

Traditional VS. Virtual Banks in Ukraine: is there a pendulum swing happening impart due to COVID-19

Bachelor Thesis for Obtaining the Degree

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Affidavit

I hereby affirm that this Bachelor's Thesis represents my own written work and that I have used no sources and aids other than those indicated. All passages quoted from publications or paraphrased from these sources are properly cited and attributed.

The thesis was not submitted in the same or in a substantially similar version, not even partially, to another examination board and was not published elsewhere.

31.05.21

Date

Abstract

The ongoing tradition of putting money in the bank has stayed amongst people for centuries. However, the appearance of digital banks may change this lengthy attitude in an unknown direction. The outbreak of a novel disease COVID-19 has already changed the way people do business today and might also have an effect on the banking sector.

This thesis aims to identify the influence of COVID-19 on the banking industry of Ukraine as well as to see whether there is a trend in the shift from traditional brick-and-mortar towards digital banks with no physical branches, but only with 24/7 online support.

The study takes a close look at Ukrainian Central Bank and its monetary policies that are planned to settle financial stability in national currency. And analyzing their effects on the country's main banks. Apart from analyzing existed material on this topic, the research has conducted 12 detailed interviews with experts in this field. The received data presents the strong impact of COVID-19 on the banking industry, particularly in fastening the use of digital banks among young people during the pandemic time due to safety measures by contactless payment and more convenient service.

The study follows the qualitative approach presented in a form of in-depth interviews with professionals from the industry. After analyzing and examine the data, the researcher provides the results and findings of this study in a clear form.

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List of Abbreviations

ATM- Automated Teller Machine

ATM- Automated Teller Machine

BDO- (Network) Binder Dijker Otte

CIS- Commonwealth of Independent States

COVID-19- Corona Virus Disease 2019

EU- European Union

GDP- Gross Domestic Product

GDP- Gross domestic product

GFC- Global Financial Crisis

IBRD- International Bank for Reconstruction and Development

IMF- International Monetary Fund

NASDAQ- National Association of Securities Dealers Automated Quotations

NBU- National Bank of Ukraine

SARS-CoV-2- Severe acute respiratory syndrome coronavirus 2

UAH- Hryvna (Ukrainian Currency)

WHO- World Health Organization

WTO- World Trade Organization

1 Introduction

1.1 Problem statement

The world had seen many challenging situations throughout history. These were the wars like World War One and Two, natural disasters like the latest fire in Australia, or even sometimes massive infectious diseases like the known virus EBOLA (Ceylan et al. 2020). Nonetheless, the year 2020 brought to the world a new threat in form of a novel coronavirus “SARS-CoV-2” better known as a COVID-19.

According to the WHO (World Health Organization), the family of Coronaviruses consists of various viruses that cause illness to humans ranging from a simple cold to more severe diseases. Thus, the governments all around the world were forced to introduce certain measure to reduce the risk of morbidity (Taylor, 2020). Large gatherings and social contact were minimalized or even banned in some countries, resulting in so-called “lockdowns” or “curfew” where the government officially makes it impossible for many businesses to operate and for people to live their normal life (Singh, 2021). This has resulted in slowing down the global economy and in rising the overall unemployment.

According to IMF (International Monetary Fund), only the tourism-dependent economies accounting for 10% of global GDP with nearly 320 million jobs in this sector turned out to be one of the most vulnerable industries affected by the pandemic. Furthermore, many other industries were also hit by an economic downturn due to the COVID-19.

The coronavirus pandemic has caused much more damage to the world than just a COVID-19 disease (Singh, 2021). The paradox is that the virus itself is not as dangerous to the world economy as all of these measures that are trying to prevent it. Even small “lockdowns” have certain consequences on the state’s economy as well as on people’s income. The longer this situation will continue, the longer time it will take to maintain the effects (Greenidge, 2020).

The halt of the global economy will directly affect the corporate sector, resulting in a shortage of revenue. Thus, the financial institutions, such as banks or insurance companies, will be the key players in absorbing the risk in post-pandemic time, since they are the ones who will provide much-needed funding for the restart of the economy and be the only regulator of stability in the economy after the country's central bank (Demirguc-Kunt et al, 2020).

1.1.1 Banking sector

By putting the focus on the banking industry and specifically on the banking industry of Ukraine, the researcher outlines the technological progress happening in the financial sector and connects it to the COVID-19 implications and consumer choice. Since Ukraine is a large developing country with a population of around 40 million people, which is closely located to the eastern borders of the European Union (EU), that makes it very attractive for foreign investors to consider possible disposal of assets in this region. Relatively low-cost labor, prolific land, and diligent people are the key factors to acknowledge. However, the financial instability and the ongoing political struggle are the main drawbacks in a country's development.

Same as in many Post-Soviet states, Ukraine has two-tier bank industry. In other words, the Central Bank (NBU, National Bank of Ukraine) and other commercial banks. NBU is responsible for ensuring the stability of national currency Hryvna (UAH) and for the monetary policies. While the commercial banks are only responsible for operating under the strict supervision of NBU and are governed by its regulations (Contact Ukraine, 2021).

A lot of experts agree on the fact that the prime cause of the 2008-2009 global financial crisis (GFC) was the uncontrolled distribution of poor underwriting decisions on mortgage loans by financial institutions (Alekseev & Zakvisin, 2018). The root of a current financial instability is pandemic. According to BDO (an international network of public accounting, tax, and consulting firms), the current pandemic situation has demonstrated that there is no other choice for many businesses than to go online or to go dark.

Despite the fact, that the Ukrainian banking industry has undergone a fundamental reform process in the last four years, the current COVID-19 crisis brought new challenges in this field (German Economic Team, 2020). The appearance of new virtual banks in Ukraine can suggest that either the banking sector is on the verge of great technological changes or that the COVID-19 forced traditional banks to transform into online banks. Nevertheless, the fact that these changes had happened during the pandemic time, already makes it engaging to consider this topic as something relevant.

1.2 Research Aim

The main purpose of this study to examine the banking industry of Ukraine and to evaluate the involvement of COVID-19 in the formation of virtual banks in Ukraine. This study has several objectives associated with online/virtual banks. First of all, to determine how the development of virtual banks may impact the traditional brick-and-mortar banks. Second goal of this study, would be to analyze people's trust in such virtual financial institutions. Hence the main research questions postulated are as follows:

- To what extent do virtual banks bring confidence in consumer investment?
- To what degree if any does COVID-19 stimulate people to change their financial habits by looking at virtual banks to get more banking support?

To answer these two central questions, the researcher sticks to the traditional way of presenting the results. First, a big amount of related to the topic literature is being studied in order to give a clear definition of the key terms and to present already existed information. Afterward, the author decided to use a qualitative approach to proceed with a study, where 12 interviews with industry experts as well as ordinal bank users were conducted. The result will help to get broader a understanding of how the banking industry is working and how COVID-19 has impacted the consumer's confidence and their decisions regarding whether to keep their money in offline banks or online.

1.2.1 Structure of the thesis

This thesis is divided into several main sections. The study will start off with the introduction, which mainly focuses on a brief overview of the topic. In this case, it demonstrates a superficial knowledge of the banking industry of Ukraine and how it operates in a time of COVID-19. It also demonstrates the degree of how big the problem of the pandemic is to the world, by mentioning a few examples like the downturn of the worldwide tourism industry or the excessive government spending on the fight against the virus, which leads to a lack of budget on other vital expenditures.

Followed by this, the purpose of this study and its main objectives would be dispensed, where the researcher will put forward the main research question and sets the framework of how the study will be conducted and what type of experimental approach/method will be used.

The second part of the report is the literature review, which includes a detailed description of the academic sources relevant to the topic and also covers the critical evaluation of the researcher according to the existed material through providing a personal opinion. This part also identifies the key terms that would help to differentiate between offline and online banking and the factors that might influence it. After performing the overview of Ukraine's banking sector and its main challenges, which have resulted in many years of economic turbulence, the report will address attention towards actions that might eliminate the productivity gap in Ukraine's banking sector. In addition, the researcher will compare the capital adequacy in Ukraine and its neighbor countries, in order to draw a line of analogy. Finally, the report will focus on "New Banking Laws" that the NBU explicitly designed for virtual banks, to keep them under control, and talk about the current and future COVID-19 impacts.

The third part of the thesis is the methodology part, which will provide an overview of the research design and method used for this study. This is a theoretical part that needs to be in every scientific paper since it explains why certain types of analyses or approaches were taken. Due to the fact that the

researcher has decided to organize the interviews as a part of qualitative research, the collected data will be interpreted into the text section under this chapter (full interview responses by the interviews will be available in the Appendices).

The fourth part of this thesis is the data analyses and its interpretation section. Unlike the other studies, which usually deal with the empirical data, this report consists of careful examination of interviews by taking them apart into small pieces and extracting important and clear statements from the respondents. This section could only be done after the researcher has finishes with all of the interviews process. The conclusion section will put together the whole process of this research and demonstrate the findings by summarizing them into one clear part, where the reader would be aware of the topic and its main aspects just by looking at this section. Like many other scientific papers, this report will also briefly mention the limitations according to this topic and provide possible recommendations for future research on this topic and outline the implications of this research.

2 Literature Review

2.1 The importance of the banking system

The banking industry plays an important role in the modern economic world, especially in a country's livelihood (Sin Lu, 2021). The banking sector was always an integral part of the economy, where it develops, transforms, and adapts to a certain system of financial relations, which has developed in the state (Jokipii & Monnin, 2013).

The detailed analyses of economic literature show that there is no single definition of the economic term "banking system". The banking system in the narrow sense is the composition of the system of banks (their amount) of a particular country in a certain period of time (Kozlovskyi, 2010). However, in a broader sense, the banking industry is an organic system, which creates new capital in a country in a way of collecting the deposits and by providing credits

to the state, people, households, and businesses. Thus, banks can provide fixed capital to a firm or organization through long or short-term loans in this way helping them to be more productive and efficient, which also helps to the overall growth process (Sin Lu, 2021).

The Russian well-known economist Oleg Lavrushin, the head of the Russian Academy of Economic Science and Entrepreneurship, defines the banking system as a set of banks and credit organizations operating within the framework of a common monetary mechanism. In other words, the country's central bank conducts the state emission and exchange rate policies, while it is still remains the country's reserve system (Pogodaeva et al, 2016). At the same time the commercial banks carry out all type of banking operations.

At the beginning of XX. century, the world-famous economist J. Schumpeter, in his work "Theory of Economic Development" wrote about the positive influence of banks on the rate of growth of national income, which is fully based on the process of savings distribution. In his opinion, banks effectively contribute to economic growth by directing the funds into the implementation of the most lucrative projects (Schumpeter, 1983).

Based on the World Bank Statistic of the 2019, before the Coronavirus appear, the analyses that has been published about the relationship between the level of development of the banking system in the country and the economic growth within the same country, where the GDP (Gross domestic product) per capita is less than \$20,000, led to the following conclusion (The World Bank).

First, as the World Bank's Financial Development Report of 2019 tells, the prevalence of banking institutions and the availability of banking services positively affect the level of GDP per capita in developed countries. The development of these services directly contributes to an increase in the efficiency of banks as financial intermediaries in the economy by expanding the client base and increasing the competition in the market, as the result, improving the quality of services (Aschheim, 1959).

Second, the ratio of banking assets to the GDP, as the main indicator of the importance of the banking system in the economy, also positively impacts the country's economic development (Jaffee & Levonian, 2001).

Third, by observing the developed countries like Germany or France, there is a negative impact of the growth of loans to the private sector on the GDP per capita (Foos et al, 2010). Nevertheless, the loans to the private sector are still considered good for poverty reduction and the support of small businesses. However, the skyrocketing increase of loans to the private sector, which is not based on the macroeconomic and legal frameworks, can lead to a decrease in resilience and the emergence of banking crises, which have happened in many countries in the last 20 years (Beck, 2006).

In developing countries, the degree of coverage of the population with banking services plays an important role in the development of the financial system (Lebedinskaya et al, 2019). Since they lag behind the developed ones in the number of ATMs and banking branches, they need to increase these values and build up banking services availability. At the same time, it is necessary to take measures to increase the capitalization of banks and reduce their operation costs (Hughes & Mester, 1998). This will contribute to an increase in the efficiency of the banking sector and a decrease in the share of non-performing and inefficient bank loans in the total volume of loans issued.

Accordingly, the degree of development of the banking system in the country may indicate the level of financial and economic development of the nation as a whole (Pogodaeva et al, 2016). Indicators such as the number of banks, capital adequacy, quality, and quantity of bank loans reflect the efficiency of the banking sector (Hahn, 2007). An increase in these values can lead to an increase in the rate of economic growth.

2.2 Ukrainian's banking sector: Overview and Key Challenges

The banking sector of Ukraine is one of the key elements in the structure of the country's economy itself. Unfortunately, the constant unstable economic and political situation, which has developed in the country over the years, has

negatively affected the banking industry and in particular its customers and financial partners (Åslund, 2021). One of the reasons for such a deplorable state of the Ukrainian economy is irretrievable loans. The events in the Donbas and Crimea regions, more specifically the war with Russia, played a huge role in the country's banking crisis, if not the main, which led to a significant devaluation of the national currency "Hryvnia" and to the liquidation of a large number of financial institutions (Miroshnychenko, 2020).

The crisis of 2014 and the Ukrainian revolution prompted the authorities to carry out reforms and regulations to restore confidence in the economy and improve the banking sector of Ukraine (Khudoliy & Bronin, 2019). Some of the main changes that the National Bank of Ukraine (NBU) implemented, were as follow:

- The transition to a floating exchange rate, which led to a decrease in the current account deficit and a decrease in pressure on the international reserves of the NBU (Naumenkova et al, 2015).
- Financial support from international organizations (International Monetary Fund (IMF), International Bank for Reconstruction and Development (IBRD)).
- The NBU has explicitly developed favorable conditions for commercial banks in order to support them during the crisis, which has resulted in good savings rates among the population and in less demand for cash (Akimova & Lysachok, 2018).

These were the basis for the development and implementation of an anti-crisis action plan, rehabilitation, and effective functioning of the banking sector of Ukraine.

2.2.1 Banking system assets ownership structure

In addition to the number of banks operating in Ukraine, the graph below represents the information on the presence of foreign capital in the banking system of Ukraine.

THE NUMBER OF COMMERCIAL BANKS IN UKRAINE FROM 2008 TO 2021

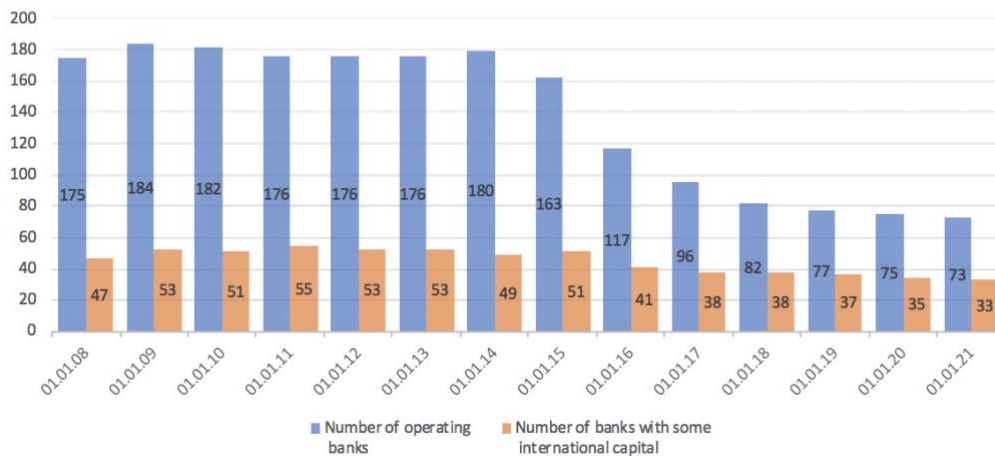


Chart 1: *The number of commercial banks in Ukraine from 2008 to 2021* Source:

<https://bank.gov.ua/>

By fulfilling the anti-crisis measures that NBU has planned, it starts to liquidate insolvent banks one by one (Mihus et al, 2020). Only at the beginning of 2014, Ukraine had 180 officially registered commercial banks with assets above the US \$47 billion, where 49 of them were with foreign capital (NBU, official website). By using the official website of the NBU today, the report of 2021 tells us that there are only 73 licensed banks remain in a whole country with total assets of around the US \$80 billion, where just 33 banks continue to have some foreign capital and only 23 of them including 100% foreign capital (NBU, official website). Without having a superior knowledge of economics, it is clear that the Ukrainian economy has doubled its amount since 2014. The figures show a rapid increase in total assets of Ukrainian banks, which means that the NBU had correctly planned the strategy on getting out of a crisis (Oliynyk et al, 2020).

