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Future Business Models in Financial Services: A Legitimacy-based Perspective

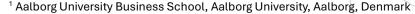
Authors

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Abstract

In this conceptual paper, we discuss four future scenarios of the financial industry, illustrating a potential industry configuration. We take a legitimacy-based perspective on future business models, highlighting interdependencies between legitimacy, regulation policy, and industry structure. We conjecture that the Neo Bank scenario is the most probable in the future of Fintech.

Keywords Fintech Business Models, Blockchain, Decentralized Finance, Neo Banks, Big Tech



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1. Introduction

Over the last years, technological innovations and digitization have caused paradigm shifts in many industries (Palmié et al., 2020). News media, brick-and-mortar retailers, and travel agencies are just some of the businesses that have experienced dramatic changes, with disruptive innovations overhauling business models that had worked successfully for decades (Christensen et al., 2018). Recently, a similar technological upheaval has begun to unfold in the financial services sector. Advancements in critical technologies such as artificial intelligence and blockchain are reshaping the industry, posing challenges for incumbents, start-ups, and regulators alike (Lau and Leimer, 2019). In addition, tech giants are increasingly moving into the industry, leveraging their vast customer base to roll out their own financial products (Frost et al., 2019). Moreover, significant geopolitical developments encourage governments to experiment with new regulations to establish or maintain a leadership position in finance (Bromberg et al., 2017).

The ongoing COVID-19 pandemic has further accelerated the adoption of financial technology (FinTech) tools. With increasing incentives for engagement with FinTech, traditional financial organizations are also undergoing rapid changes in their business models (Turcan and Deák, 2022). We expect the financial industry to be at a crossroads within the next five years. With different players pushing for different business models and industry structures, the decisive battles will be those for legitimacy: business models can only prevail if their supporters can establish a generalized perception of appropriateness (Suchman, 1995). This paper analyses four scenarios that describe the potential future states of the financial industry. We take a legitimacy-based perspective on future business models, indicating reciprocal influences among legitimacy, regulation policy, and industry configuration.

2. Approach

This paper aims to develop four scenarios for the financial services industry, each of which illustrates a potential industry configuration, and to predict the business model that will most likely play a dominant role in each setting. We follow the intuitive logic (IL) approach to scenario planning to achieve this. IL is a descriptive, qualitative approach that builds on applicants' imagination and critical thinking ability to logically assemble ideas and facts regarding major trends and derive future scenarios (Wright et al., 2013). It is one of the most popular methods in the scenario planning literature. It is well suited for determining the relationships between critical uncertainties and sociopolitical or technological trends while also considering the behavior of individual actors within a focal field (Wright et al., 2013).

To construct internally consistent, plausible scenarios, each of us (the co-authors) first individually identified key trends and change drivers affecting the financial services industry. We referred to a range of academic literature, industry and company reports, newspaper articles, and social media data for identifying these trends. We also attended multiple online conferences, talks, and panel discussions to gain expert insights on the topic. The trend identification exercise was conducted primarily between June 2020 and

October 2021. Subsequently, based on the insights gained, we jointly discussed these change drivers regarding their predictability and the magnitude of impact on the financial services. After discussions and mutual agreement, we placed all the drivers

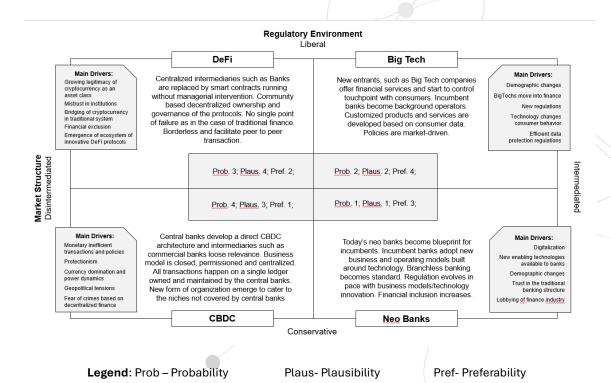


Figure 1: Future scenarios in Financial Services

on an impact predictability canvas. Next, we separated the critical drivers with high unpredictability and impact and clustered them into different themes or dimensions. We then identified two mutually independent dimensions – Market Structure and Regulatory Environment, to which most of the critical drivers were connected.

