

**Digital trends in financial institutions:
challenges and strategic responses for management**

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ABSTRACT

This paper analyzes the digital transformation of the financial sector, including banking, insurance, investment funds, and microcredit organizations (MCOs). It identifies key digital trends such as FinTech, Artificial Intelligence (AI), and Blockchain, and examines their effects on business performance and regulatory requirements. The study highlights management challenges, especially the need for skilled staff and ongoing investment in technology. Its main objective is to present strategic solutions for overcoming digitalization challenges, with a focus on Bosnia and Herzegovina, and to outline future directions for performance improvement. The research finds that partnering with FinTech companies is the most effective strategy and offers a new analytical framework for addressing digital challenges in transition economies.

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1. Introduction

The global financial landscape is undergoing a radical transformation driven by rapid technological advancements. This shift is primarily fuelled by the emergence of innovative technologies such as FinTech, Insurtech, Blockchain technology, Artificial Intelligence (AI), and Big Data analytics. These digital trends are fundamentally altering traditional business models, pushing financial institutions beyond their conventional service offerings (Braun & Schreiber, 2017; Klus et al., 2019; D'Acunto & Rossi, 2021). Consequently, a deeper understanding of these concepts is crucial for all stakeholders, particularly management, across banking, insurance, investment funds, and microcredit organizations.

The research problem stems from the speed and scope of digital transformation, which is radically changing the operations of financial institutions. Key challenges include the uncertainty regarding the long-term impact of new technologies (such as Artificial Intelligence and Blockchain) on traditional business models. This also encompasses the need for appropriate legal regulation of digital products and specific challenges faced by management. The subject of the research thus encompasses digital trends within the financial sector. Detailed analysis focuses on four main areas: banking, insurance companies, investment funds, and microcredit organizations (MCOs). The focus is on identifying and analysing new digital products (such as FinTech, Insurtech, and Robo-Advisors) and their impact on operational efficiency and management's strategic decisions.

The primary research aim is to highlight possibilities for overcoming the aggravating factors of digitalization in the financial sector and to define directions for future improvements in business performance within the new digital environment. Accordingly, the main question is posed: What challenges do financial institution managers face when introducing and integrating digital products and services? The paper proceeds from the following research hypothesis (H): The introduction of digital products and services compels financial institution management to undertake significant staffing and investment changes, with collaboration with FinTech companies representing the most effective strategic response to new competition.

2. Literature Review and Hypotheses Development

2.1. *The Framework of Digital Transformation: Industry 4.0 and the Financial Sector*

The current wave of technological change is widely framed by scholars as the Fourth Industrial Revolution (Industry 4.0) (Schwab, 2016, 2018; Philbeck & Davis, 2018; Mekinjić, 2019). This era is characterized by the fusion of the physical, digital, and biological spheres, with transformative effects on all business activities and global lifestyles (de Man & Strandhagen, 2017). The financial sector, which has historically been at the forefront of technological adoption, is now experiencing an unprecedented acceleration in digitalization (Krstić & Tešić, 2016; Fehér & Varga, 2019). This shift is defined by the emergence of the Digital Economy, where economic activity increasingly relies on interconnected digital technologies and communication networks (Carlsson, 2004; Lazović & Đuričković, 2018).

The core of this transformation is the departure from traditional banking and financial service models. King (2019) argues in *Bank 4.0* that the future of banking will be defined by an experience in which financial services are seamlessly embedded in consumers' lifestyles, rendering physical products and branch networks largely obsolete. This requires a fundamental change in mindset within financial institutions, moving away from viewing technology as a mere tool to recognizing it as a driver of conceptual change (Singh et al., 2022).

2.2. *Core Digital Trends: FinTech, AI, and Blockchain*

At the heart of the digital transformation lie technological trends that generate Technological Pressure and establish the Intensity of FinTech Competition as the core Independent Variables (IVs) in this study. These trends are radically redefining the four main segments of the financial market: banking, insurance, investment funds, and microcredit organizations (MCOs).

Financial Technology (FinTech) companies are at the forefront of this disruption, leveraging technology to provide automated and improved financial services

(Arner et al, 2015). This aggressive new competition forces traditional banks to fundamentally reconsider their cost structures and customer acquisition strategies (Deloitte, 2020, 2023; Vives, 2019).

