**Redefining Banks in the Digital Era:**

**A Typology of Banks and Their Research, Managerial and Policy Implications**

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**Abstract**

**Purpose**: This study aims to shed light on the evolving nature of banks in the digital era and the implications for bank marketing and management. The research addresses the need for a comprehensive typology of banks that integrates fintech and explores how traditional and app-only banks strategically position their brands. The key argument is that understanding the changing landscape of banking and the impact of technological advancements is crucial for banks to navigate the challenges and opportunities presented by fintech and digital transformation.

**Methodology:** This study examines literature and practices to develop a typology of banks, describing their characteristics, strengths, weaknesses, and providing examples. It also proposes new research agendas for scholars and practitioners in the field.

**Findings:** This paper introduces a typology of banks based on their adoption of fintech and digital technologies. Three distinct types of banks are identified: Traditional banks adopting FinTech (TBAF), Traditionally Driven Neo Banks (TDNBs), and Digitally Driven Neo Banks (DDNBs). TBAF are traditional banks that have embraced fintech solutions to enhance their operations and customer experiences. TDNBs represent a hybrid model, combining the trusted brand and infrastructure of traditional banks with the digital capabilities and agility of neo banks. DDNBs are purely digital banks that operate exclusively online, offering innovative and user-friendly banking services.

**Originality/value:** This study is a pioneering work that classified banks based on their utilization of fintech and digital technologies. The study provides a typology of banks based on fintech adoption, offering valuable insights for bank managers, policymakers, and researchers. The research also outlines a research agenda, suggesting future investigations to further enhance understanding of the evolving banking landscape and its implications.

***Keyword:*** traditional bank, neo bank, challenger banks, typology, bank marketing

# Introduction

Internet-enabled banking operations have transformed banking practices, shifting how we engage with financial institutions (Nguyen, et al., 2022; Fan, 2022; Alalwan, et al., 2023). Long gone are the days of physically visiting a high street banking hall; now, everything takes place online (Nguyen & Mogaji, 2022a). Today, thanks to the internet and user-friendly mobile applications, consumers can open bank accounts more efficiently without ever needing to visit an actual branch in person (Contreras Pinochet, et al., 2019; Nguyen, et al., 2022). This transformation has profoundly altered the banking landscape and provided opportunities for newcomers to challenge traditional models of bank management (Mainardes & Freitas, 2023). Industry observers are witnessing an explosion of innovative players that use technology to deliver customer-friendly banking experiences (Alalwan, et al., 2023; Abdulquadri, et al., 2021), disrupting traditional models through digitalization and redefining banking practices. Nejad (2022) describes this trend of financial innovations, suggesting how the banking sector has experienced dramatic transformation since digitalization has come of age, redefining banking processes (Murinde, et al., 2022; Fan, 2022).

Banking landscape is currently experiencing an evolution beyond established methods like internet and mobile banking with the rise of an innovative form known as app-only banks (also called neo banks) (Contreras Pinochet, et al., 2019; Mainardes & Freitas, 2023; Nguyen, et al., 2022). Neo banks aim to meet consumers' changing expectations when banking digitally (Nguyen & Mogaji, 2022b). This innovative banking model holds significant ramifications for conventional banks, necessitating greater reliance on technological developments across all aspects of operations (Chan, et al., 2022). Conventional high street banks have recognized the rise and potential of neo banks, realizing the necessity to establish app-only banks as brand extensions to better satisfy digitally minded customers (Mainardes & Freitas, 2023). This trend calls for a transformation within banking as industries adapt to meet digital-driven customer expectations.

Due to these advances, banking classification has become ever more complicated due to a proliferation of types such as retail banks, corporate, investment banks, cooperative institutions, and now fintech firms. Many studies have even considered fintech as banks (Contreras Pinochet, et al., 2019; Mainardes & Freitas, 2023; Nguyen, et al., 2022), highlighting a mixed understanding of what truly defines a bank. Notwithstanding, this study specifically addresses fintech integration as a framework for classifying banks more precisely. It addresses two central questions: firstly, how can banks be classified amidst the ongoing fintech and digital transformation? And secondly, how should these changes impact classification methods of banks? And thirdly, what are the implications of this new bank classification for the marketing and management of banks? By exploring fintech integration within banking industries, this research seeks to shed light on banks as an ever-evolving entity as well as technological progress' impact (Chan, et al., 2022; Abdulquadri, et al., 2021). This study seeks to provide a thorough examination of how banks should be classified within today's rapidly shifting financial landscape and to explore their marketing and management implications in relation to fintech transformation and digital disruption (Nguyen & Mogaji, 2022b; Nguyen, et al., 2022). Through insights gained through this study, managers can assist banks with successfully meeting both challenges and opportunities presented by fintech disruption and digital disruption.

This study adds an invaluable new element to existing literature on strategic management and marketing within banking and financial services industries, specifically banking & finance services (Alalwan, et al., 2023; Soetan, et al., 2021; Nguyen, et al., 2022). Moving beyond established research on mobile banking (Fan, 2022; Nejad, 2022), it recognizes digital banking's growing significance. Within the context of classifying banks, this study offers a detailed typology based on how financial technology adoption impacts banks - both traditional and app-only banks - when strategically positioning themselves to attract customers. Further, this study presents a research agenda, setting the scene for further investigations. By broadening our understanding of banking evolution, this research can offer valuable insight for bank managers, policymakers, and researchers alike.

This paper is organized as follows. Section 2 looks at how fintech has caused disruption within banking industries by revolutionising traditional practices through technological development. Section 3 introduces the bank typology, outlining i key characteristics, strengths, weaknesses and providing examples from each category. Further sections then address its important implications for bank managers and researchers alike. These papers explore managerial considerations, strategic decisions, and research agendas arising from an evolving banking landscape. Furthermore, policy implications are addressed before concluding with key findings and contributions made both managerially and theoretically.

# FinTech disrupting Banking.

Financial technology (fintech) encompasses a wide range of technological advancements, applications, and business models that aim to improve financial services (Alalwan, et al., 2023; Abdulquadri, et al., 2021). Fintech refers to the use of technology and innovation to enhance and streamline various aspects of financial services, including banking, payments, investments, insurance, and more (Bapat & Khandelwal, 2023; Boot, et al., 2022). It leverages cutting-edge technologies, such as artificial intelligence, machine learning, blockchain, data analytics, and cloud computing, to deliver innovative and efficient financial solutions (Fan, 2022; Mogaji & Nguyen, 2022a; Nguyen, et al., 2022). From the days of internet banking to mobile banking and contactless payment, fintech has disrupted traditional banking models and challenged established financial institutions to embrace digital transformation (Fanning & Centers, 2016; Lee & Pan, 2023; Mainardes & Freitas, 2023).