We revisited our sources for our initial analysis of critical trends, focusing on these two dimensions, leading to the emergence of their polar categories: disintermediated and intermediated (market structure) and liberal and conservative (regulatory environment). Next, we cross-tabulated these polar categories on a two-by-two matrix, generating four scenarios: Decentralized Finance (DeFi); BigTech; Neo Banks; Central Bank Digital Currency (CBDC) (Figure 1). For each scenario, we developed their contents in the form of a brief description of the respective scenario, including its main characteristics, key drivers, challenges, and limitations. We ranked the scenarios according to their plausibility, probability, and preferability (Figure 1). We built on and drove forward our joint research on the legitimation of newness by providing a holistic view of crucial change drivers and developments in the financial services sector.

3. Key insights

3.1 Key Scenario Drivers and Dimensions

The first critical dimension is market structure, and we argue that future financial business models can either have an *intermediated or disintermediated market structure*. The current financial system is highly intermediated, and centralized intermediaries such as commercial banks, insurance companies, exchanges, and payment-processing networks play an essential role. They connect the transacting parties, act as a source of trust, and help settle transactions (Chen and Bellavitis, 2020). For example, commercial banks act as intermediaries and connect lenders and borrowers. We observe an *additional layer of intermediaries* as FinTechs emerge and BigTech firms move into finance, which promises to increase efficiency by providing better use of data and customer service, such as better reach and faster turnaround times (Omarini, 2020). Demographic changes and advances in technologies drive this. For instance, BigTech firms are entering the market, offering financial services in addition to their existing portfolios and increasing convenience for consumers. However, traditional banks are pushed to become *background operators* in this structure and carry the regulatory burden (OECD, 2020).

Taking a radical leap, blockchain technology and its augmentation with the smart contracts has enabled the transaction amongst parties, with no trust or prior knowledge, without any counterparty risk (Harwick and Caton, 2019), creating the possibility of disintermediating the financial market, significantly reducing transaction costs and increasing efficiency (Chen and Bellavitis, 2020). An ecosystem of innovative DeFi protocols, such as insurance, lending and borrowing, and exchanges, as well as organizations supporting these protocols, such as data oracles, smart contract audit, and fraud analysis firms are quickly developing at the periphery of the traditional financial system. The total value locked in these protocols at the time of writing has risen to 82 billion USD. Cryptocurrencies and blockchain tokens, which form an essential part of the DeFi ecosystem, initially had a negative connotation and were associated with financial crimes such as money laundering and terrorist funding. However, recent trends indicate that these currencies are slowly gaining legitimacy. These digital assets permeate the existing financing system, and surprisingly, traditional incumbents play a crucial role in integrating them into the existing financial system. Examples of such trends are the emergence of crypto-based debit cards (Khatri, 2020), the surge in institutional investment in cryptocurrency (Manning, 2020), the development of custody services for digital currencies by incumbent banks (Son, 2021), or the acceptance of bitcoin as legal tender by the government of El Salvador (Jones and Avelar, 2021).

