

# **Mounting Challenges and New Horizons for the Banking System\***

*Ádám Nyikes – István Papp – Péter Sajtos*

*For centuries, banks have played an essential role in the functioning of the economy. However, the digital evolution of the 21st century has not only challenged the traditional role and operating principles of the banking sector, it has also created new competitors. What does the future hold for the financial system and financial services? In this article, we discuss three possible trends: (i) the emergence of a more efficient banking system; (ii) the spread of decentralised financial services; and (iii) the widespread adoption of central bank digital currency (CBDC).*

## **1. Introduction**

There are many different financial systems around the world, which differ significantly in terms of the historical context in which they were developed, their socio-economic environment, their sophistication and their regulation. The financial ecosystem has been and continues to be shaped by many factors, such as the spread of civilisations, changes in the needs of economic agents, extending deregulation of capital flows, industrial revolutions, the current wave of progress in information and data technologies, financial crises, changes in the regulatory environment and financial innovation.

While the way banking systems work on the surface has changed greatly over history, the core of how banks operate has remained almost unchanged until today. The central organising principle of commercial banking is that the liability side of the banks' balance sheets includes items (sight and other deposits) that are used as money by other agents of the economy. This allows banks to grant their loans in this liability, increasing their balance sheet total, while – putting it simply – they only need to provide liquidity to the extent that they remain liquid when deposit holders request a payment outside the bank.

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\* The papers in this issue contain the views of the authors which are not necessarily the same as the official views of the Magyar Nemzeti Bank.

*Ádám Nyikes is an Analyst at the Magyar Nemzeti Bank. Email: nyikesa@mnb.hu  
István Papp is a Senior Economic Analyst at the Magyar Nemzeti Bank. Email: pappis@mnb.hu  
Péter Sajtos is a Head of Department of the Magyar Nemzeti Bank. Email: sajtosp@mnb.hu*

In the 21st century, however, the centuries-old hegemony of banks, shaped by two interrelated trends, has been challenged: on the one hand, the inherited “overbanked” structures are often too costly (*ESRB ASC 2014*), inflexible in resource allocation and inefficient in the era of digitalisation, and on the other hand, new, innovative players are trying to better meet ever-changing consumer needs, thus capturing some banking markets. Based on these trends, we try to outline a vision of how financial systems may evolve in the future.

## **2. Specificities of the operation of the banking system**

Banks have long been key players in the economy and have successfully adapted to socio-economic and technological changes and transformations. In the past, financial innovation has often boosted the development not only of banks but also of the economy and society, and the sector has moved from being a follower and facilitator to being an innovator. As modern societies have developed, the use of banking services has become increasingly common, and banks have become an integral part of everyday life around the world. However, after the 2008 global financial crisis, banks lost their former role as innovators, and new innovative players emerged to become both partners and competitors to commercial banks. Rapid changes in consumer demand and technology are much more favourable for new, innovative players than for banks with traditional systems and business models, often based on decades-old knowledge.

Traditional banking systems now face many problems, partly due to their inherited structures. European countries typically have well-developed financial infrastructures, but too many banks and branches are expensive to maintain. This also affects pricing in many markets, with banks offering some services (e.g. payment services) at high prices, despite the fact that their services are far from customer-friendly in today’s environment. However, banks derive a significant part of their revenues from the provision of payment services, and it is their centuries-old role in this area that was first challenged by new competitors. The new entrants’ services include a range of innovative, fast, user-friendly and low-cost transaction services. These services pose a significant threat to the traditional markets of banks, even if they are not risk-free: some new products are unregulated, highly volatile and can be highly pro-cyclical.<sup>1</sup>

From a textbook perspective, the banking system performs its functions properly if it can withstand external shocks – not just environmental ones – and ensure the efficient allocation of resources on a continuous basis. There are many examples in economic history of banking systems operating in an unsustainable, pro-cyclical

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<sup>1</sup> For more details, see: *Benk et al. (2018)*

manner, causing market turbulences or severe financial disruptions. Banking crises have serious economic consequences, resulting in significant costs for owners and sometimes for governments and customers as well. These negative instances have led to a societal demand for banks to operate in a sustainable way, i.e. not to take excessive risks, follow misaligned incentives or unsustainable business models. This is facilitated by the continuous evolution of the regulatory system.

