Fintech is nothing new. Financial technology has existed for practically as long as the financial services industry itself. The telegraph and the transatlantic cable laid in 1866 to connect North America and Europe is a clear example. That technology provided the infrastructure for the first era of major financial globalisation in the late 19th century. And innovations such as the automated teller machine (ATM), credit cards, electronic payments and internet banking have each changed the face of modern banking.

But now we are entering the next phase of the digital age, when the combination of new telecommunications, big data analytics, cryptography and machine learning technologies has the potential to change the whole banking industry in faster and more disruptive ways than ever before.

As technology gives new entrants better and cheaper ways to compete for core banking business, banks’ dominant position could be challenged. And indeed, we are already seeing disruptions in the financial services market:

- In the first half of 2018, global investment in fintech reached $57.9 billion across 875 deals, a significant increase from the $38.1 billion invested in the whole of 2017.
- The time span for adopting various banking innovations, such as online or mobile banking, is getting shorter and shorter.
- Many consumers are switching to e-commerce, and more e-retail payments are made from mobile phones. Consumers expect pan-European services that are safe, efficient and easy to use. With the recent launch of TARGET Instant Payment Settlement (TIPS), the Eurosystem has laid the groundwork for innovative, customer-friendly retail payment solutions that benefit everyone in Europe. TIPS is a truly domestic market infrastructure for pan-European instant payments with settlement in central bank money within 10 seconds and a price fixed at 0.20 eurocent.
- Technological investment in cash cycles is also strong and helping to make this safe, instant and cheap means of payment resilient. Indeed, on average, cash payments take just over 22 seconds and cost around 24 cent per transaction according to a recent study of retail sector cash payments in Germany.

Fintechs could make the financial system more diverse and competitive, offering customers better-targeted, faster and cheaper financial services. But fintech could also lead to the emergence of new risks and greater concentration.

So far, regulators have tolerated or even facilitated these developments. In the EU, for instance, the revision of the Payment Services Directive (PSD2) aims to foster innovation and enhance competition by requiring banks to share account information.

But to the extent that fintechs are providing core banking services, regulators and central bankers need to monitor their activities in order to follow risk migration.

Fintech credit: lending in transition
Fintechs have now moved into core banking services, including the credit business.

Currently, fintech credit makes up only a very small fraction of overall credit, but it is growing rapidly and could become more dominant in certain market segments. In the United States, for example, 36% of unsecured personal lending was issued by fintechs in 2017.5

“Fintech” is often associated with small start-ups – technologically innovative firms with agile business models. But huge, globally active technology companies, the so-called big tech companies, are also entering the market. These companies have a competitive advantage because they can leverage their existing customer networks and huge amounts of proprietary data to provide financial services. Moreover, their enormous balance sheets give them the financial capacity to handle credit risks economically on a large scale.

These comparative advantages of big tech could, in principle, generate benefits for customers. By using predictive algorithms, machine learning and a wider range of data, available from online spending or social media, for example, big tech could become more efficient at lending than traditional banks.

Moreover, if big tech can speed up loan application processing, reduce transaction costs and improve credit risk assessments, it could increase the overall degree of competition in credit markets.

And with their increasing market share, these companies could help diversify the sources of credit to the economy, thus fostering investment and growth.

However, these big tech companies are generally less motivated by the return on their credit activity and more by the access they get to data that let them sell products and services over and above their financial activities.

Therefore we can’t rule out some negative side effects. Not only could large technology companies increase market concentration by exploiting their network externalities, they could also create new risks.6

For example, risks could arise from big tech’s funding models, which often use a mix of internal and external investors to finance loans or repackage and sell them to third-party investors. Such originate-to-distribute models can lead to information asymmetries, incentive problems and financial instability – as we painfully learned from the mortgage lending that led to the subprime crisis.

Another type of fintech is the so-called peer-to-peer lender, which offers credit services in a fundamentally different way to banks in that the services are unbundled. Electronic platforms typically match borrowers and investors without taking on balance sheet risks and generate fee revenue rather than net interest.

