TECH IN FINANCE: OPPORTUNITIES AND CHALLENGES

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Regulating digital finance – what next?

It has been one and a half years since the European Commission presented the Digital Finance Package. We have made good progress, in particular with the ambitious legislative agenda we have set ourselves in digital finance. But the next steps will be much more challenging.

So what have we achieved so far? First, following a swift agreement by Member States and the European Parliament, our pilot regime for market infrastructures based on distributed ledger technology will start running later this year. Market players will have a safe space to experiment with issuing, trading and settling shares or bonds using blockchain technology. We count on them to use this opportunity. This will be key to give the EU's capital markets a much needed push, but also to help supervisors and the Commission identify areas in which the rules might need to be adapted to enable long-term development in this field.

Second is our proposal for a framework for markets in crypto assets, including stablecoins. New rules will provide legal certainty to foster responsible innovation in this rapidly growing asset class, while putting safeguards in place to protect investors against fraud, abuse and theft and to preserve market stability. Member States have reached a common position and negotiations with them and the European Parliament on a final agreement will begin soon. This fast-moving market will not wait for European players and the many retail investors attracted to crypto assets deserve to be effectively protected. We really have no time to lose.

Thirdly, our proposal for new rules on digital operational resilience for financial firms has also advanced. Member States and the European Parliament have started negotiations that should soon lead to a final agreement. Adopting this piece of legislation is a vital step: as the financial system becomes ever more dependent on IT systems and digital processes, we need to ensure that all financial entities in the EU have the necessary safeguards in place to mitigate cyber risks and other threats to their digital operational resilience.

There is more to come. Later this year, the Commission intends to table a proposal for an open finance framework. A key part of the European Financial Data Space we are building, this framework will empower retail and business clients, giving them control over who has access to their data and how it is used. We believe that this will lead to innovative financial products and a better consumer experience. Preparatory work on this initiative is already underway, involving experts, including from the financial industry.

However, as the financial system keeps changing, we as regulators need to take a hard look at our approach. How do we ensure that we anticipate developments rather than merely trying to catch up with markets and technological advances? How do we regain the initiative in a financial system that is now much bigger, more complex and that moves much faster?

The traditional regulatory approach of focusing on clearly defined entities, sectors, activities or products seems increasingly ill-suited in a world where established business models are disrupted, value chains broken up and decentralised finance is gaining ground. Our action will need to be structural, rather than focused on intermediaries or transactions. This will include looking at businesses and developments outside "traditional" financial markets. At the Commission we have started to do this as technology firms–big and small–have become more active in the financial system. Based on an analysis the Commission has recently received from the European Supervisory Authorities, we will need to see whether legislative action is needed here. This kind of cross-sectoral work has much further to go.

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And it is just one example of how regulators will need to adapt and to redefine their role. Building up new skills and expertise is another. A lot is in flux but one point is clear: it is becoming harder for regulators to detect and manage risk, guard financial stability and push markets towards allocating capital to activities that are economically productive – and in the interest of society. All the more important that we get it right.

AKASH SHAH
Chief Growth Officer - BNY Mellon

The future of capital markets: digitalization and democratization

Emerging from the pandemic and an unequal economic recovery, several interrelated forces are transforming the way global capital markets work. As the world's economies rebound, market participants broadly recognize a need for reforms to the established modus operandi, to build resilience, to remain competitive in the face of innovation, and to retain their customers' trust.

At this defining moment, the core of this transformation is digitalization. With an innovation-focused financial industry and enormous amounts of processes yet to be digitized, the trend will continue to be a large theme in financial services in the years ahead.

Market participants must now act with a sense of urgency to overcome hurdles, innovate, and adapt to the digital future. To instill confidence in the evolution of capital markets, we believe there are a few key areas that will help ensure digitalization occurs in a thoughtful, regulatory-compliant and safe way:

1. Concerns around data and cyber security

Capital markets processes have become more digital as market participants demand faster execution speeds and seamless access to information. These technologies accelerate changes in the industry, but also raise concerns around cybersecurity and data protection.

