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Fiat Money, Cryptocurrency, and the Global Financial Economy

Relatori

prof. Elisa Ughetto

Candidato

Mohammadreza Zeididouzandeh

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Contents

List of Acronyms and Abbreviations

USD US Dollar

BTC Bitcoin Cryptocurrency

ICO Initial Coin Offering

SEC The US Security and Exchange Commission

CFTC The Commodity Futures Trading Commission

IPO Initial Public Offering

ESMA The European Securities and Markets Authority

ECB The European Central Bank

DeFi Decentralized Finance

NFT Non-Fungible Token

ETH Ethereum Cryptocurrency

P2P peer-to-peer

QR Quick response code

CBDC Central Bank Digital currency

DApps Decentralized Applications

XRP Ripple Cryptocurrency

BUSD Binance USD Cryptocurrency

USDT Tether Cryptocurrency

DOGE Dogecoin Cryptocurrency

eNaria Central Bank of Nigeria-issued Digital Currency

Dcash Eastern Caribbean Union Digital Currency

e-CNY Digital Yuan (Central Bank of China's Cryptocurrency)

USDC USD Coin Cryptocurrency

IP Internet Protocol Address

ID Identity Document

DAI Dai Coin Cryptocurrency

ADA Cardano Cryptocurrency

BNB Binance Coin Cryptocurrency

MIM Magic Internet Money Cryptocurrency

ELON Dogelon Mars Cryptocurrency

Introduction

Money and its use for transactions and businesses has always been one of the concerns of individuals and governments. Since the emergence of money, there have always been problems with the regulation and transfer of money. Cryptocurrencies were created with the aim of eliminating the problems and shortcomings of fiat money. But due to the new emergence of cryptocurrencies, they are still facing many problems, and in the meantime, they have their supporters and opponents.

Fans and those who are optimistic about Cryptocurrencies predict that cryptocurrencies will play an important role in the future of the global financial economy and in the coming years will cause the globalization of borderless exchanges and businesses.

On the other hand, the opponents of these currencies consider them a danger to the financial economy of the world and due to the problems and defects of these currencies, they do not envision a future and continuity for cryptocurrencies and do not suggest investing in this market as they believe that investors will suffer a significant loss sooner or later.

Traditional theories of money, following a brief history of bartering

The concept of bartering

The need of different materials and services was the reason of coming into existence of bartering.

Our ancients started to barter by exchanging the materials in lack of money. The very first bartering system is recorded approximately 6000 B.C. by Mesopotamia tribes was adopted by Phoenicians. This bartering was defined as a direct system to exchange goods and services. Giving a good or service in order to obtain another one. For instance, giving potatoes to obtain grain.

By the genesis of weapons, the desire to bartering has increased. In this period of time people started to barter weapons as well as foods and services.

By spreading the bartering almost all over the world, there should be a negotiable system to demonstrate the real value of things. After a while there were some people that wanted more for their products and services, and they had all rights because they soon recognized that for example the value of a sack of rice is not as equal as a potato! (Negotiation!)

That was the time in which people started to negotiate over the value of their goods and services. Obviously, those popular goods had much more value than others, so the owners of these kind of goods started to ask for more.

This bartering system extended all over the globe and still is using in some countries.

The genesis of money and global trading

What is money?

Money is any type of merchandise or verifiable record that is widely accepted in a certain country or socio-economic system as payment for products and services and debt repayment, including such taxes. Money is not always valuable, whether it is in the form of a metal coin, a shell, or a piece of paper. Money's worth is determined by how important people regard it as a medium of commerce, a unit of measurement, and a safe place for riches.

Money enables people to trade goods and services indirectly, it aids in the communication of product prices (prices written in dollars and cents correspond to a numerical amount in your possession, such as in your pocket, purse, or wallet), and it provides individuals with a long-term means of storing wealth. Money is precious as a unit of account—a socially approved unit of

account by which goods are priced and payments are accepted. However, both the use and the form of money have developed over time.

Despite the fact that the terms "money" and "currency" are frequently used interchangeably, numerous hypotheses propose that they are not equivalent. Money is intrinsically an intangible concept, according to certain ideas, whereas currency is the physical (tangible) expression of the intangible concept of money. Likewise, according to this theory, it can be mentioned that money is not touchable, or it cannot be smelled. Currency is any coin, note, object, or other item that is presented as money.

The principal form of money is numbers, nowadays, paper notes, coins, and plastic cards are the most basic forms of currency (e.g., credit or debit cards).

