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QUALIFICATION PAPER

on the topic " FINANCIAL AND ECONOMIC ROLE OF CRYPTOCURRENCIES
IN INTERNATIONAL INVESTMENT "
Specialty 292 "International Economic Relations"

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It is submitted for the Bachelor's degree requirements fulfillment.

Qualifying Bachelor's paper contains the results of own research. The use of the ideas, results and texts of other authors has a link to the corresponding source

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ABSTRACT

on bachelor's degree qualification paper on the topic
«FINANCIAL AND ECONOMIC ROLE OF CRYPTOCURRENCIES
IN INTERNATIONAL INVESTMENT»

student Anna Tsybulniak

(full name)

The main content of the bachelor's degree qualification paper is presented on 49 pages, including references consisted of 45 used sources, which is placed on 4 pages. The paper contains 1 table and 7 figures.

Keywords: CRYPTOCURRENCY, BLOCKCHAIN, INVESTMENT, INSTITUTIONAL INVESTMENT, NFT, FIAT CURRENCY.

The purpose of the bachelor's degree qualification paper is to analyze the cryptocurrency, its types, exchange rate and its role in institutional investment. To compare the cryptocurrency and fiat currency, as well as their exchange rates and factors of influence. Discover the problems and prospects of the cryptocurrency in international settlements as well as in institutional investment.

The object of research is the cryptocurrency and its place in international financial market.

The subject of the work is the structure, formation and development of the cryptocurrency as well as its role in institutional investment.

In the process of research depending on the goals and objectives, the following methods of scientific research were used: historical, comparative, method of statistical analysis, compilation and grouping; processing of literary sources, as well as the method of displaying the results of scientific research in graphical and tabular forms.

The information base of the study is media resources of domestic and foreign economic organizations such as Library of Congress, National Bureau of economic research, National Bank of Ukraine, Verkhovna Rada of Ukraine, publications of domestic and foreign authors like Satoshi Nakamoto, Annessa Custovic, Xun Zhang,

Adam Hayes, official sites: Coinmarketcap, Binance, Binance Academy, Coin Desk, Forklog, Coinbase.

According to the results of the study the following conclusions are formulated:

1. Blockchain technology which is one of the core features of the cryptocurrencies, is a set of connected blocks, that include number of transactions that were reviewed by each member of the network on their own.

2. Bitcoin was the first cryptocurrency, that allowed secure peer to peer transactions within the Internet, and it remains by far the biggest, most influential, and best-known.

3. Comparing the factors that influenced the cryptocurrency and fiat currency exchange rate it can be concluded that these factors are quite different and the only factor influencing both the fiat currencies and cryptocurrencies is any global crisis.

4. There are already some gains that receive institutional investors from cryptocurrency they include the absence of significant connection with other currencies; different types of cryptocurrencies which can be developed and used even for some particular sphere; lack of regulation that means it can be used openly all over the world and is not issue to the similar government-levied restrictions as other currencies.

The obtained results can be used in the process of development of the strategy of investment in cryptocurrency for institutional investors and international trade settlements.

Results of approbation of the basic provisions of the qualification Bachelor work was considered at the conference “International economic relations and sustainable development 2022” the abstract was published.

The year of qualifying paper fulfillment is 2022.

The year of paper defense is 2022.

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TASKS FOR BACHELOR'S DEGREE QUALIFICATION PAPER

(specialty 292 " International Economic Relations ")

student 4 course, group ME-82a

(course number) (group's code)

Tsybulniak Anna Serhiivna

(student's full name)

1. The theme of the paper is «Financial and economic role of cryptocurrencies in international investment »

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4. The object of the research is the cryptocurrency and its place in international financial market.

5. The subject of research is the structure, formation and development of the cryptocurrency as well as its role in institutional investment.

6. The qualification paper is carried out on materials of domestic and foreign economic organizations such as Library of Congress, National Bureau of economic research, National Bank of Ukraine, Verkhovna Rada of Ukraine, publications of domestic and foreign authors like Satoshi Nakamoto, Annessa Custovic, Xun Zhang, Adam Hayes, official sites: Coinmarketcap, Binance, Binance Academy, Coin Desk, Forklog, Coinbase.

7. Approximate qualifying bachelor's paper plan, terms for submitting chapters to the research advisor and the content of tasks for the accomplished purpose is as follows:

Chapter 1 _____ To research theoretical bases of cryptocurrency use in international settlements

Chapter 1 deals with genesis, essence and features of modern cryptocurrencies. Blockchain technology; classification of modern cryptocurrencies. Non-fungible token technology. Institutional investment theory; the situation with cryptocurrencies within the world and in Ukraine.

Chapter 2 _____ To analyze financial and economic connection between cryptocurrencies and classical currency. Mutual influence

Chapter 2 deals with cryptocurrency exchange rate dynamics and its prospects. Comparison of cryptocurrency and dollar / euro exchange rate; influence of cryptocurrency rate on exchange rate reserve; the role of cryptocurrencies in international trade. The share to use of cryptocurrency in international settlements and institutional investment.

Chapter 3 _____ To define the problems and prospects of cryptocurrencies development

Chapter 3 deals with problems of effective implementation of cryptocurrencies in international finance; prospects for the development and implementation of blockchain in the world economy; prospects for the role of cryptocurrency in institutional investment.

8. Supervision on work:

Chapter	Full name and position of the advisor	Date, signature	
		task issued by	task accepted by
1	Phd, senior lecturer O. O. Kotenko	04.04.2022	
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INTRODUCTION

The relevance of the topic based on the current and upcoming changes all over the world. These changes first of all connected with technologies and transfer to digital world.

Cryptocurrency and blockchain technology are thought to renew the modern world, especially the economic sphere. The use of cryptocurrencies in international financial transactions will make the process faster, cheaper for the recipient of services and easier in making payments. Various specialist think that blockchain technology can be used in number of spheres, like supply chain, and processes like e-voting and crowdfunding. Financial establishments such as JPMorgan Chase & Co. test the application of blockchain technology to decrease transaction costs by simplification of payment processes. Despite quite different situation with cryptocurrencies around the world the level of their popularity is growing significantly, thus in future it might be used by different companies and governments.

The purpose of the work is to analyze the cryptocurrency, its types, exchange rate and its role in institutional investment. To compare the cryptocurrency and fiat currency, as well as their exchange rates and factors of influence. Discover the problems and prospects of the cryptocurrency in international settlements as well as in institutional investment.

To achieve this goal, it is important to solve the following tasks:

- to determine the nature, functions of the cryptocurrency and blockchain technology, spheres of their application
- to analyze the dynamics of top cryptocurrency exchange rate and discover factors that influence it
- to compare the exchange rate of the cryptocurrency and fiat currency and their dynamics
- to identify the prospects of using cryptocurrency in international settlements and institutional investment

The object of the work is the cryptocurrency and its place in international financial market.

The subject of the study is the structure, formation and development of the cryptocurrency as well as its role in institutional investment. For this work the following methods of scientific research were used: historical, comparative, method of statistical analysis, compilation and grouping; processing of literary sources, as well as the method of displaying the results of scientific research in graphical and tabular forms.

