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عنوان المداخلة

Digital experience for consumer in the financial Industry

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Abstract :

The financial services sector is experiencing a digital transformation due to global innovations and developments in digital technology. This transformation is transforming business models and customer value delivery. The study aims to understand the digital consumer experience in the financial industry in light of this digital transformation.

The study reveals that digital transformation has altered financial consumer behavior and preferences, with FinTech companies enhancing the digital financial experience. However, this has raised risks of fraud and cybersecurity for consumers and public policies. The study recommends financial sector reforms and regulatory mechanisms to safeguard digital consumer interests.

Keywords: Financial consumer - Digital financial services - FinTech - Cyber security

الملخص:

في ظل الابتكارات والتطورات العديدة في مجال التكنولوجيا الرقمية التي حولت نماذج الأعمال في جميع أنحاء العالم، يشهد قطاع الخدمات المالية تحولًا رقميًا يؤدي إلى تغيير طريقة التشغيل وطرق تقديم القيمة للعملاء، تكمن أهمية هذه الدراسة في معرفة تجربة المستهلك الرقمية في مجال الصناعة المالية في ظل التحول الرقمي.

توصلت الدراسة إلى أن التحول الرقمي قام بتغيير سلوك المستهلك المالي وتفضيلاته، كما قامت شركات التكنولوجيا المالية عن طريق خدماتها المبتكرة بتعزيز تجربة المستهلك المالي الرقمية بصورة كبيرة، غير أنها قامت بزيادة مخاطر الاحتيال و«الأمن السيبراني» للمستهلكين من ناحية أخرى، وعلى السياسات العامة والسلطات المالية تنفيذ الإصلاحات والآليات التنظيمية في القطاع المالي لحماية مصالح المستهلكين الرقميين.

الكلمات المفتاحية: المستهلك المالي ـ الخدمات المالية الرقمية ـ التكنولوجيا المالية ـ الأمن السيبراني

Introduction:

The traditional industry globally is undergoing rapid change as a result of the digital transformation (Mchkour & Abriane, November 2-5, 2020, p. 497), which is propelled by continually evolving technology and relies on human-machine interaction in what is known as Industry 4.0 which refers to the Fourth Industrial Revolution. A component of this revolution is manufacturing technology. This group includes technologies such as artificial intelligence (AI), cyber-physical systems (CPS), and the Internet of Things (IoT) (Banitaan, Al-refai, Almatarneh, & Alquran, 2023, p. 23).

In light of the numerous innovations and developments in the field of digital technology that have transformed business models worldwide, financial institutions and banks had to adopt modern technologies in order to keep up with the intense competition and increase profitability. At the same time, they had to improve the quality of service and product they offered to financial customers, whose needs and preferences have changed over time. thus, Digital transformation is required to attract new clients and increase the loyalty of existing ones.

Decision-makers in the financial sector face great challenges with customers whose expectations have increased and whose behavior has changed dramatically. It has become difficult to satisfy them, as it is no longer enough to provide high-quality products and excellent service. Rather, it has become necessary to keep up with the changing nature of customer.

The main focus of this study, as stated above, is how was the customer's digital experience in the financial industry?

The significance of the study lies in examining the factors that have influenced financial consumer behavior and preferences, as well as understanding the role of financial technology companies in improving the digital consumer experience, and, finally, understanding the cyber risks to which the digital financial consumer is exposed and the most important regulatory mechanisms that must be implemented to safeguard him.

1. New consumer, new expectations in light of digital transformation:

The financial services industry, like many others, is currently going through a digital revolution that is altering how it operates and provides value to customers (Knihová, 2020). One of the most fundamental elements that caused a significant shift in financial consumer habits was the rapid rise in Internet access. The percentage of people using the internet globally as of 2023 was 67%. Ninety-one percent of people in Europe said they used the internet. The Commonwealth of Independent States (CIS), which 84% of people utilize the internet, was the second-most connected area. With only 37% of people using the internet, Africa had the lowest percentage (Statista, 2024).

The Internet provides a vast opportunity for financial consumers to compare all types of services and share their experiences as customers of various financial institutions, particularly in industries such as insurance, telecommunications, and financial services. On the other hand, Customers can examine account balances, holdings, and the most recent bank statements on simple transaction websites. Customers can also enjoy additional benefits by using the system to initiate online transactions such as payments or money transfers between accounts. These cutting-edge websites allow users to view credit card balances, make payments, and apply for loans and mortgages. The Internet has given financial consumers more control and accelerated smooth operation in their favor. Customers now have greater power! They can request services whenever they want and have complete access to information.

