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Emergence of Fintech in the Financial Landscape: Stakes of Fintech and Competition with Traditional Banks

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Abstract: The purpose of this paper is to empirically study the stakes of Fintech and competition with traditional banks. Through interviews with 18 specialists working in various fintechs, the empirical results show that most of the fintechs elaborate on their in-house technology available via an online customizable platform, while other functionalities considered as out of the core Fintech activities are developed via external outsourcing. Fintechs face significant systemic challenges, including an evolving regulatory framework that can constrain ambitions and the need for rigorous compliance processes. Protecting personal data against hackers is also vital for these start-ups. The paper further shows that banks are not fundamentally threatened by fintech, given their essential role in the economy, especially credit intermediation. The relationship between the two appears more cooperative than competitive, with growing momentum for banks to acquire fintechs to accelerate digitalization and foster innovation. The scientific novelty lies in framing dual tech as a common operating pattern and showing that banks and fintechs are complementary through partnerships and acquisitions.

Keywords: fintech, traditional banks, competition, digitalization, financial innovation

1. Introduction

"Financial institutions must be able to deliver an easy-to-navigate, seamless digital platform that goes far beyond a miniaturized online banking offer," asserts Jim Marous, publisher of Digital Banking Report. Indeed, traditional banks today appear increasingly challenged by emerging players utilizing innovative technologies within financial services. These fintech companies cater to evolving customer requirements, embrace the digital revolution, optimize financial returns, and deepen customer insights [1, 2]. Fintech, broadly defined, represents a dynamic intersection of finance and technology where start-ups and new market entrants reshape traditional financial services [3]. Over the past decade, fintech's presence in the financial and banking sectors has grown exponentially. This prominence is attributed partly to a shift in consumer preferences toward digital and mobile banking solutions, reflecting broader societal digitalization trends. Additionally, fintech firms' agility and innovation allow rapid responses to market demands, contrasting with traditional banks' slower adaptation cycles.

The catalyst for fintech's accelerated growth was significantly influenced by the 2007–2008 global financial crisis, recognized as the most severe banking crisis since the Great Depression. This event profoundly affected global economies, causing unprecedented reductions in output and wealth, with costs surpassing $22 trillion for the US economy alone [4]. The crisis eroded public trust in traditional banking systems, creating opportunities for fintech companies to introduce alternative financial solutions and new business models, positioning themselves as innovative and customer-centric providers [5].

While fintech offers substantial benefits by fostering more efficient, reliable, and accessible customer ecosystems, its rapid growth introduces critical regulatory challenges. Regulators globally increasingly scrutinize fintech operations, focusing on potential systemic risks to consumers, businesses, and the broader financial ecosystem [6, 7]. Robust regulation is necessary to maintain the integrity and stability of monetary systems, ensure secure transaction settlements, and mitigate risks, especially those associated with emerging technologies such as cryptocurrencies and decentralized finance [8, 9].

Despite these regulatory complexities, fintech continues to drive financial innovation, significantly reshaping industry dynamics. Traditional banks, previously secure in their dominant market positions, now face substantial pressure to innovate and digitalize rapidly to compete effectively. Thus, understanding the interplay between fintech and incumbent banks, their strategies, challenges, and regulatory environments becomes increasingly essential.

Consequently, this research addresses specific, focused subquestions: How are fintech companies leveraging advanced technologies within finance? What primary challenges do fintech firms face to sustain rapid growth? How do traditional banks strategically respond to fintech's disruptive emergence, and what future scenarios can be envisaged? More broadly, this paper investigates the extent to

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which emerging financial players, offering innovative technological solutions, have altered the financial industry's landscape.

The remainder of this paper is structured clearly to address these objectives. Section 2 provides a comprehensive review of existing literature on traditional banks' strategies to bridge the digitalization gap with fintech competitors. Section 3 details our qualitative methodology, including participant selection criteria and the research design. Section 4 presents empirical findings derived from expert interviews. Section 5 discusses these results critically, interpreting their implications within the broader theoretical and practical contexts. Finally, Section 6 concludes by summarizing key insights and suggesting directions for future research.

2. Literature Review

FinTech threatens banks' market share, revenues, and models as digitalization boosts efficiency and profitability from online customers [10]. Banks respond by launching digital branches and apps—for example, ING's Yolt for money management and aggregation—while balancing reliability. Yet FinTech enables differentiation and innovation, prompting collaboration and investment rather than rivalry [2]. This disruption reflects Christensen's Innovator's Dilemma for incumbents [11] and aligns with platform-ecosystem dynamics [12]. Central bank assessments, including ECB/BIS analyses [13], highlight systemic implications and the need for robust regulation as automation raises questions about humans' roles.

2.1. Acquiring or investing in fintech to capture the value creation

To embrace the digital shift, banks have the option to acquire disruptive technological companies, improving their services and customer experience [14]. This strategy enhances understanding of customer value and creates added value [15]. Santander invested $100 million in the FinTech space through the InnoVenture funds, while Fidor Bank was acquired by the French BCPE banking group to accelerate its digital transformation, despite potential "cultural conflicts" [14].

Traditional banks acknowledge that fintechs offer valuable new features and capabilities to enhance the customer experience and reinforce their operations [16]. Acquiring established products or investing in growing companies remains the fastest strategy for banks to provide innovative services to their clients [17]. Banks plan to integrate finance management and financial planning platforms to leverage fintech solutions [18]. This approach allows traditional banks to offer tailored services to digitally savvy users without extensive R&D investment [18].

Banco Santander launched Mauro Capital in 2020 as the new brand for its Innoventures funds. This decision doubled the available funds from $200 million to $400 million due to the strong financial results of Santander Innoventures. The launch is part of a €20 billion digital and technology investment strategy over four years, aiming to enhance operational expertise, customer experience, and innovative platforms. Santander's executive chairman highlighted that their fintech venture capital fund, Innoventures, has been successful in implementing new technologies such as blockchain, improving services for customers. By increasing investment and granting greater autonomy to the fund, Santander aims to accelerate the group's digital transformation even further[1].

However, the acquisition of young fintech start-ups by banking groups can be risky, as seen in the Fidor-BPCE case. Fidor, a challenger bank established in 2009, was acquired by BPCE to strengthen its digital and online banking capabilities. However, BPCE later decided not to deploy Fidor in France as planned in 2017. This decision was driven by the opportunities presented by the Second European Payment Service Directive (PSD2), which requires banks to disclose customer interactions with other companies, including fintech [19]. This new regulation was seen as potentially burdening retail banking operations, as it allows customers to access services from other firms directly through their current accounts. Instead, BCPE Group prioritized optimizing this financial reform to accelerate the development of its digital services, foregoing the deployment of Fidor in France.

