THE REPUBLIC OF TÜRKİYE
SOCIAL SCIENCES UNIVERSITY OF ANKARA
THE GRADUATE SCHOOL OF SOCIAL SCIENCES

SHIFTS IN BANKING: RISE OF FINTECH COMPANIES

Master's Thesis

Master of Science in Economics

July 2023

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Abstract

In the past few years, the financial market worldwide has experienced unprecedented development, especially in terms of financial technology or shortly "fintech". A massive technological use within digital currencies, innovation in mobile payments, distributed ledger technology, and blockchain technology along with marketplace lending and peer-to-peer lending within the financial institutions have been observed. Subsequent growth of intake innovation has been observed outside the traditional banking and financial system that has been largely given by the non-bank entities such as fintech start-ups and emerging companies along with some non-traditional providers. With the subsequent decline of traditional banks and rising of neo-banks or fintech companies in general, the financial market or industry worldwide has been reshaping. The study evaluates the need for the emergence of financial technology services within traditional banks and tries to understand the adoption of different models for addressing new trends in the finance industry. Therefore, the study evaluates the opportunity, security, and sustainability concerns related to financial technology and fintech companies, and evaluates them within the society in terms of technological advancements. Financial technology has been utilized for helping business owners, companies and consumers managing financial operations and processes with the help of specialized algorithms and software used in computers and smartphones. Compared to the traditional value-adding areas of universal banks, fintech companies have been widely distinguished in their involvement in assessing management payments and financing. “Diffusion of Innovation Theory” has been regarded as a major theory which would be evaluated in this study. The study has followed a positivist philosophy, deductive approach, and exploratory research strategy as this type of strategy has helped the study in exploring the phenomenon of fintech in the current world and its impacts on the traditional banks and financial institutions in general. The study has implemented a qualitative research technique from both primary and secondary sources. The finding of the study represents that the rise of fintech companies has significant influence on the decline of traditional banks and financial institutions in recent times. The inability of traditional banks to effectively implement technology within their operations is the major factor that has initiated the decline of growth for them. For instance, traditional banks would need to have a greater emphasis on customer experience to compete with neo-banks. They also need to collaborate with their service providers while implementing fintech within their own organizations. As per the perspective of most of the managers of traditional banks in the UK implementing financial technology within their company can help traditional banks in generating greater revenues. The use of more innovative and digital solutions by traditional banks can help them effectively manage their risks, especially regarding to the implementation of financial technology.

Keywords: banking, fintech companies, financial technology, innovation, digitalization

Özet

Son birkaç yılda, dünya çapında finans piyasası, özellikle finansal teknoloji veya kısaca "fintech" açısından benzeri görülmemiş bir gelişme yaşadı. Dijital paralarda (digital currency) artan teknolojik kullanım, mobil ödemelerde yenilik, dağıtık defter teknolojisi (distributed ledger technologies) ve blok zinciri teknolojisinin yanı sıra finansal kurumlar içinde piyasa kredisi ve farklı finansman uygulamaları gözlemlendi. Büyük ölçüde fintech start-up'ları ve gelişmekte olan şirketler ile bazı geleneksel olmayan sağlayıcılar gibi banka dışı kuruluşlar finansal sistemdeki inovasyonların yaygınlaşmasını sağladı. Bu süreçte geleneksel bankaların azalan etkinliği ve genel olarak neo-bankaların veya fintech şirketlerinin yükselişiyle birlikte, dünya çapında finans piyasası veya endüstri yeniden şekilleniyor. Çalışma, geleneksel bankalarda finansal teknoloji hizmetlerinin ortaya çıkmasına olan ihtiyacı değerlendirmekte ve finans endüstrisindeki yeni eğilimleri ele almak için farklı modellerin benimsenmesini ele almaktadır. Bu bağlamda, finansal teknoloji ve fintech şirketlerine ilişkin fırsat, güvenlik ve sürdürülebilirlik kaygılarını ele almakta ve teknolojik gelişmeler açısından toplum içinde değerlendirmektedir. Finansal teknoloji, bilgisayarlarda ve akıllı telefonlarda kullanılan özel algoritmalar ve yazılımların yardımıyla işletme sahiplerine, şirketlere ve tüketicilere finansal operasyonları ve süreçleri yönetmede yardımcı olmak için kullanılmıştır. “Yeniliğin Yayılması Teorisi” bu çalışmada değerlendirilecek önemli bir teori olarak kabul edilmiştir. Çalışma, pozitivist bir felsefe, tümdengelimci bir yaklaşım ve keşifsel araştırma stratejisi izlemişti. Zira bahse konu bir strateji, çalışmanın mevcut dünyadaki fintech olgusunu ve bunun geleneksel bankalar ve genel olarak finansal kurumlar üzerindeki etkilerini keşfetmesine yardımcı olmuştur. Çalışma, hem birincil hem de ikincil kaynaklardan nitel bir araştırma tekniği uygulamıştır. Çalışmanın bulgusu, fintech şirketlerinin yükselişinin, son zamanlarda geleneksel bankaların ve finansal kurumların düşüşünde önemli bir etkiye sahip olduğunu gösteriyor. Geleneksel bankaların operasyonlarında teknolojiyi etkin bir şekilde uygulayamamaları, onlar için büyümenin yavaşlamasını başlatan en önemli faktördür. Örneğin, geleneksel bankaların neo-bankalarla rekabet edebilmek için müşteri deneyimine daha fazla önem vermesi gerekecektir. Fintech'i kendi kuruluşlarında uygularken hizmet sağlayıcılarıyla da işbirliği yapmaları gerekiyor. Birleşik Krallık'taki (UK) geleneksel banka yöneticilerinin çoğunun bakış açısına göre, şirketlerinde finansal teknoloji uygulamak, geleneksel bankaların daha fazla gelir elde etmesine yardımcı olabilir. Geleneksel bankaların daha yenilikçi ve dijital çözümlerin

kullanılması, özellikle finansal teknolojinin uygulanmasına ilişkin risklerini etkin bir şekilde yönetmelerine yardımcı olacaktır.

Anahtar kelimeler: bankacılık, fintech şirketleri, finansal teknoloji, yenilik, dijitalleşme

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CHAPTER 1: INTRODUCTION

1.1 Overview

Financial technology has represented its potential in closing the gaps in delivering financial services to organizations and households in developing economies and emerging markets within the recent record, especially in this post-pandemic situation. The fintech market has been observed to be continuing its expansion and has been helping the financial institutions in accessing their services during the pandemic situation and even has been helping immensely in this post-pandemic situation (Acar & Çıtak, 2019). As per the perspective of the recent reports published by the World Bank, strong growth within all types of digital financial services has been observed except within the lending services among financial institutions worldwide. Therefore, this dissertation would be focusing on the rising growth of the fintech companies worldwide along with assessing the importance of incorporation of modern technology in context to financial services for attaining greater revenues and profits. This chapter would provide a background context of the dissertation on the growth of the fintech market worldwide as well as would provide a rationale for the study. The aim and objectives of the study would also be discussed within this chapter along with discussions on the significance and scope of this study.

1.2 Background of the study

Neo-bank is a term to describe fintech-based financial providers that challenge traditional banks. Other than the term "neo-bank," one could also come across terms such as challenger bank, digital bank, or alternative bank that all describe the same phenomenon. Alternative banking regarding financial technology bloom has been a hot topic for the last decade. Since technology is developing fast and people's habits are changing rapidly due to globalization, new trends and issues are emerging in terms of financial matters that need to be addressed. Financial technology is an industry containing many different firms, with various purposes, missions, and sizes, ranging from start-ups to huge corporations. They all use innovation and technology to make the financial field more efficient and accessible to everyone while keeping costs low. Financial technology start-ups, in the sense of so-called neo-banks, provide similar services to traditional banks, such as debit and credit cards, payments, loans, insurance, investments, and savings. Its mission is to reshape the traditional financial industry and therefore propose a completely new approach. To do that, they are lowering the costs of the services, improving the quality in speed and accessibility, and creating more diverse prospects. They are using big data, artificial intelligence, and blockchain, which makes them more cost-efficient and helps them to understand the exact customers' habits. Knowing the pattern of the customers helps to create more personalized and effective financial solutions, which saves time and money for both sides. Furthermore, neo-banks do not have physical branches thus their overall maintenance costs tend to be lower.

Banking in the UK has been considered to have started in the Kingdom of England nearly in the 17th century as the first activity that has later become popular as banking was initiated by goals made by ones that started the accumulation of significant stocks of goals after the dissolution of English monasteries by Henry VIII. The first provisional bank in England was founded in 1650 by a cloth merchant named Thomas Smith. The Bank of England was founded in 1694. The founding act issued by the UK has imposed a monopoly on public banking where the raising of nominal capital among the banks was permitted to 1.2 million pounds Scots or 10000-pound Sterling (Melnychenko et al. 2020). The industrial revolution in the 18th century and the growth of international trade resulted in an increase in the number of banks within the UK, especially in London. New merchant banks facilitated profit and overall economic growth from the emerging trade dominance between the colonies. In the 19th century, the evaluation of smaller private banks in the UK was reported and these smaller private banks started new joint stock banks. In the 20th century, several technology aspects were incorporated within the banks and other financial institutions such as the introduction of credit card computing and many other services that have significantly initiated the banks in driving the expansion of their business and helped in hoping to increase competitiveness within the market due to deregulation. The banks started improving their services, brought future technology such as ATMs and refurbished acquitted premises for gaining a competitive advantage within the UK financial market (Ali et al. 2018). Now, in the 21st century, most banks in the UK have more or less similar services and are mainly distinguished by their interest rates.

In the past few years, the financial market worldwide has experienced unprecedented development, especially in context of financial technology or "fintech". A massive technological use within digital currencies innovation in mobile payments distributed ledger technology and blockchain technology along with marketplace lending and peer-to-peer lending in context of the financial institutions have been observed. Subsequent growth of intake innovation has been observed outside the traditional banking and financial system that has been largely given by the non-bank entities such as fintech start-ups and emerging companies along with some non-traditional providers such as Apple and Oracle (Kou *et al.* 2021). These non-bank entities have been experiencing an unregulated environment and have been mainly emphasizing operations on the position of a particular set of new banking and financial services.

The fintech innovation that has been given mostly by the non-bank entities has significantly deconstructed the traditional banking and financial system that has fourth traditional banking and financial system towards a radical shift by challenging the conventional business model, marketing positioning and value chain of the traditional banks and financial institutions. Significantly, the innovation has been changing the experience of the customers as well as expectations by promoting mode interactive and client-centric approaches to banking and financial services (Nguyen, 2022). The recent developments within fintech have offered new opportunities for client value creation and have enabled the financial institution to understand the needs of the clients and help them in designing new personalized services and products. Due to the widespread reach of smartphones and data network, fintech innovation has been observed to gradually expand and has been providing liquidity access to banking and financial services to the global population.

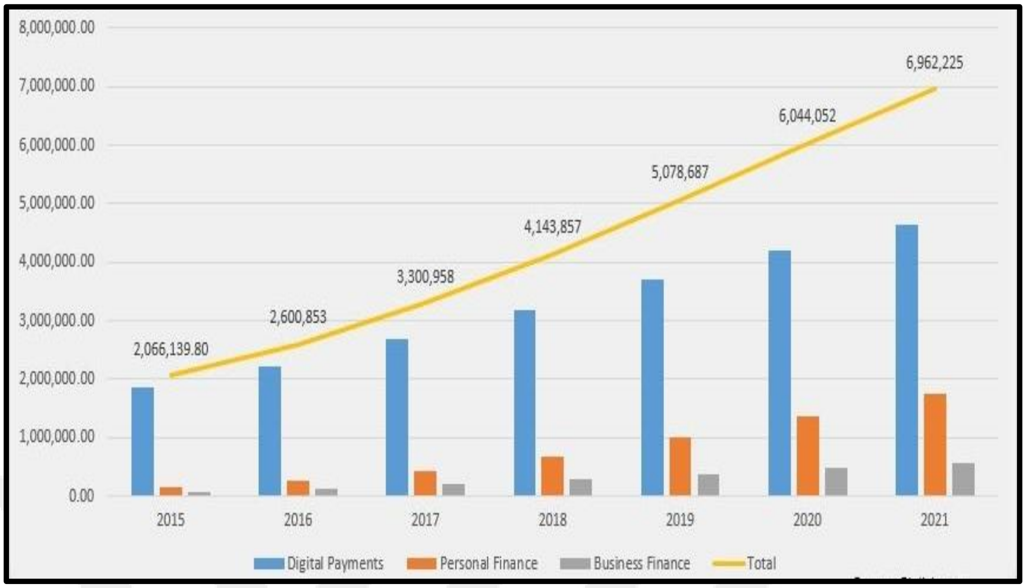


Figure 1.1: Market size growth of fintech from 2015 to 2021

(Source: Kou *et al.* 2021)

The above figure represents "Market size growth of fintech from 2015 to 2021". In the above figure, the number of digital payments in business finance and personal finance has been represented over the years from 2015 to 2021. In the above figure, subsequent growth within digital payments has been reported over the period where in 2015 the digital payments were reported to be nearly to billion pounds and have reached nearly 4 billion Pounds in 2021 considering the digital payments have doubled in this due period. Growth in context to personal finance and business finance have also been observed. As per the reports, where the total market size of fintech in 2015 was estimated at 2 billion pounds and has reached nearly 7 billion Pounds in 2021, indicating over the years the market size of fintech has increased by 3.5 times. Therefore, analysing the data it can be concluded that a great application of technology in context of financial services has been observed that has significantly impacted the market of the financial industry worldwide.

The rise of innovation among non-bank entities has also drawn the attention of financial regulators. Financial regulators nowadays have been encouraging development in fintech and for it, they have been providing an environment for thriving innovation within the organization and protecting markets, investors and consumers simultaneously. With the exponential growth of the syntax ecosystem, the financial and banking regulatory regimes have also been evolving swiftly. The financial regulators have been evaluating the existing rules in the organizations and have been adapting new regulations which have enabled them in addressing both challenges and opportunities of the new technology (Zveryakov *et al.* 2019). In particular, financial regulators from the United Kingdom, Europe and the United States have been observed to have recently enacted a number of rules and policies that have significantly targeted fintech innovation in their organizations. The evolution and disruption in financial and banking services due to fintech innovation has initiated the need for new rules and policies for forward thinking and development of the financial industry.

1.3 Rationale

The implementation of digital technology in context of the financial sector has been observed before the pandemic and the sudden dependence on digital technology during the pandemic has evolved into a great challenge for financial institutions (Jagtiani & Lemieux, 2018). The fintech companies that have been observed to be born with the internet and modern technology have subsequently as fintech companies have a greater understanding towards the utilization of technology for creating new business opportunities in unfavourable circumstances. Whereas traditional banks have been observed to be struggling in the sector as they have less knowledge and understanding of digital technology, especially technology that has been widely utilized to redeem financial and banking services worldwide (Anand & Mantrala, 2019). There are some roadblocks that have been preventing traditional banking institutions to get this benefit from the pandemic situation and have not provided the opportunity for providing greater competition for the neo-banks and fintech companies.

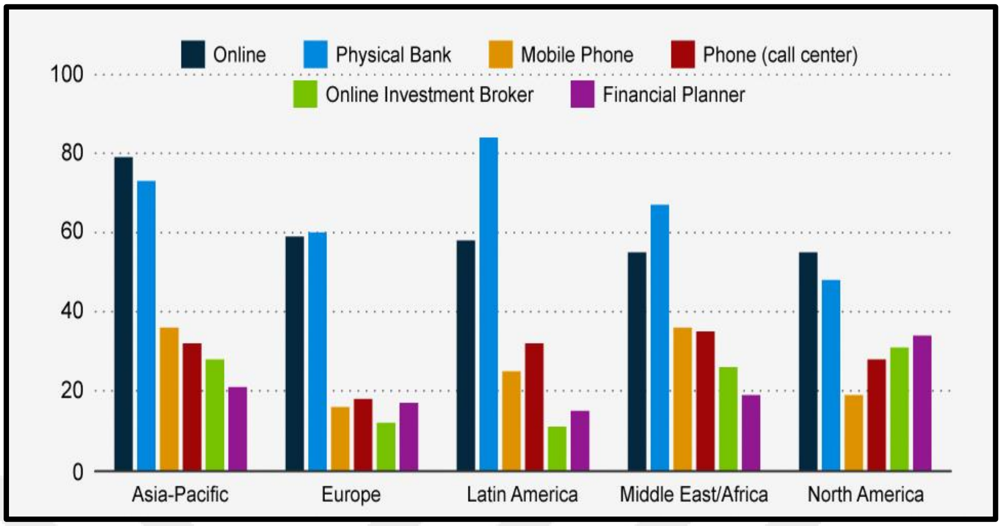


Figure 1.2: Comparison of traditional banking and neo-banking

(Source: Statista.com, 2021)

The above figure represents a "comparison of traditional banking and neo-banking," In the above figure, the utilization of banking and financial services as per the region has been represented**.** As per the perspective of the above figure, it can be concluded that in the Asia Pacific region online banking has been identified to be much better than physical banks. Even in other regions such as Europe, Middle East or Africa, and North America in Latin America, digital financial services combined such as online mobile phones, online investment brokers and financial planners, are much greater than physical Banks (Boustani, 2020). Therefore, analysing the worldwide data it can be concluded that traditional banks worldwide have been facing severe losses due to the subsequent growth of financial technology adaptation and utilization.

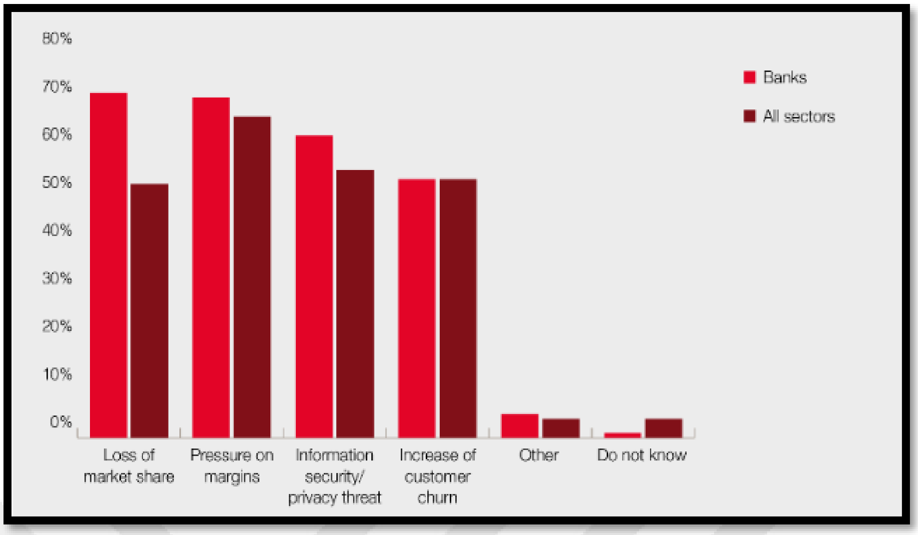


Figure 1.3: Potential threats to banks due to rise of fintech companies

(Source: Pwc.com, 2021)

The above figure represents "Potential threats to banks due to the rise of fintech companies." As per the perspective of the above figure, it can be concluded that the major threats to the banks that have been caused due to the rise of fintech companies can be regarded as loss of market share on margins, privacy threats and in threats in information security and increase of customer churn. The major challenges faced by traditional banks and financial institutions have been identified as due to their overdependence on old business models such as dependence on high payment fees for revenues. The rigid structure of the traditional banks has been identified as a great resistance to the cultural and organization evaluation for the company that needs to be changed immediately for adoption and implementation of changes in their business operations. The regulatory risks have also been regarded as one of the major challenges that have been disrupting the whole process to become appealing in the traditional financial institution (Iman, 2019). Most of the researchers have the opinion that the unsuccess or disability in holding positions within the market of traditional financial institutions has been identified as a lack of awareness and access to write technology expertise. Due to the lack of technology expertise, traditional financial and banking institutions have been observed to be facing several challenges such as long time-to-value cycle procedures (Grassi *et al.* 2022). Again, a major role in the decline of traditional banking has been caused due to COVID-19 crisis as the crisis has developed a sense of urgency among all the sectors and has initiated digital transformation.

Since people are on the move more than ever before and working overseas has become a trend, making transactions with different currencies and having a localized banking experience is necessary. Therefore, transaction costs and the availability of the services should be available for customers regardless of their physical location. For the last decade, customers awareness has also rapidly increased towards banking alternatives, which can be seen through huge customer base growth and investments made into fintech start-ups. For neo-banks, there are also several risk factors. Since many of them are not profitable and are dependent on investments, there is no clear sign of their sustainability in the long term. As a fairly new field, there is also a lack of regulations which could make it a good landscape for money laundering, fraud, and terrorism financing. Furthermore, many of their funds are not insured unlike in traditional banks, which could cause the situation where customers lose their money in case the company goes bust. Nonetheless, it can be also seen that there are some exceptions among traditional banks that are slowly adapting fintech's modern approach to compete with them and address new emerging issues. For example, the biggest local bank in Estonia (LHV) has adapted alternative financial provider Wise's payment method, which lets customers send money overseas in different currencies with marginal costs. In addition, many traditional banks have also started offering virtual debit cards, which were only provided by neo-banks before. Since this research compares traditional banks to neo-banks, it seeks to estimate the future of the banking sector in the sense of whether a new approach is needed for traditional banks to survive long term. Therefore, the hypothesis of this paper assumes that a new approach is necessary for the traditional banks shortly to keep up with the changes in society and avoid losing their advantage over neo-banks. To find that out, qualitative data in the form of interviews are used. Interviews will be conducted with representatives of four traditional Estonian banks (Swedbank, LHV, Coop, and Luminor) representatives to assess the future of banking from their expert opinion. Those representatives from different standpoints could offer better diversification for this study. The answers of representatives will be analysed by interpreting the data to see if the hypothesis holds. With the subsequent decline of traditional banks and rising of new banks or fintech companies the financial market or industry worldwide has been reshaping. The study evaluates the need for the emergence of financial technology services within traditional banks and explores the adoption of different models for addressing new trends within the finance industry. Therefore, the study aims to evaluate the opportunity, security, and sustainability concerns related to financial technology and fintech companies in terms of technological development within society.

1.4 Aim of the research

This research aims to study the phenomenon of financial technology and neo-banks and therefore compare them to traditional banks to evaluate their opportunity, security, and sustainability concerns. Since the financial trends in society are changing fast due to technological development, globalization, and change in customers' habits, alternative solutions in the financial field are necessary because traditional banks fail to address them. The study would also evaluate strategies that can be incorporated by traditional banks for competing with fintech companies and strategies essential for lowering the risk of implementation of financial technology. The main focus lies on the banking sector where neo-banks are compared to traditional banks in terms of availability, speed, services, costs, and risks.

