

# Digitalisation and new technologies in the retail space

This session discussed the impacts of digitalisation on the retail financial services sector, with the exception of payments that was addressed by another panel during the Eurofi Helsinki Forum.

## 1. Potential customer benefits provided by technology in retail finance

### 1.1. Improved services

An industry representative explained that the principal benefits of digitalisation for consumers are reduced friction in their interactions with financial-services providers (e.g. easier access, quicker decision-making), greater choice and personalisation. Technology is helping financial institutions to exploit the opportunities offered for example by micro insurance for 'gig-economy' workers or micro-loans for firms in need of working capital for extremely short durations. Looking at developments happening in China in companies such as Tencent and Alibaba, digitalisation helps to broaden the range of services offered e.g. into new areas such as healthcare. Technology also allows financial institutions to make personalised service offerings at the point of need. For example, institutions can use predictive technology based on artificial intelligence (AI) to assess when customers might go overdrawn or need a mortgage.

Another industry representative emphasised that efficient data storage and sharing is another important aspect of digitalisation. With a customer's consent, digitalisation enables data sharing with partner institutions. The industry representative's firm allows small business users to digitise, categorise and share their business transaction data with accountants, for example, which speeds up their end-of month bookkeeping dramatically.

### 1.2. Easier access and greater financial inclusion

An official stated that digitalisation does not change the product per se but it does change the mode of delivery and the availability of the service, allowing institutions to reach efficiently customers at anytime and anywhere and also to service previously unreachable customers and parts of the world. Lowering barriers to supply and also to entry into the market is its true advantage. Most developments are taking place in the payments space at present, but other areas will be concerned.

Another official added that the increase in the financial inclusion of the un- or under-banked and the greater access to credit supported by technology is a globally relevant subject. AI and data analytics can allow financial institutions to access additional data points and create more robust credit profiles for individuals or smaller businesses that may not currently have access to credit. The unbundling of services that goes with digitalisation is also unlocking increased efficiency which allows them to reduce the cost of certain products. Finally financial health firms that have emerged notably in the US using data analytics can help families that do not have sufficient literacy to manage their financials.

An industry representative agreed on the importance of providing access to finance for SMEs and noted that technology allows their company to offer services to this customer segment across Europe in an efficient way.

A third official emphasized that technology could also play an important role in capital markets, which is an area where retail engagement is notoriously insufficient in Europe. This can be explained by limited financial literacy and the perception that investment is complex and risky. From an economic perspective, with a decreasing share of labour income in Europe, it is essential for households to invest more in capital market instruments. Technology could provide effective tools to encourage savers to do so and the industry should propose ways of further standardising capital market instruments in this perspective.

Two speakers also stressed the risk of financial exclusion for the part of the population that is unable to use digital services. It is important for financial institutions to consider how to help these clients. In addition, not everyone is capable of understanding the risks and benefits associated with financial products, which is essential when using digital channels with no support from advisors. There is therefore a link between digitalisation and financial education that needs to be considered.

## 2. Changes in market structure and in the operating model of financial institutions

An industry representative explained the key trend towards ecosystems and marketplaces. Many incumbent retail institutions are faced with challenges concerning cost-income ratios. To alleviate cost pressures they need to find new revenue generating opportunities that are cheap and fast to develop, while supporting existing customers and products in a more efficient way. Platforms leveraging cloud, AI and machine learning can help them to do this. These platforms can help them to build a broader financial ecosystem e.g. with fintechs and explore new revenue-generating opportunities. Harnessing data will be critical for taking advantage of these opportunities because this is not just about being able to develop new products; it is also about being able to apply them at the point of need. The institutions able to leverage these technologies to offer these more personalised services will win trust from customers and be able to maintain long-term relationship with them. This approach should also help retail financial institutions to optimise their back-office operations. Many of these are relatively undifferentiated and the IT platforms they currently use present many similarities. There could be greater convergence and harmonisation in this area with progress in the use of utility services based e.g. on cloud services. Doing this would allow financial institutions to reduce their costs and focus more resources on providing value-added services.