The information base of the study is media resources of domestic and foreign economic organizations such as Library of Congress, National Bureau of economic research, National Bank of Ukraine, Verkhovna Rada of Ukraine, publications of domestic and foreign authors like Satoshi Nakamoto, Annessa Custovic, Xun Zhang, Adam Hayes, official sites: Coinmarketcap, Binance, Binance Academy, Coin Desk, Forklog, Coinbase.

1. THEORETICAL BASES OF CRYPTOCURRENCY USE IN INTERNATIONAL SETTLEMENTS

1.1 Genesis, essence and features of modern cryptocurrencies. Blockchain technology

At the center of the appeal and feature of Bitcoin and all the cryptocurrencies is the blockchain technology. According to its title, blockchain is basically a range of linked blocks or an online ledger. Every block includes a set of transactions that were reviewed by each member of the network on their own. Each new block created must be reviewed by each node verification, making the creation of transaction histories almost impossible. Also, the blockchain technology is defined as a public, unchangeable ledger that enables the procedure of registering transactions and controlling assets in a business network. Thus, it can be concluded that the blockchain is a kind of technology which in general sense includes a set of connected blocks with a set of transactions that were reviewed by each member of the network on their own. This technology forms as a public, unchangeable ledger that enables the procedure of registering transactions and controlling assets in a business network.

The one significant feature of the blockchain technology is that the blockchain is immutable – if the one block is changed, the print is changed. Thus, if this print is included to the next block, the next block also changes. As a result, the domino effect happens and any change becomes obvious. It is impossible to change the information unnoticed by all. Other features of blockchain described below:

It's global, that means cryptocurrencies can be sent across the planet fast and cheap. It increases confidentiality, so cryptocurrency payments do not require the user to include their personal information, which protects them from being hacked or from having their identity stolen.

It is open, so each transaction on cryptocurrency networks is publicly released in the form of the blockchain, anyone can review them. That leaves no way for manipulation of transactions, modifying the money supply, or tweaking the rules mid-game. The software that makes up the heart of these currencies is free and open-source so everyone can check the code.

Experts say that blockchain technology can be used in number of spheres, like supply chain, and processes like e-voting and crowdfunding. Financial establishments like JPMorgan Chase & Co. test the implementation of blockchain technology to decrease transaction costs by simplification of payment processes.

As for the cryptocurrency, it is defined as a digital currency, that could serve as a medium of exchange without using any financial institution of government. In other words, bitcoin is a digital currency, that allows secure peer to peer transactions on the Internet.

Historically Bitcoin appeared in digital world in 2008 after publishing a document “Bitcoin – A Peer to Peer Electronic Cash System” by somebody called Satoshi Nakamoto [29].

With the increase in Bitcoin reputation, other ideas of decentralized digital currencies appear, as a result the first alternative cryptocurrencies occur. Such currencies called altcoins, which are trying to upgrade the original Bitcoin format, this usually done by increase in speed of transaction, provision of anonymity for users or other benefit. [7].

Step by step as new users appeared, it is obviously more resources were transferring into the Bitcoin and cryptocurrency ecosystem. Over this time the market capability of all the cryptocurrencies grown from \$11 billions to its peak nowadays of over \$300 billions.

To sum it up, blockchain is a type of technology, that is basically one of the core characteristics of the cryptocurrencies, naturally can be described as a set of connected blocks, that include various numbers of conducted transactions, which can be checked by each member of the network on their own. The one valuable feature of this

technology is the “domino effect” which happens in case of change in one block, thus the others also change.

Bitcoin, which was introduced in 2008, was the first cryptocurrency, that allowed secure peer to peer transactions within the Internet, and it continues to be the biggest, most vital, and best-known. In the decade since, Bitcoin and other cryptocurrencies have grown as digital option to money supported by governments.

1.2 Classification of modern cryptocurrencies. Non-fungible token technology. Institutional investment theory.

All cryptocurrency assets can be distributed into different categories. Bitcoin is the first cryptocurrency, thus it has a specific asset status among categories. Other blockchain projects can be divided into several types, illustrated on the Figure 1.1 below.

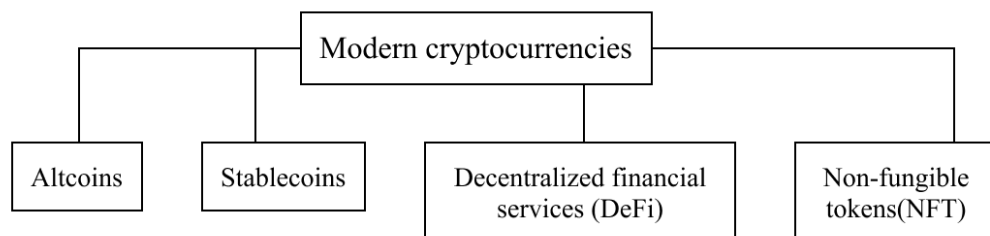


Figure 1.1 – Classification of modern cryptocurrencies

Altcoins – are alternative coins, any cryptocurrencies with its own blockchain (except bitcoin). Some of them much alike Bitcoin. Others oriented at the implementation and use of new tools, as well as extension of opportunities. By changing the BTC’s open-source code, altcoin developers can speed up transactions, optimize mining processes, create various automated contracts, form a base for working with crypto applications, etc.

Examples of altcoins:

Ethereum (ETH) – this decentralized computing platform was built on its own blockchain. The process of implementation of smart contracts lies in the core of its work. This platform has its own cryptocurrency ETH, that is operated in various transactions on the platform and basically traded on different exchange platforms. As for the April 2022, there are more than 120 millions of these coins. Unlike the BTC, the ETH limit is not set. Its market capitalization exceeds the \$420 billion mark.

Ethereum blockchain helps to send digital money without delays and high fees. However, while the aim of creation of Bitcoin was appearance of decentralized payment system, Ethereum was made as a unified decentralized virtual machine. Application of smart contract technology is one of the main features of Ethereum. This is the virtual algorithm, that can automatically control the execution of the terms of the transaction, fixed in the blockchain. In addition to this basic function, the system provides the resources and conditions to develop decentralized applications. It is still flexible because it can execute random application code of any difficulty level.

Litecoin – is a cryptocurrency, the work of which is based on bitcoin code base. However, Litecoin differs from BTC in the following characteristics:

- higher transaction speed;
- different hash algorithm;
- changed emissions order.

Litecoin's main goal is to provide secure, cheap and fast payments in a blockchain. With LTC, it is easy to pay for different products and services in the USA and Europe. There are already lots of terminals around the world where Litecoin is exchanged for fiat currency.

Stable coins – a type of cryptocurrency, that include digital coins, the price of which is tied to tangible assets - dollar, gold, oil, etc. The exchange rate of Bitcoin and other similar cryptocurrencies varies during the day, week and month. The cost of stable coin on the contrary - is extremely stable. There may be price fluctuations, of course, but they are less than those of cryptocurrencies.

With the development of the cryptocurrency industry, new technologies started to arise that are rapidly obtaining popularity.

DeFi – decentralized financial services, these are not single cryptocurrencies, but complex platforms that can include different types of digital assets and their functions. The main attribute of such services is that their users can provide and receive different services straight, without the engagement of intermediaries. In this case, all calculations implemented in a certain decentralized network [29].

One example is ETH Maker DAO, a decentralized loan protocol. Its main goal is to grow into more appropriate and secure alternative to banking services.