1.5 Research objectives

This research aims to study the phenomenon of financial technology along with neo-banks and compare them to traditional banks to evaluate their opportunity, security, and sustainability concerns. To understand that, we need to evaluate the following research objectives.

- To evaluate the factors initiating financial technology
- To assess the limitations of traditional banking and neo-banking
- To address the sustainability of the fintech market
- To compare the growth of traditional banks and fintech companies
- To evaluate strategies for traditional banks to compete with neo-banks in the future
- To assess the strategies for lowering the risks of neo-banks

1.6 Research questions

The following research questions are necessary to study the phenomenon of financial technology and evaluate research objectives to understand the rapid changes in the industry and its future perspective.

Hypothesis states that traditional banks have greater challenges of survival in the global finance market in the long run, and thus they need to adopt different models that would address the new trends in finance market that takes globalization and digitalization into account.

To understand the phenomenon of financial technology and neo-banks the insight of the following questions needs to be stated:

- Why did fintech and neo-banks start to rise?
- What are the limitations on both sides?
- Will neo-banks be sustainable in the long run?
- Should traditional banks change their strategies to be able to compete with neo-banks in the future?
- What can be done to lower the risks of neo-banks?

1.7 Significance of the study

The contribution is to address new emerging problems in the financial field. More specifically, addressing the new trends in society and the potential risks of both traditional banks and neo-banks. Furthermore, this research aims to increase awareness among policymakers, the traditional banking sector, the fintech sector, and business and retail customers. The originality of this research will be the fact that it has never been done on that big scale and even if the other papers address the problems, there are no concrete policy suggestions that could fix the main risk factors of the fintech.

This research could be useful for policymakers, the traditional banking sector, fintech start-ups, and companies and retail customers. Policymakers could learn the shortcomings of the regulations around the fintech companies and see the possible policy regulating suggestions. The traditional banking sector could see a reduction in the market share which could be lost to fintech companies in the long term and study the new trends in society that need to be addressed. In addition, fintech start-ups could learn their potential risks such as profitability, fraud, and insured funds issues before coming up with new services or expanding them. Also, potential customers who are either businesses or individuals. The aim for them is to increase awareness about the services in the market and possibilities to get the best value for their money in case of making foreign currency transactions for example. It could be beneficial for international businesses and individuals who travel often or need to make transactions overseas. Furthermore, it also gives them an idea about the potential risks of fintech companies since the field is not yet fully regulated.

CHAPTER 2: LITERATURE REVIEW

2.1 Overview

In terms of previous chapter, it has been noted that the study would be focusing on the growing trends of advanced technology within the financial sector and the subsequent growth of fintech companies worldwide. The literature review chapter provides essential information and data collected from previously published books, articles, and journals. This chapter provides the context and insight for the phenomenon of fintech revolution. The chapter also provides a theoretical framework where theories and models related to the application of new technology in the financial sector would be evaluated. Most importantly, the chapter would provide a conceptual framework where the visual representation of the core research of the study would be represented.

2.2 Concept of financial technology and fintech companies

Financial technology (fintech) is a phrase used for describing modern technology that aims to automate the delivery and improve the flow of financial services. It is utilized to help all kinds of customer segments starting from individuals and ending up with huge corporations. Its functionality is to speed up and ease the financial operations and processes by utilization of special software and algorithms (Kagan, 2020). The absence of the traditional infrastructure and traditional business model makes it possible for fintech companies to take advantage of more flexible policy regulations and therefore, make it simpler to attract customers around the world while keeping requirements low (Okunevych, Hlivecka, 2018). Financial technology uses standard secure communication protocols to make sure that all participants can easily communicate in a common language, which enables fast delivery of the information. It unites mathematical, statistical, computing, and economic models with analytical systems that are further integrated with messages, transactions, and payment systems providing seamless integration making complicated processes easier through automation (Freedman, 2006, pp. 1).

Overall, financial technology can be understood as an innovative way of how transactions and processes work, and how individuals and businesses interact in the financial field. Generally, all those processes such as money transfers, applying for credit, loans, investments, and fundraisings for start-ups are managed by bypassing the physical branch and without the assistance of a person (Kagan, 2020).

Financial technology has been observed to be widely utilized for describing new technology for improving and automating the delivery and use of financial services. As per the perspective of Agrawal and Yesugade (2022), fintech has been utilized for helping business owners, companies and consumers managing financial operations and processes with the help of specialized algorithms and software used in computers and smartphones. The term fintech or financial technology first emerged in the 21st century, however, the term was initially applied within technology employment of the establishment of financial institutions (Melnychenko *et al.* 2020). Recently, fintech has included different set of industries and sectors, such as retail banking, investment management, fundraising, education and many more. Fintech has also included the development and utilization of cryptocurrencies such as Bitcoin. According to Bavrova (2021), financial technology has been evaluated as any innovation that has been implemented within transacting business and it has been evaluated from the invention of digital money. Since the smartphones and internet revolution, exponential growth within financial technology has also been observed. The term fintech originally referred to the utilization of computer technology in the back-office operation of trading forms and banks but nowadays it has been widely described as technology interventions into commercial and personal finance (Mehdi, 2022). Nowadays, financial technology has been widely described as a white range of financial services that suggest depositing checks with the help of smartphones bypassing a bank branch for applying for a credit card, money transferring, raising money for business start-ups, managing investments and many more.

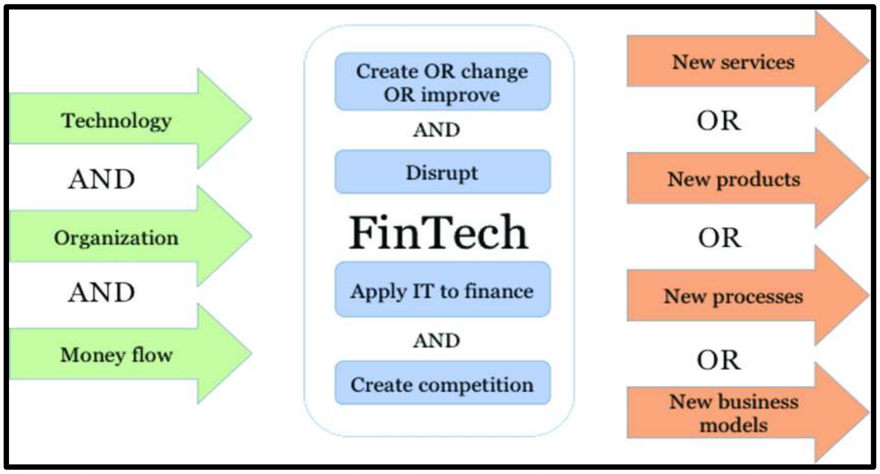


Figure 2.1: Concept of fintech

(Source: Agrawal, 2021)

From the report of "EY's 2017 Fintech Adoption Index", it has been evaluated that nearly one-third of financial consumers have been utilizing more than two fintech services and those consumers have been observed to possess a great awareness of fintech. Fintech companies are considered being a great threat to traditional financial services and have been serving an underserved population segment while providing faster and better services in comparison to traditional financial institutions. Ali *et al.* (2018), has stated that the company, "Affirm" has been focusing on cutting the credit card company with the help of the online shopping process and has been offering ways for consumers for securing their short-term and immediate loans for purchasing. With a higher rate, this company has been offering its consumers poor credit points for securing credits and building a credit history. Similarly, Better Mortgage has been streamlining the home mortgage process by offering a digital procedure that has been helping users with verified free approval letters within a short span of time (Acherjee, 2022). Whereas, the company, GreenSky has linked home improvement borrowers with the bank and helped the borrowers' words to avoid entrenched lenders and saving interest by offering them zero-interest promotional periods. New technology such as artificial intelligence and machine learning has been observed to be implemented within financial services for providing data-driven marketing and predictive behavioural analytics that have helped financial institutions in their decision-making (Langley & Leyshon, 2022). Fintech has been identified as an adapter of automatic customer service technology by utilizing artificial intelligence interfaces and chat boards that have been helping customers with basic tasks and helped financial institutions to lower their staffing costs.

The history of financial technology could be understood through the timeline from 1866 until the present, which is categorized into 3 stages FinTech 1.0, FinTech 2.0, and FinTech 3.0 (Figure 2.2), where each stage implies key technologies used (Leong, Sung, 2018). A more specific timeframe between those stages would be 1866-1967 for FinTech 1.0, 1967-2008 for FinTech 2.0, and 2008 to present for FinTech 3.0 (The Payments Association, 2020).

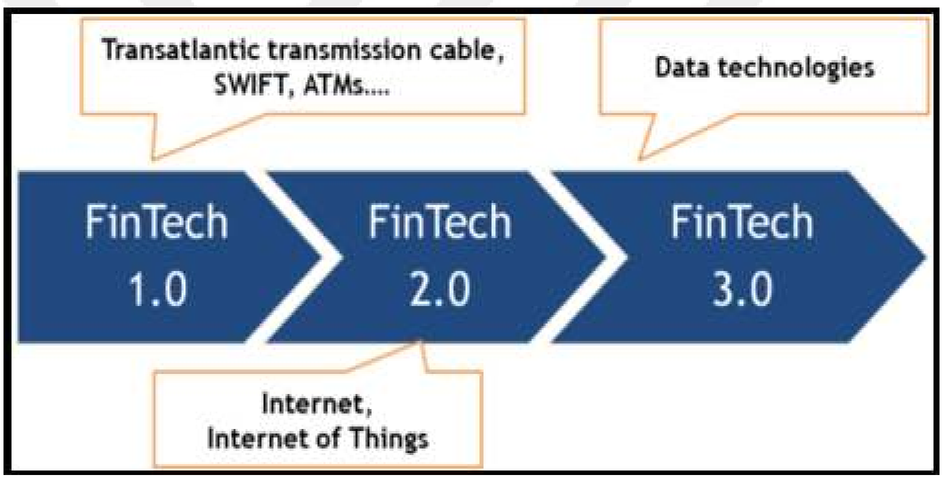


Figure 2.2: Fintech key technologies used in each stage

(Source: Leong, Sung, 2018)

Financial technology has become a hot topic lately that carries a theme of modern technological advancement. Nonetheless, its idea is not new and it goes back to 1866 when the first communication through the Trans-Atlantic transmission cable was created. The idea of the cable was to reduce the communication time between North America and Europe. As the communication took before around 10 days to be delivered (message delivered by the ship for instance), it was reduced to 17 hours. Later, in 1918 Fedwire (the first electronic fund transfer system) in the US was made that used technologies such as telegraph and Morse code (The Payments Association, 2020). What is more important, is that those systems facilitated the progress of the global telex (a communication service involving teletypewriters connected by wire through automatic exchanges) and from there made improvements possible to develop financial services that are forerunners for SWIFT and ATMs. Therefore, Trans-Atlantic transmission cable, mainframe computers, SWIFT, and ATMs are the key technologies of FinTech 1.0. (Leong, Sung, 2018).

2.3 Understanding financial technology

Financial technology can be understood as a cube (Figure 2.3) with three dimensions: an x-axis that implies the financial sector, a y-axis describing the business model, and a z-axis showing the technology that is being used. All three dimensions in turn can be divided into subsections that would imply the specifications (Chishti et al., 2020, pp. 26-27).

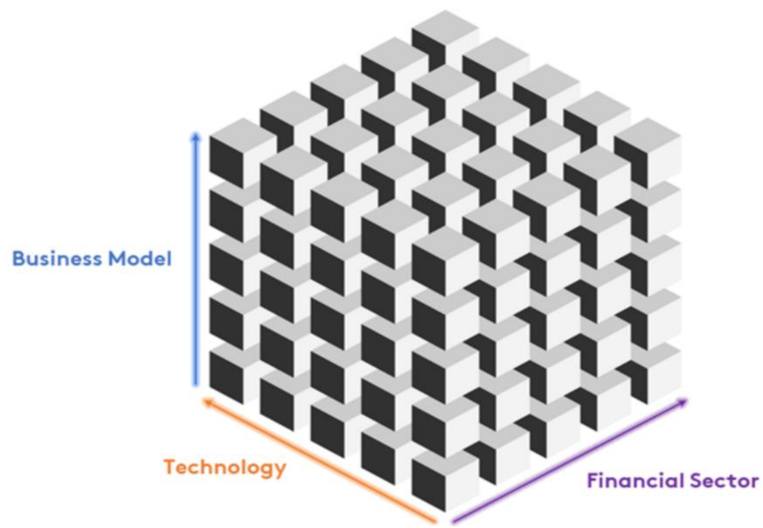


Figure 2.3: Three-dimensional fintech cube

Source: FinTech for dummies (pp. 27)

The financial sector dimension lists all types of financial services (Figure 2.4) that could benefit from financial technology such as retail banking, payments, foreign exchange, insurance, etc. The business model dimension summarizes different business models that could be implied to the specific financial sector (Figure 2.5) such as business-to-consumer (B2C) or even crowdfunding, and finally, the technology dimension (Figure 2.6) shows the type of technology that is being used which could range from cloud computing to augmented reality (Chishti et al., 2020, pp. 27-31).

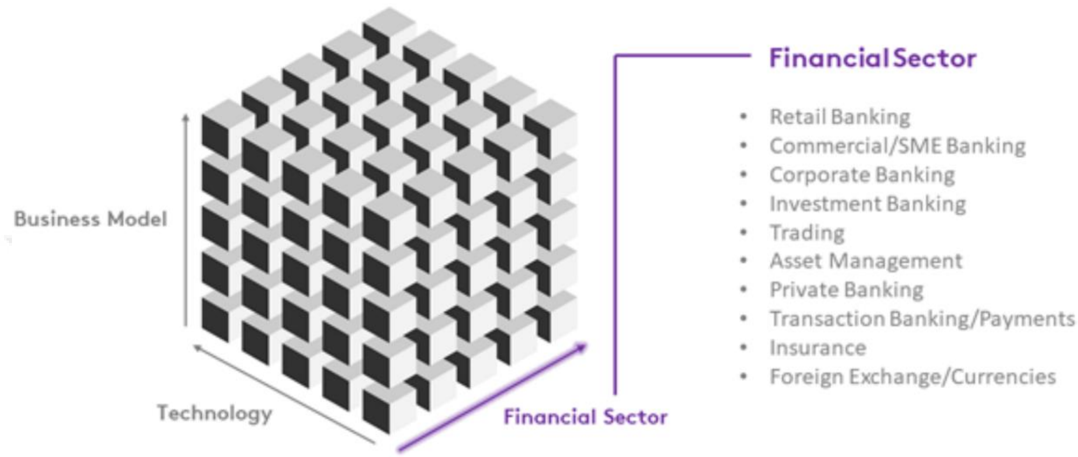


Figure 2.4: x-axis (financial sector)

Source: FinTech for dummies (pp. 28)

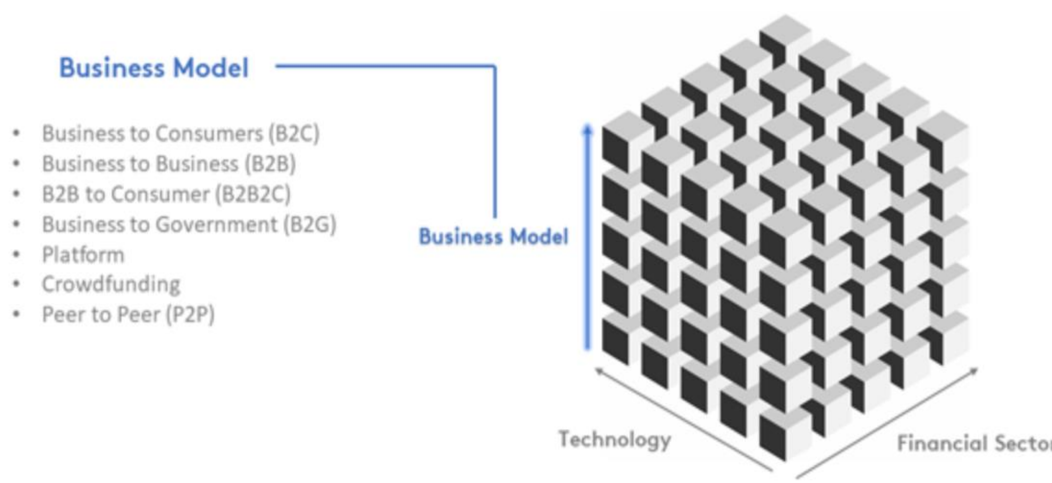


Figure 2.5: y-axis (business model)

(Source: FinTech for dummies, pp. 28)

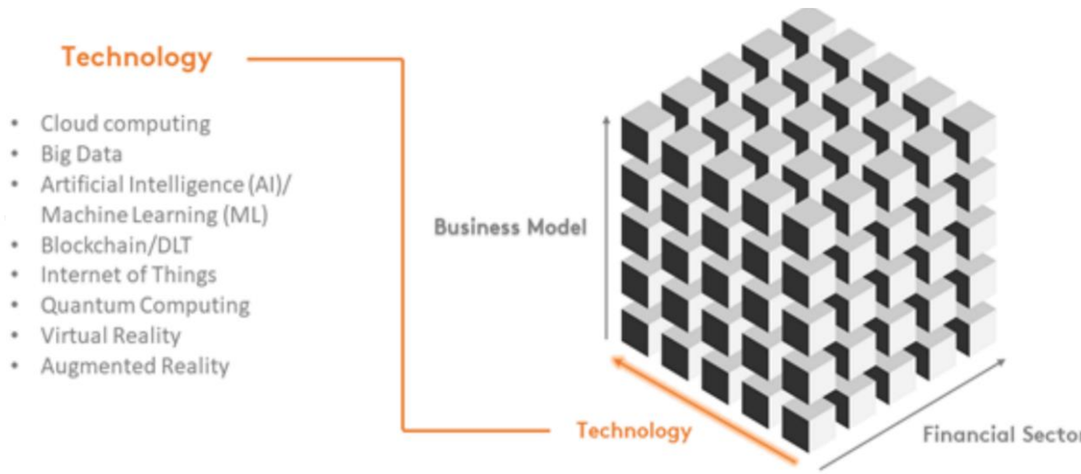


Figure 2.6: z-axis (technology)

Source: FinTech for dummies (pp. 30)

A three-dimensional cube figure also helps us to categorize and understand financial technology more easily and thus make their structure clear. Fintech start-ups also use a similar method to launch their business. When evaluating the neo-banks for instance, it could be seen that they may have retail banking concentration as the financial sector, that is focused on business-to-consumer (B2C) business model, and using various technologies like artificial intelligence, cloud, and big data (Chishti et al., 2020, pp. 29).

2.4 Current trends of fintech

As per the reason reports investment and interest in fintech have been observed to be growing significantly during 2021 worldwide and the scopes of the fintech companies has been observed to be broadening in the due course of time (Kiyutsevskaya, 2019). The growing scope of fintech combined with the subsequent growth within the maturity in numbers of fintech sub-sectors while charging corporate interest and increasing investment in mature jurisdictions has initiated the growth of the fintech companies and investments. According to Galvin *et al.* (2018), embedded finance has been observed to be showing a great growth during the last few years while the positional growth in the embedment of solutions within the banks who have become service providers to non-financial and non-bank institutions. Due to this embedded solution, the companies have delivered in greater service proposition and customer experience involved with the financial services that have been regarded as a major aspect of larger offerings by the financial institutions (Yasini and Yasini, 2019). An increase in the regulatory scrutiny of embedded finance offerings has also been observed in recent years. A sequent growth in the financial services and products embedded and delivered with the help of non-regulated entities which has been driving greater levels of regulatory intervention and awareness in the banks and financial institutions (Hernández *et al.* 2019). The regulators have been trying to come up with the solutions for protecting their customers by focusing on and clarifying special issues such as available resources and accountability.

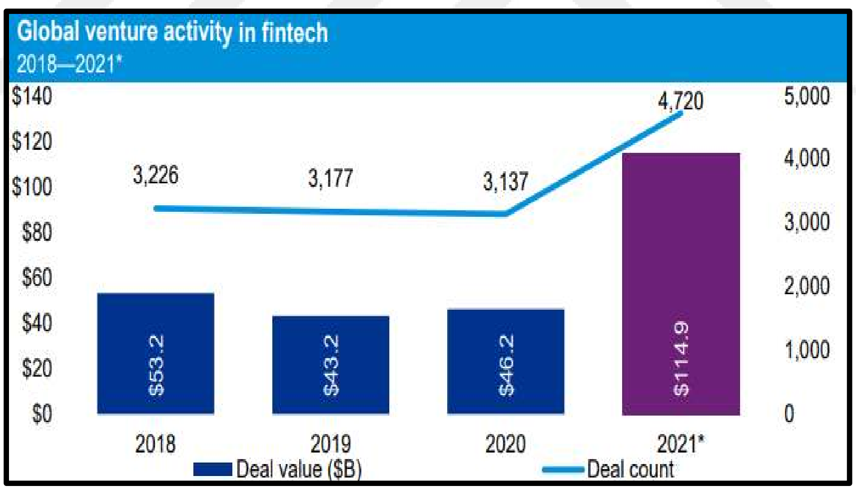


Figure 2.7: Global venture activity in fintech from 2018 to 2021

(Source: Shashkova *et al.* 2020)

The above figure represents "Global venture activity in fintech from 2018 to 2021". As per the perspective of the above figure a subsequent growth of the fintech market in context to global ventures has been observed in 2021. Where the Global venture number in 2020 companies has been identified as 3137 it has increase to 4720 in 2021 (Shashkova *et al.* 2020). A growing trend of fintech companies towards branding themselves as data organizations has been observed in recent years. Many companies have been re-inventing their operations into data management and have been representing themselves as data providers and data organizations that are able to provide payments and other financial services. By presenting themselves as data organizations the fintech companies have been able to differentiate their organization from other financial institutions among the market and investors.

The fintech companies have been providing special emphasis on ESG (environmental, social, and corporate governance) and have overall impact on the trajectory. The companies have been prioritizing ESG and the growing interest in fintech with its easy capabilities, that has initiated the companies to emphasize carbonization, circular economy and climate change. Among the fintech companies, an increase worth on deal-making in the different developed regions has been observed (Sun and Wang, 2022). The industrious have been ramping up their targeting of jurisdiction in considering underdeveloped countries with respect to financial services and have been initiating deals in regions like Latin America, Southeast Asia, Africa and the Middle East. According to Abdeldayem & Al Dulaimi (2020), in recent years, subsequent decreases in unicorn companies within the developed market has been observed whereas these unicorn companies have been maintaining their strong position within the emerging market. Due to the rapid growth of the number of unicorn companies worldwide, especially in European countries such as the UK and Estonia, the status of unicorn companies has been observed to decrease and become less valuable in developed markets (Vučinić, 2020). It has also been reported that the unicorn companies would continue to hold a strong position for the starters in less mature fintech hubs and emerging markets.