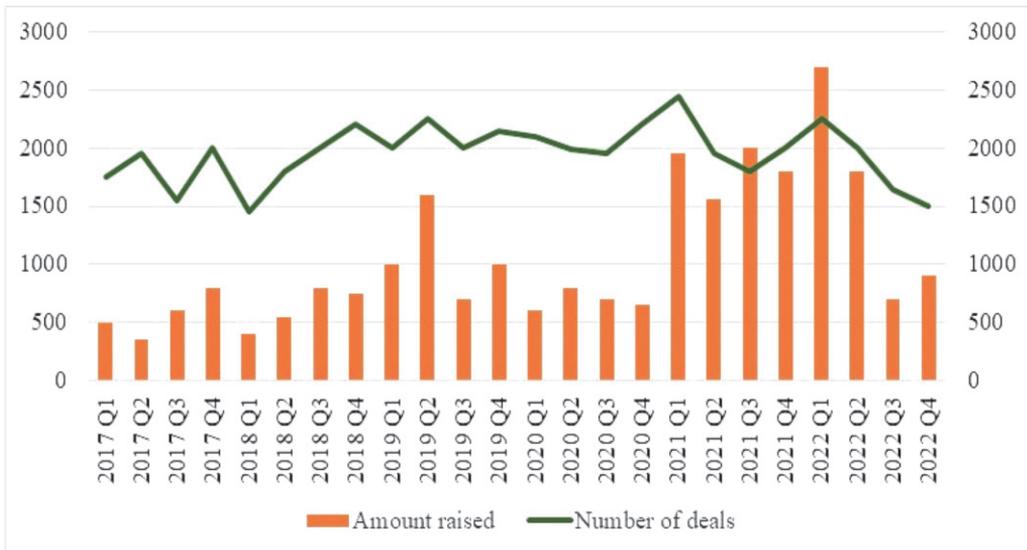
FinTech models, often characterized by superior Online/Mobile UX-optimized design, have successfully targeted specific consumer groups that may have historically been underserved by larger, traditional institutions (Elsayed et al, 2024). In the context of the platformization of financial services (Elsayed et al, 2024), which emphasizes Open Banking, the survival of traditional institutions directly depends on defining an adequate Strategic Response (DV) to this pressure. Thus, FinTech directly contributes to the growth of the Independent Variable (IV) and requires a radical Strategic Response (DV).

Figure 1 and 2 shows investments from 2017 to 2021 in the capital of British fintech companies, and high growth is visible. Although investment amounts are slightly lower in 2020, great resilience to the

impacts of Brexit and COVID-19 has been demonstrated.

These investment data empirically confirm the exponential growth of Technological Pressure (IV) and Intensity of FinTech Competition (IV) in the financial sector. As shown in Figure 2, global capital raised by FinTech companies experienced a sharp increase, particularly between 2020 and 2021, when it peaked at \$1,310 billion. This capital inflow directly generates the Intensity of FinTech Competition, forcing traditional institutions to re-evaluate their strategic models. Similarly, Figure 3, which shows investments in Blockchain and cryptocurrencies, reveals significant volatility but also consistently high peaks in investment volume, such as \$2,700 billion in the first quarter of 2022. This evident willingness of investors to commit large sums to both areas confirms that FinTech and Blockchain are not just theoretical trends but powerful market forces that dictate the necessary Strategic Response (DV) from management.

Figure 1
Equity investment in fintech companies by quarter (2017-2022)

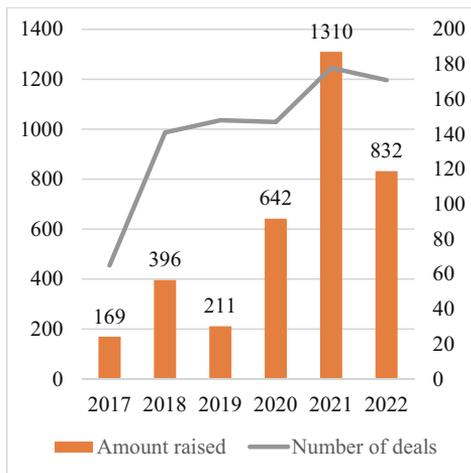


Note. Author's presentation based on Deloitte, Fintech Sector Analysis 2022 in Review February 2023, p. 2.

Another crucial force is the combination of Artificial Intelligence (AI) and Big Data. AI is now essential for core financial processes, including automated data analysis, behavioural pattern recognition, fraud prevention (Kyriakou et al., 2024), and the deployment of intelligent advisors, known as Robo-Advisors.

Coupled with Big Data analysis, AI enables highly personalized, context-aware financial services, directly challenging traditional, standardized, product-centric models (Ozili, 2018) by anticipating client needs. The application of Artificial Intelligence and Big Data analytics constitutes a direct Technological Pressure (IV) that dictates the efficiency of risk management and operational processes.

Figure 2
Equity investment in cryptocurrency and blockchain companies (2017-2022)



Note. Author's presentation based on Deloitte, Fintech Sector Analysis 2022 in Review February 2023, page 5.

Core AI disciplines, such as Machine Learning and Deep Learning, are critical for more accurate credit scoring by reducing information asymmetry, fraud detection, and advanced risk modeling (Fehér & Varga, 2019). Furthermore, D'Acunto et al. (2022) emphasize the influence of Robo-Advisors in transforming investment advice. From an economic perspective, AI and Big Data enable alternative credit

scoring, which is crucial for increasing financial inclusion in the microcredit sector (MCO) (Ozili, 2018), thereby directly expanding the market. This application of AI directly increases Technological Pressure (IV), imposing upon management the imperative to integrate these systems.