The failure of a fintech acquisition serves as a warning of the risks banks face in accelerating their technological transition. While buying or investing in fintech firms can provide access to expertise, banks are still working on the best approach to evaluate such investments [6]. According to a 2017 survey by KPMG, only 31% of respondents intending to acquire fintech firms had an accurate model for assessing opportunities. Additionally, 60% relied on their internal strategy teams for evaluation, lacking a solid due diligence procedure with an objective framework [6]. Establishing partnerships can be a suitable way for traditional banks to address their digital shortcomings.

2.2. Partnership: Rivaling through collaboration

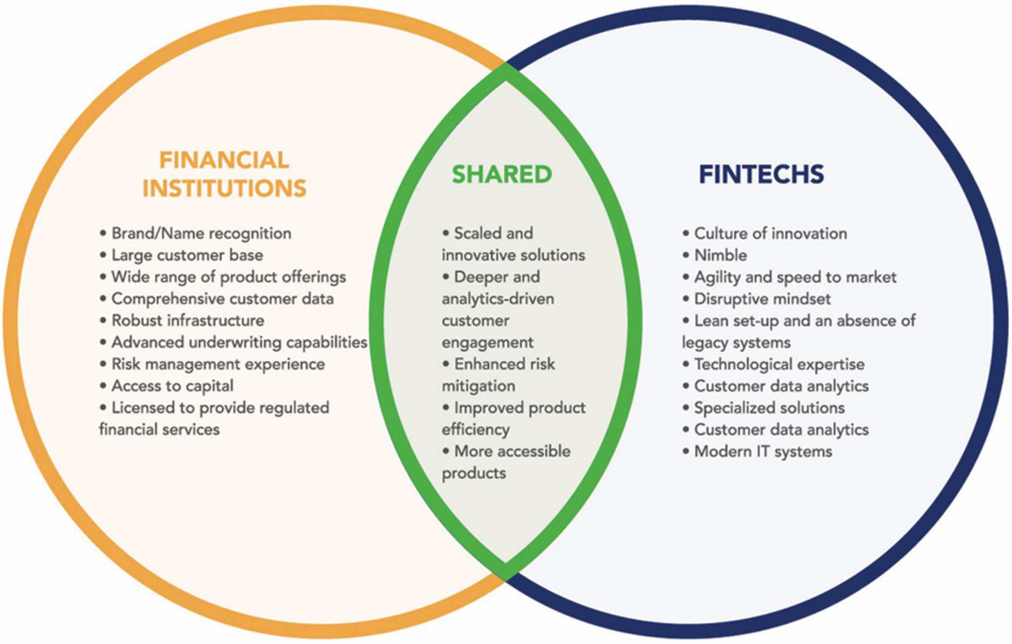
Some of the traditional banking groups often face uncertainty or resource constraints when attempting to undergo digital transformation, lacking the necessary competencies [20]. The rise of new players and the digitalization trend present significant challenges for existing financial institutions, requiring them to adapt to digital finance, cater to internet-friendly users, and embrace disruptive innovations [21]. To address these challenges, financial institutions are increasingly seeking partnerships with fintech companies that specialize in the desired digital aspects they wish to enhance [22]. These collaborations provide flexibility and expertise beyond the institutions' capabilities. Banks, insurers, and payment companies recognize that collaborating with fintech can achieve financial inclusion at a fraction of the time and resources required to develop the same technology internally [23, 24].

Legacy banks are enthusiastic about the fintech approach due to its low-risk, low-cost technology deployment and innovative techniques [25]. Collaborations between traditional banks and fintech ventures can lead to the creation of a digital bank that combines the regulatory compliance, confidence, and trust of a bank with the agility of a fintech. This partnership allows for the exchange of valuable experience and culture, with incumbents sharing their expertise while fintech companies bring entrepreneurial, innovative, and customer-oriented approaches [26]. The collaboration creates value by offering premium and interactive services to customers. Additionally, the partnership benefits both sides, with fintech companies gaining access to a large customer base provided by banks and banks being seen as trustworthy institutions investing in promising technological firms. Traditional banks also play a role in bridging the cultural and knowledge gap between fintech start-ups and regulatory entities [26], aligning with the perspective of [2].

The following figure shows that collaborations between financial institutions and fintech companies offer mutual advantages. Such partnerships enable both entities to expand their operations, access a broader customer base, strengthen their market competitiveness, and enhance the efficiency of their products [27–30].

[1] https://www.santander.com/en/press-room/press-releases/2020/09/santander-spins-out-its-fintech-venture-capital-arm-while-doubling-allocated-funds-to-400-million

Figure 1
Source report from the Center for Financial Inclusion at Accion and the Institute of International Finance



This figure (Figure 1) is referenced to illustrate mutual benefits in fintech-bank collaborations based on a report by the Center for Financial Inclusion at Accion and the Institute of International Finance. To maintain coherence without visual disruption, we provide the following textual summary: Collaboration between traditional banks and fintech firms generally yields mutual benefits such as expanded customer reach, enhanced service offerings, and strengthened competitive positions, reinforcing the complementary nature of their relationship as supported by literature.

To implement a strategic partnership that enhances customer experience and attracts new customers, References [31] and [32] suggest following a "Fintech Integration Process." The process begins with the initial contact, typically initiated by various departments within the bank but handled by the Digital Transformation and Innovation (DTI) department. The DTI analyzes the target fintech's business model to identify a specific problem it can potentially solve. The next step involves scouting and researching fintech options, utilizing sources such as Google, news, media, blogs, and fintech databases. A meeting is then arranged between relevant bank departments and the fintech, where the fintech presents its business model and solution to the bank's initial problem. The meeting record and fintech presentation are shared with the Business Committee for updates. Subsequently, the Business Committee invites the fintech for further evaluation and voting on potential collaboration. If the majority votes in favor, a technical evaluation meeting is scheduled to assess IT, compliance, and regulatory aspects. The final step is the proof-of-concept process (PoC), which involves a feasibility study and documentation of integration plans across relevant departments. Once the PoC is validated, integration can commence with all stakeholders [32].

In 2020, Spar Nord, the fifth largest bank in Denmark, successfully collaborated with Optiilo, a Danish fintech start-up. Spar Nord aims to provide personal and expert financial services and focuses on business development with a 360-degree view of the local banking environment. The partnership with Optiilo enables Spar Nord to offer intuitive mortgage and loan tracking recommendations by leveraging data from both the bank and the fintech start-up. This collaboration allows for real-time calculations and advice on refinancing mortgages. Spar Nord announced its agreement with Optiilo in early 2020 to provide the fintech's digital platform to its clients, without involving the transfer of equity. The fintech technology employed by Optiilo enables multiple partnerships simultaneously, distinguishing it from other business plans like corporate venture capital. The project has been ongoing for 1.5 years, with a solution expected to be proposed in the third quarter of 2020[2].

Collaboration between banking groups and fintechs brings certain risks that can impact operational efficiency. Cultural differences often emerge as a significant issue, leading to fragmented collaboration and conflicting decision-making. Moreover, the reputation of the banking group can be at stake if a fintech product experiences a security breach, jeopardizing customer trust and profitability. Regulatory risk is another concern, as fintech products reshape the financial industry while regulations struggle to catch up.