A properly established and good developed banking system is a prerequisite for the normal functioning of the economy (Patrick, 1966). Commercial banks are the main drivers in the country's credit system, which includes credit institutions that carry out a variety of banking operations for their clients based on commercial settlement (Kozlovskyi, 2010). To make sure that the banking

sector is stable, it is important to maintain a healthy balance between state-owned and foreign capital banks. The lack of such a balance can lead to instability in the banking industry of the region (Mishkin, 2000).

No	Name	Ownership	Total Assets (mil., UAH)	Capital (mil., UAH)	Liabilities (mil., UAH)
1	PrivatBank	State-owned	380.385	53.694	326.691
2	Oschadbank	State-owned	246.473	22.037	224.473
3	Ukreximbank	State-owned	183.640	9.832	173.807
4	UkrGasBank	State-owned	140.709	8.207	132.501
5	Raiffeisen Bank Aval	Raiffeisen Bank, Austria	116.660	13.632	102.660
6	Alfa-Bank	Luxembourg/Russia	96.777	10.049	86.727
7	FUIB (First Ukr. Int. Bank)	SCM Finance, Ukraine	79.870	10.385	69.484
8	UkrSibbank	BNP Paribas Group, France	67.988	8.246	59.741
9	OTP Bank	OTP Bank, Hungary	61.235	9.969	51.265
10	Crédit Agricole Bank	Crédit Agricole France	50.987	5.312	45.675

Table1: *Leading banks operating in Ukraine as of March 2021, by total assets*

Source: The National Bank of Ukraine

2.2.2 State-owned banks now rule the market

In December 2016 the largest nationalization process in Ukrainian history, at that time, has happened (Ivanova & Polityuk, 2019). PrivatBank, being the largest Ukrainian bank by total assets as well as by the numbers of clients has been taken away from its former owners, Ukrainian oligarch Igor Kolomoisky and his partner Gennadiy Bogolyubov (Puglisi, 2003). In order not to go much into the details of the nationalization process, the government’s main claim to the bank was, that 97% of loans given by PrivatBank were issued to former shareholders or related parties, which absolutely contradicted the existing legislations (Ivanova & Polityuk, 2019). Nevertheless, the previous owners are trying to take the revanche and they have filed multiple lawsuits in different countries for the illegal bank takeover (Zinets, 2021).

THE PROPORTION OF BANKS IN UKRAINE FOR 2021

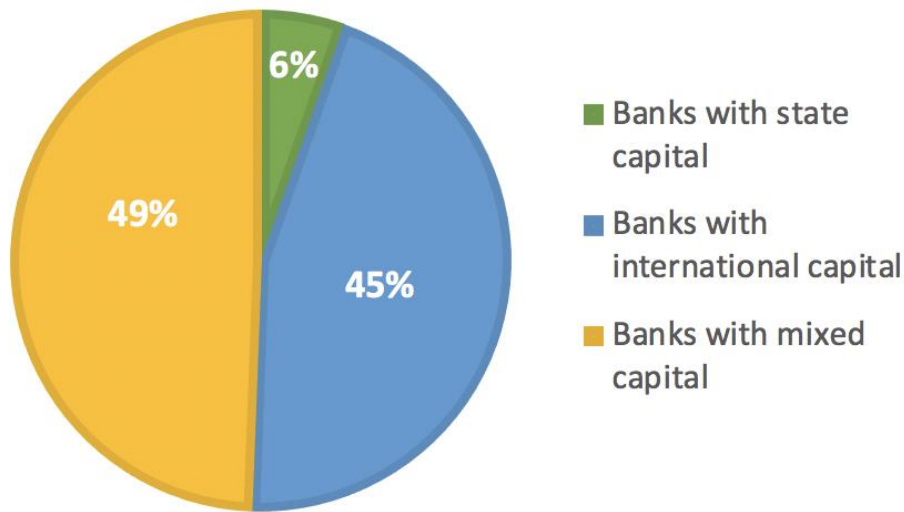


Chart 2: *The proportion of banks in Ukraine for 2021*

Source: Forinsurer Statistic Agency

Despite the fact that there are only 4 state operating banks in the market, which accounts only for 6% of the total market share, they are still very strong and important market players (Statista, 2021). The rest of the chart represents Ukrainian banks as well as some international banks, which also have a solid market position in the banking industry. The chart below gives the reader a nice overview of how only 4 state-owned banks accumulate nearly 60% of the whole banking financial industry.

Since 2016, the state-owned banks in Ukraine account for more than half of the banking sector and their share continues to grow (Tustanovskyi et al, 2019). In fact, the government owns the banking group with a dominant market position that could be seen in the chart below. At the same time, the four largest banks in the country, which are under state control, are highly inefficient and require constant replenishment of extra resources from the state budget (Pogodaeva et al, 2016).

**THE MARKET SHARE OF THE UKRAINIAN BANKING SECTOR
BY TOTAL ASSETS FOR 2021**

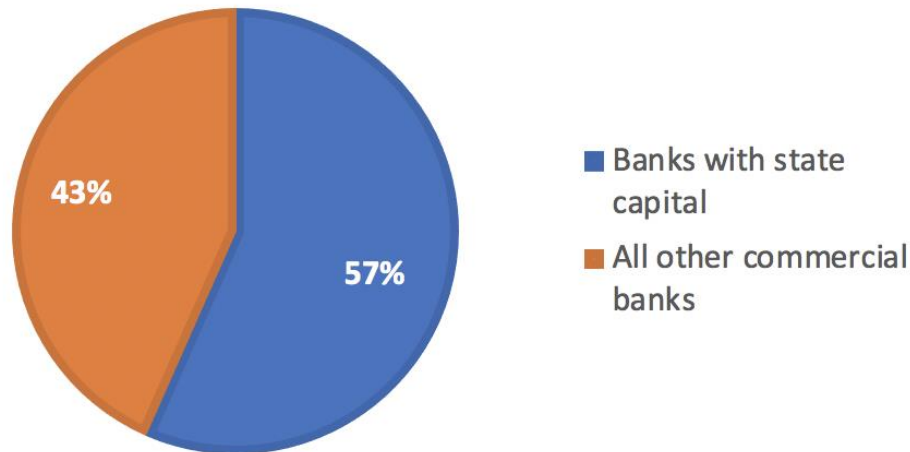


Chart 3: *The market share of the Ukrainian banking sector by total assets for 2021*

Source: Forinsurer Statistic Agency

The high share of state-owned banks in Ukraine is a consequence of different crises. In 2008, the percentage of state-controlled banks was about 10% before the crisis hit the country (Lebedinskaya et al, 2019). Afterward, this number has doubled and became comparable with the indicators of Poland and Serbia at that time (Oliinyk et al, 2020). However, this was not the end. Since 2015, it has grown rapidly to 50% and continues to grow year after year (Tustanovskyi et al, 2019). As a result, Ukraine faced an abnormal situation with the dominance of the government-owned financial institutions. According to the statistic, the banking sector of Ukraine is considered to be one of the weakest in the world (Maslennikov, 2017). The financial operations of Ukrainian banks, for all international partners, are associated with high risk, which is conducted in challenging macroeconomic conditions. Nevertheless, the private banks in the Ukrainian banking sector are treated as very IT-forward thinking. Nearly 80% of all the banks in Ukraine already use online banking as a regular tool for conducting financial transactions via the Internet and for more convenient tracking of your payments (Alekseev & Zakvisin, 2018).

OFFICIAL EXCHANGE RATE OF THE HRYVANIA (UAH) TO THE US DOLLAR FROM 2012 TO 2021

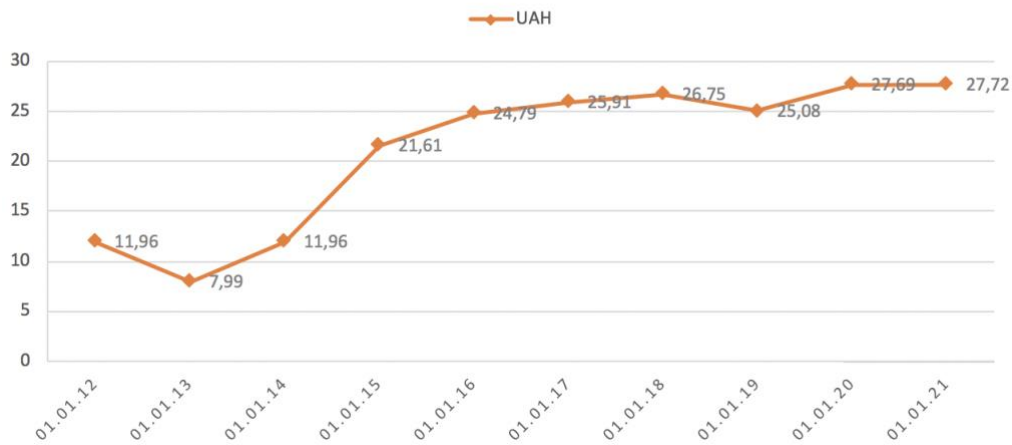


Chart 4: *Official exchange rate of UAH to the US Dollar from 2012 to 2021*

Source: United Media Holding Group

Last but not least what needs to be considered is the official Hryvnia exchange rate to the US dollar. As in many developing countries around the world where the national currency is weak and unstable, Ukraine is not an exception, also uses the US dollar as the second national currency (Naumenkova et al, 2015). Furthermore, more than half of the total gold exchange reserves in the country are stored in dollar assets. The Ukrainian National Economic University professor, Sergei Khestanav, points out that the US dollar is dominated in most of the world's financial activities because of its good liquidity. There is a very little chance that in comparison to all the other currencies, that something will go wrong with the US dollar. This is the reason why so many countries stick to this currency as being very stable and broadly used around the world (Aschheim, 1959).

The chart above demonstrates the official Hryvnia exchange rate for the US dollar of the last 20 years. It is a good demonstration of how much the national currency of Ukraine has lost in its value from the beginning (German-economic-team, 2020).

2.3 Current and future COVID-19 impact on the banking industry

The last year was another stress test for the Ukrainian banking system, but the industry did not collapse. (Biswas et al, 2020) On the whole, banks have proved to be much more prepared for the current challenges than for instance in the 2008 financial crisis. This is primarily due to the consistent work of the NBU by withdrawing the weak players from the market over the past few years and by implementing regulatory indulgence towards the remaining banks and providing correct monetary policies to support the economy (Khudoliy, 2019).

At the same time, the events of 2020 Coronavirus became a catalyst for the digital transformation of most customer services, such as banking processes for example. All types of businesses had to quickly develop new strategies and new ways of reaching their customers (Demirguc-Kunt, 2020).

2.3.1 COVID-19 vs Commercial Banks

For Ukrainian banks, the pandemic was the beginning of a difficult and competitive test of their ability to change and adapt their business to new realities (Acharya & Steffen, 2020). The effects of the pandemic will certainly be felt by the market in the next few years, both financially and operationally. On the whole, Ukrainian banks have managed to maintain the volume and efficiency of their business (Ceylan et al, 2020). At the end of the first and the beginning of the second quarter of 2020, banks expected a decrease in net profit by more than 20% and a decrease in the return on equity to 10%, while in fact, the net profit decreased only by 6%, and the return on equity was 16% relatively to 21% in 2019.

There are several key factors that have helped Ukrainian banks maintain business volume and efficiency, these are:

- High level of development of remote service channels and interaction with clients, which allowed banks to continue to provide services to clients in conditions of their limited physical mobility;

- The flexibility of the operating model of banks, which ensured a quick transition to a remote mode of operation, both in terms of the IT infrastructure's readiness and from an organizational point of view.

The Ukrainian banks become one of the leaders in terms of effective implementation of the remote format of work in comparison with representatives from other sectors of the economy. Despite the non-optimistic expectations of many bank executives at the beginning of 2020 that the remote type of work will necessarily damage the effectiveness of their performance, they were surprised that the total effectiveness of staff in distance mode has not changed significantly.

The key difficulties were associated with the emerging risks of possible leakage of confidential information. For the banking sector, unlike many other industries, the risk of this happening is more significant. In addition to storing personal data and commercial secrets, banks work with information containing banking and state secrets. Another difficulty faced by some banks was the unpreparedness of IT systems and infrastructure for the large-scale implementation of telecommuting.

2.3.2 The pandemic has shown the importance of “digitalization”

More than 70% of commercial banks in Ukraine as well as some insurance companies experienced difficulties in attracting customers during the Coronavirus pandemic. Therefore, their main efforts were focused on digitizing products, changing approaches to promoting products and services online, and develop remote customer service channels (German-economic-team, 2020). More than 50% of representatives of traditional banks found important the development of a data-centric approach when working with clients and the development of personalized offers (Akimova & Lysachok, 2018).

Banks will not refuse from operating the physical branches in the future. Even though during the pandemic many financial institutions developed the digital approach of work, 50% of respondents do not see the feasibility of reconsidering the role of physical branches or changing their format in the next few years.

However, the fully digital banks provide another view according to the future of banking operations.

“The need for physical offices for public consultation is likely to remain. After all, there are always complex cases that can be solved with personal visit only.”
– Dmitry Nazipov, the Vice President for Information Technologies at Alfa Bank Ukraine.

Remote work is a new reality, but not for everyone. According to the study lead by Accenture PLC, the multinational company that provides consulting and processing services, 71% of respondent companies in Europe indicated that they plan in the future to transfer part of their staff to constant remote work. However, the positions that require direct communication with the customer, have the least potential for remote condition. In addition, the remote work mode brought some other difficulties for employees. These include performance management, providing a propriate remote workplaces, setting goals and organizing teams.

The “lockdowns” were easier for digital banks to survive. It turned out to be that digital banks were most prepared for the period of restrictions, whose business model provides for the maximum digitalization of all services and products (Akimova & Lysachok, 2018). This financial organization experienced little or no significant sales and customer service issues during the pandemic. Despite the presence of more advanced digital sales and customer service tools, digital banks consider it necessary to further development of its data-centric approach and to strengthen its digital marketing competencies.

2.3.3 What to expect in banking sector development in 2021?

In 2021, the majority of banks plan to increase business volumes while reducing or maintaining the level of operating expenses. Based on their quarterly reports, the key growth drivers in 2021 may remain government programs to support lending to the economy, including mortgages, and lending to small and medium-sized businesses to overcome the hard times of the pandemic (Åslund, 2021).

As measures to improve operational efficiency, most Ukrainian banks plan to develop IT systems and improve the efficiency of business processes, including through automation. This trend is typical for both Ukrainian and international banks. Many large players in the market, especially the state-owned banks, have relatively old and inefficient IT support that requires revision or updating (Biswas et al, 2020).