### **3. Challenges for banking systems in the decade ahead**

Nowadays, breaking up old structures in the financial system has also become more feasible, as the development of information and data transmission technologies has created large networks and customer bases around the world, making it cheaper and faster to spread information through global networks. The coming years could be a watershed moment in the fundamental functioning of our current financial system, changing not only our banking habits but, in extreme cases, the current logic and ecosystem of money creation and financial intermediation, based on bank lending.

Despite the aforementioned problems, such as low efficiency and allocation distortions, universal banks still dominate the financing of the economy in European countries today. This is partly because consumers in the EU are protected by strict data protection rules, which often act as a barrier to the introduction and spread of financial innovations. The degree of segmentation of the European market does not favour FinTech/BigTech companies. European commercial banks with well-developed financial infrastructures mostly started the digitalisation of banking processes based on developments of their own, thus lacking organic and well-functioning partnerships with FinTech/BigTech companies, which has led to a clear lag in the digitalisation of financial intermediation and innovation of new products.

In other parts of the world, the rise of FinTech companies is much more remarkable, for example in China, local FinTech/BigTech companies have played a significant role in the digitalisation of large banks, accelerating the digitalisation of banking processes and leading to productive collaboration between banks and these companies. In many African countries, the lack of financial infrastructure and the high cost of traditional banking systems have led to a surge in financial services provided by FinTech companies (*Eszes et al. 2018*). Technological progress provides a good basis for broadening the range of users of financial services and promoting financial inclusion. Technological advances in recent years – and the coronavirus epidemic of the past two – have brought significant changes to people's lifestyles, affecting banking habits and what is expected of banks.

Banking systems in Europe are also at a crossroads, and without radical efficiency improvements and service enhancements they will not be able to meet the demands of the times and withstand the increasing challenges of competitors. Digitalisation and digital operations are essential elements for the meaningful renewal of banks. However, digital solutions can only spread more widely and to less developed regions if the necessary conditions are in place.<sup>2</sup> Branch closures are particularly destructive where internet penetration and the digital literacy of the population are low. Thus, not only the financial sector, but also the government has an important role to play in the uptake of digital banking solutions. Traditional institutions that are not able to adapt to the digital needs of their customers may lose clients, and new players can take full advantage of this. FinTech/BigTech firms with their more technologically advanced, cost-effective solutions and customer-oriented services can become more attractive than traditional service providers. However, most FinTech/BigTech companies provide financial services without performing maturity and liquidity transformation. This essential operation is still carried out by banks, i.e. the dethronement of banks has not yet taken place, and commercial banks still maintain their market dominance almost everywhere in the world, but warning signs are seen more and more frequently.

#### **4. Future development directions in banking services**

It is difficult to predict the future direction of banking services, but three main trends can be clearly identified and analysed to guide us. The first of these trends is (i) the renewal of the banking system as we know it today, making it more efficient through digitalisation, in the spirit of sustainability. The next one is (ii) the spread of technology-based, decentralised financial platforms that can partially or fully replace today's financial intermediaries. The third development direction is (iii) the widespread adoption of central bank digital currency (CBDC), which could bring a transformation in the basic infrastructure of financial systems that would allow central bank money to innovate financial intermediation on a digital basis, while respecting security. For each of these trends, we present a general vision of the future, looking at three key banking functions (payments, lending and savings) in an attempt to map possible changes going forward.

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<sup>2</sup> For more details, see: *MNB (2021a): Box 10, pp. 58–60*

#### **4.1. Direction (j): a more efficient banking system**

The renewal of the current banking system has already begun, with an increasing focus on technology in finance as well, with the development of digitalisation in banking, and it is already apparent that banks not participating in digitalisation could suffer a significant competitive disadvantage. However, there is still a long way to go before banking operations as a whole are placed on a new footing and a digitalisation-driven turnaround in efficiency occurs within banking systems.<sup>3</sup> On the customer side, the future of banking can be characterised by convenient, instant and fast digital services, accessible from anywhere. A more efficient service model built around the customer and a personalised, user-friendly banking experience in the digital space can increase customer satisfaction. The fact that customers will be able to access the internet – mainly via smartphones – almost universally in the near future can help achieve this.

