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(REVIEW ARTICLE)

Disruption of traditional banking by fintech: A review and financial analysis

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Abstract

This review paper examines the disruption of traditional banking by FinTech, analysing key factors driving this transformation and its implications for the financial services industry. It explores technological advancements, changing consumer behavior, regulatory dynamics, and investment trends shaping the landscape of FinTech and traditional banking. The financial analysis compares market share, growth trends, profitability, and efficiency metrics between traditional banks and FinTech firms. Furthermore, it discusses strategies for traditional banks to adapt and compete with FinTech firms. It offers predictions for the future of FinTech and traditional banking. This paper concludes that while FinTech disruption presents challenges for traditional banks, it also offers opportunities for innovation and growth in an increasingly digital and customer-centric environment.

Keywords: FinTech; Traditional banking; Disruption; Technological advancements; Financial analysis; Future outlook

1. Introduction

The financial industry has long been a cornerstone of global economies, providing essential services such as deposit-taking, lending, and payment processing. Traditional banking, characterised by brick-and-mortar branches and face-to-face interactions, has been the primary means of delivering these services. However, the advent of financial technology, or FinTech, has brought about a seismic shift in the landscape of the financial sector (Ashta & Biot-Paquerot, 2018).

FinTech refers to the innovative use of technology to deliver financial services in a more efficient, accessible, and customer-centric manner (AlMomani & Alomari, 2021; Gomber, Kauffman, Parker, & Weber, 2018). Rapid advancements in digital technologies such as artificial intelligence, blockchain, and mobile computing have fueled its emergence. These technologies have enabled FinTech companies to disrupt traditional banking models by offering innovative solutions across various financial industry segments. The disruption caused by FinTech poses a significant challenge to traditional banking institutions. With their agile business models, streamlined operations, and focus on customer experience, FinTech firms have captured market share and redefined industry standards. This disruption is evident in various aspects of banking, including payments, lending, wealth management, and even regulatory compliance (Ajayi & Udeh, 2024b; Gomber et al., 2018; Igbinenikaro & Adewusi, 2024d).

The problem statement at the heart of this research paper is the impact of FinTech on traditional banking. As FinTech continues to gain traction and disrupt established banking practices, it raises questions about the future viability and relevance of traditional banks. How are traditional banks adapting to the challenges posed by FinTech? What strategies are they employing to remain competitive in this rapidly evolving landscape? These are crucial questions that necessitate deeper exploration and analysis.

This study aims to provide a comprehensive review and analysis of the disruption caused by FinTech in the traditional banking sector. By examining key trends, drivers, and implications, this paper aims to shed light on the dynamics

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shaping the future of banking. Through a combination of theoretical insights and empirical evidence, the study seeks to contribute to understanding FinTech's impact on traditional banking and inform strategic decision-making by industry stakeholders.

To achieve this purpose, the objectives of the paper are as follows:

- To provide an overview of the financial industry and traditional banking, highlighting its historical evolution and key characteristics.
- To introduce the concept of FinTech and its emergence as a disruptive force in the financial sector, exploring its defining features and technological underpinnings.
- To analyse how FinTech is disrupting traditional banking, examining the key drivers and implications of this disruption across various banking activities.
- To assess the purpose and objectives of the study, outlining the rationale for examining the impact of FinTech on traditional banking and the expected contributions of the research.

In summary, this research paper aims to explore the transformative impact of FinTech on traditional banking, providing insights into the challenges and opportunities it presents for industry participants.

2. Understanding FinTech and Traditional Banking

Financial technology, or FinTech, represents a revolutionary wave of innovation within the financial services industry, transforming how individuals and businesses access and manage their finances. To grasp the significance of FinTech's disruption of traditional banking, it is essential to delve into the definition, characteristics, and evolution of FinTech and traditional banking and analyse their relative strengths and weaknesses. Additionally, exploring key players in both sectors provides insights into the competitive landscape and the dynamics shaping the future of financial services.