The adoption of mobile devices is another significant aspect that has contributed to a shift in financial consumer choices. Globally, there were about 15 billion mobile devices in use in 2021 compared to slightly more than 14 billion the year before. It is anticipated that there will be 18.22 billion mobile devices by 2025, a rise of 4.2 billion over 2020 levels (Statista, 2023). a 2021 government survey found that mobile banking was the most common way consumers accessed their bank accounts, and online banking was another popular option—43.5% of consumers reported mobile banking and 22% reported online banking as their primary method to access their bank accounts (Cooper, Scott, & Tierno, 2023, p. 02).

According to the State of Mobile 2023 report, mobile applications are the primary indicator of changing consumer habits more than ever before. In 2022, the use of mobile apps expanded significantly across prominent sub-genres such as personal loans, digital wallets and payments, and mobile banking. This is consistent with the trend of mobile use, which began to accelerate around the beginning of the pandemic in 2020 (ROLFE, 2023), South Korea has the highest mobile banking penetration in 2023, with 82% of respondents using smartphones or tablets for banking. Japan has the highest online banking penetration, with 62% using PCs or laptops. European countries like Switzerland, Poland, Netherlands, and France have high online banking penetration, while Asia and Latin America have higher mobile banking penetration (Statista, 2024). mobile banking has completely changed the landscape for financial institutions. Due to its security, Mobile banking gave the customers the opportunities to do the banking transactions anywhere and anytime through their mobile devices (Cabral, Ravikumar, Abbaraju, & Cedro, 2023, p. 590).

With the rapid expansion in internet access and the usage of mobile devices, digital financial customer has emerged, and its expectations have risen, it is higher than ever. Consumers increasingly demand financial services to be easily available from any location, as well as fast, engaging, and user-friendly. New demands in the financial sector are being driven by technological advancements and rising customer expectations (Mchkour & Abriane, November 2-5, 2020, p. 502). Consumer behavior is a dynamic and rapidly changing, particularly among digital consumers, Some key features that define digital consumers are the following (Barragán Quintero & Barragán Quintero, 2024, p. 37):

- **Digital consumers are increasingly satisfied with the medium:** The user demographic primarily consists of young people, who tend to use the medium more frequently and efficiently as they feel comfortable with it.
- **They want it all and want it now:** Digital consumers prioritize time and relevance, requiring qualities like "scannability" and "instant gratification" to achieve positive results from multiple sources simultaneously and on demand.
- **The consumer is in control:** The web's user-centric, trust-building, permission-based market must offer a real value proposition to appeal to digital consumers, ensuring positive results.
- **The digital consumer is fickle:** The transparency and immediacy of the internet can weaken vendor loyalty as consumers can easily compare competing names and brands.
- **Digital consumers are vocal**: Online consumers communicate experiences, allowing companies to better understand customer feedback and improve service quality.

Digitalization has changed how financial consumers access their finances and connect with those who provide services. In the post-Covid era, 57% of adults in developing nations now make or receive digital payments (a 23% rise from 2014), while two-thirds of adults worldwide utilize digital payments. In people's daily lives, this means faster transactions, better availability to vital products, and less travel time to withdraw and pay in cash (Consumers International, 2023). The Covid-19 pandemic has significantly impacted people, markets, and financial institutions, challenging previous economic expectations and shifting consumer expectations. A recent study by MX of 1,000 US consumers on what financial consumers want and expect from financial service providers (MX Technologies Inc, 2023):

- **Better Money Management:** Connect outside financial accounts so they can see all financial data in one place, Integration with digital wallets like Apple Pay or Google

Pay, connect outside financial accounts so they can see all financial data in one place, Order a personalized card, Open new accounts online.

- **Better Security and Control:** Ability to download financial data, required multi-factor authentication, Ability to restrict transactions above a specific amount, Ability to see and control who has access to your financial data, Ability to get emails on transactions made, Biometric login options.
- **Better Financial Wellness :** Automated insights created based on financial data, Automatic savings options, such as rounding up to the nearest dollar on purchases and depositing in savings, Automated categorization of transactions to help understand where money is going, Educational programs to teach you how to become financially strong, Predictive insights on what your account balance will be on a future data based on spending habits, Personalized recommendations on where you can make changes to improve finances, Automated categorization of transactions to help understand where money is going.
- **Better Data Ownership:** Digital financial customers (89%) strongly believe that they own their financial data and should be able to choose who gets access to it. While this is true, more than half of customers (55%) believe that they don't know what companies or providers have access to their financial data.

