



## The Impact of Fintech on Colombian Financial Products and Services

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### Abstract

The purpose of this article is to review the growth of Fintech in Colombia, analyzing the determinants that have influenced the behavior of the financial market, taking into account that Fintech is the mix between technology and finance, and that it is replacing the current banking services, providing a great help to the customers of financial services, defining the term as a technological evolution, and the contribution in the development of financial technologies and the conclusion on the influence of technology and finance and its possible ways to contribute to the development of the financial sector. The conclusion on how Fintech has been influencing traditional finance, thus imposing new conditions and therefore the offer of new services by traditional banking.

Methodologically the study conducted an analysis on the evolution of Fintech and how through the algorithms that have been implemented has led to many changes in financial services, the final results show this evolution, the article allows to know some conclusions about the development in this field.

**Keywords-** Banking services, Fintech, finance, financial services, financial security, technology, Startup, blockchain

### Introduction

In this time where the pandemic generated by covid-19 and the controls that were generated to maintain people's health, such as the application of quarantines and controlled enclosures,



Fintech was strengthened as the solution for the banking sector to develop the provision of its services while generating new products and better services. The development of information and communication technologies (ICT) has a significant impact on the business model of companies operating in the financial sector. Digital transformation leads to changing the existing business model rapidly, as well as the need to develop new processes specifically related to the use of ICT in business processes, development of new products and upgrading of existing ones (Arefjevs, et al., 2020). Fintech is gaining space in the financial world where new companies have emerged dedicated to technologies called startups that are at an early age, but have great potential for growth, they are oriented to financial solutions, and is that the sector is broad, ranging from apps that are programmed to perform specific jobs.

This is the field where banks will need to further improve by increasing the level of digitization and adoption of Fintech solutions, which may also involve mergers and acquisitions with fintech companies. Technological advancement will undoubtedly affect their business models (Laporšek et al., 2022). The main objective of financial institutions is to have a great impact so that financial services are more accessible and flexible for customers, and that the unit cost can be reduced in some services, which is why they have become a very innovative field.

Digitization and connected devices have enabled the expansion of the global financial market with an increase in banking websites and companies dedicated to digital payments, online lending and crowdfunding, online brokers and wire transfers (Abad-Segura et al. 2020).

The motivation for the emergence of Fintech is that while information technology has made everything from computers to automobiles cheaper and more functional, the unit cost of financial intermediation has apparently not changed much (Philippon, 2015).

From online applications to personal finance management, the goal is to provide financial services to a larger number of customers, in this sense Orozco and Vélez (2019) indicate that Fintechs can be understood as startups that have arrived to encourage change in the behavior not only of financial consumers but also of companies in the country with respect to the different operations they perform, it is clear that within these operations that can be performed are from requesting loans, making transfers, making payments and many more services that can be streamlined with the use of technology. This stage is also driven by the growing massification and public confidence in high-tech companies and the decreasing confidence in conventional banks (Monroy, 2022).

And another technology that worked as a cryptographically secured blockchain, but that despite having existed for a long time took its importance from 2008, when it became popular due to the birth of the virtual currency bitcoin, is the so-called blockchain, which allows the storage of large amounts of data and operate the resources of customers. Applying blockchain to a given area usually implies disruption, a change in the way of doing things, a change of mentality, so its use goes beyond a mere incremental evolution (García-Pastor et al., 2021).



Fintech technology allows online transactions to be carried out without the need for direct intervention of bank personnel, which is why Fintech companies have gained great importance because they are organizations that use the latest developments in their activities in the field of mobile payments, online loans, instant digital money transfers and funds worldwide without the need for the presence of the customer, which reduces costs and allows offering financial products on the most favorable terms.

As competition in the banking sector increases, business models have to be updated, leaving behind traditional banks and moving on to banks with modern computer equipment and highly experienced human resources trained in the use of technology.

