

## Digitalisation and Banking Sector

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I would like to thank my dear friend Pentti Hakkarainen for giving me the opportunity of being here today on the occasion of his Farewell and participating in this exciting seminar. We all have known Pentti for many years. His breadth of awareness, his intellectual rigour and his commitment to the Eurosystem are matched only by his warmth and his personal elegance. But we are not losing Pentti as his many skills will benefit the performance of the Single Supervisory Mechanism Board as from February 1st. It is a privilege for me to be here to pay tribute to the outstanding accomplishments of Pentti over the years.

Now, let me start my address on the impact of digitisation on banking with the following question: ***Will there be banks in the near future as we know them today?*** Banking has always managed to take advantage of technology to improve its efficiency and the service provided to its customers, but it now faces new developments with much wider implications.

Digital disruption may help the healthy part of the sector to survive the pressures of low growth, waning profitability and tough regulation, and to solidly re-establish its customers' trust and its reputation with society. If banks can offer a better user experience, they will again come closer to what customers demand and need to satisfy their aspirations and take advantage of the opportunity of this new age, since they are already living exposed to the digital transformation in nearly all aspects of their lives.

In order to properly understand the future scenarios for the banking sector, we need to place them in the context of the digital transformation that is taking place in the economy and in society.

So let me go through 1) the digital transformation of society, 2) its implications for financial services, 3) opportunities & challenges, 4) the regulatory & supervisory framework, and finally 5) "potential" future scenarios for the banking sector.

### *1. The digital transformation of the economy and society*

Since their emergence at the end of the twentieth century, the digital technologies have achieved very rapid adoption in a very short space of time, leading to a process of transformation which is profoundly changing society and the economy. The number of connections, interactions and transmissions of information that we carry out using digital technology is growing exponentially, blurring physical barriers and reducing the cost of accessing information. Interconnectivity, the Internet of things and automation are the main exponential technologies to which companies have to adapt now. Let me say a word on each of the three.

- **Interconnectivity/Mobile technology:** In the past ten years the use of mobile devices connected to the Internet has taken off, thanks to the roll-out of mobile broadband networks and the growing affordability of the devices. Their low price and ease of use have narrowed

the digital divide, extending the benefits of digitisation to practically the whole world population.

- **Internet of things/Big Data:** Big data analysis techniques are geared to analysing and extracting value from large volumes of information at high speed. The types of data that can be processed now include not just structured information but also unstructured data in huge and exponentially growing quantities thanks to the hyper-connectivity among people and machines (the Internet of Things).
- **Automation/Artificial intelligence:** It will be the next technological frontier with a significant impact on the labour market, and which will be an essential part of this 4.0 industry. This discipline is devoted to designing IT systems based on highly flexible algorithms with characteristics normally associated with human intelligence and behaviour, such as understanding language, learning, reaching own conclusions, etc. In the medium term we shall most probably see the automation of certain activities, which will require productive processes to be redefined so that humans continue to contribute value where they perform best.

## *2. The digital transformation of the financial services industry*

This digital revolution has also arrived in the financial sector. Currently there is no doubt that our sector is at a major crossroads. The negative impact of the economic environment on banking, expectations of a prolonged period of low interest rates and the stagnation in lending lead inevitably to the quest for transformation processes enabling costs to be reduced and revenues boosted. Things become complicated if we take into account two additional factors: the reputational problems still weighing on banks and the assimilation of the aftermath of the regulatory tsunami. Accepting that all the above requires profound changes in the sector; the presence of this radical disruptive force, the digital revolution, has changed everything.

The disruption characterising the transition in banking is reflected in irreversible changes in both the supply of and demand for financial services:

- On the **demand** side, we are already seeing radical changes in the patterns of consumption and savings behaviour of a whole generation. The two new generations of digital natives, the millennials and the centennials, have started joining the labour force, and in the coming years they will become increasingly important customers not just of banking but of a whole range of sectors. In a context of increasing competition such as the current one, it is crucial to understand the services that are being and will be demanded by these younger generations and by older "non-native" generations which are rapidly digitalising.
- As for the disruptions seen in **supply**, the sector is facing greater competition and technological changes that will decisively affect the quantity, quality and price of financial services.