The transformative power of fintech lies in its ability to streamline processes, enhance accessibility, and provide tailored experiences for customers. Fintech solutions encompass a diverse array of services, including digital banking platforms, mobile payment apps, peer-to-peer lending platforms, robo-advisors, crowdfunding platforms, insurtech solutions, and much more. In their editorial on Artificial intelligence and financial services marketing, Mogaji, et al. (2022) noted that fintech offers new and alternative ways for individuals and businesses to manage their finances, make payments, access credit, and invest their assets. Fintech has revolutionized banking operations by introducing digital banking platforms, mobile apps, and online payment systems (Levy, 2022; Nejad, 2022). These innovations have made banking services more accessible, convenient, and efficient, enabling customers to perform transactions, manage accounts, and access financial information anytime, anywhere (Mogaji & Nguyen, 2022).

Fintech has raised the bar for customer expectations in banking. The seamless user experiences provided by fintech platforms have created a demand for similar convenience and personalized services in traditional banking (Alalwan, et al., 2023). As a result, traditional banks are investing in digital channels, user-friendly interfaces, and enhanced customer experience initiatives to meet evolving customer demands and stay relevant. Traditional banks are leveraging fintech to offer digital banking services that mirror the convenience and accessibility provided by fintech startups. Abdulquadri et al. (2021) conducted a study investigating the integration of chatbots into banking operations, shedding light on how banks are leveraging this technology. In a separate study, Mogaji and Nguyen (2022) explored the integration of artificial intelligence (AI) in financial services marketing, providing insights into how banks are utilizing AI-driven strategies to enhance their marketing efforts. Furthermore, Sheth et al. (2022) delved into the use of fintech by traditional banks to deliver personalized banking experiences, highlighting the transformative potential of fintech in shaping the customer journey within the banking industry. These studies collectively contribute to our understanding of how fintech is being adopted by traditional banks to drive innovation and improve customer experiences in the financial sector.

Fintech platforms have revolutionized the lending landscape by offering alternative financing options, connecting borrowers directly with investors through peer-to-peer lending platforms (Boot, et al., 2022). This bypasses traditional banks and streamlines the lending process, with data-driven algorithms and automated credit scoring models enabling faster loan approvals and improved credit access. Moreover, fintech has democratized investment and wealth management, as robo-advisors leverage algorithms and artificial intelligence to provide personalized investment advice, portfolio management, and automated financial planning (Fan, 2022; Boot, et al., 2022; Sheth, et al., 2022). This accessibility has reduced reliance on traditional financial advisors, making investing more inclusive. Additionally, fintech solutions have enhanced risk management and compliance processes, utilizing advanced data analytics, machine learning algorithms, and artificial intelligence to facilitate accurate risk assessments, fraud detection, and regulatory compliance monitoring. These technologies bolster security, minimize risks, and ensure adherence to regulations (Mogaji & Nguyen, 2022a; Sheth, et al., 2022).

Considering the growing benefits of digital transformation, it has become increasingly apparent that scholars often describe fintech as banks that compete with traditional banks. For example, Contreras Pinochet, et al. (2019) noted that their study includes ‘how FinTechs fit the Brazilian credit market and an evaluation of consumer behaviour in relation to the use of FinTechs compared to traditional services’ (p. 1191), here comparing the consumers’ propensity to use services from lending digital banks compared to traditional banks. Likewise, (Murinde, et al., 2022) explored ‘customer satisfaction and loyalty in the banking sector, comparing these relationships between traditional banks and fintechs (p. 642), here also presenting fintech as a type of bank. Even (Suryono, et al., 2020) presented fintechs as financial service providers. However, it is essential to distinguish between fintech and banks. Fintech refers to the technologies being used by banks and other financial services providers, including insurance, wealth management, and even healthcare.

Bapat (2022) highlights the presence of fintech firms, commonly referred to as fintech startups, in the digital financial services landscape. However, it is important to note that these startups do not automatically become banks. Banking services are heavily regulated, and for a fintech startup to offer financial services, they must undergo regulatory processes and compliance requirements. By successfully registering and adhering to these regulations, fintech startups can transform into a distinct type of bank that utilizes fintech to deliver their financial services. This emerging breed of banks begins as fintech startups and eventually obtains the necessary licenses to operate as fully-fledged banks, albeit with some regulatory restrictions. Leveraging technological advancements, these banks employ innovative solutions that enable faster, more secure, and borderless transactions (Stegmeier & Daniels, 2021). They embrace the concept of open banking, facilitated by fintech, which allows traditional banks to securely share customer data with trusted third-party providers via application programming interfaces (APIs) (Suryono, et al., 2020). This collaboration and the resulting dynamic ecosystems strengthen the overall banking industry, driving technological advancements, and ultimately enhancing the quality of financial services for customers (Peyton, 2018).

These banks, known as neo banks, challenger banks, or app-only banks, have emerged by catering to the technological needs of consumers and offering innovative solutions that leverage fintech (Contreras Pinochet, et al., 2019; Mainardes & Freitas, 2023). They have disrupted traditional banking models and provide a seamless and enhanced banking experience. According to England (2022), the global count of challenger banks in 2021 was reported to be 248. However, recent data indicates a notable increase, with the current tally reaching 291 as of Q4 2022. A remarkable surge in challenger banks has been observed in Europe, making the region a frontrunner in this trend. Between October 2021 and October 2022, Europe experienced a significant growth rate of 27.6% in new digital banks. With a total of 97 active challenger banks, Europe solidifies its position as the world leader in digital banking, showcasing its prominence and innovation in the industry.

As the fintech industry continues to witness the proliferation of fintech providers, particularly neo banks, offering a broader range of financial services beyond traditional banks (Chan et al., 2022), it becomes imperative to reevaluate and redefine our understanding of banks, particularly in the realm of retail banking. The dynamic and ever-evolving landscape of fintech calls for the development of an updated typology that effectively captures the emerging trends and innovations within the retail banking sector. This revised typology should encompass not only traditional banks but also a diverse spectrum of financial service providers that have embraced fintech solutions. By adopting this comprehensive approach, researchers, practitioners, and policymakers can gain deeper insights into the changing dynamics of the banking industry and adapt their strategies to meet the evolving needs of customers in this technologically driven era.

The proposed typology challenges our existing theoretical and managerial frameworks, encouraging us to broaden our perspectives and embrace the transformative power of fintech in redefining traditional financial services. By embracing fintech solutions, banks can enhance operational efficiency and significantly improve the overall customer experience through digital transformation. This evolving nature of fintech requires continuous research, collaborative efforts between researchers and industry practitioners, and active engagement from policymakers to effectively navigate the opportunities and challenges presented by this rapidly changing landscape. Staying attuned to the latest advancements in fintech and adapting strategies accordingly will be crucial in harnessing the full potential of fintech for the future of banking.