Finally, Blockchain Technology provides a decentralized ledger system that serves as the foundation for cryptocurrencies and smart contracts (Grujić, 2022; Zhuo et al., 2023). This technology offers potential solutions for enhanced security, greater transparency, and significantly reduced transaction costs in complex areas such as cross-border payments and insurance claims (Radivojac & Grujić, 2018). Its application across the financial industry is promising, although its full realization remains subject to complex regulatory and legal challenges worldwide.

Blockchain serves as the foundation for decentralized transactions, offering the potential to drastically reduce transaction costs and increase transparency in key areas (Radivojac & Grujić, 2019). This decentralized ledger system is the basis for Smart Contracts, which, for instance, in the InsurTech sector, enable automated claims processing and payout (Grujić & Vojinović, 2024). Although it promises enhanced Operational Efficiency (a key measure in the DV), the widespread adoption of Blockchain is conditioned by the complexity of the Regulatory Framework (MV) and related RegTech solutions. Specifically, its application in cross-border payments demonstrates immense potential for optimization. Overall, the potential of Blockchain to radically change the value chain raises Technological Pressure (IV), requiring management to define a Strategic Response (DV).

2.3. Management Challenges and Hypothesis Development

The integration of these pervasive digital trends presents significant, multifaceted challenges for financial institution management. Managers are compelled to navigate a complex transition, shifting their institutions from traditional, geographically bound, and product-oriented entities toward agile, data-driven platforms (Ozili, 2018). Successfully executing this strategic pivot requires substantial commitment to both con-

tinuous technological investment and necessary staffing restructuring (EY, 2021), addressing the core issue of organizational readiness.

A key challenge stemming from this pressure is defining the optimal competitive response to agile FinTech firms. Established banks, on one hand, possess inherent structural advantages, including regulatory protections, deeply established customer bases, and a low cost of capital. FinTech companies, conversely, offer agility, cutting-edge analytics, highly innovative business models, and superior digital execution (Pantielieieva et al., 2020).

Research suggests that management generally faces two primary strategic pathways in response to this FinTech competition: imitation (attempting to develop competing technology internally) or collaboration (partnering with FinTech entities) (Deloitte, 2020). Given the rapid speed of digital disruption and the high cost of internal technological development, the choice between these two strategies is critical for determining the institution's long-term viability and efficiency.

The Collaboration Strategy involves partnering with FinTechs, enabling banks to quickly integrate new technologies and innovative customer experiences without the considerable time and internal costs associated with ground-up development (Hess et al., 2020). This partnership approach strategically combines the bank's core strengths - such as a broad customer base and regulatory protection - with FinTech's superior strengths in agility, innovation, and analytics (Chernoff & Jagtiani, 2024). This cooperation is frequently identified in literature as the most efficient and cost-effective way for established financial institutions to achieve swift and effective digital transformation (Fehér & Varga, 2019).

Based on the synthesis of the reviewed literature concerning the undeniable need for structural changes and the identified strategic advantages offered by partnerships as the fastest competitive response, the following research hypothesis is proposed to guide the analysis: H: The introduction of digital products and services compels financial institution management to undertake significant staffing and investment

changes, with collaboration with FinTech companies representing the most effective strategic response to new competition.

3. Empirical Analysis

This study is structured primarily as a systematic literature review to synthesize current academic and industry knowledge. Although this approach does not involve primary data collection or statistical testing, this section outlines the analytical framework used to test the formulated hypothesis (H) and structure the findings derived from secondary data. The approach is thus qualitative and analytical, treating theoretical concepts and findings from existing literature as the "data" for testing the proposed relationships between digitalization drivers and management responses. The framework ensures that the subsequent discussion is systematically aligned with the hypothesis: that collaboration with FinTech is the most effective strategic response.

The subsequent subsections, while adopting the conventional terminology of empirical research, should be interpreted as defining the core conceptual constructs utilized in the literature synthesis. This structure allows for a clear mapping of the theoretical variables identified in the literature review - such as the intensity of technological change or specific regulatory hurdles - to the observed outcomes in managerial practice (King, 2019; Deloitte, 2023). The structured analysis of the literature allows for the isolation of key findings and their grouping into analytical categories that serve to proxy for "variables."

3.1. Sample

In the context of this literature review, the sample refers not to surveyed entities but to the population of analysed documents and secondary sources that underpin the findings. This sample includes peer-reviewed academic articles indexed in WoS and Scopus, industry reports from major consulting firms (e.g., Deloitte, EY), and specialized regulatory publications. The deliberate choice of this sample ensures that the analysis is grounded in both established academic theory and contemporary industry practice, capturing both the conceptual depth and the practical urgency of digital trends. The sample selection criteria focused on relevance, recency, and impact. Specifically, the

inclusion of reports from international organizations like the World Economic Forum ensures a global perspective on the diffusion and impact of Industry 4.0 within the financial sector. This diversified sample is necessary to capture the multifaceted nature of the research subject, which spans technological innovation, managerial strategy, and macroeconomic context.

3.2. Variables

In this paper, variables are treated as conceptual constructs derived from the synthesis of literature, serving as the primary analytical tools for testing the research hypothesis. These conceptual variables represent the key thematic categories and forces identified in the literature, which define the relationship between the digital environment and the strategic choices of financial institutions. This approach is essential to maintain academic rigor while acknowledging the qualitative nature of the data (secondary literature findings).

