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Summary of WP Student Team

The Evolution of the Digital Payment System in Europe: An Analysis of Digital Banks' Business Model

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THE EVOLUTION OF THE DIGITAL PAYMENT SYSTEM IN EUROPE: AN ANALYSIS OF THE BUSINESS MODEL OF DIGITAL BANKS

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Abstract

This paper analyzes the business model evolution of the European payment system and highlights a consumers' preference shift towards technology. Digitalization and globalization combined represent key factors that are driving consumers to modify their payment habits to an

increased use of apps by neo-banks and payment providers as a new tool to manage individual finances. In addition, consumers' role in the industry is changing organizations' decision-making process by driving digital banks to build a more tailored service. Consequently, an analysis of the business model of the industry is presented, followed by recommendations that leverage on maximizing advantages and minimizing threats.

Keywords

Payment System - Digital Banks – Europe - Business Model - Digitalization - Traditional Banks- Fintech

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1. Literature Review

The aim of this chapter is to analyze the evolution of payment systems over time in Europe. This initial overview will ensure a proper understanding of the core research of this paper, which focuses on the analysis of the business model of the digital banking industry with a focus on the current development of the digital payment system.

As the Greek philosopher Thucydides theorized already in the 5th century B.C., it is important to understand the past in order to act in the present and to orientate the future. For this reason, a preliminary investigation was conducted under several aspects, which include an introduction to the concept and components of the payment system and its historical evolution, to later on be able to examine the birth of digital banks and payment system and the regulation that rules this industry in Europe. The geographical scope was chosen to focus on Europe in order to allow for better comparability and to conduct a more in-depth analysis of such a big industry with great repercussions on the overall economy and on the everyday life of people.

1.1 Introduction to the Payment System

Payment systems are mechanisms that allow consumers, businesses, and other organizations to transfer funds, typically held in an account at a financial institution, to each other. Payments are generally transfer transactions, as funds are transferred from the payer to the payee according to established payment flows that are peculiar to every payment institution. Typically, the payee provides services or goods to the payer, who in return will pay an agreed amount of money against a payment request, usually in the form of an invoice document, as part of the invoicing process. There are several types of payment which are all currently used. Cash is the oldest and the most widely used method of payment, whether in coins or banknotes.Its main feature is that it is immediate: it does not require any transaction to make a payment, and it is very convenient and easy to carry. Its drawback, however, is that it is unprotected, as it can be subject to theft, and it is almost impossible to recover. Secondly, the personal check

can be listed. This payment method became very common during the 20th century, a time when

it was even considered a fad. However, checks are nowadays still used by very few people. Personal checks are essentially paper forms that the buyer fills out and gives to the seller. The seller delivers the cheque to his bank, where the transaction is processed and a few days later the money is deducted from the buyer's account. Thirdly, debit cards are considered a mean of payment, thanks to which the amount is debited directly from the cardholder's account and deducted directly from the cardholder's balance. Finally, there are credit cards. Credit cards allow financing, i.e., offering the possibility to pay in instalments and/or make purchases without having to pay the full amount on the spot. If the customer does not pay the full balance of the invoice by the end of the month, the company is entitled to charge interest on the buyer's remaining balance. Credit cards can be used for both online and in-store purchases (Kenton 2022).

After explaining the main types of payment, it is relevant to understand the rationale behind the functioning of the payment processing industry. Payment processing is a more complex operation than it may seem at first sight, as there are not only the figures of the merchant and the acquirer, but also other parties involved in the process. In the following section, the players involved in the process will be analyzed (see exhibit 6).

Firstly, there is the intermediate role of the trader. This refers to any type of person or company that sells goods or services. This person must work in conjunction with a bank, requiring the creation of an account and it is labelled as “merchant”, i.e., acting as a business and not as a regular person. The bank then assigns the merchant a specific account number so that the merchant can receive credit and debit card payments. Secondly, there is the acquiring party. It is considered as a financial institution registered in a card network, such as Visa or Mastercard, which accepts transactions by merchants. In the third place, there is the buyer, a person who purchases goods or services by making a payment with a credit or debit card. Looking at the industry from a more technical point of view, an important element to mention is the payment gateway, generally known as the software or server that transmits transaction information to

acquiring banks and responses from issuing banks (such as approval or rejection of a transaction). Through this service, credit card vulnerabilities, as well as card numbers, have become the first subjects of theft, making data protection even more critical. For this reason, the card associations have created a set of rules and procedures that anyone must follow to obtain card information and data and to conduct any kind of banking transaction. This set of security rules and standards is called the Payment Card Industry Data Security Standard (PCI-DSS or PCI) (PCI 2022).

Furthermore, there are payment service providers who partner with banks to act as a lynchpin between the two and control the viability of the transactions. They do not only control the transaction, but also provide other services, as they ensure compliance with various security standards, such as fraud protection and currency processing.

Every procedure needs a body that controls and verifies the veracity of the operations; for this reason, the figure of the payment processor appears as a vital player to support the transaction's effectiveness. Payment processors allow merchants to receive debit or credit card payments online by providing a connection to an acquiring bank. Like payment service providers, they perform more functions, such as assessing the validity of transactions and preventing fraud. This operation could not be completed without the issuing bank, which acts as the party responsible for the cardholder's ability to repay the debt accumulated on a credit or debit card and it is responsible for authorizing or rejecting the transaction, depending on the acquirer's financial situation.

Payment operations or economic transactions require the acceptance of the acquirer figure. These are known as financial institutions registered in the card network, such as Visa or MasterCard. These companies are in charge of accepting transactions by merchants,

representing an intermediary figure between card issuers and merchants. The last step to complete the transaction is the settlement. Once all authorizations have been completed and all approvals have been received by the parties involved, the acquirer's issuing bank sends the

funds to the merchant's acquiring bank, via that bank's payment processor. The acquiring bank will transfer these funds to the merchant's account (Cenusa 2018)

Financial services are many and diverse: there are many types of services offered by banks to both individuals and companies, but the most common ones on a day-to-day basis are personal and credit loans. These contracts allow different financial transactions, from personal loans to buy a computer or a car, to mortgage loans to buy a house. Personal loans have a double side, as it is easier to obtain them and, therefore, higher interest rates are usually paid to the bank. In a loan contract, the person requesting the money has access to it in one lump sum, whereas in a credit contract the money is made available as it is needed.

The common feature of both models is that the money must be repaid together with interest and fees within the previously agreed time. An interest rate is applied to either of these two loans, which refers to an amount charged by the entity for lending this money. It can be fixed, which means that it remains constant over time without being modified, or variable, which means that the interest rate will be modified depending on how the index used for its calculation varies. This amount is paid via monthly instalments, whose composition comes from an amount that corresponds to the agreed capital, and the other part is made up of the interest that is paid on the loan. The instalment is derived from the agreed duration of the loan, the amount borrowed, the agreed interest and the calculation rate used. The term of the loan is the time during which the borrower is obliged to repay the loan modality. Generally, the longer the term of the loan, the lower the instalments will be, but the higher the amount of interest that will be paid. Usually, entities offer better conditions if the client is linked to the bank to a greater extent by direct debit of salary receipts, for example by opening accounts, retirement plans, and insurance policies. However, the person applying for the loan must consider the costs associated with taking out the loan. This happens because these costs are not usually mentioned and are stipulated in the small print of the contract; depending on the bank, the conditions could be more or less favorable.

By dealing with a loan or credit contract, a series of obligations must be included for both the bank and the loan applicant. It is of vital importance to study the conditions beforehand, such as the amount and total cost, duration of the contract, commissions, and interest, as well as the penalizing clauses imposed by the bank in the event of non-compliance with any of its clauses. It is important to underline that the applicant can repay a part of the agreed capital at any time, without having to wait for the agreed date of payment of the instalments. This partial repayment will lead to a readjustment of the agreed instalment, terms, and interest, which may cause the institution to stipulate a series of compensation costs for the partial repayment, as it is not usually in the bank's interest. The modifications must be included in the contractual clauses of the basic contract, so neither of the parties does not need to accept the new conditions. A peculiar aspect concerns the assignment of the loan contract, which gives the bank the possibility of transferring the loan to another entity that will maintain the original contractual obligation. In this case, only the entities must agree on the conditions without the consent of the obligated party, although they must only inform the client of the assignment.

The cancellation of the loan takes place once the temporary term established in the contract has expired or in case that the total repayment of the established amount is settled in advance compared to the agreed date. It is important to emphasize that this can happen if the obligor repeatedly fails to fulfil the contractual obligations. The most common reason for cancellation is prolonged non-compliance over time, which can lead to the lender initiating an asset seizure procedure. On the other hand, the figure of a guarantor is common for the granting of loans. This person acts as a guarantee for the fulfilment of the loan, normally using his or her assets.

Therefore, if the person requesting the loan fails to comply with the established contractual obligations, the bank can directly demand the collection of the outstanding amounts from the guarantor (Stephens 2022).

It is therefore important to consider all the factors involved in taking out a personal or mortgage loan. People applying for the loan must be aware of the necessary economic conditions to be

able to request a loan and fulfil its conditions. This is appropriate because, the obligor will be tied to a number of instalments, and it is not uncommon for non-payment to lead to the foreclosure of the person's personal possessions. On the other hand, awareness must be raised also concerning the protection of the guarantor, who will have to take the burden of the payment in case of failed or delayed payments by the obligor.

1.2 Historical Evolution of the Payment System

As previously discussed, a payment consists of two parties, the payer and the payee. When the first one transfer money to the other one with the purpose of extinguish a debt, the payment occurs. When considering the payment systems, it refers to all the technologies, rules and contract that regulate a payment settlement. (RBA s.d.)

In the modern era, payment systems encourage the use of credit by providing debtors with reliable, low-cost ways to resolve their debts, which in turn stimulates economic activity. On the other hand, risky and ineffective payment methods could prevent the effective flow of money between people and other economic entities (Payment systems – history and challenges 2019)

Considering the past, for a very long time in all the economic transactions between agents, one party would share a good and the other part would repay the product with any form of old payment, thus only direct bilateral relationships were involved.

The establishment of banks, nearly seven hundred years ago in Venice, was essential in creating the framework for such payments to advance in a sophisticated and secure way. More in detail, according to Investopedia, the definition of banks is “a financial institution that is licensed to accept checking and savings deposits and make loans. Banks also provide related services such as individual retirement accounts (IRAs), certificates of deposit (CDs), currency exchange, and safe deposit boxes” (Investopedia 2022).

Different perspectives contributed to the development of banks as they are known nowadays. In fact, even in the Medieval Middle East bankers were constantly involved in several

transactions and payments. Furthermore, during the XIII century in Venice, coins from different origins were the main form of circulation of money. The first forms of banks could also be found in London during the XVII century among goldsmiths, who thanks to their ability to provide safekeeping services, they developed one of the first form of banking business. Geographically moving to the continental Europe, payment methods based on transfers between different accounts tended to be predominant.

An important aspect to highlight about payment systems is that, even if they are considered fundamental for the right functioning of the economy, they have gained importance only recently because of the increase in technological changes within the industry and the policy concerns connected to this.

Coins and banknotes have traditionally been granted legal tender status in most Western countries, which means that governments view those items as the official money in circulation. Money nowadays, however, can take many other forms, such as contactless payments through the use of mobile phones. Furthermore, the difference between wholesale payments and retail payments should be underlined. Normally, the first ones involve large value transfers and are established from one financial institution to another one with a high priority, and they usually undergo dedicated interbank settlement systems.

Instead, retail payments involve low value transactions that are made between people, generally in form of cash or transfer transactions. These payments are slower than the first ones and less prioritized, even if in recent times and in some countries, the improvement of technology is directly connected with the speed of such payments (e.g., through mobile phones or internet).