# Typology of Banks

A typology is a classification system or framework designed to classify entities based on shared characteristics or attributes that allow an effective framework to describe complex organizational structures (Doty & Glick, 1994). A typology provides an effective means of categorizing items into distinct types or categories in order to better comprehend and analyse them (Edwards, 2021). Typologies have become popular tools across disciplines, including social sciences, anthropology, biology, and business, for creating meaningful classifications that highlight patterns among entities by creating meaningful classification systems that help identify patterns of similarity or differences among entities among entities (Doty & Glick 1994). Typologies have proven particularly useful tools in such studies (Doty and Glick 1994) when categorizing items by common characteristics or attributes among entities (or distinguishable qualities among entities), making organization and analysis easier (or otherwise).

In the specific context of this research, a typology of banks is developed to classify banks based on their adoption of fintech and digital technologies. This classification system aims to provide insights into the evolving nature of banks in the digital era. The typology proposed in this study includes three types of banks:

1. Traditional banks adopting FinTech (TBAF),
2. Traditionally driven Neo Banks (TDNBs), and
3. The Digitally driven Neo Banks (DDNBs).

This section introduces these banks, outlining their key characteristics, strengths, weaknesses, and providing relevant examples. Figure 1 presents a graphical illustration of the different types of banks.

A close-up of a sign

Description automatically generated with medium confidence

Figure 1: The Spectrum of Bank Typology. Source: Author’s own creation

## Traditional banks adopting FinTech (TBAF)

Traditional banks with physical branches are what most people consider banks (Mainardes & Freitas, 2023). The banks have likely adopted (financial) technology in order to enhance their business operations with online banking, mobile banking, artificial intelligence (AI) (Chan, et al., 2022; Lee & Pan, 2023; Mogaji, et al., 2022), and other forms of digital transformation for banking digital transformation initiatives (Fan, 2022; Nejad, 2022). TBAF boasts a vast customer base and offers an expansive array of financial products and services tailored to diverse customer requirements. Utilizing physical branches allows these financial firms to provide hybrid banking experiences combining digital with in-person services for enhanced customer convenience while offering face-to-face interactions when needed.

FinTech solutions allow TBAFs to streamline processes, provide digital banking services, and remain competitive in an ever-evolving financial landscape (Alalwan, et al., 2023). One of their greatest strengths lies in their established brand recognition. TBAFs often enjoy a longstanding presence within an industry and strong brand recognition, instilling customer confidence thanks to the stability and reliability synonymous with traditional banks. Mainardes & Freitas (2023) noted traditional banks’ customer satisfaction through awareness typically leads to positive outcomes in terms of increased customer loyalty. Mogaji & Danbury (2017) found that UK bank consumers recognised the emotional appeals in advertisements being presented by their traditional banks. Likewise, in business-to-business financial services provision by traditional banks, the brands are well recognised (Mogaji, et al., 2018). Physical branch networks also present banks with an advantage for customers who prefer in-person interactions or need help with complex transactions, as well as those who prefer speaking directly with bank staff for physical banking services in developing nations or with vulnerable consumers who prefer talking face-to-face in branch locations (Mogaji, et al., 2020a). It is, however, imperative to recognize how the COVID-19 pandemic has affected banks by decreasing footfall in their branches (Higgs, et al., 2022). TBAFs operate under an established regulatory framework and must abide by various financial regulations, giving customers confidence in the security and stability of their funds while offering them a wide variety of financial products and services - savings accounts, loans, mortgages, investment services, etc. (Czarnecka & Mogaji, 2020). They serve customers well by being a one-stop-shop for their banking needs.

While banks have numerous benefits and advantages, one major drawback of operating is adapting and integrating new technologies. Mogaji & Nguyen (2022), in their study on AI integration into banks, identified that traditional banks may encounter challenges modernizing legacy systems while seamlessly adopting emerging technologies. They must navigate a complex IT infrastructure while managing resistance from internal stakeholders as they transform. Due to their size and organizational structure, traditional banks tend to lack agility compared to digitally native banks in making decisions quickly, keeping up with technological advances, customer needs, and meeting customer service obligations (Mainardes & Freitas, 2023). They face difficulty keeping pace with rapid technological change while satisfying customers' expectations for service delivery (Nguyen, et al., 2022). Young tech-savvy consumers tend to associate traditional banks, like TBAFs, with being less innovative or technologically advanced compared to fully digital banks such as Neo banks or fully digital banks - leading them to misperceive them as less innovative or technologically advanced than their neo bank counterparts (Chan, et al., 2022; Contreras Pinochet, et al., 2019; Lee & Pan, 2023). This perception may hinder their efforts at attracting tech savvy clients (Nguyen & Mogaji, 2022b).

TBAF banks can be found worldwide and play an essential role in banking sectors around the globe. Notable examples in various regions can include Barclays, HSBC, Lloyds and NatWest in the UK; in Nigeria Access Bank, Ecobank, Zenith Bank, and United Bank for Africa (UBA). India has HDFC Bank ICICI State Bank Kotak Mahindra Bank HDFC, and HDFC. In Canada, there is the Royal Bank of Canada (RBC), Toronto-Dominion Bank (TD Bank), and Scotiabank. These TBAF boast many physical ATMs as well as identifiable brand identities in various locations around their countries of operations.

## Traditional Driven Neo Banks (TDNBs)

TDNBs represent an emerging phenomenon created as traditional banks enter digital channels as brand extensions. Clarifying how these banks were established is vital – They were established by Traditional banks as a means of brand extension and market expansion to cater to the diverse needs of different customer groups. These TDNBs represent an innovative blend between neo banks and traditional banks, providing convenient online operations while capitalizing on their parent brand's established digital and physical infrastructure. There is limited theoretical awareness and understanding about TDNBs, as many may sometimes confuse them with a digitally driven neo banks, especially when the brand architecture is not very clear, and consumers cannot identify the parent brand. Notwithstanding, it is imperative to recognise that these TDNBs give customers the best of both worlds by drawing upon both parent brand resources while taking full advantage of digital innovation. Operating online channels mainly, these TDNBs deliver convenient banking experiences tailored to customer preferences.