### **Theoretical references**

Financial institutions all over the world are classified as entities that are responsible for providing many services to customers, including money collection, transfers between different types of accounts and customers, loans, etc. The development in financial technological advancement (Fintech) has greatly enhanced the financial outreach tasks of the banking sector. Researchers refer to this advancement as the “Fintech Revolution” (Yin et al., 2022). Financial institutions are presented as any institution in charge of performing functions that are essential for channeling funds in the traditional way, without the use of technology, but the traditional financial sector is undergoing change, due to technological developments in recent years, and also due to customer demand for new services (Cornett et al., 2015).

Fintech has a great capacity to develop in the search for better services, being a contraction of two words such as “finance” and “technology”, oriented to new technology companies that have been born not so much to compete with the financial sector but to serve them as a great help in the variety of their services. Fintech arrived to completely renew financial services, becoming a leader in the provision of financial services among them by streamlining services such as mobile payments and the handling of bitcoin and in general all digital currencies. The issue of financial technologies in genere is not a new topic, but over time it has acquired new and different manifestations. Thus, without prejudice to the fact that it is an issue that is discussed and debated among regulators and in the most contemporary forums (Monroy, 2022)

The strength also lies in the use of appropriate algorithms for the construction of systems with which to model the valuation and processing of different financial services in order to meet the needs of new customers. In this sense Freedman (2006) cited by Nelson and Maeda (2019) states that Fintech describes financial technology as related to building systems to model, value, and process financial products such as bonds, stocks, contracts, and money. And that further discusses how financial systems can be considered very similar to trading systems because they are involved with the buying and selling of products in different markets and at different times through trading systems and technology, it should be clear that any financial service solution



that uses technology to serve customers cannot be considered a Fintech, it must be understood that it must provide a variety of such services, which is why startups appear, which are companies that are responsible for developing different services taking into account great innovation through the use of technology.

The startup can refer to initiatives of any economic and socio-cultural sector, it is usually closely related to the technological field, since it is a company that usually makes intensive use of scientific and technological knowledge or is directly related to the world of Internet and ICT (Montoya, 2016).

Technology generates financial innovation and also generates new business models, applications, processes, and elaborated products. Fintech has a significant impact on the financial market, financial institutions and the way financial services are provided (Han, 2020). Fintechs complement the platforms for the commercialization of different financial services, allowing them to be seen as tools that will help generate competitive advantages for the entities that provide these services.

Innovative solutions provided by FinTechs result in support for the achievement of objectives, process improvement, and user experience with a value-added service through multiple alternatives, such as payment channels given through virtual platforms (Medina and León, 2019). This mix of finance and technology has had a long and storied history, which in its latter part has allowed it to increase due to causes such as large investments, the change in the lives of large customers and the value being placed on time, Britto and Castro (2019) citing Arner, Barberis and Buckley (2015). In addition to indicating that Fintech refers to financial solutions strengthened by technology, they confirm that there are three events in the history of Fintech: the first relates the connection that has existed between finance and technology throughout history.

Secondly, it points out that the financial services industry has been the main consumer of information technology services and products worldwide, and that these business models are not a recent trend; and finally, the authors state that the term Fintech covers all the products and services offered by the traditional financial sector industry, i.e., it is not confined to specific sectors. With the emergence of the fintech sector, the need to strengthen risk management has arisen, so there is an increase in the development and application of reliable business processes that allow changing management processes, taking into account the emergence of new technologies, of course complying with the requirements of international standards because customer data protection must be taken into account, there is bound to be a great deal of competition among financial institutions, even in the conclusion of agreements with fintech companies, specifying the responsibilities of each party, the agreed service levels and audit rights.

Risk mitigation is based on the creation of standards and regulatory supervision on the provision of financial services, regardless of whether the service is Fintech or not, including



the continuous re-evaluation of the current models of staff training and the training of tools that bring the use of new technologies.