2.5 Fintech segments

Due to the recent activities within the fintech industry, the segments that have significantly participated in shaping the industry are yet to find. In the study Dorfleitner *et al.* (2017) divided the companies within this industry into major Ford segments with respect to the distinctive business models. Compared to the traditional value-adding areas of universal banks, fintech companies have been widely distinguished in their involvement in assessing management payments and financing.

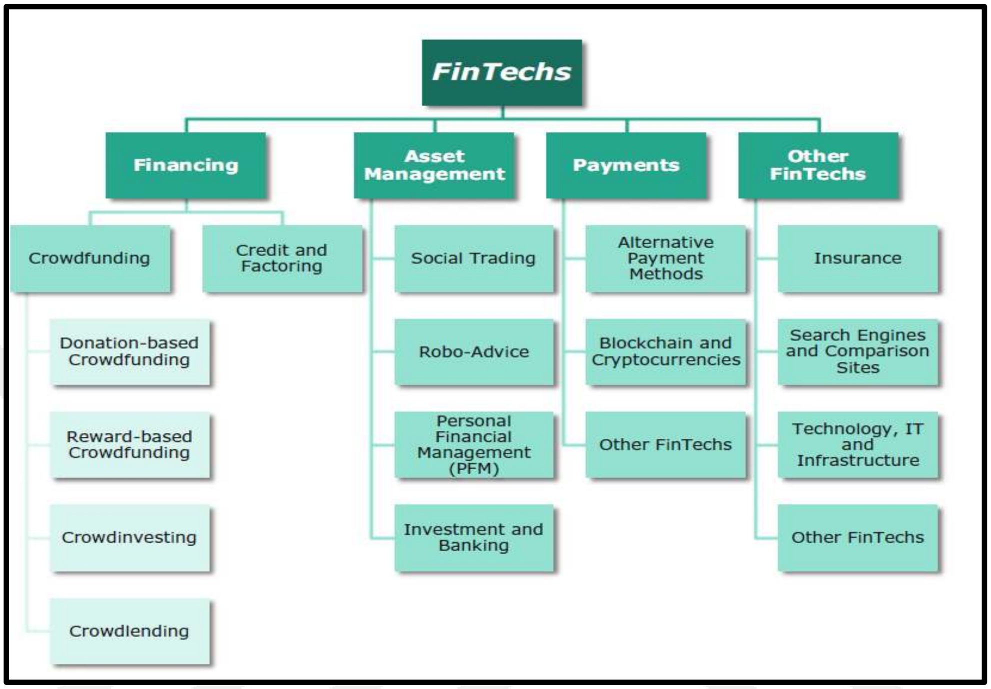


Figure 2.8: Segments of the fintech industry

(Source: Al Ajlouni & Al Hakim, 2019)

As per the perspective of the figure, fintech companies have four major segments that have been identified as financing, asset management payments and other fintech. In the financing segment, the fintech activities have also been subdivided into two categories known as crowdfunding, credit, and factoring. According to Vaganova *et al.* (2020), on the basis of crowdfunding services provided by the company, the crowdfunding facility has been divided into four categories such as donation-based crowdfunding, crowd-investing, reward-based crowdfunding and crowd-lending.

Within the asset management segment, the fintech companies have been observed to be providing several services such as Robo-advice, investment and banking, social trading, and personal financial management. In the payment segment, the companies have been providing services such as blockchain in cryptocurrencies that are considered alternative payment methods (Reyes-Mercado, 2021). Within the other segment, the fintech companies have been providing services such as technology and information technology, and infrastructure-related services such as search engine and comparison sites, insurance and many other fintech services.

As per the recent landscape, the fintech services have been observed to be widely distributed in 8 categories such as blockchain, lending and crowdfunding, insurance, payment, planning, trading and investment, security and data and analytics. As per a recent report, the US has the largest fintech industry worldwide with the highest number of fintech adaptors within its financial sector (Stolbov & Shchepeleva, 2021). The trend of the fintech landscape has been widely observed within European countries such as the UK and Estonia.

2.6 Factors driving the rise of fintech

Fintech has been identified as a rapidly evolving industry. Thanks to changing financial landscape due to new regulations and technology, the services and products supporting the industries have also been observed to be changing (Basole & Patel, 2018). There are some major factors that have been significantly contributing to driving the rise of the fintech industry.

Increased Mobile Usage

The increased use of mobile devices has been regarded as one of the major drivers of fintech growth. A recent study has evaluated that 77% of American adults have a smartphone which has significantly driven the utilization of mobile banking and other mobile accessible financial services (Stolbov & Shchepeleva, 2021). As per recent studies, the demand for online payments has initiated the financial institutions to launch several mobile payment options and now there are several mobile payment options for each type of transaction from shopping online to credit card. Their study Berg *et al.* (2021), has reported that in 2021, the US population only spent nearly 100 billion Pounds through their phones. The increased use of smartphones has also initiated an increase in the number of applications which has been significantly targeting consumers.

The Rise in Digital Payments

Another major factor has been identified as the increasing popularity of digital payments. Subsequent growth in mobile payment options has been observed as well as in other forms of electronic and online payments. The study Kowalewski & Pisany (2022), represented that the global value of digital payments in 2022 was 5058.96 billion Pounds which has increased to 5872.89 billion pounds in 2021. The new trend of growing digital payments has been significantly driven by several factors among which the increasing use of smartphones has been regarded as a major one. It has been observed that the growing use of smartphones has been significantly increasing the popularity of online shopping. Digital payments have also provided increased security and lower cost that has been attracting many businesses (Mirchandani *et al.* 2020). A subsequent growth within digital payments has been initiating the fintech companies for offering innovative payment solutions and the growth of the fintech industry has been more guaranteed.

Focus On Underserved Areas of Banking

Financial institutions have been emphasizing certain areas within their business that have already experienced massive growth in the past such as asset and wealth management. Whereas, there are also some areas which have been greatly neglected by the financial companies due to their great emphasis on asset and wealth management. Therefore, the fintech companies have been moving their focus to the neglected section such as student loans, mortgages, and business lending (Claessens *et al.* 2018). Changes have also been observed in the regulatory environment within the banks and financial institutions in the last few years, especially within their financial services where now the banks and financial institutions have been focusing on offering customers the services that can help them both in composing the requirements while initiating innovation within the sector.

Use of APIs

The fintech companies have been observed to be utilizing "application programming interfaces or APIs" for developing their services and products around existing financial infrastructure which has been regarded as a new trend. API has been regarded as a major aspect of the fintech industry. API security has become a great necessity in deciding and utilizing financial products and services, and banks and other financial institutions have been focusing on disclosing their systems that could help third-party companies in developing services and products with them (Pallathadka &

Pallathadka, 2021). Therefore, API has significantly increased the number of ventures, capitals and start-ups involved in the potential growth of the fintech industry.

Large Amount of Capital Available

Funding or investment has been regarded as a major aspect of any industry and business, and the rise of the fintech industry has also been observed due to a large amount of capital available for the companies of this industry. The fintech companies have a large amount of anchor capital that has initiated potential growth of the fintech companies (Utami *et al.* 2021). Additionally, banks and financial institutions have also been focusing on strategic investments within these start-ups.

2.7 Opportunities and limitations of fintech

Several studies have discussed the benefits and opportunities of fintech within the financial industry and these opportunities and benefits have been observed to be largely associated with investor and consumer protection, competition, market integrity and financial inclusion. It has been represented within the reports of Financial Stability Board the main opportunities can be observed as:

- The “peer-to-peer (P2P) lending” and “Equity Crowd-Funding (ECF)”, platforms have been providing credit to SMEs and borrowers who do have not significant access to bank loans and opening new possibilities of access especially towards equity finance to the SMEs and borrowers (Teigland *et al.* 2018).

- Digital finance has significantly enhanced the access of individuals to financial services. Advanced technology has helped companies to reach remote locations. The fintech platform has been emphasizing larger size trades and their focus has been shifting towards executable orders and firms (Lai, 2020). Fintech has helped the financial sector with the inclusion of new acid classes that have significantly benefited the company by providing energy products, private equity and making the trading system collateral.

- Fintech companies have been providing more specialized and improved financial services in comparison to traditional banks and it has enabled the companies to deliver their services to the customer in a flexible and cost-effective manner (Kim *et al.* 2021). Banks with Robo-advisors and white label have been greatly helping their customers in navigating their investment world and have significantly provided tailored and better service experiences to their customers.

- The entry of new fintech companies has significantly increased the competition within the financial market and industry which has significantly helped in fragmenting the banking service market and reduced the systematic size that is associated with companies and organizations (Lai & Samers, 2021).

- Fintech has significantly enhanced code development within the financial industry by enhancing security within the blockchain by encrypting the blocks and linkages between the operations (Hinson *et al.* 2019). These companies have also been providing various methods for protecting the anonymity of their customers and preventing information leakage.

It has been observed that financial technology takes rates and rays that are mainly coming from the operational risk liquidity volatility of banking funding sources, and compliance and severe competition. The major limitations of fintech can be identified as:

- The lack of physical branches has been regarded as a major disadvantage for fintech companies. It has been causing severe issues such as the provision of services among the company and for it, the companies have been emphasizing utilizing social media networks and email for mitigating the issues of lack of physical branches (Loo, 2019).

- Many fintech companies have not utilized blockchain technology which has significantly negatively impacted their security system and it has put user data at a risk. Recently the fintech companies have addressed this issue and have started to utilize blocks and technology for enhancing their security system (Lai, 2020).

- Lack of regulation has been regarded as another major disadvantage of fintech companies. The regulation around the fintech industry has been observed to be not perfect which has significantly increased the possibility of potential fraud due to the absence of regulation (Kim *et al.* 2021).

2.8 Sustainability of fintech

Fintech has been rapidly growing and teaching new insights as customers have been providing greater interest towards switching to online financial services and switching from traditional in-person banking and embracing new solutions such as mobile banking, cryptocurrencies and e-wallets. As per recent reports it has been estimated that the fintech market has grown by nearly 25 billion Pounds in 2022 just by its previous year (Mention, 2019). Where in 2021 the worth of the global fintech market was calculated as 105.41 billion Pounds, in 2022 it has reached 131.95 billion pounds (Iqbal *et al.* 2021). Digital banking has been regarded as the largest segment within the fintech industry. Just within European countries such as the UK and Estonia, digital banking has experienced steady growth in the adoption of synthetic technology over the years. Where the adoption of digital banking within the US has accounted for 61.3% in 2018 it has reached 65.3% in 2022 (Das, 2019). Therefore, it can be concluded that the fintech industry would experience further growth within the digital banking segment in the recent few years.

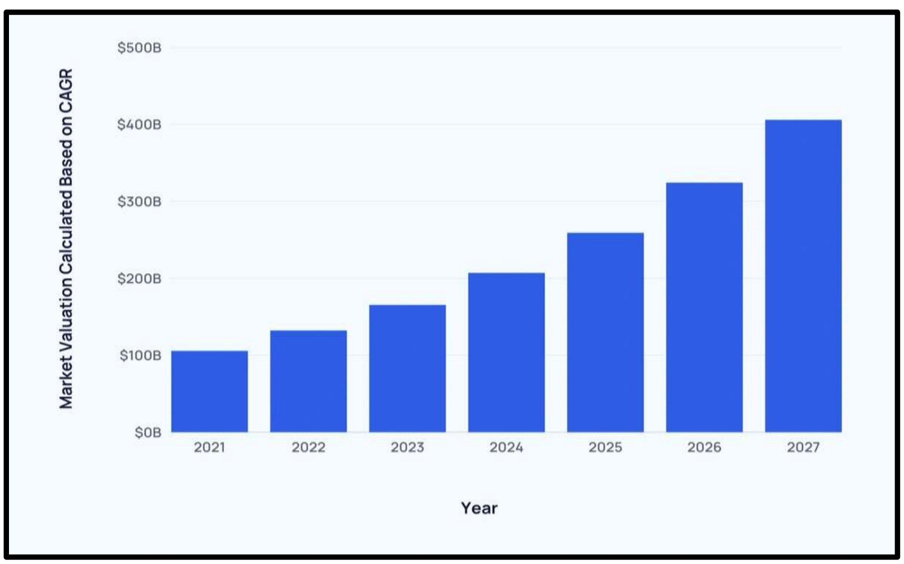


Figure 2.9: Fintech market growth project from 2021 to 2022

(Source: Explodingtopics.com, 2022)

The above figure represents the "Fintech market growth project from 2021 to 2022". As per the perspective of the ever figure it can be concluded that a subsequent growth would be noticed within the global market. As per the reports, by the year 2026, the industry would experience a subsequent growth of 25.18% with a CAGR yearly (Anichebe, 2019). The global financial technology market has been expected to gradually grow during the recent decade and it has been estimated that the market value of financial technology would reach approximately 324 billion Pounds by the year 2026. Calculating the compound annual rate of the financial technology market globally, it has been estimated that over the period of 2022 to 2027 the global financial technology market would increase by 25.18% (Kitamura, 2020).

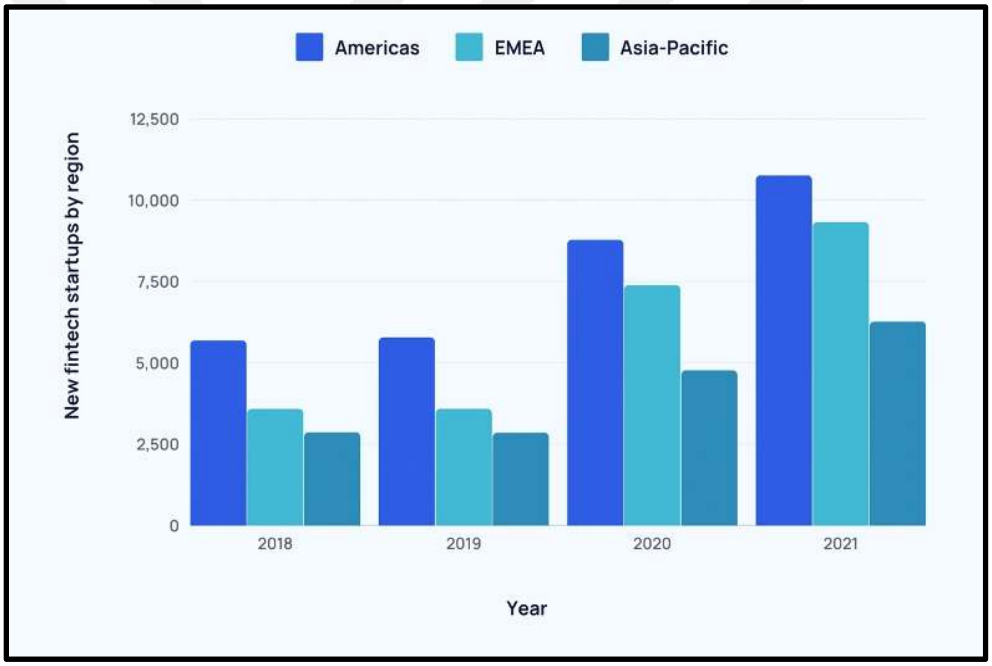


Figure 2.10: Fintech market by region from 2018 to 2021

(Source: Explodingtopics.com, 2022)

The above figure represents the "Fintech Market by Region from 2018 to 2021". As per the perspective of the above figure, the largest market of the fintech industry over recent years has been identified as North America. But the rapid growth of demand for fintech companies and the rise of this company within the financial market of the Asia Pacific region in recent years has been observed. The index companies have been largely emerging within the financial sector of developing countries such as Asia Pacific regions and it has been estimated that as per recent reports in 2022 China has the highest cumulative transaction value which has been estimated as nearly 3.5 trillion pounds (Mohamed, 2020).

2.9 Strategies for traditional banks to compete with fintech companies

The fintech industry has been moving towards fintech 2.0 and evaluating its services to the next level which has developed a potential strategic risk for traditional banks and financial institutions. Therefore, dealing with this current situation, traditional banks need to switch their attention to technology for responding to the fintech technology in a much more competitive manner (Megargel, 2018).

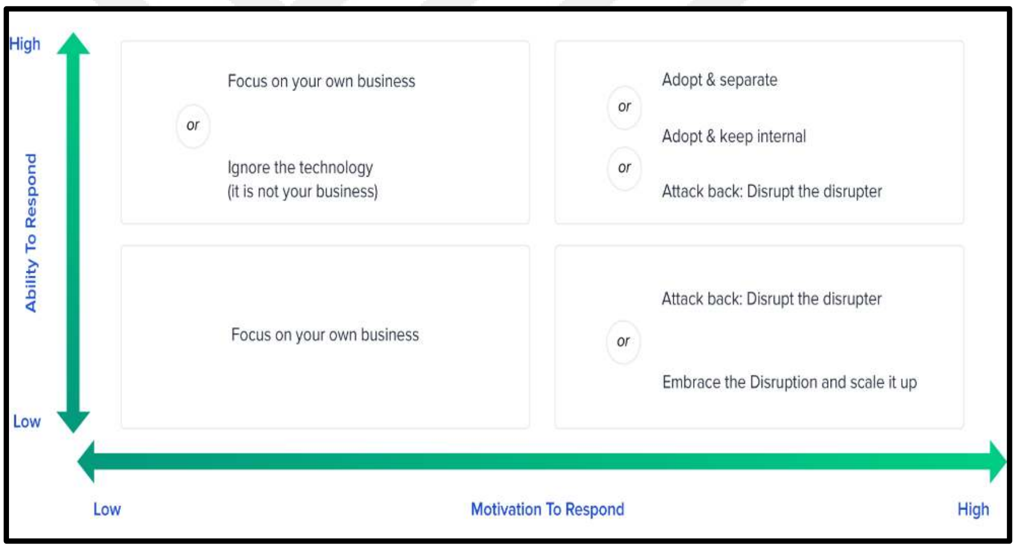
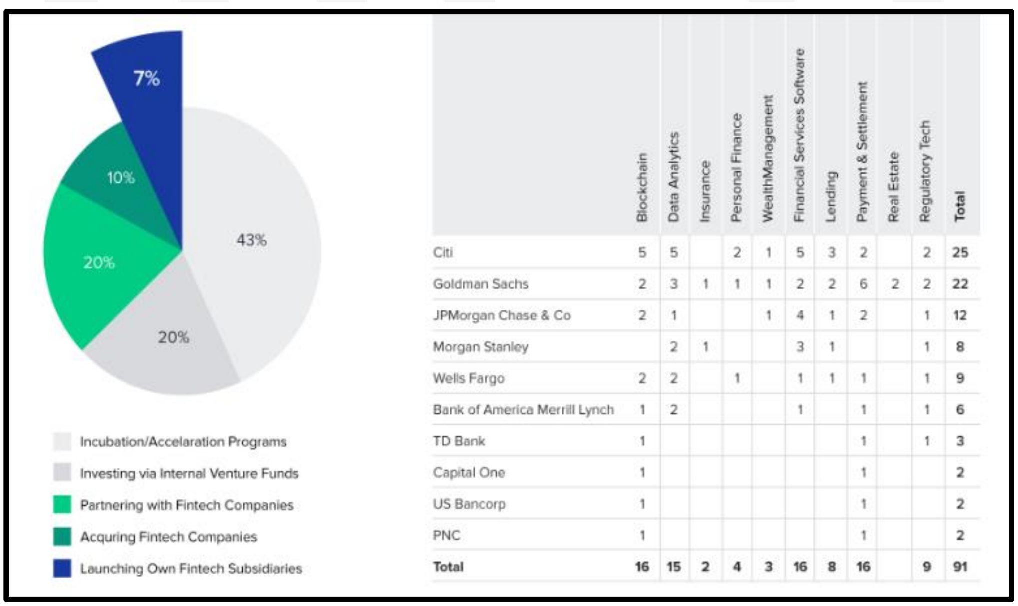


Figure 2.11: MIT slogan disruptive technology response matrix

(Source: Toptal.com, 2022)

The above figure represents a framework by the MIT slogan that has categorized responses to disruptive innovation and two factors that have been significantly affecting the response of incumbents, ability, and motivation. On the basis of current actions, banks and financial institutions need to follow the leaf quadrant. Traditional banks and traditional financial institutions have shown low motivation and they have high ability and responding to fintech. From the prospect of staff numbers and wealth, they have a high potential against the disruptive potential of the start-ups of the fintech industry, but their responses have been observed to be passive and dismissive which has helped the fintech companies and start-ups to dominate the financial sector (Grassi *et al.* 2022). Being passive the banks and traditional financial institutions have been observed to be mostly engaged with the fintech companies by soft-touch accelerators and their equity investing. Therefore, the banks need to increase their motivation for responding to the fintech movement within the financial sector. With their technology prowess and financial resources, the banks can achieve their objective of providing better service and developing a new infrastructure through innovation (Elsaid, 2021).

As per recent reports the fintech companies have been outsourcing innovation within their financial services and 63% of inter companies have launched start-ups and accelerators venture funds. Only banks within the US have invested nearly 3.6 billion Pounds in 2020 won in nearly 56 different fintech star-tups. On the contrary, only 7% of banks have successfully said they own a "fintech R&D offshoot" for developing proprietary solutions (Senyo and Karanasios, 2020).



	Blockchain	Data Analytics	Insurance	Personal Finance	WealthManagement	Financial Services Software	Lending	Payment & Settlement	Real Estate	Regulatory Tech	Total
Citi	5	5		2	1	5	3	2		2	25
Goldman Sachs	2	3	1	1	1	2	2	6	2	2	22
JPMorgan Chase & Co	2	1			1	4	1	2		1	12
Morgan Stanley		2	1			3	1			1	8
Wells Fargo	2	2		1		1	1	1		1	9
Bank of America Merrill Lynch	1	2				1		1		1	6
TD Bank	1							1		1	3
Capital One	1							1			2
US Bancorp	1							1			2
PNC	1							1			2
Total	**16**	**15**	**2**	**4**	**3**	**16**	**8**	**16**		**9**	**91**

Figure 2.12: Current actions of banks to fintech movement by investing in fintech startups

(Source: Toptal.com, 2022)

Analysing the above figure of "Current actions of banks to fintech movement by investing in fintech start-ups," it can be concluded that now that additional financial institutions and banks have been emphasizing investing within the incubation and acceleration programs and investing within venture funds of the fintech companies which has provided the bank with a greater return of investment and help the banks in generating greater revenues. As per the perspective of Omarini (2018), relying on the return on investment from the ventures of fintech companies can be risky and overly passive. They have also stated that this race can be reduced by investing collaborative equity to fintech start-ups. Banks also need to become more innovative with their start-up and capital venture and therefore completely separate these ventures and lapse from their main operation. This can help the banks in developing independent groups and capitalizing their equity where known internal transfer pricing would be involved as well as it would reduce the race of environment from parent or staff from external hires (Nomakuchi, 2021).