As regards competition, over the past few years we have seen an increase in the number of new players coming from the digital world, the "fintechs". Their objective is to concentrate on specific segments of the value chain (foreign exchange, payments, loans, trade, asset management or insurance, for example), unbundling or disaggregating the services previously originated and sold by the banking sector. These companies start without the burden of having to maintain a physical distribution network, the rigidities of corporate culture, the upkeep of obsolescent technological systems or the tough banking regulation.

Also, the sector will have to compete not only with providers emerging in the financial sector, but also with those arriving from other areas. In particular, the major digital companies, Google, Apple, Facebook and Amazon, (referred to using the acronym GAFA), could take advantage of their differential capabilities to gain market share.

And to new competition will be added technological changes under way or yet to come. As we have seen, there are a number of exponential technologies interacting with other digital innovations, such as the large-scale use of big data, artificial intelligence, blockchain and cloud computing. All this will open the way to different ways of participating in the digital ecosystem, such as by acquiring or taking equity stakes in "fintechs", developing internal capabilities or open innovation.

In this context of disruptive change, two forces will be fundamental for determining the speed of change and the scenario towards which the sector will move. The first, which is of an internal nature, concerns banks' vision of the future and their technological, financial and organisational capacity for self-transformation. The second one is the role of the regulators and supervisors as drivers of or brakes on the changes needed during the transition.

### *3. Opportunities and challenges*

This new ecosystem offers great potential in terms of improved agility, quality, price, etc. in the relationship with customers. New customers want to be able to meet their financial needs at any time and on any device, mainly mobile. The use of big data has brought about a change in the way we understand customers and predict their behaviour. In addition, the new entrants, with their more agile and efficient structures, are increasing the competitiveness and productivity of the industry as a whole. In this scenario, the **customer** is clearly the **main beneficiary**.

Let me give an example where digital transformation has many ways to make a positive impact and where BBVA is one of the leading institutions: financial inclusion initiatives in emerging markets like Latin America.

- Technological diffusion provides more possibilities to access financial services by, for example, using people's mobile devices; this fits perfectly with the high level penetration of cell phones in emerging economies. In this case, digital transformation has the potential to help to overcome structural barriers to financial inclusion, such as geographical distance,

bureaucratic processes and documentary requirements, and to provide time-efficient processes.

- Digital transformation also brings a low-cost framework for financial institutions, facilitating the evaluation process for opening a new client account or processing a loan, reducing an important barrier to traditional banks' offering financial services to low-income customers, as well as attracting non-financial institutions that provide some financial services, generating more competition and more value for the economy.

But this **digital revolution also raises new challenges** to the stability and the integrity of the financial system and the protection of consumers. In particular, there are various areas to which regulators and supervisors need to pay special attention:

- The application of new technologies brings new risks related to the proper functioning of these technologies and their vulnerability to external attacks (cybersecurity). In addition, other risks are being affected by the various applications:
  - ✓ New technologies for storing and processing data (such as cloud computing) and data analysis techniques pose new challenges for data protection, an increasingly significant area in consumer protection.
  - ✓ The advance of automation and artificial intelligence also raise certain ethical, political and legal dilemmas which have yet to be resolved. The large-scale replacement of the workforce that performs routine work will pose crucial challenges relating to social well-being, inequality and the stability of political systems. Moreover, it will be necessary to determine who is responsible for failings with serious consequences deriving from incorrect behaviour of a robotic system. It may even be that we have to limit robots' autonomy, perhaps updating Asimov's Three Laws of Robotics
  - ✓ The new electronic identification mechanisms are directly related to the prevention of money laundering and terrorist financing.
  - ✓ Some possible applications of blockchain technology also involve risks for the prevention of money laundering and terrorist financing because of the anonymity they bestow.
- New business models (P2P lending for example) involve risks to consumer and investor protection and financial stability, which in many cases are not being addressed within the existing regulatory framework.