The second dimension we identified as highly influential is *regulation*. Regulatory environments are commonly regarded as crucial factors favoring or hampering the evolution of industries towards digitization and innovation (Alaassar *et al.*, 2020). Thus, it is unsurprising that new regulatory frameworks have significant implications for future scenarios in the *highly regulated financial services* sector. To update or create new regulations that will keep pace with changes in the industry and enable innovation, a trend in the sector is the establishment of *regulatory sandboxes*. They are usually government initiatives that function as an incubation program in which new fintech

ventures can test their solutions in controlled, real-world environments. While these new ventures receive special licenses to operate and develop innovative solutions during a specific period, they directly collaborate with regulators connected to the initiative to influence policy and regulation advancements (Alaassar et al., 2020). While early regulatory and supervisory responses to Fintech were more liberal and focused on enabling growth, more recent approaches pay more attention to emerging risks for consumers, firms, and financial stability (KPMG, 2019). Such risks go well beyond general data security and privacy concerns. Many Fintech solutions are still poorly understood by consumers, increasing the risk of financial exclusion or fraud; businesses are subjected to new operational and technology risks; and cryptocurrencies threaten the structure of the financial system as we know it (KPMG, 2019). Those risks are magnified with growing Fintech adoption as this leads to a higher reliance on technology, increased interconnectedness, and further complexity. Regulators must find the right balance between liberal (i.e., growth-focused) and conservative (i.e., security-focused) policies to reap the benefits of emerging technologies and business models while at the same time mitigating its considerable risks.

3.2 Future Scenarios

Scenario 1 - DeFi

DeFi is the scenario wherein, using distributed ledgers and smart contracts, financial services are provided without relying on centralized third parties such as banks. We expect to see disintermediated, decentralized, permissionless, and open business models becoming the dominant logic for financial services. In such business models, central intermediaries' role in providing trust and facilitating transactions becomes obsolete and is transferred to smart contracts and cryptography (Chen and Bellavitis, 2020). Ownership and the governance of these smart contracts are decentralized through the issue of governance tokens. Usually, developers, marketers, liquidity providers, investors, and users, based on their contribution, earn these tokens and participate in governance (Gogel, 2021). The smart contract enacting the financial rules and all the transactions on the ledger is open and can be viewed by anyone. The permissionless nature of these protocols makes the business model borderless (Chen and Bellavitis, 2020). The value captured is shared with the token holders through various mechanisms, such as income distribution based on their percentage holding and participation in the governance (Gogel, 2021).

In the future, people might hold a tokenized version of their physical assets in their personal digital wallets. These tokens when integrated with DeFI then can be used for various purposes such as collateral on a lending portal. Rules can be built in the smart contracts for auto appraisal of the loan application, the default of EMIs, liquidation, and the release of collateral. Any off-chain information required for activities such as liquidation can be fed on-chain via decentralized oracles (Beniiche, 2020).

Scenario 2 – BigTech

BigTech is the scenario where big technology companies such as Google, Amazon, and Meta will dominate the financial services industry by leveraging their existing technology and resources to provide innovative financial services and products. On the one hand, this scenario is characterized by liberal and market-driven regulations allowing new

entrants into the sector, and on the other hand, by a yet intermediated environment in which incumbent banks are pushed into the role of background operators.

BigTech companies assume a dominant position in the market, enhancing their service portfolio and delivering more value to their already large customer base. With a flexible regulatory structure, BigTech companies, such as Amazon, Google, and Apple, enter the market and gain space as financial service distributors. They can act as gatekeepers, connecting their platforms to incumbent banks. A higher degree of process integration is seen within these tech companies, offering integrated solutions to consumers as a part of their daily processes. Incumbents, in turn, deal with the risk of losing complete control over consumer interfaces and becoming merely product providers on platforms. With advancements in technologies and relying on a large amount of consumer data, BigTechs customize their products and services fast, focusing on bringing more convenience to customers. In this regard, integration among market players comes as a response to minimize costs and increase their competitiveness.