Capitalizing on their existing brand recognition and infrastructure, TDNBs may offer more services while reaching more customers. TDNBs provide an innovative blend of digital and traditional banking elements, making them key players in an ever-evolving financial landscape. They distinguish themselves by offering competitive features such as lower fees or better interest rates to attract customers - something which differentiates TDNBs from their rivals. While they benefit from their parent bank's infrastructure, TDNBs may face certain limitations with respect to product offerings compared to traditional banks. Their offerings tend to more closely mirror that of their parent bank rather than offer niche or specialty items. TDNBs’ limitation

TDNBs boast an unrivalled advantage: their ability to exploit their parent bank's customer base for cross-selling opportunities. By strategically marketing digital banking services to existing customers who prefer an amalgam of trust, reliability, and innovation with modern features that distinguish neo banks like their TDNB, these banks can effectively target and capture niche markets that might otherwise go untouched. Using their parent's established trust and brand reputation, they entice existing customers to explore and adopt digital offerings more readily than competitors might otherwise.

Targeted marketing initiatives and tailored product offerings allow TDNBs to effectively attract tech-savvy individuals searching for an integration between traditional banking values and fintech solutions with convenient fintech solutions. Through such targeted approaches, they can position themselves as reliable providers of digital banking while still benefiting from existing customer bases. Furthermore, by offering platforms or apps dedicated to digital banking experiences, they cater specifically to customers who prioritize such experiences over maintaining the reputation and stability associated with parent banks.

By taking advantage of cross-selling opportunities, TDNBs not only enhance customer engagement but also expand their customer base - becoming formidable players in the competitive digital banking space. Their advantageous positioning enables them to meet customers' evolving requirements for convenience, security, and technological advances offered by digital banking while still upholding trust between themselves and traditional parent banks.

However, TDNBs face certain constraints that can diminish their competitive positioning within digital banking landscape. One such constraint lies in what products and services they can offer relative to neo banks due to being affiliated with their parent bank; often, their offerings mirrored that of their parent bank, which limits them from offering niche or specialized products like those typically available via fully digital banks. Branding-wise, TDNBs face unique branding challenges when trying to establish their individual identities and separate themselves from their parent banks' brands. Customers may use TDNBs without realizing it is associated with them. These shortcomings in awareness may impede TDNBs from creating their own distinct brand image, leading to customers viewing them simply as extensions of larger traditional banks. As Mogaji & Danbury (2017) noted, consumers’ personal encounters with the bank brands could influence how they engage with the bank advertisements. Similarly, there are potential for meaning transfer (Czarnecka & Mogaji, 2020), where customers familiar with their parent brand might perceive TDNBs as less agile or innovative compared to fully digital neo banks, due to being tied to larger institutions; the perception that being tied may influence customer adoption and market position - customers may perceive that standalone neo banks offer greater technological advancement - thus possibly leading them away from adopting digital banking services offered by TDNBs.

Mettle is an example of a traditionally driven Neo Bank (TDNB). Created by NatWest, an established traditional UK bank, this digital bank operates offering services directly to customers while taking advantage of infrastructure and reputation of parent bank NatWest (Mettle, 2023). Mettle Bank provides both convenience and innovation akin to that found within modern neo banks with the trust and security associated with NatWest. Mettle stands as an example of how traditional banks such as NatWest can adapt by opening a TDNB to meet customer demand for digital banking experiences, while maintaining their reputation and stability through parent bank backing. Openbank was Spain's inaugural TDNB when established by Grupo Santander (Openbank, 2017), with plans to establish another one in Mexico by 2024 (Hilaire & Torres 2023). Alat Bank is another example created by Wema Bank - traditional bank based out of Nigeria (Wema Bank, 2020); Leobank belongs to Unibank one of Azerbaijan's leading traditional banks (Unibank, 2023), while Space TDNB was launched by TBC Group Bank, a traditional bank located in Georgia (Peyton, 2018).

TDNBs have the potential to undergo significant changes in their positioning within the typology. It is plausible for TDNBs to transition into DDNBs when they sever ties with their parent brand. This process can be referred to as debranding, divestiture, or the selling off of a subsidiary (Kwon, et al., 2023)), wherein the parent brand (TBAF) disposes of the TDNBs to streamline its operations. The future trajectory of TDNBs can unfold in three directions.

First, The TDNBs could be sold off by their parent brand and subsequently acquired by another TBAF. In this scenario, the brand would be absorbed into the acquiring TBAF, losing its unique identity as it integrates into a new brand architecture.

Alternatively, the TDNBs might be softly divested and acquired by another bank but allowed to operate as a standalone entity. In this case, they would not be absorbed and could retain their brand identity and customer base. This was the case of ING Direct USA, which was sold by ING Dutch multinational banking and financial services corporation (a TBAF) to Capital One Financial Corporation, a leading US-based financial holding company (ING Direct, 2011). The divestment is a crucial aspect of ING's restructuring plan, which was submitted to the European Commission in 2009 as a requirement to gain the Commission's approval for the financial support ING received from the Dutch State during the financial crisis. As part of this plan, ING is taking strategic measures to align its operations and meet the Commission's conditions for ensuring a stable and sustainable financial environment.

A third possibility involves the TDNBs being sold off to another fintech company or private investor, potentially one seeking entry into the marketplace. In such a case, the TDNBs would transform into DDNBs under the new ownership.

These potential directions showcase the dynamic nature of the banking landscape, where digital banks may adapt and evolve to meet changing market demands and strategic priorities. As the financial industry continues to evolve, these possibilities offer intriguing insights into the future of TDNBs and their potential roles within the broader banking ecosystem.

## Digitally Driven Neo Banks (DDNBs)

These are digital-first banks characterized by user-friendly online and app banking experiences fuelled by intuitive mobile applications that prioritize seamless digital experiences for their customers. These banks are frequently, albeit wrongly, referred to as fintech (Contreras Pinochet, et al., 2019; Mainardes & Freitas, 2023; Nguyen, et al., 2022). Meanwhile, they simply use fintech to streamline their banking business operations. DDNBs operate exclusively online without physical branches, providing an opportunity to build brands efficiently while offering innovative product development that quickly adapts to evolving customer needs and market trends (Mainardes & Freitas, 2023). This digital-first strategy also facilitates brand development effectively while quickly responding to any evolving customer requests or market changes that arise (Nguyen & Mogaji, 2022a). Fintech banks use technology to offer banking services via mobile apps that make banking services accessible without physical branches being necessary for customers (Nguyen & Mogaji, 2022b). This model allows digital bankruptcies (DDNBs) to establish themselves within the digital banking arena by meeting the preferences of tech-savvy individuals seeking convenient banking experiences with user-centric features (Bapat, 2022; Fan, 2022). Through rapid innovation and adaptation capabilities, DDNBs are revolutionising banking landscape and challenging established banking norms (Peyton, 2018; Contreras Pinochet, et al., 2019; Nguyen, et al., 2022).