In recent years, due to the digitalization process, also the wholesale payments shifted from the deferred net settlement to real time gross settlement (RGTS). The emergence of new players and new regulations imply the growing development of fast payments. New possibilities relate to impulse for transformation, bringing Big Data application and Artificial Intelligence to be protagonists of the modern banking industry era. Thanks to them, several payment services

opportunities are growing for companies' business models.

The negative side of this innovation are the lower barriers to entry, paired with higher competition and a consequent increase in emerging FinTech companies.

All the previously explained changes involve stakeholder, which are facing huge challenges:

- The central role of client interface: it has always been an important connection point between companies and clients, in particular for providers of cashless payment system, which can obtain and leverage payment data in order to personalize their offer to the target. With the increase development of technology, also the amount and value of client data is increasing.
- The disaggregation chains: the value chain is another element that is changing due to the technological innovation, in fact in the past was mainly concentrated in one single entity, while nowadays it has been completely redesigned.
- Digital ledger technology (DLT): DLT systems are gaining power in the recent times, even more than the modern RTGS systems, mostly in areas such as securities settlement.
- Cyber risks: with the increase amount of cashless and online payments, also cyber-attacks are becoming more and more frequent. Recognizing and preventing these risks is fundamental for banks, reason why they should invest in new secure data communications infrastructure (Payment systems – history and challenges 2019).

To sum up, a system that allows people to exchange different assets has always existed, but the emergence of banks has been fundamental to form conditions for those payments to develop in a specific and regulated way and thus to allow everyone to follow strict rules and laws. Over the years and, more specifically, nowadays, the payment system is facing great changes due to digitalization processes that led to the creation of digital banks. The increasing use of fast and online payment alternatives and the reduced use of cash are some of the new challenges that banks are experiencing.

1.3 The Birth of Digital Banks and the main Players in Europe

A digital bank is a financial institution that provides banking and financial services exclusively through digital channels, such as online platforms and mobile apps. Digital banks do not have physical branches and instead operate entirely online, allowing customers to access their accounts, make transactions, and apply for loans and other financial products through their digital devices. These banks are often focused on providing convenient, user-friendly services to customers, and may offer competitive interest rates and fees compared to traditional banks. Starting in the 1980s, when advancements in digital banking began to pick up speed, there were several historical events that impacted the history of banking, from the first bills of exchange to the modern day.

In 1980, United American Bank offered the first home banking service by partnering with Radio Shack to produce a custom modem for its TRS-80 computer, enabling the bank's customers to securely access their account information (England 2022). By offering electronic home banking services to its customers in 1985, the Bank of Scotland became the first bank in the United Kingdom to adopt the cutting-edge technology required for remote functionality. To pay bills and transfer money, people simply needed to connect to the Internet via their television nor phone. Although the connection was sluggish and unstable, it was nevertheless possible to immediately see how disruptive this new "telebanking" service may be. In 1994 Stanford Credit Union introduced the first banking website, marking a turning point in the development of online banking. From that moment forth, internet banking's growth was unabated, and more and more private customers began utilizing digital services.

Germany pushed the envelope in Europe when it came to building Open Banking as a platform and moving forward. Banking professionals created the Home Banking Computer Interface (HBCI) between 1998 and 2002; it was later replaced by the Financial Transaction Service in 2002 and was the driver for the creation of the PIN and a banking security system. Two years later, SOFORT implemented the first screen scraping and data use, allowing bank clients to

authorize service providers to access their banking data and their login information. With the use of this technology, the banking provider became able to access the account as if they were the client. In addition to revolutionizing the way we interact, Apple's introduction of the first iPhone in 2007 acted as a catalyst for innovation that drove the growth of mobile banking, making it simpler and easier to access banking services on our smartphones. According to several analysts, many Western nations will be legally cashless by 2026 since technology is developing so significantly in this area (England 2022).

Although many bank clients experienced hardship during the global economic crisis of 2008, digital banking continued.

Customer behavior has been changing over the last few decades, shifting more and more towards a consumption of banking services that is digitally oriented. These were created with the intention of offering customers a better banking experience in a financial environment that is still recovering from the global financial crisis. Because of their digital roots, they have been able to provide customers with greater offerings at cheaper costs, increasing financial inclusion and transparency. Globally, there have been an increasing number of digital banks since 2015.

With the advent of digital banks in Asia, Africa, the Middle East, and Latin America, this trend has spread beyond established countries like the United States and Europe to become a worldwide phenomenon (Benaissa 2021).

The transition from branch banking to online banking was evidently well under way even before the coronavirus pandemic (COVID-19); the latter has simply accelerated the current trend. When social distance become the norm, several of the technologies that were already accessible to bank customers – such as contactless methods of banking and payment – quickly became highly appealing. In this regard, the number of digital users in the European banking industry has increased by 23% since the pandemic's start (see Exhibit 1).

This furthers banking's position as an industry where consumers are most likely to interactwith their service providers through online channels. The digital banking sector is extremely broad

and fast expanding. It is also not surprising that the use of online banking is higher amongyoung people. The pace of technological innovation is rapid, along with the continued penetration of technology within our daily actions. As more people become digital natives andhave higher expectations for their experiences, customer behaviour is evolving. Additionally, we are witnessing regulatory developments on a global scale – which we will discuss in more detail later – including the introduction of open banking regulation as a method of fostering competition and the establishment of regulatory sandboxes by financial authorities. Since customers are demanding more efficient and user-friendly online services, all these new technological improvements place competitive pressure on banks, who are pushed to react andadapt to these changes as promptly as possible to keep up with the competition and hold their competitive advantage.

The fully digital banks enter this contemporary banking sector framework. The operational models, key ideas, and business strategies of these new competitors are continually evolving. Their business models are also significantly different from those of traditional banks: instead of differentiating themselves through the high caliber of their relationship managers and a broad range of products, digital banks focus on user experience and product simplicity. These attributes, as mentioned repeatedly, have gained importance in contemporary society.

Neo-banks provide a wide range of goods and services, target customer categories, and geographic areas. Ease preferences among customers have long been a driving aspect. Banks once benefited from customers bundling their financial services at a single institution, but today's online options allow customers to choose from a wider range of customized options, including non-financial services, that meet their unique needs. Customers only need to open an app wherever they are and take a few seconds to complete most transactions. Consumers are likely to select this quick and convenient alternatives, aware that having more options might lead to significant savings.

There are several core business models that can be differentiated notwithstanding the diversity

of the proposal and operating model. Digital banks can adopt a "freemium" business model, similar to the technology industry and following Google and Facebook as examples, in which basic daily services are provided for free to build a relationship with the customer with the aim of subsequently converting to paid services. The European and North American markets are home to a wide number of top operators, including Revolut, N26, Satispay, Ipagoo, Monzo, and Wise, as this model supports quick scalability. These operators have been successful in increasing their market share by providing millennials, the majority of whom originally preferred the freemium model, with a low-cost premium experience.

Many of these companies have positioned themselves in the payments sector, focusing on sending and saving money or on easy payments and transfers in any currency. Historically, compared to other countries such as the United States or Asia, Europe has always been a step behind in technological and digital innovations, but despite this, in recent years several venture investors have shown interest in European FinTechs.

Among major digital banks, we chose to analyze the big 3 in the European FinTech landscape: Revolut, N26 and the latest Italian unicorn Satispay.

I. Revolut

Revolut was created in 2015 by Nikolay Storonsky and Vladyslav Yatsenko with the intention of revolutionizing the payments system by making it accessible from a digital app and minimizing fees due to foreign currency exchange rates. Revolut earns most of its revenues through a fee called interchange, in which it takes 0.2 percent of each transaction. This did not have a significant impact for the first few years, but as Revolut added more customers, the fees started to escalate. Other sources of revenue are then ratchet fees applied by the firm as Revolut is free/low-fee, however customers are time-limited and rate-limited (i.e., fee charged only on weekends or limited free monthly withdrawal).

Moreover, Revolut makes money through offering services like P2P loans or cryptocurrency trading, as well as through a variety of insurances and a cashback program. Due to its extremely

flexible contracts and cost-free international cash transfers, the firm has consistently outperformed rivals. It provides free basic and various premium accounts for both individuals and businesses, giving users access to extra tailored services and perks based on the type of premium contract they have subscribed to. Almost half of the company's user base is between 25 and 35 in line with the strategy adopted to acquire, retain, and continuously develop its customers, coherent with its fintech nature. The majority of the channels used are digital, including social media, tube advertisements, and community-driven referral programs.

The primary expenses Revolut must bear to run its company are connected to technological development, legislation, compliance, and licensing, as well as marketing and community management.

Revolut's online community, which is heavily focused on the bank's products and their virality, really embodies the company's key values. In 2021 the app has reached 20 million users who use it for banking and currency exchange. (PYMNTS 2022).

II. N26

The other major European player, not headquartered in the UK, is N26. It is a German direct bank that provides customers with a range of financial products. Valentin Stalf and Maximillian Tayenthal created it in 2013. Being a digital bank, the business doesn't operate any physical branches but rather offers all of its services online using a smartphone app.

The German company received its license in 2016, marking a significant turning point in its corporate history. As a result, it was able to increase its customer base throughout Europe by one million clients in just two years, opening 24 new markets and bringing the company's user base to eight million by 2021.

Through various partnerships, N26's strategy is aimed at acquiring a young audience that also includes freelancers and workers who want to use banking services in a smart and time-saving way. There are no physical branches and all customer support is provided through online platforms or telephone services; social media is, of course, the most widely used channel for

connecting with clients and managing established relationships. N26 tends to be less community-driven and more focused on commercial partners than its competitors, with a more conventional approach to marketing and customer service. The company has partnered with organisations like Mastercard, which offers all issuing and processing solutions on the payment side, or Wirecard, which offers banking back-end, to boost the business's scalability and efficiency. Similar to Revolut, N26 provides free basic accounts as well as two-tiered premium plans that come with features like free international withdrawals, partner discounts, or a stylish card. There is one significant distinction between the two companies, though: N26 doesn't charge commission on card transactions made in foreign currencies, whereas Revolut does so up to 2% of your total spending. Revolut's service is exclusively available through the app, whereas N26's allows you to manage your account using both its smartphone app and an online banking website (N26 2022).

III. Satispay

Different business model than the two fintech giants mentioned so far is that of Satispay. Satispay is nothing but a modern smartphone application, which intends to simplify payment and money transfer operations, thanks to its connection to the web. It is without a doubt the most well-known Italian app for QR code payments at this time. In our continent, Satispay stands out as the only truly established model that is not dependent on banks or credit cards. The unique aspect of the Satispay system is that payments may be made via smartphones without the usage of credit cards or ATMs.

Yet this applies to both physical businesses and online retailers (e-commerce), as well as between friends and acquaintances, in public administration, regarding the payment of taxes and various bills. The app has been available for use on all operating systems since 2015, and it comes in two versions: a personal version for users and a commercial version for shops. By indicating the IBAN code, in fact, the application establishes a link with the current account of any bank in the user's name. The process stands out for being both practical, quick, and secure.

The success of Satispay may be attributed to its affordability, convenience, and simplicity. This payment method is becoming more popular among both individual customers who can benefit from its extremely cheap prices and those who work in the business world. In fact, the latter has several benefits that mostly affect bars and small enterprises: zero commissions for transactions under 10 euros, and fees that are in any case less than those associated with creditcard use.

Satispay benefits from its expanding customer base of enterprises: it receives fixed commissions of 0.20 euros for each transaction made with a value over 10 euros in "physical" points of sale, and it also triggers an additional commission of 0.50 percent for all transactions made online (Satispay 2022).

In other words, compared to competitors, the fees that Satispay charges retailer businesses are still reasonable. Nowadays, most partnering businesses in overseas countries allow customers to use Satispay. There are already well over 100,000 organizations, both domestically and internationally, taking part in the project (Germany and Luxembourg). The app may soon be made available in additional European countries since the expectations are promising. Not only will there be an exponential rise in users as a result of this, but Satispay's profit will also ostensibly rise. Satispay has exceeded the dreaded threshold of the billion-euro value thanks to an investment of 320 million euros, allowing it entry into the exclusive group of Italian unicorns.

