

REVIEW PAPER

THE INCORPORATION OF FINTECHS INTO THE BANKING SECTOR: THE FINTECH N26 AS A CASE STUDY

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ABSTRACT

Using breakthrough technology, fintech companies have created new business models in the financial industry. This has a profound effect on the standard operating procedures, services, and products of the banking area, as well as on the incumbent institutions themselves. This rapidly growing business sector forces the whole banking industry to reconsider its previous business models. It also has implications for cost structure, efficiency, and future service delivery. Furthermore, these fintech startups appeal to the younger, more technologically sophisticated population. This underlines the crucial importance of dealing with fintechs in regard to their position and competitiveness. This article aims to provide insight into the evolution of fintechs in the banking sector. Furthermore, these companies' success attributes should be emphasised, as well as the differences to an established bank. For this purpose, a descriptive and comparative literature review was conducted. In addition, a case study of the N26 business model was performed and analysed. According to the findings, there is a substantial knowledge about fintech startups and their business strategies. In addition, these companies have the potential to continue to establish themselves in the banking sector. The banking industry is still in need of significant development, which is why fintechs should be considered.

Keywords: fintech, banking industry, business models, innovation, N26

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Introduction

The contemporary banking market is undergoing significant changes and facing numerous challenges. One cause for this is the advent of new competitors in the banking industry, who are attempting to acquire a part of the market through more innovative business models. These are financial technology companies, more precisely known as fintechs (Fintechs auf der Überholspur, n.d.; Arge ITA-AIT Parliament, 2020, p. 1). The aftermath of the 2008 financial crisis, the period of historically low interest rates, further regulatory requirements and new revolutionary technologies, such as blockchain, have all contributed to this progress (Bhappkar et al.; 2021; European Banking Trend Radar, n.d.; Die Zukunft des europäischen Banken-Ökosystems 2035, n.d.). All of these factors, as well as others, have decreased and facilitated entry into the formerly conservative and partially monopolistic banking industry (Riikinen & Pihlajamaa, 2022, p. 461; Tapscott D., & Tapscott A., 2016, p. 85). Furthermore, it should be noted that the generational shift in the customer sector, and, thus, the change in consumer needs, had a strong impact on this development (KPMG, 2018, pp. 17, 31; Fakten, Trends und Strategien 2023, n.d., p. 16). Not only retail clients, but also entrepreneurs increasingly desire unique and individualized services to facilitate their daily operations. Other studies, such as Ernst & Young's "EY Global Consumer Banking" Study 2021 on consumer financial relationships, support this view. According to one of the conclusions, emerging neobanks and fintechs are gaining substantial traction and may trigger a transformation in the banking industry. Long-standing customer relationships continue to constitute an advantage in the area of confidence regarding established banks, but the need for individualized and creative financial services is growing (Bellens, 2022). The pressure on the traditional banking environment is increasing and the urgency of expanding alternative financial solutions is growing. Importantly, the increasing rate of adaptation to new circumstances has added to the modern financial environment's unpredictability. This poses a significant issue for established institutions in particular, because of the complexity in projecting certain patterns in light of this rapid evolution (Die Zukunft des europäischen Banken-Ökosystems 2035, n.d.).

Fintechs, in turn, have significant advantages. To put it simply, it is a new form of business model that makes use of a range of various technological breakthroughs which are currently available on the market. Not only may these innovations revolutionise a tiny portion of the financial sector, as the ATM

did in the past, but they also influence the whole banking sector. These changes range from the services supplied to the treatment of existing business processes, to the questioning of the requirement for a centralised banking system, as is now frequently the case in conventional banks. Currently, it is necessary to highlight blockchain technology, which plays a significant part in this entire financial industry upheaval and is a development that encourages and potentially promotes a decentralised banking system. This can result in several cost, time, transparency, and security benefits (Martino, 2021, pp. 1-4). Apart from that, fintechs have a different cost composition than traditional banks. Especially given that they focus more on app-based solutions, thereby minimizing the costs of a typical bank with a physical branch network, while yet being able to satisfy the needs of potential customer (Kostenreduktion im Banking – eine transformative Agenda, n.d.; IBM Institute for Business Value, n.d., p. 4). Furthermore, these new market participants have realised their product and service performance potential (Paulet & Mavoori 2020, p. 20). They have identified the gaps in the traditional banking environment and provide modernised solutions for a vast array of bank-specific products (Omarini, 2018, pp. 23-24; Hendershott et al., 2021, p.1). This involves expansion into new markets in which current banks have been unable to profitably offer banking services due to the greater costs of maintaining physical branches (Ji & Tia, 2022, pp. 2656-2657; Flötotto et al., 2022, p. 11). According to Deloitte, it is crucial to understand the impact of new innovations in the banking sector, as well as the competitive issues in the banking business. As signs of progress are already visible, it is vital to determine the nature of these changes. The idea here is to be proactive and responsive to change and establish successful transformation processes (FSI Strategy Insights, n.d.). Due to the fast speed and rapid evolution, it is difficult to identify a clear scenario for the future development of the traditional banking sector in particular. In addition, there are other obstacles, such as the war in Ukraine, inflationary climbs and greater price fluctuations, to which a financially strong corporation must be resilient. Thus, increased cost management is a benefit in this context, necessitating the introduction of new technology. It should be noted that these difficulties might have an impact on both business models (Der Banken- & Kapitalmarktausblick 2023, n.d.). According to the Handelsblatt banking summit, the fintech industry will continue to show strength, but a stronger focus on its own profitability would be beneficial, since the altered financial environment has already claimed the existence of several fintechs. Nuri, a cryptocurrency startup, is one of these (Schwarz, 2022).