Data is emerging as its own asset class, as a record amount of data flows through the global financial system.

Through this transformation, data management infrastructure is a key growth area for traditional financial firms. Institutions are actively seeking ways to leverage analytics to remain nimble and promote growth.

Questions remain around how firms can innovate safely, benefiting from a more agile use of data while mitigating risks.

2. New roles for financial firms

Some functions traditionally performed by large financial firms are being performed by a new set of competitors. As a result, institutions across the value chain are redefining their roles, taking on new responsibilities, partnering with new technology providers, and introducing new ways of operating in order to keep pace with their clients' needs.

As of 2020, 250 of the top private fintech startups internationally had raised nearly $50 billion in aggregate funding. These platforms often provide complementary services to those offered by legacy institutions, presenting new chances for collaboration and integration. While industry stakeholders have made substantial progress in understanding how consumer-facing fintechs are reshaping financial services, the role of fintech in institutional capital markets is less well understood.

One of the most significant emerging trends in the financial industry is the rise of retail investing and market transparency. Blockchain and distributed ledger technologies have the potential to disrupt core functions within capital markets, including trading processes, settlement systems, payments, and capital raising, all while increasing transparency. Digital assets and decentralized finance, now buzzwords across the industry, are becoming increasingly mainstream through institutional support. At the same time, regulators and lawmakers are increasingly vocal about concerns around cryptocurrencies as a store of wealth, raising important questions around their future viability as an asset class.

Market participants must now act with a sense of urgency to overcome hurdles, innovate, and adapt to the digital future.

3. Transparency around ESG

ESG is a top priority for financial firms. Financial firms including BNY Mellon are leveraging advanced data analytics tools to help market participants customize investment preferences and portfolios according to ESG factors, while also demonstrating impact.

Still, the industry lacks a universal ESG framework. As investors, asset owners, and corporations navigate their roles in supporting the transition to net-zero and stakeholder capitalism—including adopting consistent reporting standards around ESG metrics—significant questions surround what market structures and tools are needed to support sustainable investing. Why now?

We are living through a unique moment in history. The COVID-19 pandemic has forced reflection and accelerated change. Capital markets will continue to evolve and increasingly digitize, and they must do so urgently, in an inclusive and collaborative manner, in order to retain public trust.

TSVETELINA PENKOVA

MEP, Committee on the Internal Market and Consumer Protection - European Parliament

Tech in finance - seizing opportunities and mitigating risk

The digital transformation is the new reality and we are trying to foster and promote innovation in all policy areas of the European Union. Our consumers want faster and more convenient services while innovative companies provide adapted and timely solutions for their needs. In addition, the COVID pandemic forced much of the world to move online. Today we see high increase in the use of digital applications, including financial applications, where this trend is developing even more rapidly.

Financial companies invest massively in their digital transformation, which on one hand is changing their business models and on the other is bringing a completely new spectrum of processes and services, focusing both on innovation and consumer protection. The use of cloud services and big data, AI, DLT and the internet of things have become viral for the way traditional financial actors adapt to the new reality, as well as for new comers that are disrupting the established market.

In this context, the European Commission has released in September 2020 a European digital finance package. As co-legislators, the European Parliament and Council, we are actively working on these initiatives, where on part of the legislative proposals the trialogue negotiations phase has already started. Our aim is to support the digital transformation of the financial sector and the development and use of new financial products in the EU, while at the same time safeguarding the consumer rights and financial stability.

The package consists of the EU digital finance strategy for the next five years and three legislative proposals regarding digital operational resilience, markets in crypto-assets and a pilot regime for market infrastructures based on DLT as well as a proposal for a directive to amend certain EU rules regarding financial services.

The Commissions proposes a framework on crypto-assets to bring innovation in a way that preserves financial stability and protects investors. Our political family would like to see this framework as a tool that would better protect investors against fraud. We believe that third-country based providers should be subject to rules when marketing their tokens to EU consumers. We also see a prominent role for the ECB in the authorisation process for crypto-assets and asset-referenced tokens. Finally, we should be cautious with crypto-assets whose creation or usage would generate additional energy usage.

