



Comisión  
Nacional de  
**Evaluación y  
Productividad**

# EXECUTIVE SUMMARY

Innovation and technology adoption in  
the financial sector

2021

## **Innovation and technology adoption in the financial sector**

The rise of the Internet, mobile devices, and the increased processing capacity of computers have substantially changed how financial products and services are offered in the world, benefitting both providers -with lower costs, new ways of relating to their clients, and procedures without timetables- as for people: more convenient, immediate, varied and safe services. Likewise, this process has changed the market structure, increasing competition between incumbents and new technology-based entrants or fintechs. Fintechs have the advantage of having lighter and more flexible organizational and IT structures than the traditional industry, covering customer segments with higher specificity or parts of the value chain. One of the most significant social benefits of such competition is the financial inclusion of previously excluded elements, fostering a deeper and more stable financial sector in light of economic shocks. However, the technologicalization of these products and services presents new risks:

1. For financial institutions, such as cybersecurity and decreased governance
2. For people, such as greater exposure to their data and financial risk
3. For the economy as a whole, such as increased procyclicality and contagion

In this context, in January 2021, President Sebastián Piñera ordered the National Productivity Commission to review the literature and practical cases of adopting technological innovation in the international financial industry and thoroughly diagnose this under the traditional Chilean financial market.

### **The study and its findings**

The research strategy consisted of an exhaustive bibliographical review to determine the technological trends the sector is adopting internationally, the micro and macro-financial benefits of technological innovation, including its costs, and the advancement of open finance models. Over 30 interviews were conducted with institutions, unions, academics, and researchers between January and April 2021 in Chile and contrasted this information against the international data. In addition, to fully understand the strategies and perceptions of the traditional industry, a survey was distributed digitally to banks, insurers, fund managers, stockbrokers, savings and credit cooperatives, business support companies, compensation funds, card issuers, and others in

February and March 2021. The responses to this instrument gathered exceptionally high market participation of banks, cooperatives, and fund managers, with more than 90% of the market share in the first two and 70% in the third. This was the first national effort to find out the current trends of technological innovations in the market, directly consulting the traditional industry.

### Technological innovation in the traditional industry

The main innovation trends in the international financial industry are (a) mobile technologies, (b) application program interfaces (APIs, for its acronym in English), (c) cloud computing, (d) artificial intelligence, and (e) blockchain. Locally, the first three have been the development priorities in recent years in more than half of the institutions surveyed. The objectives sought through the process of innovation have been primarily the improvement in the relationship with customers, the efficiency of the operation, and the offer of products. An important finding is that, at present, the innovation processes in the traditional local and international industries have sought greater profitability and maintain competitiveness in the sector and its new entrants. On the other hand, local institutions have faced regulatory barriers and a lack of enabling elements that have slowed or stopped them in their innovation process. The insufficiency of digital talent has had the same effect, evidenced in various studies nationally. Finally, when seeking to quantify the interference of the financial services' technologicalization in the well-being of people (through financial inclusion and other mechanisms), we found scarce availability of standardized public information concerning the use and quality of the products that operate in a digitized manner. To date, there are no publicly available statistics or measures.

### Relationship of the traditional industry with fintechs

Internationally, fintechs have fostered competition in the financial market, using their flexibility to bid prices down and promote financial inclusion. However, this study finds that, locally, these organizations collaborate with the traditional industry, operating under a client-supplier relationship and reporting a low level of competitive threat in most cases. Today, almost 70% of conventional institutions collaborate with at least one fintech, looking for more significant innovation and improvements in customer service and experience.

Specific regulations regarding the Chilean financial market operation and the lack of an ideal regulatory framework that acknowledges the distinct characteristics of particular business models have been the main barrier to the operation of fintech companies that seek to offer their products and services directly to final customers, further discouraging innovation. Countries such as Colombia and Mexico have incorporated specific regulatory frameworks or made regulation more flexible under the pillar of proportionality in demands and risks to promote market technology. In Chile, the Central Bank has recently introduced regulation modifications regarding means of payment<sup>1</sup> and proposed guidelines in White paper<sup>2</sup> published by the Commission for the Financial Market for regulating fintech business models in the stock market.<sup>3</sup>

### Open finance

Open finance systems emerged worldwide in the last decade, empowering people over their data and allowing free mobility of clients in the financial market. The main objectives that originated these systems were competition promotion and reducing the industry's concentration. There have also been other positive externalities, such as promoting new infrastructures for data exchange and encouraging a broader offer of products in this and other industries.