However, successful finance startups such as N26 exist as positive example (Holzki & Maisch, 2021), particularly because the current geopolitical and economic scenario pose a challenge to many industries. A well-thought-out change and response strategy is quite important. As a result, not only may competitive activity be detected between these institutions, but more and more cooperation is visible to the benefit of both kinds of organisations (Schneider, 2020).

This article is to provide an overview of the current banking industry and new market entries, such as fintechs. The case study “Business Model of N26” and the existing literature will be used to demonstrate the departures from traditional banking models. Particular emphasis will be placed on the success characteristics and strategic operations of fintechs. The purpose of this paper is to draw attention to the importance of this challenge and to stimulate discussion, especially in the financial field. For this reason, the research question “How do fintech companies differ from traditional banks, and what characteristics do they have that make them competitive?” forms the foundation of this analysis. This paper contains the following subsections:

- The first chapter includes a literature review. This section provides a more extensive description of the fintech and banking sectors, as well as the contributing reasons of this transformation and development.
- The business model of N26 is described in chapter two. This includes a comprehensive overview of the company from its inception to the present. Consideration was given to both positive and negative aspects. In addition, the examination of this company model was conducted to highlight its special characteristics.
- The remaining chapters offer the results and a discussion considering limitations and suggestions for further investigation. Finally, a conclusion is provided.

I. Literature review

Change in the banking business is nothing new, and it is not the first time it has occurred. This industry has always been aware of digital advancements and innovations. Specifically, the advent of the internet has altered the service, offerings, and procedures of banks. However, in recent years, the banking industry has been challenged by advances that have the potential to transform the

broader market. These advancements have been a challenge since they have the potential to reinvent the banking sector, in particular, with new market entrants known as “fintech” companies, who not only provide new services, but also construct new business models by utilizing a number of different technological advancements in the financial industry (Martino, 2021, pp.1-2). Consequently, they provide new obstacles for the conventional banking sector (Riikinen & Pihlajamaa, 2022, p. 462), as well as necessitate the adoption of new standards (Dombret, 2016). Nevertheless, this evolution is further advanced by the understanding that innovations are essential to economic prosperity, especially as it can have a favourable effect on productivity and, consequently, many economic stakeholders (Europäische Zentralbank, Eurosystem, 2017). According to the German Federal Financial Supervisory Authority Bafin (n.d.), many companies will require innovative technologies to retain and enhance their market position in the future. At the moment, digitisation is an important part of the financial industry’s efforts to maintain stability, honesty, and competitiveness (Bafin Federal Financial Supervisory Authority, n.d.). In addition, societal expectations, technology requirements, and those of the regulatory system have changed substantially (Die Zukunft des europäischen Banken-Ökosystems 2035, n.d.). Furthermore, the European Commission recognises the significance for future technological progress. By implementing new approaches, the EU is providing recent market participants, such as fintech companies, with a boost and is facilitating their entrance into the European financial system. Certain efforts are being taken to enable the financial sector to adopt technologies such as blockchain, artificial intelligence, cloud solutions etc., in order to make the sector more future-oriented and competitive (Europäische Kommission, 2018). There are measures for digitalisation and payment transactions in 2020, as well as the treatment of cryptocurrencies and related issues. Notably, though, the EU has not yet established a consistent framework for breakthrough technology (Kunschke & Yerlikaya, 2022, pp. 3-4).

According to the Austrian Financial Market Authority, the terms “fintech” or “financial technology” lack a uniform definition. Even amongst regulators, there are apparently divergent opinions (FMA, n.d.). The German Financial Supervisory Authority Bafin cites the Financial Stability Board’s FSB definition (Bafin, n.d.).

The FSB defines fintechs as technologically enabled innovation in financial services that could result in new business models, applications, pro-

cesses or products with an associated material effect on financial markets and institutions and the provision of financial services (FSB, 2022).

This statement indicates that the term encompasses a vast array of technology and the definition often depends on the specific financial service sector in which the technology is applied (Bafin, n.d.). The term fintechs refers to young enterprises that specifically provide financial services using new technologies (Bafin, 2020). The Austrian FMA, also categorises existing financial institutions with an innovative business model as fintechs (FMA, n.d.). Furthermore, experts and organisations agree that there is no unique national legislation governing this matter (FMA, n.d.; Bafin, n.d.; Deutsche Bundesbank Eurosystem, n.d.; Kunschke & Yerlikaya, 2022, p. 3).

Additionally, it should be highlighted that fintech companies can offer their financial services in the financial sector with or without a license (University of Bath, (n.d.)), because not all businesses are subject to regulatory obligations, particularly those done outside the area of transactions requiring a license (Deutsche Bundesbank Eurosystem, n.d.). As with the grey capital market, this industry frequently utilises a typical grey area because there is no need for licensing (Bafin, 2020). Conventional banks, in contrast, are subject to regulatory action and authorities' monitoring (FMA, n.d.). These obligations have been increased by new measures enacted by regulators in response to this industry's development. Risk provisioning, the equity ratio, and investor protection are given considerable consideration. These trends provide the existing banking industry with more formidable challenges and need future alignment concerns (Deloitte, n.d.). It should be noted that bank concessions are frequently fairly costly, which sometimes discourages fintechs from making this move (Breit, 2018, p. 2).