2.3. The place of the human in an increasingly robotic financial landscape

Machine learning, robotics, and artificial intelligence (AI) are increasingly prevalent in the financial sector, revolutionizing the way bankers and financial experts interact with clients. These technologies offer significant economic benefits, driving productivity and the development of innovative products [9] and [33]. A PwC study predicts that by 2030, they could contribute to over 14% of global GDP, approximately $15 trillion. Investment in automated portfolio management has already surged by 210% between 2014 and 2015. This automation trend is reshaping the job market, with a substantial risk of computerization for nearly half of US jobs, particularly in finance [34]. Indian banks have also experienced a 7% reduction in their workforce due to the integration of robots. Analytics and AI are already being utilized by banks for tasks such as loan

[2] https://eyfinancialservicesthoughtgallery.ie/wp-content/uploads/2019/09/ey-global-fintech-adoption-index.pdf

underwriting, challenging the necessity of certain human skills [35] and [36]. The transformative impact of these technologies extends beyond the USA, signaling a global shift in the financial industry.

Fintech's rapid advancement is prompting universities to adapt their curriculum to meet the changing demands of the financial job market. Institutions like Stanford and Georgetown University are integrating fintech courses into their MBA programs to cultivate expertise in this field.

Shestakofsky, an anthropologist, conducted research on a California-based firm that utilizes digital technologies for matching domestic service buyers and sellers. Contrary to his initial expectations, he found that the company's rapid expansion and complex computer systems actually required more human employees to observe, supervise, and interpret the data. Shestakofsky emphasized that while software automation can replace labor, it also creates new opportunities for human-machine collaboration.

The current robot-advisors used in asset or wealth management are relatively basic, despite the increasing complexity and sophistication of technologies. While their low fees are attractive, they lack the ability to comprehensively analyze customer demands or design long-term solutions. It is important to recognize that robo-advice technology is not advanced enough to fully optimize portfolio performance or provide perfect financial advice. Therefore, the human elements of the financial service experience continue to provide added value and protect financial advisors from competition with robo-advice services [37].

3. Methodology

This empirical study employs enriched, semi-structured qualitative interviews. The format, guided by thematic prompts yet flexible in sequence and wording, enabled adaptation to each interviewee, current events, and firm context; open-ended questions often surfaced insights that rendered later items redundant and allowed deeper probing of issues central to the research questions [38]. To nuance and triangulate findings, we complemented interviews with descriptive statistics and brief case extracts, reinforcing expert views with concrete evidence. We emailed more than 70 requests; 18 French fintech professionals accepted—a sample-size limitation offset by respondent quality. Participants included business developers, public communications managers, finance managers, founders, and strategy/operations managers—roles that directly drive growth and demand strong communication. All interviews were conducted in person, audio-recorded with consent, and transcribed verbatim; each lasted about one hour. We present results in an integrated narrative format to preserve authenticity and contextual depth, a practice aligned with qualitative methods scholarship emphasizing the value of context-rich interpretation within narrative frameworks [38, 39]. This design is especially suited to the fintech sector's complexity and rapid evolution.

4. Results and Analysis

Fintechs develop their own in-house technology dedicated to their core business but outsource certain technological components in order to serve a specific financial segment. The contents of our semi-structured interview guide are the following sections.

4.1. The different processes of technology creation

Fintech in general way accomplished to implement cutting-edge tools in finance processes by betting on the disintermediation, making funding sources available to as many people as possible, optimizing the client interface via digital platforms, adopting a cost-cutting strategy, and bending the rules to create a new fintech ecosystem. Nevertheless, fintechs have different ways to elaborate technologies and place them at the center of their activities. Developing a product or service requires the use of several technological solutions. Some of these solutions are developed internally, while others are integrated externally via a supplier or even via subcontracting. This sub-question is dedicated to analyzing the extent to which different fintechs have implemented technologies to provide innovative solutions in various areas of finance.

First of all, it might be stimulating to know how IbanFirst, a payment fintech specializing in international payments for small and medium enterprises (SMEs) and providing them foreign currency account and the means to make foreign exchange transactions, implements a sophisticated technology to optimize its platform. Bertrand Godin, head of operations and correspondent banking at IbanFirst, has been interviewed and affirmed that the platform's functionalities were built in-house from scratch while other aspects that were not part of IbanFirst's expertise were outsourced to other companies: "By looking at the technology of the platform, the online platform, we started from the bottom and we developed everything from 0. Besides, we also go through third-party software, we deal with payment, we have to use SWIFT... In order to meet our anti-money laundering requirement, we have to work with a renowned anti-screening, but the core technology has been developed in-house." Indeed, all technology related to compliance with laws, regulations, and practices is designed to protect criminals from turning illicitly obtained funds into income.

In the same way, KissKissBankBank (KKBB), which is a collaborative financing fintech using a crowdfunding platform, adopted a similar approach to IbanFirst. Nicolas Rousseau-Dumarcet, Administrative and Financial Director at KKBB, stated that the crowdfunding platform was created in-house, but technologies in relation to payment services and fund-keeping have been entrusted to an external service provider. Besides, Antoine Besnier, Senior Product Specialist at KissKissBank, specified during the interview that taking into account the opinions of clients or users on the platform and that a KKBB team is dedicated to this work of technological processes.

On the other hand, neobanks are relying on the dematerialization of bank agencies for the most part to offer ergonomic applications that are 100% online to provide all their services and satisfy their customers. This requires the development of algorithms and technological interfaces to allow customers to gain autonomy. For instance, N26, a mobile bank focusing on current accounts, loans, and savings accounts, has also developed the essential functionalities of its website but collaborates as well with other fintech and banking institutions for the implementation of certain banking products, notably when it comes to credit services. This information has been confirmed by Timothée Lenoir, who is Press Relations Lead at N26.

Unlike N26, Nickel, which is a fintech offering an alternative French banking service open to any individual aged 12 or over, with no income requirements and no overdraft or credit facilities, seems to have developed each technology internally. To be precise, the Nickel technological innovation is an interactive terminal located in local shops such as tobacconists that allows you to create a profile and generate a bank account number and a bank card. Nicolas Moreau, Head of Business Development at Nickel, discussed the development of that technology in the form of a terminal and how it is proving useful to customers: "On the terminal, you answer a few questions accept the general banking conditions and scan your ID."

The singularity of this paper is that interviews from experts in regtech have been collected, which is an emerging type of fintech in the market. It can be very interesting to know which kind of technologies a regtech such as B4Finance uses. Before examining their technologies, B4Finance is a software company that offers a digital solution to asset and wealth management companies to manage the entire investment process. Gabriela Paciu, CEO and founder of B4Finance, specified that the technologies employed by Iznes are developed to analyze a wide range of data to estimate the profile of clients. As far as the development of these technologies is concerned, B4Finance subcontracted the entire process at the very beginning of the project to present the idea to potential clients.

