

How can new technologies support the CMU?



Carlos San Basilio

Secretary General of the Treasury and International Financing, Spanish Treasury

EU leadership in Fintech. How can new technologies help develop the CMU?

Developed and integrated capital markets, especially in a monetary union, are crucial to ensure a good match between savings and investments and an increase in cross-country risk sharing, contributing to economic growth and financial stability.

In order to pursue these benefits, definite progress needs to be made in the project

of the Capital Markets Union, launched 5 years ago.

New technologies can play an important role in developing the Capital Markets Union, helping overcome barriers to integration. Indeed, new financial technologies (Fintech) create an array of new possibilities for financial agents, instruments and transactions, by improving the efficiency of financial activities, making financial markets more inclusive and improving regulatory and supervisory capacities of the public sector.

The efficiency of different activities such as equity and debt issuance, asset management or corporate governance can be improved with Fintech, allowing for better access to capital markets, reducing barriers and transaction costs and therefore, enhancing financial markets' competitiveness. Some concrete examples of this are crowdfunding and alternative investment platforms, virtual vote tools for shareholders, supply chain finance and robotic financial advisory.

New technologies can also make financial markets more inclusive by enhancing retail investors' activity through low-cost digital platforms and more transparent and trustworthy products. Deepening the integration of financial markets at a retail level is key for a successful Economic and Monetary Union that takes into account the needs of its citizens. Retail investors are the main source of long-term financing of the economy. A broader participation of retail investors in the financial sector can help smooth asymmetric shocks that may affect individual countries.

Furthermore, new technologies can help improve public sector's regulatory and supervisory capabilities, through the so called Regtech and Suptech. However, new technologies may also present risks from a regulatory and supervisory point of view. Thus, policy initiatives should be directed to boost technology development while at the same time, ensuring that financial consumer protection and financial system stability are guaranteed.

The regulatory sandbox, which will be launched shortly in Spain, pursues both objectives simultaneously. The sandbox allows firms to test their innovations under appropriate supervision by the relevant authorities. This helps not only innovators and consumers, but also the supervisors and regulators themselves by having access to valuable information which could, eventually, lead to further improvements of financial regulation and supervisory practices. This initiative responds to the well-defined need to push innovation as a central element for sustainable and equitable economic development. Likewise, it guarantees that technological change protects users of financial services, maintains financial stability and market integrity, while at the same time preventing money laundering or financing of terrorist activities.

It is time to make significant progress in the deepening of the Economic and Monetary Union and turn the Capital Markets Union into a reality. For that purpose, we should make use of any means at our disposal. New technologies have undoubtedly a very relevant role to play. Spain is ready to contribute actively to this endeavor. ●

Mario Nava

Director Horizontal Policies, DG for Financial Stability, Financial Services and Capital Markets Union, European Commission

A digital Capital Markets Union

Digitalisation, new technologies and innovative business models hold great

potential to support the objectives of the Capital Markets Union (CMU) by increasing efficiency, transparency and cross-border provision of services. The COVID-19 crisis shows that digitalisation may also be a safety net against operational risks, thus improving market resilience. The European Commission (EC) is thus taking the necessary steps to ensure the right conditions are in place to take advantage of and manage any risks stemming from digitalisation.

That is why digital finance has become a resounding public policy topic, as also reflected in discussions of the CMU High Level Forum (HLF) set up by the EC to identify and propose new targeted actions to further develop the CMU. Whilst it is too early to discuss the outcomes, these recommendations, including ideas on how digitalisation supports the CMU objectives, will be published later this year and will feed into the Commission Action Plan on Capital Markets Union. In parallel, ►



► the EC is working towards a broader new Digital Finance Strategy promoting digital finance in the EU while adequately addressing possible risks. A digital finance public consultation was launched in April 2020.

Distributed ledger technologies/blockchain may improve efficiency in trading and post trading, reduce costs and make it easier to raise financing on public markets via

Security Token Offerings and DLT bond issuances. In December 2019, the EC launched a public consultation on crypto-assets to assess if the existing EU legislation should be adapted for the issuance, trading, clearing and settlement of crypto-assets and how to ensure a level playing field between security tokens and other financial instruments. A legislative proposal covering all crypto-assets is expected in Q3 2020.