NFT – non-fungible tokens, that were created in order to transfer the rights to unique assets to the blockchain. To put it simply, NFT – is a token that has a special identifier and has additional settings that let it to store particular information.

A special identifier is what makes a token non-refillable. Additional information may include any information, such as text, images, audio and video files.

Unlike interchangeable cryptocurrencies, every NFT is unique and non-reciprocal. Since each Bitcoin or Ether is consistent and almost indistinguishable from the other, it can be traded openly on cryptocurrency exchanges without much problem.

NFT use benefits of smart contract technology to store and record unique information in a blockchain, which means that each time an NFT is created, there is only one specimen. NFT creators can also encrypt some parts such as information-rich metadata or secured file links, that allow people to create various of verifiable digital assets based on images, audio, and video files. These technologies enable everyone to check the identity of digital assets and simplify the process of establishment of ownership. They also allow to transfer assets safely, effectively and verifiably.

Using NFT, it is possible to authenticate an asset in digital way, and artists can easily show that a work is original. Moreover, the blockchain can be used to authenticate the descent of digital assets. For example, we can easily track when an asset was first created and then sold. It is also possible to track the list of past owners and find out how much each buyer has paid for the work.

As for the institutional investment, it is conducted by the legal body that accrues the funds of multiple investors, that might be private investors or other legal bodies, to invest in different financial instruments and receive its gains from the process.

Furthermore, institutional investors may obtain and know how to explore a numerous of investment tools, that are not accessible for private investors. The ground of an institutional investor's occupation is its expertise, and it operates with assets according to the interests and aims of its customers. An institutional investor regularly handles a critical quantity of funds [12].

Institutional investors also obtain significant operational activities because of corporate possibilities. Based on significant capital and licensing, large establishments ensure approach to many assets that are not accessible to private individuals. They cover:

- foreign securities,
- government business credits,
- altered banking policies,
- interest rates,
- and more.

To sum it up, there are different kinds of cryptocurrencies, which include altcoins, stable coins, tokens, defi`s and NFT. Each of them has its own unique features, for example, altcoins may have faster transactions, optimized mining processes, various automated contracts, and become a base for working with crypto applications, etc. As for de-fi services, their users can provide and receive different services straight, without the engagement of intermediaries. NFT – is a token that has a special identifier and has additional settings that let it to store particular information. As for the institutional investment, it is conducted by the legal entity that accrues the funds of multiple investors, that might be private investors or other legal entities, to invest in different financial instruments and receive its gains from the process.

1.3 The situation with cryptocurrencies within the world and in Ukraine.

Bitcoin and other cryptocurrencies could be operated confidentially among different users all over the world. However, this lead to some kind of troubles for country`s authorities. Some governments do not support financial operations with Bitcoin and other cryptocurrencies, because of the shortage of control and illegal links. While others have already suggested some rules for their law and laws prohibiting money laundering and financing of terrorism in order to decrease the use of cryptocurrencies for such aims.

In this section would be reviewed following cases with the situation with cryptocurrencies all over the world:

- USA. Although a huge amount of cryptocurrency investors and blockchain companies in the United States, the country has no system, which controls the situation with structure for assets. The Securities and Exchange Commission generally consider cryptocurrency as a security, at the same time the Commodity Futures Trading Commission names Bitcoin a commodity, and the Treasury identifies it as a currency. Crypto exchanges in the USA fall within the legal extent of the Bank Secrecy Act and must record with the Financial Crimes Enforcement Network. They are also obliged to obey with anti-money laundering and combating the financing of terrorism obligations.

- Canada. Canada retains a generally bitcoin-friendly position like the United States. Cryptocurrency is deemed as a traded good by the Canada Revenue Agency for income tax terms. Thus, any revenue from a transaction using Bitcoin is considered as business income or a capital profit and have to be accounted as such.

From the other point, cryptocurrency exchanges are considered as money service businesses. Thus, cryptocurrency exchanges must be registered within the Financial Transactions and Reports Analysis Centre of Canada, that records any strange operations, follow the plans of fulfilment, and even make particular reports.

- Japan. The country takes a future-oriented approach to crypto regulations, admitting cryptocurrencies as legal property under the Payment Services Act [7]. At the same time, crypto exchanges in the country need to be registered with the Financial Services Agency and obey with AML/CFT obligations. In some Asian countries, for instance, Japan, state authorities reviewed trading incomes received from cryptocurrency as “diversified income” and taxes investors consequently.

Moreover, besides the crypto regulations and cryptocurrencies, the bank of Japan decides to launch Central Bank Digital Currency by 2026. According to Central Bank Governor Haruhiko Kuroda, the Bank of Japan maintains experimenting with the Central Bank’s digital currency and will decide whether to introduce it by 2026 after discussion with the government and the private sector.

In April 2021, the Bank of Japan ran the first stage of Central Bank Digital Currency testing, which will continue until March 2022. In July, Hideki Murai of the ruling Liberal Democratic Party reported that the state would draw up a more detailed digital yen project by the end of 2022.

- China. According to the decision of the Central Bank of China in September 2021, trade in bitcoins and other cryptocurrencies will be considered as a crime. As the People's Bank of China reported: “Business connected with virtual currencies is defined illegal financial activity”. They believe that cryptocurrencies “endanger” the assets of the country’s population.

At the same time, China is one of the largest cryptocurrency markets in the world, as well as one of the largest “producers” of cryptocurrencies. In general, cryptocurrency trading was officially prohibited in China back in 2019, but it actually continued online through foreign trading platforms.

- Salvador. In El Salvador, since September 7, 2021, Bitcoin become an official payment method. From this time, El Salvador’s citizens can use the government’s digital wallet Chivo, which let them to pay for goods as well as services on the territories in cryptocurrencies that will automatically be transferred to US dollars and back. The Government of El Salvador has also supplied a basic amount equivalent to USD\$ 30 in each of these wallets of the country’s citizens.

- Ukraine. Ukraine ranked fourth amid the countries where cryptocurrencies are highly appreciated. This is confirmed by the results of the research of the blockchain-company Chainanalysis. Besides, Ukraine was amid the top ten countries with the highest incomes in the cryptocurrencies according to the results of 2020.

Moreover, starting from the 17 of February 2022 the Verkhovna Rada of Ukraine adopted the Law "on Virtual assets", which regulates transactions with cryptocurrency assets in Ukraine. According to this law, the foreign and Ukrainian companies will be able to officially work with crypto-assets, open accounts with banks, pay taxes and provide their services to citizens. Thus, cryptocurrency owners in Ukraine can lawfully exchange assets, submit tax returns, open blockchain businesses and use them in everyday life [33].

The regulation of the market will be conducted by the National Securities and Stock Market Commission (NSCSSM) and the National Bank of Ukraine, that will control the turnover of virtual assets offered with currency values, define the number of currency values that can be exchanged for crypto-assets and the order of such exchange. Also, the National Bank controls the activity of suppliers of services, that are connected with the exchange of provided cryptocurrencies, defines the requirements for cybersecurity and provides sanctions for violations.

At the same time the National Commission and Stock Market Commission will license and control the activities of cryptocurrencies' participants, carry out inspections, issue warnings, regulations on the removal of violations, and provide financial sanctions.