All core banking functions on the client side may be significantly affected by this renewal. The combination of real-time availability, cost reduction and great customer experience – as the three main factors – in payments can lead to continuous innovation. The emergence of extensive digital interfaces and platforms for customers can provide a convenient way to access multiple services simultaneously and quickly, tailored to individual needs, while in the field of lending, the increasing amount of data generated by a growing online presence and the general evolution and integration of technology into credit decision processes can result in more personalised services and more convenient, fast and automated credit processing, which can be reduced to a few days or hours. In addition, the management of savings may also be affected by intense technological development, as improvements in search mechanisms and cost reductions can significantly automate portfolio decisions (e.g. robo-advice), while green and financial awareness products reflecting new perspectives can broaden the supply side.

At the same time, a modern operating environment is needed to achieve and maintain high, mostly digital, service standards. The institutions need to recognise that the potential of digitalisation goes beyond placing traditional processes into a digital space. The use of innovative, advanced technologies (e.g. deep learning algorithms, cloud-based solutions) in internal processes can be an important building block for a more efficient banking system. Innovative developments are enabling banks to move to a data-driven, digital operating logic, where the flexibility, speed and automation of processes brought by increasingly advanced technologies can reduce the amount of resources needed, time and complexity of processes, and lower operational and running costs. So, overall, there are substantial efficiency

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<sup>3</sup> MNB (2021b): pp. 10–14 and 16–19

gains, while advanced solutions can provide better data management and better customer experience with a high degree of flexibility.

FinTech companies are also working towards a more efficient banking and financial system. There are numerous innovative solutions aimed at revitalising every element of the banking service and supply chain, embedded in financial intermediation to improve its quality and efficiency. In the wake of the coronavirus pandemic, particular importance has been attached to fully digitalised service delivery and it is expected to remain relevant in the long term. As a result, an innovative and digital approach and business logic will become an important basis for financial intermediation, where FinTech companies are currently leading the way. However, despite all these efforts, the relevance of commercial banking business models may still be crucial in an even more efficient financial system in the future: this is partly supported by the emergence and development of so-called neobanks. These new market players without a physical branch – typically FinTech start-ups – are also providing banking services to an increasingly wide range of customers. It is important to note that neobanks' business models – besides digital-only access – place significant emphasis on process modernisation and open ecosystem-based operation, thus supporting more personalised service delivery and the long-term success of efficiency improvement. In terms of improving customer experience, competition in the market is beneficial, and cooperation between incumbents and new players (neobanks, FinTech firms) can also lead to a better customer experience and has significant potential for systemic efficiency gains.

#### **4.2. Direction (ii): decentralised financial services**

In addition to making banks more efficient, rapid technological progress could make many financial services available in a peer-to-peer form, i.e. customers could carry out financial transactions directly with each other without the need for a traditional intermediary (e.g. a commercial bank for sending money or a stockbroker for investing). In these service delivery models, decentralised operation – without a central counterparty – can be based on the spread of technologies with increasingly transparent, unalterable data management mechanisms (e.g. blockchain), and on the automatic and algorithmic exploitation of the inherent value of data through active online presence. These factors could help the dissemination of applications and platforms based on the principle of decentralisation and the transition of financial services to a fully digital path, while further technological advances could also lead to a fully decentralised financial system (DeFi),<sup>4</sup> where technological bases that have emerged via blockchain and cryptoassets could completely eliminate financial or other intermediaries (e.g. stock exchanges).

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<sup>4</sup> For more on this topic, see: *Katona (2021)*

Given that digital markets are open around the clock and around the world, the ability to operate without an intermediary could significantly support the real-time settlement of payment transactions. This model could also enable the automation of decisions related to more complex financial services, for example, various forms of direct lending can appear between users on digital platforms, where the lender and the borrower can meet, agree on terms and enter into a “contract” in the context of a personalised service. In addition, innovative solutions in the field of borrowing could also emerge, including the creation of large online investment communities where users can commit their free reserves without an intermediary in a transparent and traceable way, while the growing online activity and the dominant size of the online community could also act as a risk filter (e.g. by avoiding risky solutions in a group during crowdfunding).

Although the spread of decentralised solutions is already seen in some smaller market segments, the structures following the DeFi principle still carry several risks that could undermine the trust essential for long-term sustainable growth, even though many technologies already address confidentiality and integrity issues at an exceptionally high level. The potential reduction of the intermediary role may make it more difficult to deal with market imbalances (e.g. a shortage of resources if only borrowers appear on the platform and there is no one to meet the demand), while the lack of assumption of responsibility, and investor and depositor protection measures (e.g. complaints handling, dispute resolution processes, money laundering controls, deposit insurance), which is typically provided by the centralised actor, can pose a number of risks to consumers, and unpredictability can also pose stability risks to the financial system as a whole. Appropriate supervisory mechanisms could mitigate these risks, but the comprehensive regulation and ongoing supervision of constantly evolving and cross-border DeFi solutions is a significant challenge. In the DeFi framework, numerous financial services can already be seen that do not yet fit clearly into the current regulatory framework and defined types of activities, which present relevant challenges for both regulation and supervision. Against this background, while the potential of the technology is promising, the complete elimination of intermediaries is not yet a realistic scenario.