Digital-First Neo Banks (DDNBs) hold distinct advantages within the banking industry (Mainardes & Freitas, 2023). By adopting an agile, innovative product development process with cutting-edge technologies and quickly responding to customer feedback, DDNBs excel in agility (Nejad, 2022). DDNBs prioritize user-friendly interfaces and intuitive mobile applications to offer frictionless digital banking experiences to their clients (Nguyen & Mogaji, 2022b). They demonstrate their adaptability by quickly altering offerings to address changing customer demands and market trends, using customer data analytics for personalized recommendations (Bapat, 2022). DDNBs also possess the potential for seamless integration with fintech services through partnerships, expanding their offering by adding budgeting tools, investment options, and integrations with third-party apps. All these characteristics place DDNBs amongst the frontrunners of banking transformation in today's modern environment and redefine customer experiences through modern banking experiences (Boot, et al., 2022).

Digital-First Neo Banks (DDNBs), while offering many advantages in the banking industry, still face several difficulties. One major difficulty of digital banks lies in their absence of physical branches and in-person support services that might attract customers who prefer face-to-face interactions or need assistance in performing complex transactions (Mainardes & Freitas, 2023). Without physical branches available to their customers, their ability to serve certain customer segments may become severely constrained, limiting their reach and impacting revenue generation (Nguyen & Mogaji, 2022a). Additionally, new DDNBs may struggle with limited brand recognition compared to more established banks; therefore, establishing trust through effective marketing and customer acquisition strategies becomes equally crucial. One major challenge facing DDNBs is security concerns associated with digital channels, particularly their increased reliance on them to store customer data and mitigate fraud risks. Mogaji & Nguyen (2022) identified this security concerns as one of the dark sides of fintech-driven financial services provision. Therefore, prioritizing comprehensive cybersecurity measures as part of customer data protection strategy. DDNBs must overcome the challenge of building trust from scratch as they lack the legacy and established reputation associated with traditional banks. Focusing on transparency, security and providing exceptional digital banking experiences to establish customer confidence will be essential if these newcomers hope to remain viable players in an evolving banking ecosystem.

Fintech advances, digital transformation efforts, regulatory initiatives promoting financial inclusion and open banking all contribute to its widespread presence across various regions (Peyton, 2018; Khalil, et al., 2022; Nejad, 2022). Monzo, Revolut, and Starling Bank are examples of DDNBs, and they have gained enormously in popularity throughout the UK for their user-friendly mobile applications and revolutionary features. Europe-based N26 and Bunq digital banks stand out as prominent examples, providing superior digital experiences and flexible banking services, respectively. Meanwhile, in North America, Chime Bank and Ally Bank have gained ground due to their focus on mobile-centric offerings that meet customer demands. Nigeria is home to banks such as Kuda and Opay that are capitalizing on the digital payments boom to provide integrated banking services to a vast customer base. Their success highlights the widespread adoption of digital-first models as institutions capitalize on opportunities presented by fintech, digital transformation, and regulatory support for financial inclusion and open banking initiatives.

The financial sustainability of digital banks operating with either no fees or very low prices is a significant topic of debate and consideration in the banking industry. While digital banks offer convenience and accessibility to a broad customer base, their ability to maintain profitability in the long term has been a subject of concern for some experts. Reynolds (2023) noted that DDNBs have experienced varying degrees of success and are focusing on profitability as investors are demanding returns on their investments. Likewise, O'Brien (2022) noted that predictions of a global recession and a perfect storm of rising interest rates and inflation in Europe are putting additional pressure on DDNBs. With DDNBs often targeting individuals and small businesses, they attract a segment of the population with limited financial resources. This raises questions about their ability to generate sufficient revenue to cover operational costs and remain profitable. With minimal or no fees, traditional revenue streams, such as transaction charges and account fees, may not be significant enough to sustain these banks in the long run. Many experts have suggested the possibilities of mergers, acquisitions, and partnerships as these DDNBs strive for survival. Affleck (2021) suggested a partnership between TBAFs and DDNBs, arguing that while DDNBs gain legitimacy and security, TBAFs can access new consumer markets as this extends geographic and demographic reach, offering customers high-tech tools for both partners.

Table 1 below presents a comparative summary table of the banks. In the dynamic landscape of the banking industry, these three distinct types of banks coexist, each shaping the way financial services are provided and experienced. Traditional banks with physical branches maintain their established brand recognition, catering to a wide customer base through a combination of online and in-person services. Digital-Driven Neo Banks (DDNBs), on the other hand, operate solely online, leveraging cutting-edge technologies to offer seamless digital experiences and revolutionizing the banking landscape. Meanwhile, the emergence of Traditional Digital Neo Banks (TDNBs) represents a convergence of traditional banks entering digital channels as brand extensions, capitalizing on their parent brand's reputation while providing innovative online banking experiences.

Traditional banks have long been the bedrock of the financial sector, trusted by consumers worldwide for their stability and wide array of financial products and services. Despite adopting fintech solutions to stay competitive, traditional banks may face challenges in adapting legacy systems to rapidly changing technological trends and meeting the expectations of tech-savvy customers. On the other hand, DDNBs have emerged as agile and innovative players in the digital banking arena, prioritizing user-friendly interfaces and offering tailored digital experiences to tech-savvy individuals. Their exclusive online presence allows for swift product development and quick responses to evolving customer needs and market trends. However, they may encounter difficulties in serving customers who prefer in-person interactions and establishing brand recognition compared to more established banks. In contrast, TDNBs strategically leverage their parent banks' reputation and infrastructure while embracing digital innovation to deliver convenient online banking experiences. These banks represent an innovative blend of traditional and digital banking elements, capturing niche markets and benefiting from cross-selling opportunities with their parent bank's customer base.

As the banking landscape evolves, new entrants in the form of digital banks will emerge, and mergers, acquisitions, and traditional banks acquiring digital banks will become possibilities. For example, BBVA acquired Simple, a digital bank, in 2014 to boost its digital banking expansion. However, after seven years, the Simple brand vanished as BBVA discontinued the banking app (BBVA, 2014; Groenfeldt, 2021). Challenger banks face financial sustainability challenges compared to traditional banks with their vast customer base and brand recognition. Understanding the strengths and limitations of each bank type is crucial for policymakers, financial institutions, and consumers. These three types of banks, whether collaborating or competing, play integral roles in driving innovation, accessibility, and customer-centric banking experiences in the digital age.