Since the start of the war by russia, cryptocurrencies become one of the most powerful sources for funding of humanitarian and military urges for Ukrainians. Purchasing and delivering to Ukrainian cities of medical needs, clothes, provision, shelter for refugees and many other basic elements have become a top task for Ukrainian government and volunteers. Moreover, everything was complicated by the almost paralysed work of the currency market. In this time, cryptocurrency became the «lifeline». According to the Slowmist analytics, by the end of the March

2022, Ukraine received donations for more than \$96,5 millions in crypto-assets. Almost immediately after the start of the invasion, Ukrainian official Twitter-account published various addresses for donations in cryptocurrencies [5].

Ministry of Digital Transformation turned to the Kuna Exchange for help in the creation of cryptocurrency ledgers, that was the way how the Crypto Fund of Ukraine appeared. After that the number of partners and supported assets is only growing. The idea was also supported by FTX and Everstake exchanges – so the website Aid for Ukraine, where various addresses of wallets for different cryptocurrencies for Ukraine were collected.

When certain requests are received, the crypto-assets are either converted to fiat currencies (UAH, USD or EUR) or used directly as a means of payment if the laws of the country of supplier permit it. The distribution of the donations is conducted by Ministry of Digital Transformation in accordance with the needs of Ministry of Defense and Ministry of Health of Ukraine.

Together with authorities, various cryptocurrency businesses joint to help Ukraine by launching their projects. Many NFT projects have been introduced, from public to private. Among the latest:

- collection Ukraine's Angels from the developer of blockchain solutions ElephantsLab;
- Ukraine DAO initiative;
- StandWithUkraine collection from blockchain company 4IRE;
- NFT from the public organization «Pomerania 17»;
- Initiative from Cardano enthusiasts.
- The NFT Museum of the War of Russia against Ukraine, that raised over \$500,000 and many others.

So, the situation with cryptocurrencies around the world differs from one country to another. Some of them are trying to regulate it like USA, Canada and others. China totally bans the cryptocurrencies and all operations connected with them. Salvador conversely adopts the Bitcoin as a payment method. As for Ukraine, in the mid of February the law that makes the operations with cryptocurrencies

legal and regulated with authorities was adopted. Moreover, after the Russia invasion a lot of NFT and other crypto-projects appeared to support Ukraine.

2. FINANCIAL AND ECONOMIC CONNECTION BETWEEN CRYPTOCURRENCIES AND CLASSICAL CURRENCY. MUTUAL INFLUENCE

2.1 Cryptocurrency exchange rate dynamics and its prospects.

The cryptocurrency exchange rate is a value of one cryptocurrency expressed with fiat currency. When Bitcoin was introduced at the start of 2009, 50 BTC was submitted with the value of \$0.

In 2011 the price of 1 Bitcoin cost equally to 1 USD for the first time in history. This has step promoted new users into the market, so in the next 4 months, BTC price remained a steady increase, achieving more than \$30.

At the beginning of the 2013, Bitcoin had healed from a long-lasting “bear market” and increased more than \$1000, though. However, after the infamous Mt Gox hack, China announced its first prohibition on cryptocurrencies. The BTC recovering process of returning back to above the \$1000 lasted more than 4 years. As that grade was achieved, the value of Bitcoin continued to grow significantly all the 2017 till the achievement of the past long-lasting heigh of \$19850 [18].

Over 2018, as illustrated on the Figure 2.1, the whole cryptocurrency market fell into the “crypto winter” – a 1-2 years long bear market.

That was till the December of 2020, as BTC restored trying the past historical high, that it finally overwhelmed that point and increased extra 239% during the next 4 moth for another historical maximum – \$64799.



Figure 2.1 – BTC/USD exchange rate dynamics in 2018 – 2020 [14]

As it was mentioned above and illustrated on the Figure 2.1, in 2020 the Bitcoin began to rise extremely. This was due to the reason of COVID-19 pandemic and crisis. As a result, lots of investor were looking for ways to protect their money. Thus, the number of Bitcoin-investors were increasing as well as the popularity of cryptocurrencies [6].

By the end of the 2020, the Bitcoin price achieved \$20000 and after that grew up significantly as can be seen on the Figure 2.2 below. So, at the beginning of 2021, the price for 1 BTC was \$30000 and it continued to grow even faster and significantly that it was before. For example, in order to increase from \$10000 to \$21000 for 1 Bitcoin it took almost 3 years, while to grow from \$20000 to \$32000 took 17 days.



Figure 2.2 – Bitcoin exchange rate fluctuations in 2020 – 2021 [14]

The further increases in the BTC price sometimes connected with news or huge investments. For example, when Elon Musk posted in Twitter hashtag of the Bitcoin on January 2021, the price rose sharply to \$38000. Another case was when the Tesla invested \$1,5 billion in Bitcoin and as a result the price achieved new historical maximum of \$44000. One more example of changes in Bitcoin price afflicted by news and Elon Musk is illustrated on the Figure 2.3 below.



Figure 2.3 – The fall in Bitcoin exchange rate in May 2021 [14]

The figure 2.3 shows the fall in price of BTC in 3 stages. The first one was on 12 of May, due to the announcement of Elon Musk that Tesla's Bitcoin payments would be discontinued because of concerns about the sustainability of mining. As a result, the value of cryptocurrencies has fallen from \$55000 to \$46000 [3]. The second fall was caused by difficulties in supplying electricity to mining farms in Sichuan. The third and key factor was the statement of the State Council of the People's Republic of China on the upcoming measures to combat Bitcoin trade and mining. As a result, in May 2021 Bitcoin became 35% cheaper.

With the rising popularity and thoughts about Bitcoin as a safe asset. Nowadays in the societal and economic climate there is a growing encouragement to reserve less cash and be covered against intensive market swings.

Thus, a lot of investors put their money in Bitcoin and other cryptocurrencies. As a result, the BTC price increased to the new maximum point of almost \$64000 in 2021.

In contrast with investing fiat currencies, Bitcoin is not released by a state bank or supported by a government; so, the fiscal policy, inflation values, and economic extension dimensions that typically affect the price of cash don't concern the Bitcoin. At the same time, Bitcoin price impacted by the list of aspects:

The demand and supply of Bitcoin on the market, that affect the prices of many products the most. Bitcoin's market price is basically influenced by the number of coins that are in financial circulation and the amount of money that people are spending to pay. By creation, the cryptocurrency is restricted to 21 million coins — by achieving this maximum by the circulating supply, the higher prices are likely to go up.

The locus of Bitcoin's demand volatility built on economical and geopolitical concerns. For instance, Chinese population might have apparently conducted some financial operations with cryptocurrency to avoid capital regulations in 2020. Another case is the popularity of Bitcoin in countries with strong inflation and situations when its currencies become devalued, like Venezuela. As a result, with the increase of media coverage, the investor's demand for the cryptocurrency has also grown up.

Thus, the reducing of supply, which is connected with the rise in demand, becoming a kind of push for bitcoin prices. Fluctuations connected with expansions and collapses have already become the attribute of the crypto-ecosystem.

Another factor that influences Bitcoin price is the value of generation a Bitcoin via mining process. For leading cryptocurrency, the generation cost is approximately an amount of the costs for facility and energy that are needed to generate Bitcoin and costs connected with the degree of hardship of the mining algorithm [36].