FinTech refers to the intersection of technology and financial services, encompassing various applications to enhance efficiency, accessibility, and user experience (Chishti & Barberis, 2016). From mobile banking apps and peer-to-peer lending platforms to robo-advisors and blockchain-based payment systems, FinTech solutions leverage cutting-edge technologies to deliver innovative financial products and services. Key characteristics of FinTech include agility, scalability, and a customer-centric approach enabled by advanced analytics, automation, and digital interfaces (Ajayi & Udeh, 2024d; Alt & Huch, 2022; Igbinenikaro & Adewusi, 2024c).

On the other hand, traditional banking has a long history dating back centuries, rooted in providing essential financial services such as deposit-taking, lending, and payment processing. Historically, traditional banks operated through physical branches, relying on face-to-face interactions and paper-based processes to serve customers (Borbón, 2003). Over time, traditional banking evolved in response to changing market dynamics, regulatory requirements, and technological advancements. The rise of electronic banking, ATMs, and online banking platforms marked significant milestones in the evolution of traditional banking, laying the groundwork for the digital transformation witnessed in recent years (Wewege, 2017; Wewege & Thomsett, 2019).

2.1. Comparison of Traditional Banking and FinTech: Strengths and Weaknesses

When comparing traditional banking and FinTech, each approach has its own set of strengths and weaknesses. Traditional banking institutions boast extensive networks of physical branches, established brand recognition, and deep expertise in regulatory compliance and risk management (Gupta & Xia, 2018; Khan, Khan, & Tahir, 2017). They also offer various financial products and services, including personalised advice and relationship-based banking. However, traditional banks often face challenges related to legacy systems, bureaucratic processes, and high operating costs associated with maintaining physical infrastructure (Krasonikolakis, Tsarbopoulos, & Eng, 2020). Moreover, they may struggle to keep pace with technological advancements and meet evolving customer expectations for seamless digital experiences.

In contrast, FinTech companies exhibit agility, innovation, and a strong focus on user experience. By leveraging emerging technologies such as artificial intelligence, machine learning, and distributed ledger technology, FinTech firms can deliver tailored, faster, more convenient, and more cost-effective solutions than traditional banking services. They also have the advantage of operating in a less regulated environment, enabling them to experiment and iterate more freely. FinTech firms may face trust, security, and scalability challenges despite these strengths. Building credibility and brand recognition in a crowded market can be daunting, especially for startups without a track record or established customer base. Moreover, navigating complex regulatory frameworks and ensuring compliance with data protection

and financial regulations can pose significant hurdles for FinTech companies as they scale their operations (Ajayi & Udeh, 2024c; AllahRakha, 2023; Igbinenikaro & Adewusi, 2024a; Yadav, 2020).

2.2. Key Players in Both Traditional Banking and FinTech Sectors

In the traditional banking and FinTech sectors, numerous players range from multinational banks and financial conglomerates to innovative startups and technology giants. In traditional banking, global players such as JPMorgan Chase, Bank of America, and HSBC dominate the industry, with extensive branch networks and diverse product offerings. Regional and community banks also play a vital role serving niche markets and fostering local economic development.

In FinTech, disruptors like PayPal, Square, and Stripe have revolutionised payment processing and digital commerce, offering seamless solutions for businesses and consumers. Robo-advisors such as Wealthfront and Betterment have transformed wealth management by providing automated investment advice and portfolio management services. Meanwhile, peer-to-peer lending platforms like LendingClub and Prosper have disrupted traditional lending models by connecting borrowers directly with investors (Jenik, Lyman, & Nava, 2017). Technology giants such as Google, Amazon, and Apple have also entered the financial services arena, leveraging their vast user bases and technological prowess to offer innovative financial products and services (Salmon, Thompson, Salmon, & Thompson, 2021). With their extensive resources and global reach, these tech titans pose a formidable challenge to traditional banks and standalone FinTech startups.