Table 1: A comparative summary table of the banks. Source: Author’s own creation

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| --- | --- | --- | --- |
| Characteristic | Traditional banks adopting FinTech (TBAF) | Traditional Driven Neo Banks (TDNBs) | Digitally Driven Neo Banks (DDNBs) |
| Also known as | High street bank  Traditional bank | Hybrid banks | Challenger bank  Digital Bank |
| Definition | TBAFs are traditional banks with physical branches that have adopted (financial) technology for online and mobile banking services. | TDNBs are digital banks owned by traditional banks. They offer both online and mobile banking services while benefiting from the parent brand's established digital infrastructure. | DDNBs are digital-first banks characterized by user-friendly online and app banking experiences, operating exclusively online without physical branches, offering innovative product development. |
| Customer Base | TBAFs serve a broad customer base and offer an array of financial products and services. They provide a wide range banking experiences by combining digital and in-person services for enhanced convenience. | TDNBs target diverse customer groups and benefit from their parent brand's customer base. They provide online banking services. They appeal to customers who wants a form of established security base of a traditional bank and tech-savviness of a digital bank | DDNBs cater to tech-savvy individuals seeking convenient digital banking experiences with user-centric features. They prioritize user-friendly interfaces and intuitive mobile applications. |
| Branding Challenges | TBAFs enjoy established brand recognition, instilling customer confidence. They may face challenges in perceived innovation compared to fully digital banks. | TDNBs may face branding challenges when establishing their individual identities. Customers might not associate them with their parent banks. They need to establish trust through marketing. | DDNBs may face challenges in establishing brand recognition compared to more established banks. Building trust and exceptional digital experiences are essential to establish customer confidence. |
| Product Offerings | TBAFs offer a wide variety of financial products and services, leveraging their established infrastructure. Their services include mortgages, credit cards and loans | TDNBs leverage their parent brand's resources and offer services in line with their parent banks' offerings. | DDNBs excel in agility and rapid innovation, quickly altering offerings to address changing customer demands and trends. They solely focus on retail banking and limited with their product offering, seldom offer loans and mortgages. |
| Examples | Barclays, HSBC, Lloyds (UK), Access Bank, Ecobank (Nigeria), HDFC Bank (India), Royal Bank of Canada (Canada) | BMO Harris Bank, Mettle Bank (UK), Openbank (Spain), Alat Bank (Nigeria), Leobank (Azerbaijan), Space (Georgia) | Monzo, Revolut, Starling Bank (UK), N26, Bunq (Europe), Chime Bank, Ally Bank (North America), Kuda, Opay (Nigeria) |
| Future Trajectory | TBAFs continue to adapt to digital transformation while serving a broad customer base through hybrid banking experiences. They may consider having their own TDNBs. | TDNBs may transition into DDNBs when severed from their parent brand. Their future could involve integration or divestiture. | DDNBs strive to build trust and recognition, expand customer base, and offer innovative digital experiences. Yet, low/no fees may lead to acquisition or liquidation for financial sustainability. |

# Discussion

This study recognizes fintech's disruptive influence on the banking sector and its emergence of non-traditional types of banks beyond retail, investment, and cooperative banks (Nejad, 2022; Bapat, 2022; Lee & Pan, 2023). It focuses on the growing importance of retail banks as emerging retail institutions and highlights their implications for bank practices and bank marketing strategies (Nguyen, et al., 2022). Recognizing that banks are distinct entities with unique target customers and marketing strategies (Czarnecka & Mogaji, 2020), this research fills a void in the existing literature on bank marketing by creating a typology capturing changes over time and offering theoretical support to understand these emerging bank types - thus contributing to research field around internet banking, fintech, and financial services marketing (Higgs, et al., 2022; Abdulquadri, et al., 2021; Alalwan, et al., 2023; Boot, et al., 2022).

This typology provides a valuable means of detecting and understanding transformations taking place within banking industry as a result of fintech innovation, while simultaneously analysing their effects. As it opens avenues for engaging discussions on various aspects, such as consumer behaviour, branding strategies and business operations for different banks - these discussions become more informative (Fan, 2022; Nejad, 2022). This study offers an in-depth examination of bank marketing under new fintech-driven types of banks. By shining light on these developments, this study encourages both academic discourse and practical considerations, leading to greater insight and more informed decision-making for bank marketing strategies overall. This paper contributes to bank marketing by investigating the theoretical, managerial, and policy repercussions of an emerging typology that recognizes new types of banks due to fintech disruption and provides research opportunities in studying them and their marketing strategies.

## Theoretical contribution

This typology presents a framework for classifying banks based on their utilization of fintech and digital technologies. It recognizes the significant impact of technology on banking operations and identifies mobile money (Mogaji & Nguyen, 2022), contactless payment (Alalwan, et al., 2023) mobile payment (Lee & Pan, 2023), banking apps (Levy, 2022), mobile investment technology (Fan, 2022) and payment management apps (Bapat & Khandelwal, 2023) as derivatives of fintech. It is crucial to differentiate between fintech and banks when examining bank marketing from a theoretical standpoint. The present study challenges previous studies that have posited fintech as banks (Contreras Pinochet, et al., 2019; Mainardes & Freitas, 2023; Nguyen, et al., 2022). This study emphasizes that financial technologies (fintechs) are NOT banks, but rather technologies employed to enhance banking operations.

Fintech encompasses a wide range of innovative technologies and services. From Blockchain and Cryptocurrencies to Mobile Payments, Peer-to-Peer Lending and Borrowing, Personal Finance Management, Robot-based Advice, and Stock Trading, these cutting-edge tools are revolutionizing how financial services are provided – streamlining operations and enhancing customer experiences (Abdulquadri, et al., 2021; Lee & Pan, 2023). Traditional banks, as well as app-only and challenger banks, incorporate these fintech solutions into their financial services provision. Fintech's impact extends across various sectors, including banks, insurance, retail, and investment companies, all of which leverage these advancements to improve their offerings and cater to the evolving needs of their customers (Sampat, et al., 2023). With the remarkable momentum gained by fintech, spearheading a digital transformation in the financial sector, it comes as no surprise that scholars and practitioners often associate fintech with traditional banks. However, by discerning these distinctions, we unlock the opportunity to analyse and delve into the unique marketing strategies and challenges that banks face in the digital age. This understanding is crucial for banks to remain competitive, as they must incorporate digital strategies into their operations and gain a theoretical grasp of the rapidly evolving landscape.

This study makes a significant contribution to the field of bank marketing by introducing a typology that categorizes banks based on their adoption of fintech and digital technologies. By moving beyond the traditional struggles of classifying banks, the typology presents a distinct set of bank types, each with their unique characteristics and implications for bank management and marketing. The study sheds light on the marketing implications for these new types of banks, expanding the scope of bank marketing efforts beyond traditional banks. It emphasizes the need to recognize the diversity within the typology and develop tailored marketing strategies that align with the specific characteristics and challenges of each bank type. As Nguyen, et al. (2022) established the consequences of brand reputation on fintech services, this research enhances our understanding of the evolving landscape of bank marketing and highlights the importance of adapting strategies to meet the needs of different types of banks.