One more point, that affects price of bitcoin is the total quantity of cryptocurrencies competing on the market. Even despite the fact that Bitcoin is the most popular among cryptocurrencies, there are still thousands of other cryptocurrencies and tokens, that are competing for investors. In 2022 BTC rules the

trading process in cryptocurrency market, however over the time its mastery decreased. For instance, as of 2017 it took more than 80% of the general market capitalization, but as for 2021, this value fell to less than 50%.

Mainly this was due to the raise of knowledge and abilities for alternative currencies. For example, because of the growth in DeFi tokens, the Ethereum coin Ether (ETH) appeared as a strong opposite for Bitcoin. As of October 2021, Ethereum had about 18% of the total market capitalization of cryptocurrency markets.

Further factor influencing the cryptocurrency price – Bitcoin investors actions. Being the most famous cryptocurrency, Bitcoin request rises since supply is becoming more restricted. Long-term, richer investors reserve their Bitcoins, preventing those with less amount of assets from obtaining exposure. In accordance with the National Bureau of Economic Research, 1/3 of all Bitcoins were maintained by the top 10000 investors at the end of 2020. Bitcoin volatility is also caused, to an extent, by these investors. If the whales were to begin selling their Bitcoin holdings unexpectedly, prices would fall down cause investors panicked as well.

Another important factor, that impact the cryptocurrency price is governments regulations, its sale and use. The regulatory with the absence of any restrictions and rules has its advantages and disadvantages. From the one point, lack of regulation says that cryptocurrency can be used openly all over the world. Also, it is not under consideration of the similar government-levied restrictions as is done with fiat currencies. From the other point, it entails that the use and trade of cryptocurrencies may have illegal results in some financial jurisdictions. The wide majority of institutional investors still treat placing money into the asset class, ensuring in lower liquidity and more volatility for its ecosystem suspicious.

The more country's authorities all over the world integrate into their countries Bitcoin and other cryptocurrencies, the more chances they have to become a lawful asset class appropriate for investment. Due to the fact, that the regulatory developments regarding cryptocurrencies are measure of liquidity in cryptocurrencies markets, its investors and traders should obey these regulatory developments.

Moreover, having influence on the supply and demand of cryptocurrencies, these developments apply pressure on the price of Bitcoin and other cryptocurrencies.

One more factor impacting Bitcoin price is the news. These developments have a straight effect on the cost of Bitcoin. Such issues may have different types. For instance, news connected with financial regulation may shift the price of cryptocurrencies significantly.

The last factor that influences the cryptocurrency price and its volatility is that Bitcoin is still in its infancy. Bitcoin exists for a little time period – it is still in the price discovery phase. This says that prices will continue to alter as investors, users, and governments work over the basic growing pains and worries until prices achieve stability – if a stable point can be reached.

Based on the factors that influence the price of cryptocurrency, it may be possible to draw some prospects for it. It is obvious that the price of the Bitcoin will grow in long-term prospects with some kind of volatility caused by news, regulations and so on. This growth is caused by the global development and digitalization processes all over the world. Along with the growing popularity of cryptocurrency as a way to protect money from inflation and crises.

To sum it up, the cryptocurrency exchange rate is a value of one cryptocurrency expressed in fiat currency. Bitcoin started from the \$0 when the first block was mined in 2009, cryptocurrency achieved balance with US dollar in 2011 and peaked \$1000 in 2013. After that it had ups and downs, till 2017 when Bitcoin achieved \$19850. Then, in 2018-2020 cryptocurrency's price fell in "cryptowinter" which overcame by the end of 2020. After that it grew fast achieving new maximum points. Also, this "way" was not without decreases and fluctuations, there are different aspects that influence the price of Bitcoin and its volatility. These aspects include: supply and demand for Bitcoin on the market, cost of mining of cryptocurrency, number of competing cryptocurrencies, governments regulations, news, actions of investors with huge amount of Bitcoin, the fact that cryptocurrency market is quite young. As for the prospects for cryptocurrency exchange rate, the price will continue to grow in long-term prospects, along with fluctuations caused by factors described above.

2.2 Comparison of cryptocurrency and euro exchange rate. Influence of cryptocurrency rate on exchange rate reserve

In order to compare the cryptocurrency and the reserve currency, especially euro it is important to establish factors that have influence on the fiat currency. Various components affect exchange rates. Some of these factors are linked to the trading relations between the countries. These factors include: inflation, interest rates, monetary policy, present account deficits, public loan and others. These factors will be described more in detail below.

Inflation is an essential factor that impacts all currencies, including the euro. Typically, countries with high levels of inflation corresponding to other countries will commonly have their currency depreciated so that the prices of goods among countries stay fairly equal. Also, higher-than-expected inflation will be derived in the central bank increasing interest rates to tame inflation [27].

Every currency is influenced by the monetary policies of its corresponding central bank. For the euro, such kind of institution is European Central Bank, and decisions concerning interest rates carried out by the European Central Bank can have an essential effect [12].

Interest rates, inflation level, and exchange rate dynamics are tightly connected. By altering interest rates, central banks of countries have impact on inflation, exchange rates and varying interest rates influence inflation and currency values. Growth in interest rates lets the debtholders in a country's economy to receive a higher income comparing to other countries. Hence, boost of the interest rates results in engagement foreign investment that drives the elevating of the exchange rate. In case once the stronger interest rate impact is diminished, if in one state the rate of inflation is stronger than in other countries, or the currency drops under the influence of some other factors. Existence of the contrary connection for reducing the interest rates stands for the fact that less interest rates decline exchange rates.

The definition of present account states that this is a kind of the trade parity among the state and its “friends” that drives all the transactions amid this partners conducted for some products, services, gains and interests. A lack in the deposit account indicates the profit the state is receiving is much lower than the payment it conducts on foreign trade. As a result, it needs to borrow money from external resources in order to fill this deficit. Briefly, that means the state provides more of its native currency, than amount of external demand for its products and it needs much outward currency, than it receives from exports sales. The surplus request for foreign currency reduces the country's exchange rate till internal goods and services are low cost for foreigners, and external assets are too cost-intensive to make sales for domestic interests.

Countries will participate in wide deficit of financial resources that are spending for financing of the projects in public sector as well as governmental funding. Although such kind of operations encourages the national economy, states with high level of public deficits and liabilities are not so much interesting to external investors. Huge loan stimulates increase in inflation rate, as it grows, the liability is going be maintained as well as finally redeemed into more cheap cash in prospect.

Horrible case says that in order to pay some part of large liabilities, state authorities could print more money, but it is going to result in rise of money supply that unavoidably leads to increase of inflation rate. Furthermore, if state authorities unable to control deficit over national funds, it should rise the supply of bonds, that need to be sold to foreigners, thus decreasing price of these securities. As a result, large liabilities might lead to some troubles for foreigners if they think state risks defaulting on its obligations. Foreign investors will not be interested in having securities denominated in the currency, the country of which has a high risk of default. That is why, the country's debt rating is an essential element of its exchange rate. It is also important to compare the graphs with exchange rates of cryptocurrency and fiat currency. These graphs are on the figures 2.4 a) and 2.4 b) below.

a)



b)



Figure 2.4 – Comparison of the dynamics of the euro a) and BTC b) exchange rates for the period of 2021 [14]

From these graphs it can be concluded that euro which is illustrated on the part a) of the Figure 2.4, and Bitcoin exchange rate, which is illustrated on the part b) of the Figure 2.4, are not connected. However, it must be noticed that both of them are on the influence of some global events and factors, such as COVID-19 pandemic crisis. Based on this graph, there is no connection between these currencies, while the Bitcoin exchange rate is much volatile than the euro ones.