In conclusion, understanding the dynamics between FinTech and traditional banking requires a nuanced examination of their respective definitions, characteristics, and evolutions. By comparing their strengths and weaknesses and analysing key players in both sectors, we can gain valuable insights into the forces shaping financial services' future and the industry's competitive landscape.

3. Factors Driving the Disruption in FinTech and Traditional Banking

The disruption of traditional banking by FinTech is driven by a convergence of various factors, including rapid technological advancements, shifting consumer behavior and expectations, evolving regulatory landscapes, and investment trends in FinTech. Understanding these factors is essential for comprehending the profound changes reshaping the financial services industry and the competitive dynamics between traditional banks and FinTech firms.

3.1. Technological Advancements

One of the primary drivers of disruption in the financial services industry is the relentless pace of technological innovation. Advances in blockchain, artificial intelligence (AI), big data analytics, and cloud computing have unlocked new possibilities and transformed how financial products and services are delivered. Blockchain technology, best known as the underlying technology behind cryptocurrencies like Bitcoin, holds the potential to revolutionise various aspects of banking and finance. Its decentralised and immutable nature enables secure and transparent transactions without intermediaries, reducing costs and eliminating the risk of fraud (Ajayi & Udeh, 2024a; Hreinsson & Blöndal, 2018; Igbinenikaro & Adewusi, 2024b).

AI and machine learning algorithms are powering various applications in FinTech, from customer service chatbots and virtual assistants to fraud detection systems and algorithmic trading platforms. These technologies enable FinTech firms to analyse vast amounts of data in real-time, extract valuable insights, and personalise services to meet individual customer needs. Big data analytics is another game-changer in the financial industry, enabling institutions to harness the power of data to make better decisions, improve risk management, and enhance customer experiences. By analysing transactional data, social media activity, and other sources of information, FinTech companies can gain deeper insights into customer behavior and preferences, enabling them to offer more targeted and relevant products and services (Nguyen, 2016; Pilkington, 2016).

Cloud computing has also driven FinTech innovation, providing scalable and cost-effective infrastructure for deploying and scaling digital solutions. Cloud-based platforms enable FinTech startups to launch new products quickly, iterate rapidly, and scale their operations without significant upfront investment in hardware or software (Kanchepu, 2023; Mei, 2022; Olaoye, 2023).

3.2. Changing Consumer Behavior and Expectations

Another key driver of disruption in the financial services industry is consumers' changing behavior and expectations. Millennials and Gen Z, in particular, are driving demand for digital-first banking experiences that are convenient, seamless, and personalised.

Today's consumers expect to access financial services anytime, anywhere, and on any device, whether making payments, managing investments, or applying for loans. They value simplicity, transparency, and user-friendly interfaces. They quickly adopt new technologies that offer greater convenience and control over their finances. This shift in consumer preferences has fueled the rise of FinTech startups that are nimble, agile, and focused on delivering innovative solutions tailored to the needs of digital-native customers. By leveraging technology and data-driven insights, these firms are reimagining traditional banking services and challenging incumbents to adapt or risk becoming obsolete (Kasturi, 2023; Kotler, Kartajaya, & Setiawan, 2021).

3.3. Regulatory Environment and Its Impact on FinTech and Traditional Banking

The regulatory environment plays a crucial role in shaping the competitive landscape of the financial services industry and influencing the trajectory of FinTech disruption. While regulations are intended to safeguard consumers and maintain the financial system's stability, they can also serve as barriers to entry for FinTech startups and inhibit innovation.

In recent years, regulators have grappled with balancing innovation and risk in FinTech, seeking to foster competition and innovation while safeguarding against potential risks such as fraud, money laundering, and systemic instability. The regulatory landscape varies widely across jurisdictions, with some countries embracing FinTech innovation and adopting regulatory sandboxes and innovation hubs to facilitate experimentation and collaboration between regulators and industry stakeholders. Others have taken a more cautious approach, imposing stringent regulations that may stifle innovation and limit the growth of FinTech startups.