Despite the preservation of physical branches and offices, banks are plan to continue developing digital channels of interacting with clients. There are already a few examples in the market, where licensed banks create a new digital bank, that has nothing in common with their predecessors but still be functioning under their platform (German-economic-team, 2020). In other words, some banks in Ukraine that already operate in the market for a couple of years, decide to create a completely new digital bank with a new name, which does not need the new license in the contrast to other commercial banks from the NBU, because it will be operating under the license of its creator (Akimova & Lysachok, 2018). This is basically the marketing strategy of creating multiple products and services under different names, but to be controlled by one organization.

The COVID-19 pandemic has only accelerated the use of digital channels for customer interaction. Banks expect that the digitalization trend will continue to develop actively in 2021, and the share of products processed through remote channels will grow rapidly (Ceylan et al, 2020).

Another trend in 2020 was the development of banking ecosystems offering customers the purchase of financial and non-financial products. Many large and medium-sized banks have focused on growing cross-selling, primarily financial ones. In addition to such classic products as bank insurance, market players began to actively offer clients investment and other products (Ivanova, & Polityuk, 2019).

In this regard, many banks are focusing on attracting partners to develop their business, increase commission income, and retain customers in their ecosystem.

2.4 Virtual Banks

2.4.1 Introducing FinTech into the banking sector

FinTech is a dynamically establishing segment at the intersection of the financial services and technology sectors, where tech startups and emerging market entrants are taking innovative approaches to the products and services currently provided by the traditional financial services sectors (Mărăcine et al, 2020).

FinTech companies using the latest technology and new tendencies of business, thus reshaping the competitive landscape, blurring the boundaries that have been established among financial services players. The fintech ecosystem includes elements such as startups, tech companies, financial institutions, and infrastructure players (Mărăcine et al, 2020).

The evolution of digitalization in the financial sector demonstrates high intensity and dynamism of development (Biswas et al, 2020). This process leads to the emergence of qualitatively new requirements for the economic system, its institutions, and society as a whole. In the development of fintech, the following stages can be distinguished:

Period	Phase	Characteristics
1950 -	The emergence and active distribution of bank cards.	Development and promotion of banking products and services for a wide range of retail clients. Credit cards were a universal product developed by banks for the mass consumer.
1960 -	Use of ATMs	ATMs were invented and actively used for the convenience of customers and ease of conducting cash transactions, which made it possible to use banking services outside of bank branches.
1970 -	Creation of trading sites (first – NASDAQ)	Systematization and automation of operations in the stock market have greatly simplified the conduct of financial transactions.

1980 -	The first banking computers and information technology solutions	The creation of special electronic facilities for processing banking information on the basis of specialized micro-computers, allowed credit institutions to cut costs. It became possible to equip the workplace of a bank employee with a computer.
1990 -	The formation of the “financial technology” industry	The emergence of a special ecosystem that combines innovative solutions and technologies in the field of financial products and services.
2000 -	Robotization, visualization, the emergence of the Internet	Mass distribution of Internet communications. There is a fusion of traditional operational and information technologies, also the expansion of “smart” machines. The information becomes not only a tool for creating value but also an independent product.

Source: The Routledge Companion to Business History (Wilson, 2016)

2.4.2 Digital Bank Concept

Over the past decades, significant changes have taken place in the payment market all over the world and in Ukraine. There is a growing demand from citizens and businesses to improve the speed, convenience, and safety of payments and transfers, as well as to reduce costs in the financial sector. In response to these requests and to facilitate the digitalization of the financial market, different banks consistently implementing such infrastructure projects as Fast Payment Systems, the Unified Biometric System, the Digital Profile, and many other features (Deloitte, 2020).

However, the new digital financial institutions and banking services providers, so-called digital banks not to be confused with online banking, are increasingly conquering the financial world. None of them have the usual physical branch in the city or employees at the counter or the checkout (Jokipii & Monnin, 2013).

Nevertheless, their services and offers seem to be in line with the spirit of the time, otherwise why so many people around the world would consider them as

a real substitution for the traditional brick-and-mortar banks? Credit cards and digital services are offered by such a structure innovatively and transparently, and even on extremely favorable terms (Biswas et al, 2020).

The bank communicates with its clients exclusively via digital channels. These people want to carry out all their banking transactions quickly and easily, in addition, they want to save on transaction fees and fees for maintaining a checking account. In the traditional banking sector, these fees have grown exponentially over the last 10 years (Åslund, 2021). But if you are the client of any digital bank, then all you need is to open your smartphone and use the app of a corresponding digital bank and fulfill all your transitions with no or minimum fees.

Either way, the success of digital banks in many countries, also known as “mobile banks” or “smartphone banks”, signals a fundamental structural transformation in history (The World Bank). The physical proximity of the bank to the client of the direct relationship between the client and the consultant is becoming less and less important. In addition, online shopping has been actively developing in the country in recent years. The coronavirus crisis has given this trend an additional powerful impulse (Ceylan et al, 2020). It is no coincidence that the giants of the Internet, like Google and Amazon or Yandex, are extremely interested in the development of new digital financial services.

The Swiss Banking Association (Schweizerische Bankiervereinigung SBV), informs that many of their members recently have emphasized the importance of the digitalization of financial services, while citing “notable progress” allegedly made by Swiss banks in this area. Indeed, many banks are now closing their analog branches or converting them into consulting centers.

However, so far, almost all forms of Internet banking offered by traditional banks, including mobile applications, are still too inconvenient and unattractive, unable to lure or even arouse the interest of those who are called “representatives of the digital generation” (Mărăcine et al, 2020).

2.4.3 Traditional Banks vs Virtual Banks

In the era of the development of innovations and the latest technologies, digital banking is no exception, which is developing at a tremendous pace (The World Bank). The fintech sector is using more and more technological innovations and has already overtaken traditional banking in some ways. So digital vs traditional bank – what are the main technological and regulatory differences?

Opening a current account online is now standard functionality for fintech companies, neo-banks, and digital banks (Biswas et al, 2020). Although, a few years ago, the ability to open an account through a mobile application was a very innovative feature. According to Statista, 60-70% of people prefer to use online channels or mobile applications to connect to financial services because physical identification at a bank branch means less comfort and more time spent (Åslund, 2021). Digital banking services were created to improve customer's experience and service connectivity from any device and from anywhere in the world. From a regulatory standpoint, fintech companies or digital banks are favored over traditional banks – for example, digital banks are not required to personally identification of a customer, the online version is enough (German-economic-team, 2020).

In the financial technology world, an improved customer experience is defined by a personalized approach that truly sets financial institutions apart from traditional banks (Ceylan et al, 2020). Providing personalized solutions and improved customer service is seen as a competitive advantage that helps fintech companies increase customer loyalty. End users want their digital bank to understand which solutions or services are best suited in their case. Each individual interaction of this kind is an opportunity for a fintech company to collect more information and data about its customers, and then, based on the collected knowledge, offer even better services. Compared to traditional banking, digital banking technologies operate and develop their services faster than traditional brick-and-mortar banks (Mărăcine et al, 2020).

Artificial Intelligence (AI) has become an integral part of many digital banking solutions. It can be used to manage customer data such as preferences and interests, demographic or transactional data. This data can be analyzed and then again used for improvement (Biswas et al, 2020). Simply put, customers get what they expect based on their habits and preferences. This technology not only provides analytics on customer behavior data but also used to identify suspicious transactions and in the prevention of fraud. Compared to traditional banking, digital banking systems are more flexible concerning any changes caused by changes in the regulatory framework, since there are physical interactions with the clients (Mărăcine et al, 2020).

The driving force behind the introduction of the Open Banking initiative was the Payment Service Directive 2 (PSD2) in the EU. This directive came into force on January 12, 2018, and required banks to open access to customer information to third-party vendors through open APIs (Application Programming Interface). This initiative has provided fintech companies with new opportunities in the market, as well as monetize both their own services and those of other service providers or banks. In addition, to financial opportunities, open APIs enable companies to deliver personalized services to the end-user. By analyzing the interactions of their customers, fintech companies and digital banks will be able to rethink their product and service portfolio strategies and offer additional functionality (Ceylan et al, 2020).

In addition to online applications for end-users, banking technology has also become available online in the cloud. Digital banks have begun offering cloud-based SaaS (Software-as-a-Service) solutions to make the go-to-market process as easy as possible for digital banks and other fintech companies as easy as possible for digital banks and other fintech companies without having to implement an IT system on their side. Another revolutionary tool by modern digital banks is the cryptocurrency wallet. Cryptocurrency is something that cannot be connected in any way with banks. It is not regulated in any way and therefore banks not only do not offer themselves but also avoid cooperation with companies whose business is related to cryptocurrency (Åslund, 2021). This is

what puts fintech companies and digital banks, as being the product of FinTech, in a better position. A cryptocurrency wallet, in addition to a checking account, has already become an important function, allowing you to store or exchange your cryptocurrency assets (Mărăcine et al, 2020).

Modern digital banking technologies are opening up new opportunities for fintech companies to deliver better services to their customers in a safe and more reliable, affordable way (Ceylan et al, 2020). Thus, such fintech companies retain their competitive advantage over other competing fintech and banking industries. These new technologies allow customers to adapt quickly, and always use new features (Biswas et al, 2020).

2.5 Virtual Banks in Ukraine

2.5.1 Monobank

The new trend of digitalization also came in Ukraine and the first companies to experience this, were commercial banks. At the moment, there are four officially registered online/digital banks in the financial sector of Ukraine. This is a completely new business model for Ukraine and so far, it has very impressive results (Akimova & Lysachok, 2018).

After the nationalization of PrivatBank in 2016, the biggest commercial bank in Ukraine, all top managers left the bank. Some of them launched their fintech company “Fintech Band” and began to compete with what they themselves had been working on over the years. The plan was to create something like PrivatBank, but online. After a couple of years, the Fintech Bank and the commercial bank “Universal Bank” created a joint project under the name of “Monobank”. Nowadays, this is a top-leading digital bank in Ukraine, with more than 3,4 million everyday users, and by 2022 the company is planning to be a unicorn, meaning that the total worth of the company will be more than \$1 billion (Ivanova, & Polityuk, 2019).

It is important to mention that Monobank is not completely an independent bank with its own license or infrastructure. In fact, Fintech Band has created and

developed a banking application under a separate brand for Universal Bank (Akimova & Lysachok, 2018). The co-founders say that they have started to work with Universal for several reasons: first of all, they appreciated the concept of a mobile bank, the team found a common language with the management, and the bank was ready to provide resources for the future lending operations. The owner of the Universal Bank is a well-known Ukrainian businessman and politician Sergei Tigipko.

Investment in the creation of the application for Monobank is estimated at \$2 million, and the total investment in the project is about UAH 150 million (\$5,5 million), partly from the founders' own funds and partly from payments from partner banks Universal Bank and iBox Bank.

One of the key tasks of the project was to create software that could adequately determine credit risks. Many machine learning models at Monobank work precisely to determine credit risks, accompanying the entire process of making a credit decision (Ivanova, & Polityuk, 2019). The models automatically analyze how quickly the client fills out the questionnaire, what kind of phone the client uses, etc. According to the founders of the company, they have learned to consider risks so well that the Fintech Band now sells risk analysis tools similar to Monobank's tools as part of a separate Artificial Intelligence Solutions project (Akimova & Lysachok, 2018).

Fintech Band is expanding into new markets. The team announced earlier this year that it is entering the UK financial market with a similar product to Monobank, in partnership with local fintech company Prepay Solutions.

2.5.2 The main players

1. **Monobank** – the first Ukrainian based online bank. Due to its simplicity and gamification, it has a very strong support of young users. Customers receive rewards for a certain number of actions in the application. This is how the creators made the use of the bank interesting, and this as well encourages using it.

2. **IZIBank** – this is the youngest bank of all four in the market, founded in September 2020 and fully launched only in February 2021. The biggest advantage of this particular bank is the cashback service. Even though all-digital banks are very similar in terms of structure and business operations, they still try to stand out from each other by using certain features. If the client pays with a card in many places and accumulating large amounts of cash, the IZIBank returns up to 5% of the clients spending amount at the end of each month. The IZIBank also has the lowest real annual interest rate on loans.
3. **SportBank** – is the digital bank that has a clear sporting focus. If certain conditions are met, the clients receive a 10% discount on all sporting goods and clothing stores, sports clubs, dance studios, bowling, billiards, etc. Nevertheless, by the end of 2020, the bank has nearly 150 000 active users.
4. **O.Bank** – this is the second most popular digital bank in Ukraine without branches. The interface of the banking application is very similar to Monobank’s app but in different colors. By first downloading the app on a smartphone, the client gets a bonus in the form of UAH 500 (\$20) for personal use. The bank is only one year old and currently does not operate in all regions of Ukraine, but taking into account the serious support from the partner bank, it intends to compete with other banks in the smartphone soon.

There are currently 4 mobile banks in Ukraine and a couple of other financial companies that are trying to compete with them (German-economic-team, 2020). This is the beginning of the new era. The era of digitalization. There are already so many young people, who will never enter the traditional building of the bank because they have their own bank just in their smartphones. These digital banks make finance understandable and convenient (Ceylan et al, 2020). Considering the fact that Ukraine is relatively a poor country and there are many small towns where there are no bank branches at all, this new type of banking introduces the financial operations for those people. Furthermore, in this case,

digital banks will not only contribute to the overall economic growth but also teach people financial literacy (Biswas et al, 2020).

Ukraine is now on the verge of a global transformation. Not only the banks, but the entire economy is going to digital. With help of the COVID-19 pandemic, people got used to working and studying online, order food or taxis through their smartphones, and pay for all of these through phone applications (Ivanova, & Polityuk, 2019). Perhaps the Coronavirus was the wake-up call for the world to reunite around one problem and for redistribution of priorities. The quarantine has proven that the Internet and social networks are not just the main livelihoods of communications, but also for businesses (Akimova & Lysachok, 2018).

2.6 Consumer choice

Mobile banking or virtual banking retains all the benefits of internet banking for both customers and banks. At the same time, banks receive a lot more new opportunities to attract new customers. The users, in their turn, gain access to banking services virtually without time and space constraints.

2.6.1 Empirical Research on Consumer Adaption to Virtual Banking

By analyzing the existing empirical literature on that topic, the researcher identifies three main theories of consumer acceptance/adoption of mobile banking, depending on the degree of their spread in the field of information technology.

- **Theory of Reasoned Action (TRA)**

This theory has been built by Icek Ajzen and Martin Fishbein in 1977 and formulates as a connected chain of cognitive elements of behavior intention (BI), attitude (A), and subjective norms (SN). This theory recommends that a person's behavioral intention is subjective by the person's attitude and subjective norms (Davis, 1989). Simply put, this theory defines how much an individual believes that the technology, for example, will bring him/her any benefits [BI = A + SN].

- **Technology Acceptance Model (TAM)**

According to Davis's scientific paper of 1989, the TAM model identifies the perceived usefulness and ease of using the technology as determining user behavior. The TAM model uses the TRA model as a theoretical basis for specifying the causal linkages between two key factors; perceived usefulness and perceived ease of use (Davis, 1989).

- **Innovation Diffusion Theory (IDT)**

This theory is about how people in the same society react differently to new changes. The IDT model was created to understand what effects contribute to the innovation, whether it is a new idea or technology. Innovation diffusion ideas can be used to understand how innovation can be introduced more effectively.

Expected utility is one of the key incentives considered by researchers (Karjaluoto, 2015). The TAM model and its modifications reflect the degree to which virtual banking will be useful and efficient for the end-user. In the IDT model, the utility is seen as a comparative advantage, highlighting the merits of mobile banking over the technologies it replaces. Thus, despite the different names, the essence of the utility factor is the same in both models.