The Dependent Variable (DV) in this conceptual framework is the primary outcome of the study: the Strategic Response of Financial Institution Management to Digitalization. This construct captures the decisions and actions institutions take to adapt to FinTech competition and technological change. This DV is conceptually manifested in the literature through various measurable outcomes, primarily focused on strategic choice: (1) adopting a passive "wait-and-see" approach; (2) pursuing internal development and imitation of FinTech products; or (3) forming strategic collaboration or partnership agreements with FinTech companies.

Independent Variables (IVs) represent the core driving forces of change - the digital trends - that exert pressure on the Dependent Variable (Management's Strategic Response). These IVs are the Technological Pressure and the Intensity of FinTech Competition. The first IV, Technological Pressure, is defined by the scope and disruptive nature of technologies like Artificial Intelligence (AI), Blockchain, and Big Data. The second IV, Intensity of FinTech Competition, is measured conceptually by the documented rate of market-share erosion, the speed of competitors' product innovation, and the amount of capital inflow into the FinTech sector.

The Moderating Variable (MV) is a conceptual construct that influences the strength or direction

of the relationship between the Independent Variables and the Dependent Variable. The key MV identified in the literature is the financial institution's Organizational Culture and Readiness for Change. A more agile, innovation-oriented organizational culture is hypothesized to strengthen the positive effect of FinTech competition, enabling the collaborative strategy to move faster and be more successful. Furthermore, the Complexity of the Regulatory Framework acts as a secondary moderating factor.

Control Variables (CVs) are contextual factors that the analysis must acknowledge. These are treated as contextual categories rather than statistical controls. The two most relevant CVs are Geographical Context and Financial Institution Type/Size. The Geographical Context (e.g., the specific regulatory landscape in BiH) and the Financial Institution Type/Size (e.g., universal banks vs. MCOs) are crucial CVs that shape the interpretation of the global findings.

4. Methodology

The research is conceived as a systematic literature review, employing a qualitative and analytical approach. The objective was to synthesize existing scientific and industry knowledge to test the formulated hypothesis (H) regarding the effectiveness of FinTech collaboration as a strategic response. The study relies on secondary sources whose findings are treated as analytical data to assess the defined conceptual variables. This methodology allows for the establishment of a theoretical framework and the derivation of conclusions about the strategic implications of digital trends, without the limitations of a primary empirical sample.

The sample of documents included relevant scientific articles published in the reference databases Web of Science (WoS) and Scopus, as well as recent industry reports from leading consulting firms (Deloitte, EY) and international organizations (WEF). The criteria for literature selection included publications issued between 2015 and 2025, with emphasis on citation frequency and scientific relevance. The keywords were aimed at the following thematic areas: digital trends, financial institutions, the banking sector, insurance companies, investment funds, the microcredit sector, and alternative finance.

The analytical method includes analyzing, syn-

thesizing, and comparing findings. The secondary data were first analyzed to identify recurring patterns and influencing factors (Independent Variables) and then synthesized to determine the consensus in the literature regarding the most effective strategic response (Dependent Variable). Comparison was used to contrast global trends with the specific context of the financial market in Bosnia and Herzegovina (Control Variable), particularly concerning legal regulation and infrastructure.

5. Empirical Results and Discussion

5.1. Findings on Digital Trends Across Financial Sectors

The analysis of secondary literature demonstrates that digital trends, primarily Artificial Intelligence (AI) and Blockchain, alongside FinTech competition, have profoundly redefined business processes across all segments of the financial sector. Results show that banks have massively adopted AI for automated data analysis, chatbot communication, and fraud prevention,

while in the insurance sector (Insurtech), applications manifest through dynamic e-policies and automated claims processing. In investment funds, the trend is directed towards Robo-Advisors and asset tokenization (King, 2019). These findings directly support the Independent Variable's premise of strong Technological Pressure on management.

Concrete business results (serving as a proxy for the Dependent Variable) arising from the introduction of digital services have also been identified. The literature reports significant reductions in transaction and employee labor costs, improved efficiency, and a personalized customer experience. Table 1 illustrates the empirical finding that traditional financial products are being replaced by embedded digital experiences (Replacement Embedded Experience), confirming the inevitability of a radical change in offerings. However, these positive results are accompanied by an increased Intensity of FinTech Competition (Independent Variable), which imposes an imperative on management to formulate a response strategy.