For traditional banks, navigating the regulatory landscape requires substantial resources and expertise to ensure compliance with a complex web of regulations governing everything from capital requirements and consumer protection to data privacy and cybersecurity. While incumbents may have the advantage of established compliance processes and regulatory relationships, they may face challenges adapting to evolving regulatory expectations and competing with agile FinTech startups (Didenko, 2020; Marotta & Madnick, 2021; Shandilya, Datta, Kartik, & Nagar, 2024).

3.4. Investment Trends in FinTech

The proliferation of FinTech startups has been fueled by a surge in investment from venture capital firms, private equity investors, and corporate investors seeking to capitalise on the potential for disruption in the financial services industry. FinTech investment has soared to new heights recently, with billions of dollars pouring into startups across various sectors, including payments, lending, wealth management, and insurance.

These investments have enabled FinTech startups to scale their operations, expand their product offerings, and enter new markets, accelerating the pace of disruption in the financial services industry. Moreover, strategic partnerships and collaborations between FinTech startups and traditional banks have emerged as a common strategy for driving innovation and fostering growth.

However, the influx of capital into the FinTech space has also raised concerns about valuation bubbles, investor appetite for risk, and the sustainability of business models. As competition intensifies and market dynamics shift, investors increasingly focus on backing startups with strong fundamentals, scalable business models, and a clear path to profitability (Bollaert, Lopez-de-Silanes, & Schwienbacher, 2021; Chiu, 2016).

4. Financial Analysis of the Impact: FinTech vs. Traditional Banking

The disruption caused by FinTech in the traditional banking sector has prompted a closer examination of the financial performance and competitive dynamics between FinTech companies and traditional banks. This financial analysis delves into key metrics such as market share, growth trends, profitability, efficiency, and innovation to assess the impact of FinTech on traditional banking revenue streams and business models.

4.1. Market Share and Growth Trends of FinTech Companies

FinTech companies have experienced rapid growth and expansion in recent years, capturing an increasing financial services market share. According to industry reports, global investment in FinTech reached a record high recently, with billions of dollars pouring into startups across various sectors, including payments, lending, wealth management, and insurance.

This investment surge has fueled FinTech companies' growth, enabling them to scale their operations, expand their product offerings, and enter new markets. As a result, FinTech firms have captured market share from traditional banks and disrupted established business models (Tanda & Schena, 2019). Moreover, changing consumer preferences and technological advancements have further accelerated the adoption of FinTech solutions, driving demand for digital-first banking experiences that are convenient, seamless, and personalised. This shift in consumer behaviour has created significant opportunities for FinTech companies to gain traction and compete with traditional banks on a level playing field (Okatta, Ajayi, & Olawale, 2024b; Olaoye, 2023; Olawale, Ajayi, Udeh, & Odejide, 2024; Weichert, 2017) .

4.2. Financial Performance Comparison between Traditional Banks and FinTech Firms

In terms of financial performance, traditional banks and FinTech firms exhibit distinct characteristics and metrics. Traditional banks typically have large balance sheets, diversified revenue streams, and extensive branch networks, contributing to their stability and resilience. However, they may face challenges related to legacy systems, high operating costs, and regulatory compliance.

On the other hand, FinTech firms are known for their agility, innovation, and focus on customer experience. While many FinTech startups are still in the early stages of growth and may not be profitable initially, they often demonstrate rapid revenue growth and scalability. Moreover, FinTech companies tend to have lower overhead costs and can operate with leaner organisational structures than traditional banks. To assess the financial performance of traditional banks and FinTech firms, key metrics such as revenue growth, profitability, efficiency, and innovation should be considered. Traditional banks typically generate revenue through net interest income, fees and commissions, and other sources such as trading and investment banking activities (DeYoung & Rice, 2004; Edwards & Mishkin, 1995). In contrast, FinTech companies may generate revenue through transaction fees, subscription-based services, licensing fees, and other revenue streams. While traditional banks may have higher profit margins due to their established customer base and diversified product offerings, FinTech firms may demonstrate higher revenue growth rates and scalability potential (Moro-Visconti, Cruz Rambaud, & López Pascual, 2020; Okatta, Ajayi, & Olawale, 2024a; Olaoye, 2023).