Not all of the costs of using virtual banking can be attributed to direct financial costs, such as commissions or the cost of the Internet itself. The specificity of the application of a new technology lies in the fact that the consumer must be able to use them with ease, otherwise, his/her interest in mobile banking is greatly reduced, even despite the recognition of its usefulness. There is simplicity in the TAM model, which reflects the consumer's reception of the effort required to apply the technology.

Incentives, one way or another related to trust, are most popular in works devoted to the study of intentions to use or not to use virtual banking (Karjaluoto, 2015). It has been established that contactless services which include mobile banking, require a higher level of trust than those where the client's interaction with the traditional banks. Two approaches are used to study this phenomenon. The first operates directly on the incentive of trust including

the integrity and competence of the bank (Lin, 2011), its reputation, and the level of consumer protection (Kim, 2009). The second allows us to evaluate this incentive from the other side – as a second option, which presents the risk incentive as the possible economic cost of using virtual banking. Additionally, the following circumstances were also taken into account:

- The likelihood of errors by data entry or other technical errors that might lead to the fact that the client may not achieve the desired results from virtual banking (Zhou, 2011).
- The transmission of personal data over the Internet requires a high level of protection. If personal information is stolen, attackers can gain access to the client's confident banking operations, which might lead to financial losses (Chen, 2013).
- Despite all the security measures by the virtual banks, the loss of a mobile device can also allow third parties to gain access to the customer's private banking information (Hanafizadeh, 2014).

2.6.2 Virtual Bank and the Perceived Risk

Virtual banking users concerned about their privacy while using online payment methods and as a majority of studies represent, users are exposed to banking requirements about demographic, technological, and occupational environments (Dhanya, 1970). Particular attention was paid to features of the virtual banking service that affect the intention of consumers to use it regularly. The greatest effect among them is the expected utility. In this regard, banks can be encouraged to focus primarily on increasing the perceived usefulness of virtual banking for consumers (Chen, 2013). Clients attach importance to the speed and ease of access to banking operations, where they also require a wide range of functionality and flexibility. The key question is whether the consumer considers the use of virtual banks beneficial. Banks practice various bonus systems and partnership scenarios to work in this direction and constantly target marketing policy.

Virtual banks worldwide seek new opportunities to increase the citizen's awareness of the existence of neo banks (Hanafizadeh, 2014). The second factor in terms of the degree of influence on the motivation to use mobile banking was the expected effort. This means that to promote virtual banking services, it is necessary to strive to simplify the tools for their use (Karjaluoto, 2015). Complex interface and navigation in the application reduce incentives to use it, devalue the benefits of the service, and increase potential risks in the eyes of the consumer (Kim, 2009). In such a situation, banks are required to have the most convenient and simple mobile application interface adapted to the small screen of a mobile device. As well as technical and informational support for users.

The promising directions for the development of such a product, its comparative advantages as a channel for access to a bank account, communication of clients with a bank through social media, and cross-selling of payments, deposits, and credit products of a credit institution, are becoming clearer (Akimova & Lysachok, 2018).

3 Methodology

3.1 Research Design

When it comes to the collection of primary data different types of research designs can be applied to gain the required input. These three types are qualitative, quantitative, and mixed methods (Creswell, 2014). Quantitative and qualitative analyses are complementary methods that can be combined in research to obtain comprehensive results. The quantitative method alone, as the name implies, involves numerical observation. Qualitative data is any data presented in numeric formats, such as statistics, percentages, etc. The qualitative analyses in the broad sense of the word mean such a character of sociological research, in which the main emphasis is placed on the theoretical resources of sociology, individual experience, observation and intuition, and logical analyses of categories and concepts, historical comparisons, the use of personal and official documents. Finally, the mixed-method approach is a combination of the

qualitative and quantitative approaches and is assumed to deliver a more in-depth understanding than the two methods alone (Creswell, 2014; Matthew & Ross, 2010).

The selection of the appropriate research method can be challenging for the researcher. The fate of sociological research, the significance of its theoretical and practical results depends on its theoretical foundation, as well as on the successful choice of working hypotheses and system of empirical indicators. A poorly grounded research leads to insignificant theoretical conclusions, ineffective practical results and often does not justify the significant material resources spent on its implementation. For these reasons, every research problem requires a different design to deliver an accurate result. Only the researcher can decide what scientific approach he/she would use for their study, to achieve planned goals.

Another important aspect of the study is research ethics. The research ethics of sociology lies primarily in the observance of general scientific principles that are necessary for research in any science. This is the main task of the researcher to define by values and principles of two parties (the researcher and participants of the study), which going to be treated respectfully and used for data analysis. For instance, at the level of collecting and processing the information, it is necessary to describe the methods of collecting information, which implies the justification of the chosen methods.

Particularly this paper sticks to a qualitative research design, because especially this market research method focuses on obtaining data through open-ended and conversational communication (Bhat, 2012). Basically, qualitative research looks at specific people in specific situations. Such aspects would perfectly suit our research objectives, rather than use a quantitative approach. This study considers the everyday interaction of people with the product, which is investigated from the point of view of social or cultural discourse (norms, patterns of behavior, and cultural symbols). Moreover, interviews, as being the most frequently used method in qualitative research, are playing a crucial role in this paper, since they are responsible for obtaining the main information from

respondents, who are directly working or familiar with the area of our interest. Interviews are usually conducted one-to-one, to make the atmosphere unconstrained and prone to open conversation, if possible, in person or online.

In qualitative research, the process of collecting and classifying data is more open than in quantitative research, which makes this particular approach more user-friendly than the other. Furthermore, the research results can go beyond the hypothesis and format boundaries, which opens up great mobility (Cassell & Symon, 1994). Third, qualitative research is the identification of the roles of communicants, the physical context of the communication situation, modification of situational events that affect the interpretation of discourse (Thing-Toomey, 1984).

The most challenging aspects of conducting interviews are the procedures related to the process (Creswell & Poth, 2016). The choice of a particular type of interview by a researcher is determined by the goals and objectives of the research project. In this regard, in the practice of empirical sociology, there is a wide variety of interviewing techniques, which fit into dozens of classifications built on various grounds. Interviews are quite challenging to organize and realize, especially for a researcher that has never done this before (Creswell & Poth, 2016). Equipment is another important factor for a successful interview since it collects and records valuable information from a respondent for later analysis. The great ability of the researcher to predispose the other person to a nice conversation will allow the interviewer to ask all the necessary questions and what's most important, is to get answers to them (Creswell & Poth, 2016). The opportunity of the researcher to show competence in the topic will underline the prominence of the relationship between two participating parties in the interview process (Creswell & Poth, 2016). Given the special status of the interviewer as an active individual, who is interested in talking, it is also important to inform the other party about the goals and objectives of this event (Bhat, 2012).

3.2 Data Collection

Scientific research always starts from identifying the main goals and objectives. Afterward, the researcher looks for already existed information regarding the topic of interest and analyses these sources. These secondary sources provide a fundamental base for the future research of the investigator. Eventually, the researcher uses in his/her work the mixture of secondary and primary data.

The secondary data that was used for this particular paper, was gathered from official websites of banks, which took part in this study, Google Scholar, Research Gate, National Library of Ukraine, Modul University Library, National Bank of Ukraine, and many other online sources that could be easily founded in the bibliography section. Because of the topic content, a lot of information was found using numerical and statistical data, which brought certain complications of showing huge data tables in our specific paper. For this reason, some of that information is presented in charts, tables, or in a well-explained text form. Nevertheless, all types of sources used in this study are crucial for paper success. In terms of primary data, the researcher has collected this information through interviews with experts. Some of the individuals are directly contributing to the expansion of virtual banks in Ukraine, who have provided us with the latest news, the other people are the users of mobile banking, who gave us important feedback from the customer point of view. However, due to the current COVID-19 pandemic situation, it was not possible to organize the interviews in face-to-face mode, for this reason, the researcher met with all respondents online via Skype, WhatsApp, and other wired communication platforms. All interviews were either in Russian or Ukrainian language since all of the participants are from and in Ukraine. Nonetheless, the translation in English will be provided in the Appendices.

3.3 Interview Development

The goal of conducting these interviews is to better understand whether there is a pendulum swing happening from traditional towards the virtual banks impart due to COVID-19. The interview consists of 12 open-ended questions, where

each participant can give his/her personal opinion about the topic, to obtain a better insight on the subject. The first question asks for the permission of the interviewee to do the recording and later on the use of the information conducted. Afterward, all the formalities have been completed, the researcher proceeds to the main group of questions. The next two questions of the interview are designed to get to know the participant better, by asking the educational and professional background of a person. These questions are very essential for building a correct portrait of each participant because of their future answers. Interviewees who necessarily work in a banking sector will present a deeper understanding of the subject rather than other participants who have nothing to do with it. Nevertheless, the study needs to have the opinion of both parties. The main group of questions starts with a query of general knowledge of virtual banks by the participants and their experience with them. It is followed by the sub-question stated as follows: “How do you think the banking system will develop in the next 10-15 years?”. It is also crucial for qualitative research to know how and why participants think so about different aspects of the study. The main question and its sub-questions seek to discover the fact whether there is a current trend for digitalization, which also appeared to be in the banking industry of Ukraine. The following question is phrased: “In your opinion, can a current COVID-19 pandemic create a situation where people are looking towards virtual banking? Yes/no explain...”. It combines the two main conditions of the work, which are the COVID-19 pandemic and the operating banking sector of Ukraine during that time. The next question asks “In your opinion what are banks doing or should be doing in the virtual banking systems to protect their customer or clients to ensure banking trust?”. Through this question, the participant will be able to give his or her opinion regarding the security of online money; why certain people trust or do not trust neo banks, and what should be done about it. The next question is followed by the sub-question, that sounds like: “Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?”. This is the continuation of the previous question about consumer trust, but more focused on rational thinking and decision making of their potential capital. The

last two questions are specifically related to the region of Ukraine and talk about the long history of the financial culture of the country and what most interesting, display people's concerns about the constantly changing financial situation in the market. More precisely, the first question sounds like this: "Due to banking licensees of traditional banks being revoked, how does this create confidence or lack of confidence to invest or bank with virtual banks?". This question will only be familiar to Ukrainian people, who surely know or even worse, were themselves the witnesses of how the large banks, at the first glance, unexpectedly go bankrupt and do not pay their money to all of the depositors. A very important question to understand the thinking and mentality of the young and older generation and also see what priorities they put in front of them by looking for the right bank. The last question of the interview points out the personal preferences of people to invest or not to invest in virtual banks and their stimulus to do so. This question is phrased as follows: "Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?". By being the last question of the interview, this question plays a double role in understanding the topic. First, it tells us the consumer's encouragement of putting their life savings in mobile banks rather than in traditional ones. Second, the researcher clearly demonstrates people's way of thinking about where they would invest their money, which establishes a deep and qualitative understanding of the problem.

4 Data Analysis and Implementation

A total of 12 interviews were conducted during this study with members of the banking industry as well as just the regular bank users in Ukraine. The researcher specifically tried to diversify the sample size, by including participants of different gender, ages, educational level, and diverse work experience. The graph below demonstrates the respective percentage for both groups (male and female). It might seem that there are more male respondents than female ones, but the chart provides a clear situation within the banking male-dominated sector.

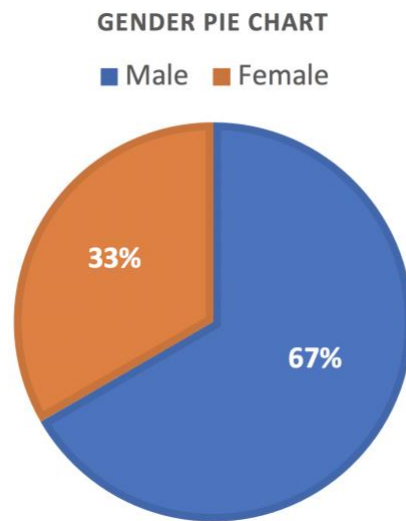


Chart 5: Gender Pie Chart

Source: Author's own

In this section, the researcher determines to provide a visualization of all the interview processes that have taken place. The histogram below, for instance, provides an overview of all age groups that participated in this study. It is very important to outline the difference in the maturity of the respondents because it directly correlates with the results that have been found. Three of the candidates were between the age of 18 and 23, the majority of the participants (four in total) were between 23 and 35, the other three were between 35 and 50, and only two of them were older than 50 years old. This diversity in age groups has resulted in very interesting dependences from the interviewees.

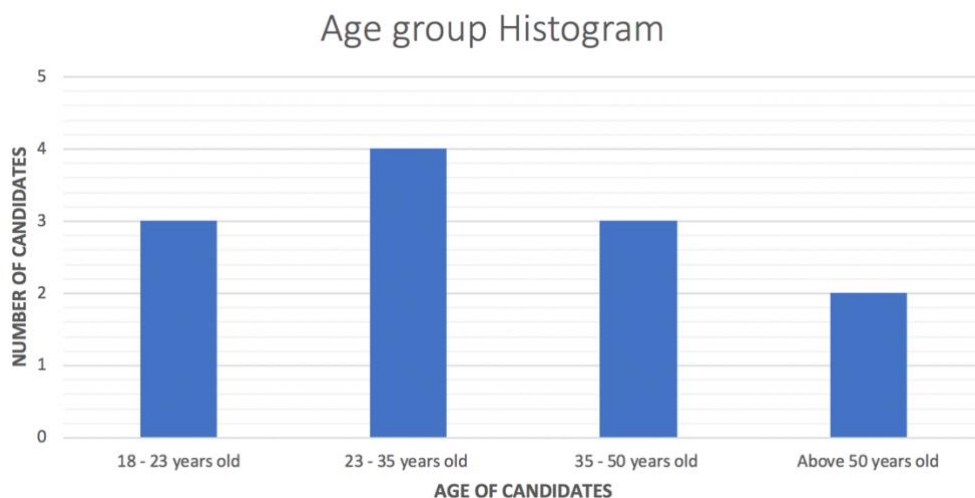


Chart 6: Age Group Histogram

Source: Author's own

It is also crucial to mention that the educational background of the respondent plays a big role in the data analysis section. Since the result are directly based on the answers of the respondents, the deeper the knowledge they have in the subject, the better results we will get. But at the same time, to see the real image of what is happening in the banking system in Ukraine, it would be fair to talk with different people with different work experiences.

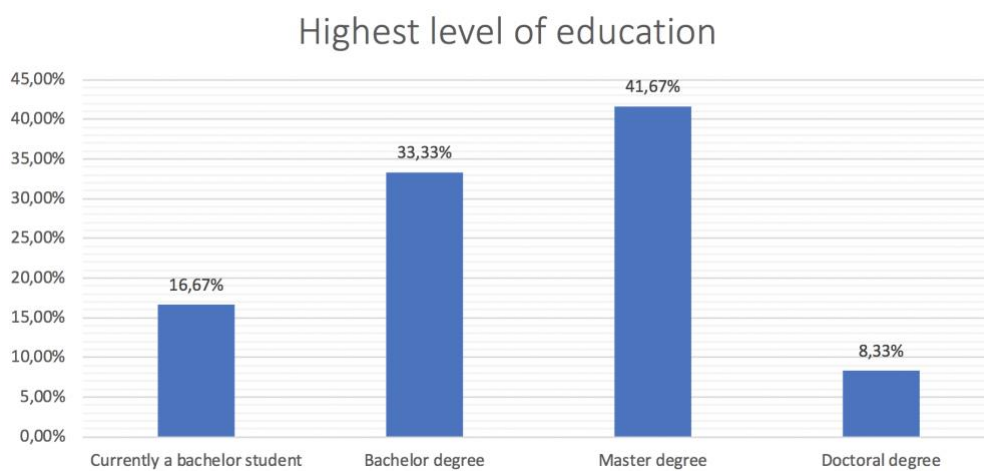


Chart 7: Highest Level of Education Histogram

Source: Author's own

As we can see on the chart above all of our participants have their educational backgrounds on different levels. Three of them or 16% of the respondents are still students and are currently obtaining their Bachelor's degree. Four people or the 33% of the respondents already have their Bachelor degree, where the majority of 41% of the respondents have completed both Bachelor and Master degree in different fields of study. And there is only one respondent or 8% of all respondents is received the highest academic level following the course of study, which is a Ph.D. or a Doctoral degree.