1.4 European Payment System and annexed Regulation

The European Union has always fostered a unified and integrated approach when it comes to payment and settlement systems, especially after the introduction of Euro banknotes and coins in 2002. Indeed, as cited by the European Commission, the objective is to create an efficient market for payment services in Europe, which should guarantee common rules, symmetry of information, fast payments, consumer protection and a wide choice of payments (European Commission). A major role in this regard is therefore played by the Eurozone, which is composed by all EU Member States whose single currency is Euro (European Commission).

The Eurozone also comprises the European Central Bank (ECB) and the National Central Banks (NCBs) of the member states of the euro area. These players made it possible to develop a harmonized payment and settlement system over time thanks to the introduction of regulation. Moreover, the general aim at a continental level was also to improve coordination and cross-border payments as a response to globalization and to the fast development of European and global markets rather than just national ones. For this purpose, also the Euro Banking

Association (EBA) became relevant given its mission to initiate and develop cooperation arrangements in relation to value transfer mechanisms. The same goal was shared by the European Union, which extended this objective with the aim of creating a single payment area also to the goal of reaching the same charges of cross-border payments as domestic ones. Furthermore, in order to keep up with the fast pace at which innovation and digitalization evolve, the European commission set up a retail payment strategy in 2020. The purpose of this new strategy was to develop instant and EU-wide payment solutions that can ensure cost efficiency and accessibility to individuals and businesses. Moreover, Europe's intention was declared to strive at outstanding global competition in this field and become independent from global payment providers. Finally, customer care was at the heart of this strategy, in order to guarantee safety in such a delicate topic as payment and thus ensure proper risk management and mitigation. The interconnections between players gave birth to regulation that laid the base for the European payment system, which constantly undertakes a constant development and adaptation process.

The first directive to pursue these objectives was laid down in 2007 under the name of payment system directive (PSD) by the EU, where a common ground for all types of payments was ruled for the whole European Economic Area covering electronic and cash payments. The directive specified all rules that payment service providers must follow in order to guarantee compliance of rights and obligations to its customers. Moreover, it also introduced a new category of payment service provider: the so-called "payment services", which relate to non-banks. Already

back in 2000, the Electronic Money Directive (EMD) was issued with the purpose to allow non-banks (referred to as Electronic Money Institutions) to issue e-money stored in an electronic device or remotely in a server. With PSD, an evolution of the EMD is carried out with a more comprehensive approach (Bank for International Settlements 2014). With PSD, the single euro payment area (SEPA) was presented, a very big step towards harmonization given that SEPA allows consumers and businesses to have access to equal payment conditions across the whole Euro Area.

For this regard, it is relevant to highlight that even after Brexit, the UK made sure that their participation in the SEPA would be maintained in order to minimize payment disruption. In this way, most payments regarding SEPA were not affected to a big extent by the decision of the UK to exit the EU. On the other hand, Brexit surely led the UK to rethink its relationship with the EU, although the intention was to implement a domestic transparent and safe system while always keeping a close alignment and cooperation with the European Union (European Payments Council 2021). With the rise of digitalization in most recent years, the directive needed to be updated and thus PDS2 directive became applicable starting from 2018. The major changes relate to the introduction of measures to improve cybersecurity and consumer rights. Indeed, the aim was to improve security of online payments as well as protection from frauds. A better coordination with EBA was also fostered, in order to improve the quality of standards and international cooperation. Finally, thanks to PDS2 improved the situation of interchange fees, limiting the fee to charge for credit and debit cards and forbidding retailers to charge more on these cards than settled (European commission).

Another pillar of the European payment system is represented by the Trans-european Automated Real-time Gross settlement Express Transfer system (TARGET), which was firstly introduced in 1999 with the aim to provide a reliable real-time settlement mechanism of euro payments and to improve coordination between EU Member States. Its establishment indeed followed the launch of the euro and was aimed at providing a support to the monetary policy

operations. Indeed, the rationale behind TARGET lied in the coexistence of decentralized national real-time gross settlement systems with the ECB's payment mechanism: in this way, a unified approach for cross-border payments was created. The core feature of TARGET is the provision of instant euro payments, which are held individually. Users, who are represented by almost any European credit institution, are identified thanks to a bank identifier code (BIC) and all credit transfers are made possible through this platform. Thanks to this system, no limits are posed on amounts payable, thus large-value payments are possible and intra-bank systematic risk is reduced (European Central Bank 2005). In 2007, an evolution of TARGET was introduced: TARGET 2. The need for further development came from the inefficient and costly business model of the first draft, where a decentralized approach was adopted by combining the several RTGS national systems. With TARGET 2, the central banks of Germany, France and Italy were appointed to create a new platform which would serve as a service provider for the whole Euro system. The logic behind it allowed central and commercial banks to submit instant payments to the platform, where they are processed and settled in the recipient central bank money. The objectives of TARGET 2 included minimizing systematic risk, allowing a Euro system's monetary policy and a proper functioning of the euro money market (European Central Bank). The latest evolution of TARGET 2 can be found in TARGET Instant Payment Settlement (TIPS), which came into action in November 2018 as a market infrastructure system of the Euro system. TIPS is the answer to the constantly increasing demand for instant payment, and thus allows individuals and businesses to process instant payments any day at any time without having to bear the banks' opening and closing hours. This was aimed at avoiding fragmentation due to the introduction of national solution to increasing demand and to ensure the pursue of a general unified approach. The modern and advanced technology TIPS in based on allows transfers to be processed in less than 10 seconds, large-volume transactions to be secure, no time constraints and to ensure deployment without any interruptions. The next steps and future projections include the introduction of currencies other than euro in the system, in

order to extent the eligibility requirements to central banks of states closely related to the European Union which do not have Euro as a single currency.

The last fundamental pillar of the European payment system is embodied by the EBA. Firstly, it is relevant to point out the role of the European Banking Association (EBA), which is responsible for creating a pan-European payment infrastructure service. It was funded in 1985 by 18 major European commercial banks, and it gave life to EURO 1 and STEP 2 systems, which will be shortly analyzed (European Banking Association). Nowadays, these systems are managed by EBA Clearing, which is a company founded in 1998 and currently owned by 48 major European banks. Its close relationship and support provided by SEPA and the major technology companies from the several countries involved made it possible for EBA clearing to run two Systematically Important Payment Systems such as the ones listed above. More specifically, EURO 1 in the only private-sector payment system which also allows to process large-value transactions. It focuses on high-priority and urgent transactions which are processed daily both at a domestic and cross-border level. Moreover, it also allows small and medium size business to process commercial euro transactions. On the other hand, STEP 2 represents an automated clearing house for mass payments, and it was launched in 2002. Moreover, since 2008 STEP 2 operates hands in hands with SEPA and the platform provides access to most financial institutions across SEPA. EBA Clearing extended its operations in 2013, including an online authorization platform for digital payments and transactions under the name of “My Banking”. This solution allows consumers to pay online with their familiar online banking interface and represents a huge step forward in the digitalization of payment process. Finally, EBA Clearing launched RT1 in 2017, which further extends the opportunity of processing instant SEPA payments at a pan-European level (EBA CLEARING).

In conclusion, it can be claimed that the regulatory landscape in Europe concerning the payment system has consistently evolved in the last 20 years and it has been carefully dealt with especially after the introduction of euro. In this regard, many regulatory bodies and institutions

play a meaningful role in the general objective to create a pan-European payment system which allows individuals and businesses to process instant payments and to have access to equal charges and fees regardless of the domestic or cross-border nature of the transaction. With no doubt, the European Union with all the annexed bodies is the main responsible for regulation for the EU but given its strong interaction with other countries also coordination with external players is fundamental. For this reason, the EBA and the ECB always act in the best interest of Member States both at an internal and external level. It is also important to highlight the importance of the Eurozone and SEPA, delimitating also geographically an area that should be guaranteed with common rights and obligations for its customers regardless of national borders. The changing needs and consumer trends are affecting to a large extent the European payment system, which is adapting to a more and more digitalized service to be offered with a special care and attention for highly informed and demanding consumers

2. Methodology

The following chapter is going introduce the main tools used for the analysis of digital banks' business model and industry. In addition to this, in the second part, the sources and documents that were used in order to gain insights on the business model of the digital banking industry will be presented.

2.1 Conceptual Background

The business model of an industry is the way in which all the parts of an organization fit together. However, even though it analyzes the main aspect of an industry, it does not consider a fundamental part of performance: competition.

Every business encounter rivals sooner or later, and how to deal with them is what strategy defines. (Harvard Business Review 2002)

In the following chapter, three frameworks are used in order to support the analysis of the industry business model: starting from the Business Model Canvas, through a Sum up Matrix out of own elaboration, and concluding with Porter's Five Forces industry analysis.

The Business Model Canvas framework is used at the very beginning of the analysis, mainly thanks to its transparent structure that allow to go deeper into every component of a business model of an industry and depict the weaknesses and strengths points of it. The Business Model Canvas (BMC) is “a paper-based or computer-supported framework that claims to facilitate the process of devising, improving and communicating innovative business model strategies” (Osterwalder 2010).

Its focus is on nine main points: key partners, key activities, key resources, value proposition, customer relationships, channels, customer segments, cost structure and revenue streams. Each part was firstly invented by Alexander Osterwalder, and it completely changed the way to explore business models, thanks to the evaluation of complex elements that form and guide an industry.

The “block” of Customer Segments explains how different groups of people and/or organizations are in contact with and offer service or products to a company. Organizations can build the products or services according to specific needs of each cluster of customers.

Connected to this, the value propositions block indicates the benefits for a specific segment of customers.

Through the Channels, the company is able to reach a certain customer segment and provide its value proposition. Moving on, the Customer Relations describes the type of relationship established between the company and the customers. In particular, it indicates how the company acquires customers, retains customers that already serve and increases sales.

The Revenue Streams explain how the company gain revenue from selling its products/services to a specific customer segment. The Key Resources encloses the strategic assets that a company must have in order to create and to support its own model of business. This block identifies what are the business needs for a specific business model in order to work. The Key Assets show the specific strategic activities that have to be accomplished in order to create and sustain value propositions, reach customers, build relationships with them and generate revenue. In

addition, Key Partners defines the network of suppliers and partners necessary for the functioning of the business model. The Costs Structure defines the costs that the company itself will have to support in order to operate the model of busines (Mc consulting). Additionally, this framework enables to define each of these fundamental elements schematically.

The second framework used is a Matrix of our own elaboration and it was mainly created to summarize, compare, and have a better view of the four elaborated suggestions for the improvement of the digital banks industry. More specifically, the four suggestions are: expand services to innovate and improve customer experience, create a network of digital banks, open branches for customer care and finally create collaborations with traditional banks. The matrix was built taking into consideration some of the most important aspects when implementing or improving a business model: costs, risk, availability of resources, time of implementation and expected outcome. The first aspect, costs, was considered to be quite high for almost every suggestion, in particular for the third one. Opening new physical branches would require a significant initial investment but at the same time the expected outcome would reach the benefit of customer loyalty and a higher engagement between customers that would be very low and limited to be digital in case the bank would have only the online store. For what concerns the risk, it is considered to be low in every part because of the feasibility of the suggested proposals. The availability of resources is elevated in every idea, particularly for the collaboration with digital banks. This happens because of the great number of traditional banks that would need and that already take advantage from digital ones, mainly due to the fact that in most cases old and traditional banking system is outdated and need to be digitalized and modernized in order to keep up with the times and attract as many consumers as possible. Finally, time of implementation is moderate and not very low because of the highly regulated industry and the processing of sensitive data and information of consumers. After all these analyzed aspects in the matrix, it was easier to understand and draw the possible outcome for each scenario, having in mind the complexity of such operations.

