

Italian banks face the challenges of the digital transition, sustainability and the governance of innovation in digital financial markets

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Good evening and thank you for your invitation to participate in this roundtable, which addresses very topical but also very complex issues.

The main challenge for banks at this point in time is to seize the opportunities offered by technology and move towards the progressive digitalization of the banking business. This is a challenge that the Italian banking system has accepted, albeit moving at a different pace from other European countries and with progress being uneven. The Bank of Italy plays an active role in monitoring market developments and performs its supervisory function in accordance with the principles typical of prudential supervision.

The current change is before our very eyes and has accelerated with the pandemic,¹ which has – necessarily, I think – led to an increase in demand for digital services, requiring the banking system to rise to the occasion. Although the number of digital banks in the strict sense ('neobanks' or 'challenger banks') are still limited in number, all the major banking groups, albeit with different definitions and at a different pace, have adopted transformation strategies, offering innovative services. For some of them, the transformation of their business has been profound: in the medium term, relationships with customers will be completely restructured, gradually reducing the geographical links between the customer and their local area. However, according to our periodic Fintech survey, among the top ten financial intermediaries investing in Fintech, there are some small and medium-sized banks and some non-bank credit intermediaries: hence, besides business size, the propensity to innovate also counts.

1. Drivers of the digital transition

¹For example, according to our annual survey on the cost of current accounts, between 2020 and 2022, the number of bank transfers made over the counter fell by almost 20 per cent; ATM and over-the-counter withdrawals also decreased significantly by 44 and 18 per cent respectively, to the benefit of online transactions, such as credit transfers, the number of which doubled on average over the same period.

The most recent evidence, made available to the Bank of Italy through strategic plans, meetings with intermediaries and data, has made it possible to identify the main supply-side factors that are driving the change underway. I would like to mention some of them.

1. Partnership with the world of Fintech companies, both domestic and foreign, enables banks to acquire expertise that is not available internally and to reduce the time to market: 80 per cent of Fintech projects are developed by intermediaries in collaboration with other companies and institutions or by entrusting them with the entire project implementation cycle.

2. The open banking paradigm, which, three years after the entry into force of the revised Payment Services Directive (PSD2) and the implementing rules, continues to impact banks' business models. Our evidence shows that, over the last two years, the number of Italian financial intermediaries offering the new Payment Initiation Services (PIS) and Account Information Services (AIS) has doubled from 11 to 22. What is more, just over one quarter of the Fintech projects that we regularly survey develop services that fall within the scope of open banking. While in the first start-up phase the new PIS and AIS services were mainly provided through the creation of new payment institutions, in this second, more mature phase, banks also benefit from the potential offered by the widespread availability of data contained in their current accounts. The new payment services are used by traditional banks as a means of broadening the range of products and services on offer and, in particular, to support businesses and households in cashflow management, payment reconciliation and financial management. At the same time, these data can help to improve accuracy and precision in assessing customers' creditworthiness.

The open model introduced by the PSD2 is expanding, not least as a result of the European Commission's regulatory action, towards new, more far-reaching paradigms, which are summarized within the concepts of Open Finance and Open Data. With the arrival of Open Finance, the degree of openness will extend beyond payment accounts data to include the areas of credit, investment and insurance: the massive exploitation of customer data will open up opportunities for the development of new financial products and services. However, it will also be necessary to strike the right balance between offering new digital services and respecting consumers' rights, by ensuring that the exploitation techniques used are free from errors leading to algorithmic bias and that everyone can access the new digital services. It follows that the difficult relationship between the protection of personal data and the opening-up of customer data to the outside world will have to be wisely managed.

In addition, the new business models already on the market are progressively becoming more widespread. These are 'banking as a platform' models, in which the platform bank incorporates services offered by third parties, and 'banking as a service' models, in which banks offer their own services to third parties which, generally speaking, do not have the licences necessary to provide the services in question directly. These models complement each other and are based on the use of Application Programming Interface (API) technology² as a tool for interaction and collaboration between financial

²API technology is a set of software procedures that enable communication between applications and programmes.

operators. These can generate tangible benefits for users, provided that they are able to monitor the strategic risks associated with the new business models and the operational risks arising from the use of these technological solutions. New protection and reputational risks associated with banks offering non-financial services are emerging.