As a result of innovation's elevated standing in the economy, regulatory agencies provide support in this regard. For instance, the Austrian Financial Market Authority's Fintech Sandbox (Wirtschaftsagentur Wien, 2022, section 2, para. 3) is meant to offer entrepreneurs the opportunity to receive help for their innovative business model or collaboration projects. It serves as a sort of test environment and is intended to facilitate companies' transition into the normal regulatory setting (FMA-Sandbox, n.d.). This permissive regulatory environment and their young, creative corporate structure provide fintechs with considerable market opportunities and the capacity to deliver newly developed technology concepts to the market

(Fintech: Strategic advantages and initial costs for entry into banking, n.d.). Thus, it may be claimed that legislative reforms and growing technological developments have made it simpler for new rivals to enter the banking market, with the benefit of not needing to comply with the whole legal framework throughout the development period (Riikkinen & Pihlajamaa, 2022, p. 462). However, there are already examples on the market of effective licensing by regulatory authorities. Finabro, a young company in the asset management industry (Breit, 2018, p.18), was the recipient of the first license issued by the Austrian financial regulator. Similarly, the FMA has given Bitpanda a concession as a payment institution (Wiener Bitpanda erhält Konzession als Zahlungsinstitut, 2019). In addition, they have received a complete authorisation for custody and proprietary trading of crypto assets from the German financial authority Bafin (Bitpanda, 2022). In 2016, Bafin gave a complete banking license to the startup N26 (Berliner Fintech-Unternehmen Number26 erhält Banklizenz, 2016).

Established competitors struggle to adjust to this rapid evolution, which was intensified by the Covid-19 crisis. According to Deloitte, it is challenging for traditional players to commit to a certain future development model, due to the difficulty in identifying the sector's important tendencies and their precise effects within this area (European Banking Trend Radar, n.d.). Nevertheless, Fintech companies have swiftly identified vulnerabilities in the current banking environment to exploit and, thereby, boost the company's profit. In order to increase productivity, they have focused their attention on the customer and individual requirements (Omarini, 2018, p. 23). For this purpose conventional banks have usually prioritised product developments (Paulet & Mavoori 2020, p. 20), which is contradictory to the emphasis on service and requires rethinking. This focus on service has enabled fintechs to customise their services to users' individual demands. Ordinary banking operations as well as unique products are included (Riikkinen & Pihlajamaa, 2022, p. 462). By utilizing modern technology, they may provide more cost-effective and innovative services, as well as products. This allows them to attract and win over younger users, who are interested in this way of digital banking (Vives, 2017, pp. 97, 100).

These customers are known as digital natives (Eisl et al., 2022, p. 1) in both the private and commercial sectors (Breit, 2018, p. 3). Experts agree that these consumers were not born before 1980 and have a natural affinity for technology. Their proficiency and comfort with digital applications

is their most noticeable characteristic. In addition, they have a more advanced understanding of digital tools than previous generations (Akçayır et al., 2016, p. 435). This is one of the reasons why conventional banks no longer hold a privileged position in financial transactions for the current generation (KPMG, 2018, p. 31). The fact that most young clients are now conducting their financial transactions solely through internet channels emphasizes this point even more. It is possible to conclude that the use of fintech solutions is spreading (Eisl et al., 2022, p. 4; Onken, 2022) and access to items outside the realm of conventional financial products and across international borders are significant factors (Fakten, Trends und Strategien 2023, n.d., pp. 54–55). Ernst & Young performed research on retail banking and found that customers' expectations mirror these realities of the modern banking business (Bellens, 2022). In particular, fintechs achieve this through their purely digital solutions, so-called Super Apps or a created platform ecosystem (Bellens, 2022; The World Bank, 2022, p. 17). Physical branch networks or locations are increasingly avoided (The World Bank, 2022, p. 19) and succeeded by digital locations, where the customer may find and access numerous items, ranging from financial services to vacation promotions. This digital network makes it simpler for fintechs to access and connect with third-party solutions, so they do not need to provide everything themselves, which ultimately generates a superior database and enables improved cross-selling opportunities (Bellens, 2022; The World Bank, 2022, p. 17).

Additionally, it promotes decentralised alternatives (Wang et al., 2021, pp. 1–2), such as those provided by technologies like blockchain. This has a favourable effect on business productivity and frees up resources (How blockchain can change banking: Banking on a public platform, n.d.). Using innovative solutions, fintechs are able to develop advanced products, greater customer transparency and traceability, and a consistent information base for contracting (The World Bank, 2022, p. 10). These not only pertain to existing financial services, but also permit their expansion and, in the same way, the creation of entirely new services. This is precisely the strength and driving force of fintech's business sector, as they satisfy the needs of various parties (Flötotto et al., 2022, p. 6). In turn, most well-established banks provide both traditional bank branches and an internet banking option to their customers, whereby the services available online are comparable to those offered in physical locations (Bellens, 2022). According to KPMG, banks must adapt to new multibanking models, since the new generation of clients has a different perspec-

tive on modern finance (KPMG, 2018, p. 31). This is particularly relevant now that modern technology has allowed people to access various services online. Physical points of interaction with banks are consequently becoming obsolete. Standardised offerings and inefficient methods will not satisfy the expectations of future customers (Basdekis et al., 2022, p. 160). Partner at KPMG Tim Weckmüller argues that adopting a few digital features will not be enough. The overarching concepts of the bank must be questioned and evaluated. Consideration must be given to the company's culture, future goals, IT, and employees. In particular IT will be a difficult topic. Some banks' transition to the use of new technology has been incomplete due to the lack of full implementation (KPMG, 2021). They were able to do so because of their previous monopoly position in this business. There was no more investment than required to maintain profitability (Tapscott & Tapscott, 2016, pp. 84–85).