2. FinTech; the impact on financial consumer:

FinTech refers to technological innovations used in the financial industry to design and provide a wide range of innovative daily financial services, primarily in the areas of online and mobile payment services, digital currencies, investment advice, lending, wealth management, risk management, and insurance operations. The expansion of this new type of investment has become one of the most significant events that have altered the global financial sector. FinTech companies have begun to transform the way financial services are managed, thus the three most essential criteria in their success and superiority are:

- FinTech companies focus more on customers by inventing and building models that narrow the gap between customer satisfaction and expectations, as the services given are easy. Transparency; ease of attracting clients; ease of distribution, commercial attractiveness (Omarini, 2017, p. 03).
- FinTech companies have mostly focused on cannibalizing banking by providing specialist products and services with a heavy emphasis on customer experience.
- FinTech companies rely on innovation in providing financial services by adopting modern technological technologies such as blockchain, cloud computing, artificial

intelligence, which results in reducing financial intermediation costs and improving products for consumers (Innovating technologies are in fact a cornerstone of fintech services)

FinTech companies have founded their business models in the applicability of technology as an integral part of consumer's experience and services (Barragán Quintero & Barragán Quintero, 2024, p. 42). The KPMG global survey revealed that 43% of respondents prioritized enhancing customer experience as their top strategic goal, making it the most frequently cited strategy objective among fintech firms, and 92% of FinTech leaders cited customer-centric strategies as a top or high priority (KPMG, October 2023, p. 05). Internet access, mobile technology, electronic payment improvements, alternative data, and artificial intelligence (AI) have been used to create new FinTech products for consumers. Some recent consumer FinTech products include peer-to-peer (P2P) payments, digital wallets, consumer data aggregation services, marketplace lending, and "buy now, pay later" (BNPL) financing (Cooper, Scott, & Tierno, 2023, p. 02).

FinTech is changing the way consumers interact with and obtain financial services, and its impact is visible through (Bates, July 2017, p. 06):

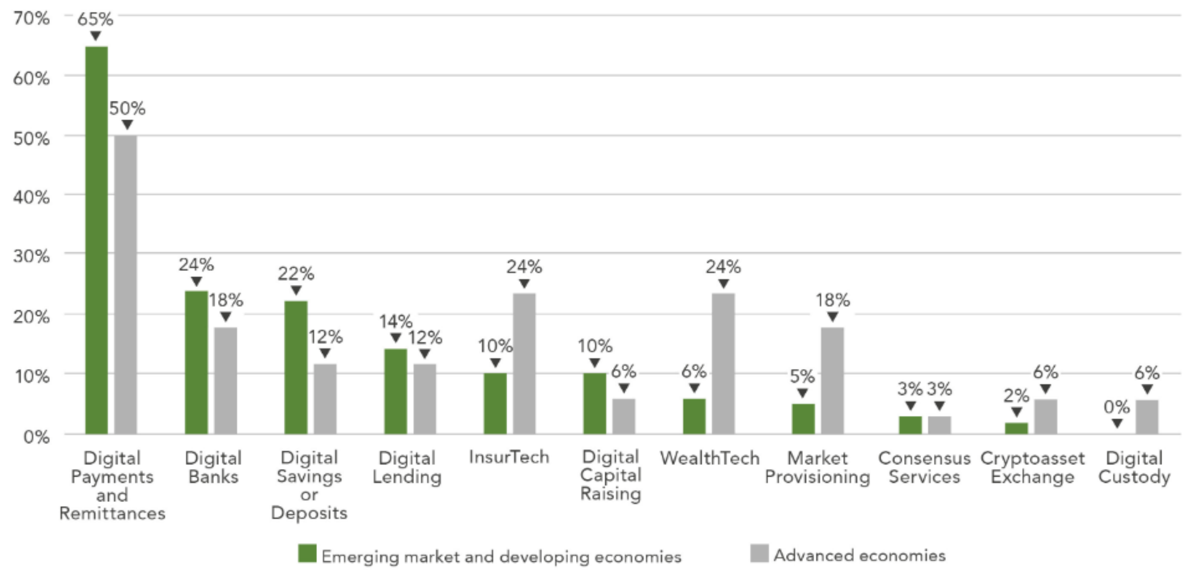
- Enabling access to financial services (financial inclusion)
- Where and how consumers interface with financial services (channel shift)
- The providers and institutions consumers develop
- financial services relationships with (beyond banks)
- The means by which consumers make (or receive) payments when engaging in transactions
- Whether consumers can make payment using an alternative cryptocurrency in place of orthodox legal tender
- Consumers' own awareness of their financial behaviors and wellbeing

Adoption of FinTech services has moved steadily upward, from 16% in 2015, to 33% in 2017, to 64% in 2019. Awareness of FinTech, even among nonadopters, is now very high. Worldwide, for example, 96% of consumers know of at least one alternative FinTech service available to help them transfer money and make payments (EY, 2019, p. 06).

