at USD 34.38 billion in 2025, and is expected to reach USD 60.78 billion by 2030, at a CAGR of 12.07% during the forecast period (2025-2030). The digital currency ecosystem is rapidly evolving due to technological innovations, regulatory developments, and shifting consumer behaviors. Over 132 countries, representing 98% of global GDP, are exploring or implementing Central Bank Digital Currencies, with China, Jamaica, and

Nigeria already operational. Financial institutions are heavily investing in digital assets, especially after the approval of Bitcoin ETFs. Key trends include real-world asset tokenization and the rise of decentralized finance (DeFi), which reached over USD 100 billion in value. However, cybersecurity risks persist. The COVID-19 pandemic significantly accelerated adoption, positioning digital currencies as both a payment solution and hedge against economic volatility [18].

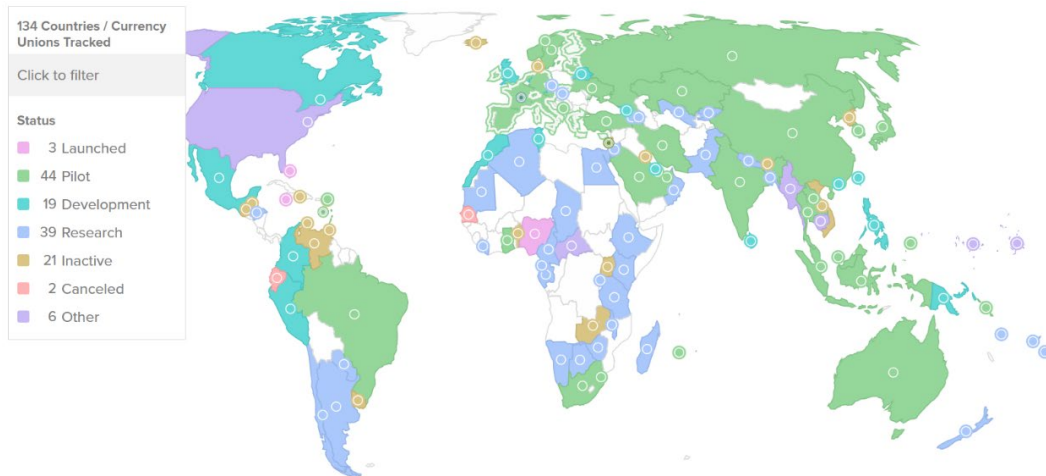


Figure 4. Geopolitical Distribution and Developmental Stages of Central Bank Digital Currencies in 134
 Source: Atlantic Council. 2025

Countries As of 2025, 134 countries and currency unions—representing 98% of global GDP—are exploring Central Bank Digital Currencies, a dramatic increase from just 35 in 2020. Sixty-six nations are in advanced phases, with 44 active pilots, including the digital euro. Every G20 country is engaged, and 19 are in advanced exploration. Three countries—Bahamas, Jamaica, and Nigeria—have fully launched retail CBDCs.

BRICS members are piloting CBDCs, and cross-border projects like Project mBridge are expanding. China’s digital yuan (e-CNY) leads globally, with \$986 billion in transaction volume. The U.S. participates in wholesale trials but debates continue on retail issuance. Three CBDCs—Bahamas, Jamaica, and Nigeria—are fully launched and currently in active domestic circulation [1].