Lastly, Jean-Robert Hervy, Executive Director at Iznes, presented how a fintech operating an international platform for subscriptions and redemptions of European investment funds compatible with the different distribution channels uses blockchain technology to bring more transparency between asset management and their clients. He started by explaining why blockchain plays a major role within the fintech structure and its interest in terms of information storage. According to Jean-Robert Hervy, the blockchain technology appears as a distributed model that has the potential to be more secure compared to a centralized model.

Then, he proceeded to describe the main characteristics of blockchain technology, mentioning some fundamental concepts that make this decentralized model unique. The first key feature examined was the hash function. It consists of a digital fingerprint to quickly identify the original data, in the same way as a signature to identify a person, as explained by Jean-Robert Hervy.

Another primordial characteristic of the blockchain technology remains asymmetric encryption. Asymmetric cryptography, otherwise referred to as public key cryptography, is a procedure that involves the use of linked key pairs—a public key and a private key—to encrypt and decrypt a message and secure it from unauthorized reading or usage. Jean-Robert Hervy analyzed the principles of the language information required to maintain a blockchain.

The last blockchain applications are smart contracts, which are irreversible computer programs usually implemented on a blockchain that run a set of predetermined instructions. Jean-Robert underlined the significance of such intelligent contracts that represent a new revolution in the transfer of assets without going through a third-party intermediary, such as a bank: "A final important concept is smart contracts. We have lived in a system where we have paper legal contracts that are written quite manually. The principle of smart contracts is based on computer coding and an algorithmic program that will self-execute according to the events stipulated in the contracts." He concluded by specifying how these smart contracts intervene within the system of Iznes.

Through these technologies, all these fintechs have developed innovative offers allowing their customers to subscribe to advantageous offers based on many benefits compared to the conventional banking system.

4.2. The competitive advantages of fintech over the traditional banking system

Where the big banks operated in a quasi-monopolistic situation, technology has paved the way for new entrants by providing the opportunity to have a minimal cost structure and to attack the market with low-cost solutions. The fintech strategy is not only a technological reaction, but it also represents a value proposition adapted to new expectations and a better approach to customer relations. For instance, IbanFirst provides a dedicated platform for multi-currency payments. As an alternative to conventional bank offerings, IbanFirst brings payments expertise and a range of financial services to meet the daily operational needs of small and medium-sized businesses. With IbanFirst, they finance their international development. Bertrand Godin adds to this description some objectives that are at the heart of IbanFirst' activity. Several observations of the market have led to the detection of flaws in the classic banking schema, and IbanFirst has taken advantage of these findings. On the one hand, Bertrand Godin remarked that individuals and especially SMEs did not have attractive offers adapted to their needs from the big banks. On the other hand, Bertrand Godin deplored those big banks made the collection of taxes from customers opaque with complex calculation methods.

Based on this observation, IbanFirst developed a solution to its problems as Bertrand Godin explained. He concluded by reminding us that all these technological devices aim to benefit the customer, who experiences a reduction of their margins.

With regard to crowdfunding platforms, they represent an alternative means of financing that is becoming increasingly popular. Born in the early 2000s thanks to the internet and regulated since 2014, crowdfunding is aimed at everyone, individuals and start-ups alike, and makes it possible to finance any type of project thanks to donations from internet users and thus to break free from the traditional financing circuits. Antoine Besnier, Senior Product Specialist at KKBB, stated that the idea of launching a crowdfunding platform came from the following ideology: "to be able to give power back to people's money." Contrary to what one might think, fundraising via participatory financing solutions does not compete directly with a project, as confirmed by Antoine Besnier and which is in line with [40].

Moreover, Antoine Besnier underlined that a crowdfunding campaign is not just about raising funds but about establishing a link with future clients around an innovative communication strategy that makes these collaborative platforms so successful.

According to him, the genuine added value brought by KKBB is the human coaching behind each entrepreneur, while this service of coaching and advice is not included in the competitor's business plan. It is more rewarding for KKBB to incorporate a human contact through the service of a fintech when we know that the common objective of fintech is to digitalize practically all their processes to the detriment of the human impact in the banking or financing sector.

Besides, it can be captivating to know how a regtech succeeds to develop an innovative offer that benefits customers. B4Finance is part of this regtech and proposes an expert and comprehensive tool dedicated to the investment management industry to support investor interaction in a fully digital environment, from the initial contact to the agreement signature or online subscription, integrating all European regulators' directives and standards. According to Gabriela Paciu, the idea of creating such a digital solution has been reflected by a personal experience in investment banking. She argued that the problem is not limited to Europe but is common internationally: "I have worked in New York, Latin America, and Europe, and the problem is the same. Hence our objective to make a highly configurable product so that we can attack any market, regardless of its regulation."

Therefore, B4Finance has been created with a functional approach to these issues and presents numerous assets for these companies as outlined by Gabriela Paciu. She completed this answer by noting that these investment firms operate in a highly competitive environment where margins are increasingly squeezed, and adopting B4Finance's solution accelerates the matchmaking process.

The European blockchain-based fund subscription and registry platform named Iznes recently surpassed 2 billion euros in assets under registry and crossed the 15 billion euros threshold in transactions processed according to the website Option Finance. How does Iznes differentiate itself from the basic model of fund investment to provide an innovative offer to its clients? Jean-Robert Hervy, Executive Director at Iznes, replied to the interrogation by analyzing the classic market from the perspective of the client and the asset management company and specified what the key points are to bear in mind about the platform.

According to him, intermediary fees and lack of transparency are the main drawbacks of this specific industry. By using blockchain and relying on total transparency, Iznes ensures a digital solution that is fully beneficial for its customers, as Jean-Robert Hervy stated: "Iznes offers total transparency between investor and the management company. Historically, the bank that is the intermediary in this invest system is the trusted third party between the investor and the asset management company. We have implemented a blockchain system that plays the role this trusted intermediary, and it is a technological innovation that is the heart of the solution proposed by Iznes."

In the context of the paper, it is necessary to discuss how neobanks are developing innovative solutions for their customers, particularly in relation to the traditional banking offer. The number of current accounts opened in neobanks 2.5 times in 2 years, and there are now just over 3.5 million accounts in France based on a study carried out by the Risk Research and Analysis Directorate and the Fintech Unit of the Autorité de Contrôle Prudentiel (ACPR)[3]. According to [6], the motivations are attractive prices (50% of new customers), a welcome bonus (34%), and immediate account opening (30%).

First N26, a leading neobank on the European Market, had been created to "disrupt the banking sector by using digital and therefore mobile" based on Timothee Lenoir's interview. He also clarified the advantages of neobanks compared to traditional banks. First and foremost, the price constitutes a genuine differentiating factor from conventional banks as this latter detailed. It also allows financial inclusion as proposed by the Nickel banking offer. Accessible to all customers, with no eligibility criteria or minimum income, and with extremely low management fees (20 euros per year), the Nickel account can be accessed by anyone, even by individuals who are heavily in debt or experiencing banking exclusion. Nicolas Moreau shed light on the specificity of Nickel. These results are in line with [41] and [42].