The researcher approached individuals from the banking industry and individuals outside form it. This way the study is not biased and includes different viewpoints. Some of the participants have been working in the industry

for more than 20 years, some are just started. In other words, participants were specifically selected to receive varied and accurate information.

The diagram below is a ‘‘Word cloud’’ or ‘‘Tag Cloud’’ that visually represents the most common words, that interviewees used in their responses to the researcher’s questions. Tags are usually single words and the importance of the tag is shown with font size color. This format is useful for quickly grasping the most important terms and determining their relative importance. The larger the term, the more weight. This particular format is widely used for a qualitative study since it demonstrates the understanding and the very essence of research.

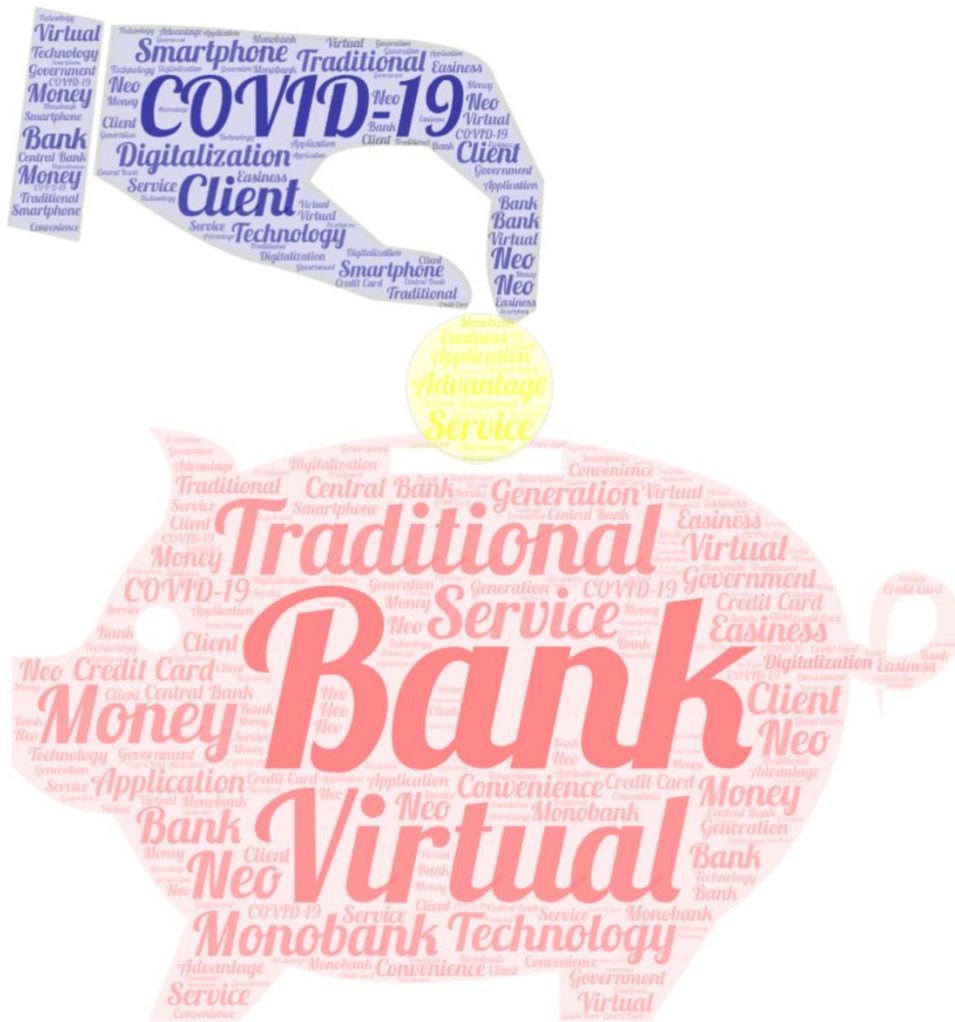


Chart 8: Word Cloud

Source: Author's own

For example, by taking a look at our word cloud it becomes immediately apparent that the most frequently used word in all interviews was the word, bank. This is not surprising, because the whole study is based on the comparison of traditional and virtual banks.

The researcher purposely decided to use the piggy bank for this word cloud, because it symbolizes the money that all people are trying to save. And the upper hand with the biggest word COVID-19 on it illustrates the risk that people face when storing their money in a traditional or a virtual bank, especially during the pandemic time. The format of a word cloud instantly enables us to recognize the critical words, the keywords, that appear in the study.

The first two questions that were asked during the interview process, were about a person's educational background and work experience. These two questions are designed to get more familiar with a particular participant as well as to find out about a person's life and career. In this study, the researcher applies the same approach as many companies when they are searching for a new employee for a job. If the person has a good level of education and a diverse list of work experience, he/she is more likely to give the research the right information. However, this is not always the case.

After a careful analysis of all twelve interviews, it was noticed that the majority of participants of this research identifies the technological development and the era of digitalization are the main aspects of the popularity of virtual banks. Many of them mentioned that the current COVID-19 pandemic is also most likely caused the shift from traditional towards the virtual banks, or at least had stimulated this shift.

“When we speak in terms of people then yes. A lot of people decided to spend their money on banking cards because it is easy, contactless, and safe. They probably got afraid of Coronavirus, and are trying to stick to all safety regulations. But still, the main reason for them to use online banking is because of the app itself. Very nice and clear information of all your transaction on your phone, isn't cool? I would say this is the combination of

both the COVID-19 and the technological change. The current pandemic has just stimulated this shift faster than we planned.” (Male, Interview 8).

“Yes, significantly. My personal example can be used to explain this question. I was always using cash before the pandemic, though I had bank cards, after it started, everyone asked to be cashless and I found out how convenient are virtual banks, especially Monobank in Ukraine. There are all options that a person might need: convert money in any currency, easy transfer of money, discounts with bank partners, and cash-back. After I started using that bank, most of my friends did the same.” (Female, Interview 11).

However, not all of the participants agree to the fact that technological change in combination with COVID-19 has stimulated the shift towards virtual banks. Regarding the virtual banks themselves, some participants showed their unconsciousness about the main topic, and some provided arguments for traditional banks, stating that virtual banks have nothing revolutionary in their business idea and that they are out of place.

“I don’t think so. Why would it change? I personally don’t think that COVID-19 has played a dramatic role in the banking industry.” (Male, Interview 12).

“If we take a look at traditional banks today, they have all implemented online banking services for the convenient use of their customers. And they provide the same features that virtual banks have. The fact that the pandemic has affected people’s ability to spend as before, then yes. But in terms to switch to virtual banks, then no.” (Male, Interview 9).

Nevertheless, when the researcher asked the question about how the banking industry will develop in the next 10-15 years, most of the participants said online. And this is where we have a paradox here. When the respondents talk about the convenience of online banking or the application, which allows easy transfer of money, they all glad that this technology exists. But when they see

the problem that might arise with their personal account, they prefer to have a physical location with professional employees where they could come and resolve all of their problems. While everyone unanimously says that the future belongs only to virtual banks and online money. So, the right question would be, where is the balance between these two?

“I am certainly not an expert in this area, but it seems to me that everything will go online, even banking. It is really convenient when your bank is on your phone and you don’t need to go anywhere.” (Male, Interview 1).

“It did not change much over the hundred years, so I do not think so it will change much in 10 years. If you look, the bank’s service is always the same, everywhere. The only difference is rates, customer service, and your personal experience with a particular bank. I think today nobody goes into a specific bank only because it was operating for more than 50 years. We go into a bank where we think we will get a better service and receive some advantage over the other bank. So, nowadays it is all about attracting new customers and try to hold them as long as possible.” (Female, Interview 2).

“This is a hard question. Let me think about it. Because it is getting harder and harder to transfer big amount of money from one bank account to another one, because bank requires a lot of different documents about the origin of money and the tax payment information, it seems to me that banks in the future will be even more strict and demanding from their clients.” (Male, Interview 6).

The researcher also draws attention to the details that respondents mentioned about what services attract them to choose one bank over the other one. Moreover, the researcher had prepared a separate question about what banks are doing or should be doing to protect the customers, but some of the participants already mentioned a few factors that they think are important. Among those are customer service, the easiness of money transfer, and

favorable deposit conditions. This means that people do not really bother which bank to choose. The only fact what matters for them is terms conditions. Since virtual banks do not have physical branches, meaning that they have fewer operational expenses, they can afford to offer better terms than traditional banks.

To find out whether the participants trust online banks more than the traditional banks or the other way around, the researcher came up with the question about their personal choice. The question sounds like: “Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?”

“I do not use online banks and do not see the need for this.” (Male, Interview 6).

“I see no reason not to trust modern banks, including online and traditional ones. I think that this is the task of the government to protect people, its citizens, from counterfeit banks. I personally have an account in both banks, in PrivatBank, and O.Bank. And I am quite happy with this combination.” (Female, Interview 2).

“Absolutely. Since virtual banks are the same as traditional banks in a way of a bank as an institution, they also operate under the Central Bank licence and are obligated to follow the rules like any other banks. I do not see any problem, not putting my life-saving in Monobank or any other virtual banks in Ukraine. The question here is: do you trust the financial system as a whole? But this is already a different question.” (Male, Interview 8).

The answers provided above confirm the existence of different opinions among the participants. The representative in interview #6, makes it clear that he does not use digital bank services. On the other hand, interviewer #2 and #8 speak positively about the use of modern neo banks. And it would be fair to say here that such answers are the majority. This underlines the importance of

interviewing people with different backgrounds and knowledge about mobile banks, by getting various answers to the same question.

The researcher notices that a few participants started to comment on digitalization processes that the government in Ukraine currently implementing. Especially the app “Diya” that the state develops to simplify multiple bureaucratic processes so that people can resolve their questions regarding the authority online. They saw it as a trend for transformation and compare it to the appearance of digital banks. The researcher later identifies that there is no real connection between these two events. It just happened that these two things coincidentally have occurred.

“Ukraine is currently becoming a more digitalised country since the Ukrainian government created special app «Diya» thanks to which all official documents are on the phone. So, the government tries to persuade people that the digital system of Ukraine is safe.” (Female, Interview 11).

“I think that the government plays an important role in people’s awareness for many questions. If we take, for example, public services that have always been a huge confusion and a long-term procedure, thanks to the new app “Diya”, this action become much easier and more convenient. The state serves as the main example for the people. When people get used to all actions online from the beginning, it will be not difficult for them to get used to the online banks.” (Male, Interview 10).

Continue the question regarding the trend for virtual banks, one of the participants mentioned western countries. His main point was that all the new trends that exist currently in Ukraine, are coming from western countries. His main argument was that, since this or that business idea worked there for a couple of years, it should automatically work in Ukraine.

“In my opinion, people in Ukraine are still poor to fully trust the banks and keep their money only there. I know that in Europe, people are trying to get rid of the habit of paying cash, but in our country, people prefer to feel the currency.” (Male, Interview 5).

The researcher considers this to be a very objective point and worth reasoning. Many successful business ideas in Ukraine are indeed taken from western countries. But it would be very foolish to believe that just copying the business idea from one country will necessarily develop in another one. Factors such as economical sustainability, cultural mentality, and market readiness play a critical role in shaping the future success of the idea.

Another important factor that worth mentioning is how the Ukrainian Central Bank (NBU) back then tried to recreate the confidence of the banking industry so that people start investing their money in banks or virtual banks. Surprisingly, some of the participants found the action of the NBU damaging rather than helpful. But some people believe that the government did not have any other choice of not revoking the banking licensees from dishonest financial institutions.

“I still don’t get why the government, in a face of the Central Bank (NBU), did not do this clean-up of insolvent banks earlier. As an economist, it was obvious to me that Ukraine is oversaturated with dishonest and fraudulent banks. Of course, after careful work carried out by the Central Bank, the financial sector has obtained an order and transparency, but we clearly have lost the confidence of people in the national banking sector.” (Male, Interview 8).

“We must understand that this was an inevitable process. The state, sooner or later, still had to remove the insolvent banks from the market. Yes, we have people who suffered. Yes, we have some unpaid deposits. But people choose

these banks themselves, nobody forced them to invest in these dishonest banks. Of course, due to such events, the overall confidence in banks has suffered. But this could happen with any bank, even with an online bank.” (Male, Interview 12).

The last question that the researcher posed, was regarding the overall economic culture of Ukraine. To be more precise, the researcher wanted to find out whether there is one common, traditional way of how people in Ukraine deal with their money. In other words, to explore what most people do with their money. Do they keep them at home or they invest or just keep it in the bank account? For this reason, the last question sounds like this: Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?

“I think it depends more on the person. It is the same question if you would ask me why some people buy electric cars rather than normal cars. Only because people feel this way. Probably the younger generation feels closer to the ongoing progress, so they primarily support various technological projects like Monobank or Rocket (food delivery). But trust me, soon everyone will use such applications. Even the older generation understands that it is more convenient and more effective than they used to have in the past. So, we are slowly going there.” (Female, Interview 1).

“In my opinion, people in Ukraine are still poor to fully trust the banks and keep their money only there. I know that in Europe, people are trying to get rid of the habit of paying cash, but in our country, people prefer to feel the currency.” (Male, Interview 5).

“Economic culture will be built when people will have money. In the meantime, people are thinking about how to save the last penny, and not about where they should invest it.” (Male, Interview 6).

Even by taking a look at the three responses above, the study immediately displays a mixture of positive and negative attitudes. It is concluded that the banking industry in Ukraine is still weak in comparison to the other countries and especially to the neighbourhood countries.

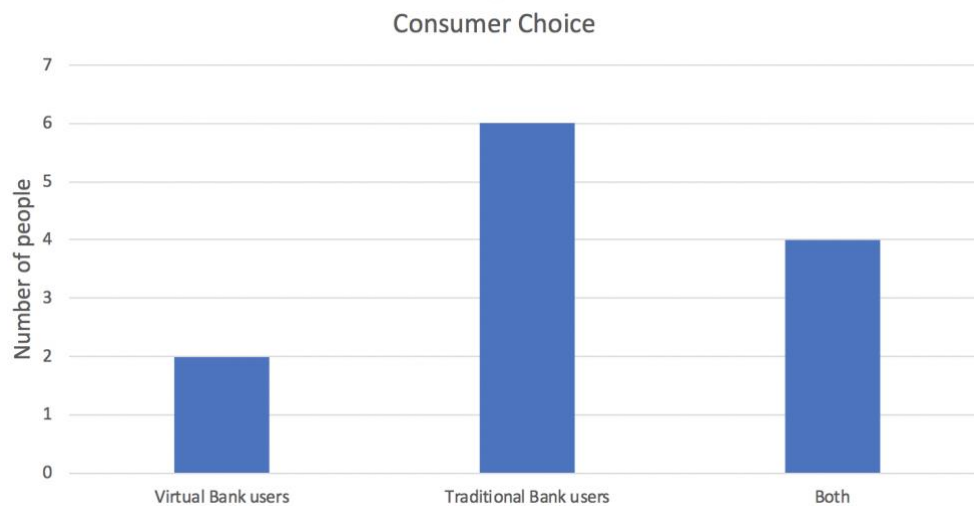


Chart 9: *Consumer Choice*

Source: Author's own

The chart above represents the results, which were found out from the interview processes, and specifically demonstrates the choice of the participants of selecting either the virtual bank or the traditional bank or the combination of both.