Recent EU policy initiatives recognise the importance of data-driven innovation and data flows such as GDPR's right to data portability and PSD2's Open Banking provisions. CMU objectives, in particular retail investor participation in capital markets, may also be further advanced through open finance. If broadened to include other types of financial data, open finance could benefit consumers by enabling the creation of new business models which would equip them with better tools to manage their finances and investments as well as foster competition between service providers. In February 2020 the EC adopted a Digital Strategy to enhance access and sharing of data within the EU. This horizontal framework will be

complemented by a sectorial framework for the financial sector.

Financial institutions increasingly rely on third party providers of IT services, and in particular cloud services. While these solutions bring opportunities, they also expose the financial sector to operational risks and potentially systemic risks which need to be mitigated. The EC recently launched a consultation on digital operational resilience. A cross-sectoral act is expected in Q3 2020, harmonising rules across the EU to make the financial sector more secure and resilient.

“The EC is working towards a broader new Digital Finance Strategy promoting digital finance in the EU.”

By improving access to finance for innovative companies, the CMU will deliver on its objective of supporting growth and innovation in Europe, and in turn further advance the digital transformation. ●

Björn Sibbern

President European Markets, Nasdaq

Artificial Intelligence + market surveillance = market integrity

Artificial Intelligence is the defining technology of the 21st century that will upend industries, institutions and long-time incumbents. Modern artificial intelligence enables new, hyper-scalable capabilities which make otherwise bespoke or scarce solutions ubiquitous and accessible.

Machine intelligence is gaining deeper penetration at exchanges and clearing houses - we are using it to increase operational efficiency, create richer data products and provide better services to the market. Nasdaq reimagines capabilities such as alternative data research, trade surveillance, asset flow predictions, and

investor relations and applies them to financial markets for institutional and retail investors.

Nasdaq was the first market to implement machine learning for market surveillance on the markets we operate in Europe and in the US, as well as providing such services to our technology clients. Nasdaq's European Surveillance team was the first surveillance team in the world that implemented machine learning into its surveillance technology and starting to use that in live production almost three years ago. When we are now also starting to use similar technology for our US market that will be helpful given that the Nasdaq's U.S. market surveillance team annually reviews 750,000+ alerts that flag unusual price movements, trading errors and potential manipulation.

“...maintain the approach of not stifling but supporting innovation.”

The implementation for our European markets is benefiting from machine



learning to create a ranking score attached to new alerts from the surveillance system. In particular, it enable prioritization among incoming alerts in situations where work load is high, e.g. around opening of markets, it complements existing quality controls in relation to alert handling and it enables managers to identify outliers. This use of artificial intelligence enhances the ►

► market surveillance functionality and transfer learning to improve detection of malicious activity. Machine learning provides better opportunities for surveillance specialists to focus on the right cases, ensuring market integrity is upheld at its highest level.

Nasdaq sees benefits for this technology for exchanges and regulators worldwide, not least in the European markets where trading is fragmented. We also believe it will be useful in sectors which are outside

the traditional financial markets, such as cryptoassets and also in the gaming industry. Among others, it can help monitor bets and for instance detect possible money laundering cases.

Nasdaq continues within its Innovation Lab to research and build unique products that combine our proprietary and third-party data with machine intelligence capabilities. This allows us to work hand in hand with market participants to jointly build products that support investors'

ability to build and protect assets today, and in the future.

Given the huge opportunities ahead, already under exploration or still to be detected, Nasdaq would urge policymakers to maintain the approach of not stifling but supporting innovation. As traditional business models are challenged and where regulatory intervention is considered, we also fully support the principle of 'same business, same rule', which has so far been guiding the regulatory development. ●



Adrian Poole

Head of Financial Services,
UKI, Google Cloud

Achieving financial innovation through the cloud

Innovative banks who already understand cloud benefits are using this technology in a multitude of ways to understand risk, segment customers, track market movements, develop new instruments and ultimately gain a competitive advantage in an increasingly fierce market.

They are using the technology to process large volumes of information, reducing their time to market by rapidly creating and selling new and innovative financial solutions. Atom Bank is one example

of an innovative bank turning to cloud to accelerate its digital transformation efforts. With cloud, the bank can provide more agility and scalability at a lower cost. The challenger bank operates in a very fast evolving environment and needs to take advantage of current innovation, whilst building for future speed by building more SaaS and creating an architecture that is resilient to future industry changes. Turning away from on-premise data centres towards the cloud has enabled Atom Bank to keep up with its tech savvy customer base by updating product app features or even creating entirely new services quickly and cost-effectively.