Fintechs facilitate the expansion of financial services into new markets, which is a significant benefit. They have made financial services available to people, who previously had no or extremely restricted access (Flötotto et al., 2022, p. 11). For example, in Sub-Saharan Africa, mobile payment methods have expanded rapidly, according to World Bank figures (The World Bank, 2022, p. 11). This competitive edge is achieved, according to McKinsey, by the companies' rapid pace of technological innovation development and implementation (Flötotto et al., 2022, p. 12). Furthermore, fintechs and their services are widespread throughout the whole financial sector, with a greater number of options per provider than in the past (Bafin Federal Financial Supervisory Authority, 2020). They provide services ranging from standard banking to completely new ones (Eisl et al., 2022, p. 2). Fintechs are actively operating in the fields of new payment instruments, cryptoassets and blockchain applications, investment and trading, crowdfunding and -investing, insurance, technical, and interface services, according to the FMA (Was ist FinTech?, n.d.). Additionally, they provide digital solutions for general lending businesses and comparison platforms within the financial industry (Breit, 2018, pp. 5–6). This generates new revenue streams that have the potential to diversify and stabilise the current banking sector. Moreover, these innovators can be seen as motivators and pioneers across the market segment to facilitate future investment decisions (Flötotto et al., 2022, p. 12), particularly if one examines the offered alternatives more closely. Modern online payment options and mobile payment possibilities have improved the payment transactions sector. The use of blockchain, which established the payment meth-

od with cryptocurrencies, is another innovation in this regard. Thus, it involves considerably more than just an inventive method. It enables financial services to be provided without intermediaries. This technological advancement is applicable not just to payment transactions, but also to the securities and insurance area (Arge ITA-AIT Parliament, 2020, pp. 2-3). Another payment innovation is the e-wallet, a development in the field of non-cash payments.

The securities business is another area that has received attention, because it is a less expensive alternative to human labour (Vives, 2017, p. 100). It is about the possibility to invest in various securities and manage them via smartphone, for example, by using investment apps. These applications are intended to provide a vast array of investment services for private and institutional clients (Knewton & Rosenbaum, 2020, p. 1056). In addition, it features a lower minimum investment requirement and lower costs (Wang et al., 2021, p. 2). Besides, it enables ordinary investors to invest in asset types that are often exclusively available to institutions (Pulse of Fintech H2 2020 – Wealthtech, n.d.). Automated investment advice is a method that has gained prominence in wealth management. It is made feasible by robo-advisor platform technology. Here recommendations are generated solely by algorithms, devoid of any human input (Barroso & Laborda, 2022, pp. 3-5). It involves an investor classification and the suitable investment approach. These digitised platforms are designed to simplify the financial planning process for users (Dorfleitner, 2020, pp. 38-39). The customer benefits from not needing extensive expertise of the financial field. Investment proposals are made based on the risk appetite and liquidity requirements provided by customers (Deloitte, 2016, p. 2). This type of investing advice meets the expectations of today's clientele. This sort of investment is intriguing owing to its unrestricted accessibility, highly innovative methodology, and extremely low expenses. However, the algorithms and investing methods employed by the products on the market vary (Robo Advisory – Wie Algorithmen eine Branche umkrempeln, n.d.).

The credit industry incorporates digital development as well. This eliminates limitations and creates new opportunities inside the financial industry. Access to financial resources may be exploited through alternate forms, allowing for the creation of new types of funding. For example, it enables entrepreneurs of emerging companies to raise capital (Bollaert et al., 2021, pp. 1-2), or excludes consumer segments for which the traditional loan procedure lacked sufficient data (The World Bank, 2022,

p. 26). Through the use of innovative analytics, they are able to adopt a new creditworthiness foundation for satisfying credit standards, so enabling the provision of this form of funding (Abbasi et al., 2021, p. 1). Peer-to-peer lending and crowdfunding on platform-based services are two well-known forms that have simplified this procedure and approach. These are efficient methods of connecting capital suppliers with capital borrowers, as well as harmonising the availability of information data (Bollaert et al., 2021, pp. 2). Crowdfunding is meant to fill a previously existing credit market deficit. These platforms act as a digital broker. This aids in meeting the financial objectives of certain initiatives and acquiring the necessary assets. This satisfies a market niche requirement, like helping to cover the micro-credit market (Knewton & Rosenbaum, 2020, pp. 1055-1056). In conclusion, these digital platforms provide low-cost borrowing and have opened the door to small business loans, hence expanding access to capital (Barroso & Laborda, 2022, p. 3).

As a result of rapid technological development, financial institutions will evolve into a wide variety of new types (Basdekis et al., 2022, p. 160). A global survey conducted by Deloitte on the maturity of digitalisation in banks demonstrates that innovative financial institutions are definitely favoured. Particularly, their user-optimised solutions assist them. Following market criteria, the development of established banks should not stagnate. This might reduce their competitiveness, while creating new chances for other market participants (Digital Banking Maturity Studie, 2022, n.d.). In order to respond to the requirements of the financial market, PWC argues that an appropriate course of action must be pursued, especially to maintain growth and positioning (Fintechs: Digitalisierung und branchenfremde Angreifer beschäftigen Finanzdienstleister. Sie müssen sich fragen: Was brauchen meine Kundinnen und Kunden?, n.d.; Bellens, 2022). Banks with prior successful business models are no exception, according to Kunschke et al.. Simply focusing on streamlining traditional banking operations is not a long-term strategy that can ensure the success of financial institutions (Kunschke & Yerlikaya, 2022, pp. 93-94).