The last framework used is the Porter's Five Forces. This tool is used to identify and deep dive into five competitive forces that affect every industry and help identifying a sector's advantages and disadvantages. These forces are: competition in the industry, potential of new entrants into the industry, power of suppliers, power of customers and threat of substitute products. The aim was to analyze the intensity of threats in the digital bank's competitive environment and the forces that influence the most the companies operating in this sector. The framework was created by Harvard Business School professor Michael E. Porter in 1979 and it helps companies to be guided in order to increase their competitive advantage as well as to understand their corporate strategy. Starting from the first of the Five Forces, it explains how the decreasing power of a company is directly connected with the increase in number of competitor and comparable goods they provide. In contrast, if little competition is present, businesses have more possibility to define their own terms for contracts and raise prices with the aim to increase sales and profits.

Concerning power, also the force of new entrants has a huge impact on the stability of a company. In fact, the faster and easier it is for a new rival to enter the market, the weaker the already existing companies are on the market. The Porter model's next element examines how quickly suppliers can increase input costs, and this is mainly due to the availability of this input on the market. A company becomes more dependent on them also if the switching cost are particularly high. Moving on, the capacity of the customer to influence price reductions. This aspect is driven by the number and value of customers, as well as how difficult would be for an organization to explore new markets or customers. It will be simpler for a business with lots of small, independent clients to raise prices and increase profitability.

The final force focuses on substitutes items or services offered by the competition. If a company can increase prices, it will be the one that makes items or provide services for which there are no direct alternatives.

Concluding, even if this model was invented almost forty years ago, it is still relevant to

understand if an organization should modify its business plan to become more efficient and utilize its resources to have higher returns and added value.

The choice to analyze three frameworks is mainly in order to take advantage of the importance of each one and to avoid complexity and to foster understanding and clarity.

2.2 Methodology: Data Sources and Usage

This section explains the methodology employed to obtain the information used in the study. Firstly, the different sources of information were weighed in order to develop the broadest possible view of the digital banking sector. Secondly, the sources of information were selected to evaluate how to best explain the disruptive elements of the sector and how to set out the guidelines for the future outlook of the industry.

To understand what digital banks are, it was decided to analyze where they come from, and what factors differentiate digital banks from traditional banks. Therefore, a series of financial reports and banking news have been used. The aim is to explain from the inside what digital banks are, what their structure is and how digitalization in the cloud is crucial in this context. Therefore, the work written by consultant Kamran Ikram for the company Accenture on how banks can modernize their main framework with the help of the cloud was analyzed (Ikram 2020)

The second point was to analyze the key factors and elements that digital banking needs to strengthen in order to continue to grow and be competitive. For this purpose, a report by the European online consultancy platform for the digital sector has been used, based on how the digital banking model works in Europe, and what are the 7 factors to be considered in the development of digital banking (Consultancy.eu 2022).

In addition, different financial blogs have been analyzed to understand how digital change is being managed and how it is adapted to improve the customer experience, For this purpose, a report was chosen by the technological giant Salesforce, a leading company in the development of CRM, which knows aims at improving the user experience with its services. The report

published on September 10th, 2021, deals with how financial services are beginning to set the pace for digital engagement.

The last point focused on analyzing what will the prospects of this sectorbe, what disruptive elements will lead the way, and what are the new trends. To this end, two different reports from leading consultancy firms were analyzed, the first being the McKinsey article published on the 17th of August 2021, which focused on explaining the strengths that traditional banks should focus on in the future, and what digital banks need to differentiate themselves and continue growing (McKinsey&Company 2021)

Secondly, the report of the consultancy firm EY from the 7th of October 2021 was used. It explains what steps need to be taken to adapt technological change to the new generation of digital consumers. Moreover, it helps gathering information on technological developments that are applied in other sectors and that have a great place in the digital banking sector, allowing to improve the experience of the ever-demanding consumer using the information in the cloud (Bellens 2021)

3. In-depth Analysis of the Industry's Business Model

In order to gain a deeper insight in the functioning and structure of digital banks and their role in the evolution of the payment system in Europe, an in-depth analysis will follow. The tool chosen to do so is the "Business Model Canvas", which represents a framework that helps examine business models of industries. This framework was firstly introduced by the Swiss theorist Alex Osterwalder in his book "Business Model Generation". The canvas is divided into nine building blocks, each of which will be thoroughly investigated with the aim to explore the digital banks' industry business model, in particular in relation to the digital payment system. This analysis also aims at subsequently extracting strengths and vulnerabilities of the industry's business model and provide possible future improvement solutions. The nine components are: *key partners, key activities, key resources, value proposition, channels, customer relationships, customer segments, cost structure and revenue streams* (Interaction 2019).

3.1 Key Partners

Understanding that technological development and innovation are changing the banking industry at lightning speed is fundamental. Indeed, around 52% of banking directors planned to collaborate with new digital banks within their industry in the next two years, according to an Accenture survey with more than three hundred CEO. In addition to the speed of the current technological changes, more than 85% predict that this development will increase rapidly over the next three years (Accenture).

All the huge amount of data and collaborations that banks are building nowadays represent an important asset that allows banks to take advantage from customers and create new business models. With the introduction of digital processes in their traditional business model, banks could add 5% to ROEs, but only if customers do not access the new services outside of the banking sector. According to 83% of the bank executives, “platforms are the glue” that connect organizations and digital. On the total number of banks that are expected to be working with new digital partners, two out of five (42%) believe those partnerships would not be connected with the banking industry within the next two years (Accenture 2016)

However, while the need for partnerships has been recognized as fundamental for banks, scaling up their implementation is difficult. Given that banks lacked a defined structure for a two-way value creation, partnerships were frequently opportunistic or experimental.

In order for banks to obtain more results from their partnerships, some experts from Oliver Wyman (Oliver Wyman) suggested the following four best practices. Starting by codifying the demand for partners, banks must specify the major results they aim to achieve from these collaborations, as well as the areas in which they want to collaborate. Secondly, formalize the partner engagement models. A partner that is useful to banks and unique to their partners should be established. The value propositions that various partners offer should be taken into consideration while building partner-centric interactions. Third, embrace continuous learning: banks should always aim to achieve the best customer experience by listening to the

expectations and preferences. On the same level, also Partner Experience (PX) is important because some companies create important incentive to follow rules and to improve. Finally, banks can take inspiration from platform-based industries and develop new tools, through the digitalization of partner capabilities. The aim is to improve the Partner Experience (PX) which includes standardizing and simplifying important procedures.

Banks must develop the necessary skills in order to successfully collaborate at scale while reducing costs and industrializing partner competencies.

As we approach 2030, establishing strategic relationships to encourage innovation and development is turning into a crucial component of the banking industry's future-proofing strategy. Fintech firms have the benefit of basing their fundamental procedures and business models on digital transformation, but they frequently run into difficulties expanding their operations.

Nikolai Hack, Head of Strategy and Partnerships at Nucoro (platform which enables financial institutions to build digital savings, investment, and wealth management propositions), claims that the partner networks revolution has led to a few notable occurrences (Nucoro). He also believes that partnership has shifted from the periphery and supporting roles of a simple offer to its central core, as opposed to building, or purchasing. Although in the past collaborations would have been an optional choice like KYC checks and digital signatures, he claims that nowadays partnerships are fundamental. Some observers claim that several reasons have contributed to the transition and that the incumbent sector's embrace of partnerships is a sign of changes to come. According to Mahmood Noorani, CEO of Quant Insight (a financial market analytics firm), partner networks with specialized fintech providers may significantly improve performances, cost savings, and client services, as the banking industry is realizing very fast (Quant-Insight.com). The main banks should view fintech businesses as a source of innovation that may improve their current offerings rather than as a threat. Furthermore, in March 2020, with the beginning of the pandemic emergency experienced worldwide, the start of the huge

need for collaborations took place. Up until this moment, incumbents and tiny fintech players have been in competition, with banks holding the higher position.

However, most of the banks' IT operational models are not designed for collaboration with third parties. Banking IT is sometimes a complex mix of outdated systems, with important customer data spread across several division and this makes it challenging for banks to collect the necessary client data sets in order to work with other companies.

Banks are increasingly using API-led (application programming interface) integration to overcome these difficulties. Due to how easy it is to diversify services, goods, and solutions, APIs have revolutionized the partner network industry, and they will emerge as the preferred solution to build partnerships.

3.2 Key Activities

The new landscape of payment systems in Europe, as mentioned above, includes a major role of digital banks and of some new and innovative solutions for digital payment systems. The following building block helps gathering further insight of the functioning of the European payment system by explaining the main activities that companies withing the industry perform. The aim is to better understand how these activities ensure the success of the company's operations and how they shape the value proposition of the industry. Firstly, it is important to highlight that focus will be set on both digital banks and on decentralized payment systems, which represent the main players of the target topic. It can be stated that the key activities performed by these players include: marketing and digital platform focus, customer assistance, risk management, additional services and individual account management.

Regarding marketing, this activity represents a fundamental need for digital banks, who highly depend on its effectiveness on consumer decision-making. In such an evolving environment with easiness of substitution, digital banks strive to gain and maintain competitive advantage. To do so, digital marketing is a crucial tool to achieve this objective. More and more informed consumers have nowadays higher standards and finest needs, especially when it comes to their

finances management. It is important that digital banks use marketing to promote their services appropriately, in order to avoid information asymmetry and an inappropriate communication of their vision and specific offer. Digital marketing should serve for this reason, in order to attract new customers by creating a desire to be part of an important change. For this purpose, attraction marketing should be implemented, and this is the reason why digital marketing is a big source of spending for neo-banks. The strategy of European digital banks varies a lot and touches upon several options, such as paid keyworks search. For instance, when considering the two competitors Revolut and Monzo, their paid search strategy is opposite. Revolut focuseson brand bidding, which implies competitors' keyworks such as competitors' brand name. This

is to ensure high-quality traffic and brand exposure given that when looking for a company, also the industry competitors show up and people are more likely to make comparisons before making purchasing decisions. On the other hand, Monzo focuses its paid search on its own brand to enhance customer retention and loyalty rather than new acquisitions (GA Agency 2022). Another relevant marketing strategy includes a strong social media presence, given that the digital soul of neo-banks makes them more attractive for younger users, who also tend to be more familiar and influenced by social media. In order to be attractive, creativity and valuable content generation are key to a successful media presence. As an example, Satispay is engaging a lot with Tiktok and influencers to spread its new and visionary concept of a payment system that does not require any card, but just a mobile application (Gummy Industries s.d.).

As highlighted above, customer assistance also represents a key activity for neo-banks and digital payment providers. It is crucial that a very effective and efficient assistance is provided for a 100% digital service. The main players to ensure this are artificial intelligence and machine learning tools, which create solutions for digital businesses in order to deal with customers. The main examples are chat boxes and virtual assistants: thanks to these highly advanced technologies, support can be offered 24/7. Moreover, automated review systems have been developed with the aim to constantly monitor transactions in order to prevent and spot possible

frauds. However, some limitations to these solutions have been found across the different mobile applications. For example, N26 just offers technical support to paying users, which prevents standard users from accessing full assistance. In the case of Revolut, instead, several problems arose because of the automated freezing of accounts for review matters. The problem stood in the lack of sufficient review assistants, which led to an excessive freezing period (even up to months) of accounts with consistent amount of money (ZD Net 2019). This being said, artificial intelligence and machine learning solutions represent a valuable resource for neo-banks by boosting their attractiveness thanks to inviting interfaces and thanks to the collection of data and statistics which allows for personalized and tailored services. To ensure the proper functioning of platforms, continuous investment in innovation and maintenances is required, in order to keep being competitive and outperform competitors.