Scenario 3 – Neo Banks

In the Neo Bank scenario, banks and financial service providers without physical branches and completely digital operations will replace the traditional brick and mortar banks. This scenario reflects a future in which the financial industry remains highly intermediated and where regulators take a relatively conservative approach, restricting the use of cryptocurrencies and passing stricter antitrust laws to limit BigTech companies. This combination of regulation and industry configuration will cause a shift from traditional banks to digital banks without physical branches. Successful digital business models such as those of N26, Starling Bank, Monzo, or Revolut will serve as a blueprint for financial services firms, with fintech start-ups following their lead while incumbents either acquire firms and capabilities or develop and spin-off their own digital-only brands. Those neo banks who have not done so already will switch from emoney licenses to full banking licenses and expand their portfolio while still focusing only on parts of the traditional banking business. Thus, we will see different banks for different segments, such as retail banking or wealth management. Additionally, we will likely see a combination of full-stack neo banks (i.e., standalone digital banks with all appropriate licenses) and front-end neo banks that depend on legacy or other full-stack banks that will only control the customer interface but not the background operations.

Scenario 4 - CBDC

CBDC is a regulated and centralized version of the DeFi scenario. So *less intermediated*, *centralized*, *closed*, *and permissioned* business models characterize this scenario. Intermediaries such as commercial banks may significantly lose their relevance by introducing direct or retail CBDC architecture (Bank for International Settlements, 2021). Central banks might take over the role of account opening, maintenance, and verification. All payments and transactions will happen on a single ledger, which will be owned and maintained by the central banks of the respective countries (Bank for International Settlements, 2021). This will improve the transaction efficiency from the existing setup, where transactions happen on ledgers of multiple intermediaries. This scenario will take a more permissioned rather than open approach compared to the first scenario. The participant's identity would be verified, and the central bank would decide

who can participate in the system, thus *reducing the risks of financial crimes* such as money laundering and having better control over the monetary policy and financial stability.

3.3. Assessment of scenarios

Based on our analysis, we conjecture that "Neo Bank" and "CBDC" are the most and least probable scenarios in the next five years, respectively. Considering the perspective of end-users and the overall financial system, we find that "CBDC" and "BigTech" are the most and least preferable, respectively.

4. Discussion

4.1 Scenario 1-DeFi

DeFi appears to be a gateway to the utopian world, where everyone has access to a super-efficient financial system. However, we also foresee multiple challenges to its legitimacy and mainstream adoption. From a technology perspective, developers currently face the blockchain trilemma of scalability, security, and decentralization, which forces them to sacrifice one aspect for the sake of the other two (Abadi and Brunnermeier, 2018). Besides, although smart contracts being open source brings in transparency, it also makes them vulnerable to a possible exploit from malicious actors (Gogel, 2021). Furthermore, decentralized oracles, which can bring the value of real assets and identities to the blockchain and thus enable the full potential of DeFi, are still in their very nascent stage of development (Beniiche, 2020).

From an institutional perspective, due to the radical shift from the existing practices and structures, DeFi lacks cognitive legitimacy. Constituents such as regulators, users, and policymakers lack education about its know-how, risk, implication, and opportunities. For DeFi to come to the mainstream, multiple developments might be required, such as developing a legal framework defining the liabilities of DAOs and a framework for taxing their profits (Gogel, 2021). Besides, there would be resistance by the government and regulators to this type of financial setup, as they may lose control over the monetary policies, and there can be risks of money laundering and terrorist financing due to the anonymous and permissionless nature of DeFi.

Further, there are issues with the mechanisms for decentralized governance itself. For example, entities may hold the governance token only for speculative purposes and may lack understanding and interest in the future development of the protocol. In addition, the unfair launch and distribution of tokens may lead to vesting too much power to a few people, leading to issues similar to those in traditional finance. Thus, a dependable way of decentralized governance is yet to be identified.

4.2 Scenario 2-BigTech

Although the entrance of BigTech firms and their partnerships with incumbents in the financial industry are already realities, the actors face different legitimacy challenges to perform their activities and make this new operation model evolve. In the traditional market structure, many financial services are offered directly to consumers by commercial banks. These banks have achieved legitimacy throughout history by

complying with the rules. Therefore, they can be considered part of a taken-for-granted model in this established and highly regulated market structure. Conversely, BigTechs and commercial banks (not exactly by their choice, see OECD, 2020) have proposed a new operating model. The acceptance and adoption of this model require a movement towards making it "fit in" the existing structure (Turcan, 2018).