3. The third key element for innovation is the gradual recourse to cloud technology: we see a very close correlation between migration to the cloud and propensity to innovate. The survey on the use of IT in the Italian banking sector, conducted by the Interbank Convention on Automation (CIPA) and published last July, showed that in 2021, 58 per cent of participating banks benefited from the cloud services provided by external providers, albeit to different extents; a further 29 per cent had embarked on a process of technological transformation for the use of cloud services. The cloud is an enabling technology for innovation because it allows large amounts of data to be easily managed and gives access to innovative exploitation and processing techniques, for example machine/deep learning; it can also help to contain company costs since its use is scalable. However, this technology is not without risks for data security and, especially in some models of public cloud adoption, this is because of the dependent relationship with the supplier that can ensue.

2. Constraints on business digitalization

System obsolescence is certainly a constraint that cannot easily be overcome, especially in larger and older banking groups. Banks need to take action to replace systems that have reached the end of their lifecycle and are generating an overall rise in costs, increasing the risks of malfunctioning and of security issues. Old systems act as a brake on innovation, create competitive disadvantages vis-à-vis new players, and limit the ability to aggregate data for business purposes, to develop new business models and, not least, to monitor risks (risk data aggregation).

Initial calculations based on information made available by the ECB suggest that only 5 per cent of total IT expenditure is allocated by the significant banks (the ones under direct ECB supervision) to the replacement of systems that have completed their life cycle; in Italy, the figure is slightly lower, at around 4 per cent.

Secure customer distance-identification systems are still not very common among banks. For example, very few banks allow customers to open an account via the Public Digital Identity System (SPID) or with an Electronic Identity Card (CIE).³ This is also a complex issue: fully digitalized financial services mean that the customer's user experience must be fully digital from the initial identification stage to the conclusion of each transaction. However, any technological solution adopted must be sufficiently reliable and must not lead to any deterioration of the Know Your Customer (KYC) processes required by law. In this respect, as you know, we are also waiting for the new European legislation that will allow access to sovereign digital identity systems, where the user will have full control over the digital credentials and personal information to be used in trusted digital interactions.

³According to the survey carried out by CIPA, remote operator recognition was the method most used in 2021, followed by facial recognition (on video calls or via selfies). The adoption of the SPID was either being evaluated or was likely to be adopted by almost all respondents in 2022-2023. Around half of the institutions surveyed were considering the possibility of identifying customers by means of the CIE, while there was little interest in adopting the CNS smart card that gives access to the public administration online or in e-passports (with electronic chips). See <https://www.cipa.it/rilevazioni/tecnologiche/index.html>

Looking ahead, digital identity systems with high and uniform levels of security and interoperability at European level will facilitate a consistent approach to the issue and can combat money laundering, fraud and illicit financing, avoiding instances of downward competition in laxity between different countries and regulatory systems.

In any case, despite the difficulties I have mentioned, there are clear signs that banking business models are evolving in tandem with the possibilities for accessing and exploiting customer information. Further assessment is needed of the effects of all this in terms of organizational implications, risk monitoring, information systems and protection of privacy.

3. Building a new bank-customer relationship: governance and new skills for data security

The credit function relies on the confidence that the saver places in the ability of the bank to select how to use the resources entrusted to it and to repay the amounts deposited. Digitalization requires an additional fiduciary relationship, based on the bank's ability to ensure the confidentiality and security of savers and borrowers' information, avoiding malicious unauthorized access.