In the study on "Disruptive Technologies: Regulation of Digital Platforms," conducted by the National Productivity Commission in 2019, specific recommendations were formulated in the field of "Fintech Financial Services." One of the key proposals put forth was the promotion of an "open banking" system that enables the seamless and secure sharing of financial information between traditional financial institutions and emerging fintech companies. This system, with the client's

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<sup>1</sup> Recently, the Central Bank of Chile revised the regulation applicable to payment card operators and payment service providers in order to incorporate greater proportionality and facilitate the entry of new participants in acquiring. Additionally, it announced that it is working on a proposal for flexible and adaptable regulation to promote innovations in low-value payment systems, with the aim of expanding opportunities for users and diversifying the available payment methods in the financial system. This would allow the settlement of transactions originated from different platforms while establishing appropriate prudential safeguards in response to this trend. This followed one of the recommendations of CNP (2019).

<sup>2</sup> "White papers" are known as documents published by governments in certain cases to inform legislative bodies or the public opinion with the objective of helping readers understand a topic, solve or confront a problem (for example, designing a long-term government policy), or make a decision. In the context of cryptocurrencies, the term is widely used to refer to technical documents related to protocols or cryptographic tokens, having a similar objective, although not necessarily issued by a central authority.

<sup>3</sup> CMF (2020). Development, regulation, and supervision of digital technologies in the insurance industry.

consent, aims to foster collaboration and innovation within the financial sector while ensuring the protection of user data. The implementation of such measures would facilitate greater agility and efficiency in financial transactions, benefiting both consumers and industry players. The Ministry of Finance announced that it would include these recommendations in a bill on the matter to enter this year's legislative process.<sup>4</sup>

Almost 70% of the local traditional financial institutions maintain that an open finance model would benefit them, making it possible to open new lines of business, complementing their service offer. This study collects evidence on technological adoption in the financial sector as an enabling condition for implementing an open finance scheme. Regarding the technology necessary to take advantage of these schemes, the literature details three enablers:

1. Cybersecurity and data storage standards that ensure the protection of customer information.
2. Robust methods to authenticate customers and clients.
3. Secure tools for the transfer of information to third parties.

The local financial industry responded (for this study) that in over 75% of the cases, it fulfills the three elements above or is working towards it, which is a favorable condition for implementing a regulatory framework that enhances the development of open finance in Chile. The preceding does not exclude the relevance of having a regulatory and supervisory framework that allows mitigating and protecting the risks associated with the more significant data exchange under a consented scheme granted by the customer who owns the data. Furthermore, it is essential to highlight that, for its proper functioning, an open finance scheme needs a robust framework that protects personal data, which is not currently present in current legislation.

## Conclusion

This study discusses how the digitalization of the industry can stimulate competition, reduce prices, improve coverage and quality, and promote greater macroeconomic stability, among other benefits. Through these mechanisms, the adoption of new technologies has the potential to increase the productivity of the financial sector and the Chilean economy as a whole. Furthermore, the

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<sup>4</sup> CNP (2019). Disruptive Technologies: Regulation of Digital Platforms.

COVID-19 scenario has made remote operations in the market necessary, giving urgency to the digitization of financial products and services. Through numerous interviews and surveys with the traditional financial industry - in a national effort to gather information on current technological trends in the market - the relevance and urgency of creating the ideal conditions in the country to progress in the adoption of digital technologies have become evident. Barriers to its advancement have been identified, from both the public and private sectors, many of which could be mitigated through regulatory modifications. The National Productivity Commission (CNP) emphasizes the importance of promoting technological innovation in the financial industry, and it is expected that the thirteen recommendations presented in this study will serve to promote this goal through a public policy effort.