The last aspect of neobanks that allows to distinguish their new generation banks from conventional banks is the relationship between these two systems: "Our customer service is open from 7AM to 11PM Monday to Sunday by phone, email, or chat. This proximity and continuity of service did not exist before with traditional banks."

Now that the technologies developed by fintech and serving multiple revolutions in the investment and banking sectors have been discussed, it is essential to relate the margin of progress of these fintechs and the major challenges that await them.

4.3. The development priorities and key challenges that fintechs will need to surmount in order to reach a mature phase

4.3.1. Top priorities for fintech in the coming years related to development issues

It remains vital for fintech to fix short-term objectives to hedge from extraordinary sanitary pressures, a rise in the number of competitors, or a reform of the regulatory framework for fintechs, for example. However, only fintech needs to maintain hypergrowth as long as possible to generate revenues. Through interviews with experts from different fintechs, a study of the latest trends in terms of short-term priorities is presented in this sub-section.

On the one hand, a great number of fintechs have decided to make international expansion a priority over the next few years, as is the case for IbanFirst. Indeed, Bertrand Godin affirmed that IbanFirst intends to accelerate the expansion phase abroad by notably absorbing other entities. In the same way, Orange Bank has the willingness to launch a product abroad but for other reasons. Arnaud De Soultrait, head of project and ongoing improvement at Orange Bank, highlighted throughout the interview that the French legislation is not totally tailored to launch a consumer credit product in France, while Spain presents a better regulatory environment for this offer. He also mentioned that Spain is not the only country targeted since Eastern Europe could also be attractive to Orange Bank.

Nickel is also interested in expanding their operations abroad as Nicolas Moreau announced it: "At the moment we are mainly focusing on internationalization as a development axis. We launched Spain at the end of 2020 and we are working on two other countries, namely Portugal and Belgium..." "By 2024, we would like to have 4 million customers, 10,000 distribution points and 7 countries to distribute Nickel. So expansion of the customer base and internationalization are our top priorities as short-term horizon." Although it is important to notice that this is a long-term goal, Nickel has the ambition to export its banking product beyond the European borders as Timothée Lenoir pointed out. Similarly, Jean-Robert Hervy underlined that offering the possibility to subscribe to foreign investment funds is defined as a top priority for Iznes. According to Gabriela Paciu, even B4Finance is concerned to develop its software abroad within the next 3 years.

On the other hand, several experts from fintech stated that another focus for development in the short term is to strengthen their core market either by striving to increase their customer base in their local market or by continuing to meet the demands of their customers. As a spokesperson for the payment company IbanFirst, Bertrand Godin did not forget to note that reinforcing their primary market is also essential. Timothée Lenoir assured that he sees N26 growing within the next five years by fostering the development of the local market.

Another fintech aiming to increase its performance in its main market is Orange Bank. Indeed, Arnaud De Soultrait emphasized that Orange Bank has the intention to enhance its self-care offer due to a lack of results from it. The last axis of development mentioned by the interviewed professionals is to perpetuate the development process of their product by focusing on innovation. This is the case for N26, which intends to disrupt the insurance sector. The same results are shown by [43].

Jean-Robert Hervy also confirmed that Iznes has the intention within the next years to diversify the Iznes offer by proposing various types of funds in line with the client's demands: The first is on the product. Today, as we said recently, we are focusing on subscriptions to UCITS (Undertaking for Collective Investments in Transferable Securities) funds. There is a lot of demand to integrate private equity and real estate funds, which require quite specific characteristics. We also want to offer our clients the possibility of investing in ETFs (Exchange Traded Funds) in the near future, which is not the same thing as the products we currently offer. In general, we want to offer different types of funds to our clients."

[3] https://acpr.banque-france.fr/system/files/import/acpr/medias/documents/20240529_ra_acpr_2023.pdf

In addition to international expansion, diversification of their offer, or consolidation of their core market, fintechs will face challenges that threaten their sustainability.

4.3.2. Numerous challenges could affect the growth of the fintech

Fintech is currently facing pairs of obstacles, and in order to achieve long-term stability, companies must be proactive in overcoming the barriers faced by fintech companies [44]. Fintech leaders who overcome these issues will open the door to truly revolutionary growth. Several challenges have been identified through a series of professional interviews working in fintech. A central Fintech challenge facing new institutions is the management of regulatory risk and compliance. This is an inherent factor in the financial industry, but one that is particularly impacting for the fintech companies. This factor has been cited by Arnaud De Soultrait as a relevant defy for fintech start-ups. He described the regulatory compliance as complex since it combines different aspects: First of all, there is the regulation because it is something that is very expensive and complicated. It's expensive because you must have the skills to connect, understand and implement the regulations. This is one of the challenges of fintech.

Just like banks, IbanFirst must conform with the rigorous standards in anti-money laundering (AML) on the basis of the interview with Bertrand Godin: In theory, we have the right to do credit with our clients, but we consider that we have to focus on our core activity, which is facilitating international payment. On this aspect, we are subject to the same regulatory framework as banks. To be specific, the AML measures will be the same, as well as the anti-terrorist financing measures. We have to be in line with every rule that concerns payment. As already mentioned, regulatory compliance necessitates special skills and competences, and it is the reason why InbanFirst must collaborate with an external entity to be in line with the legal part, as underlined by Bertrand Godin: "In order to meet our anti-money laundering requirement, we have to work with a renewed anti-screening but the core technology has been developed in-house." According to an article published on the Thomson Reuters website, one case occurred in 2015, when the Financial Crimes Enforcement Network fined a digital currency operator $700,000 because it proved that it did not have adequate AML procedures.

For instance, Brexit impacted several fintechs in their daily operations or in their conquest of clients. B4Finance experienced a few difficulties due to this regulatory turbulence. According to Timothée Lenoir, N26 has also been affected by Brexit since the neobank had to abandon a specific market because it no longer fit into the European vision and rendered operations complicated: "we took the decision to leave the UK market as soon as the Brexit was agreed because it didn't really make sense in terms of our European project. It made things very complex in terms of the regulatory issues. Moreover, this is Revolute's core market."

The second largest defy for fintech relates to liquidity, cash flows, or revenues that lead them to generate profit by notably reaching the break-even point. Fintech must demonstrate that they have a robust business model centered on profitability, not only fast growth, if they wish to secure investment. When it comes to considering the break-even point, which is a very responsive profitability indicator in business, Jean-Robert Hervy assured that cost management is paramount in order to achieve profitability: "There is a platform to be developed, and then it is interesting to know how many clients I need to amortize these costs. You must be careful to limit variable costs because if you add a lot of variable costs to considerable fixed costs, the fintech will never reach its financial break-even point. Either you have a mighty sales force to reach profitability, or a takeover seems logical for them."