It is important to ensure efficient data governance processes and highly technical security safeguards to protect the IT systems that are the key infrastructure for the management of business data and the conduct of related processes, while ensuring their integrity and operational continuity. Data security should be pursued not only by respecting privacy provisions, but also by ensuring that the technical solutions for safeguarding IT systems and communication channels between the different parties meet the requirements of the European guidelines and the best international standards. Only in this way can we reduce the impact of security incidents (especially in terms of the unauthorized dissemination of information) and contain the spread of possible cyber-attacks.

Governance can be the main instrument to support innovation. Banks need to have adequate resources and expertise not only among their technical staff, but also in their management bodies. In this regard, the available evidence is not reassuring: an analysis of the composition of the boards of Italian banks classed as less significant institutions (LSIs) – those under the direct supervision of the Bank of Italy – showed that only a very small percentage (between 1 and 2 per cent) of the board members had any IT expertise. More recent data on the significant banks (SIs), show that the percentage of these banks' board members claiming to have adequate IT skills is about half of the European average. There is a clear shortfall of human resources with IT skills: in Italy, full-time equivalent technology experts account for just over 10 per cent of the staff in SI banks, compared with a European average of almost 20 per cent.

Digitalization and open data also increase the level of interconnectivity between operators and expand the perimeters of customer data sharing to include, for example, third parties providing AIS and PIS services, technical providers with which banks work via outsourcing agreements, and even fourth parties, such as Fintech companies, that can access the data on the basis of customer consent. In December 2021, outsourcing ICT systems for European SI banks accounted for half of the total expenditure on outsourced

services. In Italy, this percentage was slightly higher, probably reflecting a greater dependence of the Italian system on technology suppliers.

However, still in this context of multiple types of operators competing and using fairly extensive customer data, the guiding principle must remain that the data held by financial intermediaries are the property of the customer, and the use of such data by third parties must be secure. Banks have the ultimate responsibility to ensure, primarily through contractual clauses with outsourcers, that the technical infrastructure used to transfer data offer the same security level as the internal systems, and if these guarantees are not in place, it is important to be able to switch provider rapidly if necessary. The authorities are responsible for verifying that the intermediary has adopted an approach consistent with its risk appetite in terms of the security measures required from the provider and with reference to where the data is stored, and for monitoring the concentration of major technical suppliers over time, so that none of them can become a single point of failure. The necessary cooperation with the other authorities involved, such as the one responsible for protecting privacy, should also be promoted.

4. Compliance requirements

Taking into account strategic perspectives and impacts in terms of data and IT system security, the digital transformation of financial intermediaries is clearly not a simple process and, of course, it is a costly one, which requires adequate margins of capital.

This leads me to a further consideration. Market confidence in the proper performance of intermediaries is also pursued through a structured and complex system of rules and controls. When this system is well calibrated, the benefits for the general public – specifically in terms of the stability of the financial system – are beyond question. However, from the point of view of the intermediaries, being subject to this set of rules and controls implies significant compliance costs, which may affect the sustainability of their own business model.

If a precise estimate of costs is not so easy, this is all the more true for compliance costs, especially if they are linked to evolving processes such as the digital transformation.

From 2019 on, probably the largest component of compliance costs were the measures to comply with PSD2 legislation, as mentioned earlier. Our Fintech survey confirms that Application Programming Interfaces (APIs) account for almost 60 per cent of expenditure, followed by biometrics (around 22 per cent). However, Italian banks have made a cooperative effort, converging on a few platforms, which are shared solutions offered by some service companies supervised by the Bank of Italy and this has led to large economies of scale.

5. Business sustainability and digitalization

Over the past year, we have seen an overall improvement in banks' profitability: between June 2021 and June 2022, ROE increased by 5 per cent, net interest income by more than 9 per cent, and the cost-income ratio declined by 3 per cent. These positive results, together with the recent increase in interest rates, could generate expectations

for banks of positive effects on profitability for the same level of 'technology capital'.