From 12 interviews that have been conducted 50% of the respondents, which means six people, are continuing to use the traditional bank as their main financial institution. Only two respondents made it clear that they fully switched to the virtual banks and stopped using the traditional one. And remaining four people are using the combination of both, where they do one sort of services in one bank, and other services at the other bank. Here are some statements that support the statistic.

“I will do the mix of both, as I have right now. My personal experience of using the virtual bank tells me that the virtual bank is more acceptable when

you are playing around with e-wallets, transferring money, or paying for certain bills. But when it comes to depositing money and receiving the interest from it the traditional banks are still better for now.” (Female, Interview 7).

“Probably I have this old habit of not putting all of my money into a bank. Some of it should be in the bank only for paying the urgent bills, but the rest I prefer in cash.” (Male, Interview 5).

These responses give us a clear picture that virtual banks are becoming more popular and more people prefer to have both accounts in a virtual and in a normal bank. However, we can still see that not many people decided to completely switch to digital financing, meaning that there is still probably a lack of knowledge that people have about new technology or there is a lack of confidence by customers towards the virtual banks.

5 Discussion of findings

In this section, all the above findings will be reviewed and discussed. The majority of participants acknowledge the fact that they were using online banking before the appearance of neo banks. Thus, for them, it was problematic to understand the whole concept and more importantly the advantage of using modern mobile banks. Nevertheless, the explosive development of the Internet over the past ten years has opened up new business opportunities and stimulating the online commerce and banking sector. Many of the participants have mentioned that the Ukrainian banking industry currently has the most active stage of its development in the era of digitalization.

The Coronavirus has accelerated the digitalization of the banking sector according to the opinion of the participants. In their opinion, at present, Ukrainian banks are among the world leaders in terms of digitalization of their services and by the number of virtual banks, where the use of them is increasing rapidly, outstripping global indicators. And the most important thing that is unique in this whole situation is that Ukraine has much later

begun to implement all modern technologies that exist today and still managed to be of the world leaders in this area.

Participants voiced that the banking system of Ukraine is highly dependent to the political situation within the country. As soon there is something happens in the political arena, the banking sector, being very sensitive, quickly reacts to them in a positive or a negative direction. The small presence of international banks within the country demonstrates the unstable and risky position of the financial market. The National Bank of Ukraine (NBU) after the sweep of the insolvent banks is trying to restore the confidence within the people.

Nevertheless, the presence of the free market economy, plus the big potential of the country's productivity, inspire investors to make this risky move.

Most of the questions in the interview were specifically designed to find out what services or actions the banks should implement to maintain their clients. Some of the respondents mention the favorable account conditions, lower interest on loans, and high returns on deposits. Other participants find it important to have good customer service that would help them anytime 24/7. But they all agreed on one thing that the easiness and convenience of the mobile application, which the bank developed for its customers, is a key factor for the bank's success.

The last finding that was uncovered through the interview process, is the dependency of the national currency Hryvna to the US dollar. Despite the fact, that the US dollar is the second unofficial currency of the financial market, is widely used among all levels of society, it is also the main currency from the IMF (International Monetary Fund) and the World Bank financial support Ukraine receives. The argument that supports this finding is that any disruptions that cause the US dollar to fluctuate, automatically change the Hryvnia's exchange rate.

It is concluded that the banking sector of Ukraine feels supported by other EU countries and by the USA, Ukraine's main financial partner. The money provided by these countries went to rebuilding the country's infrastructure as well as on the fight with the COVID-19 pandemic and to carry out state reforms to improve the efficiency and operability of the country. The presence of this support and capital provides confidence to the country in its further development. Thus, all the weaknesses of the banking sector and many accumulated and timely unresolved internal problems during 2014 – 2016, resulted in a banking crisis, which only now seems to be finished. But the resumption of economic activity, a stable exchange rate, a decrease in interest rates on deposits, the return of funds from the population to the system, and the stabilization of the level of bad debts make it possible to look at the development of the banking sector with optimism, based on the answers of the respondents.

6 Conclusion

The coronavirus pandemic and quarantine have caused an economic crisis unprecedented in the last century. Closed shops reduced the demand for goods, and the demand for some services has decreased by almost 100%. According to the latest calculations, presented in the study, of the World Trade Organization, the drop in international trade due to COVID-19 this year could be up to 18,5%, which will hurt export-oriented economies.

The coronavirus crisis highlighted the need to strengthen Ukraine's social protection infrastructure and develop a system of payments to the population, the World Bank emphasized. According to the latest findings, 60% of Ukrainians who may find themselves below the poverty line do not receive social assistance under any of the programs operating in the country.

However, one sector of the country's economy was particularly not affected by the coronavirus, or affected but not that much compared to other sectors, and has quickly adapted to the new reality. This was the banking industry of

Ukraine. The financial impact of the pandemic is manifested in the decline in bank profitability compared to the last year, but only in a few percent. Due to the worldwide recession and quarantine, many borrowers have lost some of their income and some of them even all of their money. In response, banks are massively restricting loans and accelerating the formation of reserves. Nevertheless, the main lesson of the year that banks have learned is that the reforms were not in vain. Due to the tightening of supervision and many difficult requirements – to capital, to management, to various internal processes, banks have met the crisis with dignity.

The macro-financial stability, as well as the cooperation with IMF, are the key factors for sustainable growth in the banking sector in Ukraine. Without this, it will be difficult to overcome the stagnation in lending and develop a business within the county. Furthermore, the banking market itself is rapidly changing. Traditional banks need today to compete not only with each other but also with virtual banks and fintech.

Modern digital banking technologies are opening up new opportunities for fintech companies to deliver better services to their customers in a safer, more reliable, and affordable way. Thus, such fintech companies retain a competitive advantage over other competing fintech and banking industries. These new technologies allow you to quickly adapt to change, introduce new products, and compete.

Opening a bank account remotely provides quick access to services and superior customer service, while pervasive data and artificial intelligence help digital banks deliver greater personalization and customer satisfaction. According to the results of the study, it was found that the above-presented services are the key factors why some people have considered switching from their traditional banks towards fully digital banks.

There is a positive dynamic in the number of neo banks in Ukraine. First of all, legal changes began at the legislative level, particularly the creation of the Ministry of Digital Transformation by the government, which among other things, regulates the issue of virtual currencies and digital technologies. Second, most respondents agree on the importance of online banks and think that this will be the future of the banking industry. Furthermore, even the current state of digital banks and the convenience and efficiency of their applications already much higher than by traditional banks. Third, the implementation of this experience in Ukraine will improve the investment climate, in particular in the IT-sphere, the financial sector, and will become an incentive for small businesses to come of the shadows. And finally, the success of the company always depends on two things, people who work in a company and new technologies that help them be innovative. New technologies change the world, and fintech technologies change the banking sector from the inside out.

7 Limitations, Recommendations, and Implications

7.1 Limitations

There was a considerable number of limitations made even before the study has begun, as well as others were disclosed along the way. Like any scientific research, this study presents already existed knowledge about the topic and also adds the researcher's personal findings. The author of this thesis followed the qualitative approach, which means that the data for this study was gathered from the interview processes with experts from the banking industry of Ukraine, and with regular customers.

First of all, the study was conducted during the COVID-19 pandemic, which itself entailed certain restrictions. Countries all around the world have declared quarantines to minimize the risk of people getting sick and thus forced them to stay at home. These changes have definitely influenced the way how the interview was conducted. Instead of the researcher personally interviewing

each of the respondents in Ukraine, due to the above-mentioned reasons, all interviews had to be conducted via the Internet, online.

Second, only a limited number of sources were available online and offline about the COVID-19 and its influence on the banking sector of Ukraine, which complicated the research process. Nevertheless, this shows the uniqueness of the topic chosen by the author, and the title itself displays the importance of this study for future investigation.

Third, as soon as the topic was chosen it was notable that there would be challenges regarding the interviews. In total 12 interviews were conducted and even though the researcher tried to make the sample size bigger, it was difficult to find the right people for the interview due to the distance itself and the remote work model that many firms implemented during the pandemic time. However, the sample is still well balanced and includes people of different ages, different gender, position in the banking industry, and educational background.

Finally, by conducting these interviews, the researcher had to manage the number and the quality of questions, that they reveal the answers that the study was looking for. The researcher had to make sure that all respondents have the right knowledge and understanding of the topic and would be willing to share their experience and insights into the industry to help the investigator to finish his research. Another big limitation of the study could be the language barrier. All of the respondents decided to do the interviews in Russian or Ukrainian language, however, English was proposed. Although all interviews were translated, some details or thoughts can be lost due to the translation or interpreted in a slightly different way.

7.2 Recommendations for Future Research

The switch from traditional towards virtual banks can not only be happening due to the COVID-19 pandemic but also due to technological progress. The main task or the idea behind already conducted interviews was to understand people's perception and their affection towards new, online banking as a whole. Since the issue is so complex to understand and evaluate, the researcher should

not only be interested in people necessarily from the banking industry, but also from the other fintech companies, or even anybody who is contributing to the financial market of Ukraine. Some several laws and policies have been designed by the local government that should regulate this industry in the future. So, it would be nice to see the comparison between the current state of the virtual banks and the future state them and analyze whether these changes are actually were efficient and really needed. Another aspect is that there is not much available literature on this topic available and using the official website of the NBU (National Bank of Ukraine) for a financial statistic in the future is highly recommended. It is also suggested to make use of a survey that would include a greater sample size to find out how other people feel about the digitalization of banks. Finally, the mix-method approach for later studies is highly recommended, combining the qualitative and quantitative ways to get a deeper understanding and bigger participant number.

7.3 Implications

This research paper focuses on the banking industry of Ukraine. It analyzes the transformation of traditional banks towards virtual banks in this region. All second-level banks, which currently do not operate even online banking, could strongly benefit from this research study and see the potential of neo banks, which they could start developing. Another benefiter could be the NBU (National Bank of Ukraine). This paper could be published on the official website of the NBU, in the section of News of the Industry. There two other possibilities how this particular study can be shown to the public. The first one is through the Academy of Science, which is an educational organization in Ukraine, which set up different academic competitions among schools and universities, where the best students are getting chance to present their studies to the whole country and also win a financial price. And the second possibility is a state-owned financial newspaper called “FinanceUA”. The researcher can provide its work to the publisher and point out the importance of this study. Since the newspaper is controlled by the government, they are interested when

someone highlights new events in the country, and even more someone independent like a student or volunteer, who has no commercial benefit from it.

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Appendices

Appendix 1

Interviews

A = Author

P = Participant

Interview 1 – Female

A: Can you please tell me about your educational background?

P1: I am a current student at Shevchenko National University with a degree in International Economics.

A: What's your professional experience?

P1: I worked for one year in my father's company, which is a printing company. And I also had an internship at the TV channel called "Hovyi" for about three months, and now I am working there as a junior stage director.

A: Are you familiar with virtual banks? And what do you know about them?

P1: Well, it's not that I'm very familiar with them, I just use one, I guess. I downloaded the Monobank application to my phone, entered all the required data, received my card in less than 24 hours, and now, in most cases, I don't pay with my card even though it is in my wallet, but I use Apple Pay.

A: How do you think the banking system will develop in the next 10-15 years?

P1: I am certainly not an expert in this area, but it seems to me that everything will go online, even banking. It is really convenient when your bank is on your phone and you don't need to go anywhere.

A: Do you think there is an increase or decrease in the number of users of virtual banks?

P1: *This is a good question. I think that the number of clients of virtual banks is growing so much every day. If we take all my friends, nearly 90% of them already use modern neo banks on their phones. The statistic speaks for itself.*

A: Can the creation of banks like Monobank in Ukraine be considered a trend?

P1: *I cannot say that this is probably a trend in Ukraine, it is most likely a global trend. The world is going to the point, where we try to simplify things. The simpler - the better. Now many businesses use this particular model to be successful. And what most importantly, people like it. We see how Uber or Airbnb works. These are genesis business models, and that what most probably banks are also trying to do.*

A: In your opinion, can a current COVID-19 pandemic create a situation where people are looking towards virtual banking? Yes/no explain...

P1: *I never thought about that in this way. But you are probably right. We can clearly see that many restaurants and shops being closed during the quarantine, which obviously affected their financial situations. There is apparently the same scenario for banks. Many of them, I know, did still work remotely. Maybe since the traditional branches were closed, some people decided to use mobile banks. This is how I think.*

A: In your opinion what are banks doing or should be doing in the virtual banking systems to protect their customer or clients to ensure banking trust?

P1: *For me personally, the main thing is the convenience of using the application is the number one priority. Everything should be done clearly, so*

that I can easily transfer my money to different accounts, withdraw my money with a minimum commission, see general monthly and quarterly statistics, and many other cool features. If more banks will do it as nicely and beautifully as it did Monobank, then people will use a different bank and there will be a big competition.

A: Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?

P1: *At the moment I have two banking cards, one from PrivatBank and one from Monobank. I do not see any difference at all where my money will be located.*

A: Due to banking licensees of traditional banks being revoked, how does this create confidence or lack of confidence to invest or bank with virtual banks?

P1: *Ohh, this is already a complicated question. To be honest, I do not follow the news in the banking industry, so I do not know much about it. With the banks I use now, I feel pretty confident.*

A: Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?

P1: *I think it depends more on the person. It is the same question if you would ask me why some people buy electric cars rather than normal cars. Only because people feel this way. Probably the younger generation feels closer to the ongoing progress, so they primarily support various technological projects like Monobank or Rocket (food delivery). But trust me, soon everyone will use such applications. Even the older generation understands that it is more convenient and more effective than they used to have in the past. So, we are slowly going there.*

Interview 2 – Female

A: Can you please tell me about your educational background?

P2: *At the moment, I am finishing my master's degree at Mogilyanka National University, specializing in biochemistry.*

A: What's your professional experience?

P2: *I don't really have much work experience, I have just done postgraduate studies in my University, which also included teaching younger students, and for this, I got paid. Additionally, I am a freelancer. I am good with photoshopping pictures, so I retouch pictures online.*

A: Are you familiar with virtual banks? And what do you know about them?

P2: *Of course, I am familiar with them, they are popular right now. I and many of my friends are using them every day. For example, I have an account in O.Bank because, in my opinion, it has a better interface and more attractive saving rates. But at the same time, my friends use Monobank and they are also happy about it.*

A: How do you think the banking system will develop in the next 10-15 years?

P2: *It did not change much over the hundred years, so I do not think so it will change much in 10 years. If you look, the bank's service is always the same, everywhere. The only difference is rates, customer service, and your personal experience with a particular bank. I think today nobody goes into a specific bank only because it was operating for more than 50 years. We go into a bank where we think we will get a better service and receive some advantage over the other bank. So, nowadays it is all about attracting new customers and try to hold them as long as possible.*

A: Do you think there is an increase or decrease in the number of users of virtual banks?

P2: *Are we taking worldwide or in Ukraine? Okay, both. I am not sure about the other countries, but if we are talking about Ukraine, there is obviously an increase.*

A: Can the creation of banks like Monobank in Ukraine be considered a trend?

P2: *We cannot say that this is the only success of Monobank and they are the only good guys. I am more than sure that they have probably copied this idea somewhere from the west, as it is always done in our country. Monobank was the first one to enter the Ukrainian market of neo banks, so they are definitely the leaders. But we are witnessing a picture right now where just in the last 2 years, approximately from 2 to 4 new online banks appeared in Ukraine. Therefore, answering your question, yes, there must be a trend here.*

A: In your opinion, can a current COVID-19 pandemic create a situation where people are looking towards virtual banking? Yes/no explain...

