DIGITAL FINANCE AND INVESTOR PROTECTION

Diyana MITEVA
Department of Finance, UNWE, Institute for economics and politics at UNWE

Abstract: This paper reviews the aspects and features of digital finance but also systemizes risks connected with the enhancing and developing field of digital finance for investors**.** The vast development of digital financial services and use by retail investors and also its inclusive role of giving access to digital financial means to parts of population that has not had such access before brings financial services to new levels but also introduces new risks that concern regulators as well as consumers. Responsive actions and continuing financial literacy improvements are key points for a stable and confident financial sector.

Keywords*: capital market, digital financial risks, investor protection.*
JEL codes*: G01, E66, E43, E63.*

Introduction to digital finance

Digital finance refers to the integration of digital technologies into financial services, enabling the delivery of traditional and innovative financial products and services through digital platforms. It leverages tools like mobile apps, online platforms, blockchain, and artificial intelligence to make financial transactions and management more accessible, efficient, and cost-effective.

EU Commission defines digital finance as "*the impact of new technologies on the financial services industry, including a variety of products, applications, processes and business models that have transformed the traditional way of providing banking and financial services*." (EU Commission).

Also, there is a distinction between digital finance and digital inclusive finance. Digital inclusive finance refers to the extension of digital financial services to underserved or excluded populations tend to significantly improves individual investor performance Xiaomeng et al (2024).

However, digital inclusive finance combine all the aspects of digital finance therefor it is important to deeply understand them.

The key components of digital finance refer to digital payments, online banking, blockchain and cryptocurrencies, decentralized finance, investment platforms and others, which allow much easier access to financial services and products (see Table 1)

Table 1. Components of digital finance

Components of digital finance	**Tools and benefits**
Digital payments	○ Tools: Mobile wallets (e.g., PayPal, Apple Pay), QR codes, and peer-to-peer payment systems. ○ Benefits: Fast, secure, and convenient transactions.
Online banking	○ Tools: Internet and mobile banking apps for account management, loans, and savings. ○ Benefits: Anytime, anywhere access to banking services.
Blockchain and Cryptocurrencies	○ Tools: Decentralized technologies like Bitcoin, Ethereum, and smart contracts. ○ Benefits: Increased transparency, reduced costs, and borderless transactions.
Decentralized Finance (DeFi)	○ Tools: Platforms that remove intermediaries in lending, borrowing, and trading using blockchain. ○ Benefits: Greater access and control for users. ○ Example: Borrowing on platforms like Aave or trading on Uniswap.
Investment Platforms	○ Tools: Robo-advisors, micro-investing apps, and online trading platforms. ○ Benefits: Low-cost, automated portfolio management and market access.
InsurTech and RegTech	○ Tools: Digital solutions for insurance (InsurTech) and compliance (RegTech). ○ Benefits: Faster claims processing and enhanced regulatory compliance.

Digital finance brings financial services to underserved populations, including those in remote areas. It automates processes, reducing time and costs for both providers and users. DF allows transparency and auditable transactions and in the same time enables new products like tokenized assets and AI-driven financial advice.

The reasons for the rise of digital finance are connected with technological advancements and comsumer demand for convenience.

Technological Advancements include *the improved connectivity* -the proliferation of high-speed internet and mobile networks allows seamless financial transactions globally. *Big Data*

and AI are the hottest technological advancements which allow advanced analytics enable real-time insights, predictive modeling, and personalized financial services. *Blockchain and cryptocurrencies* are other technologies that enhance transparency, security, and efficiency in financial transactions. Last but not lease, *cloud computing* facilitates scalable, cost-effective storage and processing for financial institutions.

Consumer Demand for Convenience like 24/7 accessibility, made financial providers to develop systems of a non-stop transaction services as customers expect to manage finances anytime, anywhere, through mobile apps and online platforms. Consumers also demand *faster transactions which means* instant payment systems and digital wallets reducing the need for cash and physical banking. Also, there is a constant demand for *personalized experiences:* digital tools offer tailored recommendations based on spending habits and financial goals.

It is important to look the connection between digital finance and financialization which is significant, as digital finance can be seen both as a product and a driver of financialization. Financialization influences digital finance through : demand for alternative investments, expansion of financial services, acceleration of capital flow, technological solutions to market saturation. The demand for alternative investments is triggered by ultra-wealthy and institutional investors who are always seeking new asset classes to diversify their portfolios.
DeFi (decentralized finance) provides high-risk, high-reward opportunities. For example, cryptocurrencies like Bitcoin began as a decentralized alternative to fiat currency but quickly evolved into speculative investment assets. Financialization drives the need to monetize every aspect of the economy, from consumer credit to digital payments. Digital finance innovations like robo-advisors, mobile payment systems, and micro-investing platforms cater to this expanding financial landscape. Financialization thrives on global capital mobility, and digital finance enables faster, more borderless transactions. Blockchain technology, for instance, facilitates instantaneous cross-border payments, aligning with financialization's focus on maximizing efficiency. Traditional financial markets are mature, and opportunities for significant growth are limited. Digital finance creates new markets (e.g., tokenized art, digital real estate) that appeal to financialized economies looking for untapped opportunities.

Risk triggered by digital finance development

The vast development of digital finance on the other side made it dependent on cyber security risks and other attempts for misuse and attempts to compromise the security of financial institutions, transactions, and sensitive customer data. Challenges in digital finance are

different types of risks that are triggered, like cybersecurity risks, regulatory gaps, exclusion risks, market volatility and others / see Table 2/.