II. Case study

i. Business model of N26

N26, with its headquarter in Berlin, is a modern, innovative, and internationally successful online bank, established in 2013 by Maximilian Tayenthal and Valentin Stalf. Initially known as "Number 26," it was not yet a regular bank. It had the objec-

tive of dominating and revolutionising the global banking business with a smartphone-based financial solution (Über uns: Wir bauen die erste weltweit digitale Bank auf, n.d.) without providing consumers with actual interaction points and, thereby, aiming to modernise banking practices to meet 21st century expectations (N26, 2018).

The initial step was to have a partner act as a regulatory cover while focusing on creating the company concept, thus they cooperated with Wirecard Bank AG to provide banking services (KPMG Law, 2016). The strategic decision to utilise a partner's regulatory framework and back office allowed the two founders to concentrate on the progress of their firm (Elsner, 2015). The company was already growing after a few months of collaboration and development of the first product launch in 2015 (Jovicevic, 2017). Obtaining a complete banking license for a fledgling fintech start-up was an essential and unique milestone in this process (Perlaki, 2016). N26 gained its independence and joined the banking industry with the granting of this license in 2016. Thanks to their effort and positive reception by customers, they have become one of the first fintech businesses to receive this chance (KPMG Law, 2016). The cost structure, participation of relevant major partners, and emphasis on consumer demands all played important roles in facilitating its growth potential and raising its visibility (Gründer Plattform, n.d.). In particular, the satisfaction of customer needs and their expectations has contributed to the strengthening of their business model, as has the involvement of key partners to expand the range of their services.

2015 marked the introduction of an app-based account and credit card an alternative free of charge. New revenue streams, such as commission income from card payments, make this possible. Additionally, the company has increased the variety of accounts and launched premium packages. With the ability to serve as a bank beginning in 2016, the services and product offerings were customised and extended according to individual preferences. It was feasible to develop into asset investing, financing, and insurance, among other fields. Financing in the area of instalment payments of 20€, as well as consumer loans are paperless and done in minutes (Perlaki, 2016). Bicycle, home contents, and pet insurance, as well as electronics insurance, are available in the insurance area.

To satisfy further existing client demands, the cooperation with key partners was crucial. To compensate for the lack of a branch network or ATMs, retailers, for example, were leveraged to of-

fer cash withdrawals. N26's product offerings have been made possible by collaborations with other fintechs. The basic banking system is provided by the fintech firm Mambu (Schwär & Hufner, 2021). Bitpanda's white label solution facilitates crypto trading (Bitpanda, 2022). Customers may transfer money in 36 different currencies through the TransferWise partnership (N26, 2020). By partnering with travel platforms such as booking.com, N26 enables discounted travel bookings (N26, 2023), as well as benefits for non-customers, such as the Digital Tip, to help the staff of restaurant businesses (N26, 2021).

With this banking license and brand recognition came some initial challenges (PWC, 2020). In the following years, they were quickly confronted with the tougher regulatory obligations of a regulated bank (Mey, 2019). The Bafin issued a penalty of 4.25 million euros and a new customer limit of 50,000 after it became apparent, that anti-money-laundering measures were inadequate. There were account terminations and account freezes. In addition, the corporation is subject to particular oversight (Bafin, 2021). New investments and public comments were made by the corporation in an effort to quell these criticisms and restore its reputation (N26, 2021; Osman, 2019). Previously, there was an issue with security vulnerability that was discovered by an IT expert in 2016. That N26 has re-developed in the same year (Atzler, 2016). Yet, high costs and struggles did not stop the firm from gaining customers and investors (Kröner, 2022; Statista, 2022; Holzki & Maisch, 2021).

Their conviction and initiative to build a purely digital bank has led to the result that they are currently in 2022, expanding in 24 countries with 10 locations and have gained about 8 million customers (Statista, 2022; Über uns: Wir bauen die erste weltweit digitale Bank auf, n.d.). In the beginning, growth to the United Kingdom and the United States followed. In 2020, the business was ceased in the United Kingdom, and in 2021, in the United States with the intention to target the European market. Current locations include Amsterdam, Berlin, Barcelona, Belgrade, Madrid, Milan, Paris, Vienna, New York, and Sao Paulo. In several of these areas, N26 is establishing TechHubs as part of its effort to develop further innovative banking products (N26, 2019). In addition, they were keen to have an international team available (Grasel, 2022). They are attempting to attract people, who have previously worked for companies such as Google and Zalando (N26, 2019). Currently, 1,500 employees from 80 nationalities work at these locations (Über uns: Wir bauen die erste weltweit digitale Bank auf, n.d.). To be able

to continue to grow the team internally, they focus on places that seem appealing to foreign staff (Grasel, 2022).