Lastly, this typology makes a valuable theoretical contribution to bank marketing research by providing a framework for understanding and categorizing banks based on their adoption of fintech and digital technologies. As Doty & Glick (1994) noted that typologies are a unique form of theory building, this framework opens new avenues for future research and theoretical exploration in the field of bank marketing. Researchers can delve into the specific marketing strategies, challenges, and opportunities associated with each bank type within the typology. This typology also raises awareness about the diversity and evolving nature of banks in the digital era, prompting further investigation into the effectiveness of marketing approaches for different types of banks. Future research can explore the impact of technology adoption on customer behaviour, the role of branding and positioning in different bank types, and the relationship between marketing efforts and customer satisfaction in the context of the typology. By stimulating future research, this typology contributes to advancing knowledge and understanding in the field of bank marketing.

## Managerial Implications

The typology of banks presented in this study has important managerial implications for banks, investors, and policymakers. Managers of different bank types should tailor their strategies to address the unique characteristics and challenges of their banks. Emphasizing technology, customer experience, innovation, trust, and partnerships are key areas for success in the digital banking landscape. Here are the expected key managerial implications for each type of bank.

### Traditional banks adopting FinTech (TBAF)

Managers in TBAFs need to prioritize embracing and driving technological innovation within their banks. This involves identifying opportunities to leverage FinTech solutions, streamlining processes, and enhancing digital banking capabilities. They should lead the integration of new technologies, fostering a culture of innovation and overcoming resistance to change. Understanding evolving customer needs and preferences is essential. As advised by Mainardes & Freitas (2023), TBAF managers should focus on enhancing the customer experience through user-friendly interfaces, personalized services, and seamless digital banking. Leveraging customer data and analytics can enable targeted recommendations and tailored financial solutions. Strategic collaborations with fintech companies can expand service offerings and incorporate innovative features (Mogaji & Nguyen, 2022a).

Marketing efforts for TBAF should highlight their adoption of FinTech solutions to differentiate from traditional banks. As studies have compared the digital transformation strategies of these TBAFs (Chan, et al., 2022; Contreras Pinochet, et al., 2019; Mainardes & Freitas, 2023), it is imperative for managers to emphasize how technology enhances the banking experience, streamlines processes, and offers convenience to customers is crucial. TBAF can leverage their physical branches to provide a hybrid banking experience, catering to diverse customer preferences (Nguyen & Mogaji, 2022a). Marketing campaigns should highlight the benefits of digital and in-person options, emphasizing regulatory compliance, data security, and customer protection. Building trust and reassurance is vital for attracting and retaining customers in the competitive banking market. TBAFs should carefully craft their brand identity to strike a balance between traditional bank credibility and modern technological advancements (Hinson, et al., 2021; Mogaji, et al., 2023). The brand messaging should emphasize the bank's ability to offer the convenience of digital banking while maintaining the reliability and trust associated with traditional banks. Consistent branding across all physical and digital customer touchpoints is crucial to building familiarity, trust, and a cohesive brand image. When it comes to TDNBs, banks must consider the brand architecture and decide whether to endorse them as TDNBs powered by TBAFs or let them stand alone as independent brands (Mogaji, 2021).

### Traditionally driven Neo Banks (TDNBs)

Managers in TDNBs should leverage the parent bank's brand recognition and resources to establish a strong presence in the digital banking landscape. They should promote TDNB as an extension of the trusted parent bank's brand, emphasizing the benefits of a digital banking experience supported by the credibility and stability of the traditional bank. Continuous improvement and expansion of digital offerings are essential to attract and retain customers. TDNB managers should stay updated on market trends, customer feedback, and emerging technologies to drive innovation in digital banking. Cross-selling digital banking services to the parent bank's customer base is a strategic opportunity for TDNBs. Effective marketing strategies and communication channels should be developed to promote the TDNB to existing customers, showcasing the convenience and advantages of digital banking. Seamless integration between the parent bank and TDNB is crucial for a cohesive banking experience and maximizing cross-selling potential.

In marketing efforts, TDNBs should highlight their association with the trusted traditional bank, emphasizing the benefits of a digital banking experience backed by an established financial institution. TDNBs can leverage the brand equity and reputation of their parent banks to establish a strong brand identity. Branding efforts should focus on showcasing the parent bank's credibility, stability, and customer trust while highlighting TDNB's innovative and digital-focused offerings (Nguyen, et al., 2022). Brand management should ensure alignment between TDNB's brand positioning and the values and attributes of the parent bank. The TDNB's branding should complement and extend the parent bank's brand, providing a cohesive brand experience for customers and reinforcing the association between the two entities. Unique competitive advantages such as lower fees, better interest rates, specialized services, or innovative features should be communicated to attract customers. Personalized messaging should target existing customers to showcase the convenience and benefits of TDNB's digital banking services. By capitalizing on the parent bank's reputation and leveraging cross-selling opportunities, TDNBs can strengthen their position in the digital banking market.

### Digitally Driven Neo Banks (DDNBs)

DDNB managers should prioritize creating seamless and user-friendly digital banking experiences, continually innovating, and refining their mobile apps, interfaces, and features. As highlighted by Nguyen and Mogaji (2022b), DDNBs must not become complacent and assume they are immune to the need for fintech development and adoption. They should recognize that they are not exempt from the ongoing digital transformation strategies being implemented across the industry. They should conduct user testing, gather feedback, and implement improvements to ensure an intuitive and engaging digital banking experience. Building trust and credibility is crucial, as DDNBs may not have the established reputation of traditional banks. Managers should prioritize data security, privacy, and regulatory compliance to instil confidence in customers, communicating transparently and providing exceptional customer support (Nguyen, et al., 2022). Fostering an agile and adaptable organizational culture is essential, empowering employees to respond quickly to market changes and customer needs.

In terms of marketing, DDNBs should cultivate a brand image that reflects their disruptive and innovative nature. Branding efforts should position the bank as a cutting-edge, technology-driven institution that challenges traditional banking norms and provides a fresh alternative to customers. Brand management for DDNBs should emphasize building trust and credibility, especially since they may not have the same established reputation as traditional banks. Brand messaging should highlight the bank's commitment to security, data privacy, and regulatory compliance, assuring customers that their financial well-being is a top priority. DDNBs should emphasize their user-friendly interfaces, intuitive mobile apps, and digital features that provide a seamless and enjoyable banking experience. Marketing messages should highlight personalized services and targeted campaigns based on customer data and analytics. DDNBs should position themselves as innovative and forward-thinking brands, showcasing cutting-edge technology and the ability to adapt to emerging trends in the digital banking space. Marketing strategies should emphasize the bank's understanding of individual customer needs, tailored financial solutions, and relevant offers. By focusing on managerial, branding, and marketing implications, DDNBs can enhance their market positioning and drive customer engagement in the competitive digital banking landscape.