2.10 Strategies for lowering the risks of fintech

With the increase of regulatory scrutiny, the fintech companies are also emphasizing optimization of operation and risk practises and practices focusing on minimization of potential operational risks. Risk mitigation has been regarded as an important responsibility for operating management within fintech companies. Implementing verified and established risk assessment and hiring professional risk management assistants have been regarded as common methods for risk mitigation (Campino *et al.* 2021). Operation teams have been responsible for process management and in such situations the level of risk has been cleared and procedures have been formalized. This has been inherited within the fintech industry as well and the most dependable and effective strategy for decreasing the operation and risk has been identified as automating the operation activities of the company. Regardless of the external condition and danger, the operation staff would be able to take the appropriate measures in every situation automatically (Said & Angelita, 2020).

Automating operations

When the organization is ready for the automated procedures then with the perspective of mitigating risk of the organization, all the operations and procedures of the organization need to be broken down for reacting in specialized situations. Automatic financial activities do not imply that the task would be handled by robots only. But automated financial activities would enable the operation teams in managing the eventualities and they would be trained for walking with the instant and capability like the employees of most fintech companies (Agusinta & Fachrial, 2022). By automated control and coordination of risky activities within the organizations of the fintech companies, it would also help the companies in operating their staff of numerous significant tasks such as it would help the employees in pending and required time on coordination. The tops can easily avoid the risk of email threats, searching files and moving between tools. The automation procedure would help the staff in accomplishing their task with the help of an automated method which is easier and less time-consuming in comparison to traditional methods. The automation would help them start communicating by providing them with proper instructions, procedures, and reactions (Megargel, 2018). With the automation of procedures, the teams can begin the procedures immediately without additional progress update evaluation or alignments which can reduce the time span of work duration and can help the tabs in completing the task within the deadline.

Recording Real-Time Operational Procedures

Operation executives need to record real-time operation procedures that are especially associated with risk scenarios. By developing a brief explanation of the plant reaction or processes such as market event information and identifying the right team such as customer operation and estimating the frequently occurring on a monthly basis (Grassi *et al.* 2022). There are several other procedures like complaints audits that have been occurring regularly and in a more predictable manner that would significantly increase the asynchronous and irregular approaches which have a higher risk. By determining the procedures that have a higher risk and by examining the list of operations and processes, the highest operations have been analysed. The analysis has been done by two aspects such as the maturity of automation and business critically (Elsaid, 2021). Operations with higher rank has been observed to acquire more susceptibility in accordance with accuracy and they need to provide more resources.

CHAPTER 3: METHODOLOGY

3.1 Overview

A methodology has been regarded as a major aspect for assessing methods of collection and analysis of data in a systematic and most appropriate manner. The methodology chapter mainly focuses on assessing data collection and analysis methods with respect to research objectives and questions, and what the research has aimed from this study. Therefore, this chapter would provide a brief context on methods that have been used in this study.

3.3 Theoretical framework

The research is conducted on the basis of the use of technology within the banking sector that has enabled the study to evaluate the application of research models and theories for explaining factors that are associated with the adoption of technology. Among the most recognized theories, it has been estimated that the market value of financial technology would reach approximately 324 billion Pounds by the year 2026. “Diffusion of Innovation Theory” has been regarded as a major theory which would be evaluated in this study.

3.3.1 Diffusion of innovation theory

The “Diffusion of Innovation Theory” has investigated the key characteristics of technology adaptors that have been initiating the acceptance of innovative technology. This theory has explained how, why and at what rate the new technology and ideas have spread. The theory was first proposed by Everett Rogers in 1995. He has defined diffusion as a procedure through which innovation can be popularized with the help of social systems over a time span (Iluba & Phiri, 2021). This theory has described cognitive states that have emphasized individuals going through for gaining awareness of innovation and utilizing the innovation within the organizations. The theory has discussed four main elements that can be regarded as the major component of any innovation which has been identified as a communication channel, innovation itself, social system, and time.

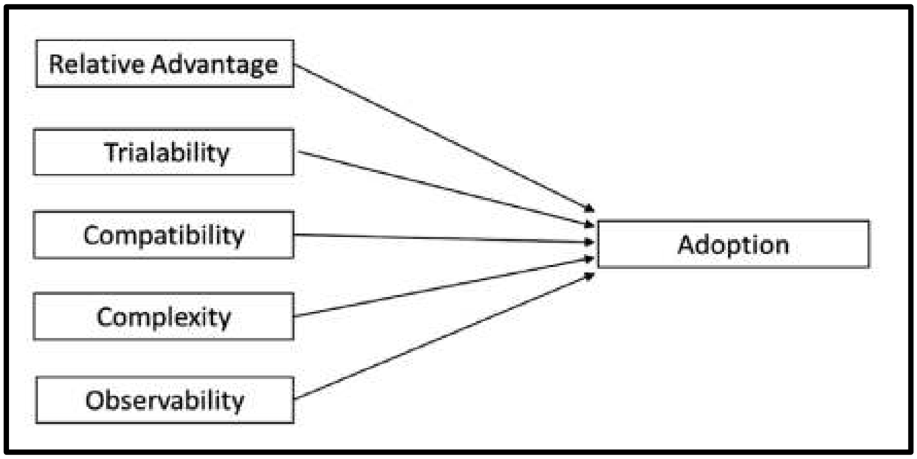


Figure 3.1: Diffusion of innovation theory

(Source: Iluba & Phiri, 2021)

The above figure represents the model of "Diffusion of innovation theory." As per the perspective of the above figure the major factors that have been driving Technology adoption can be regarded as trialability, complexity, relative advantage, compatibility, and observability (Iluba & Phiri, 2021).

Relative Advantage

This factor has discussed the perceived value of innovation where the innovation can be provided to the users. The major aspect of innovation has been regarded as improving the life system of humans and therefore, the ability to improve lifestyle and the interest in the adoption of the innovation has been observed to be increasing as well (Min *et al.* 2021). This characteristic has been most important for the users to understand the benefits of the innovation and provide strong motivation for the uses for adopting the innovation. The easy access to financial services provided by the fintech companies has increased the popularity of financial technology adoption.

Trialability

This factor has been emphasizing the interest of the users towards the innovation. The growth of fintech companies and innovations such as mobile applications and many more has required numbers of users to register their mobile numbers for proceeding with receiving and sending funds.

The same activity has also been applied to people operating with bank accounts. Therefore, these characteristics would help in understanding the willingness of the users in trying new banking innovations.

Compatibility

Compatibility has been emphasizing the fitness of the innovation on the current condition and lifestyles of the users. Users do not emphasize or express likeability towards innovation which can develop significant change within their current condition or can force them to shift from their current norms (Syahadiyanti & Subriadi, 2018). The current trends of digitalization have significantly helped the fintech company to implement financial technology within the daily lifestyle of the population.

Complexity

Innovation always focuses on ease of use and any innovation has been regarded to be great when adopting the innovation can decrease the complexity within the operations. Innovations with difficulty to use are very likely to be less approved by the users and shifting users towards utilizing that specific innovation can be difficult. The fintech innovation has provided the ease of usage of financial services to the users that have a major aspect in driving the financial sector.

Observability

This characteristic has emphasized understanding the results and performance of innovation after utilizing them. Observability can be based on the personal experience or experience of others and these characteristics have been identified as a greater aspect for affirmation of the usefulness of the innovation (Sartipi, 2020).

3.4 Research onion

Research onion has been identified as a framework that has been helping the research studies in designing their research methodology. It provides the researcher with taking decisions that have been allowing systematic research with three exams such as axiological, epistemological, and ontological which have been constituting the research philosophy.

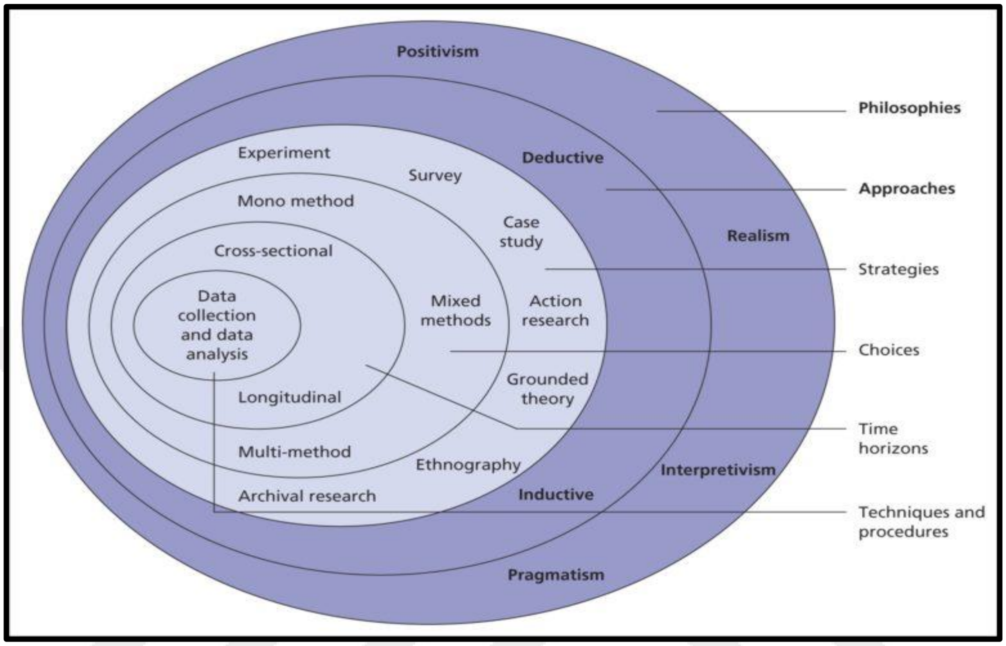


Figure 3.2: Research onion

(Source: Melnikovas, 2018)

As per the perspective of the above figure of research onion, the sequential steps of determining accurate data collection and data analysis procedure for a research study, research philosophy has been identified as the first step for assessing the research methodology as within the research onion the research philosophy has resided at the outermost layer. The second layer of the onion consists of research approaches indicating the second step to evaluate the research approach for the study. The third layer has been signifying the evaluation of the strategies for the research. In the fourth or most significant layer of the research, onion has been identified as the right method of data collection and analysis has been determined (Melnikovas, 2018). This research onion has been utilized for assessing the accurate data collection and analysis by evaluating the research method and implementing the sequential steps within this research onion.

3.5 Research philosophy

The research philosophy has been referring to a set of principles that have been observed to be widely concerned with the stands or worldviews from which the research has been conducted. The research philosophy has been identified to be widely categorized into epistemology and ontology. The ontology philosophy has been referring to the authenticity of the information and understanding the existence of the factor information whereas the epistemology philosophy has been referring to valid information that is required for conducting research and mainly focuses on obtaining the information (Pearse, 2019). From the aspect of a philosophical position, academic studies have divided the philosophies into two categories such as interpretivism and positivism.

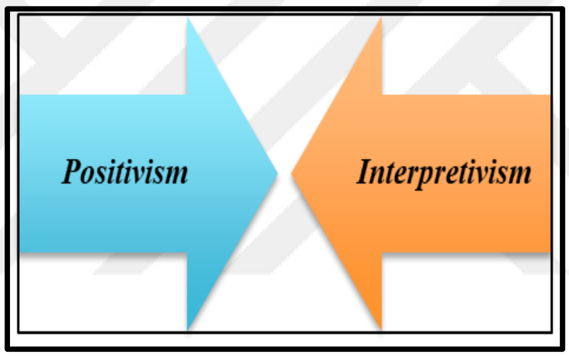


Figure 3.3: Research philosophy

(Source: Created by the author)

Positivism philosophy has been referred into the assumption of knowledge which is independent of the subject of the study whereas interpretivism philosophy has been emphasizing the individual perception of the observer and understanding the reality. Among the study context, positivist philosophy has been regarded to be more scientific as it has been helping research studies for testing the known fact or phenomena whereas interpretivism studies have been observed to be more qualitative in nature (Pearse, 2019). The study has followed a positivist philosophy as this philosophy has helped the study in examining the phenomenon of fintech in the current world and its impacts on the financial sector, traditional banks, and financial institutions.

3.6 Research approach

The research approach has been identified as the procedure that has been utilized by the author for the collection, analysing, and interpretation of data. There are mainly two types of research approaches that have been widely utilized within the academic context. This research approach has been identified as a deductive approach and an inductive approach. Where the deductive approach has been developing upon the hypothesis of free existing theories and has been formulating research approaches for testing the hypothesis, the inductive approach has been characterized by moving from a specific to a general approach (Rogers *et al*. 2020). The inductive approach has been emphasizing observation as and starting point for the researchers and assessing the research patterns after the collection of data.

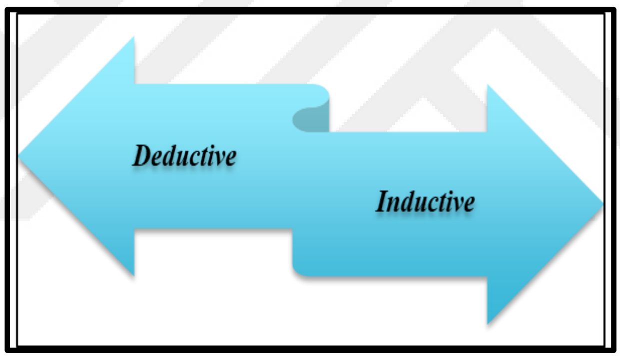


Figure 3.4: Research approach

(Source: Created by the author)

The study has taken a deductive approach as the deductive approach has a more significant framework which is missing within the inductive approach. Most importantly, where the inductive approach only emphasizes qualitative research techniques, the deductive approach supports both quantitative and quantitative research techniques (Rogers *et al*. 2020). Therefore, the deductive approach has helped the study in following the qualitative research approach and has also helped the study in examining the phenomenon of fintech in the current world. Also, its impacts on the financial sector, traditional banks, and financial institutions.

3.7 Research strategy

The research strategy signifies the intent of the author in carrying out the research activities. The research strategy within the academic context has been observed to have different approaches such as action research, experimental research, case study research, systematic literature review, interviews, and surveys. The experiment research or exploratory research has been referred into the strategy for developing a research project that has helped the study in examining the results of the experiment against the expected results (Pearse, 2019). This type of research strategy has been broadly utilized in several studies for examining the relationship between factors and examining the research outcomes with respect to expected outcomes. The case study has been widely utilized for establishing key features and drawing generalizations. This research strategy has been widely utilized within research studies due to its ability in offering insights into specific nature and establishing the importance of context and culture in differences among the various cases (Pearse, 2019). The study has implemented an exploratory research study as this type of strategy has helped the study in exploring the phenomenon of fintech in the current world and its impacts on the financial sector, traditional banks, and financial institutions.

3.8 Data collection method

The data collection method within a research study has been greatly associated with the research technique. Significantly two types of research techniques have been observed to be greatly utilized within the study which is known as quantitative and qualitative research techniques. Where the quantitative techniques have been observed to be focusing on the collection of quantitative or numeric data, the qualitative techniques have been observed to be focusing on the collection of qualitative or textual data and information (Huang *et al*. 2021). The quantitative research technique emphasizes more on testing hypotheses in comparison to exploring any specific subject. Therefore, the study has implemented a qualitative research technique as it has helped the study in exploring the phenomenon of fintech in the current world and its impacts on the financial sector, traditional banks, and financial institutions.

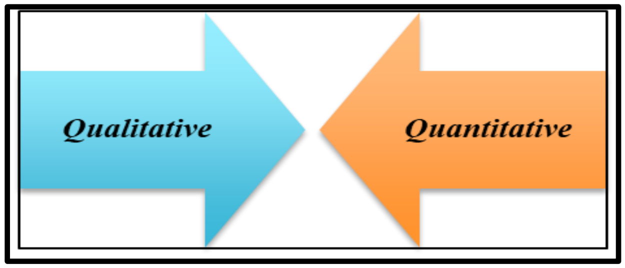


Figure 3.5: Research techniques

(Source: Created by the author)

Collection of qualitative data has been collected from both primary and secondary sources. For primary data, a survey has been conducted with representatives (chief executive officers) from 4 Estonian universal traditional banks such as Coop, Swedbank, LHV, and Luminor where they were asked a total of 9 questions. In addition, a total of 50 respondents that are mainly managers from different traditional banks within the UK were selected to participate in survey with total of 10 survey questions which were sent via email or LinkedIn. Secondary data for the study has been collected from several secondary sources such as journals and articles. Therefore, a mixed data collection method has been utilized within the study. By gathering both primary and secondary data, the purposive sample technique has been implemented as this technique has helped the study in collecting data from relevant sources to obtain relevant data, information, and develop an insightful conclusion for this study (Huang et al. 2021).

3.9 Research design

Research design has been referring to overall strategies that have been chosen by the author and integrated within different components of the methods of the study in a logical and coherent way. Therefore, the research design helps the studies effectively address the research problems and provides a blueprint for the collection, measurement, and analysis of the data (Doyle *et al*. 2020). There are majorly four types of research designs that have been widely observed within the academic study that are identified as descriptive design, experimental design, causal experimental design, and literature review.

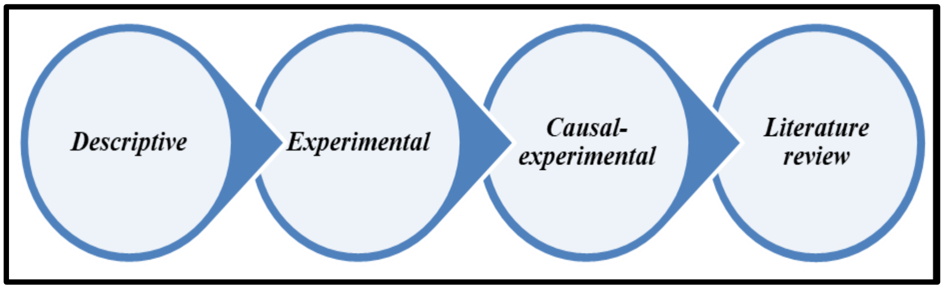


Figure 3.6: Research design

(Source: Created by the author)

From the above discussion, it has been observed that the study has implemented an exploratory research strategy that has enabled the study in designing itself following the experimental research design. The experimental research design has helped the studies in evaluating the accurate reason in underlying facts and aspects (Doyle *et al*. 2020). This research design has helped the study in describing the relationship between the success of financial technology within the financial sector of the fintech companies and has helped in evaluating the strategies that the traditional financial institutions need to incorporate for competing with the fintech companies.

3.10 Data analysis

In the study, mainly qualitative data has been collected and the data has been gathered by two procedures. Therefore, analysis and representation of the collected data has been provided within the study in two different sections. As the study has conducted an interview of four representatives from traditional banks. Interview analysis has been provided within the findings section of the study. In the section of the interview analysis, the study has discussed the point of view of each of the respondents for a given interview question and within the discussion subsection of the finding section the overall conclusion got from the respondent for each of the interview questions provided (Amarasinghe *et al*. 2020). A thematic analysis subsection within the finding has also been provided where the information and data collected from the secondary sources have been represented. The themes of the section have been developed on the basis of the research questions and objectives of the study, and subsequent data for each of the themes has been collected and the conclusion of each of the themes has been provided within the discussion section.

3.11 Time horizon

The time horizon has been identified as the timeframe that has been observed for the research within which the author has intended to complete all the tasks. There are two types of time horizons that have been significantly utilized in the academic context. These time horizons have been identified as longitudinal and cross-sectional (Chen *et al*. 2018). The cross-sectional time horizon has been identified as the time horizon that has already been established and the data needs to be collected, where the longitudinal time horizon signifies collecting data over an unexpected period and has been utilized for examination of the changes within the factors over the period of time.

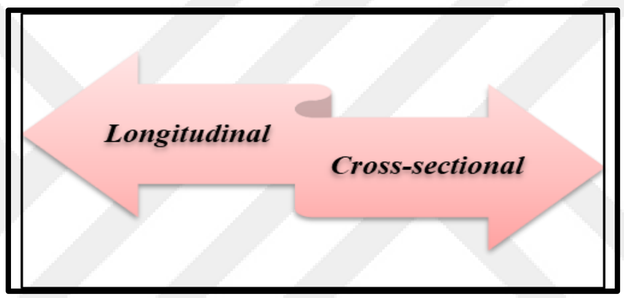


Figure 3.7: Time horizon

(Source: Created by the author)

In this study, a longitudinal time horizon has been implemented as it has helped the studying in collecting qualitative data from both sources by not bounding the collection of data within a specific timeframe and providing freedom to the study for collecting necessary data appropriately (Chen *et al*. 2018).

3.12 Ethical consideration

While executing interviews, the primary goal is maintaining the well-being of the respondents. For the interview, the interviewer has especially emphasized important facts such as honesty and transparency. Before formally beginning the interview, the author thoroughly explained the purpose of the interview and study. The author has maintained a respectful environment from the behaviour and research questions aspect (Robertson, 2021). The data collected from the interview is maintaining anonymity of the respondents by the "Data Protection Act, 2018". Apart from this, for avoiding any major ethical issue, the study has cited all the authors whose words have been utilized within the study and full citations of the journals. Moreover, secondary sources have been provided within the reference list following the Harvard reference system.

CHAPTER 4: FINDINGS AND ANALYSIS

4.1 Overview

Data analysis is essential for research study because it helps the researchers in evaluating the data in a simple and accurate manner. It helps in the interpretation of the collected data so the researchers can analyse all the collected data and get beneficial inside of it. Data analysis has been identified as a strategy or where that is responsible for analysing a huge amount of data. At the start, data has been collected in two methods and therefore the analysis section has been provided. In the primary data analysis section, the result of the survey and interviews have been represented and analysed. In the secondary data analysis section, the data has been collected from secondary sources such as journals and articles, and therefore analysed.

4.2 Primary data analysis

For the survey, a total of 50 respondents that are mainly managers from different traditional banks within the UK were selected. An online survey was done where 10 survey questions were utilized for the conduction of a questionnaire set in the Google form and the link of the form was sent via email or LinkedIn. The responses provided by the respondents for the 10 questions of the survey have been represented in this section.

4.2.1 Gender analysis of the respondents

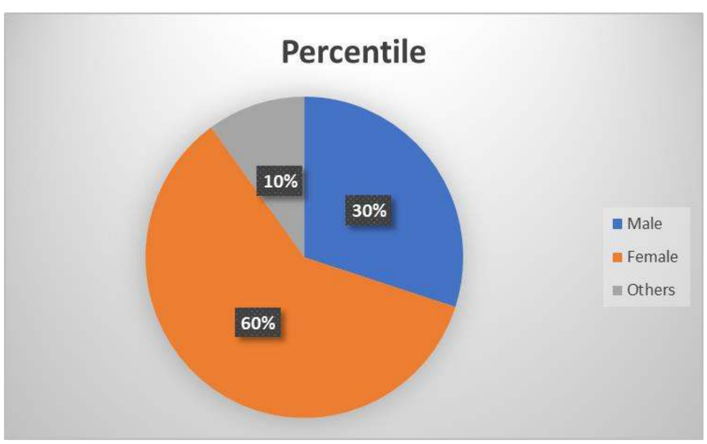


Figure 4.1: Gender analysis of the respondents

(Source: Developed by author)

The first question of the survey has been concerned the assessment of the gender of the respondents. From the collected data it has been concluded that there are 60% of female respondents and only 30% male respondents. Therefore, the data has been indicating that there is a dominance of female employees on managerial level within the traditional banks in the UK.