Nevertheless, the banking system operates in a context of considerable uncertainty which makes it difficult to assess strategic risks: boosting banks' profitability margins, especially for small and medium-sized banks and with traditional business models, **can** leverage technological innovation. Available evidence suggests that between June 2020 and June 2021 – and so before the recent interest rate increase – the system was able to offset the reduction in net interest income (-2.5 per cent) with higher fee income (up by 14 per cent). Banks that invested more in digitalization in that year performed better than the system in terms of both net interest income and fee income (+ around 30 per cent and +45 per cent respectively). The results of a sample of digital or predominantly digital banks are particularly encouraging – they were better able to diversify their profit margins, increasing their fee income significantly, with annual growth of around 13-14 per cent over the past two years.

In any case, investment in IT can take time to produce clear and lasting effects in terms of the increased efficiency of processes and an expansion in supply and customers: our evidence shows that a project takes two years on average from when it starts trading to reach a balanced cash flow.

A survey of the sustainability of the business models was conducted for a large sample of Italian LSI banks. It found that only 11 per cent of the banks in the sample reported that Fintech initiatives had been implemented among the measures to restore profitability. It is therefore necessary to raise awareness of the potential of the new technologies.

The creation of partnerships with Fintech companies or those operating open banking platforms and digitalization (for example through automated reporting, standardized credit assessment and supply processes, and digitalized back-office services) are possible ways of expanding the customer pool and making processes more efficient.

6. The new digital financial markets

The rapid escalation of the various possible types of transaction using 'decentralized finance' is gradually moving towards a kind of digital replication of the traditional world of finance.⁴ There are already numerous connections between the two ecosystems. In addition to holding crypto-asset exposures – to be monitored with particular attention – banks can be involved in various activities related to decentralized finance and in the provision of different types of crypto-asset services.

The use of decentralized technologies in finance presents the same types of risk as in traditional finance (credit, market, operational, cyber, liquidity risks, etc.), but increases their importance in terms of financial stability. In fact, the significance of the degree of interconnectedness between intermediaries and sectors of financial and non-financial activities increases, together with operational, cyber and fraud risks linked to the presence of more than one unsupervised entity and the use of technology tools and paradigms that are not properly regulated; and the lack of industry standards. It is

⁴Decentralized Finance or DeFi means a financial system that does not rely on central financial intermediaries such as brokers, exchanges or banks, but which uses smart contracts on a blockchain.

important that operations related to crypto-assets are carefully assessed in advance and, if implemented, that they are monitored by banks using the same principles and methods as in their traditional business: effective governance, consistency with strategic guidelines, risk governance objectives and policies, proper customer relations, and attention to operational risks.

The Bank of Italy monitors developments in market infrastructure based on Distributed Ledger Technology (DLT) and crypto-assets in order to assess risks and impacts on financial stability, on banking and financial intermediaries, on the proper functioning of the payment system and on customer protection.

The recent Communication on decentralized technologies in finance and crypto-assets has a twofold objective: first to draw the attention of supervised and non-supervised entities to the opportunities and risks related to the use of such technologies in finance and to crypto-asset activities and services; and second to encourage financial intermediaries to find ways to mitigate the risks associated with the use of such technologies and/or crypto-assets. Concrete initiatives will follow in order to establish the technological and legal standards for the financial instruments used in the provision of services through distributed ledger technologies.

Conclusions

Today, our conference is dedicated to banks and the dynamic environment in which they operate, but let me conclude by saying that, here at the Bank of Italy, we are doing our best to accompany the transition of the system, leveraging the new range of powers that we have been given.

We too are facing a great challenge: to promote innovation while having to protect consumers and investors, and without excluding or discriminating against less digitally-skilled users. We must guarantee the proper functioning of market infrastructures and the payment system, and maintain the security and stability of the financial system as a whole. It is very likely that it will be necessary to expand the perimeter of supervised entities and activities. It is extremely important for both banks and authorities to acquire the necessary skills to understand the risks (IT, operational, reputational, but also strategic and business) that may arise for supervised entities.

Over the coming years, these challenges may require us to thoroughly overhaul our supervision methodologies and to invest in new skills so that we will be able to act with the necessary rapidity.