Money invention

The invention of money took place before the beginning of written history. As a matter of fact, it can be said that all the stories about how and where money is invented are based on conjecture and logical inference.

Exchanging goods for goods was not so convenient and logical, as for example if a farmer wanted a jacket, it was not so easy to carry two sacks of potatoes for a long distance to buy a jacket, or if he had all foods and drinks but milk, it was not logical to give foods to another farmer who served milk and this second farmer also had all types of food, so he did not need foods. On the other hand, exchanging materials like foods in large amounts was not so logical as foods do not remain fresh for a long time.

Consequently, the money invented must have some specific features. First of all, the money should be fungible and portable. The foods bartered might be spoilt so the money must be durable. The value of goods was differed so the money invented must be divisible and countable, and the most important feature for a tangible money is that it must be non-counterfeit.

Besides, the money must have a standard measurement of value and a store of value which means that during the time it should not lose its value.

figure 1. Evolution of Money

The first noun commodity used as money was seashell. Other goods used as medium of exchange were salt, cattle and tobacco.

Coins

Coin is defined as a piece of metal which has a specific quality and weigh, with a special sign or seal of those who stamp coins.

The first coin was created by Lydians around 600 B.C., they were a powerful and rich nation in Anatolia or Asia Minor. These early coins were made of a special material called electrum. Electrum is a natural material combined of almost 75 percentage of gold and 25 percentage of silver. These coins were almost as large as a bean, and they were known as official money in that time. After that the Greeks also imitated Lydians by following the idea that they must welcome the metal coin as an official money too, so soon they started stamping coins. Thus, about hundred years later, many cities in the great land of Greece and Asia Minor, in the islands of the Aegean Sea and Sicily, and in southern Italy had their own mints.

Gold coins were considered the most valuable coins, then silver coins and finally copper coins. The minting of coins by the Greeks lasted for about 500 years.

The Romans also accepted this idea and minted coins for about 500 years.

Then, slowly the art of minting coins lost its intensity and the coins belonging to this period were very thin and not noticeable. But in the 15th century, the art of coining was revived, and metal became more abundant, and the masters of this profession were employed to write on the coins.

With the passage of time, the people of the whole world came to believe in gold, silver and the coins made of these two precious metals, and global trades took place. European traders were able to buy silk, porcelain, and spices from East Asia. This is how the economic wheel of Europe and East Asia began to turn.

The first bankers and banknotes

After the time when people started to believe in coins, it was agreed that the property owners, who had most of the gold and silver coins, would leave their coins with the money changers, who were among the first bankers and suppliers, and receive a receipt for what they have lent. The name of that person and the quantity and quality of their deposit were written on this receipt. This gold and silver that people put in the treasury was the fund of money, and this receipt gradually turned into a banknote.

In China, since gold and silver were scarce, they decided to make something similar to a banknote and use it as money, but it was worthless in other countries.

The modern first banknote was printed in Stockholm Bank on January 5, 1691.

After a while, the use of coins lost its popularity among the people and paper money replaced it and created an effective role in transactions and exchanges and caused the expansion of the career of various exchanges in this field. By transferring money from one country to another, merchants caused better transactions, the publication of paper money, and the formation of today's banks.

Today, money is one of the most important tools of the society, in the same way, governments are producing fiat money with the support of banks for the convenience of buying and selling goods.

Unlike coins, paper money is not scarce, and governments can easily print paper money.

Fiat money or paper money was first popularized in China in the 10th century and was used in Europe and America in the 17th century.

Although there were always people against banknotes because they believed that “the banknote has no intrinsic value and over time its printing will increase and its value will disappear”, but banknotes became so popular all over the world.

The creation of virtual currencies

Electronic money

By developing the bank network and technology, electronic money was created.

Electronic money is money that cannot be touched, and the value of electronic money is issued by the government and stored in a wallet or electronic device (credit/debit cards). Electronic money is purchased by consumers and customers, and every time it is directly connected to electronic devices through a sales terminal or makes a purchase from computer networks (internet), its balance is reduced. The advantages of electronic money can be mentioned as security and prevention of fraud, facilitating payment and high speed of operation.

The advent of cryptocurrencies

Why is money valuable today?

The credit that people give to fiat currencies causes the value of these assets. simply the reason people believe in money is because they know that if they save some amount of money, they can use it to buy something in the future because it still has value, and countries and governments pay people a service or good in exchange for the money.