4.2.2 Age analysis of the respondents

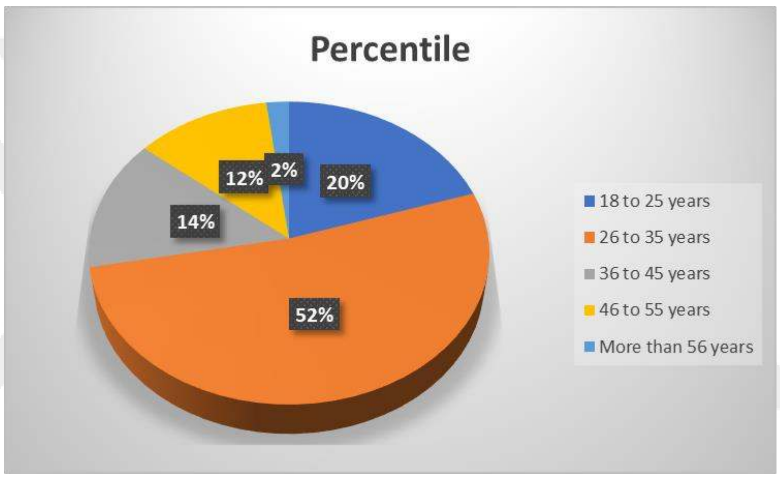


Figure 4.2: Age analysis of the respondents

(Source: Developed by author)

The second question of the survey has been concerned with the assessment of the age group of the respondents. From the collected data it has been concluded that 52% of respondents belong to the age group 26 to 35 years whereas 20% of respondents belong to the age group of 18 to 25 years. There are also 12% and 14% of respondents who belong to the age group of 46 to 55 years and 36 to 45 years respectively. Therefore, from the data, it can be stated that the majority of the managers within the traditional banks in the UK belong to the age group of 26 to 35 years.

4.2.3 Working experience analysis of the respondents

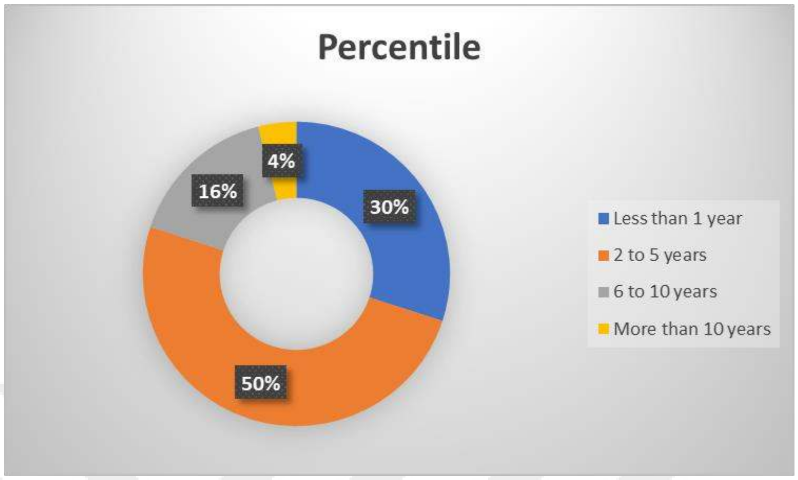


Figure 4.3: Working experience analysis of the respondents

(Source: Developed by author)

The third question of the survey has been concerned with the assessment of the age group of the respondents. From the collected data it has been concluded that 50% of the respondents have worked for a minimum of 2 years and a maximum of 5 years, whereas 30% of respondents have worked for less than 1 year within the banks. Therefore, from the data, it can be concluded that to become a manager within traditional bank in the UK the one has to have certain experience on the field.

4.2.4 Impact of fintech companies on banks

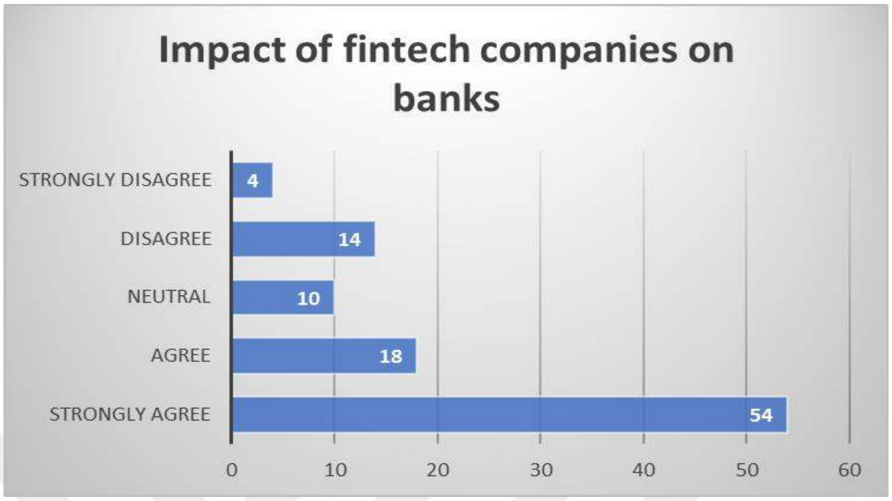


Figure 4.4: Impact of fintech companies on banks

(Source: Developed by author)

The fourth question of the survey has been concerned with the assessment of the impact of fintech companies on banks. From the collected data it has been concluded that 54% of respondents strongly agreed and 18% of respondents agreed with the statement. Therefore, it can be concluded from the results that the rise of fintech companies has a significant influence on the decline of traditional banks and financial institutions in recent times.

4.2.5 Factors responsible for the decline of growth in traditional markets

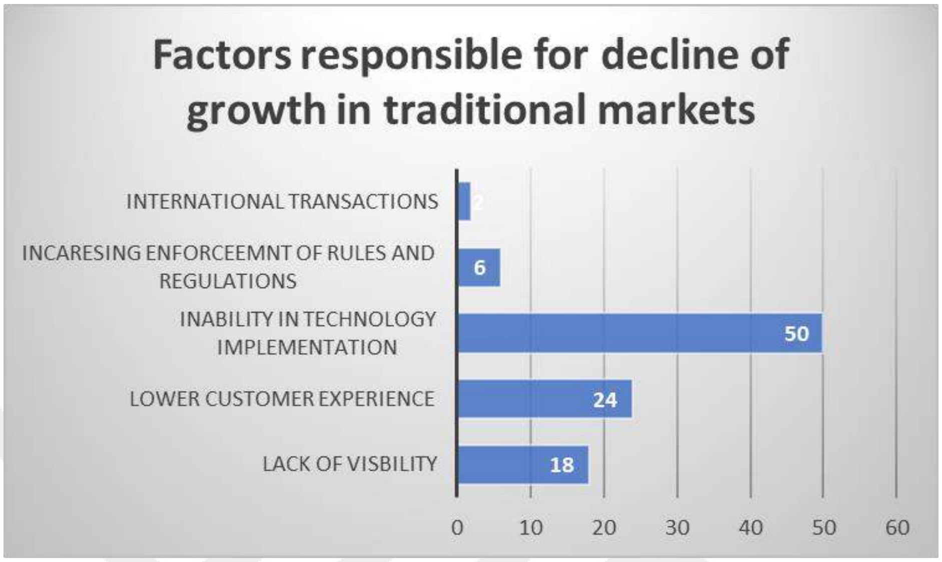


Figure 4.5: Factors responsible for the decline of growth in traditional markets

(Source: Developed by author)

The fifth question of the survey has been concerned with the assessment of the factors responsible for the decline of growth in traditional markets. From the collected data it has been concluded that 50% of the respondents have given their vote to inability in technology implementation whereas 24% have given their opinion towards lower customer experience, and only 18% have stated that lack of visibility is responsible for this aspect. Therefore, from the collected data, it can be concluded that as per the perspective of managers of traditional banks in the UK the inability of the traditional bank to effectively implement technology within their operations is the major reason or factor that has initiated the decline of growth of those banks.

4.2.6 Focus of banks on customer experience

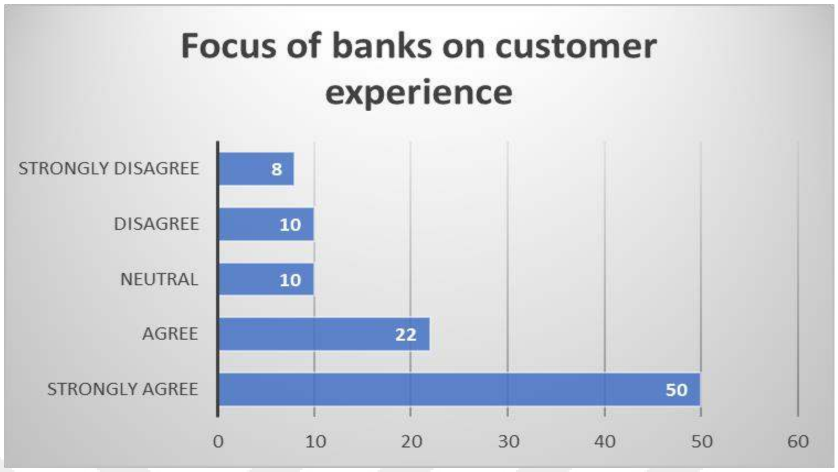


Figure 4.6: Focus of banks on customer experience

(Source: Developed by author)

The sixth question of the survey has been concerned with the assessment of the focus of banks on customer experience. From the collected data it has been concluded that 50% of the respondents have strongly agreed whereas 22% of the respondents have simply agreed. Therefore, nearly 72% of the respondents agreed with the statement thus it can be concluded that traditional banks need to focus more on customer experience to compete with the neo-banks.

4.2.7 Collaboration of banks with IT service providers

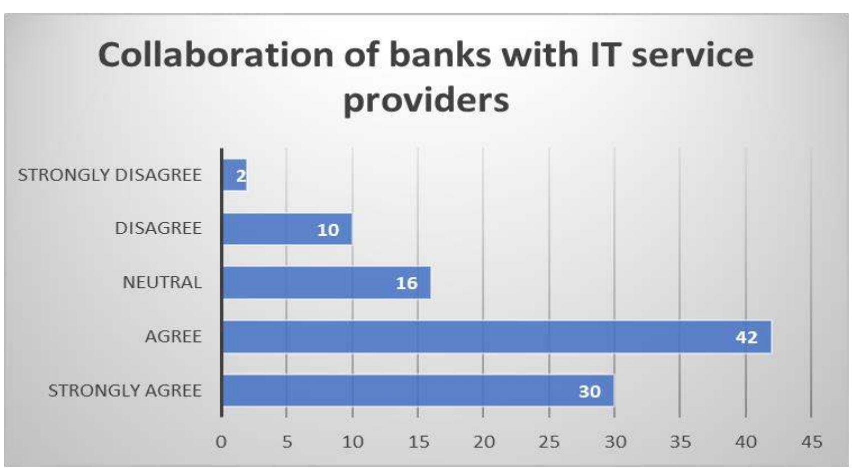


Figure 4.7: Collaboration of banks with IT service providers

(Source: Developed by author)

The seventh question of the survey has been concerned with the assessment of the collaboration of banks with IT service providers. From the collected data it has been concluded that 30% of the respondents strongly agree whereas 22% of the respondents have simply agreed. As the majority of the respondents, nearly 72% have agreed with the statement, therefore, it can be concluded that traditional banks need to collaborate with their service providers while implementing fintech within their organizations.

4.2.8 Implementation of fintech within banks

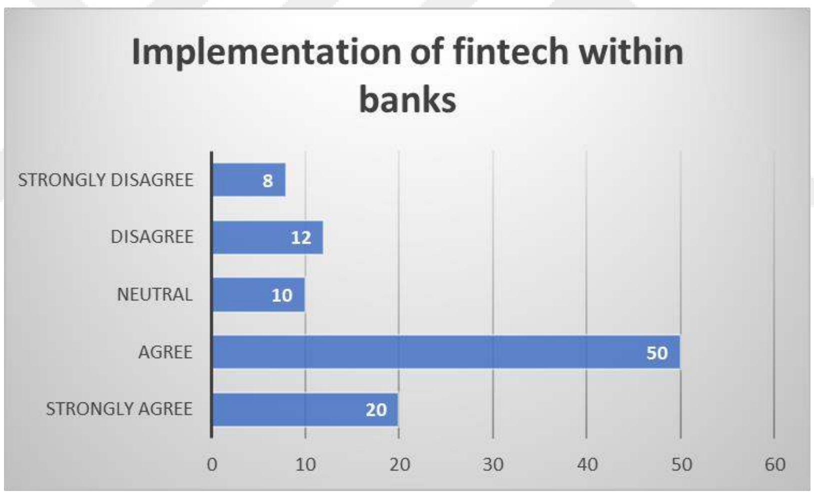


Figure 4.8: Implementation of fintech within banks

(Source: Developed by author)

The seventh question of the survey has been concerned with the assessment of the implementation of financial technology within traditional banks and financial institutions. From the collected data it has been concluded that 20% of the respondents have strongly agreed whereas 50% of the respondents have simply agreed. Therefore, from the responses, it can be concluded that from the perspective of most of the managers of traditional banks in the UK implementing fintech within their company can help traditional banks in generating greater revenues.

4.2.9 Use of digital solutions for effective risk management

Figure 4.9: Use of digital solutions for effective risk management

(Source: Developed by author)

The seventh question of the survey has been concerned with the assessment of the collaboration of banks with IT service providers. From the collected data it has been concluded that 46% of the respondents have strongly agreed whereas 22% of the respondents have just agreed. As the majority of the respondents have agreed with the statement, therefore, it can be concluded that the use of digital solutions by traditional banks can help them effectively manage their risks, especially in regard to the implementation of financial technology.

4.2.10 Focus on rules and regulations

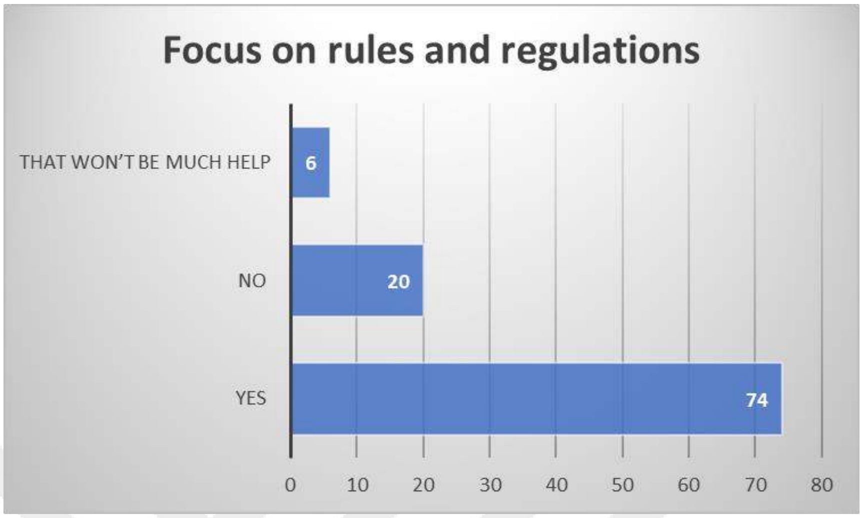


Figure 4.10: Focus on rules and regulations

(Source: Developed by author)

The seventh question of the survey has been concerned with the assessment of the collaboration of banks with IT service providers. From the collected data it has been concluded that 74% of the respondents have agreed with the statement and therefore, it can be concluded that traditional banks need to have strong emphasis on laws and regulations, especially while implementing financial technology.

4.3 Interview analysis

Interview Question 1: "***Could you please introduce the bank you manage in terms of values, goals, future perspective and the services you provide to both private and business customers?***"

From the perspective of the CEO of Coop Bank, the bank has been regarded as one of the five universal or global banks which has been operating within Estonia and currently the company has 6% of the market share. The company has exponentially increased its market share in the past 6 years 1% for a year which has been showing significant growth within the company. Therefore, it can be stated that the Coop Bank has maintained sustainability within its growth rate. The representative has also stated the bank has taken the objective of growing its market share by 10%

within the next 10 years. The company has mainly focused on business and private customers all over Estonia and they have not regarded the idea of business expansion internationally. The main components of the company deal with financing and banking for business and private customers, and the company does not deal with insurance, investment, and pension funds. LHV has been providing all the services both business and private customers and has been providing pension funds. The company has mostly focused on payments as all other banks have credit institutions. The bank was established in 2009 and by the year 2022 the company has become the third largest bank in Estonia. The company has focused on increasing its number of customers' deposit loan volumes and females by 2032 and become the largest and most profitable bank in Estonia. Luminor has mainly offered services in a traditional manner and also has a retail customer segment. The company has been taking significant efforts in achieving primary client relationship and satisfaction but has not achieved yet due to digital technology issues and the digital transformation within the services need to be improved. Swedbank has developed a sustainability road map and has been following its approaches ever since. It has also focused on employee satisfaction for gaining higher customer satisfaction. Currently the company has been providing all classic financial services to both private and business sectors such as credit payments, loans, insurance, investment, and pension.

Interview Question 2: "*In your opinion, what are the reasons for the development of financial technology and alternative banking and, therefore, the rapid growth in popularity in the last 10 years (e.g., Wise, Revolut, Monese, N26)?*"

In this regard, the CEO of Coop Bank has coined the major aspects, which are the lack of initiative of traditional banks towards understanding and searching the market trends and high-cost services of traditional banks. The representative has stated that the traditional banks have not created or modernized their services and this lack of modernization issue has become a greater opportunity for the fintech companies and alternative finance companies that have utilized this opportunity and have designed their services as per the current market change and has modernized the financial services (Kagan, 2020). Even many traditional banks have been now considering the trends and therefore they also have been significantly contributing to the modernization of financial services and have been collaborating with several fintech companies. The modernization and use of technology within financial services have been out coined by all the representatives of this interview session. Similarly, the CEO of Luminor Bank has stated that traditional banks have been facing issues related to technology and smart entrepreneurs have been taking this as an opportunity and have been creating something new with this technology on the financial field. Entrepreneurs have been utilizing financial technology for providing data products and services to customers. The CEO of Swedbank has also stated that technology can be regarded as a major factor where the transition and banking industry has been lagging which has created greater opportunities for the new fintech companies and neo-banks. The CEO of LHV Bank has also stated that the development of technology can be regarded as a major reason which has initiated the development of fintech companies and alternative banking companies in the last 10 years. In this regard, the representative has stated that most of the traditional banks in Europe have been following the bureaucratic organization approach and the operations within the companies are clumsy and slow. The core technology and infrastructure of the traditional banks have been observed to be following the technology of 1980 making the banking services slow and lagging (Agrawal, 2021). Most importantly due to this old infrastructure, the traditional banks have been experiencing several challenges while building or integrating something new or innovative. Apart from the technology aspect, the representatives of different banks have also pointed out some other aspects which have initiated the development of fintech and alternative banking companies. The representative of the LHV Bank has also stated that the capital requirements and new regulations can be regarded as factors. The return and equity have been observed to be low in the banking sector in comparison to other sectors which has not helped the traditional banks in fostering innovation. The representative has also stated the regulations within the banking industry, especially in Europe where there are already too many regulations and new ones are being constantly added that traditional banks have to follow. In contrast, the alternative banks have “the legacy” of not following all the regulations as the traditional banks do. The same opinion has also been stated by all the other representatives when it has been stated that traditional banks have been experiencing an extremely regulated environment in the financial market. Compliance with all the requirements while dealing with the customers as well as resources has become a greater challenge for traditional banks which has been significantly increasing the bureaucracy within them (Langley & Leyshon, 2022). Therefore, regulations can also be regarded as a major aspect that has initiated the development of neo-banks and fintech companies in the European economy. The representative of

Swedbank has also stated a greater emphasis on the financial market that the venture funds have been searching for new areas for investing money that has somewhat made fintech sector bloom.

Interview Question 3: "*Do you think that traditional banks have lagged behind with their innovation and services, taking into account the current globalization and digitalization, and why do you think so?*"

Analysing the interview answers of all four representatives of traditional banks it has been concluded that the traditional banks have been lagging in terms of innovation and digitalization. All the representatives have stated that the regulations which became more complex after the recession and the highly regulated environment for the traditional banks have become a greater challenge for automation for these companies. On the other hand, the fintech companies and neo-banks do not have to deal with the banking industry's regulations, which has enabled them to foster innovation and automation within services (Teigland *et al.* 2018). The regulations have forced traditional banks, especially in the US and Western Europe to follow bureaucracy and manual work which has slowed down the innovation. On the other hand, it has also noted by all the representatives that the future for the fintech companies and neo-banks might not be that bright as well. The representative of Swedbank has stated that alternative banks have their own infrastructure but they also tend to face the liquidity problems. This representative has also stated that the liquidity issues have also made the traditional banks become more regulated and less automated which has significantly increased the prices of the services and products provided by traditional banks, however, fintech companies do not have to follow this regulation, therefore, they can provide services and products for cheaper price. The representative of the Luminor Bank has stated that the time of cheap money is over and more of the companies and individuals have been considering traditional banks again. (Galvin *et al.* 2018). In terms of cheap money, there will be less investments into fintech industry from venture capitals each year. In terms of technology, traditional banks have been lagging the past 10 years mostly due to regulatory and security issues. All representatives think that with the growing trend and exponential growth of traditional banks, it can be assumed that they could be even more successful in the near future if they can work on the technology.

Interview Question 4: "*Does your bank provide any specific services or solutions for people living abroad, frequent travellers, digital nomads, and such?*"

Analysing the interviews of the representatives of traditional banks it can be concluded that all the banks are very particular about their business model after the major economic disruption in 2008. All these traditional banks have not been providing any specific solution for travellers, people living abroad or digital nomads. All these banks have not been associated with customers who are not directly related to the hosting country that is Estonia, indicating, that all the traditional banks have to take security and regulations into consideration (Yasini & Yasini, 2019). Due to the lack of innovation, security concerns, and regulatory obligations, those traditional banks have not provided any special services to frequent travellers, people living abroad, and digital nomads.