Table 1
List of typical banking products that could disappear in the future

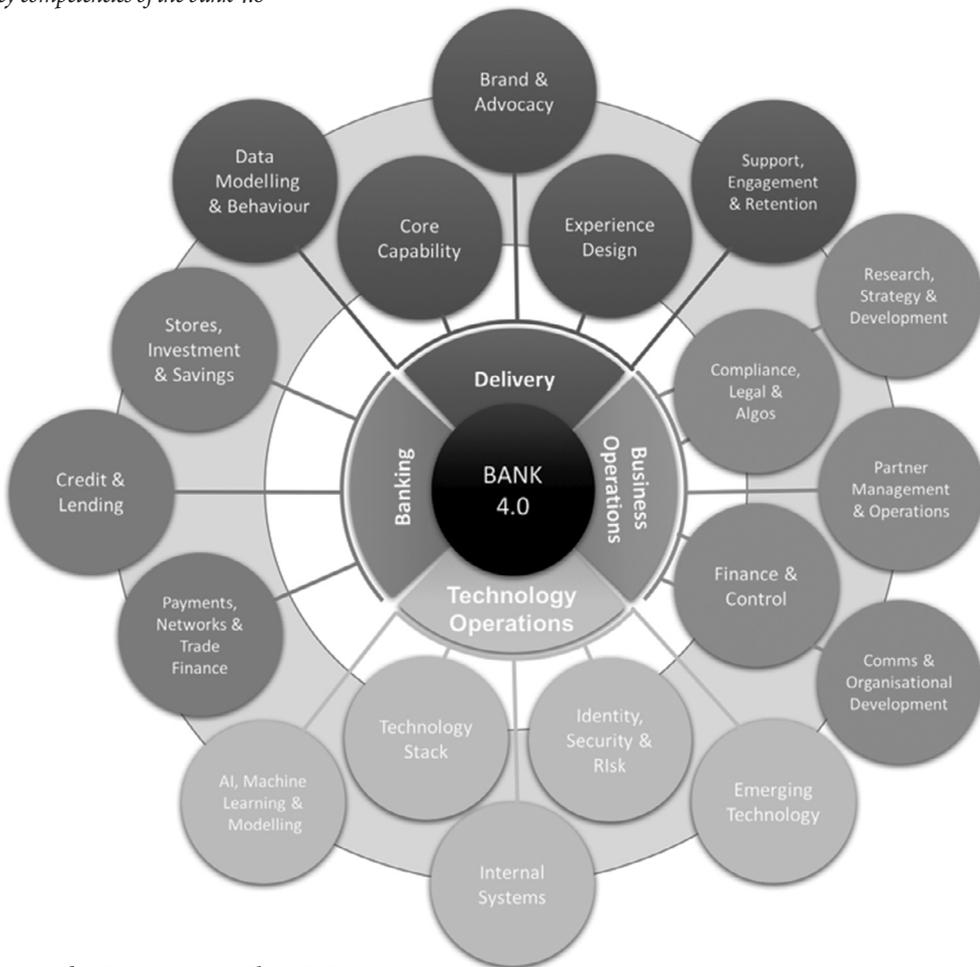
Financial Product or Service	Replacement Embedded Experience
Credit Card	Predictive and contextual credit access
Overdraft	Emergency credit access (grocery and healthcare optimized)
Checking, Current Account or Debit Card	Cloud-based personal value store linked to a mobile wallet
Savings Account	Behavioral savings tools and prompts
Personal Loan	Payment options advice in-store or contextually
Mortgage	Home purchase assistant Car Loan/Lease Autonomous vehicle access subscription
Small Business Bank Account	Intelligent business value store (with accounting, taxation and payments AI)
Business Line of Credi	Predictive cash flow analytic, and smoothing
Life Insurance Policy	Longevity and after-life management
Health Insurance Coverage	Health optimization and monitoring service
Term Deposit, CD, Investment or High Yield Savings Account	Wealth builder robo-assistant
Mutual Fund or Investment Product	Robo-advisor with net worth manager
Foreign Exchange Service	Global wallet add-in

Note. Author's presentation based on King, 2019.

Specialized findings across sectors confirm the general trend: Microcredit organizations (MCOs) implement automated decision-making (AI analysis) and alternative credit scoring; the insurance sector uses Smart Contracts for accelerating claims payouts; and investment funds rely on algorithms for predictive analysis. Every segment

demonstrates a high level of digitalization, but the common challenge for all segments is the need for continuous investment in personnel and technology. The literature identifies that management must define the optimal balance between new digital and traditional services, which is the central issue of the Dependent Variable.