P2: *We've probably already gone through the worst time of the pandemic, and as we can still see the traditional banks did not go anywhere. It was clearly harder for them to survive during that time than for mobile banks since the second one does not have any physical branches, nevertheless, they coped with this task. It seems to me that the main advantage of online banks are their convenience and simple application. I use an online bank every day and I am super happy about it, so I do not need to go anywhere or to call someone to fix this or that problem. Absolutely everything can be done through the app on your phone.*

A: In your opinion what are banks doing or should be doing in the virtual banking systems to protect their customer or clients to ensure banking trust?

P2: Well, we are all worried about the safety of our money, particularly when we are talking about online banks. To be honest, with neo banks, I do not know where my money is physically located. As a user, it is very convenient for me to put money in an ATM and have it on my account within a couple of seconds. And of course, I want to believe that this process is very safe and nobody could still money from me. For customers to remain loyal to their bank longer, the bank must show their adherence to customers through special offers, some kind of bonus system, or other programs. In this way, they could increase the confidence of their customers.

A: Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?

P2: I see no reason not to trust modern banks, including online and traditional ones. I think that this is the task of the government to protect people, its citizens, from counterfeit banks. I personally have an account in both banks, in PrivatBank, and O.Bank. And I am quite happy with this combination.

A: Due to banking licensees of traditional banks being revoked, how does this create confidence or lack of confidence to invest or bank with virtual banks?

P2: I can't say anything about myself, but my parents, for example, were very worried about what was happening. They were afraid that the bank where they have their money might have its license revoked. But luckily, everything worked out well and the bank is still operating today. But of course, such information surely can affect people's relationships and trust towards banks. I know some people, who after the NBU's liquidation process of some financial institutions, moved their capital from the previous bank to another one, which statistically was more reliable.

A: Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?

P2: This is an interesting question. It all depends on the generation. As I have already said, younger users likely to lean towards online banks, due to the convenience, nice app interface, and other cool features. While for older people, the reliability and reputation of a financial institution play an important role. For this reason, they would most likely choose a traditional bank. Furthermore, it is much easier for older people to solve a problem that has arisen through direct communication with a bank employee rather than writing somewhere on the phone. As we can see the demand for both banks, we will see their presence for many years.

Interview 3 – Male

A: Can you please tell me about your educational background?

P3: I graduated with honors from the Moscow Institute of Steel and Alloys.

A: What's your professional experience?

P3: I am the founder and the owner of an insurance company in Ukraine.

A: Are you familiar with virtual banks? And what do you know about them?

P3: Yes, I am familiar with them. I know that an online bank functions just like any other bank, only it is in a smartphone.

A: How do you think the banking system will develop in the next 10-15 years?

P3: Banks have existed for many decades and will continue to exist. The question is, what will be the monetary unit, the currency itself? Today we are seeing a great demand for various cryptocurrencies, which in turn could also

be a global financial unit. But it will not be beneficial for the USA and all the other country's Central Banks, since they will not be able to control the amount of money in the economy.

A: Do you think there is an increase or decrease in the number of users of virtual banks?

P3: *Over the past two-four there is noticeable increase in the number of new banking applications.*

A: Can the creation of banks like Monobank in Ukraine be considered a trend?

P3: *Personally, I have no relation to the Monobank. But I know that they were the first ones to create an absolutely contactless online bank in Ukraine. Therefore, most likely they will be able to influence the future shape of the banking sector.*

A: In your opinion, can a current COVID-19 pandemic create a situation where people are looking towards virtual banking? Yes/no explain...

P3: *I have never experienced the need to pay with a card because most of the time I have cash with me. But when the quarantine has started, everyone immediately switched to banking cards due to safety measure or their convenience, I don't know. But the fact is that more people start to use this payment method instead of cash.*

A: In your opinion what are banks doing or should be doing in the virtual banking systems to protect their customer or clients to ensure banking trust?

P3: *I am not a user of any virtual banks. I don't see the reason why should I bother to create one. But from the outside point of view, the main*

disadvantage of virtual banks is their security or at least the need for explanation to people, where their money is located.

A: Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?

P3: *As I already said, I am not using a virtual bank. I prefer an old-fashion way.*

A: Due to banking licensees of traditional banks being revoked, how does this create confidence or lack of confidence to invest or bank with virtual banks?

P3: *All that has happened in the Ukrainian banking industry over the last five years, unquestionably affected the overall confidence in it and what's most offensive is that Ukraine has lost its already weak partnership with international banks, resulting now in only a few global banks, who are still risking and ready to play by the regional rules.*

A: Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?

P3: *I some way the banking industry is similar to the insurance industry, where people are not entirely happy to part with their money. It is our task to convince them that by investing money in us or a bank in general, first of all, they will protect themselves. And this is probably the hardest part of the Ukrainian market because the majority of the population in the country is still poor and they do not like the financial companies, having thoughts in mind that they will still their money. This is the economic culture that not only the virtual banks, but all the financial institutions should change.*

Interview 4 – Male

A: Can you please tell me about your educational background?

P4: I receive my Bachelor Diploma from the National Shevchenko University with the major in International Economics. Afterwards I graduated from the London School of Economics with a major in Interactive Marketing.

A: What's your professional experience?

P4: In 2005 I have found the IT company called "Fine Web", where later on I am only left as an advisor. In 2010 I worked as a Project Director at MasterCard in Warsaw, Poland. And from 2012 I have been an IT director of the PrivatBank. In 2015 after the Ukrainian Revolution I have been asked by the new government to create an online governmental platform "iGov", which was designed to fight corruption and arise the effectiveness of ministry work. And finally, in 2017 I and a group of my friends founded the first online bank in Ukraine.

A: Are you familiar with virtual banks? And what do you know about them?

P4: Yes, of course. I have been working in the baking industry for the last 15 years. And we have created one.

A: How do you think the banking system will develop in the next 10-15 years?

P4: It will be fully digital banks, in which there will be no branches and employees will be working from homes or working spaces, focusing not on people, but rather on their gadgets. We calculated that if we compare the bank today and three years ago, then about 50% of those decisions that were made by people today are made by machines. And in five years, we believe that we will be able to make about 80% of all decisions automatically.

A: Do you think there is an increase or decrease in the number of users of virtual banks?

P4: *In 2020, the number of bank branches across Ukraine decreased by 868 units, most of them in the eastern part of the country. The number of full-time employees decreased by five thousand people in the banking industry over the year. In the same year, the number of ATMs decreased by 1175 and amounted to 34.8 thousand at the end of December, according to National Bank. However, during that time 3 more online banks started operating in Ukraine. So, depends, how you will look at this question.*

A: Can the creation of banks like Monobank in Ukraine be considered a trend?

P4: *I would like to believe that.*

A: In your opinion, can a current COVID-19 pandemic create a situation where people are looking towards virtual banking? Yes/no explain...

P4: *Even though we are still a small bank on a national scale, we have managed not only to maintain the amount of profit compared to 2019 but also to achieve new goals. For instance, in 2020 we have managed to issue the biggest among of new credit cards, which is nearly 2,9 million total users. However, the pandemic showed its effect and the total amount of money spent in 2020 fell by three times compared to the previous year. So, we cannot be 100% sure that the COVID-19 pandemic has stimulated the development of online banks, but statistically, this information is confirmed.*

A: In your opinion what are banks doing or should be doing in the virtual banking systems to protect their customer or clients to ensure banking trust?

P4: *There are two main directions. First, we will focus on lending. When all the other banks focus on the payment business then we want to focus on*

lending, and lending to young people. Second, through the correct use of artificial intelligence and machine learning, we expect to build more efficient predictive models that will help us make better credit decisions. On the other hand, in this whole story, we add the beauty of the application, we add the same cat.

A: Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?

P4: 100% in Monobank)

A: Due to banking licenses of traditional banks being revoked, how does this create confidence or lack of confidence to invest or bank with virtual banks?

P4: Of course, as being a participant in the financial market, the news about any bank insolvency, cannot be good in the first place. We understood that our bank couldn't have any problems, because we are conducting an honest business. But as practice shows, everything is possible in our country.

A: Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?

P4: Let's look at this, this way. The more clients we have, the newer clients they will bring to us. There is a rational reason: our tariffs are more favourable because we do not have branches. We can afford a lower interest rate on loans and more - on deposits. There is also an emotional reason, why more people will come to us, how we licked the interface, what kind of cats we have in this interface.

Interview 5 – Male

A: Can you please tell me about your educational background?

P5: In 1964 graduated from the school in Dnipro, Ukraine. Afterward, finished the Kyiv Polytechnic Institute with a major in mechanical engineering. In 1992, I have obtained the degree of professor and academician of technical science. And in 2003, received the Doctoral Degree of Technical Science and became the Honored Engineer of Ukraine.

A: What's your professional experience?

P5: For 25 years I worked at the Artemov military plant and now I am teaching at the Kyiv Technical University.

A: Are you familiar with virtual banks? And what do you know about them?

P5: No, unfortunately I have no idea about them.

A: How do you think the banking system will develop in the next 10-15 years?

P5: The banking industry has always been one of the most vital sectors in a country's livelihood. Only a few understood that this is the industry that reflects the full potential and current state of the entire country. And more importantly, the banking industry sector is the source of people's wealth and safety. A lot of things have now moved to the Internet, most likely the banking industry will also move their one day and money will be digital.

A: Do you think there is an increase or decrease in the number of users of virtual banks?

P5: Regretfully, I cannot tell you anything about it.

A: Can the creation of banks like Monobank in Ukraine be considered a trend?

P5: I do not have good baking knowledge, and I honestly do not have an idea who are the Monobank.

A: In your opinion, can a current COVID-19 pandemic create a situation where people are looking towards virtual banking? Yes/no explain...

P5: Perhaps I can answer this question. The current COVID-19 has affected absolutely all areas of the economy and healthcare. Many countries will feel the shock of the pandemic for a couple of years. This will be seen not only by the number of infected people but also by the rise of unemployment, by the number of unpaid salaries, accordingly unpaid taxes, etc. It is all one interconnected process. Therefore, I do not doubt that banks have also felt this pandemic, and most likely they have already taken further measures to reduce costs, reduce the number of employees, and automate many processes.

A: In your opinion what are banks doing or should be doing in the virtual banking systems to protect their customer or clients to ensure banking trust?

P5: I will probably say the obvious things, but the bank, first of all, must be reliable and honest.

A: Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?

P5: Probably I have this old habit of not putting all of my money into a bank. Some of it should be in the bank only for paying the urgent bills, but the rest I prefer in cash.

A: Due to banking licensees of traditional banks being revoked, how does this create confidence or lack of confidence to invest or bank with virtual banks?

P5: I cannot comment on this due to the lack of knowledge.

A: Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?

P5: In my opinion, people in Ukraine are still poor to fully trust the banks and keep their money only there. I know that in Europe, people are trying to get rid of the habit of paying cash, but in our country, people prefer to feel the currency.

Interview 6 – Male

A: Can you please tell me about your educational background?

P6: I studied in the Kharkov National University of Radio Electronics and graduated there with a major in Computer intelligent technologies and systems.

A: What's your professional experience?

P6: First, I worked as a junior assistant of a professor at my university. Later, my friend invited me to create a company called "Aero Metal", which was producing and exporting metal products abroad. And now I am working at Kharkov Locomotive Factory, in the position of Deputy Director for Research and Development.

A: Are you familiar with virtual banks? And what do you know about them?

P6: Yes, I heard something about them but did not delve into this question much.

A: How do you think the banking system will develop in the next 10-15 years?

P6: This is a hard question. Let me think about it. Because it is getting harder and harder to transfer big amount of money from one bank account to another one, because bank requires a lot of different documents about the origin of money and the tax payment information, it seems to me that banks in the future will be even more strict and demanding from their clients.

A: Do you think there is an increase or decrease in the number of users of virtual banks?

P6: I have no idea about that.

A: Can the creation of banks like Monobank in Ukraine be considered a trend?

P6: Many things nowadays go online. So, I am not surprised that some banks decided to go digital. This is definitely a better story than traditional banks, but a very hard one to implement.

A: In your opinion, can a current COVID-19 pandemic create a situation where people are looking towards virtual banking? Yes/no explain...

P6: I think that COVID-19 absolutely changed the way we used to spend money overall. People now think much more scrupulously about what to buy and what not to buy.

A: In your opinion what are banks doing or should be doing in the virtual banking systems to protect their customer or clients to ensure banking trust?

P6: It is very important for me that the bank creates a common system where it would be very simple and free to transfer money from one account to another one. Of course, I would like to see attractive loan rates shortly so that people can carry out their various business ideas and at the same time not worry that they will not be able to repay their loan. I would like also to see that the state

will more actively regulate the banking industry so that everyone played by the rules.

A: Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?

P6: *I do not use online banks and do not see the need for this.*

A: Due to banking licenses of traditional banks being revoked, how does this create confidence or lack of confidence to invest or bank with virtual banks?

P6: *As I already said, the government in a face of the Central Bank must properly regulate the financial market. People need to feel the confidence in banks to trust their money. We, as clients, should not see exorbitant interest rates but should have a stable low-interest rate as it in Europe.*

A: Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?

P6: *Economic culture will be built when people will have money. In the meantime, people are thinking about how to save the last penny, and not about where they should invest it.*

Interview 7 – Female

A: Can you please tell me about your educational background?

P7: *I graduated from the faculty of law of Karazin State University.*

A: What's your professional experience?

P7: I used to do my internship in a law firm and now I am working at Roshen company in a legal department.

A: Are you familiar with virtual banks? And what do you know about them?

P7: Yes, I am familiar with them and I am actually using one. I know that a lot of young people in Ukraine use Monobank, but I am a bit more patriotic for my city, and I support the local digital bank called Sportbank. These two are very similar, but I prefer to use the Sportbank.

A: How do you think the banking system will develop in the next 10-15 years?

P7: I think more and more people will use this beneficial service that all online banks provide. I personally find it very helpful and most importantly time-saving. I do not need to go somewhere and fill out certain papers, everything on my phone. So, in the next 10-15 years I expect that 60% of our population will use Neo banks, and probably the government will support and independently develop in the same direction.

A: Do you think there is an increase or decrease in the number of users of virtual banks?

P7: There is definitely an increase. Just by taking a look at all of my friends, many use online banks as an addition to their original banks. Since we still do not know the full potential of virtual banks, they are just slowly getting more popular.

A: Can the creation of banks like Monobank in Ukraine be considered a trend?

P7: I really don't like when people say that Monobank is the only one, who should be honored. They are just the first ones in this field, and of course, more people will know them than about the other banks. But the time will show

which bank is going to be the best. And yes, I think there is a trend now for such online financial applications.

A: In your opinion, can a current COVID-19 pandemic create a situation where people are looking towards virtual banking? Yes/no explain...

P7: That's an interesting point, I have never thought about it in this way. For sure when the pandemic has started, I also started to use my card/phone more often for different payments. So, I guess we can consider this as a situation where people are looking towards virtual banks. But as I said, this was done not intuitively and not intentionally.

A: In your opinion what are banks doing or should be doing in the virtual banking systems to protect their customer or clients to ensure banking trust?

P7: I think the same as with traditional banks, the customer's private data, is the most important. Since the virtual banks are fully online, they need to make sure that everything that they collect from their clients as well as their financial information stays hidden and protected from third parties. To ensure a greater banking trust, they probably need to do more advertisement and know-how training, so that potential customers learn more about them and thus start considering them as their possible next bank.

A: Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?

P7: I will do the mix of both, as I have right now. My personal experience of using the virtual bank tells me that the virtual bank is more acceptable when you are playing around with e-wallets, transferring money, or paying for certain bills. But when it comes to depositing money and receiving the interest from it the traditional banks are still better for now.

A: Due to banking licenses of traditional banks being revoked, how does this create confidence or lack of confidence to invest or bank with virtual banks?

P7: I don't really know about it much. I heard that some people lose their money because the bank where they stored them, went bankrupt. Some banks just do not exist for some reasons, that's probably what you are asking about the licensing. But again, I do not have much information about it.