Table 2. Key risks in digital finance

Risks	**Threats and impact**
Cybersecurity Risks	Threats: Hacking, phishing attacks, malware, ransomware, and data breaches. Impact: Loss of funds, sensitive data exposure, and identity theft
Fraud and Scams	○ Threats: Ponzi schemes, pump-and-dump schemes in crypto, fake investment platforms. ○ Impact: Investors lose their money with little recourse, especially in unregulated spaces.
Regulatory Gaps	Threats: Unregulated or poorly regulated platforms, especially cross-border services. Impact: Lack of legal protection for investors in cases of disputes or fraud
Volatility of Digital Assets ○	○ Threats: Extreme price swings in cryptocurrencies and other digital assets. ○ Impact: Significant financial losses, particularly for unsophisticated or risk-averse investors.
Lack of Transparency ○	○ Threats: Opaque algorithms, hidden fees, and lack of clear terms and conditions. ○ Impact: Investors may not fully understand the risks or costs of their investments.
Technological Failures	○ Threats: Bugs in software, smart contract exploits, or platform outages. ○ Impact: Loss of access to funds or investments. ○
Lack of Financial Literacy	○ Threats: Complexity of digital financial products, especially for novice investors. ○ Impact: Poor investment decisions or vulnerability to scams.

By addressing these risks, regulators, fintech companies, and investors can create a safer and more reliable digital financial ecosystem.

Investor Protection in the light of digital finance development and associated risks

Investors protection has been a key topic and goal in 2007-2009 post crisis financial regulation. The development of digital finance has made it even more difficult to ensure investors and their funds are secure. Investor protection regards secure use of providers of investment services, which means licensed and supervised providers on the one hand. On the other, it concerns the products and services on the market. For investors it is difficult at first to differentiate and assess which financial services providers are reliable, as usually the non-regulated providers are the ones to be most aggressive in client attraction. Thereafter it comes to ability to assess the risk of investing in the ocean of financial products which certainly needs a decent level of financial literacy. Development of digital financial services brings another obstacle to investors – to mitigate the risk that it imposes, cybersecurity risks and scams together with the other mentioned basic risks. In the same time the advertisement and popularity and the easy access to financial services by digitalization increase the number of investors and their tendency to initiate new investments.

The rise of crypto markets and its global popularity has set new requirements and need for regulations as the amount of its assets is overcoming many local and regional markets – approximately 3,4 trillion dollars as of February, 2025. That shocking amount gave no other option than put this market under the umbrella of regulations.

There are various actions at EU regulation in mitigating most of the digital finance risks. The MiCA (Market in Crypto-Assets Regulation) and the DLT Pilot foster market innovation in crypto-asset market infrastructures under the supervision of EU regulators _focused on risk Donnelly et al (2023). These two acts focus on the mitigation of traditional risks arising from new crypto operations, including monetary sovereignty and financial stability. By contrast, DORA is geared towards ensuring resilience of finance as critical infrastructure.

MiCA establishes uniform rules for issuers of **crypto-assets** that have not previously been regulated in the EU(EC, 2023). It deals with:

1. transparency and disclosure requirements for the issuance, public offering and admission of crypto-assets to a trading platform;

2. the licensing and supervision of crypto-asset service providers and issuers of asset-linked tokens and e-money;
3. the operation, organisation and management of crypto-asset issuers and service providers;
4. the protection of crypto-asset holders and clients of service providers;
5. measures to prevent insider trading, unlawful disclosure of inside information and market manipulation

On the other hand The Digital Operational Resilience Act (DORA) is an EU regulation that entered into force on 16 January 2023 and will apply as of 17 January 2025. It strengthens the IT security of financial entities andfaces the operational digital risks to which the financial sector is exposed. It harmonizes the rules relating to operational resilience for the financial sector applying to 20 different types of financial entities and ICT third-party service providers. (EIOPA, 2023) It covers: 1)Principles and requirements on ICT risk management framework; 2) ICT third-party risk management 3) digital operational resilience testing; 4) ICT-related incidents – including general requirement and Reporting of major ICT-related incidents to competent authorities; 5) Information sharing ; 6)Oversight framework for critical ICT third-party providers.

The new regulation is a challenge not only for financial services providers but also for supervisor authorities, being quite complicated to understand and apply.

Most of all it is important that investors are less exposed to risks which arise from digitalization of financial services and also to malicious attempts for fraud. Regulation and rules are important but as important is also the level of financial literacy and understanding risks on the financial market, which is a matter of much broader initiative and actions.

Conclusion

The vast development of digital finance seem to be unstoppable and irreversible. Since it improves financial transactions and increases the variety of options and raise financial transactions with different digital products and services yet it brings a lot of risks which have to be addressed by regulators, investors and society as a whole in order to protect investors' assets and the stability and credibility of the global financial system. Recognizing not only the opportunities but also the risks and the proper use of digital finance tools is a key point for achieving more effective and stable financial sector.

References:

European Commission, https://finance.ec.europa.eu/digital-finance/overview-digital-finance_en (last visited on 10.01.2025)

Donnelly S., Camacho E. , Heidebrecht S. Digital sovereignty as control: the regulation of digital finance in the European Union, Journal of European Public Policy, 2023. (https://www.tandfonline.com/doi/full/10.1080/13501763.2023.2295520)

Xiaomeng L., Xianjun Z., Jiaojiao G., Pengpeng Y., Digital finance era: Will individual investors become better players?, 2024, Journal of International Financial Markets, Institutions and Money, Volume 91, March 2024, 101935.

https://www.eiopa.europa.eu/digital-operational-resilience-act-dora_en (last visited on 10.01.2025)

https://eur-lex.europa.eu/BG/legal-content/summary/european-crypto-assets-regulation-mica.html (last visited on 10.01.2025)