On the other hand, the COVID-19 pandemic has further accelerated the widespread transition of consumers to digital financial services and FinTech (World Bank , 2022, p. 05), a World Economic Forum study, which includes responses from 118 central banks and other financial regulatory authorities from 114 jurisdictions around the world, there has been a strong increase in the use or introduction of many FinTech products and services since the pandemic covid 19 (World Economic Forum, 2020). When the pandemic began, the usage of digital wallets surged to 83% and pundits project the industry will be worth over $10 trillion a year by 2025. Moreover, 2020 saw over 779 billion digital transactions worldwide, which is expected to grow 13% in the coming years (Gilbert, 2024).Over the forecast period until 2028, The number of digital payments users is forecast to grow gradually, reaching 4.81 billion in 2028. According to Statista Market Insights, all other segments of fintech are forecast to increase their user base as well (Statista, 2024).

There is a growing view that a single proposition financial services offering by a FinTech company will come to replace traditional banking, a US study indicates that half of millennials anticipate fintech companies to disrupt traditional banking services, and about 75% of that consumer group would be more interested in receiving financial services from big companies such as Google, Amazon than they would from banks (Barragán Quintero & Barragán Quintero, 2024, p. 36).

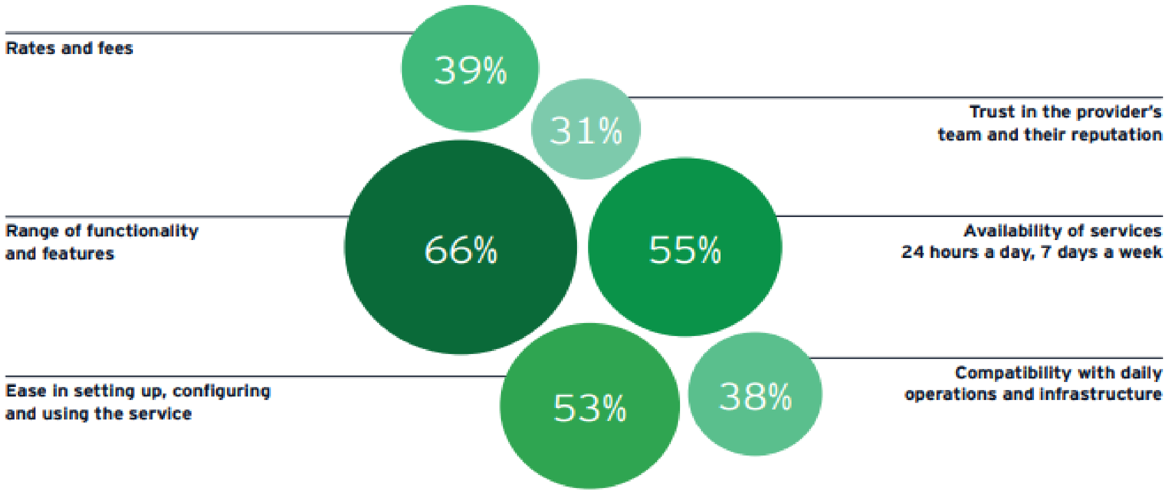
Figure 01: the adoption of FinTech services after the Covid 19



Source: (World Economic Forum, 2020)

EY (2019) highlights the reasons people choose FinTech services over traditional banks, citing factors such as cost, provider reputation, availability, functionality, ease of application, and infrastructure compatibility. The study found that the wide range of services offered by FinTech firms is the most important factor, with 66% of consumers choosing them over banks. The 24/7 availability of FinTech services is also crucial, and the ease of use and connection with FinTech services is also a significant factor.

Figure 02 : Top reasons for using FinTech globally



Source: (EY, 2019, p. 23)

In addition to bringing new financial goods and services to the market, FinTech companies and services have also altered consumer financial behavior. FinTech adoption has had a substantial impact on financial behavior, including borrowing, saving, investing, and spending. According to certain research, FinTech for mobile transfers and payments has the ability to reduce household consumption shocks and boost savings. Consumers' payment and consumption habits have changed and will continue to change as a result of FinTech (Appiah, 2023, p. 72).