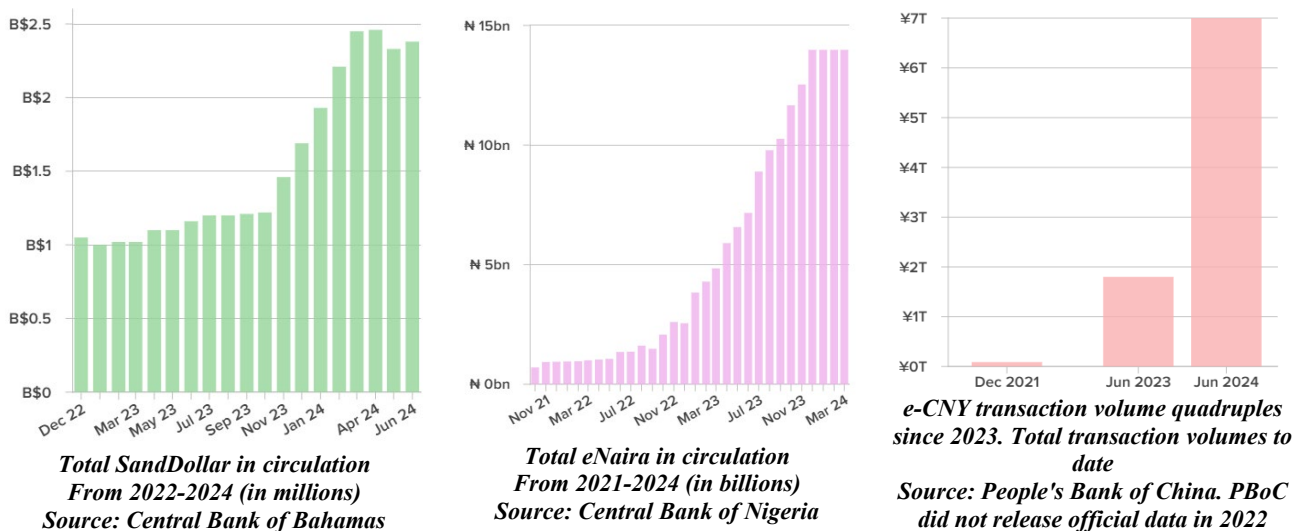


Figure 5. CBDC Circulation and Transaction Volumes: Bahamas, Nigeria, China

Auer and Boehme (2021) conceptualize a “hybrid” retail CBDC architecture wherein the central bank maintains a direct ledger of all end-user holdings, ensuring that funds remain immune to the credit risk of payment service providers (PSPs). PSPs interface with the central bank’s core ledger via standardized application programming interfaces to deliver front-end services. In this context, Project

Rosalind (BIS, 2023b) developed and validated a prototype API layer comprising 33 endpoints across six functional domains. Through over 30 tested use cases, the project demonstrated that a harmonized API framework can facilitate innovation, interoperability, and functional diversity within evolving CBDC ecosystems [2].

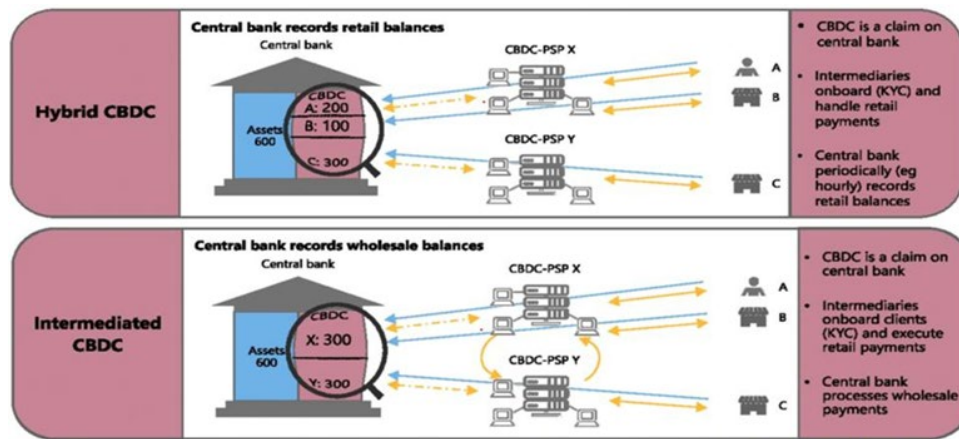


Figure 6. Multi-Tier Operating Models

In an “intermediated” central bank digital currency architecture, the central bank maintains a ledger solely for wholesale CBDC balances held by payment service providers, rather than individual retail accounts. This model is often favored due to considerations of privacy, data minimization, and cybersecurity. Nonetheless, the central bank remains ultimately liable for honoring end-user claims in cases of PSP insolvency or data loss, necessitating reliance on the accuracy and availability of PSP-maintained retail records. Consequently, robust oversight mechanisms are required to ensure that aggregate retail balances consistently reconcile with corresponding wholesale CBDC holdings recorded at the central bank.

Innovative technologies have enabled new digital-only financial service providers, such as neobanks and fintechs, to enter the market. Neobanks, typically targeting individuals and small businesses, leverage modern digital infrastructure to offer services faster and more cost-effectively than traditional banks. However, they face challenges, such as unstable deposit funding. Fintechs, specializing in particular financial services, rely on

digital channels to acquire customers and primarily offer services in payments, lending, and investments. These companies may not be subject to traditional banking regulations, raising concerns about their regulatory oversight and stability [5].

The Fintech and the Future of Finance report (World Bank, 2022) provides a comprehensive analysis of the competitive dynamics within the global financial sector, as influenced by the rapid evolution of fintech and digital technologies. The findings indicate that traditional financial institutions, such as banks, primarily perceive competition from their direct counterparts, including other banks and neobanks. In contrast, fintech firms do not regard traditional banks as their primary competitors, instead identifying other fintech firms—both domestic and international—as well as neobanks as more pressing sources of competition [24]. Figure 7 quantifies these perceptions, presenting competitiveness scores across different institution types, highlighting the nuanced ways in which various financial entities assess their competitive landscape.