This imbalance between revenues and costs is also accentuated by Nicolas Moreau, who also noted that fintechs are sometimes forced to raise their prices to ensure their financial stability.

Arnaud de Soultrait also said that it is very expensive to build a neobank and that it is essential that strong investors have confidence in the perennity of the fintech as it is a very long process for fintech to become profitable.

As far as N26 is concerned, Timothée Lenoir expressed the same vision but exposed the 26's situation by affirming that the neobank is currently profitable in France but not globally: "Last point, be profitable. Few Fintechs and neobanks are. In France, we are because we have reached a critical size, but this is not the case globally. We need to be profitable everywhere. It's important for us to succeed in our IPO in two to three years, to go public, and to perpetuate the model. At the beginning of the year, we recruited a CFO."

Last but not least, Gabriela Paciu shared her opinion about the big challenges facing fintech in comparison with conventional banks. According to her, fintech should anticipate and manage a potential liquidity risk, notably in the case of economic shocks, while it is commonly known that banks are backed by the state.

Given that fintech encompasses all the services offered by a bank, it is legitimate to ask whether banks are still credible in the eyes of customers. Beyond the threat posed by fintech to the incumbent banking players, it is fascinating to learn what their plan of action is regarding their relationship with fintech.

4.4. The potential questioning of banks due to the emergence of promising fintech and the relationship between these two different players

4.4.1. Bank is still seen as a central institution in the economy despite the increasing importance of fintech

The financial landscape implies that start-ups are leveraging technology to upend incumbent banks. Yet, there is no reason to believe that banks will collapse as a result of a delay in their digital transition and the introduction of innovation to enable notable financial inclusion. They remain highly used, profitable, and cash-rich businesses. This assumption is unanimously shared by all the professionals interviewed for this paper, even if some of them have expressed concerns about traditional banks.

To start with, Arnaud De Soultrait, head of project and ongoing improvement at Orange Bank, rejected the hypothesis that banks may disappear soon in favor of fintech because fintechs do not currently offer the package of services and products that banks do. He also considered that AI will hardly replace human intelligence. To contrast with Arnaud De Soultrait's remarks, it is noteworthy to underline that some fintechs have not completely abandoned human contact such as KKBB, which has made its human support for project holders a competitive advantage within the crowdfunding platform sector. During the interview, Nicolas Rousseau-Dumarcet indicated that the personalized approach to coaching allows KKBB to differentiate itself from the competition. Coming back to the question of how he sees the future of big banks that are slow to adapt to the new challenges and needs of customers, Nicolas Rousseau-Dumarcet is far from thinking that big ones are threatened because they still have cash and fintechs are still too fragile in view of regulatory tightening.

To complete this point of view, Antoine de Besnier, also working at KKBB, assured that banks do not perceive fintechs as a threat but more as a challenge that encourages them to evolve. He also uses a parallelism with the insurance sector to support his point.

According to Timothée Lenoir, Press Relations Lead at N26, a natural selection seems to be envisaged depending on whether the big banks have the capacity to manage the digital shift and whether fintechs will manage to become profitable. Even if fintechs may see their activity slowed down because of regulatory reforms in terms of compliance, they are not the only potential competitors of big banks. Indeed, the GAFAM (Google, Amazon, Facebook, Apple, and Microsoft) and the big Chinese technology companies also have the potential to compete with the big banks, as Nicolas Moreau points out: "Banks are reacting and this will lead to an improvement in customer service. Competition is intense from fintechs and also from GAFAMs and Chinese equivalents. The risk for banks is that they will become a back office for other companies that have developed relationships with customers. But I think the banks will react. There are also regulatory issues at the European level which mean that potentially some players will be slowed down a bit in this process." Also, Arnaud De Soultrait asserted that fintechs do not necessarily depend on the biggest bank to finance their growth, but the GAFAM have a major role to play since they have developed crowdfunding platform or payment solutions such as Apple Pay or Amazon Pay.

At the moment, fintech does not have the financial capacity to grant credit as traditional banks do, and it constitutes a genuine asset over fintech, and GAFAM also appears as the most serious rival for conventional banks. Nevertheless, they mentioned that the complex regulatory banking framework represents a major obstacle to GAFAMs starting to offer their payment or banking solutions, notably in France. They also added that banks are not threatened by the rise of fintech, but certain jobs that are carried out within the framework of traditional banks are doomed to disappear because of the trend toward dematerialization of bank branches. Gabriela Paciu, CEO and Founder of B4Finance, agreed to say that neobanks are still not ready to grant credit to their customers, and this constitutes the real difference between both players. She explained her opinion on this situation by placing herself in the problems faced by her start-up.

4.4.2. Banks interact with fintech from a collaborative or acquisition perspective rather than a competitive one

Financial institutions had, until recently, taken a cautious, even distrustful, approach to fintech, often viewing them as a fast-disrupting competitor to the industry. It is now widely accepted within the industry that some banks cannot proceed alone with digitalization. The expense and the delay associated with banks addressing their digital transformation plans internally are proving prohibitive. The future of banking lies in embracing fintech as a reliable and valuable partner, which is key to advancing relevant digital customer engagement. During the interviews, experts working in fintech shared their vision about cooperation between traditional banks and fintech according to their professional experiences and their analysis of the current market.

For example, Bertrand Godin expressed his opinion on the need for banks to engage with fintech in order to go digital rather than operating on their own: "There is probably a combination of both. It depends on the banks' strategies. We can see that banks have already tried to develop their digital solution without the help of any external entity, and I think that Brexit has accelerated this trend. But some believe that it is rather necessary to buy a fintech to catch up with their digitalization." In particular, he announced that opting for a collaboration with a fintech would be a concrete solution and seems interesting in terms of opportunity costs: "For example, in France, we have seen that Société Générale has bought the neobank Shine. And if you look at the price of Shine, it's quite expensive compared to the maturity of the company but it allows Société Générale to capture their customer directly and not waste time on opportunity costs. It all depends on the bank's strategy. It can opt for an internal development and in this case, risk losing time on its competitors or buy a fintech to accelerate the process."

Another tangible illustration is the acquisition of Nickel by BNP Paribas. With this acquisition, BNP Paribas completes its offer devoted to new banking uses and has, alongside Hello Bank!, the retail bank's digital offer and the branch network, a complete set of solutions adapted to the needs of different customer groups. Nicolas Moreau, head of business development at Nickel, argued that one of the reasons why BNP bought Nickel was to consolidate the risk and control aspect of Nickel's business and that Nickel can benefit from the expertise of a large group in this area. Furthermore, the investment of the Parisian bank is based on profitability and diversification. Indeed, three reasons led it to acquire the fintech. First, Nickel will provide BNP with innovative technological expertise. The Nickel account offers the possibility of managing one's accounts, as well as all current actions, thanks to an interactive terminal present in tobacconists. This solution makes it possible to simplify and accelerate procedures. Second, through this acquisition, BNP is expanding its distribution network and getting ever closer to the customer. Third, BNP Paribas completes its offer while capturing customers that it could not have before.