### **Methodology**

The research is developed through the collection of statistical information on the segmentation by services and its growth in the last ten years, from direct communication with expert sources, within the sources are people who work or somehow use the financial system and the databases of the statistics of the association of Fintech companies in Colombia – colombia fintech, then the review by the researchers was carried out, to arrive at the analysis of the information, and finally the review of cases raised on the development that Fintech has had in recent years, with this analysis the conclusions and recommendations were raised.

In the first part, Fintech was defined taking into account a general description of the financial services currently provided by financial institutions, performing an analysis by means of matrices to identify the main factors when implementing Fintech algorithms, the factors are weighted in order to simulate scenarios with which to evaluate the impact of Fintech on the financial sector, and then an analysis of the evolution of financial services was carried out. Thus, the research was designed as a field research, since a survey was carried out among banking sector officials.

### **Results and discussion**

The results show that an average of 75% of bank customers make their transactions through virtual media using cell phones or virtual platforms in general, this is due to the development of Fintech algorithms, making an analysis of banking at the level of more than 20 countries among which banks such as BNP Paribas, Deutsche Bank, US Bank, Citizens Bank, among many others, stand out, the investment in mobile solutions for its 100% virtual clients and for the native enabling of different financial transactions is recognized, and it is also proven that Fintech has been growing rapidly in Colombia, having around 130 ventures that are associated with Fintech, according to information provided by the Superintendencia Financiera (2018), this has contributed to the country ranking third at the Latin American level, being behind only Mexico and Brazil.

### **Fintech segmentation in Colombia**

The Colombia Fintech guild indicates that in Colombia there are 322 companies dedicated to financial innovation, distributed in nine segments, including:

Digital credit for both companies and individuals who want to take this type of credit.

Digital payments comprising payment gateways, digital wallets, digital correspondent networks, remittances and Specialized Electronic Deposit Companies.



Corporate finance comprising technology providers of electronic invoicing, factoring and confirming trading systems, third-party payment services and online portfolio management.

In addition to PFM (Personal Finance Management) & wealthtech which are financial education and planning companies, Roboadvisors and trading or investment platforms.

The regtech comprised of credit scoring, digital identity and customer knowledge (KYC), fraud prevention (AML), financial institution risk management and regulatory intelligence.

Crypto & Blockchain which are cryptoasset exchange platforms, Virtual Assets as a means of payment (crypto payments), securities or commodities, Tokens (ICOs), Blockchain As A Service for financial services, Smart Contract development services for financial sector.

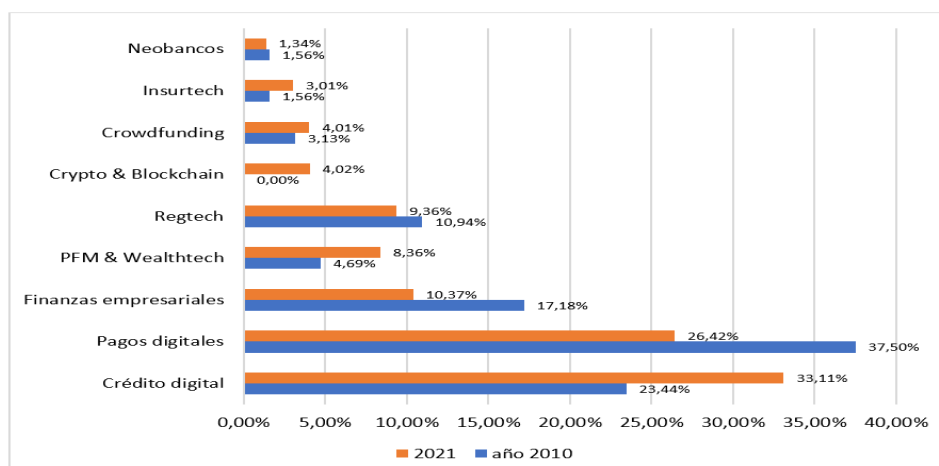
Neobanks are a new generation of financial institutions that offer banking intermediation services in a 100% digital way.

Insurtech represents the commitment to innovation and the development of new products and services within the insurance sector, including insurance comparators, digital brokers, insurance wallet apps, group insurance or P2P.