In this movement, actors must bring the desirable convenience to consumers at the same pace that they can prove to perform advanced security protocols and be reliable when it comes to data protection, which are taken-for-granted aspects in the traditional model. These are particularly challenging issues since BigTech companies have been facing an increasing lack of trust from consumers, authorities, and partners due to the unethical use of consumers' data. Herein, seeking moral and cognitive legitimacy is especially important since, according to Suchman (1995), moral legitimacy is granted when the audience recognizes that the organization is "doing things the right way" according to accepted values. In turn, cognitive legitimacy is granted when the audience comprehends and accepts the new way of doing things as the best possible and imaginable.

Given Big Tech's growth tendency through the network effect and the demographic changes towards a more digitalized world, as time goes by, it might become easier to legitimize this new model with their consumers. Nonetheless, regulators might see their growth and power gain as a threat, introducing new antitrust laws and increasing legitimacy challenges with relevant audiences. The rationale is that, as these companies grow, they might dominate the market for payments, leading to exclusion and higher fees (Bank for International Settlements, 2021). Thus, regulators shall dictate how far this scenario can move towards a more liberal end. In this regard, these companies will deal with the legitimation paradox (Turcan, 2018), having to follow the game's rules at the same time that they need to differentiate themselves to enhance competitiveness and growth.

4.3 Scenario 3–Neo Banks

Neo banks have capitalized on the lack of trust in the financial sector prevalent after the 2008 financial crisis. The crisis revealed numerous vulnerabilities of the existing system, and governments adjusted regulations to encourage new entrants and promote competition (OECD, 2020). Neo banks highlighted the need for technological innovation in financial services and positioned themselves as nimbler and more transparent than their traditional counterparts, quickly building socio-political legitimacy. The predominant business model for neo banks is to specialize in one or few financial products and offer their customers a streamlined, fully digital experience. Thereby, they either acquire their own banking licenses or cooperate with traditional institutions, providing technological solutions to partner banks who, in turn, possess the necessary licenses. Many neo banks have gone on to develop into billion-dollar companies. The number of newly launched neo banks, venture capital invested into neo banks, and customer numbers have increased every year since 2010 (Stegmaier and Daniel, 2020), indicating that the sector has established a perception of cognitive legitimacy. This position of strength and perception of legitimacy, however, might be short-lived. Firstly, the global pandemic has revealed some compliance-relevant issues in some of the leading neo banks (Stegmaier and Daniel, 2020), raising new questions about appropriate regulation and neo banks' legitimacy. Secondly, with blockchain technologies challenging the necessity of intermediation in financial services altogether, neo banks must defend the legitimacy of their organizations and the entire intermediated structure of the current financial system.

4.4 Scenario 4-CBDC

In an attempt to counter disruptive threats from cryptocurrencies and private currencies, Central banks worldwide are experimenting/researching their digital currency, commonly referred to as CBDCs (Bank for International Settlements, 2021). A direct CBDC-based architecture, which connects central banks directly with end retail users and businesses, would bring in disintermediation, operational efficiency, and financial inclusion while maintaining control with central public authorities (Bank for International Settlements, 2021). However, central banks lack the resources and capabilities for the radical takeover of the commercial banks' functionalities (Cocuzzo, 2020). Therefore, it is improbable that the central bank would disrupt the existing banking and payment infrastructure. Even if they develop a digital currency, they might follow the indirect or wholesale CBDC architecture (Bank for International Settlements, 2021). This type of CBDC architecture would still reduce inefficiencies (Deloitte, 2023), but they would be based on a traditional intermediated structure.

