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Guest Editorial

Navigating Contemporary FinTech Solutions:

Revealing Potential and Challenges

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Towards FinTech Advancements

Individuals, families, businesses, and communities have witnessed significant advancements in the field of Financial Technology (FinTech), which shows promising prospects but also substantial challenges (Fulk et al., 2018). According to the International Monetary Fund (2023), regions worldwide have seen an increase in the use of digital financial services. In 2014, 44% of people worldwide made or received a digital payment; this percentage increased to 52% in 2017, and by 2021, the statistics estimated that almost 64% of the world's population used digital payments (Demirgüç-Kunt et al., 2022).

Exploring the origins of FinTech solutions takes us on a journey back to the 15th century, when financial transactions were carried out using coins. It also directs our attention to analog technologies that enable people to extract information from documents and transmit it across long distances (Alt, 2018). The launch of smartphones in 2007 represents a significant breakthrough in FinTech history and led to what is now known as the FinTech revolution. Advanced technologies, such as blockchain and machine learning, have given rise to new generations of FinTech solutions that enable individuals, and businesses, to make informed financial decisions and manage their finances more efficiently (Nguyen et al., 2023).

The financial industry is currently experiencing the development of contemporary FinTech solutions, including financial Robo-advisors and the potential issue of Central Bank Digital Currency (CBDC). These solutions, among others, will likely reshape the financial landscape (Nourallah et al., 2025). Qin et al. (2024) suggested a strong and positive correlation between FinTech and the green environmental index, while D'Acunto & Rossi. (2023) argued that financial Robo-advisors may help improve financial literacy, and Andolfatto et al. (2021) predicted a positive role of CBDC in enhancing financial inclusion.

In parallel, these solutions come with their own set of challenges, including behavioral issues related to emerging e-banking technologies (Gomber et al., 2017), and contemporary solutions can also be associated with behavioral biases (Barber et al., 2022; Welch, 2022). In their turn, Bartlett et al. (2022) found that FinTech lenders' fees could be higher for minority borrowers compared to non-minority ones, while recent studies shed light on issues related to the 'one size

fits all' approach used by financial Robo-advisors and asked for considering cultural differences when developing these solutions (Nourallah, 2023). Moreover, Das (2019, p. 1004) highlighted the dilemma of "garbage-in, garbage-out", stating that 'more data does not mean better results'. Berg et al. (2019) further argued that even basic digital footprint information, such as the type of mobile system, can disclose important information about individuals' financial behavior and predict their default.

This special issue aims to explore the advancements offered by contemporary FinTech solutions while also examining the concerns associated with these solutions. It also encourages discussions beyond the traditional work of fraud and security, addressing various concerns surrounding these solutions.

Contributions to This Special Issue

We are grateful for the contributions submitted to our special issue. Following the peer-review process, four papers have been accepted for publication.

The first study by Brockbank et al. used human capital theory to examine whether the use of financial advisors is associated with household investment in cryptocurrencies, using data from the 2018 National Financial Capabilities Study (NFCS) in the United States. Brockbank et al. find that households consulting financial advisors are more likely to invest in cryptocurrencies. Additionally, they discover that younger individuals, married people, and the ones with higher subjective financial literacy are more likely to hold cryptocurrency investments compared to other investors.

The second study examines how the use of FinTech influences consumers' emergency fund savings, applying the theory of planned behavior and technology adoption models. Using data from 453 U.S. respondents collected in July 2021, Chen et al. employed structural equation modeling to examine the links between intention to use FinTech and actual saving outcomes. The results show that while positive attitudes toward emergency savings surprisingly reduced the intention to use FinTech, subjective norms and perceived behavioral control increased it. Perceived behavioral control also directly supported having adequate savings. The intention to use FinTech was linked to saving apps and websites, but only website use significantly improved emergency savings. The study concludes that both the intention and the actual use of FinTech tools are critical pathways connecting psychological factors to successful saving behavior, providing practical insights for financial institutions, advisors, and policymakers seeking to enhance household financial resilience.

In the third study, Diab et al. utilized self-control theory and balanced panel data from 2014, 2017, and 2021 to investigate the factors influencing the tendency to borrow from family and friends in the European Union, highlighting the crucial role of debit card usage and saving habits in mitigating this behavior. This study questions the effectiveness of current public financial education initiatives and underscores the need for more effective policy development within the evolving FinTech landscape. By shedding light on these findings, the paper increases our knowledge of the relationship between debit card usage and borrowing behavior within the European Union.

Last but not least, Shekhar & Ramesh investigate how CBDC design impacts implementation in emerging economies with strong digital infrastructures. Based on interviews

with 22 experts, they find that 1) a two-tier, non-interest-bearing model with offline access supports stability and inclusion, 2) CBDCs should complement, not replace, existing payment systems, and 3) phased implementation with clear metrics and partnerships ensures adoption. A four-layer design framework highlights the interplay of technology, security, finance, and user experience. The findings guide policymakers to prioritize interoperability, stability, and efficient integration.

Conclusion and Future Research Avenues

Technological advancements have fundamentally reshaped the structure of the broader financial sector (Nourallah & Öhman, 2021). These transformations have created promising opportunities for delivering innovative and high-quality financial services, while simultaneously introduced new challenges that warrant careful investigation. This special issue focuses on FinTech, exploring its emerging opportunities and associated challenges.

Based on the findings from the four empirical studies, it is evident that FinTech plays a dynamic role in the lives of individuals, families, businesses, and communities. One notable trend is the increasing interest in incorporating cryptocurrencies into household investment portfolios in the United States (Brockbank et al., 2025). Another important finding from the same part of the world highlights the role of FinTech platforms in enhancing households' ability to build and maintain emergency funds (Chen et al., 2025). Meanwhile, in the European context, evidence suggests that the use of structured financial tools can mitigate harmful borrowing behaviors, such as informal lending from friends and family (Diab et al., 2025). In the context of India, a conceptual framework for the potential implementation of CBDC is proposed (Shekhar & Ramesh, 2025), offering insights into the institutional and technological requirements for its adoption.

Looking ahead, future research in FinTech could focus on three key areas that are particularly significant. While considerable research has examined the impact of FinTech applications on improving access to financial services and advancing financial inclusion, there seems to be a need for studies on their role in enhancing individuals' capacity for sound financial decision-making. This gap underscores the importance of future research aimed at investigating how FinTech applications can support users in making informed, responsible, and contextually appropriate financial choices.

A second research area concerns the potential of FinTech applications to improve financial well-being and mitigate financial stress. Given the integration of these tools into everyday financial life, it seems important to assess whether and how they contribute to individuals’ sense of control, stability, and confidence in their financial decisions.

The third and most forward-looking area relates to the role of artificial intelligence (AI) in the continued development of FinTech applications. The integration of AI offers the potential to overcome many of the shortcomings and risks previously identified in the FinTech literature. This could lead to more personalized, adaptive, and ethically grounded financial tools that extend beyond the boundaries of traditional financial applications. Nevertheless, these tools still require regulation by human-established authorities.

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