Comparing with the factors that influenced the cryptocurrency exchange rate it can be concluded that these factors are quite different and the only factor influencing both the fiat currencies and cryptocurrencies is any global crisis. Moreover, fiat

currencies market is old enough and supported by government, as a result it less inclined to high volatility and changes in the changes rate. However, the factor that may affect both cryptocurrency market and fiat currencies should be global enough to get huge news distribution and have impact on country`s governments and economies. But still this influence would have different changes on cryptocurrency market and on fiat currency market.

2.3 The role of cryptocurrencies in international trade. The share to use of cryptocurrency in international settlements and institutional investment.

The role of cryptocurrencies in international trade is that they pull out the barrier that intermediaries create. And then it can be considered this capability to move smoothly among countries and currencies, so that its prospect for international trade becomes clear. Cryptocurrencies release the potential for companies, right from the small enterprises as well as medium enterprises to the biggest TNC`s, to be able to grow or enlarge their business internationally without having to drive these obstacles and expenditure connected with the traditional financial systems. There are different spheres of usage cryptocurrencies and blockchain technologies on the world market by different businesses. Their sphere of usage and effect is described in the Table 2.1 below.

Table 2.1 – The sphere of usage and effect from application of cryptocurrencies on financial market

Sphere of usage of cryptocurrencies	The result from application of cryptocurrencies on financial market
Trade and replacement of an intermediary	The use of cryptocurrencies will make the cycle of settlements less labor-intensive, reduce the expenses for company`s administration, prohibit transferring of the deposited finances until each party is satisfied with the actions of the counterparty.
Payment methods	The process of international settlements become much faster and cheaper for banks as well as the recipient services with the use of cryptocurrencies.

Financial market infrastructure	With the use of cryptocurrencies, the necessity of responsible intermediary would be eliminated as well as operational risks connected with it. The currency system will automate the customs clearance of trade and the payment system.
Smart-contract technology	The contract process automation can be boosted as a result transaction fees connected with them could be reduced by application of smart contract technology.

Thus, using cryptocurrency and its technology with different methods, will make all the processes much faster and cheaper. In the sphere of trade cryptocurrency declines the need of an intermediary, thus the cycle of settlements becomes less labor-intensive, reduces expenses and so on. Use of smart contract technology increase the automation of contract processes and reduce the cost of transaction. Moreover, there is a breadth of benefits for businesses, that provide cryptocurrencies. Some of them are mentioned below:

No long waiting times. Sending and receiving money from abroad may take days to receive. With cryptocurrencies, buyers and sellers can send and receive money almost instantly. For a country with slow and inefficient banking system, cryptocurrency gives a great answer to solving those problems.

No failed payments. One of the biggest risks working with international suppliers and buyers is return of payments bouncing back, and lack of the resources or access to ensure getting money. There are a lot of cases of businesses being scammed by foreign buyers and sellers this way. With cryptocurrency, this isn't an issue, because a business must have the money already in an account for transaction to go through. Therefore, there's no way of transactions to be cancelled, making international trade less dangerous for businesses.

Absence of transaction fee. This is one of the core advantages that cryptocurrencies carry to international trade. When handling with a third party such as a bank, businesses should pay very high transaction fees in order to have their money sent to and received by international buyers and suppliers. With blockchain authorized peer-to-peer transactions, purchases made with cryptocurrency are free of transaction fees.

Business will always have a secured record of all transactions. Tracking orders throughout international borders may be really messy. Despite the software that have to simplify this process, a lot of software is still subject to manipulation. With cryptocurrency and blockchain technology, all transactions that come in and out of business will be safeguarded and authorized.

The use of cryptocurrencies in international financial transactions by different countries of the world as an innovative analogue of real money is not clearly recognized, because it is constantly changing and adjusting. Digital money is viewed as a new economic phenomenon, which the Central Bank of each state organizes its own instruments and operations: Starting with formal authorization, implementing recommendations on hedging possible risks or applying general principles of regulation in the sphere of payments to the full ban on all related activities.

Moreover, one of the first participants in economic processes that are affected by new digital money is banks. Today, many of the central and private banks in different countries are closely following the development of the cryptocurrency market (primarily on the course and transactions with bitcoin) and trying to adapt to it or participate in its development. Today it is impossible to say exactly how cryptocurrencies will affect the banking system in different countries, and there are polar predictions on this matter.

The absolute or partial ban on cryptocurrencies is most commonly imposed by countries that are in a constant/temporary unstable economic situation and have problems with the domestic market. The above-mentioned embargo or total refusal of digital money they try to limit their use in the country and in this way simplify the control of financial means.

However, the share to use cryptocurrencies in international trade remains low, based on the absence of information about the share or amount of such usage in international trade. Despite this there are companies that already accept and use cryptocurrency in their business. Here is the list of the earliest adopters:

- Overstock – this e-commerce turned to be the first big seller that receive payments in Bitcoin in January 2014.

- PayPal – settled itself as a crypto player in September 2014 by starting to conduct BTC payments with crypto-centered companies.
- Microsoft – like Overstock and PayPal, Microsoft launched receiving cryptocurrency as payment method for applications, games and other products for Xbox and Windows stores in 2014.
- AT&T – In 2019, AT&T developed into the first serious mobile holder that accepted cryptocurrency payments. Clients could pay the orders via cryptocurrency as a payment method.
- Starbucks – has been admitting bitcoin in its Starbucks mobile application from 2020. Consumers can recharge their Starbucks cards with bitcoin and other cryptocurrencies to enlarge payment options [42].

Moreover, in future the number of such companies would increase due to the benefits, that provide cryptocurrency payments. These companies might include technological corporations like SpaceX and Tesla, that accepted payments in Bitcoin, but stopped that, automobile companies, shipbuilding companies and others.

To sum it up, the core role of cryptocurrencies in international trade is that they pull out the barrier that intermediaries create. And then it can be considered this capability to move smoothly among countries and currencies, so that its prospects for international trade turns to be most clear. It also helps small and medium-sized business to expand internationally without obstacles and expenditures that give traditional financial systems. Moreover, cryptocurrency and blockchain technology gives plenty benefits for businesses such as absence of waiting, no transaction fees, secured record of transactions and others. In international settlements, the use of cryptocurrency is not fully recognized, because it is constantly changing and adjusting. However, there are some companies that already accept cryptocurrency payments, like Overstock, PayPal, Microsoft, Starbucks and this list will be enlarged in future with technological corporations, automobile companies and etc.

3. PROBLEMS AND PROSPECTS OF CRYPTOCURRENCIES DEVELOPMENT.

3.1 Problems of effective implementation of cryptocurrencies in international finance.

Despite the prospects in cryptocurrency, there are still many constraints, that need to be experienced the cryptocurrency. Observers and new investors have likely taken precautionous step whether to invest vastly or not is due to the threat and difficulties connected with trading and investing in cryptocurrency.