4. *Regulation and supervision: How can we ensure that financial stability and consumer protection do not hinder innovation in the financial sector?*

Taking this into account, regulation and supervision are challenged to provide a regulatory framework that balances the promotion of the new digital value propositions (that benefit the customer and introduce efficiency gains in the market) and protection against the associated risks.

The regulatory and supervisory pace of digitisation sets the limits within which all the desired innovations have to fit. This requires a breadth of vision on the part of all concerned, both public authorities and the private sector, which could exploit these opportunities, overcoming the obstacles that currently exist.

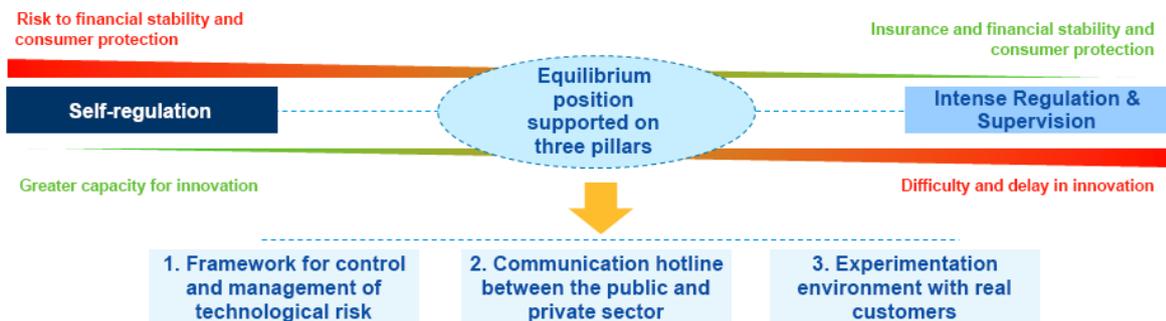
In some cases these obstacles are explicit prohibitions, but in many others it is precisely the absence of a specific regulatory and supervisory framework that is stifling innovation. There are projects that do not fit easily into the existing regulatory framework, meaning they face an uncertainty which is either delaying projects (awaiting the approval of the authorities) or blocking them before their launch onto the market to avoid regulatory risks, because of the legal uncertainty and lack of trust being generated.

The **solution** is to adopt a **holistic approach** to seek a balance between the promotion of the new digital value propositions and protection against the risks involved. How can we find the balance between both worlds?

- On the one hand, there could be a "self-regulation approach", where the financial institutions and new players from "fintechs" set their own rules of operation and control based on the risk appetite that each is willing to assume. In this environment, the private sector would have a high capacity for innovation, but without a doubt would take on more risks.
- On the other hand, the opposite approach is that of an intense regulation and supervision, where all new developments must be covered by pre-existing regulation and approvals, with supervisory monitoring of each case. Undoubtedly, this approach significantly reduces new risks in the short term, but the speed and degree of development of the system would lag well behind the demands of customers.

Since both alternatives present many advantages but also disadvantages, there is a need to find a compromise solution that is consistent with the life cycle of innovation.

Under this approach, collaboration and communication among all stakeholders is vital (public sector authorities and private providers: banks, technology companies, start-ups, etc.), as is ensuring that they all face a level playing field. As a solution, a scheme has been proposed that aims to combine the best of both worlds; self-regulation, as well as appropriate and proportional regulation and supervisory monitoring. The proposal involves a framework arranged around three elements:



1. On the one hand, the private sector needs to have defined policies on the control and monitoring of regulatory compliance risks (cybersecurity, data protection, etc.) in the new value propositions. These policies must be integrated into the governance of the entity in order to set down and measure the risk appetite that it is willing to assume.
2. Additionally, communication between the authorities and the private sector is a key pillar of the process. For this to be effective, the mechanisms for dialogue need to be simple and agile. A kind of regulatory hotline would thus be set up that would allow entities to understand how regulation affects a particular activity or business model, resolve specific questions or receive help with filing applications or meeting requirements.
3. Finally, the authorities need to have appropriate environments for experimentation (increasingly known as "regulatory sandboxes"). These would be used by the authorities, traditional operators and new entrants to test new technologies and business models with real customers, without having to bear the full weight of regulation from the outset or wait for it to be defined. This would help both kinds of actors (public and private).

