



BANK OF FINLAND BULLETIN

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Will digitalisation transform the financial sector too?

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Traditional financial participants are facing new competition in the wake of digitalisation. On one hand, major technology giants have begun to provide services designed primarily for payments but partly also for lending, while on the other hand fast-growing fintech startups are out to peck the most delicious titbits off banks' plates, spurred by feather-light cost structures and new ways of thinking.



Over several decades, technological advances have introduced innovations like payment cards, online banking and electronic trading platforms to the financial sector. Although a lot has changed from the customers' perspective, the arrival of Internet and electronic services has not, however, been as revolutionary in impact as in some other sectors, such as the telecommunications branch and record stores, where digitalisation has turned the whole scene around. This may be somewhat surprising, given that the financial services are largely immaterial and hence easily digitalised. However, the steps taken in various segments of the sector in recent years signal a more profound shake-up of financial sector structures.

Payments lead the way

The transformation has been felt first in the field of electronic payments, where a host of online and mobile payment applications have emerged alongside conventional card payments. Although part of the new payment applications have been launched by banks

and card companies; a significant proportion – such as Paypal, ApplePay, Google Wallet and Ripple – originate outside of the conventional payment ecosystem.

Methods of payment differ greatly across countries. In Finland, card payments have been the most common method of payment for groceries for some 10 years already, and Finland has been one of the leading countries in electronic payments. More recently, however, the more novel technologies, such as mobile payments, have not gained ground in Finland to the same extent as, for example, in Sweden and Denmark, or, a little farther away, in China and Kenya.

How will payments change in practice? Real-time crediting of the payee's account is a growing trend. The Euro Retail Payments Board (ERPB) has set itself the objective of implementing a Europe-wide scheme for instant payments by November 2017 and several systems are planned which would implement this set of rules.

In step with electronic payments gaining more ground and the processes of customer data analysis becoming more advanced, data on payment transactions can increasingly be harnessed for marketing and strategic decision-making purposes. By January 2018, at the very latest, EU Member States must transpose the new Payment Services Directive (PSD2) into national law. This will step up competition and innovation in payment services, as banks, upon customer authorisation, will have to make customer data available to third parties and execute payments initiated by customers via third parties.

Payments and trading are also exposed to a somewhat extreme form of digitalisation known as blockchain technology. Blockchains enable safe electronic archiving of transaction history and other data without a trusted centralised operator responsible for the system. In addition to payment applications, other envisaged uses of blockchain technology include enhancement and digitalisation of complex dynamic contracts, accounting of holdings and various other purposes. The largest banks operating in Finland are members of the international R3 consortium partnership, which explores and develops business solutions based on blockchain technology.^[1]

Digital liberalisation of financial intermediation

Digitalisation has also found its way into the core of banking, i.e. financial intermediation. A growing number of crowdfunding and peer-to-peer lending platforms provide funding and investment opportunities exclusively via the Internet. The novelty in this activity is easier and faster access to funding for actors that, due to their high credit risk or small size, would experience difficulties in obtaining finance through conventional channels. Another new element is the opportunity for small investors to invest directly in consumer loans and minor corporate bonds and participate in venture capital investment.

Although still holding a rather small market share in most countries and being primarily designed for high-risk funding, the new forms of funding are growing rapidly. For

1. See blog dated 5 April 2016 on the website of the R3 consortium partnership <http://r3cev.com/blog/2016/4/4/introducing-r3-corda-a-distributed-ledger-designed-for-financial-services>.

example, the Chinese peer-to-peer lending market has already reached a volume of USD 66.9 billion.^[2]

There are currently three domestic peer-to-peer lenders and a number of foreign operators active on the Finnish market. Market participants' data show that domestic peer-to-peer lenders granted new peer-to-peer loans worth around EUR 37 million in 2015. New digital competition is also created by branchless banks operating online only and offering loans and deposits from abroad.

The measures initiated by the Finnish authorities in response to the digitalisation of financial intermediation include the Crowdfunding Act and an electronic register of shares in housing corporations. The Crowdfunding Act clarifies the legal status and regulation of crowdfunding participants, while the electronic share register enhances the processing of shares in housing corporations and facilitates branchless offering of mortgage-backed loans.

Service reliability must be ensured and risks to financial stability taken into account

The effects of digitalisation also extend to the insurance business, securities trading and investment advice services, as well as to payments and financial intermediation. Competing insurance providers are entering the insurance field, and new innovative applications are being used in the customer-driven pricing of insurance policies. Robot and algorithm-based investment strategies, which have long been used in professional trading, are now being made available for a broader investor base, while investment advice services are being automated.

It is vital that authorities keep track of the structural changes and respond appropriately to advances in digitalisation. Three key issues are:

- promoting security of digital services
- facilitating innovation in the strictly regulated financial sector
- ensuring financial stability.

The new financial actors do not necessarily have their physical location in Finland, nor are they supervised by the Finnish authorities, which is a challenge for fostering the safety of digital services. Furthermore, part of the new activities require regulation that has yet to be drafted.

The authorities may contribute to fostering innovation by making provision for it both in the formulation of new regulations and in the interpretation of existing regulations, and by offering assistance and information. A model example of this is the Innovation Hub^[3] set up by the UK Financial Conduct Authority (FCA) and designed to promote useful innovations in financial services. In addition, the UK provides 'innovation visas' and

2. Citi (2016) Digital disruption.

3. Ks. <https://innovate.fca.org.uk/>.

lighter taxation of, for example, patent-based profits, reflecting the tightening international competition to attract innovative businesses.

In terms of financial stability, the risks of new business models and technological solutions must also be considered in the long run.^[4] Such risks include the usual risks of excessive debt-taking associated with the creation of new funding channels and easier access to lending. Examples of the new types of risks that have emerged in the wake of digitalisation are the repeated stock market ‘flash crashes’ witnessed in recent years, appearing out of thin air and passing as quickly as they arise, as well as cybercrime.

Tags

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- [innovation](#)
- [financial technology](#)
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4. Banque de France (April 2016) Financial Stability Review. Financial Stability in the Digital Era. See https://www.banque-france.fr/fileadmin/user_upload/banque_de_france/publications/Revue_de_la_stabilite_financiere/RSF20/FSR20-Full-text.pdf.