By being able to quickly adapt and respond to changing conditions, the fledgling bank has established a new universe for the banking sector and various consumer categories. Between 2013 and 2022, the firm, which was first unremarkable and not taken seriously by many, produced a noteworthy result. They have illustrated the power of digitalisation in banking and established themselves in the financial industry (PWC, 2020). So, they get to be trailblazers in the banking industry, which has historically been dominated by a few large banks and characterised by a conservative attitude. Moreover, with a worldwide goal of offering enhanced and accessible financial services to all, the use of cutting-edge technologies has made N26 desirable to investors. In 2019, they secured a total of \$470 million in investments, elevating their company's worth to \$3.5 billion. It was one of the largest investment deals in Germany and Europe for a German startup. They became the most valued startup in Germany (N26 steigt zu einem der wertvollsten FinTechs weltweit auf, 2018). Well-known British fintech firm Revolut Ltd., by contrast, was only worth \$1.7 billion at that time. N26 raised \$900 million in its most recent investment round, leading to a \$9 billion corporate valuation by 2022 (Über uns: Wir bauen die erste weltweit digitale Bank auf, n.d.). The firm is now in the preparation process for a public offering. The firm views this as a crucial milestone in their further development and realisation of their mission (N26 applies for Financial Holding license as next step towards IPO-readiness, 2021; Browne, 2022).

ii. Analysis of the case study

N26 has succeeded in establishing itself in the banking industry with its innovative and agile business model, culminating in the achievement of a full banking license. Initially, the company was a modest fintech start-up with a goal of creating a smartphone-based online bank. The company has gained its independence by obtaining a license and is now preparing for an IPO. As Tapscott and Tapscott (2016, p. 84) mentioned, the banking business until now was dominated by a few giants, who are conservative and have to contend with old technology, and technological advancement was only partially utilised. According to PWC (2020), established banks did not take N26 seriously in the beginning. The understanding of the EU's government and regulators was crucial in encouraging such new business models. Understanding that innovation supports economic growth and competitiveness is essential for these business areas. This

has lowered entrance barriers, while offering a testing environment outside the regulatory framework.

The financial technology sector has expanded rapidly in recent years, which poses serious problems for established banking business models and, by extension, for the whole banking system (Fintechs auf der Überholspur, n.d.). Utilisation of innovations plays a crucial role given that innovations that have the potential to revolutionise the banking industry, as opposed to merely altering some aspects of the industry, as was previously the case. The cost, efficiency, access and execution of banking services are being transformed with the use of advanced technology (Fintechs auf der Überholspur, n.d.). Furthermore, the generational change is a further key element for the shift in the financial environment from baby boomer customers to digital natives. Customers today have grown up with technology and prefer online banking services. Combining many services in a single area is given preference. No urge exists to visit a real branch. Benefits of services provided to the customer in the focus. Change in the banking sector is driven by all of these individual factors. Many of these elements may be found at N26. The strategic choice to collaborate with Wirecard facilitated their entry into the financial area and made it possible to concentrate on establishing and implementing its own business strategy without the need for regulatory interventions. It has provided them with the opportunity and resources to practice the concept via consumer and investor interest, as well as to work on early product releases without having to shoulder the entire regulatory burden on their own. In particular, they were successful in implementing their vision of a smartphone-based banking system that includes additional individual features, both within and outside the traditional banking offers. High funding rounds and consistent client growth demonstrate the company's desirability in the banking industry. According to PWC (2020), N26 is an excellent illustration of the disparity between fintechs, digitalisation, and conventional banks.

Examining the management and the employees of N26, more contemporary approaches can be observed, as it consists of a comparatively younger group with a global perspective and tremendous variety. The two founders are part of the target audience that these new banking concepts are meant to serve. N26 now employs 1,500 people from 80 nationalities, having started with only a few in 2013. To recruit outstanding talent across the world, managers place a high value on diversity. These employees are spread over locations in several countries and do not focus on one location. In terms of the company's financial history, multi-

ple successful funding rounds have been executed in the past, which lead to a final \$9 billion corporate valuation. Their expertise and clear goal have made them Germany's most valued startup as of 2019 with a fundraising round of \$470 million. At the time, it was one of the largest investments in Germany and Europe. So far, the business has not achieved profitability even though according to the company, sales and operating profit margins are increasing. The unrealised profitability is partly attributable to expenditures in growth and regulatory obligations. Additionally, new employees have been hired.

As the case study demonstrates, N26 has encountered difficulties. The first issue in 2016 that produced unfavourable challenges and publicity were security flaws discovered by an IT specialist. This created potential for manipulation. Another key concern was the insufficient implementation of money laundering preventive measures in 2021. As a consequence, N26 was fined 4.25 million euros and the breach was made public on the Bafin website (Bafin, 2021). In addition, actions like account cancellations and freezes were taken, as well as further adaption investments. Furthermore, there was a limit on new client acceptances, as well as additional surveillance by Bafin (2021). Moreover, the expansion into the United Kingdom and the United States and rapid withdrawal from this market region were subject to discussion. This hindered global vision and generated a negative reputation (Smartphone-Bank N26 zieht sich aus den USA zurück, 2021).

Nevertheless, N26 has numerous strengths. The responsiveness and adaptability of the system is a crucial characteristic. Through this, they expeditiously overcame some first obstacles. As seen by the investment and client numbers, their business concept has continued to gain acceptance. They have the benefits of a typical start-up. In contrast, traditional banks are much more sluggish in their implementation and take much longer to introduce new approaches. This agility is confirmed by a McKinsey study on the growth potential of fintechs. For instance, they require a maximum of six months for new product introductions. Traditional banks, meanwhile, require 12 to 24 months (McKinsey & Company, 2022). Their communication style should be mentioned as well. They comment on all main topics published in newspapers on their homepage with an emphasis on recognising mistakes and attempting to correct them, along with openness and sincerity. The trust in N26 appears to be intact. This is shown in their key indicators and the company's continued growth.