#### **4.3. Direction (iii): central bank digital currency (CBDC)**

CBDC has become an unavoidable topic for central banks in recent years, especially since the start of the coronavirus pandemic. The central bank digital currency is a digital form of money issued by the central bank in its own currency, different from traditional reserve or settlement accounts (*CPMI 2018*). Wholesale CBDC – i.e. CBDC accessible to financial institutions – could bring the reform of interbank and cross-border payments and settlement, while retail CBDC – i.e. CBDC accessible to the general public – could trigger the renewal of financial services and monetary

policy. Both types of CBDC would affect a slice of traditional banking operations, but the future of retail and corporate banking could be transformed primarily by the widely available retail CBDC.<sup>5</sup>

Two important factors are behind the rapid spread of the concept of CBDC. One is that central banks are increasingly concerned about the future of money, i.e. the question of what kind of financial currency citizens will use in the coming decades. If the national means of payment cannot meet modern requirements, the public may turn to other types of means that offer easy and simple payment in the digital space, which could lead to monetary sovereignty risks. The other important factor was the coronavirus pandemic itself. Although the digitalisation of the economy and society has long been an identifiable process, the coronavirus pandemic unexpectedly accelerated it. This has made the development of a central bank payment instrument compatible with the increasingly widespread digital payment solutions, even more topical.

The societal and economic impact of CBDC depends primarily on its design, which is why central banks need to set clearly defined strategic objectives when designing it. Such objectives can be to support digital financial inclusion, reduce market frictions and systemic costs, increase the efficiency of monetary policy, create a targeted stimulating tool or develop the financial services market by providing new innovative infrastructure suitable for the operation of smart contracts.

The emergence of the CBDC would not replace the current financial infrastructure, even in an ideal case, but as an alternative digital infrastructure it could represent a reform of the current financial system. Despite its complementary nature, it could have a significant impact on banking services and their development. In particular, it could bring changes in the area of payments, by offering citizens an easy-to-use, cost- and risk-free payment alternative that could be used in the digital space. At the same time, the role of financial intermediaries could be maintained by building additional innovative financial and complementary services around CBDC. With the CBDC at the core of the system, central banks could ensure interoperability between emerging financial platforms and ecosystems.

Depending on the strategic objectives and related planning decisions, a CBDC may also involve additional banking functions. Resources from deposits could flow to the central bank, which could raise financial stability issues. This process can be limited by the central bank through built-in mechanisms (e.g. restriction on the quantity held or adjustable interest rate). In some cases, a CBDC can also provide a credit function, allowing the central bank to effectively manage market frictions (e.g.: credit crunch, credit rationing). However, the intermediation role of banks

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<sup>5</sup> For more details on the issues mentioned in relation to CBDC, see: *MNB (2021c)*



could be maintained in this case, similarly to other central bank lending programmes (see: Funding for Growth Scheme by the Magyar Nemzeti Bank, the central bank of Hungary).

## 5. Conclusion

Although banking systems as we know them today are confronted with mounting challenges considering the spectacular changes in the 21st century – such as rapidly evolving digitalisation and numerous sustainability issues – each of the three trends we have outlined presents an exciting vision for the future. Advances in technology can bring many useful innovations for customers, which may go hand in hand with a complete transformation of business logic as we know it today. However, based on what we know today, the most realistic scenario is that the dominant role of banks in financial intermediation will continue, as most FinTech/BigTech companies provide financial services without any meaningful maturity transformation, i.e. this key financial operation is still performed by banks. The other two trends – the transition to a decentralised financial system and the spread of CBDC – also have significant long-term development potential, and therefore the three trends are expected to develop jointly in the future. In this respect, the different directions may reinforce each other as they evolve, so that the financial services palette will not be limited to certain scenarios and types of institutions, but may open up new opportunities and horizons for sustainable development. The evolution of banking services is desirable and inevitable, but it should be remembered that the focus of this transformation must always be on the needs of customers.

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