## Policy implications

Considering financial services is a highly regulated industry, there are significant implications for policymakers as they come to terms with this new bank (Alalwan, et al., 2023; Higgs, et al., 2022). With emerging trends of cryptocurrencies, blockchain, and even banking in the metaverse (Koohang, et al., 2023; Fanning & Centers, 2016; Ooi et al., 2023; Pal, et al., 2021), fintechs will continue to evolve and change banking services (Fan, 2022; Nejad, 2022). Policymakers need to recognize the evolving landscape of digital banking and fintech and adapt regulations accordingly, especially in many developing countries, as Mogaji & Nguyen (2022) noted, where policymaking is slowly catching up with technologies. Regulators need to be aware that different bank types within the typology may require tailored regulatory frameworks to ensure consumer protection, data privacy, and fair competition. Policymakers should consider flexible regulations that promote innovation and competition while safeguarding the interests of customers and maintaining financial stability.

The typology highlights the emergence of digital banks and neo banks that offer alternative banking services. Policymakers should encourage the development of these banks to promote financial inclusion, especially for underserved populations (Adeola, et al., 2021; Soetan, et al., 2021). Policies should facilitate the entry of new players and foster an enabling environment for innovation in banking, ensuring that digital banking solutions are accessible to all segments of society (Mogaji & Nguyen, 2022). Efficient consumer communication and education are vital. A regularly updated list of regulated financial services providers should be easily accessible to consumers, possibly on the regulator’s website. This ensures transparency and helps consumers make informed decisions while delisted providers are promptly removed from the list.

Policymakers should foster collaboration between traditional banks, fintech companies, and regulators to create synergistic ecosystems. By promoting partnerships and open banking initiatives, policymakers can encourage traditional banks to embrace fintech solutions and foster collaboration with digital banks and neo banks. Policymakers should facilitate the exchange of data and interoperability among different bank types, promoting a seamless customer experience and driving innovation in the banking sector.

## Research agenda

Emphasizing the importance of sound validation, it is crucial to acknowledge that currently, no empirical evidence exists to confirm the validity of this proposed typology. Consequently, this serves as a compelling and urgent call for further research to thoroughly investigate and validate the typology's principles and classifications. By delving into empirical studies, researchers can contribute significantly to the field and shed light on the potential impact and relevance of this typology in banking.

Research agenda for this typology revolves around exploring the unique characteristics, challenges, and opportunities associated with their respective business models. By conducting research in these areas, academics can contribute to understanding digital banking transformation, consumer behaviour, branding strategies, and the impact of technology on traditional banking institutions. Recognising Mogaji & Nguyen (2022) study on AI for financial services marketing, there is a need for research that examines the challenges and opportunities faced by traditional banks when integrating FinTech solutions into their existing systems and processes. This research can explore the impact of technology adoption on operational efficiency, customer experience, and overall bank performance.

TBAFs provide a hybrid banking experience by combining physical branches with digital banking services. This is a new area that has yet to be really considered. There is a need for research that explores consumer behaviour and decision-making processes when choosing TDNBs over traditional banks or fully digital neo banks. This research can shed light on the factors influencing customers' adoption of TDNBs and their preferences for specific features or benefits offered by these banks. This research strand can build on works by Mainardes & Freitas (2023) exploring customer satisfaction and loyalty between traditional banks and neo banks and Contreras Pinochet, et al. (2019) study on the antecedents of the propensity to utilize credit from neo banks.

Research can focus on developing theoretical frameworks that explain the dynamics, benefits, and challenges associated with hybrid banking models. This can contribute to the existing literature on omni-channel banking and customer channel preferences (Nejad, 2022; Boot, et al., 2022; Abdulquadri, et al., 2021). Additional research can compare the brand extension strategies employed by different traditional banks when establishing TDNBs. This research strand can build on Mogaji & Danbury (2017) study on advertising strategies of UK traditional banks, Kingshott, et al. (2018) comparative study between local, national, and foreign branded banks, and Levy’s (2022) study on branding digital banking services. This research strand can examine the factors that contribute to successful brand extensions and the implications for customer perception, brand equity, and market positioning.

Research can examine customer adoption and engagement with DDNBs. Building on studies that have explored mobile money (Mogaji & Nguyen, 2022), contactless payment (Alalwan, et al., 2023), mobile payment (Lee & Pan, 2023), banking apps (Levy, 2022), mobile investment technology (Fan, 2022), future research can focus on understanding the factors influencing customer adoption and engagement with DDNBs. This can involve studying customer motivations, perceived benefits, barriers to adoption, and the factors that drive long-term customer engagement and loyalty (Abdulquadri, et al., 2021; Levy, 2022; Nguyen, et al., 2022). Research can contribute to the development of theoretical frameworks that explain the dimensions of the digital banking experience, including user-friendliness, personalization, and the impact on customer satisfaction and loyalty.

Given the scale and customer data involved, research can delve into the regulatory compliance and security aspects of financial services provision (Chang, et al., 2020; Czarnecka & Mogaji, 2020). This can involve exploring the effectiveness of regulatory frameworks, the implementation of security measures, and the impact of compliance on customer trust and satisfaction. Future research can explore partnerships and ecosystem dynamics within the banking industry and how these banks often form partnerships with other fintech companies to expand their service offerings. Research can examine the dynamics of these partnerships, their impact on the bank's competitive advantage, and the implications for customer value creation within the broader fintech ecosystem (Adeola, et al., 2021; Abdulquadri, et al., 2021).

This invitation to validate the typology opens exciting avenues for researchers to explore, potentially uncovering valuable insights and enriching our understanding of the banking industry's dynamic landscape. Through rigorous investigation, the validation process will foster confidence and credibility, reinforcing the typology's significance and positioning it as a valuable framework for advancing knowledge in the field. Researchers are encouraged to take up this exciting challenge, contributing their expertise and dedication to the validation process, which will undoubtedly lead to new discoveries and advancements in banking typologies.

# Conclusion

This study recognizes the growing influence of fintech, digital transformation, and evolving consumer behaviour in the banking industry. The traditional notion of banking is changing as customers increasingly rely on digital channels rather than visiting physical branches. In response, established traditional banks are investing in digital transformation initiatives to stay competitive. As a result, various types of banks have emerged, forming a typology shaped by fintech and consumer behaviour. This paper has examined three key types of banks within this typology, representing a spectrum between technology space and digital space. The analysis has highlighted relevant marketing implications for each bank type. The study holds significant theoretical and managerial implications, offering valuable insights for bank managers, policymakers, and consumers alike. The development of this typology contributes to a more comprehensive understanding of fintech, an area that has been underexplored in previous research. Going forward, this typology can serve as a valuable reference for future studies focused on identifying, researching, and collaborating with different types of banks.

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