Technological innovation may enable lending platforms to become more efficient and more targeted in terms of how they intermediate between borrowers and lenders and thus put pressure on incumbent banks. Still, I would argue that, until lending platforms can replicate the benefits of intermediation, they will not meaningfully challenge the role of banks in the economy. I see two main reasons for this:

1. Lending platforms are unable to perform liquidity transformation on a significant scale – that is, to provide short-term liquidity services for depositors and long-term loans for borrowers.
2. Lending platforms are less resilient during shocks, being more prone to funding freezes and swings in credit risk appetite than banks, as at this stage they are small and not diversified.7 Also, banks have both insured deposits, which contain depositor runs, and higher levels of capital, which supports lending during downturns.
For these reasons, lending platforms are currently unlikely to threaten banks’ market position in lending. Still, these developments should be continuously monitored.

**Fintechs are changing the payments landscape**

Fintech has had a more pronounced impact in the payments market, where firms have expanded their presence in non-capital intensive business such as cross-border transfers, micropayments and card payments because those are the areas where the incumbents have accumulated the most glaring shortcomings, often resulting in inefficient and overpriced products.

This is affecting the payments landscape. In a European Banking Authority survey, a majority of incumbent banks indicated that payments is the business area most affected by fintech competition, eroding fees and commission income. In response, many banks have begun to adjust their strategies by investing more in technology and partnering up with fintechs.

The emerging competition is welcome and may bring lasting social benefits to customers in terms of efficiency gains, increased choice and more resilient payment systems.

But our role is to ensure not only efficiency, but also safety. As a central banker with the statutory task of ensuring the smooth functioning of payment systems my view is that we also need to carefully observe how this disruptive process unfolds. We should be mindful that risks could accumulate in the unregulated sector, which could affect payment security.

Customers’ interests need to be taken into account. This includes consumer protection and prudential requirements to defend customer funds. But these concerns must not be confused with pretexts to secure vested interest and inhibit innovation.

Likewise, although it is desirable to have strong domestic European payment providers, not the least to be less exposed to extraterritorial jurisdiction, we should not use protectionist measures to shield incumbents from market pressures. On the contrary, we should remain open to global players to foster competition. In fact, the industry itself should address the obstacles hampering the emergence of European players.

**Scenarios for the future**

As the competition between fintechs and incumbent banks unfolds, the financial system could become more diverse and competitive. But it could also become more concentrated, and new risks to financial stability could emerge.

Two extreme scenarios for the future are possible. Both come with regulatory implications.

In the first one, banks rise to the digital challenge by upgrading their technological systems and teaming up with fintechs. There are signs of this happening, as global banks’ IT expenses rose to $250 billion in 2017, from $180 billion in 2013.

In this scenario, banks leverage technology to enhance their products, services and operations, allowing them to retain their customer relationships and core banking services. Risks to financial stability would be rather low, as financial services provision would remain largely subject to the existing prudential regime.

In the second scenario, banks fail to provide the digital financial services demanded by customers. New, innovative and fast-moving fintechs, or big tech firms with large customer networks, would come to dominate the market – with all the risks that I outlined.

Obviously, reality is much more complex than this binary distinction of extreme scenarios. And
the range of business models of big or small banks, re-prioritization and mutualisation of certain services cannot be captured by such simplifying templates.

Indeed, some traditional banking services could move to less-regulated parts of the financial system. But pre-emptively drawing in the reins in the name of financial stability could harm innovation and prevent fintechs from growing.

We certainly must continue monitoring developments closely and adjust regulation when and where needed to ensure that financial services remain safe and sound.

But competition – to refer to the Austrian economist Friedrich August von Hayek – is a discovery procedure⁠¹⁰, and it is up to the markets’ verdict which product or service is the optimal solution. Legislation and regulation should therefore ensure a level playing field for all market players, incumbent’s and new entrants alike.

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4 See Deutsche Bundesbank / EHI Retail Institute GmbH (2019), Kosten der Bargeldzahlung im Einzelhandel, February.


7 While investors typically cannot redeem claims early, they can choose not to roll over maturing claims.

8 61% of incumbent institutions indicated that fintechs threatened to decrease their revenues in the payment and settlement domain. See European Banking Authority (2018), EBA report on the impact of fintech on incumbent credit institutions’ business models, July.


10 See F.A. Hayek’s (1968), “Der Wettbewerb als Entdeckungsverfahren”, a 1968 lecture, sponsored by the Institut für Weltwirtschaft at the University of Kiel. It was published as No. 56 in the series Kieler Vorträge.