Risk management is a crucial activity performed by digital banks, whose amazingly valuable online service is also always threatened by the possibility of cyber-attacks and frauds. Neo-banks undergo European rights and obligations as seen above, thus certain protection is provided by governments and European institutions. However, cyberattacks still represent a main threat given that FinTech companies often outsource certain services to third parties, who might not be as well protected as they are from cyberattacks. This is the reason why account checking, and review systems have been implemented and a lot of care and investments are made in order to prevent as much as possible data leaks, cyber-attacks and non-compliance with regulation (CSI 2020).

A relevant strength for digital bank is surely represented by the several additional services provided. They are implemented for two main reasons: the first one is to differentiate from traditional banks in order to incentivize customers to shift more and more to digital services. The second is to outperform competitors and they surely represent the main point of differentiation thanks to which users choose which digital bank to apply for. Surely the positive aspects that are common to all neo-banks are the no-fee policy, the opportunity to send and

receive money with no fees to other users, better interest rates and the very attractive and user-friendly platforms. However, different neo-banks offer additional and unique services. For example, Revolut allows to trade stocks, make investments in crypto currencies, buy commodities. On top of this, the omni-app allows to book travel options and purchase travel insurance, as well as to donate to charitable organizations.

Finally, a relevant key activity for digital banks and digital payment system providers is the opportunity it gives consumers to manage their finances completely by themselves. For example, Satispay is an online application in which users have access to all information about their current account position, payment history, updated statistics on a single and user-friendly mobile application. The availability of the service allows workers to be able to manage their financials not having to go to any branch; moreover, it is more attractive for young generations to use a mobile app compared to having to go in person to a physical location. Eventually, in the case of Satispay for example, the benefit will be not only for final users, but also for businesses, who will have access to a broader customer base and higher customer acquisition opportunities by adhering to the possibility of paying with the app for their customers.

3.3 Key Resources

The resources at the disposal of the new digital bank business model are manifold.

First of all, to understand how the digital banking model works, the first element to mention is technology. This is a key factor, as it is essential in order to modernize the traditional banking system. The main objective of Fintech is to offer a service that simplifies and facilitates the use of banking services for customers thanks to the use of technological development. Based on this premise, there are a series of key resources that must be developed, and correctly combined, to differentiate themselves from the ones of traditional banks. That said, the following is an analysis of the key factors that digital banks need to enhance to maintain and even increase the level of competitiveness and maintain their upward trend in this sector.

The first element to highlight is Artificial Intelligence (AI), known as the combination of a

series of algorithms designed to be able to perform a series of tasks based on the study of patterns, creating a self-learning system that feeds back on its use. FinTech companies use AI combined with data analytics to assess and predict an individual's needs, becoming capable to offer them a range of financial solutions tailored to their needs. One example of this is Robo-advisors, which are a series of digital platforms that, using algorithms, offer a range of services such as efficient automated fund portfolios at low costs, acting like a financial advisor but offering cheaper and more affordable investment products in a more automated way. AI and data analysis offer digital banks several possibilities: in addition to exploring customer needs, the combination of machine learning and AI also offers the possibility of analyzing large amounts of data in a way that reduces the possibility of errors and identifies potential problems that might occur in the future (Toppan Idgate 2022)

Finally, AI allows the detection of new trends and deviations that may occur in the market thanks to the continuous analysis of the financial situation. This solution is very important because it allows both financial institutions and financial managers to have data with which to determine the conditions of the loans to be granted, or with which other businesses want to collaborate or develop financial operations thanks to the forecasting of possible scenarios.

The second element is the Blockchain, an emerging technology that can radically improve banking institutions, offering new opportunities for innovation and growth while reducing costs and risks. The blockchain can be understood as a continuously growing list of cryptographically signed transaction records. These transactions are irrevocable and shared by all Blockchain participants. Each record is time-stamped and linked to previous records. For example, when people accesses their banking app with their device, they could track a transaction they have made or received at any point in their history. This technology is used in many everyday actions of which we are unaware (Sabharwal 2018)

Smart contracts are a very important tool derived from this technology. As their name suggests, these kinds of contracts are different from other ones, due to the fact that they are only fulfilled

if a series of predetermined conditions are met, eliminating the dependence on an intermediary figure, such as a financial entity that verifies or approves a transaction. Smart contracts are key elements in the automation and execution of operations, reducing workflow and improving the optimization of the management flow, even being very useful when managing crowdfunding or crowdlending initiatives at a business level.

Today's consumers are looking for real-time transactions, such as instant payments and transfers, checking their account status, and many conventional systems do not have the technology to perform such transactions. This should encourage the development of FinTech products and services in the cloud, rather than heavy and complex traditional methods. Being digital banking a very competitive environment, it is essential to develop the cloud to include new applications, eliminate friction and increase the level of competitiveness among the rest of the competitors. This is where the figure of Cloud Computing emerges. The use of data is the main advantage offered by the cloud for financial institutions, as it offers multiple implementation options. It allows a 360-degree view of the data field, both internal and external, to understand it and use it to develop efficient strategies, considering the ever-increasing importance of data privacy. On the other hand, customer service is oriented to the possibility of providing the necessary services and experiences to meet the needs of the end user, improving their experience and service (Ikram 2020)

The first thing that comes to people's minds when they hear the word Fintech is accessible technology, from anywhere, with an electronic device. Therefore, mobile technology is considered the most distinctive factor between the traditional banking model and digital banks, since it is impossible to understand a digital bank without an electronic device, and due to its emergence, traditional banks had no choice but to modernize and implement their services digitally. Access from any type of electronic device with an internet connection, anywhere on the planet and at any time, has revolutionized the banking sector in every sense, as it allows customers to be independent, self-manage their products and have freedom in the digital era.

Continuing to analyze the subject in more detail, there are a series of applications within the Fintech context that allow operations to be carried out as a substitution of the traditionally services offered by brick-and-mortar banks. An example of this is contactless payment using NFC communication. Near-field communication is a high-frequency, short-range wireless communication technology that allows data to be exchanged between devices. This system provides several very useful and practical solutions for the customer. First, the need to insert a credit card into a data phone to make a payment disappears, and secondly, the need to carry the credit card in the wallet is no longer necessary thanks to the integration of the payment system with the mobile device (Business Model Company 2020).Another functionality that emerges thanks to mobile technology is QR codes, using a series of images with encrypted codes to be able to transmit or reproduce a series of data instantly. For example, e-commerce companies use these codes to instantly read payment methods without manually entering the card's bank details, thus reducing time and effort and making electronic payments more secure.

As technology continues to grow and evolve by leaps and bounds, companies need to drive and maintain the strength of their brand. Brand strength can be developed in several ways. In today's world, where consumers face many choices every day, companies must understand and analyze the needs of consumers to direct their activities and become the first choice of consumers. Digital banks start from a dual perspective. Two of their main advantages are the accessibility and availability they always offer to the user, as they provide independence in decision-making and freedom to act.

Consumers are the ones who decide when to carry out banking transactions from anywhere in the world using only a device with internet access, thus offering independence to the consumer that few businesses provide. But on the other hand, the relationship between digital banks and the consumer is more distant, since by granting independence to act, a greater degree of responsibility is the consequence, and it is the user who must solve in most situations their doubts and problems. This fact causes many people who are not used to digital devices evaluate

carefully to make the shift to digital. Therefore, it is more important than ever that digital banks find ways to foster and develop a relationship with the customer that is as close as possible so that despite not offering physical presence, the user feels close to those people. To create that feeling, fintech needs to find out which aspects of their system are the most difficult for users, such as resolving queries.

Nowadays, companies have a section of questions in which the most common doubts of customers and their corresponding answers are collected, following a pattern based on the linkage of questions to the solutions.

This service has a double function, the first one is to raise awareness to customer. By offering more autonomy and independence when managing their activities, people are pushed to be more resolutive, and the final outcome is that digital banks' help desk services are reduced. In many cases, customers choose their possible answers by discarding or choosing the option that most closely resembles their query, which still does not improve the relationship between the two parties and results in the customer not being able to express themselves. For this reason, digital banks are offering a closer form of accompaniment, based on the assignment of digitalmanagers to the different consumers. In this way, these workers resolve the doubts that could not be resolved with the method explained above. This support can be offered in different ways.The first is through an online chatbot with the manager, so that the user can explain their problems and the manager can tell the customer how to solve them. The second is through a phone call or videoconference assigned at a specific time by the manager to the client so that they can connect at the same time, visualize the problem, and indicate step by step how to solveit. The third is by subcontracting external companies to offer these services at a specific time. It is important to invest in this aspect as it will help differentiate one option from another (Huges 2016). Digital banks offer this service in different ways, some depending on the user's subscription on the platform, providing the best service with the premium package. This is where digital banks need to offer an excellent service, so that customers will choose the versionthat offers this assistance

despite the price. Moreover, customer retention can be fostered as well when customers enjoy from the satisfaction of a good customer care and become a loyal. In this case, all the other options on the market will be ignored by the customer as they will associate the company with excellent customer service.

Traditional banks are already offering the digital manager support service and digital banks are introducing this service to compete and, above all, to strengthen the relationship between both parties. This service aims to get customers used to solving their queries independently and to reduce support services, but customers often choose their possible answers by discarding or choosing the option that most closely resembles their query, which means that the relationship between the two parties is still not being improved. That is why digital banks are offering a closer form of support, based on the assignment of digital managers to the different consumers, so that they are the ones who, in the last step, resolve the doubts that could not be resolved with the previously explained method.

Although digital banks are constantly looking for ways to differentiate themselves from traditional banks, the future will also be about collaboration rather than distinction. This point is important because the advantages of traditional banks, such as brand strength, trust, and customer base, can be combined with the advantages of Fintech companies, which are mainly their ability to adapt to today's technological consumer. A study conducted by KPMG reveals that 75% of fintech and traditional banks believe that working together is the best way to generate benefits, both for the consumer and for both banks (KPMG 2022). Traditional banks rely on the affective and close feeling with the customer, a person who is used to dealing with his or her manager for long periods of time. Customer management needs the involvement of people and that is why dependency is much higher and independence is very limited. It is worth remembering that many people have not adapted to digital change, nor will do because of their age, knowledge, and because when a person likes the way something is done, they are not going to change it. Digital banks have accessibility, availability and offer autonomy and independence

to the user, all of which are highly valued by today's customers, and it is important to continue to innovate and meet these demands. However, some factors are not going to change, and there is a huge niche market to access by developing different strategies compared to those already used. Therefore, the solution is not just to seek to differentiate further, or to magnify the advantages and disadvantages of both approaches, the aim is to combine the best of digital and traditional banks, to create synergies from their strengths to reduce their weaknesses.

Although in the beginning digital banks were seen as competitors, in recent years this perception has been diluted and given way to the concept of the alliance. Today, traditional banks and digital banks are not the only players in the financial sector, as new competitors have emerged, such as the technology giants Google, Facebook, Amazon, and Apple. These new players have two significant advantages: their large volume of customers and their constant capacity for innovation. These technological giants have already incorporated numerous payment options in mobile phones such as Google pay, and Apple Pay. That said, a strategic alliance between traditional banks and digital banks is vital to be able to combine synergies, enhance their multiple advantages and face these technological giants (KPMG 2022)

3.4 Value Proposition

When analyzing the value proposition of an industry, the intention is to highlight the benefits that companies of those industries deliver to their customers (Twin 2022). Indeed, the goal is to highlight the unique selling point a company is able to deliver to its consumers in comparison to its competitors (Investopedia 2022). In the case of digital banks, at the time of their birth the value proposition was based on price convenience. Nowadays, with the expansion of services offered by digital banks, also their value proposition embarks a wider concept, which is anyways still largely based on a lower price for consumers related to banking services and complementarians. The proposition of offering a cheaper service derives from a series of factors connected to channels, activities, and revenue streams. First, it is relevant to highlight that the main aspect leading to price convenience is the no-fee policy applied by digital banks about

bank transfers. Indeed, one of the main points of differentiation introduced by digital banks includes the possibility of transferring money between people signed up at the same digital bank in a quick and freeway. This innovation pushed consumers to largely shift their preferences from traditional banks transfers to digital ones, both for the free service and for the speed of the transfer, which largely avoids having to insert all the banking data of the recipient person and just requires the email or directly finds the person from the phone contact.