4.3. Assessment of Profitability, Efficiency, and Innovation Metrics

Profitability is a critical metric for assessing the financial health and sustainability of both traditional banks and FinTech firms. Traditional banks typically measure profitability using metrics such as return on assets (ROA) and return on equity (ROE), which reflect the bank's ability to generate profits relative to its assets and shareholders' equity (Klaassen & van Eeghen, 2015; Sayani, Kishore, & Kumar, 2017).

FinTech companies, on the other hand, may use alternative metrics such as gross merchandise volume (GMV), customer acquisition cost (CAC), and customer lifetime value (CLV) to evaluate profitability and growth potential (Sieber & Guibaud, 2022). While FinTech startups may prioritise revenue growth and market share acquisition over short-term profitability, investors and stakeholders often scrutinise key financial metrics to assess the company's long-term viability and scalability. Efficiency is another important metric for evaluating the performance of traditional banks and FinTech firms. Efficiency ratios such as the efficiency and cost-to-income ratios measure the bank's ability to generate revenue relative to its operating expenses. Lower efficiency ratios indicate higher levels of efficiency and operational effectiveness (Hussain, 2014).

FinTech companies may use metrics such as customer acquisition cost (CAC) and customer lifetime value (CLV) to evaluate the efficiency of their marketing and sales efforts. By optimising customer acquisition and retention strategies, FinTech firms can improve profitability and maximise the lifetime value of each customer. Innovation is a key differentiator for both traditional banks and FinTech firms as they seek to differentiate themselves in a crowded market and stay ahead of competitors. Traditional banks may invest in technology and digital transformation initiatives to enhance customer experience, streamline operations, and improve risk management (Ganguly, Harreis, Margolis, & Rowshankish, 2017; Reyes-Mercado & Reyes-Mercado, 2021).

FinTech firms, conversely, are known for their culture of innovation and agility, leveraging emerging technologies such as blockchain, artificial intelligence, and big data analytics to develop cutting-edge solutions that disrupt traditional

banking models. By fostering a culture of innovation and experimentation, FinTech companies can drive growth, attract top talent, and stay ahead of the curve in a rapidly evolving industry.

4.4. Impact on Traditional Banking Revenue Streams and Business Models

The disruption caused by FinTech has significant implications for traditional banking revenue streams and business models. As FinTech companies continue to gain traction and capture market share, traditional banks may face pressure to adapt and innovate to remain competitive.

One area where traditional banks may feel the impact of FinTech disruption is in payments and transaction processing. FinTech companies offering digital payment solutions, peer-to-peer lending platforms, and blockchain-based payment networks are challenging traditional payment processors and remittance services by offering faster, cheaper, and more convenient alternatives (Regmi, Rai, & Khanal, 2021). Moreover, FinTech firms are reshaping the lending landscape by providing alternative financing options such as peer-to-peer lending, crowdfunding, and online lending platforms. By leveraging technology and data analytics, FinTech lenders can offer faster loan approvals, lower interest rates, and more personalised lending solutions than traditional banks (Berg, Fuster, & Puri, 2022).