Interview Question 5: "*Do you think that it is important for banks to address those phenomena at all, and why?*"

As per the perspective of the representative of the LHV Bank the section of travellers or digital nomads are not a significant customer base for the traditional banks. Most of Estonian banks do not big international expansion, therefore, the major area of digital banking is not a main aim for them (Vučinić, 2020). The representatives have also stated that even in the point of view of the global banking industry and traditional banks in other regions, the customer segment is not very beneficial either. Therefore, the traditional needs to provide data emphasis on innovation in the ever-increasing regulation environment. The representative of the Luminor Bank has also provided a similar opinion and as per this representative banking can be regarded as a local play area. On the other hand, the representative of Swedbank has stated that they need to address the phenomena of people living abroad, digital nomads and frequent travellers within Estonia. As these aspects are a major factor of the growing trend of digitalization within the market, traditional banks need to comply with these factors and aspects which would help them in understanding the current financial trends within the market. The representative of the Coop Bank has stated that they have addressed the solutions and services for travellers and digital nomads, and have introduced special packages for them. As per the reports of Coop Bank after lunch of the package for this segment in 2017, the company has not experienced any decrease of number of customers using that package, not even in the pandemic period. (Vučinić, 2020). It is rather growing after the pandemic period.

Therefore, as per the perspective of this representative, the traditional banks need to address this phenomenon as bank still plays the huge role for the individuals that travel or work abroad. Providing data services and addressing services for this customer base can help the traditional bank in generating greater revenues and compete with neo-banks.

Interview Question 6: "*The fact is that alternative banks take customers from traditional banks. Do you think that alternatives will be more of a threat to traditional banks in the future, or that traditional banks will adapt and become more like their competitors?*"

According to the representative of Coop Bank, the neo-banks and fintech companies have experienced strong growth due to lagging of traditional banks because of heavy regulations but the growth for the neo-banks and fintech companies have been observed to slow down. Since the start, most of the fintech companies and neo-banks have been collaborating with traditional banks thus alternative banking cannot be regarded as a major threat for the traditional banks. The representative of the Swedbank has stated that although neo-banks are efficient and more technically evolved in comparison to traditional banks, they are not a potential threat for the traditional banks on a large scale (Dorfleitner *et al.* 2017). Though, in the current scenario it has been observed that neo-banks have taken some customers from the traditional banks but have not imposed any significant losses for the traditional banks. All representatives also assume that in future most of the fintech companies and neo-banks would be acquired by the traditional banks. The similar responses have also been provided by the representatives where they have stated that there is a higher possibility of the neo-banks in becoming a traditional bank and therefore suffering heavy regulatory obligations afterwards which can endanger their profit margin and their prices would be significantly increased (Al Ajlouni and Al-Hakim, 2019).

Interview Question 7: "*How do you see banking in the near future, and what major changes do you expect?*"

All the representatives have stated the vast technology change within the services and products most importantly automation within services such as payments, transfers, insurance, loans, and investments. In the future, the traditional banks would be able to take more advantage of technology within their services for aligning their products and services with the current market change and most importantly make the payments and money transfers fully automatic. They have also stated that the banking sector would become more concerned with online commerce and logistics, and would have a high level of automation and efficiency for providing greater customer experience. The banking sector services would be shifted towards “one click” solutions where they can utilize the financial services with just one click and could make the online payments, money transfer, and even getting mortgage loan more convenient for the customers and it would be done by digital enforcement (Anand and Mantrala, 2019). The representatives have also stated that online banking and banking mobile application has become the most important tool. The physical visibility of the banking sector has been observed to decline. In the future, the virtual presence or visibility of the banks would be the major aspect, and the future banking industry would entirely become dependent on digital customization.

Interview Question 8: “*What do you think are the main differences between traditional and alternative banks?*”

The representative of the LHV Bank has stated that the alternative banks have been mainly relying on virtual presence and their existence is completely online based. In contract, traditional banks have branches and strong physical presence. The services provided by the traditional bank are much wider than the ones provided by neo-banks. Similar statements have also been provided by the representative of Coop Bank, that the neo-banks have a focus on only few services where traditional banks have lagged such as international payments or currency conversions (Fofanov, 2022). Due to small amount of services, neo-banks can be faster and more mobile in comparison to traditional banks. On the other hand, the representatives have also stated that the major difference among the traditional and neo-banks lie on the regulatory obligations whereas the fintech companies and neo-banks have opportunity to comply with less regulations imposed by the government. Overall, the traditional banks have to bear the burden of excessive regulatory obligations.

Interview Question 9: “*What are the advantages of traditional banks over alternative banks?*”

In this aspect, all the representatives have provided more or less the same opinions where the most advantageous advantage for traditional banks over neo-banks is the trust factor. Evaluating the security aspects of the both traditional and neo-banks, the traditional banks offer greater security in terms of deposit protection for instance that provide a sense of security among the customers (Kaur *et al.* 2021). It has been observed that customers tend to choose neo-banks for transacting lower amounts but when it comes to big deposits or transacting greater amounts, the customers tend to lean towards traditional banks. Therefore, significantly the traditional banks have greater opportunity in terms of building relationships with the customers.

Evaluating the interviews of all the aspects, it can be concluded that there is not much of a threat from fintech companies and neo-banks towards traditional banking sector but the fact is that the traditional banks need to consider the aspects of current trends, digitalization, and innovation. It has been already evaluated that the traditional banks and financial institutions have been lagging, especially in terms of digitalization, innovation, and organizational structure. Therefore, the traditional banks need to consider the current market and its trends to evaluate its services and products digitally for remaining profitable within the market and provide competition to neo-banks and fintech companies in general.

4.4 Secondary data analysis

4.4.1 Factors initiating financial technology

As per the perspective of Kagan (2020), there are several factors that have enabled the apprise of financial technology forms worldwide and especially over the recent year the sector has grown rapidly. From their perspective, there are three major factors which have significantly initiated the rise of fintech worldwide and especially within the UK finance sector. One of those factors has been regarded as the focus of the fintech companies on the deserved areas of the banking and financial sector. The incumbent players within the industry have traditionally provided their emphasis on high-margin businesses and have un-emphasized lower-margin businesses. Even many banks have reduced their retail banking business to emphasize more profitable investment and commercial banking businesses (Okunevych, Hlivecka, 2018). Even within commercial banking businesses, many banks and financial organizations have been mostly focusing on large corporations. Therefore, the reduction of retail banking and especially the concerns of banks and financial institutions towards medium and small enterprises have initiated the rise of fintech players in the financial sector. Another factor that has impacted the rise of fintech has been identified as a lack of trust among the companies and industries in traditional banking. It has been reported that after the financial crisis of 2008 the incumbent players have been fined 36 billion for their non-compliance in global anti-money laundering.

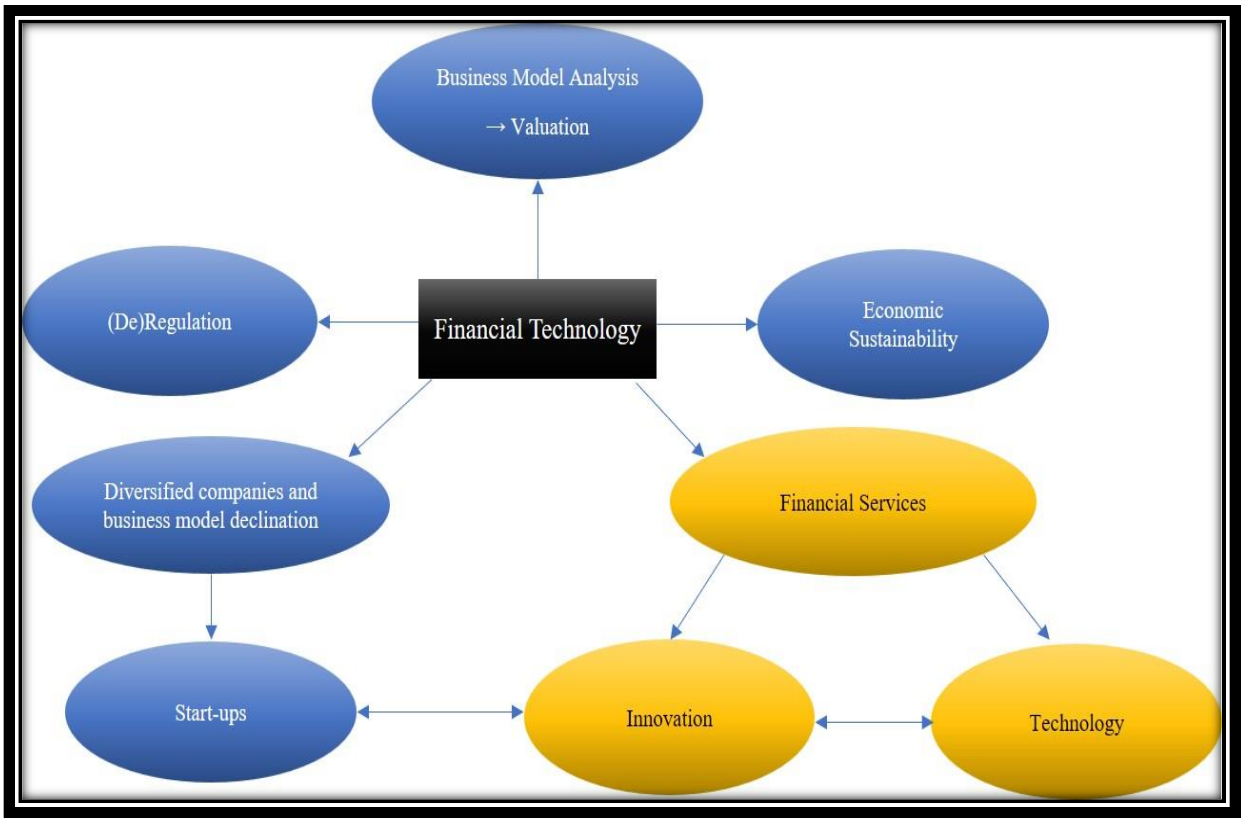


Figure 4.11: Main dimensions of financial technology

(Source: Kagan, 2020)

The survey reports of trusting for banking of 2020, it has highlighted the people's opinion on the banking industry where 79% of respondents have stated that banks do not consider the comfort and interest of the customers. Therefore, the healthy dose of scepticism for finance institutions among customers has created a special interest towards neo-banks and fintech companies in general which are a greater alternative to traditional banks. Another factor has been identified as the sharp focus of fintech companies. Firstly, the fintech companies have a sharp focus on their products and services and in most cases, the companies handle one product or service at a time which lowers the operating cost and develops the ability in concentrating on customer experience. Secondly, they have a greater focus on customers. They provide greater emphasis on enhancing customer experience and solving customer problems which helps them to satisfy their customers who have been unsatisfied by the legacy systems of the traditional banks and incumbent layers within the finance industry (Agrawal, 2021). Thirdly, they have relied on new technology such as the use of artificial intelligence technology in several traditional processes like fraud prevention, price forecasting, customer service, and risk management which has helped the companies in providing greater services to its customers. The efficient usage of known technology within traditional processes has helped fintech companies in offering greater transparency and security with increased efficiency and feasibility. On the other hand, traditional banks have not utilized these technologies efficiently for providing a better customer experience which has resulted in the rise of fintech that has taken advantage by using technology efficiently (Langley & Leyshon, 2022).

4.4.2 Limitations of neo-banks

Neo-banks have greater future aspects but it has experienced some challenges as well while expanding their business within the finance market. It has been stated by Kim *et al.* (2021), the neo-banks have been experiencing several challenges among which the foremost has been identified as building trust. As the neo-banks do not have any physical presence like traditional banks, therefore the customers have less faith in these banks and cannot rely on them in case of facing any serious challenge or issue. Another major limitation of these companies is that this segment of finance has not yet been recognized by the central bank or government of the UK. So mainly the banks have been engaged with financial institutions and regulated banks for offering financial services and products to their customers. On the other hand, Lai (2020), has stated that due to the absence of enabling regulations these banks are unable in accepting deposits or offering loans on their own terms. That is why they still have been recognized as non-banking financial companies and most of them have collaborate or partner with traditional banks or traditional financial institutions.

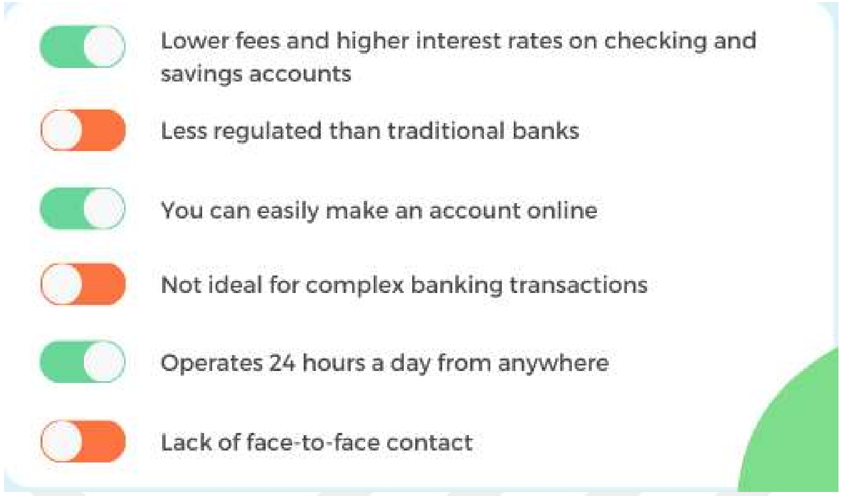


Figure 4.12: Advantages and disadvantages of neo-banks

(Source: Loo, 2019)

Lai & Samers (2021), have stated that despite the new innovation, the neo-banks are less trusted among customers as these banks have been identified to be less regulated in comparison to traditional ones. In some cases, neo-banks have been observed to be not fully licensed or chartered which can cause issues for the customers when it goes bankrupt. The financial market is a well-developed market where there are many banks and other fintech players and therefore it is not easy for the fintech company to develop a customer base in this highly competitive environment. As reported by Teigland *et al.* (2018), the profitability of neo-banks or fintech companies is comparatively lower in comparison to traditional banks. To win over the markets and users, the neo banks have been offering often free services to their customers for attracting new customers and creating a customer base. Therefore, many of them do not earn profit but rather generate loss.

4.4.3 Sustainability of the fintech market in the UK and globally

Iqbal *et al.* (2021), have stated that fintech can already be regarded as a vital part of the UK economy and it is expected that the value of the syntax in companies would be tripled in the next decade. As global competition has been increasing exponentially, therefore the UK needs to attract inward investment from other countries and need to support the export of fintech access. The future growth of UK financial services has been reduced by the effects of the COVID-19 pandemic and

Brexit. As per reports in 2021 the financial services have contributed nearly 132 billion which has been estimated as 6.9% of the total economic output of the nation (Kiyutsevskaya, 2019). Yet fintech is not as popular and has been mainly relying on the intersection of the traditional strength of the financial services within the UK finance sector and the future financial services within the UK have been fully focusing on the digital economy. The UK financial has been successfully attracting international investors and fintech companies which has been marked as 10% of the global market in 2020 (Galvin *et al.* 2018). As per a recent report, London has been ranked as the second top financial centre after New York.

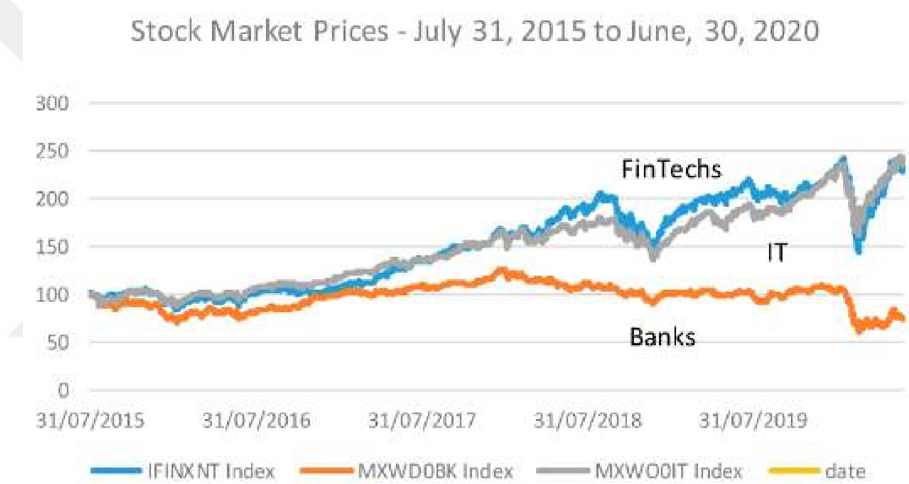


Figure 4.13: Fintechs vs. banks - stock market index

(Source: Yasini & Yasini, 2019)

Analysing the above figure, it can be concluded that a greater stock rising has been observed among the fintech companies in comparison to traditional banks over the period of 2015 to 2019. Fintech companies is regarded as a great example of the UK invading and strengthening its power within the international market. As per a recent study, the fintech market globally has a worth of 110 billion Pounds in terms of revenue and the global market has been forecasted to draw to 380 billion Pounds by the year 2030. From the recent report, it has been observed that the total technology paid by the UK financial services has been estimated to be 95 billion and significant growth within the total technology spending within the industries has been observed. Especially during the pandemic, rise of digitalization within financial services has been observed (Hernández *et al.* 2019). Even in the post-pandemic situation, almost 70% of UK individuals have been using less cash and nearly 50% have been using more contactless payments and even 35% have been utilizing digital applications as a payment option. Therefore, from the above data, it can be concluded that the future of fintech in the UK as well as the global financial market is very promising (Shashkova *et al.* 2020).

4.4.4 Comparison of the growth of traditional banks and fintech companies in the UK

As per the perspective of Abdeldayem & Al Dulaimi (2020), traditional banks have been facing several challenges in recent times. Digital destruction has caused transformation within every sector and it has also transported within the banking industry. Consumer trust in traditional banks has helped the companies to stand out even in this highly competitive industry but with changing generations the concerns for traditional banks have increased as well. The younger generation has been showing ambivalence towards the traditional banks which has been regarded as a major concern for the traditional banks. Where previously traditional banks were regarded as immovable fixtures now, they have been experiencing countless market declines. This scenario is not only limited to the UK but has spread all across the globe (Vučinić, 2020). It has been also predicted by economists that there is a greater possibility that a great number of established financial institutions and banks would shut down and become irrelevant in the digital-first market.

Filip

Revolut customer since 2016

What attracted you to Revolut?

"After moving to the UK, not having proof of address made opening a traditional bank account borderline-impossible. I needed a UK account to receive salary and make payments and Revolut was the only option for a UK account within minutes.

After going through one of the smoothest account set ups possible, I was ready to bank immediately and have never looked back. Benefits such as insurance for mobile devices and travel, access to business lounges when travelling and having a card made out of metal just puts a cherry on top of the cake".

What % of your day-to-day banking is done with them?

"I can safely say that almost all of my banking is done through the Revolut account. The only time that I would utilise my traditional bank account is when I need to top up the Revolut card, but all my direct debits, daily purchases and other income / expenditure is done solely through Revolut".

What, if anything, could a traditional bank do to win you back?

"I think that with the latest update about Revolut getting their banking license, I don't think there is anything that a traditional bank could do to win me back as a customer. Ultimately, they provide all of the functionality in a very good looking and easy-to-use application and their customer support is excellent".

Figure 4.14: A Revolut customer's perspective on the traditional banks' vs fintech companies

(Source: Vučinić, 2020)

In the above figure, the perspective of a Revolut customer has been provided and their perspective on fintech companies and traditional banks has been collected. It has been stated by the customer that fintech companies are much more efficient than traditional banks when it comes to functionality and ease of use. Where the companies provide facilities, such as opening current accounts in minutes, effortless, and one-step money transfers, third-party service bundles such as travel insurance and many more that traditional banks have failed in providing such greater customer experience and ease of use to their customers. Therefore, from the current scenario, it can be stated that the traditional banks have been failed compared to the neo-banks in terms of functionality and ease of use (Sun & Wang, 2022). Economists have provided predictions, especially considering the current banking landscape with long-term outcomes. Among these, the first one details the emergence of hybrid companies where social media abilities would be used for collecting property data within the industry. As per the other outcome, the industry would encounter a complete disruption of the banks and develop a new ground and market for the neo-banks, it would be late to financial volatility and credit branches on a global level.

Firms	P /sales	P/E	P / (free) cash flow	P / Book Value	EV / sales	EV / EBITDA	EV / EBIT	Goodwill*	WACC*	EV*	unlev. Beta*
								USD/000		USD/000	
FinTechs											
Adyen NV											
FY 2018	8.47	106.75	37.54	24.11	7.74	70.31	73.86	12,793,400	28.60	12,793,056	n.a.
FY 2019	8.18	106.56	42.26	25.31	7.63	72.60	78.90	20,277,827	13.85	20,157,283	n.a.
27/5/2020	12.21	158.81	63.16	37.74	11.75	111.72	121.43	31,206,358	10.83	31,206,358	0.88
Fidelity National Inf. Serv. Inc.											
FY 2018	3.99	30.76	18.03	3.29	4.97	14.55	28.72	41,872,894	10.22	41,872,922	0.35
FY 2019	5.99	56.76	28.01	1.76	10.18	29.56	106.13	105,181,260	7.62	105,264,756	0.57
27/5/2020	6.09	57.43	28.99	1.71	9.12	26.80	135.95	103,590,099	8.91	103,590,099	n.a.
Fiserv Inc.											
FY 2018	5.12	30.07	25.00	12.58	5.91	14.96	19.62	34,388,825	9.88	34,827,617	0.15
FY 2019	5.81	38.11	28.56	1.38	6.77	20.23	42.31	69,011,775	7.40	102,243,259	0.84
27/5/2020	5.11	40.05	27.25	2.23	7.49	22.18	49.99	93,231,528	9.15	93,231,528	0.67
Intuit Inc.											
FY 2018	8.68	40.06	26.30	18.76	8.55	28.43	33.04	51,541,732	11.05	51,127,591	1.69
FY 2019	10.63	46.99	33.24	19.25	10.30	33.60	37.67	69,846,516	10.01	69,586,783	0.46
27/5/2020	10.74	55.56	39.36	15.52	10.25	38.78	45.35	70,281,672	10.18	70,281,672	1.10
Mastercard Inc.											
FY 2018	13.14	25.35	33.33	36.05	12.88	24.87	26.44	192,548,150	11.67	192,886,660	0.44
FY 2019	17.99	38.46	39.13	51.02	17.91	29.40	31.22	302,391,130	8.96	302,974,610	0.42
27/5/2020	18.04	37.76	37.12	56.42	18.02	29.77	31.71	306,346,558	10.41	306,346,558	0.43
PayPal Holdings Inc.											
FY 2018	6.44	49.13	21.37	6.42	5.93	30.85	41.76	91,610,660	12.47	91,947,020	2.53
FY 2019	7.15	50.60	32.92	7.51	6.84	32.34	44.32	121,638,410	9.21	121,767,397	0.32
27/5/2020	9.45	72.17	39.71	10.80	9.37	46.15	65.22	171,156,649	9.61	171,156,649	0.95
Visa Inc.											
FY 2018	14.92	32.43	25.16	11.65	16.44	24.97	26.15	338,758,350	9.96	340,276,502	3.31
FY 2019	14.96	31.60	28.59	11.62	15.12	22.20	23.17	347,507,740	9.11	349,213,191	0.85
27/5/2020	15.98	34.55	32.06	12.93	16.17	23.55	24.77	386,248,625	9.23	386,248,625	0.73
Banks											
Bank of America Corp.											
FY 2018	2.27	9.22	6.29	0.98	n.a.	n.a.	n.a.	n.a.	12.13	n.a.	0.77
FY 2019	2.91	12.46	5.35	1.29	n.a.	n.a.	n.a.	n.a.	9.65	n.a.	0.64
27/5/2020	1.99	9.92	3.28	0.87	n.a.	n.a.	n.a.	n.a.	10.79	n.a.	0.48
Citigroup Inc.											
FY 2018	1.34	7.92	3.91	0.69	2.91	5.50	n.a.	282,880,392	11.95	286,715,642	0.64
FY 2019	1.74	9.33	n.a.	0.96	3.16	5.63	n.a.	326,895,286	9.99	332,413,364	0.69
27/5/2020	1.01	9.42	n.a.	0.58	2.67	5.22	n.a.	277,572,306	12.61	277,572,306	0.42
HSBC Holdings PLC											
FY 2018	2.15	13.09	80.81	1.01	n.a.	n.a.	n.a.	n.a.	13.42	n.a.	0.52
FY 2019	1.89	26.17	3.76	0.98	n.a.	n.a.	n.a.	n.a.	9.82	n.a.	0.19
27/5/2020	1.80	26.95	n.a.	0.52	n.a.	n.a.	n.a.	n.a.	8.06	n.a.	0.23
JPMorgan Chase & Co											
FY 2018	2.52	10.83	23.37	1.39	n.a.	n.a.	n.a.	n.a.	11.29	n.a.	0.42
FY 2019	3.15	13.67	74.28	1.83	n.a.	n.a.	n.a.	n.a.	8.87	n.a.	0.49
27/5/2020	2.19	10.96	n.a.	1.27	n.a.	n.a.	n.a.	n.a.	9.97	n.a.	0.33
Wells Fargo & Co											
FY 2018	2.19	11.33	6.13	1.22	n.a.	n.a.	n.a.	n.a.	10.98	n.a.	0.56
FY 2019	2.27	12.60	35.12	1.34	n.a.	n.a.	n.a.	n.a.	8.49	n.a.	0.47
27/5/2020	1.14	8.44	6.50	0.67	n.a.	n.a.	n.a.	n.a.	9.94	n.a.	0.50

Figure 4.15: Market multipliers of a sample of fintechs and banks

(Source: Dorfleitner *et al.* 2017)

The above figure has represented the multi-players of the global finance market and for it, the financial performance of seven fintech companies and five traditional banks have been compared. Analysing the key market players of the sample companies, it has been analysed that the sales of the fintech companies are much higher in comparison to traditional banks. The data has also represented greater cash flow among the fintech companies compared to traditional ones. Comparing all the other factors, it can be stated that the financial performance of the fintech companies is much better than the traditional ones (Al Ajlouni & Al-Hakim, 2019).