In response to the vulnerability, a bug bounty program was implemented. They promote participation in the discovery of security vulnerabilities on their homepage. The objective is to inspire hacker experts around the world to support N26, in return for a premium payment (Das N26 Bug Bounty Program – Eine Schatzsuche für Hacker, n.d.). This approach and flexibility are absent in conventional institutions. This may be owed to the fact that their IT infrastructure is based on legacy technology and does not permit such agility. Regarding the issue of money laundering, prompt action to resolve the issue was also required. The corporation has doubled its expenditures in this area.

In addition, the company has decided to focus on the European market for the time being. No significant losses in customer confidence were detected. New customer acquisition continues to be noticeable. Customers appear to prefer their business model and unique offers. This fact can be justified by a lack of new offer concepts and a loss of confidence in current banks, as a result of the financial crisis. A further aspect that sets the management of N26 apart is the acknowledgment that it was unsuccessful in a certain market. The decision to depart from the United States can be deemed prudent. The absence of a physical branch network and their use of modern technologies enables them to execute such decisions more quickly. These opportunities are primarily the result of their business model. Further, the swift market entry of fintechs like N26 cannot be compared to that of a traditional bank. Fintechs offer advantages due to their innovative skills, cost structure, adaptability, and, most notably, their capacity to satisfy contemporary customer demands. The absence of physical touch points for clients alone affords them enormous benefits and makes it simple to pursue their own ambitions.

The fact that N26 has succeeded in putting the consumer first is a defining characteristic that sets it apart from conventional banks. Traditional banks have been preoccupied with product development instead of focusing on customer needs. N26 has stepped into the gaps left by traditional financial institutions. The company's offerings are designed with the customer in mind. Relevant factors such as cost-effectiveness, innovation, smartphone accessibility, simplicity, transparency, and broad platform accessibility were considered. All of this is reflected in the company's brand identity and its services. These focus on simple responsive design with simple access to financial services and other features with the capacity to deliver a large number of services by utilising key partners, but

without requiring a significant investment or development effort on their own part.

Finally, N26 demonstrated that access to the banking market is achievable through the application of new technologies. They have been able to grow their business by filling existing market gaps, which have been mentioned and examined in the research for any years. It is incredible how rapidly N26 was able to implement its vision and strategy, despite some challenges. Cost and regulatory issues have not discouraged this enterprise, since they were able to operate more cost-effectively by utilising various developments. Due to the fact that their business concept is innovative in the banking industry and resonates with the times, their initial hurdles have not hindered their progress. Nevertheless, it should be noted that cooperation with existing institutions may be advantageous, especially to obtain their extensive knowledge of regulations and to utilise their database. This could prevent some negative publicity and protect the company from regulatory weaknesses. Traditional banks offer extensive expertise in a variety of fields. Moreover, this type of cooperation can boost the market and inspire individuals not to rest on their achievements. On the market, cooperation in this direction is already apparent. In a similar manner, institutions such as IBM or Deloitte and others encourage not viewing each other as competitors but rather as cooperation partners to achieve success.

III. Methodology

This article discusses the relevant characteristics of a fintech bank that permit its development in the banking sector. Moreover, the purpose of this analysis is to show the significance of current market trends for the traditional banking sector. This was made available via a literature review using the descriptive, as well as the comparative method. Based on this, the qualitative case study technique was described and examined. The combination of literature research and a case study was meant to bring theory and practice together. These findings are meant to inspire additional research in the field of finance, especially given the recent nature of the changes and the absence of a precise scenario for their future direction. Further, the article is designed to give decision-makers in the banking industry a better understanding and guidance for strategic considerations. To the best of authors' knowledge, the relevant literature on fintechs, traditional banking, contemporary innovations, and generational shift, particularly in the financial business, was researched in the first step. Diverse sources were consulted in order to gather insight

from various perspectives. Consequently, publications by scientific experts, renowned accounting companies, government organisations, financial institutions, and multimedia platforms for startups, the digital economy, and innovation were analysed. For the literature review, international research was performed in order to acquire a broader global perspective. The sources for the case study are confined to Europe, in particular to German-speaking countries.

The primary focus was to examine the term fintech from the perspectives of experts and financial industry authorities. The focus then shifted to fintechs, their business models, and advancements in the banking industry. Furthermore, the evolutions of the traditional banking industry, as well as client change, were considered. Subsequently, the case study "the N26 business model" was examined in detail. The goal was to create awareness and attract attention to this issue within banking. This research was based on Deloitte's statement that the banking sector is changing, but it is unclear what effects this change will have.

IV. Results and Discussion

This paper explored the research question of how fintech companies differ from traditional banks, and what characteristics they have that make them competitive. Using the descriptive and comparative method, the available literature was reviewed. In addition, a case study of the N26's business model was created, as well as analysed. The combination of these two methods has provided a great overview of the theory and current practice. Using this approach, it was possible to answer the research question and create a solid information base, which can be used for further research purposes. In general, the literature offers a wealth of insights that are reflected in N26's business model. There are noticeable distinctions between traditional banks and fintech banks, beginning with technology use, product offering, customer-centricity, development, management, and staff deployment. Notably, these results were generated from the available literature and the practical example of a fintech firm. A thorough examination of other fintechs in the banking industry would be helpful to support the results.