From another angle, Timothée Lenoir gave his opinion on the question about knowing whether fintechs depend on the big banks to grow and develop. This interview reveals that it is not only the big banks that are expressing an interest in start-ups specializing in financial technological innovations but also very important investment funds and even states.

Start-ups providing crowdfunding platforms also attract the covetousness of large banks. The banking subsidiary of La Poste announced the purchase of 100% of the capital of KissKissBank & Co in 2017. With his regards, Antoine de Besnier explained why KKBB agreed to be acquired by Banque Postale: "We were in a fundraising situation like many start-ups. They were already involved with KKBB with a call for projects and the Banque Postale wanted to add a string to its bow with another financing product. We were also interested in the synergies within the La Poste group to have the best mailing solutions for our project leaders."

5. Discussion

The aim of this section is to compare the responses obtained during the interviews with the research sub-questions that form the main thread of this paper. To do this, a certain verdict will be made on the consistency of the answers collected from interviews in order to determine whether certain subjects have been under-addressed and would deserve clarification.

Due to the qualitative and narrative-driven nature of this study, explicit visual summaries and tables were deliberately omitted to preserve the richness and depth of the qualitative data. Instead, thematic categories and comparative insights are integrated directly within the text, aligning with qualitative research best practices [39].

To ensure clarity and consistency, the discussion explicitly addresses each research sub-question in turn: (1) How fintech firms integrate technology into financial services, (2) what are the main challenges fintech firms face in their growth trajectories, and (3) how traditional banks strategically respond to fintech innovation and competition.

The initial focus of this study addressed the complexities involved in developing fintech algorithms and platforms requiring sophisticated technology. After exploring the technological foundations, the analysis turned to innovative solutions revolutionizing segments within the financial industry. Jean-Robert Hervy provided a detailed examination of blockchain, specifically regarding its use in subscribing to and purchasing shares in investment funds. His insights clarified blockchain's critical functions, notably disintermediation, which ensures transparency, real-time data updates, and decentralized data distribution without relying on a central authority. However, the responses obtained about other technologies lacked sufficient detail, limiting the comprehensive understanding of why these innovations hold significant value for traditional banks.

The research revealed that most fintech companies develop innovative solutions internally but outsource certain specialized functionalities beyond their expertise. This practice was exemplified by IbanFirst, which internally created an international payments platform capable of instant currency updates but outsourced its compliance processes related to money laundering due to expertise gaps. Nickel was noted as an exception, as Nicolas Moreau explained their fully internal development of an interactive kiosk enabling customers to open accounts quickly by scanning their identification, entering personal details, and immediately receiving a MasterCard debit card along with bank information.

Interviews provided valuable insights into the competitive advantages fintech solutions have over traditional banking systems. For instance, N26's innovative services efficiently manage risks associated with account management, particularly through processes that allow customers to quickly recover lost credit cards at competitive fees. Nickel contributes to financial inclusion by offering accounts without overdraft risks, appealing to vulnerable populations. Similarly, KissKissBank offers personalized human support for crowdfunding project creators, significantly enhancing the funding process.

Although each analyzed fintech effectively disrupted aspects of traditional finance, a notable limitation was identified: certain fintech categories, such as financial product comparison platforms or start-ups specializing in personal expense management and cash-flow optimization for businesses, were underrepresented. The study, while encompassing a diverse selection of fintech, acknowledges that not all types of fintech were sufficiently covered by the current academic analysis.

As far as the development of fintech is concerned, the information collected by the professionals working in fintech largely evoked a common desire to continue or begin their expansion internationally so as to increase their turnover, increase the notoriety of the brand, and position themselves in new markets. Like Iznes, another short-term priority is to broaden the range of products offered by diversifying the type of investment funds available for subscription. This same fintech also aims to adapt its business model by targeting a new clientele. Timothée Lenoir also mentioned N26's desire to maintain an innovative dynamic by penetrating the insurance market via the N26 banking offer. Finally, some of the experts interviewed referred to strengthening their performance in their main market in order to consolidate their position on the market while continuing to satisfy customer demand, as Arnaud de Soultrait emphasized concerning Orange Bank. All these short-term objectives help to inform us about the dynamics of fintech and give a significant conjecture about its future evolution. Even if it is difficult to generalize about the axis of development of fintech since it depends on the type of activity they conduct, their financial health, or their vocations, this sub-section gives a different perspective on the stakes on a short-term horizon.

This empirical part also provided valuable information on the challenges and potential obstacles that may hamper the activity of fintech and hinder their development in general. Many of the professionals interviewed mentioned that regulatory constraints that are frequently changing and threaten to limit fintechs, particularly in terms of compliance. In this respect, Nicolas Rousseau-Dumarcet adds that a possible reform requiring contributors and donors of crowdfunding platforms to identify themselves by uploading a copy of their ID would have the consequence of dissuading them from contributing and would represent a considerable loss for KissKissBank. In addition to this regulatory threat, the race for profitability for fintech is a long process full of pitfalls that force them to optimize their cost/revenue ratio in order to reach the break-even point as soon as possible, which is a vital economic indicator for any start-up. In parallel, Gabriela Paciu also warns fintechs to monitor and anticipate the consequences of their liquidity risk, which could be put to the test in the event of a strong economic shock.

All these risk factors were mentioned during the various interviews conducted. However, this list is not exhaustive as there exist other systemic risks that fintechs need to consider in their action plan. The vulnerabilities of virtual banking are much less known and therefore have a potentially much larger impact on users. When it has to do with virtual security, things get more serious because it is not only their money that is at stake but also their private information. Indeed, hackers have grown more and more skillful at illegally attacking a fintech company's data. Their recent stealth techniques have made detection and protection against these attacks more difficult for fintech. Advanced covert surveillance techniques permit attackers to track and steal data, often confidential, sensitive information or policies for an extended period while remaining undetected.

Last but not least, the ultimate key topic addressed during the interview is the potential disappearance of the big banks in favor of fintech. This hypothesis was unanimously rejected by all the experts working in fintech, who stated that banks are not directly threatened by the rise of fintech in the financial landscape. The central role of banks and their robust financial capacity through a large cash surplus allows them to grant loans, activities that fintechs struggle to carry out until they are mature and profitable. However, fintech specialists identified GAFAM as potentially greater threats to traditional banks due to their global influence and vast networks. While regulatory constraints currently limit GAFAM's ability to sell financial products globally, their interest in connected payment solutions, like Amazon Pay and Apple Pay, as highlighted by [45], merits close monitoring.