4.4.5 Strategies for traditional banks to compete with fintech companies in the future

Traditional banks must take significant approaches and improve their services to compete with the fintech companies. The banks need to rejuvenate their digital offerings and overhaul their existing tech stacks. Rabbani (2020), has stated that through rejuvenating digital offerings and overhauling existing text the banks would be able to get an advantage in terms of customer retention and wallet share. Some renowned back banks all over the globe have significantly invested within their digital offering and have gained positive outcomes. This has helped the companies compete with the neo-banks and other fintech companies within this highly competitive market. Many leading banks have experienced an increase in the number of digital transactions for years and digital clients of these companies have been engaging with banks on a daily basis through their websites and applications. Therefore, referring to digitalization, many leading banks have stated that they have implemented digital technology within their services and it has helped them complete and retain their position within the global market. It has been stated by bankers of leading banks that the traditional banks need to become more adaptable and agile in future (Anand & Mantrala, 2019). Concerning the crucial future, it has become necessary for traditional banks to solve problems just not for now but which can be applicable and beneficial for the next 10 years. Omarini (2018), has stated that the banks need to develop an open framework which can be continuously in hands and the banks would be able to fulfil the needs of their customers and their own requirements. They are major central areas that need to be addressed by traditional banks for extending their digital reach and remain relative within the current market. By being concerned with these two areas traditional banks would be able in evaluating a core banking solution and would get a total re-imaging of the customer experience. The first area has been identified as modernizing the legacy core. From the reports on the banking sectors, it has been analysed that 19% of its resources have been currently utilized for maintaining the legacy systems and 94% of bankers believe that modernizing the systems can help them in increasing their revenues significantly. The traditional banks need to migrate towards a cloud-based core banking solution but before it, the banks need to consider the potential pratfalls. There are several IT services provided to the bankers such as “Temenos, Finastra, Infosys and Fiserv” which have developed purpose-built systems for the banks which has allowed the banks in accelerating their digital transformation in a relatively safer manner. Even there is some emergence of the new core bank service providers who have been offering modular solutions to the traditional banks. The second area deals with re-imaging of the customer experience (Fofanov, 2022). The neo-banks have overtaken the finance market and relied on the customer experience. One of the biggest challenges faced by traditional banks while competing with the customer experience of neo-banks is disconnected point solutions utilized by traditional banks. Nearly 13% of banking executives have stated that the largest challenge they have been facing recently is the implementation of digital strategies. The main issue is the analysis of the collected data about customers and their habits. Therefore, the banks need to develop a more personalized experience for their customers aligning with real-time content that would be resonating with and engaging for the customers.

4.4.6 Strategies for lowering the risks of fintech companies

Since the financial crisis of 2008 banks have been criticized and therefore, many financial regulations have been launched on the banks. Therefore, banks need to comply with regulatory standards for avoiding safety fees or any legal penalties. According to Ashta & Biot-Paquerot (2018), currently, the major financial regulations have been addressing traditional banking but the current global financial market has been relying on digital solutions. Therefore, the banks need to apply the same regulatory standard within digital banking practices for mitigating the risk of being out of compliance. Regulatory technology has been regarded as a term that has been derived from fintech and has the potential in helping digitalizing regulatory risk management processes to traditional banks. This regulatory technology is also beneficial for traditional banks in saving money, time and resources with greater accuracy in comparison to traditional processes (Kaur *et al.* 2021). These regulatory solutions have been invading the financial service industry to address “Anti-Money Laundering, Know Your Customer, and detect fraud.” Therefore, embedding the digitalization of financial regulations, the banks should be benefited by integrating technology within their risk management process. Considering the highly complex network within the financial institutions Ashta & Herrmann (2021), have proposed five strategies that would be beneficial for the banks in minimizing the risk of implementing financial technology. At first, the banks need to understand the risk for their business model exposed to their customers and other participants of the financial system. They evaluate the laws and applicable regulations and apply those regulations adequately when any inherent risk arises for the company. While implementing fintech the main concentrate is a strategy and therefore the market regulators and regulated financial institutions view the business model and inherit it. Therefore, the banks need to utilize methods for integrating the blueprint of the business such as the technological development procedures designing of user experience planning of product road map back-office process and third-party systems. The companies can utilize effective technology capital and resources for developing a variable business with a high inheritance risk (Davidovic *et al.* 2019). The Bank can develop advisory boards that can help them in making introductions providing business acumen and adding initial brand name power. However, while developing a board the marketplace needs to be considered as this is a major domain of experience in risk management.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Overview

The conclusion chapter is an important chapter within a dissertation as it helps in synthesizing all the measures points that have been derived all over the study and the reader in getting a better understanding of the research area and findings of the study. This chapter also provides an analysis of the beneficiaries of the study and how it can be applied in future research work. This chapter is essential in emphasizing the new knowledge developed in the study and how the new knowledge can contribute to the field of study. This chapter is a great opportunity for the researchers in developing a strong impression on the assessors about the relevance and strength of the research and representing the skills of an individual as a researcher. Therefore, this chapter would provide an overall conclusion of the whole study.

5.2 Conclusion

This research has evaluated the phenomenon of financial technology, and therefore assessed its opportunities, sustainability, and security concerns. The main focus has relied on the banking sector where neo-banks are compared to traditional banks in terms of availability, speed, services, costs, and risks. Financial technology has been utilized for helping business owners, companies and consumers and managing financial operations and processes with the help of specialized algorithms and software used on computers and smartphones. Embedded finance has been observed to be showing a growing trend within the last few years and a strong position growth within the embedment of solutions within the banks who have been embedding and becoming service providers to non-financial and non-bank institutions. Compared to the traditional value-adding areas of universal banks, fintech companies have been widely distinguished in their involvement in assessing management payments and financing. “Diffusion of Innovation Theory” has been regarded as a major theory which would be evaluated in this study. The study has followed a positivist philosophy, inductive approach, and exploratory research strategy as these methodological aspects have helped the study in examining the phenomenon of fintech in the current world and its impacts on traditional banks, financial institutions, fintech companies, neo-banks, and financial sector overall. In the research, the data has been collected following both quantitative and quantitative approaches from primary and secondary sources respectively. For the collection of primary data 50 managers from different traditional banks within the UK have been contacted via email or LinkedIn and have been asked to participate in the survey of the study. Their responses have been collected as primary data and the secondary data for the study has been collected from several secondary sources such as journals and articles. Therefore, a mixed data collection method has been utilized within the study. The rise of fintech companies has significant influence on the decline of traditional banks and financial institutions in recent times. The inability of traditional banks to effectively implement technology within their operations is the major reason or factor that has initiated the decline of growth of those banks. Traditional banks need to focus more on customer experience to compete with neo-banks. Traditional banks also need to collaborate with their service providers while implementing fintech within their organizations. As per the perspective of most of the managers of traditional banks in the UK implementing fintech or financial technology within their company can help traditional banks in generating greater revenues. The use of digital solutions by traditional bankers can help them effectively manage their risks, especially in regard of the implementation of financial technology. Traditional banks need to focus more on regulatory obligations, especially while implementing financial technology.

5.3 Hypothesis evaluation

Traditional banks have greater challenges of survival in the global finance market in the long run, and thus they need to adopt different models that would address the new trends in finance market that takes globalization and digitalization into account.

From the survey report, it has been concluded that the rise of financial technology which has initiated the growth of new banks and companies has significantly affected traditional banks. Analysing the growth of traditional banks and fintech companies in the UK finance sector, it has been concluded that the performance and business operations of the banks and financial institutions have been continuously decreasing whereas the fintech companies have been experiencing a great success rate. It has also been assessed through the secondary data analysis that the fintech companies and financial technology have a greater market within the UK. In this record from the server report, it has been evaluated from the perspective of managers of traditional banks and financial institutions that the companies need to implement financial technology within their operations as it can help them in getting greater revenues and the use of digital solutions can help them in effectively managing their risks. Therefore, considering the collected data, it can be stated that the market for traditional banks has been becoming more competitive and less suitable for survival and therefore the traditional banks will not be able to survive in the long run. To survive within the competing market the company needs to adopt different models, especially in regard of financial technology, that would help them in addressing the new trends within the UK finance sector. Nonetheless, when evaluating Estonian banking sector through traditional banks representatives, it can be stated that banks will have solid ground, at least for the next decade. In Estonia, the traditional banking sector has caught up with innovation in terms of financial technology, making the gap between traditional banks and neo-banks minimal.

5.4 Limitations of the study

The study has mainly considered the UK finance industry which is very suitable and has been initiating technology advancement within every sector. Therefore, this study's results or evaluation might not be applicable or suitable for some developing countries where technology advancement has not reached the level of UK technology development. The study has not experimented with the evaluated strategies or models applicable to traditional banks for implementing financial technology. The strategy is based on the opinions of some traditional banks and it might not be working for some companies.

5.5 Recommendations

It is recommended to the traditional banks of the UK to enhance their customer experience as most of the customers have reported that their answer is fired with the services provided by the traditional banks and financial institutions whereas the fintech companies and neo-banks have been providing them updated technology usage opportunities and higher customer satisfaction by providing them personalized customer experience. The most important aspect that has helped the neo-banks in attracting customers from the finance market is their ability in providing higher technology usage to their customers such as ease of use and functionality. It is recommended to traditional banks collaborate with their service providers and provide technology advanced services to their customers. These would not only enhance the functionality within their organization but would also be beneficial in enhancing the customer experience and would provide the customers with the ease of use of the financial services.

5.6 Future research direction

The study has represented that banking, venture capital, trade, and digital money have all seen considerable change as a result of accounting and innovation working together. The word "FinTech" a shortened version of the term "Financial Technology," has become popular as a result of this evolution. The entire finance world has witnessed major changes in budgeting installations and money-related operations as a result of the growth of the fintech market. Over the past few years, fintech potential has seen an exponential increase in funding, with more than $8 billion in investments already reported throughout all phases of investment in 2021. With an acceptance rate of 87%, Europe leads the globe in financial technology usage, significantly outpacing the global average of 64%. 67% of UK's 2100+ existing financial technology companies were founded in the previous five years. In Europe, fintech has had a 65-year history that is nothing short of extraordinary. Since credit cards were first introduced in the 1950s, a lot has changed. The introduction of ATMs revolutionized bank cash withdrawals, and the emergence of the internet in the 1990s propelled the fintech sector to new heights, demonstrating the enormous expansion of fintech. A significant transformation has also been brought about by electronic payment systems, web-based business practises, portable banking, and bank digitalization. The future research can further evaluate the strategies through which financial banks would be able in competing with fintech companies. This research can be useful for policymakers, the traditional banking sector, fintech start-ups, and companies and retail customers. Policymakers could learn the shortcomings of the regulations around the neo-banks and see the possible policy regulating suggestions. The traditional banking sector could see a reduction in the market share which could be lost to neo-banks in the long term and study the new trends in society that need to be addressed. In addition, fintech start-ups could learn their potential risks such as profitability, fraud, and insured funds issues before coming up with new services or expanding them. Therefore, the policymakers can further evaluate the study and research about the further new policies for fintech companies.

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APPENDICES

Appendix 1: Survey responses with questions

1. What is your gender?			
Options	Responses	Percentile	Total Responses
Male	15	30	50
Female	30	60	50
Others	5	10	50

2. From which age-group you belong to?			
Options	Responses	Percentile	Total Responses
18 to 25 years	10	20	50
26 to 35 years	26	52	50
36 to 45 years	7	14	50
46 to 55 years	6	12	50
More than 56 years	1	2	50

3. How many days you have worked within this company?			
Options	Responses	Percentile	Total Responses
Less than 1 year	15	30	50
2 to 5 years	25	50	50
6 to 10 years	8	16	50
More than 10 years	2	4	50

4. Do you agree with "the rise of fintech companies is responsible for decline of traditional banks and financial institutions"?

Options	Responses	Percentile	Total Responses
Strongly agree	27	54	50
Agree	9	18	50
Neutral	5	10	50
Disagree	7	14	50
Strongly disagree	2	4	50

5.Which factor is responsible for decline of growth in traditional markets?			
Options	Responses	Percentile	Total Responses
Lack of visbility	9	18	50
Lower customer experience	12	24	50
Inability in technology implementation	25	50	50
Incaresing enforceemnt of rules and regulations	3	6	50
International Transactions	1	2	50

6. Do you agree with "the bankers need to focus more on customer experience"?			
Options	Responses	Percentile	Total Responses
Strongly agree	25	50	50
Agree	11	22	50
Neutral	5	10	50
Disagree	5	10	50
Strongly disagree	4	8	50

7. Do you agree with "traditional banks need to collborate with IT service providers for implementing fintech"?			
Options	Responses	Percentile	Total Responses
Strongly agree	15	30	50
Agree	21	42	50
Neutral	8	16	50
Disagree	5	10	50
Strongly disagree	1	2	50

8. Do you agree with "implementation of fintech can help traditional bankers in generating revenues"?			
Options	Responses	Percentile	Total Responses
Strongly agree	10	20	50
Agree	25	50	50
Neutral	5	10	50
Disagree	6	12	50
Strongly disagree	4	8	50

9. Do you agree with "digital solutions are effective for risk manageement"?			
Options	Responses	Percentile	Total Responses
Strongly agree	23	46	50
Agree	11	22	50
Neutral	10	20	50
Disagree	3	6	50
Strongly disagree	3	6	50

10. Do you think your company need to focus on laws and regulations?			
Options	Responses	Percentile	Total Responses
Yes	37	74	50
No	10	20	50
That won't be much help	3	6	50

Appendix 2: Interview transcripts

Bank: Coop Bank

CEO: Margus Rink

Date: 12th of July

Location: Coop Bank headquarter in Tallinn

Nature of the interview: In person, recorded, translated from Estonian to English

1) Could you please introduce the bank you manage in terms of values, goals, future perspective, and the services you provide to both private and business customers?

As a bank, we have been operating for 6 years now. At the beginning of 2017, the largest retail chain in Estonia, Coop, bought a majority stake in this bank, and two years later we went public. Coop currently owns 43% of the shares, while the other shareholders own 57%. We are different from the others in a sense that we are one of the five universal banks that are operating in Estonia (Swedbank, Luminor, SEB, LHV, and Coop Bank). As of today, our market share is around 6%. Six years ago, when we first bought the bank, the market share was 1%, and therefore, we have increased our market share by 1% each year. When the bank was acquired, the owners already had a vision that Coop Bank must become a local Estonian bank with 10% of the market in the next 10 years. So far, we have grown 1% each year, so there will be 4 more years of hard work and growth ahead. Coop Bank was actually established with a very clear goal. Like I mentioned, the owners requested to gain 10% of the market in 10 years. Also, we want to be business that is profitable from the first day, unlike some start-ups that overpay in the beginning and then look into possibilities to start generating profit years later. Our main goal or strategic point is to be deeply Estonian, serving private and business customers all over Estonia, and therefore, we have no intention of expanding internationally. That's why, we aim to be very efficient, as we are operating only in Estonia, all our customers are in Estonia, our owners are in Estonia, and all decisions are made in Estonia. Our main products are everyday banking and financing for private and business customers. We do not provide investment, insurance, or pension services. Since the main shareholder is Coop Estonia, which is the biggest retail chain here with around 330 stores all around Estonia, we have integrated banking infrastructure with those retail stores so that people using our bank card could insert and withdraw cash in all those stores, and by paying with that card it also gave them the best prices in those stores, in other words, it works like a loyalty program. We also have 15 offices, the majority of which are near those stores. This is the type of integration and synergy that we aim to use between retail and banking that could benefit every Estonian, whether they live in the city or countryside. All of this contributes to who we are, and I believe that the reason we have grown so well is due to our strategic differentiation from others, which places a strong emphasis on local people and businesses.

2) In your opinion, what are the reasons for the development of financial technology and alternative banking and, therefore, the rapid growth in popularity in the last 10 years (e.g., Wise, Revolut, Monese, N26)?

I think that there are two aspects. First, the traditional banks have forgotten about creating or modernizing some of their services. Therefore, the alternative banks noticed those trends before the traditional ones and saw possibilities in them, such as free cash withdrawals around the world, eliminating conversion fees when paying in another currency, or even the usage of Google and Apple Pay. Second, unlike traditional banks, they have provided many free or low-cost services, as well as some product innovation. After which, traditional banks realized that and also started to provide similar products or pricing to decrease alternative banks 'advantage. Overall, I see that these are the main things going on in the market when comparing traditional banks to alternative ones.

3) Do you think that traditional banks have lagged behind with their innovation and services, taking into account the current globalization and digitalization, and why do you think so?

I think that five years ago, the lag was even greater. That was also the time when most alternative banks were established. That was the time when traditional banks were mostly dealing with AML and all those regulations that were put upon us after the last great recession. Basically, all banks were struggling with that, and they totally forgot about product innovation as such. Therefore, alternative banks found that niche and brought it up for the customers. If I look at the situation today and think about the latest innovation that alternative banks implemented but traditional ones did not, nothing really comes to mind. At least during the last two years, there has not been any great innovation. So around five years ago, they came and brought the innovation, but as of today, traditional banking has caught up. The main reason is that, following the last great recession, banks suffered greatly from taking risks, after which regulators basically eliminated risk taking possibilities. Massive regulations followed, so that the banks, figuratively speaking, did not recruit customer managers and product developers but rather lawyers who began to deal with regulation and respond to regulators' inquiries. All innovations were basically replaced by bureaucracy. After all this, innovation was completely left behind. All this gave an opportunity to new entrants, i.e., alternative banks, which did not have to bear such a burden of regulations. But as you can see now, regulations are gradually being imposed on them as well. Their advantage was simply that there was a time window after the recession where alternative banks saw an opportunity while traditional banks were working to minimize their credit losses and sold assets. A little after that, AML and its regulations came, and once again, traditional banks had to start building defensive walls, so to speak.

4) Does your bank provide any specific services or solutions for people living abroad, frequent travelers, digital nomads, and such?

Yes, we have special package for those customers. Its monthly fee is 4.99 euros, which includes free cash withdrawals around the world and the elimination of conversion fees. Furthermore, we pay 1% interest on the account balance. We launched this package in 2017, and it is meant for “the citizen of the free world.” The only risk was how many of those customers we might have, but as of today, I can say we have approximately 20 000 of them, and the number of customers using the package did not even decrease during COVID.

5) Do you think that it is important for banks to address those phenomena at all, and why?

Absolutely, because traveling and working abroad have become a daily part of life. People want everyday comfort, and I believe banks have a huge role to play in this since people’s lives are more integrated with banking services than ever before. For example, when you live abroad, you still need to pay for your apartment bills if you have one in Estonia and use services in the country you are currently living in. Nowadays, with digitalization it is easy because almost everything has become seamless, and money is always running somewhere in the background without needing the huge customer's input. Figuratively speaking "linger your phone and money already moves at the background." If traditional banks did not address that phenomenon, customers would not be happy, and then alternative banking would come into play and take some of our market share away. But of course, all this comes down to the bank's strategy in the end. As I mentioned before, our strategy is mostly targeted at locals who permanently live in Estonia and are mostly outside the big cities.

6) The fact is that alternative banks take customers from traditional banks. Do you think that alternatives will be more of a threat to traditional banks in the future, or that traditional banks will adapt and become more like their competitors?

When alternative banks first appeared, they had a strong growth potential because traditional banks were lagging. Recently, alternative banks have not grown as much anymore; in other words, their big growth phase like before has ended. Rather, what happens is that traditional banks buy up these alternative banks and combine them with their services. Certainly, alternative banking does not pose a direct threat to traditional banking. When alternative banks first appeared, they did not have as many regulations, but as they grow in size, regulators become more interested in them, and they begin to be regulated more. At some point, their success may disappear due to regulations, and then they may no longer have advantages over others, which calls into question whether it even makes sense to continue doing business.

7) How do you see banking in the near future, and what major changes do you expect?