3. Cyber risk targeting digital financial services:

While the digital industrial revolution (Industry 4.0) has driven innovative financial services based on digital data infrastructures, it has intensified the "cyber security" that is, according to World Economic Forum, one of the biggest challenges for regulators and financial institutions to protect consumers from various forms of cyber-attacks. According to a Google report, cyber-attacks have been on the rise in recent years in the financial sector with a 300% increase in 2022.

3.1. Man-In-The-Middle-Attack (MITM)

Because digital financial services revolve around the collection, storage, processing and exchange of consumption data by various players in the ecosystem, consumers are obviously exposed to the risk of disclosure and violation of confidential data. This attack takes the form of an attacker positioning himself in the middle a communication by exploiting low web protocols inserting themselves between entities to steal data (Mallik, Oktober 2018, p. 109).

3.2. Phishing Attacks

Phishing Attacks is a fraudulent practice used by criminals to pesticide users to disclosing confidential information (username, password, credit card number, etc.) or perform actions, which can compromise the network and producing a data loss by sending fake emails, instant messaging and websites. It considers the most successful form of confidential information acquisition on the Internet, accounting for 91% of attacks (Groupement de gendarmerie départementale de la Vienne) whose financial services sector is the most targeted with 47% growth in the second quarter of 2022 (Akamai, 2022, p. 28).

In February 2022, more than 100 banking and financial applications were severely affected by the new malware «Xenomorph» in the world. It was installing on Android smartphones via phishing attacks. When its victims click on a link for a security update on their banking application, cybercriminals recover their banking information and then empty their bank accounts.

3.3. Pharming Attacks

Pharming or DNS poisoning, is a sophisticated and more advanced version of phishing aimed to steal personal data of customers of a bank by creating extremely similar cloned banking interfaces to redirect traffic from one website to another fake by installing a malware on the victim's computer to access it.

3.4. Ransomware

Ransomware is a subset of malware including viruses and worms. It is may be seen as attempt at embezzlement, by preventing a financial entity from accessing its data to extort the maximum amount of money from its customers. The current estimate would put ransom demands to an average 170,000 dollars, according to Group-IB, whose highest payment, 40 million dollars paid to Phoenix Locker in 2021 by CNA Financial (Kubovič, Août 2021, p. 3).

3.5. Distributed denial of service Attacks (DDoS)

The use of banking and financial applications multiplied after the COVID-19 pandemic and currently have remains an important element for financial services. As a result, they have become a new attack surface for cybercriminals. DDoS attacks aim to disrupt financial institutions' online services, websites or network infrastructure by overwhelming them with a massive amount of malware requests or data. The server is full. Users cannot access useful resources from the affected site. The activity of the institution is paralyzed, which can result a significant financial losses.

All of the above-mentioned attacks can have disastrous consequences disrupting online activities and causing considerable financial losses. An IMF report on the potential losses of cyber-attacks in the financial sector estimates the amount of nearly 9% of the global net profit of banks, or 100 billion dollars (Centre des Professions Financières, Mai 2023, p. 14).

Faced with this dilemma, it is important that regulators and financial institutions invest in cutting-edge cyber security solutions and keep up to date their infrastructure to prevent, identify and combat cyber-attacks.

4. The general frameworks of digital financial consumer protection:

The concept of «digital financial consumer protection» means the laws, policies and institutions constituting the legislative, regulatory, legal, institutional and prudential that protects consumers from the likely risks of using digital financial products and services by assuring fair and responsible treatment in the financial institutions and markets. These are all financial products and services performed online, such as, money transfer, payment, opening a bank account, underwriting of loan, etc.

The implementation of an adequate legal, institutional and prudential framework plays a key role in building and maintaining trust in digital financial services and the financial system, as well as preserving financial stability. It also helps digital financial inclusion translate into equitable growth by enabling consumers to use appropriate products that contribute to their well-being.