Other major players are also tapping the cloud to develop entirely new services. For example, Refinitiv recently launched its new Tick History database on Google Cloud Platform. The new offering allows Refinitiv's customers to access, query and analyse its extensive archive of pricing and trading data in much shorter timeframes, using Google Cloud's BigQuery.

Others leverage real-time market information streamed into large-scale, real-time databases and AI/ML models to quantify and cost risk. The time saved processing this information allows these banks to offer products at a much lower cost to their customers.

Traditional banks can also utilise the cloud to combat fraud and money laundering through AI and ML models, much like their challenger counterparts. Combining transactional and behavioural data can help more accurately detect fraud patterns and simultaneously avoid costly false positives. For example, using Google Cloud's BigQuery, Cloud Dataflow and Cloud Datastore to extract and store

features for its model in real time, Monzo has already reduced its rate of fraud to an order of magnitude lower than the industry average.

Similarly, cloud-based technologies are being leveraged for banks' own risk-management to determine liquidity and exposure quicker, to carry out market-to-market adjustments and for better accounting in general.

Conversations between technology providers and banks are now focused on what business problem the cloud can solve.

HSBC is an example of a global bank - which is over a hundred and fifty years old - that is helping to better serve its customers using cloud technology. Using Google Cloud, HSBC can analyse petabytes of data in minutes. This allows the bank to calculate their liquidity position for scores of countries in a fraction of the time of their previous system. And HSBC can run much more complex financial crime analytics in a shorter time, while ensuring their data security and privacy.

It's not just banks and financial services companies that benefit from cloud-first banking, customers stand to gain the most. Cloud is transforming the technology ecosystem, and it's set to revolutionise the banking sector well beyond the core infrastructure. Now is the time for banks and technology companies to work together to take innovation of financial services and products to new heights for the benefit of consumers. ●



Chris Bartz

Chief Executive Officer & Co-Founder,
Elinvar GmbH

A united Europe can become home to global leading fintech

Europe has the potential to establish itself as the ideal location and as an enabler for leading companies for fintech and the digitalization of finance, be it start-ups or established players. Digitalization and scalability are highly interdependent – so European policies need to enable both in order to ensure international competitiveness for European companies.

While it seems unlikely that, for example, another social network with global relevance will be founded and headquartered in Europe, there are massive opportunities in other sectors for Europe

– particularly in fintech. Here Europe offers a unique combination of competitive advantages:

- 1) A proven track record in finance over many centuries and a high availability of talent with financial expertise.
- 2) A strong domestic market with a significant global market share based on volumes as well as on transactions, both key drivers for revenues.
- 3) Europe's outstanding reputation for trustworthiness and its competence in data protection in particular, setting global standards in this area.

To leverage the potential for Europe and to become the major location for leading players in the fintech sector, the Fintech Council at the German Ministry of Finances proposed several key actions, published in the *Fintech Roadmap for Europe*:

- 1) Strengthening initiatives to eliminate obstacles to cross-border activities: we must ensure a single, strong and homogenous home market for innovative digital services to achieve the economies of scale needed to deliver customer benefits. Concrete obstacles to cross-border services like insufficient harmonization, gaps in the passporting system or discrimination against foreign IBANs, must be removed.
- 2) Establishing uniform European identification and authentication standards: user-friendly, uniform and standardised ID & KYC processes that are accepted in all countries without compromising on quality will provide customers with real access to the entire European market.
- 3) Creating a legal basis for comprehensive implementation of digital end-to-end processes: Digital identities and contractual agreements concluded digitally must be legally effective.

- 4) Harmonising standards and responsibilities to strengthen a single ecosystem: the financial market is turning into an ecosystem, where services are conducted through the cooperation of different market participants along the value chain. The historical principles-based approach needs to be developed further to meet the demands of an efficient ecosystem. Consistency between actual and regulatory responsibility, based on clear standards and interfaces, should be the core principle for all areas of the ecosystem. This must apply uniformly throughout Europe.

Europe has the potential to establish itself as the ideal location for leading fintech companies.

- 5) Greater effort on the part of regulators and policymakers to promote innovation: successfully developing financial technologies will be underpinned by the pillars competence, networks, speed and security.
- 6) Enhancing customer confidence and customer responsibility with respect to data use: ensuring the data sovereignty of customers should be the primary consideration. The obligation to provide suitable interfaces should be extended to all providers across all industries and data management tools for customers should be supported.

Europe has the opportunity to actively shape the ideal framework to become home to global leading fintech companies. The moment to make this happen is now. ●