The gradual shift of consumers' preferences towards a more digitalized baking approach is expected to grow considerably in the next years, with a forecasted annual growth rate of 23,5% in transaction value until 2027, year where the total projected amount arises to €8,23 trillion for the European market (Statista 2022). The no-fee policy also applies to the availability of basic services for users, who will just need to download the apps or access their online platforms to be able to take advantage of all the services offered. In some cases, revenues are raised offering additional services at a cost or through a membership, but this topic will be further discussed in the revenue stream session. This aspect is probably what affects the most the shaping of the value proposition of digital banks. However, cost reduction does not just happen for customers, but for the suppliers of the services themselves, who thanks to this digital business model are able to reduce the costs of distribution they incur in. This is possible thanks to the fact that digital banks do not incur in expenses for rent of physical branches and also of physical advertisement, given that they base their marketing only on digital marketing. This element represents an advantage in terms of cost reduction, but it also represents a hidden cost given the lack of personal interaction with clients, which still nowadays represents an important matter of decision making especially for the older population.

At the same time, another advantage that leads to cost reduction and enhances digital banks' value proposition is the lower acquisition cost they incur in when gaining new customers. Indeed, the fast and user-friendly application process leads people to be more willing to opt for digital banks. Moreover, thanks to the no-fee policy, it is easier for people to try the service first

without the need to go through extensive bureaucracy. As a consequence, the easiness of usage encourages customer retention and loyalty. In fact, digital banks allow customers to potentially manage their whole finances via phone, which surely represents a reduction of complexity and an incentive to use these mobile phone apps for most banking purposes. Not only these apps are easy to use, intuitive and fast, but they also provide the huge advantage of accessing all services 24/7. In this way, consumers do not have to worry about opening and closing time or about the time of commuting to the bank: their whole bank can be at a click distance in a single mobile application. It is however important to highlight that they value proposition of digital banks does not lie on the single fact that the service is offered completely online, but rather on the uniqueness of the service itself. Indeed, due to all the aspects explained above, digital banks outstand consumers' expectation and adapt to the nowadays very fast changing environment. The hectic life of workers makes it harder to daily find the time to run the simplest errands like going to the bank, and thus digital banks were able to solve this market gap.

Attraction marketing is also a key factor to take into consideration when analyzing the value proposition of digital banks. Indeed, the attractiveness of such service also derives from the power of digital marketing in shaping consumers' preferences. The aim of attraction marketing is to create desire of consumption through digital marketing, and the attractive and intriguing design and layout of mobile apps indirectly affect consumers' choices to a significant extent. This is the reason why digital banks incur in high marketing spending, trend which was even more emphasized during and after the pandemic. More in specific, the users who applied for digital banks rose by 23% in just one year following the pandemic and it was proved that 87% users kept on using digital banks applications even after the Pandemic was over. This proves that the user-friendly and easiness of usage of the apps induced consumers to remain loyal (ECB 2021). Although these figures show a fast increase of users and a shift towards digital, it should be taken into account that the Pandemic represented a very disruptive event. Indeed, normally people are quite skeptical when having to face fast and important changes in activities which

are usually eradicated in everyday life. This is the case of banks: for instance, especially when considering the older layer of the population, people still tend to prefer and trust buying banking services from a physical person rather than from a mobile application. To face this challenge, digital banks always try to outperform competitors by offering additional services and by sticking to their fundamental strength, which is price convenience.

Another very important factor that shapes consumer preferences is trust. Trust affects to a very large extend the value proposition of an industry, since when existent and strong it already represents a benefit to consumers, and it should always be part of it. Digital banks are indeed still in the process to gain absolute trust in their consumers, who still largely prefer to base their primary financial relationship with traditional banks in Europe (see Exhibit 3). This being said, digital banks are on the right path to build stronger trust relationships with their customers, and surely in the target activity of this research, which is the evolution of payment systems in Europe, neo-banks are improving. In fact, the changing consumer need led to a strong preference for agile and innovative solutions to the everyday life of people (EY 2021). In this sense, neo-banks offer a smart and fast service, in a unique mobile application which guarantees access to all services in a unique platform, accessible at any time and place. What cannot be forgotten is also the advantage gained thanks to the use of latest technologies in order to build the best and more tailored service to users. The use of cookies and the opportunity to track usage and build several KPIs allows digital banks to track trends and create customized consumer journey upon it. Not only a tailored service is offered, but possibilities are extended to additional services as it could be witnessed int the activities section; all these elements summed up together allow for an enhanced customer experience (Ross Republic 2020).

In conclusion, we can state that the key value proposition of digital banks focuses on the lower price of an extremely valuable service offered to its customers. The low price charged is possible thanks to a lower customer acquisition costs by digital banks, who are able to target a large share of population thanks to digital marketing. Moreover, the Pandemic represented a

strong boost for these neo-banks, given that online services were preferred and embodied a strong new need in a time when moving was not possible. Once customers are acquired, retention is also easier to reach thanks to the great and unique service offered. Indeed, the single platform for multi-use represents a strong incentive for people to stay loyal to digital banks. Easiness of use, user-friendly and attractive layout and the opportunity to access financial services at any time and place represent the reasons why the value proposition of digital banks addresses an extremely valuable service.

3.5 Channels

According to a Google study, 94% of people do research on the internet before buying a product or use a new service. This is directly connected to the fact that digital banks should offer an easy and interactive website that attract them since the very beginning of the experience. In particular, the design has to be intuitive and interactive in the mobile phone app, since it is the main device used to navigate those websites. Another remark in terms of importance is the ability to achieve a key positioning in search engines and networks. A well-positioned, optimized website and constantly updated services are indispensable for the modern landscape (Google 2016). In such a digitized environment, the first thing is to have multiple channels to connect with customers: they should be able to access from the web, mobile app, chatbot, mail, or social media. Being present in more than one media is not synonym of having reached the right target of customers, the key is to have all of them well interconnected to be able to measure their impact. Nowadays, video platforms are generating a huge number of views, as well as an important media impact, that is why digital advertising is gaining importance. Streaming applications with their advertisements, or Google with its search, are always displaying what people need to see because is in their own interest, that is why when we search for a question in the search engine, an advertisement always appears as the first option. At this point, it is clear which are the necessary tools to maintain and further promote the digital banking model. It is important to highlight that knowing or owning the tools is useless if these tools cannot be used

together, and this is where the figure of APIs appears. The acronym API refers to a system of Application Programming Interfaces, basically utilities that allow programs to interact with each other. By enabling data and systems to communicate, APIs allow financial institutions to interact, avoiding the time-consuming step of revising existing infrastructure. This increases the ability to develop new products that are fully focused on digital users, and their scalability allows new products and services to be implemented quickly. The power of APIs is giving the opportunity to companies to detect many opportunities, as they allow them to obtain specific features and services from third parties. In other words, companies no longer have to develop each product from scratch and can therefore take advantage of the functionality and products that third parties design for them. In this way, digital banks can focus even more on customer needs, as new products can be assembled from existing ones and quickly introduced to the market (Choi 2022). Financial transparency has always been an issue of controversy among financial institutions. Being an interconnected, registered, and sealed APIs increase the degree of security and transparency of operations, as weel as enables traceability, and the thread of the operation can be easily seen. Regulatory APIS offer high levels of security by coupling multiple layers of encryption to protect people's information as well as company procedures. The best-known example is the use of short-lived tokens, which allow revoking access to an individual user without compromising other users. With services that allow regulatory APIS to be offered in the market, there are numerous tools and technology solutions suitable for short-range implementations that are given according to the needs of enterprises. Open banking seeks to foster innovation to enable secure connections so that the financial ecosystem can be implemented with simplicity and open banking is a clear opportunity to expand the portfolio of financial products and services in a personalized way for both the bank, third parties and existing or future users.

4. Recommendations

In this chapter, four different recommendations will be presented. The aim of this section is to evaluate possible solutions in order to maximize the efficiency of the current business model of the European payment system. Indeed, after a careful analysis carried out in section 2, it can be concluded that the payment system industry is already facing a major change with a substantial shift to digital. The current business model of digital banks and digital payment systems is indeed already successful in its attempt to acquire more and more customers and guide them in the process of dematerialization of services and in the easiness and readiness of use of mobile apps for payment sakes. However, there is surely still room for improvement and efficiency maximization under several aspects, which will be presented. The aim the of these recommendations is thus to leverage on the above-analyzed advantages of the business model and to minimize the threats. The choice of these four precise recommendations is given by their major relevance in shaping a possible future for the digital payment systems, and it does not indeed exclude the existence of other development factors. The focus will be set on the following suggestions: *expand services to innovate and improve customer experience, allow transfers between different digital banks, open branches for customer care and finally build partnerships with traditional banks to achieve task specialization.* The recommendations will be thoroughly explained and finally compared through a matrix in order to allow for a comprehensive picture with comparative opportunities.

4.1 Expand Services to Innovate and Improve Customer Experience

This first recommendation aims at addressing a business model vulnerability that was previously analyzed, which is the strong customer centricity typical of digital banks, who strive to foster innovation in order to survive in the market and to differentiate from competitors. To do so, an expansion of services offered by digital banks is proposed as a solution in order to achieve a tailored and vast product offer that ensures diversity and freedom of choice to the nowadays very demanding customers. Three main areas that affect digital banks will be

discussed, and within each of them, a series of observations and general guidelines will be proposed, considering the current context of the sector and the new trends to be followed. The first field is foreign exchange, and within this field, different indications that banks can develop are proposed aiming at defining the exchange rate offered to the customer. The second area is the digitization and migration of data, on one hand allowing the reduction of processes through automation, and on the other hand, this information can be analyzed in order to implement new services. The third area is customer service and customer care, where the aim is to show how digital banks could offer greater versatility and autonomy to customers in the management of their incidents. At the same time, this feature can develop new methods and tools to encourage and improve customer relations, which is always a critical aspect in the digitization of services. When sending money abroad, money is exchanged from one currency to the local currency, either by an international transfer to an account or by using specialized currency exchange companies, which incur in different commission costs. Nowadays, it is very common to exchange money between friends or family, and the vast number of currencies available show the importance of this topic and to ensure that the amount of money transferred toward one currency is equivalent to the amount of money received in the other. However, it is often not fully the same, as these rates fluctuate constantly in the foreign exchange market.

It is up to the customer to accept the charge offered by the bank, but international money transfers to and from abroad often involve fees. There are companies such as World Remit or MoneyGram that offer these services, which are fast and take a maximum of one working day, but the negative aspect of it is that the fees vary greatly from country to country and the costs are not always clear, leading many people to lose money on these transactions. Moreover, when withdrawing money from an ATM in a foreign country, customers can be charged high fees of up to 1.5% of the total amount of the transaction, and when making credit or debit card payments abroad, there are fees between 1 and 3% of the total (Revolut.com).