4.1. The legal and regulatory framework

The legal, regulatory and legislative framework refers to all constitutional, legislative and management rules, as well as regulatory provisions and jurisprudential principles governing banking and financial operations to protect financial consumers. According to (World Bank, 2017, p. 8), it should include at least the following dimensions:

a) Disclosure and transparency to provide consumers with the information necessary to understand the features, benefits, risks and all conditions of the digital financial environment and their products and services; as well as defining a framework for information sharing between institutions.

b) Fair treatment and responsible business management that relate to the promotion of business practices that work in the best interests of consumers, measures addressed to ensure fair treatment and appropriate disclosure of information, formal conflict of interest policies to detect potential conflicts more easily. As well as initiatives to combat, abusive terms loans by digital credit providers, with the setting of interest ceilings and innovative interest rate regimes (for example, incentive to settlement, falling of future interest rates, etc.) ((AFI), 2021, p. 5).

c) Data protection and confidentiality which aims primarily to protect consumers' privacy by ensuring that their personal or professional data is collected and used only for the purposes authorized by law and by consumers- themselves; what really can enable them to control the access and use of their data.

In this sense, the EU, has been adopted since 2018 the GDPR regulation, which is part of the Union’s data protection reform and aims to make Europe fit for the digital age. This reform will allow people to regain control of their personal data. Currently, it is working with USA United States towards the refining of the Privacy Shield for its adequacy to GDPR (World Bank Group, April 2022, p. 14).

d) Efficient resolution of disputes, which aims to provide a dispute and complaints resolution mechanism to consumers who have suffered harm, offering them digital financial services arrangements in the regulatory directives on consumer complaints and dispute; internal and external dispute resolution mechanisms; Cooperate on claims and appeals processing. As well as, adopting a technology for claims management, such as a chat window, interactive videos, etc. ((AFI), 2021, p. 6) .

4.2. The institutional framework

The institutional framework is relative to the implementation of supervisory bodies with appropriate powers and resources to carry out the mission.. As well as, robust consumer protection mechanisms, which establish a clear supervisory governance framework for financial institutions regarding their relationships with their clients or themselves (CUTS International , 18-19 July 2022 , p. 5). This frame is based on ((AFI), 2021, p. 7):

- Promoting inter-institutional cooperation between the competent authorities responsible for the supervision of the digital financial services sector;
- The initiation of inter-institutional monitoring forums;
- Defining a framework for information sharing by establishing a common platform for data communication, standardizing the monitoring of key thematic issues in digital financial services, such as cyber security.

4.3. The prudential framework

It concerns the implementation of a risk management approach appropriate to the new models of the financial services of said «digital», in particular the strengthening of cyber security, through ((AFI), 2021, p. 5) :

a). In terms of risk management, require digital financial service providers to have internal policies and processes to protect consumers, secure service delivery, manage internal risks and ensure long-term security. In addition, define the appropriate regulatory arrangements to limit the risk of loss or abuse of the client's funds.

b). In terms of cyber security, foster cooperation between the stakeholders concerned by the cybersecurity issue, should launch campaigns to raise awareness among consumers, require digital financial service providers to submit regular cybersecurity incident reports, and work towards a framework for cooperation with regulators and external controllers on non-resident digital financial service providers.

Indeed, although the current regulation has imposed consumer protection rules applicable to the financial sector in the broad sense, the specificities of digital financial services require appropriate reforms or adaptations to that in force, to reflect their growing role in the financial system.

Conclusion:

Over the past decade, technological developments have made digital transformation an essential requirement for all economic sectors, including financial services. This digital revolution, characterized by advanced technologies and innovative service providers such as FinTech, has changed consumer preferences and habits, transforming the traditional consumer into a digital financial consumer.

Fintech firms have the potential to significantly change the financial sector landscape by providing innovative products and services that respond to consumer's needs for trust, speed, low cost and security. FinTech companies have built their business models on the possibility of applying technology as an integral part of the consumer experience and services, their innovative services have changed consumer financial behavior too.

While presenting innovative financial solutions, FinTech have also contributed to increasing the risks of fraud and «cyber security» for consumers. In particular, with regard to digital financial services-based fraud (mobile app fraud, cryptocurrency fraud, etc.), data abuse, data breaches, information asymmetry, over-indebtedness for digital credit, etc.

All of these risks are currently related to the issue of "digital financial consumer protection". The financial scandals relating to digital fraud recorded since the development these trend have shown that there is no real protection for consumers, specifically for digital financial products and services, which requires raising this issue through public policies and financial authorities, by implementing reforms and regulatory mechanisms in the financial sector, effective governance and oversight to protect consumer interests.

Finally, Consumer preferences and expectations will continue to shift as they are exposed to better financial products and services, or simply to innovations in technology that can be used to the financial services industry (Barragán Quintero & Barragán Quintero, 2024, p. 50).

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