It is obvious that the usage of new technologies such as cloud, artificial intelligence, blockchain, and others may affect the success and growth of new business models, as well as the traditional banking industry. The remark by Deloitte that the

question is no more, if a change in the banking sector is coming, but how it will come (FSI Strategy Insights, n.d.), may be supported. N26, as a previously young fintech start up, has demonstrated this through their online-only bank model and with the achievement of a banking license. It has gained entry into the banking sector, through innovation and satisfying current customer expectations. According to a McKinsey research titled “Europe’s fintech opportunity”, fintechs address trends and new technology considerably earlier than banks. Furthermore, it was stated that such enterprises with sufficient investments and a promising business concept will survive and possibly transform different industries. The international comparison demonstrates that European fintechs have a significant amount of potential and have attained the status of a serious economic factor (McKinsey & Company, 2022). The fact that emerging technologies and fintechs have potential and provide assistance for establishment in the European market was stated in news release by the European Commission in 2018. A remark by Jyrki Katainen, Vice President of the European Commission, was included, in which he stated that new technologies are reshaping the banking industry (Europäische Kommission, 2018).

The emergence of new alternatives has altered the requirements and expectations of the younger client base. Using N26 as an example, it is plausible to assume that clients prefer this banking alternative. This conclusion is supported by the fact that the number of clients has risen to 8 million in only a few years. Furthermore, despite some unfavourable media coverage, the number of new clients has not decreased. This is confirmed by an Ernst & Young examination of the private customer business. It is emphasised that newer market entrants are more likely to meet these expectations than existing financial institutions. The tides of the market are turning in favour of fintech banks, and it is becoming increasingly apparent that clients have become increasingly demanding of innovative financial solutions. KPMG underlines in a 2021 publication, that the standard offering in financial services will no longer be adequate to satisfy clients (KPMG, 2021). Another KPMG research, “Banking 2030 Austria,” highlights that conventional banks’ unique role in banking services has been eroded. Customers value solutions that are suited to their specific requirements (KPMG, 2018, p. 31). A 2022 analysis by Deloitte indicates that fintech banks have a head start in fulfilling client expectations (Deloitte. Digital, 2022, slide 9).

Another consideration is the agility and adaptability of fintechs, as well as their rapid devel-

opment. N26’s expansion strategy is an excellent illustration of this, as the entry, but also the relatively easy exit from markets illustrates. A relevant aspect is the usage of technology that enables these companies to expand without physical infrastructure, but with a more cost-effective business model. A survey by Ernst & Young shows that fintechs are penetrating markets where previously the offer of financial services was almost non-existent. Likewise, acceptance is prevalent in emerging markets (EY Global, 2017). The World Bank’s study reveals a similar scenario. A World Bank report demonstrates that the entry hurdle for fintech businesses has decreased. Specifically, the non-physical infrastructure is regarded as one of the most crucial factors that promote market entry. That the barrier to entry for fintech companies has been lowered is shown by a World Bank report. It reflects the entry of fintechs into regions, where payment service usage was historically low (The World Bank, 2022, pp. 11–13, 19).

Another factor that contributes to the success of fintechs is their workforce. It is conceivable that their employees’ attitudes reflect innovation and progress, especially since they consciously decide to enter into such a corporate culture from the very beginning. According to N26, diversity among their employees is very important to them. Further, they are trying to hire qualified professionals for their further development. According to KPMG, established banks will have to provide further training for their staff, in order to increase motivation for the change in their industry. Young leaders who will stand behind this transformation will be required. For a realignment, the know-how of the employees regarding new developments will be one of the decisive competences (KPMG, 2018, pp. 26, 32). Employees that are adaptable flexible and comfortable with frequent change are required (KPMG, 2021). Hendershott et al. (2021) report that just a small fraction of those employed by conventional banks are open to embracing such shifts.

A final aspect to mention is the product offers. These vary in particular, because fintechs provide significantly more innovative product lines than traditional banks. N26 has demonstrated that they offer a wide range of services, primarily through selected key partners. Fintechs mainly focus on the customer rather than the product (KPMG, 2021; KPMG, 2015; Paulet & Mavoori 2020, p. 20; Bellens, 2022). According to KPMG (2021), it is important not only to digitise banking systems, but to implement customer interfaces that are focused on customer needs. E&Y emphasises that only modernising the IT infrastructure is not enough. It is about the whole

package, so that existing disadvantages are eliminated. Financial services platform-based solutions or Super Apps are given preference (Bellens, 2022). It is necessary to provide offerings within and beyond the standardised financial services (EY Global, 2017).

This article focused mainly on fintechs in banking and how they differ from traditional banks. It does not cover fintechs outside of this industry. Furthermore, no further research or adjustments to regulatory requirements were performed. The individual innovations, such as cloud, AI or blockchain, were not taken into account. These topics constitute valuable input for future research endeavours. Also, more accurate literature on the future evolution of the financial industry, would be desirable. Four possibilities have been suggested by Deloitte for future development. This, in turn, generates uncertainty and slowness in conventional banks' future efforts (Die Zukunft des europäischen Banken-Ökosystems 2035, n.d.).

V. Conclusion

Fintechs are new market entrants who have succeeded in establishing themselves in the banking business and are competing with existing banks. By using novel technologies and very agile business models, they have managed to introduce new standards for financial services. They set themselves apart by fulfilling today's customer expectations and providing what was previously unavailable. They have persuaded governments and regulators that technological advances are among the most important success criteria necessary for a market's continuing economic development, as well as its competitiveness. Moreover, the previously monopolistically conservative banking market has been disrupted and forced into a phase of change. Fintechs are doing pioneering work and are inspiring future technological progress in this field.

Indications of the role these new entrants are provided, as well as the availability of literature for the fintech and banking industries. Since just one fintech was used for closer analysis, the findings presented here can only provide a rough idea. They can serve as a point of reference, but more study is required, especially since these firms and their technology are expected to stay and are already being employed in a variety of fields.

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