With all the above, it is clear how much money is lost with this type of transaction, so digital

banks have a large niche market to attract. Firstly, it would be appropriate to offer an immediate and free money transfer service for customers of the same bank. Thanks to this service, people could send money to another account in a different country without having to pay commissions. The main advantage of this service would relate to people starting to download the bank's app to send money, regardless of whether they use the bank account to a greater or lesser extent. In this way, the volume of customers would increase significantly, in addition to generating a good image of the company on an emotional level, as it would be associated to helping or sending money to friends or family thanks to this service. Secondly, when currency exchanges happen, commissions are applied, so digital banks should strive to always offer a lower rate than traditional banks and exchange offices. Doing so, digital banks would become the main choice for customers, besides being connected to the network and constantly updated by showing real-time currency fluctuations and values. To be able to offer this service, digital banks could offer different alternatives within their subscriptions depending on the functionalities and the cost of each option. As an example, by purchasing a premium account, FinTechs could offer services such free cash withdrawals in the eurozone, fixed currency exchange rates, mobile phone insurance. This option would ensure customer loyalty and would guarantee a source of stable revenues, both for transfer fees and for the customers' appreciation and subsequent subscription to a higher-cost option. Finally, when making a payment abroad, a fee of 1-3% of the total transaction is applied, so many people hesitate to pay by card or cash to avoid the fee. Therefore, digital banks should strive to apply a limited and lower payment fee rate than the one applied by traditional banks, in order to incentivize the preference for digital banks' payment options. Through these numerous advantages, the customer could evaluate the alternatives offered by these neo-banks and reckon advantages that are more specific and differentiated among these digital banks. The increasing and varied services offered, together with all the above-mentioned advantages would make people feel the necessity to create an account with digital banks (Reuttner 2022).

The migration from traditional to modern technology is a key challenge for banks and many other sectors. It encourages the development of FinTech products and services in the cloud.

Firstly, thanks to the agility and speed offered by this service, a lot will turn automatic and elements such as mail or messages will no longer be typed manually. Most of the current saving bank accounts work with codes that were written decades ago, so the industry is moving forward, and these elements are obsolete. This is where banks need to adapt tools to the existing high level of technology if they want to compete with digital banks. Migrating this information to the cloud also allows it to be stored in an adaptable and scalable model, i.e., banks themselves have the option to develop applications and implement them more easily by having everything already digitized and stored in a model that can be interconnected with other elements later. The overload of data and information are two of the elements that justify the need for data migration, requiring storage in specific locations and even paying for more infrastructure, in addition to the shortage of information retention support. With the migration to the cloud, this would not be necessary because this technology could store this information, especially in an increasingly digitalized society where more and more data is generated and processed. It is worth highlighting that reusability would produce a positive externality, as information developed in one part of the world can be used in other places if connected to a cloud, offering a global network and simplifying operations.

Therefore, it would be much easier to implement new services, as the applications to use would not need to be created from scratch. Indeed, apps could be purchased once created, which is the most expensive step, and adapted and implemented to what the digital bank needs, making it much easier to innovate and adapt to the needs of customers. Furthermore, thanks to the savings of not developing these apps from scratch, digital banks could diversify their efforts and offer more services (Accenture 2022).

Customers undergo different phases and processes. Nowadays, most consumers are more digitally inclined and much more demanding. It is essential to prevent the customer from getting

lost in this second phase of the process in order to close deals simply and conveniently by building trust and confidence. This is where digital banks must invest, in how to meet customer demands and increase their level of differentiation and competitiveness in the sector. The key is to bring simplicity and versatility to the customer to understand the application and be as independent as possible in its use. A clear element that is necessary for people's daily lives is the digital signature, as nowadays any bureaucratic procedure with the public administration requires a digital signature to be able to process documents fully digitally. Digital banks must adapt and continue to invest in customers' autonomy and automate transactions so that people can be as independent as possible. In terms of electronic security, there are many concerns, as cyber-attacks and phishing scams are frequent, so digital banks have to guarantee the security of their customers (Kaye).

Digital banks have a clear disadvantage compared to traditional banks in terms of customer relationships and proximity, which causes many customers and especially those who have not embraced technological change. Therefore, removing these barriers is vital to change this customer relationship and increase the level of competitiveness in the market against other players. The current new customers are users who were born in the digital world, so the level of expectations is enormous in terms of user experience. In an ever-changing technological world that is becoming faster and more digitized, users expect their bank to perform better than other options, offering convenience in their services. It is no longer enough for a customer to be able to open a bank account in a few minutes; customers expect to be able to interact with the financial institution with the same speed and digital simplicity offered by other digital companies. This requires a radical change in the back office, taking advantage of new advances in process automation, machine learning and AI. Smart process automation aims at eliminating repetitive and routine-based tasks by investing in robotic process automation and machine learning. The goal of process automation is to improve performance, reduce frequently occurring operational risks, reduce response times and maximize the user experience. To

achieve this automation, a particular emphasis must be placed on real-time data, as the key is to create a robust operational database for transactions and process improvement (Ikram 2020). In terms of assistance, when a modern customer asks for help, it is the key to offer a valuable service to foster retention and satisfaction. Digital banks can offer this service in different ways by using, for example, joint browsing and video chat with personal assistants, and thus be able to access the customer's screen to detect the problem and guide them. On the other hand, the use of information collected in the databases and through artificial intelligence optimizes the performance of the chatbots, adapting to the needs of the client, so digital banks can resolve the client's doubts and thus minimize assistance through electronic managers. Through all this information from the mapping of the customer journey, numerous ways of enhancing the service can be detected, since common complaints or problems for users can be depicted. Customer's points of contact with the bank could be identified, and their expectations could be met. Thanks to periodic surveys, digital banks could also proactively collect information about the customer experience and thus better understand the differences, as well as enhance communication, and notify customers about the status of requests they have made. This analysis develops around the purpose that to study customer personas and needs and to analyze the entire user journey within the platform, together with common problems in order to optimize the service and in the future to be able to raise awareness on making the best financial decisions.

4.2 Creating a Network between Digital Banks

The second recommendation on how to implement the business model of digital banks and maximize their functions and return on investment addresses the following topic: create a network/platform that contains all the major digital banks created in recent years in such a way that customers can use the different services quickly, free, and securely. In this way, consumers can carry out almost any standard banking transaction whenever they want, without any restrictions and easily connect with friends, family, and many other users in total security. With the implementation of a platform such as the one proposed, money transfers, online bill

payments, and investments will be easier, faster, and safer. As mentioned above this could be a solution for digital banks to become less dependent from suppliers, improve their systems and overcome one of their major business model's vulnerabilities. In addition, services that used to require long waits will become quick and not time-consuming, plus this platform would be connecting with other users in a totally secure and fast way and using all services. Given the many new habits of digital consumers who are used to utilizing their smartphones for every daily action, the idea is to create a platform where all major digital and neo-banks are present. Creating a platform with all digital banks is an exciting opportunity for anyone looking to make banking easier and more efficient. Digital banking is the new wave of banking, allowing customers to manage their finances from the comfort of their own home. With a platform that includes all digital banks, customers can access their accounts, transfer money, and make payments easily. Additionally, they can benefit from the convenience of online banking, such as having access to a variety of financial products and services. This recommendation could involve developing a web-based platform, or even an app, that allows customers to access all their accounts from one place. The platform should also include features that make banking easier and more secure, such as two-factor authentication, secure encryption, and fraud protection. Additionally, customers should be able to easily manage their accounts, transfer money, and make payments with the platform. Finally, the platform should provide customers with the necessary support and customer service they need. Creating a platform with all digital banks is an exciting opportunity that can make banking more efficient and secure for customers with the easiness of reaching out their friends/ family in order to transfer money or any other bank's activity related in an easy and customer-friendly way. With the right platform, customers can access their accounts, transfer money, and make payments with ease. Furthermore, they can benefit from the convenience of online banking and the security of two-factor authentication and encryption.

Creating a platform between digital banks can provide several benefits, including increased

efficiency, improved access to services, and the ability to offer a wider range of products and services to customers. To create a platform between digital banks, there are several key steps that need to be taken: the first step in creating a platform between digital banks is to identify potential partners. This can include other digital banks that serve the same geographic region or target market, or that offer complementary services. It may also be helpful to consider the size and reputation of potential partners, as well as their technology capabilities and willingness to collaborate. Once potential partners have been identified, it is important to develop a shared vision and goals for the platform. This can include a clear understanding of the benefits that the platform will provide to customers, as well as the specific services and products that will be offered. It is also important to establish clear roles and responsibilities for each partner, as well as any potential revenue sharing or other arrangements. The next step in creating a platform between digital banks is to design the platform itself. This can include decisions about the technology and infrastructure that will be used, as well as the user experience and interface. It is important to consider factors such as security, reliability, and scalability when designing the platform. Once the platform has been designed, it is time to implement and test it. This can involve integrating the systems and processes of each partner, as well as conducting user testing and other quality assurance activities. It is important to thoroughly test the platform to ensure that it is reliable and provides a good user experience. Then, when the platform is ready to be launched, it is important to promote it to potential customers. This can include marketing and advertising campaigns, as well as offering incentives such as sign-up bonuses or special offers. It is also important to provide ongoing support and customer service to ensure that users have a positive experience with the platform. After the platform is launched, it is important to monitor and maintain it on an ongoing basis. This can include monitoring performance and usage metrics, as well as conducting regular maintenance and updates to keep the platform running smoothly. It is also important to monitor the market and customer feedback to identifyany areas for improvement or additional services that may be needed.

By following these steps, digital banks can create a platform that provides value to customers and increases the efficiency and reach of their services. A well-designed and implemented platform can help digital banks to compete more effectively with traditional banks and other financial institutions and can provide a valuable source of revenue and growth.

On the other hand, creating a platform between digital banks can be an incredibly complex process that presents a variety of challenges. One of the major challenges is the integration of different technologies and systems. Many digital banks have their own proprietary software and connecting these disparate platforms can be a huge undertaking. Additionally, data security is of utmost importance when creating a platform between digital banks. Robust authentication protocols must be put in place to ensure that only the right people have access to the system, and that customer data is kept safe at all times. Another challenge is the need for a streamlined user experience. It is important for customers to have an easy-to-use and intuitive platform that allows them to easily move money between banks. This requires careful design and development to ensure that the platform is both powerful and user-friendly. Finally, creating a platform between digital banks also requires significant resources. Not only is there the cost of developing the platform, but also the cost of maintaining it over time. Additionally, digital banks may need to hire or contract external employees or consultants to help with the process. Overall, creating a platform between digital banks is not an easy task: it requires careful planning, a great deal of resources, and a commitment to data security and user experience.

Besides, creating this platform could have numerous advantages for both customers and banks. For customers, a platform between digital banks can provide a single place to manage all their finances, allowing for easier tracking of spending and savings. Customers can also take advantage of features like interest rate comparison, budgeting tools, and improved security. For banks, a platform between digital banks can create opportunities for cross-selling products and services, as customers can benchmark offerings across different banks. Banks can also benefit from increased customer loyalty, as customers can appreciate the convenience of having all

their accounts in one place. Additionally, banks can use the platform to provide real-time customer service and automated solutions for everyday banking tasks. Overall, creating a platform between digital banks has the potential to revolutionize the banking industry and make it easier and more convenient for customers to stay on top of their finances.

Creating a platform between digital banks is a complex and expensive process. It requires a significant investment of time, money, and resources to develop, implement, and maintain a secure platform that meets the needs of each of the participating banks. Some of the key costs associated with creating a platform between digital banks include: one of the major costs associated with creating a platform between digital banks is the cost of developing and implementing the platform itself. This can include expenses for technology and infrastructure, such as servers and data centers, as well as the cost of hiring developers and other technology experts. Secondly integration costs, a platform between digital banks to be effective needs that the systems and processes of each partner is integrated. This can be a complex and time-consuming process and may require significant resources and expertise. Integration costs can include expenses for consulting and other professional services, as well as the cost of testing and verifying the integration. Then, for a platform between digital banks to be successful, it must be promoted to potential customers. This can include expenses for marketing and advertising, as well as the cost of offering incentives such as sign-up bonuses or referral programs. Creating a platform between digital banks can also require significant personnel costs, including salaries and benefits for employees. This can include costs for technology experts and developers, as well as customer service and support staff. Once a platform between digital banks is launched, it must be maintained and supported on an ongoing basis. This can include expenses for regular maintenance and updates, as well as the cost of providing customer support and other services. Finally, creating a platform between digital banks may also require significant legal and regulatory costs. This can include expenses for legal advice and compliance, as well as the cost of obtaining any necessary licenses or approvals from regulatory

authorities.