Crowdfunding is the collective cooperation and within it we have the donation crowdfunding, investment crowdfunding and equity crowdfunding.

With the information collected and according to Fintech Colombia's statistical base, Figure 1 shows the percentage variation of each of the nine segments between 2010 and May 2022, during this time there have been important changes that reflect the trend of Colombians towards digital services, also these were quite driven by the COVID-19 pandemic that occurred with a great impact during the year 2020.

**Figure 1. Percentage variation over a decade of Fintech segmentation in Colombia.**



Source: authors compilation



Taking into account the statements of grupobancolombia (2018), it can be inferred Colombia Fintech was created as an aggregation that initially had about seventy companies in the sector, which sought to generate spaces of great collaboration not only among these Fintechs, but also with the government and all financial institutions so that the sector will begin to have a greater development, for this, it was urgently required that the country will have a normative or a framework law so that all efforts will be concentrated.

Table 1.

Risks and opportunities derived from Fintech

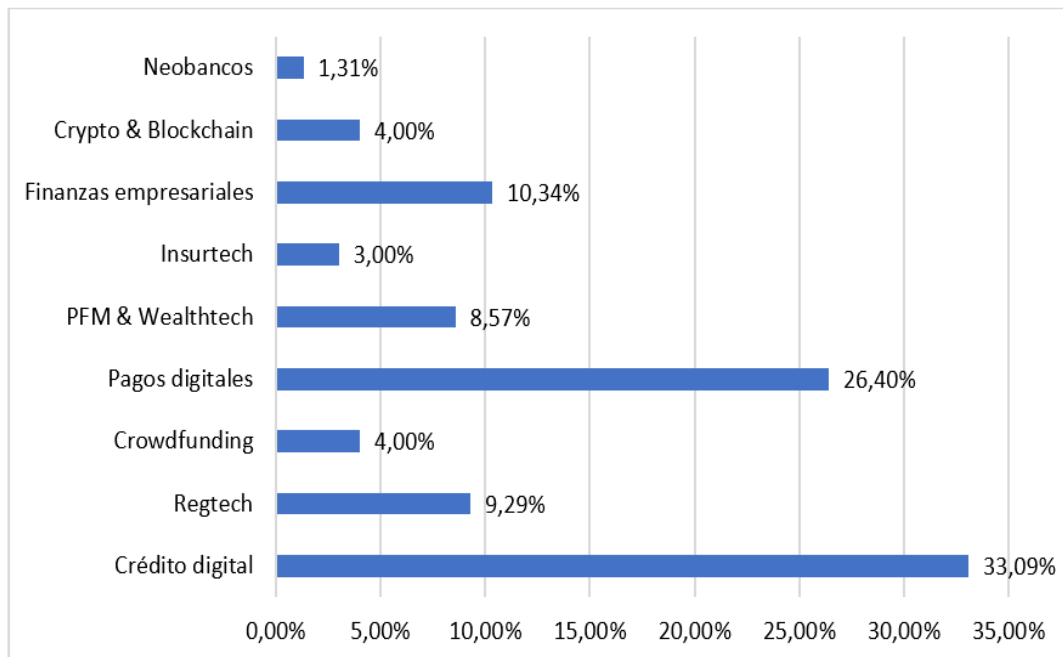
Spheres of influence	Risks exposed	Theme
Customers	Confidentiality and security of data; lack of continuity in banking processes; unacceptable marketing practices	Financial inclusion: providing more specialized financial services; decreasing transaction costs; speeding up banking processes.
Banking entities	Strategic and profitability risks; increased linkages between the parties; high operational risk; management risks with third parties; compliance risks, data protection and regulation failures; drug financing risk: money laundering; liquidity risk and volatility of the source of financing banks.	Improvement and efficiency in financial processes; innovation in the use of data for marketing and risk management purposes; positive impact on financial stability.

Source: Authors' analysis and compilation.