Another industry representative highlighted the revolutionary nature of change happening in the retail financial industry with digitalisation. First, there is a cultural revolution taking place inside banks with an increasing proportion of employees with tech backgrounds. In the speaker's institution, a large bank, 49% of new employees have a tech background, compared with 14% five years ago. This changes how a bank operates internally and the mind-set of its staff. Second, there is a revolution in customer processes. The industry representative's bank has taken the first few thousand mortgages through a fully digital process with no human involvement. 85% of customers now apply for mortgages through a digital channel and the use of mobile

devices is increasing. Thirdly, there is a revolution in cooperation between banks and fintechs through APIs and also between banks and public authorities for example with on-line access to property registers or tax information in the context of mortgage applications. Finally, there is a revolution within the competitive landscape of financial services with the implementation of Open Banking concepts in particular. New entrants could challenge the current structure of the financial sector and require changes in the regulatory and supervisory approaches. A regulator added that it is likely that bigtechs will at some point enter the retail services market.

The speaker also stressed that a key challenge for banks with physical branch networks is to manage the costs of the associated physical processes while also investing in digital innovation. Managing these two investments in parallel will hurt their profitability. Since it will be impossible for large banks to survive in the future without being digital and being both digital and non-digital will become increasingly difficult as this will ruin their cost-income ratio, the trend towards digitalisation is due to continue.

An official underlined that new technologies are enabling the 'platformification' of financial services notably in insurance. Co-insurance initiatives such as the one the Bank of Lithuania is engaging with, should develop. Instead of there being an insurance company responsible for the insurance framework or services moving to the platform of an existing service provider there is a platform that connects the different insured entities.

### 3. Current policy approach

#### 3.1. Technology neutrality

A regulator highlighted the importance of supporting innovation and the development of new retail services while mitigating risk, noting the European Commission's release of its FinTech Action Plan in March 2018.

An official stated that the current EU regulatory framework facilitates the development of digital finance with a technology-neutral approach. Europe embraced Open Banking in 2015 with the second Payment Services Directive (PSD2), which is one of the best examples of technology neutral regulation. This is an important concept, because a payment is a payment, whether it happens through a bank or a third-party provider. The official added that linked to the Fintech action plan, the Commission has also launched a FinTech Lab to support digitalisation.

Another official agreed on the need for regulators to remain technology neutral and also mentioned that the US advocates a functional approach to regulation, i.e. regulation based on economic activity rather than entities. If a new technology based on AI or data analytics performs the same function as an existing service, it should be regulated similarly. This will allow regulation to adapt to different business models and not remain tied to institution-specific considerations.

#### 3.2. Sandboxes and innovation hubs

An official mentioned the Commission's European Forum for Innovation Facilitators (EFIF), which is a platform aiming to improve cooperation and coordination in support of the application of new technological developments in the EU financial sector and to exchange best practices on innovation hubs and sandboxes. The Commission is not constructing a European sandbox; rather, it is ensuring that different national sandboxes, which are places to conduct testing in a safe way, talk amongst themselves.

A regulator felt that many new entrants to the market do not understand the function of sandboxes; they simply want to avoid unnecessary regulation. Answering a question about possible issues with the cross border export of services from sandboxes with lighter licences, the official stated that testing procedures are converging in the EU after an initial flourishing of differences.

This is why the Commission considers it useful to foster regular discussions on the development of sandboxes among European supervisors.

### 4. The role of technology in further integrating EU retail financial markets and existing barriers

#### 4.1. The issues posed by regulatory fragmentation across the EU

An official emphasised that technology in itself cannot solve the current fragmentation of EU retail financial markets because it does not change the underlying services and the rules attached to them; this would require a unified framework for retail financial services at the EU level. It is also important to understand the drivers of fragmentation. There is a large degree of fragmentation in the debt market, for example, which is partially caused by issues around financial infrastructure making it very difficult for retail customers to participate in cross-border debt markets.