The increasing digitalisation of the financial sector brings additional ICT risks to the ecosystem. The Commission therefore put up a proposal for digital operational resilience rules - a sector-specific legislation aiming to ensure that all actors in the financial system put in place the necessary measures to mitigate cyber-attacks and ICT-related risks. Moreover, the proposal introduces an oversight framework for ICT providers, such as cloud computing service providers.

The European Parliament is currently negotiating this proposal with the European Council and the Commission. We should focus on the core operational functions of financial institutions and be objective towards operational risks. The risk management framework should take a risk-based approach and consider the size, complexity and risk profile of each entity. We are affirmative that critical third-country ICT services providers should have a legal entity within the EU.

We should aim for the right balance between prescription and flexibility.

Finally, we should aim for the right balance between prescription and flexibility and ensure the coherence of DORA with other EU legislations, such as the revised NIS Directive and the GDPR.

New technologies are evolving rapidly, they are disrupting the market but at the same time they are preferred by the consumers. Cybersecurity must go hand in hand with this process. The regulatory framework must also be updated at a similar pace to ensure the protection of consumers and their data, but not at the expense of innovation and progress.

We should aim for a technology-neutral and innovation-friendly EU financial services framework that ensures fair competition among all actors and guarantees data and consumer protection.

GEORGINA BULKELEY

Director for EMEA Financial Services Solutions - Google Cloud

The Future of financial services is in the cloud

Across EMEA there are several trends which we are seeing evolve in the financial sector, many of which have been accelerated by the COVID-19 pandemic and the overall shift to digitisation.

Firstly, companies are applying cloud technology's scale and flexibility to process large volumes of information which they can bring together from different siloed data stores. The insights they can derive from this consolidated data create tangible business outcomes, enabling banks to have a better understanding of their risk profiles, segment their customers to drive seamless customer experiences, track market movements and also develop new financial products and services.

Banks that use cloud will ultimately gain a competitive advantage in an increasingly competitive market. The power of cloud technology enables financial services providers to not just meet customers' needs, but to anticipate and exceed them. This new focus on technology powering business outcomes can also be seen in business model evolution. We see the trend of embedded finance accelerating in the next 3-5 years as customers increasingly seek hyper-personalised, digitised experiences with financial services embedded seamlessly, making transactions and interactions convenient, simple, and continual. We anticipate this will lead to further partnership ecosystems evolving across sectors, such as finance and retail as an example, as they become ever more integrated from a customer experience perspective.

Data-powered innovation can draw insights from multiple points of customer interaction. For example, our AI solutions (CCAI and Dialogflow) can help call centres optimise the customer experience while allowing the call centre representatives to focus on higher complexity cases. Google Cloud's Apigee can create an API network for the greater ecosystem, resulting in improved banking experiences, and our Document AI solution analyses written documents and synthesises the data into a structured data source. All of these solutions are focused on improving Customer experience.

We also see this evolution of technology powering business outcomes with our capital markets clients that have embraced cloud computing across their entire value chains. In capital markets, cloud services are becoming ubiquitous for data delivery. In fact, 93% of exchanges, trading systems and data providers globally offer cloud-based data and services. Moreover, 100% of those surveyed intend to offer new cloud-based services, such as derived data, in the next 12 months. (Source: Coalition Greenwich research 2021 "The Future of Market Data" commissioned by Google Cloud).

Some capital markets companies are also tapping the cloud to develop entirely new services. CME Group recently signed a 10-year partnership with Google Cloud to transform global derivatives markets through cloud adoption. Under the agreement, CME Group will migrate its technology infrastructure to Google Cloud beginning next year with data and clearing services, and ultimately moving all of its markets to the cloud. The partnership will focus on delivering significant benefits to all market participants by expanding access, creating real-time data and analytics capabilities, introducing new products and services, increasing efficiencies, and driving resiliency in the financial markets ecosystem.

