

# **Challenges of digitalisation for the banking industry**

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Let me go straight to the question that many ask today: will fintech spell the demise of commercial banks and central banks?

According to some experts, the answer is yes! But before we weigh up the arguments, I would like to remind that this is not the first time that the death of banks has been announced; be it at the hand of ATM machines, telephone banking, credit unions, asset managers, sales finance companies or retail outlets, such as Walmart but to name a few examples. The competitive threat has generally come from a combination of new technology and/or new regulation. Despite all these evolutions, traditional banking activities still accounts for more than two-thirds of total revenues of financial institutions. More often than not, banks have embraced new technology and teamed up with would-be competitors. There are no doubts that digitalisation will have a profound impact on banking over the coming decade. To my mind, however, banks are here to stay because of the very special role they perform in the economy and for which it is hard to identify clear substitutes unless sovereign governments are also prepared to abandon the very notion of state monopoly on the issuance of fiat currencies.

Throughout most of their history, banks have been tightly linked to sovereigns and developed alongside the modern nation state. Banks depend heavily on their home country governments to provide them with a charter, credibility (in terms of supervisory and regulatory regime) and a safety net (deposit insurance and liquidity provision). Conversely, banks are at the heart of economic policies through monetary policy transmission and financing of the economy.

To answer the question, let's consider first the digitalisation threat to the state monopoly issuance of fiat currencies.

As you know, central banks' monopoly in the supply of cash and bank reserves is relatively new. In the 19th century, in many countries private banks issued competing currencies.<sup>1</sup> The banknote monopoly was important for the central banks' identity and task in society as guarantor of a functioning monetary and payment system. Competing currencies are today reinvigorated by advances in digitization that raise new challenge for public authorities.

While the best-known digital currency is Bitcoin, it's arguably not suited for high volume transactions. The relatively high costs of domestic and cross border electronic payments are encouraging innovation, and better adapted technologies are emerging. Stablecoins, which are blockchain-based payment instruments that aim to achieve the price stability demanded by end users for payment, could have potential for widespread adoption.

The most recent and highest profile digital currency is Libra. Libra is expected to be bought, sold, held, sent and received within the Facebook's apps. If all Facebook's users adopt Libra to shop and transfer money, it could become one of the world's biggest financial entities.

There is also a huge potential for commercial banks to become important players, should digital currencies prosper. For example, Bank of Tokyo Mitsubishi UFJ (MUFJ) is developing its own digital currency, MUFG coin, and the corresponding smartphone application prototype to authenticate digital tokens on a P2P platform. Other projects exist, JPM Coin and even the recently unveiled Wells Fargo Digital Cash.

Ironically, as currencies are increasingly weaponised by political leaders at the expense of global stability, private agents could be incentivized to adopt alternative medium of exchanges if they become available and reliable.

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<sup>1</sup> Söderberg, G. (2018). Why did the Riksbank get a monopoly on banknotes?, *Sveriges Riksbank Economic Review*, (3), 6-15.

Digital currencies pose significant issues related to monetary policy, financial stability and the smooth functioning of and public trust in the global payment system. There are also obvious and serious risks related to anti-money laundering, the financing of terrorism, as well as consumer and data protection, cyber resilience, fair competition and tax compliance. <sup>2</sup>

Let me briefly consider some of the risks associated with an initiative such as Libra.

A first issue that arises is that the absence of a state, which goes hand in hand with the absence of lender of last resort. Who will stand behind Libra in a liquidity crisis? Will Facebook be eligible to LoLR in case of crisis? It might be easy to answer negatively ex-ante, but what about ex-post, in case of crisis?

An additional financial stability issue relates to the calibration of the weights in the basket of fiat currencies that back Libra. If Libra were to become a widely-adopted, the inclusion in the basket could affect a given national currency's broader position in global finance. As things stand today, this decision on currency weighting can be made by the Libra Association without consulting any central bank or other public authority.

Likewise, there is a question as to the stability of the deposits that Libra would hold with a given bank in short-term government debt. Keep in mind, that for the banking system, a widespread use of Libra would entail the possibility to convert a stable retail deposits into either (more volatile) wholesale deposits or short-term government bonds held by the Libra Association.

Finally, there is the issue of data privacy.

Awareness of these risks among regulators seems widely spread and the challenge now is how to address such concerns. I would mention a couple:

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<sup>2</sup> Recent economic history research links the introduction of money to the fact that governments may be able to better tax agents if trade is conducted through money instead of credit and provide support for a fiscal theory of the origin of money; see for example Araujo, L., Bignon, V., Breton, R., & Camargo, B. (2016). On the Origin of Money. mimeo.