Figure 3
Key competencies of the bank 4.0

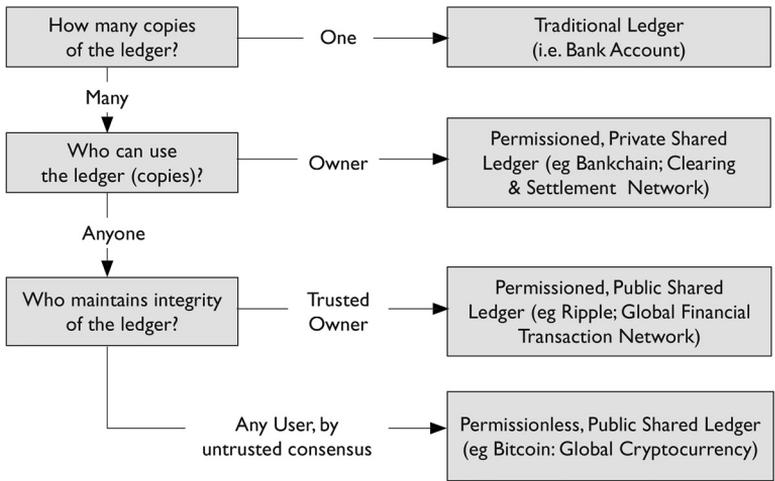
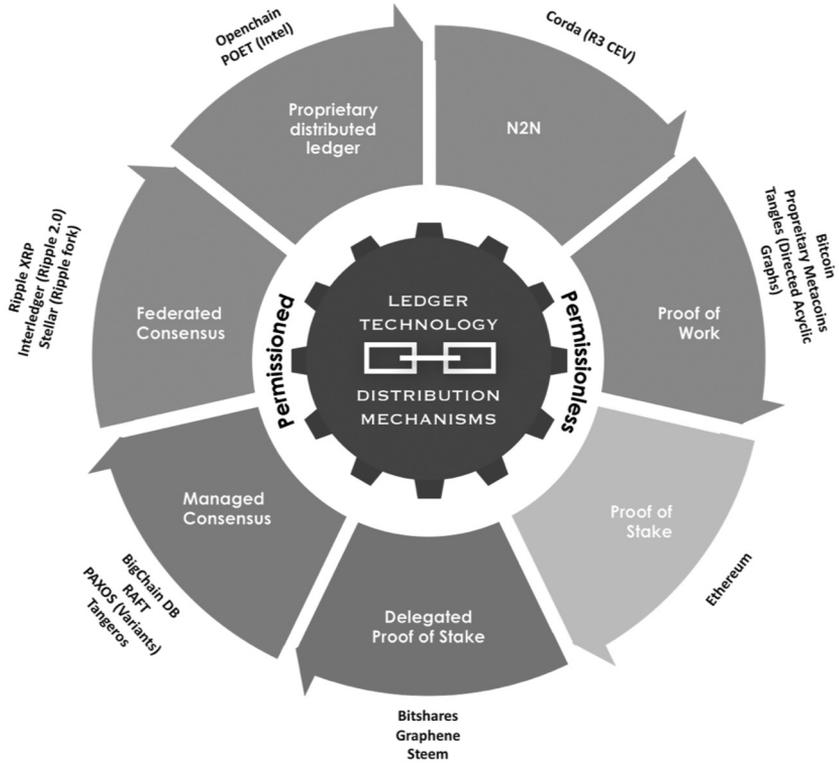


Note. Bank 4.0, Brett King, Wiley, 2019, page 150.

Diagram leads to think about the new organizational structure of Bank 4.0. This diagram shows strategic business units, but through core competencies across

the organization that can further influence client missions and goals. A typical bank would face major challenges of this type.

Figure 4
Different technologies



Note. Bank 4.0, Brett King, Wiley, 2019, page 177.

5.2. Discussion and Hypothesis Testing

The discussion is focused on testing the main hypothesis (H) and analyzing the role of the Moderating and Control Variables. The empirical findings from the secondary literature consistently confirm the first part of the hypothesis: the introduction of digital products inevitably compels management to undertake significant staffing and investment changes. This is supported by findings on the need for new competencies, staff training, and the redirection of investments from physical to digital infrastructure.

Regarding the second part of the hypothesis - that collaboration with FinTech companies is the most effective strategic response - the results of the literature analysis are very clear. Table 2 demonstrates that collaboration offers synergistic advantages: it combines the strengths of banks and FinTech companies.

Table 2
Benefits of cooperation between banks and FinTech

Bank Strengths	FinTech Strengths	FinTech Differentiation
Broad existing customer base	New ideas/thinking	Experiences tailored to specific consumer groups
Broad product set	Agile implementation	Greater flexibility in service approaches
Low cost of capital	Cutting-edge analytics and data management	New business models that change economics
Regulatory protections (deposit guarantee, etc.)	Online customer acquisition	Inclusion and serving underserved customers
Revenue source (for FinTech)	Online/Mobile UX-optimized design	Shift away from products to differentiated technology experiences

Note. Author’s presentation based on King, 2019.

Hearing about the entire history of blockchain related to bitcoin, the growing market, and stories of banks struggling to implement their own blockchain

initiatives, it is important to emphasize that blockchain is not exclusively the domain of the financial sector. The reality is that blockchain initiatives have already touched dozens of industries, from government institutions to mining, from energy to smart infrastructure. Distributed ledger technology (DLT) is now being implemented by banks worldwide.

Fintech companies make it easier for employees to have the space and time to develop technical skills, but let’s be honest, Fintechs also need employees to do certain tasks. They need the scale and revenue that bank partnerships provide, and their growth depends on these partnerships to implement their technologies. Banks have four choices on how to respond to these structural changes resulting from the explosion in FinTech-driven innovation: do nothing (slow decline into obsolescence, ultimately very expensive), partner with FinTech (cheapest and fastest), acquire FinTech (potentially fast, but still expensive and culturally challenging), or copy or imitate FinTech innovations (slow and very expensive).