Regarding fintech, discussions also explored how traditional banks respond to customer needs through collaboration or acquisition strategies. Interviewees generally viewed collaboration rather than direct competition as the primary relationship between banks and fintech. Acquisitions were widely discussed, notably BNP Paribas' purchase of Nickel, detailed by Nicolas Moreau. He emphasized mutual benefits, highlighting that BNP Paribas granted Nickel considerable flexibility and autonomy, enabling the fintech to preserve its innovation and financial inclusion values. Similarly, the acquisition of KKBB by La Banque Postale illustrates banks' strategic aims for digitalization and diversification, leveraging external fintech expertise. In contrast, very few of them mentioned the synergies that allow these two types of structures to cooperate in a specific way. This does not help to explain the rationale for fintech and traditional banks to work in partnership, except when it results from an acquisition.

Comparing our empirical findings with existing literature, we find strong support for [2] assertion that fintech complements rather than competes with traditional banks. Similarly, the regulatory compliance challenges highlighted by our respondents align with previous studies by [6] and [8]. However, our study extends these insights by emphasizing fintech's nuanced strategic responses, such as a dual approach of technological internalization for core competencies and outsourcing of non-core functionalities.

While our study primarily supports theories suggesting cooperative dynamics between fintechs and traditional banks, it is essential to critically acknowledge perspectives advocating bank obsolescence or significant digital disintermediation [1, 9]. Our empirical evidence indicates that, despite these predictions, traditional banks maintain significant competitive advantages in credit provisioning and regulatory infrastructure, suggesting a more complementary rather than substitutive relationship. Also, supporting the assertion of traditional banks' robust financial positions, recent data from the McKinsey Global Banking Annual Report [46] confirm substantial liquidity and profitability among major banking institutions, indicating significant cash reserves despite the rise of fintech competitors.

6. Conclusion

This study aimed to shed light on how emerging start-ups dedicated to elaborate innovative cutting-edge technology succeeded in disrupting the paradigm in which banks have evolved while underestimating the expectations of the new generation of customers, adept at digitalization. This problem has been broken down into three sub-questions that have been addressed through a theoretical part combining multiple academic papers' contents. It put into perspective the literature needed to effectively understand the empirical part, established on the experiences and relevant opinions of specialists working in various fintech. After elucidating the etymology of fintech, it was revealed that the financial innovations do not date from the crisis of subprime of 2008 [47] but reflects notably the implementation of the ATM network or the utilization of SWIFT transactions [48]. Nevertheless, the global 2008 crisis provoked a global distrust of traditional banks and has seen a gradual explosion of new entrants relying on digitalization or dematerialization of bank agencies to offer innovative financial services in a distributed manner. These news players, called fintech, aim to disrupt finance through three dimensions: lending, investment and saving, and payment. The most representative forms of fintech may be the new collaborative financing platform of crowdfunding, the removal of the intermediary and central banks in favor of a secure computer network for the storage and transmission of information called blockchain technology, or the proliferation of neobanks promoting financial inclusion of the most vulnerable clients, neglected by conventional banks. The same results are found by [49–52].

The destabilization of the traditional banking system by the emergence of fintech implies a reaction from banks, which have three strategies to embrace the digital shift applied by fintech: competition, acquisition, or partnership. Through interviews with 18 specialists working in various fintechs, the empirical part following the implementation of the academic content proposes to explain multiple stakes of fintech. It is precisely that most fintechs elaborate their in-house technology available via an online customizable platform, while other functionalities considered as out of the core fintech activities are developed via external outsourcing. Significant systemic challenges must be taken into consideration for fintech such as the evolution of the regulatory framework limiting potentially fintech ambitions and the rigorous implementation of compliance processes. The protection of personal data from hackers also seems vital for these start-ups. These challenges are accompanied by top development priorities for fintech, which are international expansion, maintaining innovation at the center of their activities, or optimizing the resources of fintech to make them profitable as quickly as possible. This paper also demonstrates that banks are not threatened by the emergence of fintech due to their essential role in the economy, notably through their credit activity. While the relationship between these two types of actors seems to be based on cooperation rather than competition, the second part shows more of an impetus for banks to buy fintechs to accelerate their digitalization, foster innovative initiatives.

This study contributes novel insights by empirically highlighting the nuanced dual strategies fintech firms employ in technology development (combining internal development and strategic outsourcing), as well as delineating how fintechs influence traditional banks' strategic repositioning toward innovation and collaboration. Methodologically, the qualitative, interview-based approach enriches the existing quantitative-dominated fintech research, providing depth and contextually rich perspectives often overlooked in the literature.

This study shows a clear dual tech pattern in which fintechs build core capabilities in-house and source non-core or compliance modules externally, while banks respond mainly through cooperation and selective acquisitions rather than direct rivalry; the binding constraints on fintech growth remain regulatory complexity, compliance readiness, protection of personal data, cyber risk, and the path to break even. Practically, fintech leaders should focus research and development on core differentiators, formalize vendor governance for AML and cybersecurity, invest early in compliance and data protection capabilities, and manage unit economics against explicit break-even milestones before expanding abroad. Banks should institutionalize a partnership and proof of concept pipeline with clear selection gates, use targeted acquisitions to accelerate digital transformation, and track integration with customer adoption, cost to serve, and time to market metrics while keeping risk and compliance under bank controls. Policymakers and supervisors should streamline proportionate compliance pathways, expand regulatory sandboxes, and provide timely guidance on data protection and operational resilience to reduce uncertainty while preserving consumer protection and financial stability.

In relation to the content of this paper, future research should trace profitability paths with longitudinal multi country panels to quantify time to break even under different regulatory regimes, test causal effects of specific rule changes such as AML and open banking mandates on fintech growth and partnership formation using policy shock designs, and measure the performance of partnerships and acquisitions after deal completion with standardized indicators like customer adoption, cost to serve, and time to market. It should also assess how cybersecurity and data protection practices shape customer trust and scaling, compare build versus buy choices across segments to identify thresholds for in-house development versus outsourcing, and examine competition from large technology companies such as GAFAM, as well as the rise of embedded finance. Given that coming regulations may reshape the fintech ecosystem either in favor of or against new entrants, regulatory experimentation and proportionality deserve dedicated study. Finally, quantitative designs using secondary data can track how fintechs move toward profitability and a maturity phase at scale, complemented by larger datasets, replication beyond France, mixed methods fieldwork, and transparent research protocols that support comparability.

Ethical Statement

This study does not contain any studies with human or animal subjects performed by any of the authors.

Conflicts of Interest

The authors declare that they have no conflicts of interest to this work.

Data Availability Statement

The data that support this work are available upon reasonable request to the corresponding author.

Author Contribution Statement

Fateh SACI: Conceptualization, Methodology, Software, Validation, Formal analysis, Investigation, Resources, Data curation, Writing – original draft, Writing – review & editing, Visualization, Supervision, Project administration. **Sajjad M. Jasimuddin:** Conceptualization, Methodology, Software, Validation, Formal analysis, Investigation, Resources, Data curation, Writing – original draft, Writing – review & editing, Visualization, Supervision, Project administration.

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