1. Money and trust are as intertwined as money and the state and to protect that trust, digital currencies must be subject to regulatory and supervisory oversight and the authorities must ensure that they can assert their jurisdiction.
2. As mentioned by Governor Carney in a recent speech, unlike in social media, for which standards and regulations are being developed only after the technologies have been adopted by billions of users, the terms of engagement for any new systemic private payments system must be in force well in advance of any launch. Given the systemic risks at stake, a regulatory sandbox is simply not appropriate.

Meanwhile, several central banks are investigating whether a state-backed digital currency could reduce capital outflow, money laundering and tax evasion, and make economic activity more transparent and efficient. It is worth recalling that at present, cash is in essence the only central bank money that citizens have access to. The existence of cash is also what helps defining the effective lower bound on interest rates.

Extending the privilege currently enjoyed by banks, to hold an unlimited amount of digital money at the central bank to everyone does not come without risk, and not only the obvious one of commercial bank runs. Where central banks are not fully politically independent, courting votes by pumping accounts full of money, or punishing political opponents by draining them, could become even more irresistible.

Let's turn next to the digitalisation threat to banks.

The latest CEPR Geneva report grouped bank's core functions under four main headings, which have remained broadly constant over time<sup>3</sup>:

1. **Maturity & risk transformation** relates to the well-known activity of borrowing short-term, notably through deposits, to lend longer-term to risky businesses. This is also what makes fractional reserve banking special and is key to monetary policy transmission.

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<sup>3</sup> Here, we follow the split proposed by the International Centre for Monetary and Banking Studies (ICMB) : K. Petralia, T. Philippon, T. Rice, N. Véron (2019)

2. **Payment services** is the historical activity of “transaction banking”, that is, facilitating trade and exchanges of goods and services;
3. **Information processing** relates to the special bookkeeping knowledge of banks and to customer evaluation.
4. **Risk pooling & liquidity provision** cover the capacity of banks to average risks and to keep the wheels of financial markets running smoothly.

I would also consider adding a fifth activity in terms of **watchdog**. While it can be argued that this has not always worked as effectively as desired, the role of banks in fighting illicit financing is key and providing the relevant public authorities with vast amount of data on financing flows. Incidentally, this is not an activity that banks are directly compensated for.

So how does digitalisation threaten these activities?

Take maturity and risk transformation and information processing. Here, we have seen the emergence of online lending platforms, like Peer to Peer (P2P) lending. These platforms not only use digital tools to match lenders and borrowers, but also try to use big data and machine learning to assess credit risk. China has recently made a large crackdown on such platforms following numerous cases of data leakages, fraud and mis-selling that saw several retail savers lose their life savings and borrowers submitted to loan sharks practices that date back over several millennia. The Chinese authorities are now scrambling to bring P2P lending under control.

It is important that governments, regulators and supervisors avoid the self-deception of the “Emperor’s new clothes” effect; activities that are deemed to require strict oversight and regulation do not lose this need just because they come in a glossy new technology wrapper.

Payment services are even more challenged: BigTech firms have already made large inroads in this space, using their well-developed customer base and IT infrastructures. Examples include Apple Pay or Alipay/Ant financial, but we can also cite Facebook’s Libra project in this content. Fintechs are also very active on this front, offering P2P services for retail FX operations (Transferwise) to international credit cards (Revolut).

Ensuring proper consumer credit and avoiding illicit currency flows is again key, but its worth noting that banks are already teaming up with several of these actors. Société Générale, for example, today offers Apple Pay to its clients offering both data protection and security as part of this package.

Risk pooling and liquidity provision is also a core function that faces intensified competition due to digitalisation. Here again, FinTechs using AI have emerged, for example robo-advisors in the wealth management industry. Once again regulators and supervisors need to ensure proper oversight also to protect the integrity of financial markets. It is worth noting that it's not just banks that are under pressure, but also traditional asset managers and insurers.

Granted, each of these functions has already been seen periods of increased competition in past decades. However, the financial firepower of new entrants is far more impressive today. Take FinTechs: between 2013 and 2018, they received a total of \$350bn of investment through private equity, venture capital or M&A, almost a third of which was raised in 2018 alone<sup>4</sup>.

BigTech companies have even more firepower. Even though they tend to invest relatively little in financial services compared to their other business areas, the sheer size of these companies means that they matter; the combined market capitalisation of the GAFAs, now above \$3 trillion, which is more than three times the combined market capitalisation of the four largest US banks.