A final trend which we see as a cornerstone to the industry is the new and deepening focus on purpose for financial services companies, particularly how they can use data to better understand their societal and climate impacts. This is an area where technology can help financial services companies analyse impacts and emissions with data analytics. Migrating platforms and systems to sustainable, carbon-friendly cloud infrastructure can also improve the impact on the planet.

Cloud technology enables companies to not just meet customers needs, but anticipate and exceed them.

All of these changes in the market, of course, are being accompanied by evolution in regulatory regimes that seek to create norms and mitigate risk, like the Digital Operational Resilience Act (DORA) in Europe. This regulatory evolution presents a great opportunity to enhance understanding, transparency, and trust among market participants and ultimately stimulate innovation in the financial sector in Europe. It also facilitates robust stakeholder engagement that helps ensure that the right balances are reached when designing new policies and regulations.

MÄRTEN ROSS
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Ministry of Finance, Estonia

Balancing risks and opportunities in building European digital finance

Have the measures of the EU Digital Finance Package (DFP) allowed the European financial sector to seize the opportunities created by digitalization?

The package is obviously rather young and as the regulatory innovations are mostly in the pipeline its effects haven't yet been proven. But even with this in mind one should note that over the last years we've seen progress in many of the digital strategy priority areas. Most notably it is manifested in clear step forward in uptake of several forms of digital payment services within Europe. But there is also a clear initiative to achieve a unified legal framework on many sectors attributed to digitalization, from crypto-assets and digital operational resilience – to more recently, anti-money laundering regulation and amendments to existing securities regulations.

For sure, these tendencies are not just the result of the DFP or other (and earlier) regulatory initiatives. Much of the job is done by other and from finance point of view partly remote factors. In particular, as a side effect of the covid pandemic, there has been quite a push for broader digitalization in many areas of life. No wonder then that also digital finance has seen its fair share.

Keeping these aspects in mind one should conclude that main elements of the DFS remain valid targets. And these are not just narrower financial aspects, but include welcome focus on data handling aspects on the single market and also broader infrastructure elements like anti-money laundering initiatives.

Is the balance right in the EU digital finance frameworks between risk mitigation and supporting innovation?

There is hardly any single risk metrics that could cover the whole digital finance space. So, the picture is probably a bit diverse on this question. Cyber risks are not generally anymore underestimated and those additional risk handling elements that are or will be introduced (like DORA) are rather balanced and add to the overall credibility.

However, there might be areas, for example data privacy and analytical technologies, e.g. use of artificial intelligence where this balance between risk mitigation and innovation support is either questionable or needs further testing.

In addition, not all (or even most) of the factors influencing creation of single digital finance market are related specifically to narrowly digital issues. And the same goes to risk mitigation and innovation support balancing. In many cases factors hindering smoother integration of the (digital) capital markets or overcoming practical constraints for region-wide single payment market are still related to non-digital factors, like fragmented business registries, fear of data misuse or diluted anti-money laundering practices.

Is there a risk that digitalization may lead European financial institutions to become excessively dependent on tech third-party and third-country-providers?

In network-type industries, including much of the financial sector, the market integrity and competition issues are quite frequent. And these problems are (or at least are conceived to be) more problematic once these concerns appear from actions that drift control of services away from the regulatory perimeter. Therefore, it is not particularly surprising that the potential risks of financial stability and infrastructure security are further magnified in the areas or services, where third-party or third-country providers positions are expected to be prominent or even worse – prone to become monopolistic.

> **In many cases factors hindering integration of the markets are related to non-digital factors**

Therefore, one could argue that while this stage of digitalization is not totally new, shifts in market structure or data control may be at least perceived to be excessively risky. That concern is quite serious when additional broader (geo) political layer happens to enter the stage. But as before, one should not in regulation nor in supervision mix up stability or market integrity concerns by actions only happening to hinder competition.

What is fascinating here is that digitalization has shown us both of its sides. While the question implies as if digitalization tends to aggravate the problem, on the other hand we have clear examples where it actually provides answers to support competitive environment, such as in the areas of EU's mutual efforts to regulate crypto-assets and set out common rules for AML prevention.