A: Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?

P7: There is such a common thing that I have noticed among the Ukrainians including myself. We all want to get the maximum but doing a minimum effort. What I mean, is that people put their money in small amounts in different banks, and earn interest on it. They purposely spread their saving in different banks, so if one goes bankrupt, they will have their money somewhere else. This what I think is the Ukrainian economic culture.

Interview 8 – Male

A: Can you please tell me about your educational background?

P8: I graduated from two universities. In 2002 I started at faculty of general and applied Physics in the Kyiv National Institute of Physics and Technology and 2006 the Master's program in Economics at the Ukrainian School of Economics. Both degrees I have received in 2007.

A: What's your professional experience?

P8: Straight after the University was done, I was invited to an internship at Lehman Brothers in London in 2006, where I worked as a trader until the bank went bankrupt in 2008. The team of traders, where I worked, was bought

by the Japanese brokerage house “Nomura”. I worked there for a few months and then moved to Credit Suisse, where I have been working for the next five years. And now I am here at Monobank.

A: Are you familiar with virtual banks? And what do you know about them?

P8: Of course, I am familiar with them. I have been working in the banking industry for the last 10 years in different companies and in different countries, where I was involved in many projects regarding online banking, data security, and many other digitalization processes. And now we have created our own virtual bank, which is an absolute leader in the market within mobile banks.

A: How do you think the banking system will develop in the next 10-15 years?

P8: There will be strong competition. Now there are thousands of players on the market: regional, at the national level, international groups. Few of them will survive, the same will happen as it was in retail. Amazon has killed small stores and even entire chains. Only the largest chains have survived, and take their business away from them. They have already appeared, but they are still very small.

A: Do you think there is an increase or decrease in the number of users of virtual banks?

P8: There is definitely an increase and I am pretty sure about that.

A: Can the creation of banks like Monobank in Ukraine be considered a trend?

P8: Success always depends on a person’s ambition. When you start doing something, but quickly react to what is happening and change the course, then

you will definitely be successful. Ambition and the ability not to give are important, no matter where you are.

A: In your opinion, can a current COVID-19 pandemic create a situation where people are looking towards virtual banking? Yes/no explain...

P8: *When we speak in terms of people then yes. A lot of people decided to spend their money on banking cards because it is easy, contactless, and safe. They probably got afraid of Coronavirus, and are trying to stick to all safety regulations. But still, the main reason for them to use online banking is because of the app itself. Very nice and clear information of all your transaction on your phone, isn't cool? I would say this is the combination of both the COVID-19 and the technological change. The current pandemic has just stimulated this shift faster than we planned.*

A: In your opinion what are banks doing or should be doing in the virtual banking systems to protect their customer or clients to ensure banking trust?

P8: *The traditional banks are too slow, and now they doing what we did three-four years ago. Revolut, Tinkoff, and Monobank are not quite traditional banks, since all of our activities are online. The most important mechanism is the speed of movement. While we are being copied, we move forward quickly and take market share. Initially, we made a product that traditional banks didn't have. So, we were the first, who provide this service to people. And as the statistic shows, our services getting more and more popular So we cannot compare the traditional bank to us, because we are completely different. They would probably focus more on client service at their branches and profitability, while we focus on the convenience of the mobile app, which allows our customers to do their daily transactions. People who are already with us, are not afraid of keeping their money online. And people who still believe in traditional banking will come to us in the next 2-3 years. The time is on our side.*

A: Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?

P8: Absolutely. Since virtual banks are the same as traditional banks in a way of a bank as an institution, they also operate under the Central Bank licence and are obligated to follow the rules like any other banks. I do not see any problem, not putting my life-saving in Monobank or any other virtual banks in Ukraine. The question here is: do you trust the financial system as a whole? But this is already a different question.

A: Due to banking licensees of traditional banks being revoked, how does this create confidence or lack of confidence to invest or bank with virtual banks?

P8: I still don't get why the government, in a face of the Central Bank (NBU), did not do this clean-up of insolvent banks earlier. As an economist, it was obvious to me that Ukraine is oversaturated with dishonest and fraudulent banks. Of course, after careful work carried out by the Central Bank, the financial sector has obtained an order and transparency, but we clearly have lost the confidence of people in the national banking sector. This may be due to unpaid guaranteed deposits that the government has to pay to recoup the loss of depositors or with constantly fluctuating exchange rates or other reasons. My personal opinion is that people start to use banks less as the place where to keep money, but rather as a place where to work with the money. I mean deposits, credits, loans, and other features. These are all fundamental tools for proper economic development, which requires a constant inflow of fresh money.

A: Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?

P8: If we look at the world statistic, Ukraine is considered to be a poor and developing country. People in our country are not used to invest all of their earnings in any bank, be it a traditional or a virtual bank. They simply have this fear from the past, the USSR time, that their money for some reason can be stolen or devaluated and never return to them. I know that this may sound strange, but this is the reality. We can not only focus on young, ambitious people since the majority of the country's wealth is in a hands of middle age groups and most of them only put that amount of money in the bank, which can be refunded to them in case of the bank go bankrupt. We need to change this mentality by providing a lot of more useful services and making online banking an irreplaceable feature in their lives.

Interview 9 – Male

A: Can you please tell me about your educational background?

P9: I studied at the Kyiv Technical University but then went to Moscow Academe of Economics and I receive my Master's there with a specialization in Interactive Marketing.

A: What's your professional experience?

P9: I have been working for Allianz Insurance for a couple of years and currently, I am working at Dragon Capital here in Kyiv.

A: Are you familiar with virtual banks? And what do you know about them?

P9: You mean the one which is fully online? Yes, I know about their existence but that's it.

A: How do you think the banking system will develop in the next 10-15 years?

P9: I am pretty sure that the future bank is something about of combination between the mobile operators and traditional banks. As you said, we already see the trend for digitalization. Apple has announced to produce sim cards for iPhone users, which means that nearly 1,5 billion people will use them. After that, Appel can easily decide to create its own bank and believe me many people go there.

A: Do you think there is an increase or decrease in the number of users of virtual banks?

P9: As I told you already, I am not a big fan of fin-tech, so I don't really know the updated statistic.

A: Can the creation of banks like Monobank in Ukraine be considered a trend?

P9: In other countries, virtual banks have already been working for a couple of years. It is logical that Ukraine finally has one.

A: In your opinion, can a current COVID-19 pandemic create a situation where people are looking towards virtual banking? Yes/no explain...

P9: If we take a look at traditional banks today, they have all implemented online banking services for the convenient use of their customers. And they provide the same features that virtual banks have. The fact that the pandemic has affected people's ability to spend as before, then yes. But in terms to switch to virtual banks, then no.

A: In your opinion what are banks doing or should be doing in the virtual banking systems to protect their customer or clients to ensure banking trust?

P9: The customers will be happy only then when they have favourable conditions to use a particular bank. Customer service also plays an important

part in the formation of a general impression of the bank. Therefore, all banks need to pay attention to personal communication with clients. Increase the number of useful services, but decrease their complexity.

A: Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?

P9: *Absolutely no! I would like to see where my money goes and to know where I need to come if something will happen to them. So, my choice is traditional banks, as they are right now.*

A: Due to banking licenses of traditional banks being revoked, how does this create confidence or lack of confidence to invest or bank with virtual banks?

P9: *The fact that some banks have lost their licenses, or officials saying that their licenses were taken away, is their own fault. The government would not interfere in the bank activities if there were no problems with it. We, as bank users, must understand that the state protects us from dishonest and fake banks. Thus, I do not see the reason why I should lose confidence in the Ukrainian banking industry as a whole.*

A: Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?

P9: *My personal opinion on that question is no. Everyone decides for themselves where to invest money.*

Interview 10 – Male

A: Can you please tell me about your educational background?

P10: I graduated from the Warsaw Medical University.

A: What's your professional experience?

P10: I have been doing the internship for 3 years under the control of a professional doctor, and I am working in the private clinic here in Kyiv.

A: Are you familiar with virtual banks? And what do you know about them?

P10: *Yes, I am familiar with them. My wife is using 3 or 4 virtual banks simultaneously for her work. She buys a lot of things online and resale them for more and she uses different cards to overcome the limit set by one card. I personally use only one bank, and this is a normal bank.*

A: How do you think the banking system will develop in the next 10-15 years?

P10: *It's hard for me to answer this question because I am not connected to this industry, but it seems to me that it will develop online.*

A: Do you think there is an increase or decrease in the number of users of virtual banks?

P10: *If my memory serves me correct, then almost every country in Europe has an online version of a traditional bank. By observing the development of such banks, we can say with confidence that their number is growing rapidly.*

A: Can the creation of banks like Monobank in Ukraine be considered a trend?

P10: *Yes, absolutely. Monobank is a trendsetter in Ukraine.*

A: In your opinion, can a current COVID-19 pandemic create a situation where people are looking towards virtual banking? Yes/no explain...

P10: Since I am working in the medical industry, with all of my confidence I can say that the COVID-19 pandemic has exposed some health problems as well as economic problems in most developed countries. None of us was expecting something like this to come. As a result of millions of COVID-19 cases all around the world had to change the way we do business today. Furthermore, online platforms like Amazon or Farfetch only gained from the pandemic. So, I guess the online banks also have an advantageous position.

A: In your opinion what are banks doing or should be doing in the virtual banking systems to protect their customer or clients to ensure banking trust?

P10: To retain customers, the banks must first understand what turns them off. While some of the causes are beyond your company's control, there are still other causes that the banks can eliminate.

A: Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?

P10: Since in our country, unfortunately, there are often cases of financial fraud, I would not risk putting all the money in one bank. Whether it is going to be a traditional or a virtual bank, I do not really care or have any specific conditions that need to be fulfilled.

A: Due to banking licenses of traditional banks being revoked, how does this create confidence or lack of confidence to invest or bank with virtual banks?

P10: I was lucky that I was not affected by these events carried by the National Bank of Ukraine (NBU). But of course, this does not add any loyalty of the people to the financial institutions. I do not see the reason why this could not happen to the virtual bank as well. The thing is, people should choose their future bank correctly, preferably based on financial statistics, and look through the people's experience with this bank.

A: Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?

P10: Economic culture is a basic category that reflects not only the quality of social relations into which people enter in the process of production, distribution, and consumption of material goods but also a qualitative characteristic and measure of the development of sociality. Unfortunately, in Ukraine, this economic level is very low and we are witnessing a very large financial illiteracy of people. Many of them would not yet understand the advantages of virtual banks over the traditional ones.

Interview 11- Female

A: Can you please tell me about your educational background?

P11: I am currently a student for BSc in International Management.

A: What's your professional experience?

P11: I do not have a long professional experience but I worked as an assistant in a one Ukrainian Bank.

A: Are you familiar with virtual banks? And what do you know about them?

P11: Yes, I am. I know that it is the mobile app of the bank which doesn't have a physical establishment.

A: How do you think the banking system will develop in the next 10-15 years?

P11: The banking system will become more mobile, and most banks will change their existences in virtual mode.

A: Do you think there is an increase or decrease in the number of users of virtual banks?

P11: *To my mind, the number is only increasing, and especially now, during pandemic COVID-19.*

A: Can the creation of banks like Monobank in Ukraine be considered a trend?

P11: *Yes, since people want to have a choice during choosing the bank they prefer to use.*

A: In your opinion, can a current COVID-19 pandemic create a situation where people are looking towards virtual banking? Yes/no explain...

P11: *Yes, significantly. My personal example can be used to explain this question. I was always using cash before the pandemic, though I had bank cards, after it started, everyone asked to be cashless and I found out how convenient are virtual banks, especially Monobank in Ukraine. There are all options that a person might need: convert money in any currency, easy transfer of money, discounts with bank partners, and cash-back. After I started using that bank, most of my friends did the same.*

A: In your opinion what are banks doing or should be doing in the virtual banking systems to protect their customer or clients to ensure banking trust?

P11: *I think banks should create good security and during the transfer, paying online, banks can ask to write the code or person's special word to finish the operation.*

A: Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?

P11: *I understand that possible all money will be virtual but I still prefer the traditional way and saving some money in traditional banks.*

A: Due to banking licensees of traditional banks being revoked, how does this create confidence or lack of confidence to invest or bank with virtual banks?

P11: *Yes, possibly people started thinking more before choosing a bank or if they need to invest at all.*

A: Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?

P11: *To my mind, for people in Ukraine, it will take time to perceive the existence of virtual banks and their security to invest money in them. I think they will choose a traditional bank for investing. However, Ukraine is currently becoming a more digitalised country since the Ukrainian government created special app «Diya» thanks to which all official documents are on the phone. So, the government tries to persuade people that the digital system of Ukraine is safe.*

Interview 12 – Male

A: Can you please tell me about your educational background?

P12: *I grew up and studied in Kyiv and graduated from the Ukrainian Military Technical Academy.*

A: What's your professional experience?

P12: *For more than 20 years I have been the technical director of one of the leading mobile operators in Ukraine. Before I used to work in different companies, but they were all related to telecommunications.*

A: Are you familiar with virtual banks? And what do you know about them?

P12: *Yes, I know about existence of such banks, but to be honest I don't use them.*

A: How do you think the banking system will develop in the next 10-15 years?

P12: *I am more than sure that everything will develop in the online sphere. Especially for us as mobile operators, it is very beneficial, because we provide Internet and phone services for both physical and legal entities. And absolutely everything will be developed in this way. So, I guess that the banking sector will also move slowly to an online mode. But I don't think so that this will happen soon.*

A: Do you think there is an increase or decrease in the number of users of virtual banks?

P12: *Without a clue, probably some people use them, but for sure not many.*

A: Can the creation of banks like Monobank in Ukraine be considered a trend?

P12: *100%. Any successful application or services in any branch will entail the development and implementation of similar processes. I know that there are already several mobile banks in the West, and it is understandable why they are starting to appear in Ukraine.*

A: In your opinion, can a current COVID-19 pandemic create a situation where people are looking towards virtual banking? Yes/no explain...

P12: I don't think so. Why would it change? If people were sitting at home and did not go to work during the pandemic, does it necessarily mean that their usual banks stopped working or what? No, they continue to work and like many other companies, they have provided an opportunity to solve the potential problems or any questions remotely. I personally don't think that COVID-19 has played a dramatic role in the banking industry.

A: In your opinion what are banks doing or should be doing in the virtual banking systems to protect their customer or clients to ensure banking trust?

P12: I am always saying that a company should have a specific goal. What is the goal of a bank? To collect as much money as possible from clients and simultaneously to issue as many new loans as possible. And how they will do it, it's already a different story. For me as a client of a bank, security is important. I want to know that my money is safe and always available when I need them. That's it. If a bank can provide me with these services, then I will definitely be a client of this bank.

A: Would you put your life saving solely into a virtual bank or rather have a mixture with traditional banks? And what percentage?

P12: No, I have and I will put my money only at a traditional bank.

A: Due to banking licensees of traditional banks being revoked, how does this create confidence or lack of confidence to invest or bank with virtual banks?

P12: We must understand that this was an inevitable process. The state, sooner or later, still had to remove the insolvent banks from the market. Yes, we have people who suffered. Yes, we have some unpaid deposits. But people choose these banks themselves, nobody forced them to invest in these

dishonest banks. Of course, due to such events, the overall confidence in banks has suffered. But this could happen with any bank, even with an online bank.

A: Does the traditional Ukrainian economic culture stimulate people to invest their money into traditional banks or virtual banks?

P12: In general, I believe that there is no common Ukrainian economic culture. Everyone looks for themselves and does what they want. Of course, all people have a bank account and keep a certain amount of money there. But in general, it is up to me, in which bank I will place my money and at which interest rate. Probably for the sake of fairness, it should be noted that virtual banks becoming popular among young people. But they are still very far from state-owned banks.