Keep in mind that the scale of BigTech is not just about financial firepower, but also lies in their ability to fully use network effects and economies of scale when launching a new product, thanks to the sheer number of their customers, who are familiar with these brands and their platforms.

For governments this presents a real challenge in ensuring well-functioning and competitive market for consumers, ensuring data protection and considering also how to tax the profits of such activities and exert jurisdiction. Ironically, it may well be in the interest of governments to ensure that they use their power to protect their existing financial industries and national currencies and support them in

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<sup>4</sup> ICMB (2019)

their digital transformations, for example, with tax breaks to ensure that the US GAFAs and US dollar do not become even more dominant!

For banks, it is important, moreover, to recognize that customer expectations are changing and adapt hereto to be able to leverage on customer loyalty and defend their market shares in this new environment. This is true of any industry confronted with increasing competition, but it is even more important in banking, where trust is at the core of the business model. It is thus critical for banks to keep adjusting to evolving customer demands. And they are evolving fast. Consumer surveys have been pointing to clients' increasing willingness to benefit from digital banking services, both here in the US or in Europe.

Yet this shift raises two intermingled challenges for banks.

The first is that opening an additional interaction channel with clients requires additional investments. Internet and mobile banking can bring new business opportunities. But unless those new opportunities eventually prove very profitable, banks will have to confront the question of scaling down expenses on their traditional branch network to compensate for this.

Which brings me to an additional challenge coming from our clients, namely that the customer base is not uniformly moving towards digital banking. This situation forces banks to navigate very carefully in the downsizing of their branch network, or risk losing key clients to the competition. PwC's 2019 Digital Banking Consumer Survey conducted in the US showed a still-high 61% of respondents think that having a local branch is important. In France, a Deloitte survey showed that 43% of clients still favour branches to execute more complex banking operations.

A final challenge in this context is that banks do not make the adjustments to their branch network in a perfect, frictionless world. Banks' latitude to navigate the digital transition is constrained by structural impediments, which are themselves the result of past choices by public authorities. The striking differences in the decrease in the number of branches in EU countries since the financial crisis is a key proof of this issue.

Let me take two examples here: internet coverage and digital literacy. It is obvious that increasing the adoption of digital banking will require an extensive and high-quality internet coverage, both fixed

and mobile. Yet situations can vary widely country-by-country, but also within countries. Rural areas are most at risk of poor internet coverage, but they are also the areas least likely to be able to offer a sufficiently large market for a banking branch. This is a political economy problem that banks cannot address alone.

Digital literacy also matters: In the EU, the largest decrease in the number of branches since 2008 is mostly observed either in countries that were ranked in the top twenty of the Digital Adoption Index of the World Bank in 2016 (e.g. the Netherlands, Estonia, Finland, Norway, Lithuania, Denmark) or in countries severely affected by an acute banking crisis (Cyprus, Greece, Spain).

All in all, digitalisation is a particularly large shocks for banks, and banks are already facing a large bill. Indeed, the banking and securities sectors registers the most important IT budgets in relation to revenues, according to the Deloitte CIO survey, with more than 7% of revenues allocated to IT, far more than any other sector including technology and communication<sup>5</sup>.

More important, barely half of IT spending by the financial industry goes to business operations, while a fifth goes to business innovation, i.e. as large a share as for the technology, media & telecom sector. This underlines the special effort that banks must make to adapt, even though legacy IT systems are themselves costly to operate: the banking sector truly is a “tech” sector now.

As we have seen, banks are confronted with multiple challenges stemming from digitalisation, on both their competitive environment and their customers’ expectations.

The cost of overcoming these challenges is large. As mentioned, authorities have a strong interest in banks’ success on this front to protect consumers, ensure financial stability and the proper transmission of monetary policy.

In this respect, I would like to emphasise that recent steps taken by the ECB to limit the cost of negative rates for banks (tiering) show that authorities are starting to recognize the scale of the challenges. Going forward, it will remain essential that, while doing what they deem necessary to reach their objectives, central banks limit as much as possible the negative impacts of their decisions on bank

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<sup>5</sup> Deloitte CIO survey : <https://www2.deloitte.com/us/en/insights/focus/cio-insider-business-insights/technology-investments-value-creation.html>



profitability. This is true also in the field of supervision and regulation. A profitable banking system is a necessary condition for a stable financial system.

New technologies are moving quickly and there is no room for complacency. Banking is best done by banks. Banks thus need to invest to adapt to the new environment. But to be able to make such investments, banks need to be profitable. We should never forget this.

Thank you very much.