AI adoption in financial services is driven by several specialized disciplines. Machine learning and deep learning algorithms are extensively used for risk modeling, fraud detection, and enhancing credit scoring accuracy. Natural language processing (NLP) and cognitive computing power customer-facing applications such as chatbots and sentiment analysis tools, transforming customer interactions. Furthermore, Robotic Process Automation (RPA) streamlines back-office functions such as data entry and regulatory reporting, significantly boosting operational efficiency across the sector (Bhattacharya & Sinha, 2022).

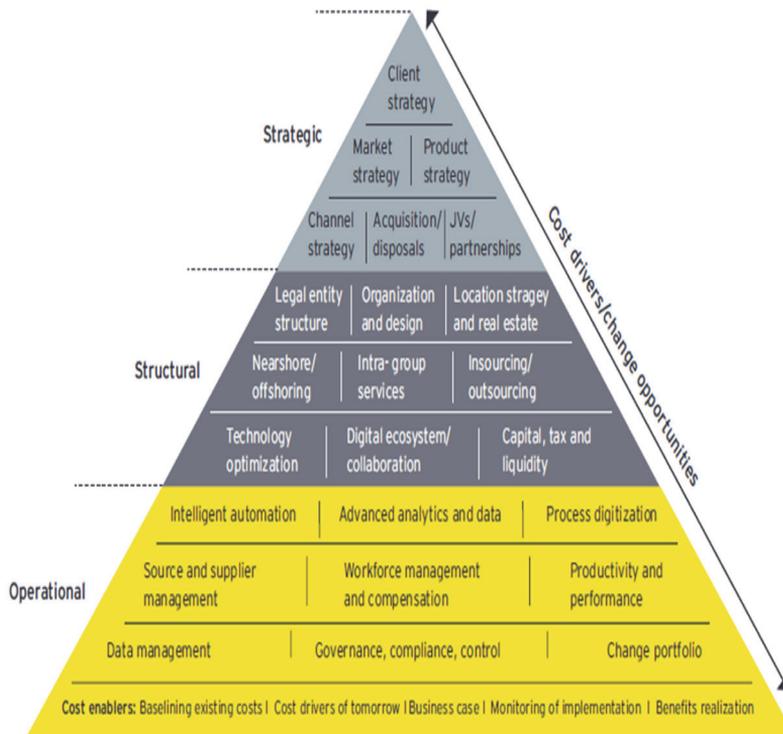
AI will have a massive impact on marketing and radically change the services customers expect. All of this will dominate our ability to engage customers on a behavioural level, displacing vast swaths of process-driven work and impacting how we view and operationalize risk in organizations today. In fact, taking just this last element, it is entirely possible that risk management in financial services will become the exclusive domain of AI within the next 10 years. Of course, this will not happen from within, i.e., through the AI department in a bank or even the IT department, but rather through a systemic attack on the core of what we consider the operational engine of modern financial services today.

In the 1980s and 1990s, as a primary financial institution, the goal of every major banking brand in the world of universal banking was to determine how each bank would achieve it. However, as a primary financial institution, the goal was to capture as much

business as possible by specializing in certain products, such as credit cards, car loans, or investment accounts. As the internet grew, we saw an explosion of choice from mainstream and alternative financial service providers.

Figure 5

Viewing cost transformation at three levels - strategic, structural and operational



Note. Author’s presentation based on Deloitte, Fintech Sector Analysis 2022 in Review February 2023, p. 2. EY, Can banks turn today’s disruption into tomorrow’s transformation? Global banking outlook 2021, p. 10.

Reducing operating costs is a direct consequence of the digitalization of the financial sector, as it reduces employee costs and the need for physical branches, which are being converted into digital branches. It is known that Cloud computing is used to enable more flexible and stable IT resources at a lower cost. It is well known that blockchain technology reduces transaction processing and data verification costs, while the introduction of digital documentation largely eliminates

paper contracts and unnecessary bureaucracy. Security and risk management are among the key factors to thank for in the digitalization process. The introduction of advanced technologies reduces the risk of potential fraud and all types of hacker attacks. Biometric authentication, including facial recognition, fingerprints, and voice authentication, is used as one of the tools. AI is used to detect fraud through algorithms that analyze transactions and identify suspicious client activity. Blockchain, sup-

ported by decentralized databases, enhances transparency and increases resistance to hacking. The legislative framework has mandated the digitalization of regulatory processes for financial institutions that use this technology in their regular business. Automated verification of transactions related to anti-money laundering (AML) and terrorist financing (KYC) is also performed. Regulatory analytics powered by AI tracks changes in laws and supports business compliance, while smart contracts enable the automatic execution of regulatory requirements via blockchain.

The literature suggests that imitation (internal development) and passive waiting are costlier and slower responses, whereas partnership enables the fastest and cheapest achievement of digital transformation. Therefore, the research hypothesis (H) is confirmed by the literature findings.

However, the analysis identified the role of the Control (Geographical Context) and Moderating (Regulation) Variables. In Bosnia and Herzegovina (BiH), the digitalization process is slowed not by a lack of technology or banks' willingness, but by the sluggishness of the public sector and inadequate legal regulation (e.g., digital signatures, remote account opening) (Grujić, 2018). This finding serves as a critical implication of the paper. Slow regulation acts as a Moderating Variable, slowing the implementation of digital solutions and imposing a dual challenge on management in BiH: managing digitalization while actively lobbying for changes in the legal framework.