The biggest thing, which I already mentioned before, is that banking starts to happen by itself somewhere in the background. We can see that banks are cutting down on branches, and even online banking becomes less popular each year. The banking mobile app is becoming the most important tool. Many processes are already seamless and, in the background, but they will advance even further as time passes. The physical visibility of banking is declining. In the future, for example, if you look at a real estate website, all offers have already been made by the bank, the only thing a customer has to do is put his signature on it, and that too digitally while lying in bed.

8) What do you think are the main differences between traditional and alternative banks?

First of all, alternative banks mainly focus on a few services, while traditional banks have to cover all the needs of customers. Due to the fact that alternatives focus on only a few things, they are definitely faster and more mobile than traditional banks. Second, in terms of regulation, alternative banks are regulated less, but, as I previously stated, significantly more than before, and this will continue.

9) What are the advantages of traditional banks over alternative banks?

Certainly, the trust factor. The issue is where you keep large sums of money. Banks are all profitable and have years of history; furthermore, they guarantee deposits and are less likely to go bankrupt. Customers ’money is safer with a traditional bank. Also, from a traditional bank, you get all the services, including mortgages, various loans, and credit cards, that alternative banks usually don’t provide.

Bank: Swedbank

CEO: Olavi Lepp

Date: 13th of July

Location: Swedbank headquarter in Tallinn

Nature of the interview: In person, recorded, translated from Estonian to English

1) Could you please introduce the bank you manage in terms of values, goals, future perspective, and the services you provide to both private and business customers?

Swedbank is a very traditional bank. The bank's history dates back 200 years. It was established in 1820 as a savings bank in Sweden. We are the biggest bank in Estonia, Latvia, and Lithuania in both the private and business customer segments. Also, we are one of the biggest in Sweden, but there the market is very fragmented since the biggest bank has around 20% of the market, whereas in Estonia we have around 50% of the market share in the private customers 'segment. Our bank is very value-based, and we have also conducted a survey among both our customers and employees to see what values we should represent, and therefore our three main cores are simple, open, and caring, meaning that it shows our DNA how we deal with everyday things inside the house here. "Simple" should represent the fact that we try to make everything more simple for ourselves, our employees, and most importantly, our customers, since banking is complex with all its regulations, infrastructure, and technology. "Open" means that we are transparent in everything that we do for both our customers and employees. "Caring" from our point of view is also very important since we have the majority of the market share, meaning our responsibilities towards clients are also huge. The hardest thing is finding a balance because if I am too favorable towards owners, then clients would not be happy and would ask why certain services are so expensive, and if I am too favorable towards customers, then the owners would ask, "But where is the money?" Also, there are public expectations in the form of politicians and regulators, so finding balance between all of them is challenging but essential. Swedbank has also developed a sustainability roadmap, which has been taken very seriously. Customer satisfaction is also one of our key drivers. If the customers are happy and they see that the bank cares about the same things they do, then they do not change the bank. Not less important is employee satisfaction, because there cannot be happy customers without happy employees. Financial results come last, but good financial results cannot come without the previous aspects mentioned. When it comes to services, our bank provides all the classics to both private and business customers, such as loans, payments, credit, insurance, investment, and pension.

2) In your opinion, what are the reasons for the development of financial technology and alternative banking and, therefore, the rapid growth in popularity in the last 10 years (e.g., Wise, Revolut, Monese, N26)?

In that case, we must examine each case individually by country. In Estonia, banking has always been very advanced, so here it has not been so easy for alternative banks because traditional ones have covered everything almost as well as them. But it was very easy for alternatives to grab the share in Western Europe and the US, for instance, since the traditional banking industry has been lagging behind with services, pricing, and technology in general. Overall, if we look at the traditional banking sector, we can see that banks are extremely regulated. Since we are so big, we are not just under Estonian financial supervision but under the European Central Bank. That makes it more complex and thus puts more regulations upon us, which increases bureaucracy. Those guidelines are literally thousands of pages long. Compliance with all of this requires a great deal of attention and resources. Alternative banks do not have that much of this regulatory burden, but as they grow, it gets similar. Furthermore, alternative banking is still a regulatory grey area, and I am not sure if they will have any advantages once regulators become aware of and interested in them. Banks are subject to regulations and are required to be conservative and fully monitor them. It's not just that there is a new regulation, but every week, officials come to my office to monitor how the processes work and whether we are following all the regulations. Then the banks receive criticism about why they are not engaged in innovation. If all the people who have to deal with regulatory compliance could deal with innovation and product development, the banking sector would be great, and there would be no alternative banks either. Other than that, alternative banking usually also provides cheaper pricing for services, but the question of profitability comes into play there since most alternative banks are not yet profitable but depend on investments. At some point, investors will also want their money, so those alternatives will need to increase their prices, and as I already mentioned, when regulations hit them, it becomes much more difficult. However, it appears to me that in the start-up world at the moment, profitability is less important than the owners' ability to sell the business for a higher price than they paid for it.

3) Do you think that traditional banks have lagged behind with their innovation and services, taking into account the current globalization and digitalization, and why do you think so?

Definitely. I believe we are in some areas as well. Especially, when it comes to international payments. Alternative banks can make it very cheap since moving money is not that expensive, and basically all you need is the initial capital. For traditional banks, we need to give out loans and credit, which require a lot of resources and financing. Also, we need to keep up the physical branches and ATMs that are making losses. Traditional banking infrastructure is generally very expensive, even when it comes to traditional international payments. The issue is that traditional banks haven’t been automated and digitalized enough, especially in Western Europe and the US, and therefore there has been a lot of manual work and bureaucracy. I believe that because of poor infrastructure and a pile of regulations, traditional banks have lagged, and alternatives saw an opportunity to provide certain services at a low cost. First, those alternatives tried to use traditional banks for that, but banks of course wanted their fees because infrastructure is expensive. Then alternatives came up with their own infrastructure, but in general, there is a liquidity problem with that since it’s required to have a large liquidity buffer in each country. So, in the long term, it might not be sustainable either. All in all, the issue has been that traditional banks have been more regulated and less automated, and due to that, they have been asking for higher prices for different services. When talking about the Eurozone area in general, there is no difference since our bank is using SEPA (Single Euro Payments Area), and there are no ATM withdrawal fees or conversion fees within the Eurozone countries. In this case, alternative banks may benefit more customers who frequently move or live outside of Europe or send money outside the Eurozone. Nonetheless, I could say that most business customers care about trust and safety, and therefore they are willing to pay a bit more for the traditional bank’s trust factor.

4) Does your bank provide any specific services or solutions for people living abroad, frequent travelers, digital nomads, and such?

After previous money laundering scandals that took place, we had a clear goal. We only want to work with customers who have a direct connection to Estonia, even if they live and work elsewhere but have an apartment in Estonia and must pay or receive rent into an Estonian bank account. We are not interested in customers who do not have a direct connection to Estonia. The same goes for businesses. If someone would come and say that their business is transporting meat from China to Brazil but they would like to own a juridical body in Estonia due to tax optimization, then we would not open a bank account for them due to the lack of a direct connection. In that case, we have no way to check their activities to see if they transport meat or some other illegal goods. Those customers are high-risk, and we prefer to avoid them. Due to those reasons, we do not provide any specific packages to those customers. Nonetheless, we provide a Platinum credit card for our customers that has a 14,90 euros monthly fee, eliminates conversion fees, and allows you to withdraw cash around the world worth 1000 euro. It also provides travel insurance, purchasing insurance, and access to airport lounges.

5) Do you think that it is important for banks to address those phenomena at all, and why?

We definitely should, and that is also the way traditional banking in general is moving. It just takes a bit more time. Of course, the banking sector in general takes those phenomena and trends into account. As long as we are able to supervise the customers and the customers are compliant, everything is fine, and we are always in favor of them. We just always need to know where the money comes from and where it goes. Especially when it comes to businesses, because there are some US states and countries, such as Cyprus, where we cannot identify the owners.

6) The fact is that alternative banks take customers from traditional banks. Do you think that alternatives will be more of a threat to traditional banks in the future, or that traditional banks will adapt and become more like their competitors?

Banks are at the moment doing something like "sit and wait" at that poker table. They are more like those in an observing state. Alternative banks are taking some customers away for sure, but mostly those are not the high value ones, and they do not impose any significant losses for us. On the other hand, those alternatives need to start making profit at some point, which usually means that they need to increase the price for the services, and then those customers who went there to save this 1 euro will leave again. After all, everybody needs a "mother bank," that is, a place where their salary comes from and where they can get a loan or credit if needed. This leads those customers back to a traditional bank, or even if they use some alternatives, they still need to use traditional banks 'services at the same time. Overall, I do not see any threat from alternative banks. There are three groups of them. The first group will fail because they will be unable to generate a sustainable profit. The second group will be able to grow while also bearing a regulatory burden, which may impose some competition on traditional banks, but they will not be able to take away a significant market share from traditional banks. They may be more technical and efficient in some areas, but they cannot pose a threat on a large scale. The third group are the ones who will be acquired by traditional banks.

7) How do you see banking in the near future, and what major changes do you expect?

Everything was completely different ten years ago. But if we look towards the future, we can already see that one of the things that is changing rapidly is traditional trade, more specifically the onslaught of online commerce with logistics. What this means for a bank is that we need a high level of automation and efficiency so that customers can pay for goods almost seamlessly. Ideally, it should be one click and everything is done, the financial and delivery aspects are already brought together in the background. Also, online instalment payments should become more seamless; one click, and everything is there; the only signature needed will be given digitally. In addition, supervision tends to increase rather than decrease over time, so there will be more regulations to comply with. Pricing of the services will probably lean more towards a subscription model than paying per transfer per se. Overall, the main thing that is going to improve a lot is automation.

8) What do you think are the main differences between traditional and alternative banks?

The main difference is regulatory pressure and volume of services, whereas traditional banks suffer under a constant pile of regulations and are more strictly supervised. Traditional banks also offer all types of services, from payments to mortgages, while alternatives usually concentrate on a few narrow types of services. Usually, those few services they provide are done more effectively, so they can offer better pricing and efficiency for the customer. Alternatives are also more capable and efficient due to new infrastructure; traditional banks already have an infrastructure, which is usually quite old, and building on top of an old infrastructure is more challenging.

9) What are the advantages of traditional banks over alternative banks?

Most importantly, it is a trust factor. Banks are present in everyday life, and if you have a problem, you can always call or visit the bank's office for assistance. Also, banks are less likely to go bankrupt compared to alternatives. Additionally, traditional banks provide all kinds of services, from payments to mortgages. If you want to buy the house, you need to turn to a traditional bank.

Bank: LHV

CEO: Madis Toomsalu

Date: 15th of July

Location: LHV headquarter in Tallinn

Nature of the interview: In person, recorded, translated from Estonian to English

1) Could you please introduce the bank you manage in terms of values, goals, future perspective, and the services you provide to both private and business customers?

Our bank is listed on the Tallinn Stock Exchange. It is an Estonian universal bank, meaning we provide all the services both for private and business customers. We are the second-largest pension fund manager in Estonia. And a few years ago, we also expanded to the United Kingdom, where we offer services to businesses. In the UK, we are mostly focused on payments, but since the bank is still a credit institution, loans are also naturally part of it. We are a rapidly growing company; we started in 2009 as a bank, but before that we were an investment company, and our roots go back to 1999. In 2009, we basically started from zero as a bank, and today we are the third largest bank in Estonia. It is written in the strategy that by 2032 we would like to be the largest and most profitable bank. To do this, we need to increase the number of customers, loan volumes, deposits, and payments. In conclusion, we as a bank try to be simple, efficient, and transparent.

2) In your opinion, what are the reasons for the development of financial technology and alternative banking and, therefore, the rapid growth in popularity in the last 10 years (e.g., Wise, Revolut, Monese, N26)?

There are two aspects: the development of technology and regulations. At one point, it was understood in Europe that traditional banks were slow, big, clumsy, and bureaucratic. The infrastructure and core technology of many traditional banks still date back to the 1980s. Integrating or building something new on top of those old systems is very challenging. The other thing is the rapidly growing pile of new regulations and capital requirements, which are growing at a completely unreasonable pace. If you look at the return on equity of banks, it is quite low

compared to other sectors. In this regard, Estonia is an exception because we have a small enough market to foster innovate
on. At one point, it was also concluded that there were actually too many regulations, but as is customary in Europe, no one reduced the regulations in this sector; instead, a new concept was created: rather than fixing or updating old ones, they created new regulations instead. Alternative banks usually don't have a cost base and don't need so many people to deal with compliance with all these regulations. To put it all together, financial technology has developed rapidly, and regulations were also behind, which favored the advent of alternative banking. And eventually, there was so much money left over in the world that it ended up in funds, and from there, in financial technology companies. Today, we can also see the first fallbacks of those fintech companies and alternative banks. We can see this most clearly in the case of the Swedish fintech flagship, Klarna, whose last indicators were -85%. The world is slowly returning to the state where it is valued again, whether someone earns money or not. We can also see that alternative banks are specifically vulnerable to any recession since they are mostly backed by investments and do not really generate any net profit. The other thing is that most alternatives focus on payment, but in payments, there's never been too much money moving around. If we look at traditional banking, it has always been about deposits and lending them to others for hundreds of years. Banks began to integrate payments in the 1960s, but today we can see how those payments are beginning to leave traditional banks again, with alternative banking taking over and providing them at a much lower cost.

3) Do you think that traditional banks have lagged behind with their innovation and services, taking into account the current globalization and digitalization, and why do you think so?

If you consider the average traditional bank, the answer is unequivocally yes. If you think about the fact that the so-called "safe deposit service" is available all over the world and you can access it 24/7 with your mobile phone and use it to make all payments and transfers around the world, it's really great. There is no need to carry around a safe like you used to. If you compare it to other fields in the big picture, this innovation is hard to beat. But innovation also has many sides. When you think about the average traditional bank and its speed, efficiency, and pricing, it's not so bright. Starting with account opening, conversion fees when using your debit card abroad, or sending money in different currencies, can be a pricey mess. Yet again, the situation in Estonia is much better in that sense compared to Western Europe or the US.

4) Does your bank provide any specific services or solutions for people living abroad, frequent travelers, digital nomads, and such?

Not specifically since the KYC, AML, and CTF regulations, the regulations have resulted in the requirement that there be a direct connection with Estonia in order to open an account at all. These packages would be difficult to create, and the individuals using them would be potentially high-risk as well, especially if they did not make any payments or transfers in Estonia. We would then need to monitor and screen those activities, which would also require resources. Then the cost-efficiency question arises. For example, if someone lived abroad and had no direct connection to Estonia, the question would be why they did not open an account in their home country. Of course, there are always some exceptions, but in the big picture, it doesn't make sense. Nonetheless, we have made things easy for people moving around the Eurozone since SEPA payments are instant and free, cash withdrawal inside the European Union is also cheap since you can withdraw cash from any ATM for just 1 euro.

5) Do you think that it is important for banks to address those phenomena at all, and why?

I think if there were enough and we could see business opportunity from that, then for sure it would be strongly addressed. But in reality, there are not too many customers like that, and 90% of customers do not even think about those questions when they are opening bank accounts. There is also nothing innovative in this context, because a change in the price list is not an innovation. It is just an optimization of growing the client base in terms of pricing. It would not matter much in Estonia because our population is small, but when I think about traditional banks around the world, I cannot think of any that would focus heavily on this customer segment either. After all, banks are companies whose purpose is to generate profit, and there is either not enough market or not enough potential profit in that segment. Also, under ever-increasing regulations, it is hard for traditional banks to create great innovation.

6) The fact is that alternative banks take customers from traditional banks. Do you think that alternatives will be more of a threat to traditional banks in the future, or that traditional banks will adapt and become more like their competitors?

The tendency is for those alternatives that can survive to eventually become banks, and thus suffer under heavy regulation. At that point, if they also want to generate actual net profit, they will need to hike their prices for the services at some point. If all that happens, they will lose their advantage over traditional banks. The other option is for traditional banks to acquire alternatives and integrate them into their own services. The truth is that many alternatives along the way will fail. In general, I do not see any danger imposed by them to the traditional banking sector.

7) How do you see banking in the near future, and what major changes do you expect?

The biggest thing I see happening is the automation of all the services, whether they are payments, transfers, insurance, loans, or investments. Everything will also become more apparent; transfers and payments will happen somewhere in the background. For example, we can see Uber and Bolt, where there is no input needed to pay. I believe that those integrations will also move to the banking sector. In general, few new services are created in banking. The question is rather how to make these services faster, more convenient, and more intuitive. A loan is still a loan; the question is how it can be offered more conveniently.

8) What do you think are the main differences between traditional and alternative banks?

Alternatives are all online-based, while traditional banks have branches. The number of services provided by traditional banks is far greater than those provided by alternative banks. Alternatives usually concentrate only on a narrow selection of services, which are mostly payments. When it comes to regulations, traditional banks are constantly drowning under a massive pile of new regulations, whereas alternatives are not.

9) What are the advantages of traditional banks over alternative banks?

Fundamentally, what is sought in a bank is peace of mind, meaning that the trust factor of traditional banks makes a huge difference for customers. Four important things characterize the traditional bank: stability, trust, capitalization, and liquidity requirements. Nothing much can happen to customers' funds because the supervision is so strong. Other than that, traditional banks are much less likely to go bankrupt compared to alternative banks due to the reasons I mentioned before. In the end, if you need a loan to buy a house, you still need to go to a traditional bank.

Bank: Luminor

CEO: Peter Bosek

Date: 18th of August

Location: Online via Zoom

Nature of the interview: Online via Zoom, interview made in English

1) Could you please introduce the bank you manage in terms of values, goals, future perspective, and the services you provide to both private and business customers?

Luminor is the creation of six different small banks, it is made up of three banks of Nordea and three banks of DNB. They were all merged in 2017. We operate in Estonia, Latvia, and Lithuania. Our headquarter is located in Estonia. The first few years after the merger were quite tough since there were a lot of technology replacements and infrastructure upgrades to do, so the main focus was on IT-related issues. I personally joined as CEO for 2021. Our way of offering services is very traditional. In the retail customer segment, we are very strong in mortgages but slightly weaker in consumer lending. Of course, we try to achieve primary client relationships and satisfaction, but there is a bit further to go because our digital state is not at its best at the moment, so there is a lot of room for improvement. As a bank, we are young, dynamic, and forward-looking, and therefore we are dedicated to supporting sustainable growth in the Baltic region.

2) In your opinion, what are the reasons for the development of financial technology and alternative banking and, therefore, the rapid growth in popularity in the last 10 years (e.g., Wise, Revolut, Monese, N26)?

I think that there are two major reasons for it. On the one hand, over-liquid venture funds have been looking for new places to invest their money, and they have discovered opportunity in fintech start-ups. On the other hand, most traditional banks are facing issues when it comes to technology, and there were some smart entrepreneurs who made the most of the opportunity and tried to create something in this financial field. Those entrepreneurs used a time window to create the products using financial technology, which made them more efficient than banks. It is also not a secret that during those times after the great recession, most banks were dealing with losses, right after massive regulations hit that they had to comply with. It required a lot of resources from traditional banks in that sense.

3) Do you think that traditional banks have lagged behind with their innovation and services, taking into account the current globalization and digitalization, and why do you think so?

Yes, definitely. The main reason for this is the vast number of regulations that are constantly being added. Alternatives are not that well-regulated. Even though they need to follow certain regulations, they are not under the same heavy supervision as traditional banks. Yet again, when those alternatives, such as N26, grow bigger, they also come under the interest of regulators. Also, most alternatives do not own the banking license, which makes their lives much easier but also has a downside, for example, that customer deposits are not guaranteed. I know the owners of N26, and years ago I also used to advise them, and I suggested they not take a banking license, but they still did, so let's see how it will turn out. There are many fintech start-ups, but most of them go bankrupt. I think that Wise, Revolut, and N26 are the only ones here to stay for the long term. There are so many fintech companies, especially in the payment area, that nobody actually needs them. Most of the time, they also do not have a profitable business model, and they are heavily dependent on investors. When it comes to the valuations of fintech companies, I believe we are currently in a situation where the market is completely changing. Klarna, for example, went from 46 billion euros to 6 billion euros in value. Basically, the time of cheap money is over. Overall, I think when looking at the timeframe of technology, traditional banks are ten years behind, mostly due to security and regulation issues because no bank also wants to use technology that has not been properly tested and proven to be fully secure.

4) Does your bank provide any specific services or solutions for people living abroad, frequent travelers, digital nomads, and such?

We do not offer any particular services for those customers. Besides that, we have a very clear business model to offer banking services to customers in Estonia, Latvia, and Lithuania.

5) Do you think that it is important for banks to address those phenomena at all, and why?

I think it is not so important. Banking is still a very local play area. The European Commission was pushing a lot 15 years ago for those matters; for example, someone from Spain could take a loan from Germany. It never really happened, and now the European Commission is running a survey to determine if the decision to go in this direction was the right one or not. I believe that the results will most likely show that they are not.

6) The fact is that alternative banks take customers from traditional banks. Do you think that alternatives will be more of a threat to traditional banks in the future, or that traditional banks will adapt and become more like their competitors?

I think that companies like Wise, Revolut, and N26 have a fair enough client base already, so I think they are here to stay, as I mentioned before. What I am certain of is that they do not take over traditional banking and do not pose any threat to it. As per technology and innovation, banks will eventually catch up. Since most alternatives are focused on payments, I think that traditional banks will become similar to them in terms of payment services, which eventually would take away alternatives 'advantage. In the end, both private and corporate customers need traditional banks for loans, which alternatives cannot offer. It seems that everyone is hyped about fintech phenomenon, but in reality, the only things that could maybe pose a threat to some extent to traditional banking are the credit tech funds.

7) How do you see banking in the near future, and what major changes do you expect?

For sure, there needs to be consolidation. If you compare European banks to US banks, they are much less profitable. I believe that a very important political question is who will own European banking five to ten years from now. If we do not succeed in increasing profitability, there won't be any bank investors anymore. If there are no investors willing to buy shares, it will be a huge problem for the economy and economic growth because we cannot lend out money anymore. I think the development and innovation of traditional banking will go step by step. The main thing I can see changing is the automation of different banking services.

8) What do you think are the main differences between traditional and alternative banks?

Alternative banking is, in most cases, more advanced when it comes to technology. Because they usually do not face IT legacy issues since most traditional banks are working on fairly outdated infrastructure. Alternatives are usually focused on a few types of services, and in terms of those services, they are also more efficient and cheaper than traditional banks. I think that traditional European banking has also been underfunded when it comes to technology because, back in the day, they could not see technology as a big advantage in banking. Now it has, of course, changed completely, but it took too much time.

9) What are the advantages of traditional banks over alternative banks?

Because of the trust factor, on the other hand, we can also give out loans on a larger scale. Without lending, the economy will not work. Banks are not necessarily needed for banking, but they are needed for loans. When talking about the trust factor, traditional banks are more stable and regulated, which makes them safe, and customers' deposits are also protected.