Although, it is naturally engaging to use blockchain technologies to offer a transparent unique origin of truth, it is usually preferable for there to have various stages of privacy accessible to stakeholders when it need to have access for information about particular transactions, smart contracts or user`s personal details. There is a special defiance for popular permissionless blockchains like Bitcoin and Ethereum, because it might be possible to conduct confidentiality weakness and kinds of online spying built on blockchain analysis, due to the feature of openness of all transactions, smart contract code and state. Multiple of new common permissionless blockchains have been created to solve this problem. For example, Monero, a basically private blockchain technology built on ring-signatures that make it hard to definitely determine the initiator of a transaction, includes the concept of a ‘view key’, that can be used to view (but not authorise) the transactions related to a Monero address.

Another difficulty regarding investment in cryptocurrency is volatility, that can be determined as both a high-tech and a financial constraint. Nowadays a great obstacle to cryptocurrencies becoming a vastly approved payment system as it makes challenges connected with functions of money, specifically the of hold of worth. Despite the troubles experienced in traditional financial systems are fairly corresponding to those being faced by crypto-exchanges, really high volatility of cryptocurrency assets have the ability to negatively influence impressions and restrain their application in all types of large-term financial operations. The financial and operational openness of the

scheme is restricted and token holders must place their trust in, amid other factors, the creditworthiness and wholeness of Tether and their keeper.

Problems connected with scalability could postpone or discourage blockchain's ability to change businesses, economics and governance. A lot of fundamental popular permissionless blockchain protocols do not extent to high transaction amounts due to the limitation in terms of transaction efficiency by design. This is since lots of these protocols have restrictions regarding block size or transaction difficulty, and purposely control the speed at which blocks are issued with the aim of regulation of the speed at which fresh tokens are created. This guides to low transaction reply periods and quite high costs of operation.

Incentives are vital to support any economic or contractual relations, because they encourage people to behave in a specific way in an economic or business condition. The creation of the correct incentives permits users to reach common benefits when parties engaged in a relation have varying aims and obtain different degrees of knowledge. In traditional economic ecosystems, strategic interactions among network members have to be guided and synchronized at high level, via usage of encouragement and compliant mechanisms. In other situations, a core jurisdiction, for example a appointed firm, institution or cooperative can organize services to the system.

While cryptocurrencies have turn to be well-known and are still rising in popularity, it is important to retain that they are existing only around for just over a decade. The conception alone truly arisen with the issue of a white paper on Bitcoin in 2008. Stock markets, conversely, can review their history on centuries. For example, the London Stock Exchange was created in 1801. Gold has been a established guardian of value for thousands of years. But as for the cryptocurrencies, no one can truly predict what will happen to them in the future – and it is important to be brave enough to get in this sphere as an investor.

To sum it up, there are a lot of benefits from investing in cryptocurrencies, however, there are still some constraints that may influence the investment and investor's behavior. For example, volatility, that has the ability to negatively influence

impressions and restrain their application in all types of long-term transactions. Other constraints include scalability, privacy challenges, the fact that cryptocurrency market is quite “young” and the problem of incentives.

3.2 Prospects for the development and implementation of blockchain in the world economy

According to the definition, mentioned in the first chapter of the work in the point 1.1, blockchain is a technology designed for data recording. This is seemed to be innovating since it is hard and almost impossible to hack the system with the saved information. Thus, there is also a special interest among businesses, that wish to assure the status of the information they have.

Companies have already evaluated the ways that blockchain can revolutionize lots of processes for business activities, these processes include: the method for contribution of cross-border payments, improvement of uniqueness and security of confidential information, spread of the smart-contract technology in the core business world. Other fields that might be soon revolutionized with the blockchain are described below:

Strong attention to blockchain technology was already proven by companies of banking sphere. Technology enables accesses to various banking capabilities for users all over the world, that might not even have such chance. Especially, persons from countries with emerging economies, that do not have normal banking institutions, that are easily available, may have access to such services with application of blockchain. In order to enable immediate sending of money all over the world without any high fees and delays, it is essential for blockchain technology to collaborate with digital currencies.

Insurance field is also ready to embed blockchain technology. To simplify the process of cooperation, companies may individually confirm the information under contracts using the capability of distributed ledger technology.

Nowadays, one of the great issues in the world is assurance of the just and accountable voting process. However, the use of blockchain might be helpful for boosting of this procedure and rise of its confidence as well as safety. Voting operations might likely enhance all the processes starting from the registration of the voter to results accounting. Moreover, the increase of transparency of the procedure might be achieved with application of the blockchain's distributed ledgers, that are freely available and unchangeable.

It is thought that term "government" is equivalent to bureaucracy and its contractions. Moreover, a lot of features of government are neither effective nor open, so they are also sensitive to corruption. Some points of governmental process might be modernized with the decline of bureaucratic concerns and upgrading information safety and openness, using blockchain technology.

In past few years there is an increased importance of the crowdfunding platforms, that are designed as one of the famous methods for raising funds for different aims and projects. Crowdfunding platforms are usually supported by levying costs for services, being an intermediary among project creators and contributors. Blockchain may help diminish the necessity for an intermediary, it is better to link managers of some particular projects to individuals who want to share money effectively.

Single sellers, at a retail store or online ones, usually trust merchant systems. However, both consumers and sellers may be "connected" easily, with the use of blockchain, by removing intermediate and maintaining prices competitive. Moreover, to boost this procedure and enhance the security the representatives of this sphere can use the smart contract technology.

Sector of the real estate also faces different bureaucratic and clarification constraints. Thus, in order to boost it and support the straight recording process the blockchain technology can be applied as well. Moreover, technology could develop this sphere in various ways including the decrease of paper usage and support of procedures of monitoring and confirming of ownership.

To sum it up, there are numerous other sectors that may receive gains from blockchain implementation. With increase of businesses that are opening up their doors to blockchain and its capabilities, the list of industries mentioned above enlarge even longer. Blockchain technology will continue to develop, and its influence on the world will increase as well as the growth of technology.

3.3 Prospects for the role of cryptocurrency in institutional investment

Based on the conducted research it can be concluded that nowadays the cryptocurrency is mostly used as an alternative payment method. In international settlements use of cryptocurrencies by different countries of the world as an innovative analogue of real money is not clearly recognized. The main reason is that the market of cryptocurrency is quite “young” and is continuously changing and adjusting.

Moreover, in institutional investment it can be also used as a mechanism for direct and indirect institution activity, thus there are obvious benefits from using of cryptocurrency in institutional investment as well as in international settlements mentioned in the Figure 3.1 below

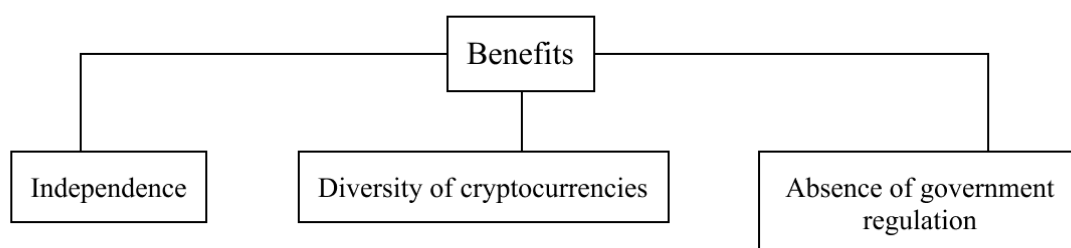


Figure 3.1 – benefits for institutional investors from using cryptocurrency

Such benefits could be described more in detail, thus independence includes the absence of significant connection with other currencies, as it was mentioned in Topic 2, point 2.2. So, the only way the cryptocurrencies and fiat currencies can be connected

is the common exchange rate changes under the influence of some global issues such as pandemic.