Although there are risks in financial services that can be generated by the emergence of Fintech, these are divided into strategic risks, operational risks, footsourcing risks, cyber risks and compliance risks. Strategic risks are those generated by income and capital derived from incorrect management decisions and inadequate implementation of decision making. Footsourcing risks are generally generated by the disruption of the flow of services between the financial institution and customers in outsourcing processes, and it is that high operational risk is associated with the implementation of business functions by financial institutions, including for example fraud risks (Alpatova, 2019). According to Fintech Colombia (2022), in Colombia there are around 322 companies classified as fintech, which generates more than 9,300 jobs in this sector, leading to 76% of the active digital population in Colombia using Fintech solutions.



**Figure 2. Percentages of companies offering Fintech service.**



Source: Fintech Colombia

Making use of Fintech increases the complexity of the entire financial system, because new elements are introduced that may increase the IT risk, due to the fact that financial systems outside the technological development may not be sufficiently adapted to the financial development, therefore it is convenient to seek the support of Fintech startups, in order to increase the complexity and transparency of financial operations by customers. Latin America and the Caribbean have become a strong territory for fintech, entrepreneurship and innovation. There are currently 2,482 platforms and they are distributed in Brazil, where 31% of the total is located, followed by Mexico with 21%, Colombia with 11%, Argentina which has another 11% and Chile with 7% (REDACCIÓN TECNÓSFERA , 2022).

Table 2.

Distribution of Fintech companies in Latin America 2021

Country	Companies number	Percentage
Brazil	771	31,68%
Mexico	512	21,04%



Colombia	279	11,46%
Argentina	276	11,34%
Chile	179	7,35%
Peru	123	5,05%
Ecuador	62	2,55%
Dominican Republic	55	2,26%
Costa Rica	44	1,81%
Uruguay	32	1,31%
Honduras	25	1,03%
Panama	16	0,66%
Venezuela	15	0,62%
Salvador	14	0,58%
Paraguay	16	0,66%
Bolivia	10	0,41%
Nicaragua	5	0,21%

Source: REDACCIÓN TECNÓSFERA, 2022

In order to respond to the research, an analysis of the impact that Fintech can have on banking services was carried out, a process of gathering and analyzing information was completed, which led to the final results. Currently Fintech companies have been growing in a high percentage and always in two strong groups, the new Fintech oriented ventures that seek to provide specific solutions becoming new startups, and on the other hand the group of technology companies that have been consolidated for many years in the market, which offer a much broader portfolio of services, as Gallardo (2019) indicates that not only should a variety of portfolios be offered, but it is also very important to change the paradigms of clients regarding IT risk.

The government of the Republic of Colombia should promote Fintech in the country, through a prompt regulation that facilitates the implementation of this type of technology, either by supporting companies that day by day are implementing new systems to facilitate the use of different banking services by users that every day are increasing by the ease with which they can be used without the need to move to the bank.

### Conclusions and recommendations

For now, the impact of fintech on the financial sector seems to be minimal, but with the creation of a large number of fintech startups, financial institutions should look at the changes that are being generated, and for some reason their growth has been occurring in high percentages, they



still have time to react so as not to be taken advantage of by financial institutions that have been using technology to offer their financial services for some time now, the importance lies in the fact that Fintech is transforming the way in which financial services are offered, changing the use of time and the place where financial services and products are provided.

The development of Fintech has facilitated the growth of companies and individuals that make greater use of the new segments into which Fintech has been divided in Colombia. If it is not regulated by the Financial Superintendency, it will generate many problems for all the entities that make up the financial system in Colombia, it is urgent that such regulations be created, which should be aimed at guaranteeing the stability and security of the financial system, while at the same time taking into account that they should not limit innovation.

Work must also be done on eliminating the risks of financial technology so that there can be great confidence on the part of customers, it is urgent that these changes are carried out, driven by the government, because otherwise in relation to Fintech, this could generate a backwardness that could take away the third place in Latin America and recovering it could be more difficult because other countries are working on these regulations.

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