Another official agreed that regulatory fragmentation hinders the capacity of technology to further integrate the EU retail financial services market. Digital services are by nature cross border, but if the rules do not change, the digital cross-border experience will be even more frustrating than the physical one because the barriers will seem entirely artificial. Customers will be asked for their nationality and depending on that will be offered different products or services for example. Fragmentation is mainly due to restrictions or specificities imposed by Member States. For example some UCITS funds are not distributed in all EU countries because authorisation channels differ across Member States and since separate authorisations are needed in all countries, many investment managers do not bother to apply in all countries.

An industry representative predicted that there will be no European single market in retail financial services despite digitalisation except in payments, because these services and products are strongly linked to banks, which still operate nationally because of differences in regulation and supervision across EU countries. This means that there will be differences in how banks respond to market trends such as digitalisation and changes in customer demand, leading to increased differences between business models and further fragmentation at market level. An official queried whether there are technical impediments causing this fragmentation, for example differences in the internet usage across the EU. The industry representative agreed that this could be a factor, but only a secondary one.

The first official stressed the importance of developing standards at the EU level. The SSM has unified the supervision of the largest banks but customer-related rules such as consumer protection, product frameworks, issuance rules or marketing rules are still largely national. The implementation of EU legislation also differs across EU countries. This significantly increases the administrative and sales workload for banks and thus their costs. The industry must push for hard European standards otherwise Europe will fail to compete effectively with the US or China. At present US banks are profiting from this fragmentation with a competitive advantage in each individual EU country. In the area of technology, Europe is focusing on 'niche' markets that cannot compete with US or Chinese bigtechs.

A third official mentioned that the US faces similar fragmentation issues to the EU regarding retail regulations especially those concerning consumer protection because these are regulated at a State level. AML however is largely managed at the federal level.

#### 4.2. Know Your Customer (KYC) and customer-identification issues

An official felt that KYC is a second major factor limiting the capacity of technology to support the further integration of EU retail finance markets. There should be a single place in the

EU for storing information about customers, because a customer is the same no matter where he or she banks in the European Union. As mentioned in another session of the Eurofi Forum DLT based platforms could be used to streamline this process. An industry representative emphasised the importance of a proper management of customer onboarding and KYC when customers engage with multiple institutions across the European financial ecosystem.

Another industry representative stressed that smaller institutions have the same anti money laundering (AML) requirements for payments as larger ones. The industry representative's firm, a small growth company, uses technology to manage issues such as transaction monitoring and fraud management at scale and with less up-front investment. This enables their business to scale faster, more securely and with greater customer benefits. An issue however is that KYC practices, which should be quite straight-forward, differ across EU countries (e.g. Germany requires video KYC, the UK allows a driver's licence as ID which Finland does not...). This makes being a cross border player extremely difficult in Europe. The official however remarked that this is not Europe's fault but is caused by different member states' implementations of the relevant directive.

A third industry representative believed that although customer-related rules will continue to differ, it is hoped that back-office processes such as KYC, which are causing increasing operating cost and 'hassle' for customers, can eventually further converge thanks to technology and with greater cooperation between banks and other financial institutions. There are several cooperative KYC initiatives being established around the world, including one example in the Nordic countries with 6 Nordic banks cooperating.

Another official noted the existence of 19 frameworks for electronic identification in the EU. Each country notifies the others of its framework for identity and asks them to ensure that it works. There is a substantial amount of infrastructure behind this, meaning that each country has its platform and that financial institutions only accept the identification system of their home country e.g. if a Finnish or British customer wants to use a Finnish ID or UK driver's licence at a German bank that will not be possible.

## 5. Challenges and risks associated with digitalisation in the retail space

The cyber-risks and operational risks associated with digitalisation were highlighted by several panellists. An official noted that these risks are not new, because the sector is constantly integrating new technologies into existing and legacy systems. However the pace and scale at which this is happening is increasing, which may pose greater risk for individual institutions and also potential systematic risks.