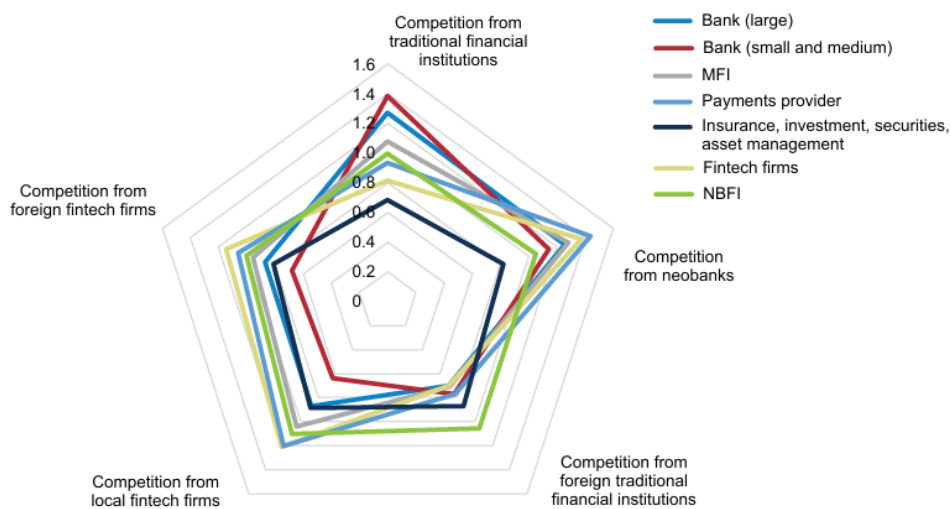


Figure 7. Map of average competition expectations by responding institution type (0-2)

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

For this part of the analysis, institutions were categorized into the following types: large banks, small and medium-sized banks, fintech firms, payments providers, microfinance institutions (MFIs), non-bank financial institutions (NBFIs), and insurance, securities, and asset management firms. Respondents were asked to express their perceived degree of competition from each competitor type, with the following sentiment values assigned: Great Degree (+2), Moderately (+1), Not much (0), and Negligible or not at all (0). The average sentiment for each responding institution type regarding

competition from each competitor type was then calculated. As a result, each institution type-competitor type pair could have a maximum average competitiveness score of 2 and a minimum score of 0.

The neobanking market, comprising digital-only banks without physical branches, has experienced rapid expansion, offering services such as payments, lending, money transfers, and savings accounts, primarily targeting tech-savvy individuals and businesses.

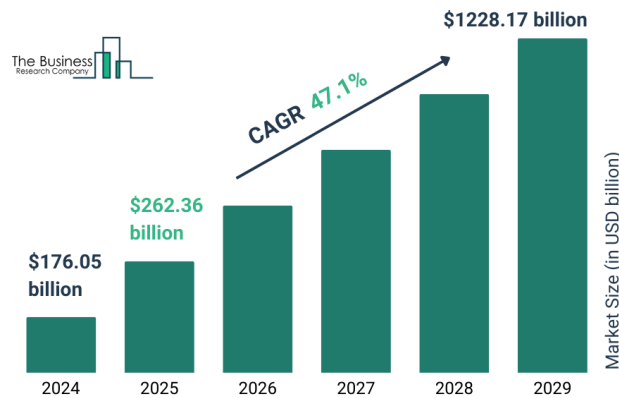


Figure 1. *Neobanking Global Market Report, billion USD*

Source: *The Business Research Company. (n.d.). Neobanking Global Market Report 2025*

The market size, valued at \$176.05 billion in 2024, is projected to grow to \$262.36 billion in 2025, reflecting a compound annual growth rate of 49%. By 2029, the market is anticipated to reach \$1,228.17 billion, driven by factors such as open banking, embedded finance, and advancements in AI for personalized finance. Key growth drivers include regulatory frameworks, cost efficiency, and financial inclusion efforts [23].

Conclusion. The digital transformation of the banking sector, characterized by technologies such as artificial intelligence, blockchain, Central Bank Digital Currencies, open banking, and neobanking, has profound implications on the operations and strategic landscape of financial institutions. This study highlights the impact of these innovations in improving operational efficiency, fostering financial inclusion, and creating new models of competition within the financial industry. AI technologies, including machine learning and automated customer service systems, have enhanced service delivery, reduced operational costs, and opened up new business opportunities. Blockchain technology has revolutionized the transparency and security of financial transactions, while open banking has provided a framework for third-party developers to create new services, driving innovation in financial products. Neobanks, by bypassing traditional

banking infrastructures, offer more flexible and accessible financial services, expanding the reach of banking to underserved populations. CBDCs are emerging as a novel approach to modernizing monetary systems, with the potential to enhance transaction efficiency and streamline cross-border payments. Their adoption is particularly relevant in emerging markets, where digital banking can bridge gaps left by traditional financial infrastructure. In conclusion, the digital transformation of the banking sector is an ongoing process, presenting both challenges and significant opportunities. Technological advancements, regulatory frameworks, and changing consumer demands will continue to shape the future of banking, resulting in more efficient, secure, and inclusive financial ecosystems.

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