Additionally, FinTech companies are disrupting traditional banking models in areas such as wealth management, insurance, and capital markets. Robo-advisors and automated investment platforms challenge traditional wealth management firms by offering low-cost, algorithm-driven investment advice and portfolio management services. InsurTech startups leverage technology to streamline insurance processes, improve risk assessment, and enhance customer experience. Meanwhile, crowdfunding platforms and alternative investment vehicles democratise access to capital markets and provide new opportunities for investors and entrepreneurs (Wales, 2017). In response to the threat of FinTech disruption, traditional banks are adopting various strategies to remain competitive and retain market share. These strategies may include investing in technology and digital transformation initiatives, partnering with FinTech startups, acquiring innovative companies, and diversifying revenue streams through new product offerings and services (Assadi, 2018; Catalini, Fazio, & Murray, 2016).

5. Implications and Future Outlook

The disruption caused by FinTech in the traditional banking sector has profound implications for industry stakeholders, presenting challenges and opportunities in equal measure. As traditional banks grapple with the implications of FinTech disruption, they must develop strategies to adapt and compete in an increasingly digital and customer-centric landscape.

5.1. Implications of FinTech Disruption on Traditional Banking: Challenges and Opportunities

The rise of FinTech poses several challenges for traditional banks, including increased competition, margin pressure, and the risk of disintermediation. FinTech firms leverage technology and innovation to deliver faster, cheaper, and more convenient financial services, eroding the traditional advantages of brick-and-mortar banks.

Moreover, FinTech disruption threatens traditional revenue streams and business models, particularly in payments, lending, and wealth management. Traditional banks must also contend with changing consumer preferences and expectations, as digital-native customers demand seamless, personalised, and mobile-first banking experiences. However, FinTech disruption also presents opportunities for traditional banks to innovate and differentiate themselves in a crowded market. By embracing digital transformation, investing in technology and talent, and fostering a culture of innovation, traditional banks can leverage their existing strengths and resources to compete more effectively with FinTech firms.

5.2. Strategies for Traditional Banks to Adapt and Compete with FinTech Firms

To navigate FinTech disruption successfully, traditional banks must develop comprehensive strategies that address both short-term challenges and long-term opportunities. Embracing digital transformation requires investments in technology and digital infrastructure to streamline operations, improve efficiency, and enhance customer experience. This involves upgrading legacy systems, adopting cloud computing, and implementing advanced analytics and AI-driven solutions.

Additionally, partnering with FinTech startups allows traditional banks to access innovative technologies, expand product offerings, and reach new customer segments. By combining the strengths of traditional banking with the agility and innovation of FinTech, banks can create value for customers and drive growth. Prioritising customer experience is

paramount in the digital age, necessitating seamless, personalised, and omnichannel banking experiences. Leveraging data analytics and customer insights enables banks to anticipate needs, personalise interactions, and build deeper client relationships. Furthermore, enhancing risk management and compliance frameworks is crucial as FinTech disruption introduces new risks and regulatory challenges. This entails implementing robust cybersecurity measures, enhancing fraud detection capabilities, and ensuring compliance with evolving regulatory requirements.

5.3. Future Outlook

The future of FinTech and traditional banking will likely be characterised by continued innovation, collaboration, and competition. FinTech firms will continue to disrupt traditional banking models, leveraging emerging technologies such as blockchain, AI, and IoT to drive further innovation and reshape the financial services landscape. Traditional banks, meanwhile, will face increasing pressure to adapt and evolve in response to FinTech disruption. Those who successfully embrace digital transformation, foster a culture of innovation, and prioritise customer experience will thrive in the new banking era.

Moreover, regulatory developments and geopolitical factors will shape the future of FinTech and traditional banking, influencing market dynamics, investment trends, and industry consolidation. Collaboration between regulators, industry stakeholders, and technology innovators will be essential to foster a supportive regulatory environment that encourages innovation while safeguarding consumer protection and financial stability.

6. Conclusion

In conclusion, FinTech disruption presents challenges and opportunities for traditional banks, requiring them to adapt and innovate to remain competitive in a rapidly evolving landscape. By embracing digital transformation, partnering with FinTech startups, and prioritising customer experience and innovation, traditional banks can navigate FinTech disruption successfully and position themselves for long-term growth and sustainability.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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