Other more specific issues related to the use of AI or to data sharing were also stressed.

### 5.1. 'Black box' effect

An industry representative mentioned how their institution has learned that technology is a 'good servant but not a good master'. While algorithms mine data for different purposes, humans must also interact with these tools and ensure they are operating correctly. People tend to think these technologies are smarter than they are, but they still require human supervision and training.

An official agreed that there is a need for 'human primacy' in the use of AI tools in particular, in order to provide regulators and supervisors with sufficient transparency, auditability and accountability and avoid the so called 'AI black box' risk. This is particularly relevant as decisions are made by increasingly complex algorithms in areas such as credit, portfolio management

and quantitative funds. From a technology neutral perspective, institutions must be able to explain decisions to regulators and supervisors. For example, a credit decision must comply with the same fair credit reporting obligation in the US, regardless of whether AI was used to make it.

Another industry representative described how their company, a major cloud service provider, is investing a great deal of resources in research, products and technologies to alleviate the 'black box' effect with AI and data analytics. Investment is made in open source technology available free of charge to the public to address the concerns around the possible bias of machine-learning models and the way they are trained, particularly for credit scoring and lending applications. A fintech looking for a credit scoring algorithm will be able to literally download it from a marketplace and should be able to understand how this algorithm was built and trained. The speaker's company is also seeking to facilitate the access to and inspection of the algorithms and data sets used.

Another industry player felt that there is a need for further regulation on the use of AI and customer data in order to create trust from society and customers.

### 5.2. Data privacy and data-sharing issues

An official stated that while the new methods of delivering financial services based on technology are beneficial, the risks potentially posed to consumers and the financial system also need considering. The industry must ensure that consumers are well informed about the choices they are making notably with regard to the access they are providing to their data. For example in the case of financial health firms, consumers need to understand that they are giving these service providers access to their account login information in many instances. This is because of the way these services are being delivered, which is different from traditional banking services. Ensuring permissioned access and informed consent is one important aspect of the risk mitigation needed.

An industry representative agreed that data privacy and data sharing issues are important to consider, particularly in Europe, because the open approach that is necessary to realise the benefits of an ecosystem model supported by technology discussed previously has profound implications in terms of data sharing between institutions. There must be transparency from technology providers around how data is stored, accessed and shared, and the financial industry must leverage open source technology and define open standards as much as possible.

Another industry representative felt that PSD2 and the EU Open Banking approach do not provide a fair enough and broad enough access to data needed to reap all the benefits of digitalisation and AI in the financial sector. PSD2 allows authorized third-party providers to access bank customer data via APIs with account holder consent, but there is much more customer data available (e.g. on merchant websites or social media) that could safely be used for providing financial services and that financial institutions do not have access to. Opening up access to this broader set of data in an anonymised form would help financial institutions and particularly the smaller players to scale up machine learning and AI, which is limited at present by the range of data they have access to. Another industry speaker agreed, emphasizing that Open Banking regulations are forcing banks to share their data with other players, but the reverse is not true.

In addition smaller financial companies and fintechs rarely have the resource to complete complex integrations with different government registries that are needed for processing credit applications for example and PSD2 does not help in this regard. At present, only the larger banks get access to these registries through proprietary links. European regulation should mandate more open and fair access to different government registries for all players.

Responding to a question from the audience on the impact of GDPR on data sharing, an official stated that GDPR facilitates data sharing because it clearly sets out the two necessary preconditions: one, that the data is the property of the data subject; two, that the data can only be given out with the owner's consent. The official then addressed a second question from the audience on the role of the European Commission in developing digital financial services across the EU and whether the CMU and Fintech action plans are sufficient. The official suggested that the next Commission will need to consider Capital Markets Union (CMU) intensively and digitalisation will be part of this. As digital finance develops, the artificial barriers created by national regulations will seem increasingly inappropriate. One solution could be to move all financial legislations based on directives to regulations. That may create some difficulties, but the official believed that the time has come to make such a change. ●