6. Conclusions and Implications

This paper analyzed the impact of global digital trends (AI, Blockchain, FinTech) on the strategic decisions of financial institution management and tested the hypothesis that collaboration with FinTech companies is the most effective strategic response.

The research hypothesis (H) is confirmed. The introduction of digital products and services, driven by intense technological pressure (Independent Variable), compels financial institution management to undertake substantial staffing and continuous investment changes to remain competitive. Furthermore, the synthesis of literature strongly supports the claim that strategic collaboration with FinTech companies provides the most viable, efficient, and cost-effective path for established institutions to achieve digital

transformation and mitigate competitive risks (Dependent Variable).

Finally, while the global trends necessitate radical change, the study highlights the critical role of Control Variables (Geographical Context) and Moderating Variables (Regulation). Specifically, the process in economies like Bosnia and Herzegovina is demonstrably hampered by the slow pace of legal and regulatory adaptation, creating a dual mandate for local management: managing technological change while actively advocating policy.

6.1. Theoretical Contributions

The theoretical contribution of this study is multifaceted. This paper offers two main theoretical contributions to the fields of financial economics and strategic management.

First, it provides a structured analytical framework for reviewing the dynamic field of FinTech adoption. By adapting the traditional empirical structure (IV, DV, MV, CV) to a systematic literature review, the study offers a rigorous methodology for synthesizing qualitative findings, transforming descriptive trends into measurable conceptual constructs (e.g., Technological Pressure and Strategic Response).

Second, the study advances the understanding of the strategic imperative in the Bank 4.0 era. It moves beyond merely describing digital trends to systematically validating the strategic superiority of the collaboration model over internal imitation or passive resistance. This validation provides clear theoretical grounding for future studies exploring optimal resource allocation amid intense technological disruption.

6.2. Policy and Managerial Implications

The findings yield significant practical implications for both policymakers and financial sector managers. Policymakers and regulators must prioritize accelerating the legal and regulatory framework to catch up with technological innovation. The slow adoption of crucial legislation (e.g., fully functional digital signature laws and remote account-opening protocols) acts as a powerful Moderating Variable, unnecessarily slowing digital progress and inhibiting competition. Governments should actively facilitate a secure environment

for open banking and encourage the use of regulatory sandboxes to integrate new technologies responsibly.

Financial institution managers must abandon product-centric thinking and embrace a platform-based, data-driven strategy. The primary focus must shift from physical assets to human capital, with a priority on acquiring and continuously training staff in AI, data analytics, and cybersecurity. Furthermore, management should strategically allocate investment capital to M&A (mergers and acquisitions) or to collaboration agreements with agile FinTech partners, recognizing these as superior alternatives to costly, time-consuming internal development.

6.3. Limitations and Suggestions for Future Research

The main limitation of this study stems from its reliance on secondary data. As a literature review, it analyzes reported trends and conceptual models, but does not provide primary empirical evidence (e.g., statistical testing of hypothesis H) from a specific sample of managers. The findings are thus based on the synthesis of global evidence, which may be partially moderated by local contextual factors.

Future research should focus on three areas: First, conducting primary quantitative research (surveys or case studies) targeting financial managers in emerging markets to empirically test the correlation between FinTech collaboration and profitability/efficiency metrics. Second, a focused longitudinal study is needed to track the long-term impact of specific digital products (like Robo-Advisors or Smart Contracts) on customer retention and cost structures. Third, research could explore the success factors and failures in FinTech-bank partnership governance to provide a practical roadmap for effective collaboration.

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Дигитални трендови у финансијским институцијама: изазови и стратешки одговори за менаџмент

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Кључне ријечи:

Дигитални трендови,
финансијске институције,
банкарски сектор,
осигуравајућа друштва,
инвестициони фондови,
микрокредитни сектор,
алтернативне финансије

JEL класификација:
G21, G23, O33, L86

САЖЕТАК

Рад анализира радикалну дигиталну трансформацију у финансијском сектору. То обухвата банкарство, осигуравајућа друштва, инвестиционе фондове и микрокредитне организације (МКО). Рад се усмјерава на идентификацију темељних дигиталних трендова. То су ФинТек, Вјештачка интелигенција (АИ) и Блокчејн технологија. Анализира се њихов утицај на пословну перформансу и потребне законске и регулаторне измјене. Посебна пажња се даје изазовима са којима се суочава менаџмент. Овдје спада потреба за адекватним кадром и сталним улагањем у технолошку инфраструктуру. Примарни циљ студије је нагласити стратешке опције за превазилажење препрека које узрокује дигитализација. То се посебно односи на контекст Босне и Херцеговине. Циљ је и дефинисати будуће правце за побољшање перформансе. Студија поставља тезу да је сарадња са ФинТек компанијама најефикаснији стратешки одговор на нову тржишну конкуренцију.