If central banks go ahead with the direct CBDC architecture, the livelihood of the commercial bank will be threatened (Cocuzzo, 2020). Therefore, the effort would see significant pushback from these commercial banks. Furthermore, the dominance of business models based on a direct CBDC architecture will lead to an increased concentration of data in the hand of central authorities, which would require an enhanced data governance mechanism (The Clearing House, 2021). People may fear abuse of the data by the central authority, which can prohibit the legitimation and mainstream adoption of this scenario. Central banks will have to develop sound technology to introduce sufficient anonymity and induce trust among the users (Bank for International Settlements, 2021). Cyber security would be another big challenge as, unlike DeFi, CBDC-based architecture may create a single point of failure (Deloitte, 2023).

4.5 Theorizing

While blockchain-based technologies and disintermediated market structure certainly pose a disruptive threat to the financial industry, it remains to be seen how substantial this threat is. Regulators and consumers alike become more aware of the risk inherent in new technologies and practices, driving a more conservative approach to regulation and favoring neo banks (which operate in a familiar format and structure to traditional banks) over DeFi. Intermediation possesses strong cognitive legitimacy and a level of "taken-forgrantedness" that is difficult to disrupt, at least within the next five years. Thus, we argue that "Neo Bank" will be the most probable scenario within the next five years. However, we also argue there will be a change in the status quo in a further 5 to 10 years. Scenarios based on disintermediated market structure are preferable, as they can bring significant efficiency and financial inclusion. Therefore, with improvement in blockchain technology and eventual legitimation of disintermediated financial structures, the logic based on a

hybrid of the first and fourth scenario, such as decentralized but permissioned business models, may eventually take over.

Analysis of future scenarios provides theoretical insights on the disruption of an institutional field (Munir, 2005) and legitimacy dynamics amongst multiple possible business models. We theorize that legitimacy of existing practices and business models in a field can be simultaneously contested by different categories of actors and the disruptive business models championed by legitimacy fringe organizations (e.g., DeFi proponent, Fintech) and high legitimacy organizations from within (e.g., Central banks) and outside the industry (e.g., Big Tech Firms). We also theorize that to counter disruptive threats (e.g., from cryptocurrencies) and maintain their dominant position in the field, incumbent firms can pursue an innovation (e.g., CBDCs by the central bank), which disrupt the disruptor as well as the very institutions, in which they are embedded. Furthermore, the dynamics between traditional and challenger neo banks highlight that incumbents and disruptors can collaborate and compete at the same time. We may argue that incumbents do this to maintain their organizational legitimacy and disruptors to create legitimacy of the business models and their organization.

5. Conclusions

We provide a concise summary of current trends and developments in financial services and demonstrate multiple business models battling for dominance in this industry. We emphasize that regulators and policymakers will have to strike the right balance between innovation and consumer protection. Our study can be a good starting point for policymakers, regulators, and other stakeholders to better understand and engage with the drivers and limitations of the possible scenarios.

Besides, we provide several theoretical insights on the disruption phenomenon and legitimacy dynamics amongst multiple competing business models in a field. Our study also identifies several avenues for future research. Prior work on disruption has primarily focused on the incumbents' strategy when facing disruptive threats from a single competing business model (Christensen et al., 2018). Our study highlights the need to explore incumbents' strategies for defending their legitimacy when facing threats from multiple disruptive business models. Furthermore, we observe that different organizations challenge the status quo in the financial services field. These comprise high legitimacy organizations from outside and inside the industry and emerging organizations with low resources and legitimacy. Future research should explore and differentiate the incumbent-disruptor-legitimacy dynamics for these challenger categories. In addition, it will be interesting to explore legitimacy dynamics amongst different competing challenger logics and the respective organizations pushing them.