The next benefit is the diversity of cryptocurrencies, types of cryptocurrency and technologies based on blockchain. Each of them has its own unique features, for example, altcoins may have faster transactions, optimized mining processes, various automated contracts, and become a base for working with crypto applications, etc. As for de-fi services, their users can provide and receive different services straight, without the engagement of intermediaries. NFT – is a token that has a special identifier and has additional settings that let it to store particular information. Thus, the investor has plenty of options to choose or diversify his portfolio. Moreover, there are different types of cryptocurrencies which can be developed and used even for some particular sphere.

One more gain, that receive institutional investor is absence of strong government regulation. The lack of regulation means it can be used openly all over the world and is not issue to the similar government-levied restrictions as other currencies. Generally, the situation with cryptocurrencies around the world differs from one country to another. Some of them are trying to regulate it, others ban. Salvador conversely adopts the Bitcoin as a payment method. However, wide majority of institutional investors are still suspicious of placing their money into the asset class, ensuring in lower liquidity and more volatility for its ecosystem.

As well as its benefits the investment in cryptocurrency has its losses. First of all, such investments are hard to control, due to the high volatility of cryptocurrency, that can be influenced by different factors. Also, it is difficult to set the origin of cryptocurrency and this may have criminal results in some financial jurisdictions.

To sum it up, the usage of cryptocurrency in institutional investment as well as in international settlements is just starting nowadays. However, there are already some gains that receive institutional investors from cryptocurrency. Such benefits include the absence of significant connection with other currencies; different types of cryptocurrencies which can be developed and used even for some particular sphere;

lack of regulation that means it can be used openly all over the world and is not issue to the similar government-levied restrictions as other currencies.

CONCLUSION

It can be concluded that blockchain technology is the kind of prospective technology for international settlements, due to various ways of its application like different types of international investments as well as institutional and portfolio ones. According to its definition, the technology is based on the number of blocks that are connected and include number of transactions could be reviewed by each users of the network.

Bitcoin, which introduced in 2008, was the first cryptocurrency, that allowed secure peer to peer transactions within the Internet, and it stays by far the largest, most influential, and popular. In the decade after, Bitcoin and other cryptocurrencies have becamen a digital options to money supported by governments.

There are also different types of cryptocurrencies, which include altcoins, stable coins, tokens, defi`s and NFT. Each of them has its own unique features, for example, altcoins may have faster transactions, optimized mining processes, various automated contracts, and become a base for working with crypto applications, etc. As for de-fi services, their users can provide and receive different services straight, without the engagement of intermediaries. NFT – is a token that has a special identifier and has additional settings that let it to store particular information.

As for the institutional investment, it is conducted by the legal entity that accrues the funds of multiple investors, that might be private investors or other legal entities, to invest in different financial instruments and receive its gains from the process.

The situation with cryptocurrencies around the world differs from one country to another. Some of them are trying to regulate it like USA, Canada and some others. Salvador conversely adopts the Bitcoin as a payment method. As for Ukraine, in the mid of February the law that makes the operations with cryptocurrencies legal and regulated with authorities was adopted

The cryptocurrency exchange rate is defined as a value of one cryptocurrency expressed in fiat currency. Bitcoin started from the \$0 when the first block was mined in 2009, cryptocurrency achieved balance with US dollar in 2011 and peaked \$1000 in

2013. After that it had ups and downs, till 2017 when Bitcoin achieved \$19850. Then, in 2018-2020 cryptocurrency's price fell in "cryptowinter" which overcame by the end of 2020. After that it grew fast achieving new maximum points. Also, this "way" was not without decreases and fluctuations, there are different aspects that influence the price of Bitcoin and its volatility. These aspects include: demand and supply of Bitcoin, cost of mining of cryptocurrency, number of competing cryptocurrencies, governments regulations, news, actions of investors with huge amount of Bitcoin, the fact that cryptocurrency market is quite young. As for the prospects for cryptocurrency exchange rate, the price will continue to grow in long-term prospects, along with fluctuations caused by factors described above.

Comparing with the factors that influenced the cryptocurrency and fiat currency exchange rate it can be concluded that these factors are quite different and the only factor influencing both the fiat currencies and cryptocurrencies is any global crisis. Moreover, fiat currencies market is old enough and supported by government, as a result it less inclined to high volatility and changes in the changes rate. However, the factor that may affect both cryptocurrency market and fiat currencies should be global enough to get huge news distribution and have impact on country's governments and economies. But still this influence would have different changes on cryptocurrency market and on fiat currency market.

Obviously, as well as any technology blockchain and cryptocurrency have their advantages and disadvantages. From the one side, there are numerous other sectors that may receive gains from blockchain implementation. As more and more businesses open up their doors to blockchain and its capabilities, it's nearly particular that the list of industries mentioned above will enlarge even longer. One thing is for particular: blockchain technology will stay, develop, and its influence on the world will continue to increase as the technology also grows. On the other side, there are still some constraints that may influence the investment and investor's behavior. For example, volatility, that has the ability to negatively influence impressions and restrain their application in all types of long-term transactions. Other constraints include scalability,

privacy challenges, the fact that cryptocurrency market is quite “young” and the problem of incentives.

As for the institutional investment, the usage of cryptocurrency is just starting nowadays. However, there are already some gains that receive institutional investors from cryptocurrency. Such benefits include the absence of significant connection with other currencies; different types of cryptocurrencies which can be developed and used even for some particular sphere; lack of regulation that means it can be used openly all over the world and is not issue to the similar government-levied restrictions as other currencies.

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APPENDICIES

SUMMARY

Tsybulniak A. S. Financial and economic role of cryptocurrencies in international institutional investment - Bachelor's qualification paper. Sumy State University, Sumy, 2022.

The final paper is devoted to analyze the cryptocurrency, its types, exchange rate and its role in institutional investment. Comparison the cryptocurrency and fiat currency, as well as their exchange rates and factors of influence. Problems and prospects of the cryptocurrency in international settlements as well as in institutional investment are discovered and defined.

Keywords: cryptocurrency, blockchain, investment, institutional investment, NFT, fiat currency.

Анотація

Цибульняк А. С. Фінансова та економічна роль криптовалют у міжнародному інституційному інвестуванні. – Кваліфікаційна бакалаврська робота. Сумський державний університет, Суми, 2022.

Кваліфікаційна бакалаврська робота присвячена дослідженню криптовалюти, її видів, курсу та її ролі в інституціональному інвестуванні. Порівняння криптовалюти та фіатної валюти, так само як і їх курсів та факторів, що на них впливають. Визначено проблеми та перспективи криптовалют в міжнародних розрахунках так само як і в інституціональному інвестуванні.

Ключові слова: криптовалюти, блокчейн, інвестування, інституціональне інвестування, NFT-технологія, фіатні валюти.