Overall, the costs of creating a platform between digital banks can be significant, and can include expenses for development and implementation, integration, marketing and promotion, personnel, maintenance and support, and legal and regulatory compliance.

However, the long-term benefits of creating such a platform are significant and can be well worth the cost. Creating a digital platform that allows for the transfer of funds between different digital banks can be a great revenue generator for both the banks and the platform. By allowing customers to transfer funds quickly and securely between accounts, the platform can charge fees for each transaction, while providing a valuable service to customers. Banks can also benefit from increased customer retention and loyalty, as customers are more likely to stay with a bank that offers a convenient digital platform. The platform could also be used to increase revenue for the banks by offering additional services, such as the ability to open additional accounts or to offer special promotions and benefits. This would allow customers to have more control over their finances and increase the number of customers who choose to use a bank's services. Moreover, creating a digital platform between digital banks can be a great source of revenue for both the banks and the platform. By offering a secure and convenient platform for customers to transfer funds between accounts, banks can increase customer loyalty and retention, while the platform can charge fees for each transaction. Additionally, digital banks can offer additional services and promotions to customers, further increasing the potential for increased revenues.

5. Conclusions

To summarize, the analysis led in this research started with a literature review of the evolution of the payment system over time, with attention set on regulation applied in Europe and on the birth of the main players in the industry: neo-banks. An analysis of the concept of the business model followed, with the main body of the research focusing on explaining the business model of neo-banks and digital payment providers thanks to the application of the business model

canva as a framework. As a result of this analysis, advantages and disadvantages of the business model were highlighted in order to build four main recommendations upon with the aim to maximize the efficiency of the current business model.

The following and last section focuses on summing up all the above-mentioned topics in the form of conclusions. Both the most relevant insights and the limitations and possible further analysis perspectives will be presented.

5.1 Most Relevant Insights of the Analysis

The analysis conducted on the business model evolution of the European payment system led to several conclusions, both from an academic and personal point of view. The results of the study show indeed that when considering this industry, a very strong consumers' preference shift can be detected. Indeed, the fast pace of technological development, combined with globalization and with the speed up of digital shift as a consequence of the Pandemic represent key factors that caused consumers to change their needs in regard to payments (ECB 2020). The current trend involves a more and more digitalized predilection, with mobile apps by neo-banks and other payment providers as new tools to manage individual finances. This was shown to be a consequence of the easiness of usage and time convivence for people.

Another remark to highlight is the crucial role of customer centricity for the industry. The huge role of consumers in shaping companies' decision making is leading neo-banks to create tailored services for their consumers, who will be able to manage their own finances and like "self-made-men". This aspect is very relevant for the research since it paves the way for another insight, which relates to the great service expansion opportunities for players in the industry. Indeed, as it could be witnessed, neo-banks are including in their service option also non-financial products such as charity donations and this element brings a relevant added value to the mobile applications, which have the aim to become "super-apps".

Finally, critical reflection can surely follow the recommendation made with regard to the future possibility of creating a cooperation strategy between digital and physical banks. The current

digitalization processes the whole world is experiencing hits particularly the financial world. For this reason, traditional banks are undergoing a change process, but keeping all their functions active. If cooperation was implemented and division of at least certain tasks would be performed through a partnership between brick-and-mortar banks and digital ones, efficiency would be optimized and customer could enjoy from enhanced services by both players, who would have the opportunity to better focus and specialize on their services of interest (McKinsey 2022).

5.2 Limitations and Future Outlook

Finally, three important limitations were identified in the report and some potential improvements that could be analyzed.

The first limitation is that finally wasn't possible to reach to out experts in the field in order to have a better understanding of threats and opportunities of the digital banking market as seen through the eyes of someone who works in this industry and lives this reality every day.

Moreover, the opinion of prominent personalities in this field would have given the opportunity to better understand how to create a competitive advantage for a new digital bank that wants to enter such a competitive market and some useful advice on how to ride the wave of the market in a smart and efficient way, so as to maintain a proper balance between cost and revenue structure.

Another limitation of the report is that it was unable to find data on what are the major drivers that lead consumers to choose a digital bank over a traditional one.

Finally, another limitation of the report is that it only focused on digital banks in the European market (including the UK), whereas it would have been more comprehensive to analyze the entire market, and the differences between countries.

On the other hand, one of the potentials on which the report could have been developed is on the future outlook of the banking industry, taking into consideration both the change in the

choices and behavior of customers who decide to increasingly use digital tools to manage their lives on a daily basis and the change in the industry in which many dynamics are likely to change, the major players will be involved in acquisitions and mergers among themselves to advance to a position of advantage and in which many smaller players will be forced out of the market. Mergers between digital banks are likely to become more common in the future, as these institutions seek to expand their customer bases and offer a wider range of services. A merger between digital banks can provide a number of benefits, including increased efficiency, improved access to services, and the ability to offer a wider range of products and services to customers.

One of the key drivers of future mergers between digital banks is the increasing competition in the market. As more and more traditional banks and other financial institutions offer digital banking services, digital banks may need to merge in order to remain competitive. A merger can allow two digital banks to combine their customer bases, technology platforms, and other resources, creating a stronger institution that is better able to compete with larger competitors. Another factor that may drive future mergers between digital banks is the need to expand into new markets or offer new services. For example, a digital bank that primarily serves customers in one geographic region may decide to merge with another digital bank that serves a different region, allowing the combined institution to offer services to a broader customer base.

Alternatively, a digital bank may decide to merge with another institution that offers complementary services, such as investment products or insurance, in order to provide a more comprehensive offering to customers.

The future outlook for mergers between digital banks may also be influenced by regulatory changes and other developments in the financial industry. For example, new regulations or technological innovations may make it easier or more difficult for digital banks to merge, affecting the feasibility and potential benefits of such transactions. Additionally, the overall economic climate and financial market conditions may affect the ability and willingness of

digital banks to merge.

Overall, the future outlook for mergers between digital banks is likely to be positive, as these institutions seek to expand their reach and offer more comprehensive services to customers. Mergers can provide significant benefits, including increased efficiency and the ability to compete more effectively with traditional banks and other financial institutions. However, digital banks will need to carefully consider the potential risks and challenges of a merger and ensure that they are well-prepared to manage the integration and ongoing operation of the combined institution.

The future outlook for digital banks is generally positive, as more and more customers are turning to online banking services. Digital banks are able to offer a range of benefits, including convenience, competitive rates and fees, and the ability to access services from anywhere with an internet connection. As a result, the demand for digital banking services is likely to continue to grow in the coming years.

One of the key drivers of the future growth of digital banks is the increasing use of mobile devices. As more and more people use smartphones and other devices to access the internet, digital banks are able to reach a wider customer base and offer more convenient services. For example, mobile banking apps allow customers to check their account balances, make payments, and access other services from anywhere, at any time.

Another important factor in the future outlook of digital banks is the increasing availability of advanced technologies, such as artificial intelligence and machine learning. These technologies can help digital banks to automate tasks, improve the accuracy and speed of their services, and provide a better customer experience. For example, AI-powered chatbots can provide instant assistance to customers with common questions, freeing up human staff to handle more complex issues.

The future of digital banks may also be influenced by regulatory changes and new developments in the financial industry. For example, digital banks may need to comply with new regulations

related to cybersecurity, data protection, and other issues. Additionally, digital banks may face increased competition from traditional banks and other financial institutions that are offering their own digital banking services.

Overall, the future outlook for digital banks is likely to be positive, as more and more customers turn to online banking services. Digital banks are well positioned to take advantage of the growing demand for mobile and online services, and the increasing availability of advanced technologies. As a result, digital banks are likely to continue to play an important role in the financial industry in the coming years.

6. Appendix

Exhibit (1) – McKinsey - Europe's digital migration during COVID-19: Getting past the broad trends and averages

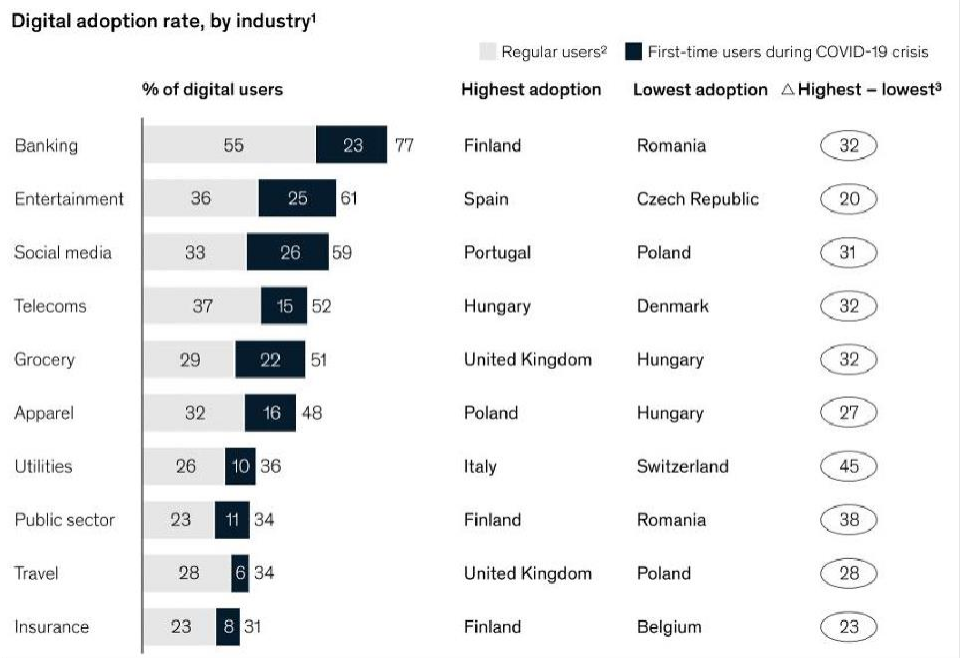

Exhibit (3) – "Primary/online bank market share". 2021 Digital Banking Consumer Survey, PwC.

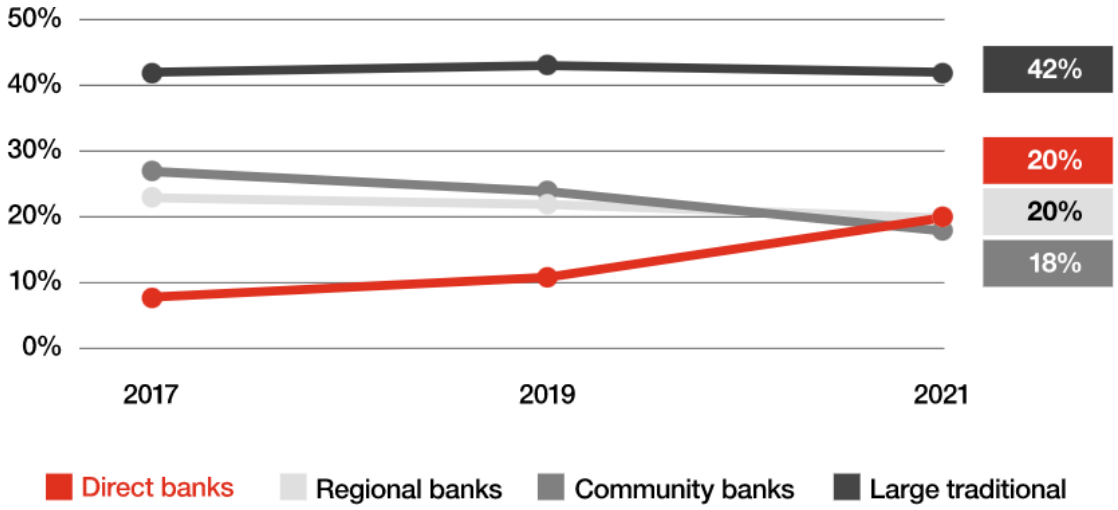

Exhibit (6) – Payment Gateway Parts and processing of a card payment

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