While we believe that the Neo Bank scenario is the most probable in the near future, we recognize the limitations of our research. Since we are using only two key dimensions to create scenarios for the financial services industry, it may oversimplify the entire situation or the environment (Amer et al., 2013). Finally, we may have missed some critical factors, and an unexpected breakthrough in the industry can suddenly change the playing field. Furthermore, this study can be improved by inviting experts from the

financial services industry to do the scenario planning exercise in a more traditional workshop setting.

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References

Abadi, J. and Brunnermeier, M. (2018), "Blockchain economics", working paper [25407], National Bureau of Economic Research, Cambridge, MA, https://doi.org/10.3386/w25407 (accessed 2 June 2025).

Alaassar, A., Mention, A.-L. and Aas, T.H. (2020), Exploring how social interactions influence regulators and innovators: The case of regulatory sandboxes, *Technological Forecasting and Social Change*, Vol. 160, 120257, https://doi.org/10.1016/j.techfore.2020.120257.

Amer, M., Daim, T.U. and Jetter, A. (2013), A review of scenario planning, *Futures*, Vol. 46, pp. 23–40, https://doi.org/10.1016/j.futures.2012.10.003.

Bank for International Settlements (2021), "CBDCs: An opportunity for the monetary system", available at: https://www.bis.org/publ/arpdf/ar2021e3.pdf (accessed 2 June 2025).

Beniiche, A. (2020), "A study of blockchain oracles", working paper, arXiv, available at: https://doi.org/10.48550/arXiv.2004.07140 (accessed 2 June 2025).

Bromberg, L., Godwin, A. and Ramsay, I. (2017), Fintech sandboxes: Achieving a balance between regulation and innovation, *Journal of Banking and Finance Law and Practice*, Vol. 28, No. 4, pp. 314–336.

Chen, Y. and Bellavitis, C. (2020), Blockchain disruption and decentralized finance: The rise of decentralized business models, *Journal of Business Venturing Insights*, Vol. 13, e00151, https://doi.org/10.1016/j.jbvi.2019.e00151.

Christensen, C.M., McDonald, R., Altman, E.J. and Palmer, J.E. (2018), Disruptive innovation: An intellectual history and directions for future research, *Journal of Management Studies*, Vol. 55, No. 7, pp. 1043–1078, https://doi.org/10.1111/joms.12349.

Cocuzzo, C. (2020), "Central Bank Digital Currencies: Challenges for commercial banks", available at: https://think.ing.com/articles/central-bank-digital-currencies-challenges-for-commercial-banks/ (accessed 2 June 2025).

Deloitte (2023), "Are Central Bank Digital Currencies (CBDCs) the money of tomorrow?", available at: https://www.deloitte.com/content/dam/assets-

zone2/lu/en/docs/industries/financial-services/2023/lu-are-central-bank-digital-currencies.pdf (accessed 2 June 2025).

Frost, J., Gambacorta, L., Huang, Y., Shin, H.S. and Zbinden, P. (2019), BigTech and the changing structure of financial intermediation, *Economic Policy*, Vol. 34, No. 100, pp. 761–799, https://doi.org/10.1093/epolic/eiaa003.

Gogel, D. (2021), "DeFi beyond the hype: The emerging world of decentralized finance", Wharton Blockchain and Digital Asset Project, University of Pennsylvania, available at: https://wifpr.wharton.upenn.edu/wp-content/uploads/2021/05/DeFi-Beyond-the-Hype.pdf (accessed 2 June 2025).

Harwick, C. and Caton, J. (2019), "What's holding back blockchain finance? On the possibility of decentralized autonomous finance", working paper, SSRN, https://doi.org/10.2139/ssrn.3373382 (accessed 2 June 2025).

Jones, S. and Avelar, B. (2021), "El Salvador becomes first country to adopt bitcoin as legal tender", *The Guardian*, 9 June, available at: https://www.theguardian.com/world/2021/jun/09/el-salvador-bitcoin-legal-tender-congress (accessed 2 June 2025).