For this dialogue and cooperation to be effective it is important for the institutions to build up a solid base of knowledge. They have to understand and manage the types of issues that could arise in the new environment in the most efficient manner possible, as often these are new topics for which there is simply no previous experience to call on.

All in all, the transformation of the sector will necessarily be accompanied by errors that will be committed as a normal result of an innovative process in which not just companies, but also regulators and supervisors, will be leading the way. In this regard, it is extremely important that the authorities' responses to these unintended consequences are proportionate. This will allow financial institutions to continue without fear to make progress in the innovation process that is so badly needed by the sector.

### 5. *The future of banking: Scenarios*

So, for me the real question is not whether banking will change radically, which it undoubtedly will, but rather whether banks will still play a significant role in the new financial ecosystem.

While acknowledging that a fertile imagination can produce innumerable scenarios, they could probably all be classified as variants of one or other of two broad and polar categories.

- The first scenario, resulting from **passive strategies**, is one in which banks evolve towards merely providing infrastructure, leaving the high added value services to other players. This would not be difficult to achieve, since it is a scenario of inertia: it would simply require banks and regulators to carry on doing things as they have been doing so far.
- The second scenario that can be discerned, resulting from **proactive strategies**, is one in which growing competition among the various players leads to a substantial transformation of the sector, in which a few of today's banks survive, undergoing a complete metamorphosis. These new banks would be highly competitive, and in direct competition with companies such as the "fintechs" and other major players such as the "GAFA".

Therefore, banking would have to adapt its strategy radically in this second scenario to survive this unbridled competition from new entrants. Success will be determined by the ability to first take care of their main asset: the customer experience, secondly re-establish their reputations, and finally reach keener prices and automation of processes so that customers can devote only the time they consider necessary to administering their finances.

This model requires profound changes of talent and culture within the organisation, which must evolve towards more agile and flexible, less hierarchical structures in more collaborative environments in which information can flow without unnecessary restrictions. The cultural change must favour the process of continuous innovation, which values learning through success, and in which failure is quickly identified and controlled, allowing progress to be made towards the realisation of the bank's strategic vision.

Thus it involves a transformation in three areas: technological, strategic and in terms of corporate culture and talent. It is, in short, a complete **reinvention of the banking business**.

The two scenarios I have just described represent possible future alternatives for the banking sector. But they are not mutually exclusive, and it may well be that we see a combination of both.

Thus it now seems inevitable that there will be increased concentration in the sector aimed at generating synergies to make up for low profitability. Banks that bet on this classic consolidation model will have to make substantial cost reductions - on systems, branches and personnel - in order to maintain reasonable shareholder remuneration.

Some players might nevertheless manage to achieve the best of both worlds, leveraging respected brands and flexible technological architecture to cement customer relations, generate value

propositions based on large-scale intelligent data exploitation and grow in different geographical regions in competition with the "fintechs" and technology companies.

### *Conclusion*

Let me conclude as I began: ***Will there be banks in the near future as we know them today?*** It would of course be ingenuous to try to guess what will happen in the future. "Doubt," said Voltaire, "is an uncomfortable condition, but certainty is a ridiculous one." The answers are necessarily contingent, since the outcome depends on the forces of technology, the demands of society and the starting point.

One thing at least is clear: a revolution in the financial sector is unfolding before our very eyes, forcing us to reinvent banking and even to question whether it can survive as an institution. Every decision we make now must be approached with a great sense of responsibility, taking into account **three key guiding principles**. First, the customer must be put at the center of any initiatives with ambition to succeed. Second, as future developments in technology and the competitive landscape remain uncertain, we need to pay special attention to the rise of new challenges. And finally, collaboration and communication among all stakeholders -public authorities and private providers- is vital in order to make the most of digitisation in finance, while preserving financial stability and ensuring adequate consumer protection.

Thank you.