Khatri, Y. (2020), "Coinbase's crypto debit card is launching in the U.S. and lets users earn back bitcoin", *The Block*, 28 October, available at: https://www.theblock.co/post/82683/coinbase-visa-crypto-debit-card-us-launch-bitcoin-2021 (accessed 3 June 2025).

KPMG (2019), "Regulation and supervision of fintech", available at: https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2019/03/regulation-and-supervision-of-fintech.pdf (accessed 2 June 2025).

Lau, T. and Leimer, B. (2019), The era of connectedness: How AI will help deliver the future of banking, *Journal of Digital Banking*, Vol. 3, No. 3, pp. 215–231, https://doi.org/10.69554/NESU7200

Manning, L. (2020), "What does institutional adoption of crypto mean for 2021 and beyond?", Nasdaq, available at: https://www.nasdaq.com/articles/what-does-institutional-adoption-of-crypto-mean-for-2021-and-beyond-2020-12-14 (accessed 2 June 2025).

Munir, K.A. (2005), The social construction of events: A study of institutional change in the photographic field, *Organization Studies*, Vol. 26, No. 1, pp. 93–112, https://doi.org/10.1177/0170840605049463.

OECD (2020), "Digital disruption in banking and its impact on competition", working paper [243], OECD, Paris, https://doi.org/10.1787/b8d8fcb1-en (accessed 2 June 2025).

Omarini, A. (2020), FinTech: A new hedge for a financial re-intermediation. Strategy and risk perspectives, *Frontiers in Artificial Intelligence*, Vol. 3, Article 63, https://doi.org/10.3389/frai.2020.00063.

Palmié, M., Wincent, J., Parida, V. and Caglar, U. (2020), The evolution of the financial technology ecosystem: An introduction and agenda for future research on disruptive

innovations in ecosystems, *Technological Forecasting and Social Change*, Vol. 151, 119779, https://doi.org/10.1016/j.techfore.2019.119779.

Son, H. (2021), "Bitcoin custody: US Bank launches service as institutions race to cater to crypto demand", *CNBC*, 5 October, available at: https://www.cnbc.com/2021/10/05/bitcoin-custody-us-bank-launches-service-as-institutions-race-to-cater-to-crypto-demand.html (accessed 2 June 2025).

Stegmaier, C. and Daniel, L. (2020), "Neobanks 2021: Shifting from growth to profitability", Exton Consulting, available at: https://www.wallstreetitalia.com/app/uploads/2021/05/report-neobanks-2021.pdf (accessed 2 June 2025).

Suchman, M.C. (1995), Managing legitimacy: Strategic and institutional approaches, *Academy of Management Review*, Vol. 20, No. 3, pp. 571–610, https://doi.org/10.2307/258788.

The Clearing House (2021), "On the road to a U.S. central bank digital currency—challenges and opportunities", available at: https://www.theclearinghouse.org/-/media/new/tch/documents/payment-systems/tch_us_cbdc_7_27_21.pdf (accessed 2 June 2025).

Turcan, R.V. (2018), Sociology of knowledge perspective on entrepreneurship, in Turcan, R.V. and Fraser, N.M. (Eds.), *The Palgrave Handbook of Multidisciplinary Perspectives on Entrepreneurship*, Springer International Publishing, Cham, pp. 433–455, https://doi.org/10.1007/978-3-319-91611-8_20.

Turcan, R.V. and Deák, B. (2022), Fintech – stick or carrot – in innovating and transforming a financial ecosystem: toward a typology of comfort zoning, *Foresight*, Vol. 24, No. 2, pp. 126–139, https://doi.org/10.1108/FS-02-2021-0052.

Wright, G., Bradfield, R. and Cairns, G. (2013), Does the intuitive logics method – and its recent enhancements – produce 'effective' scenarios?, *Technological Forecasting and Social Change*, Vol. 80, No. 4, pp. 631–642, https://doi.org/10.1016/j.techfore.2012.09.003.