On the other hand, if a country cannot or does not want to provide goods or services for the amount of money it has in the hands of its people and other countries, it is clear that the value of the fiat money of this country will decrease drastically and those who have tried to keep the money of this country will suffer a lot of losses.

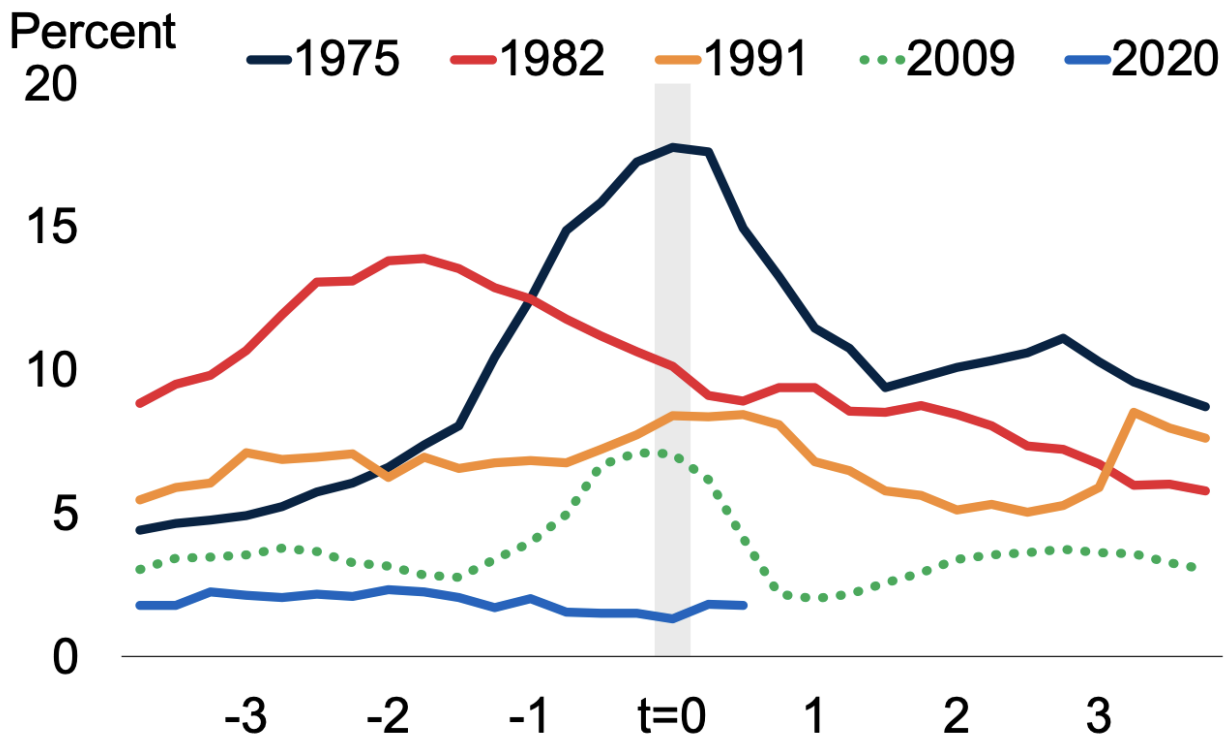

Figure 2. Global inflation before and after global recession (t=0)

Inflation by increasing money supply

Inflation can be caused by various reasons such as demand-pull inflation, cost-push inflation, increased money supply, devaluation, rising wages, policies and regulations, etc. but nowadays indiscriminate printing of banknotes by governments and central banks is one of the most common causes of inflation especially in developing countries (increased money supply).

Considering a country prints some money and in return it can provide services or goods to the holders of this fiat money.

If this country starts printing 50% more money due to the existing problems, but it could not expand its service sector and only the amount of money supplied has increased and the number of services has remained constant, or in the worse situation, the number of services has been decreased due to the existing problems, in this situation, people have to pay more money to receive the same goods and services. For example, if the total currency of a country used to be 10,000 units, and the number of services and goods was also 1,000 units, people must pay 10 units of the country's fiat currency to receive each service or product.

If people saved 100 units of money, they had access to 10 units of goods, but now the total amount of money supply has increased by 50%, but the number of services and goods has remained constant. Consequently, they have to pay 50% more, i.e., 15 units of money, for each unit of goods, which will reduce their purchasing power; This phenomenon is called inflation created by increasing money supply.

Indiscriminate printing of money

The problem and disadvantage of fiat money is that governments cause inflation and reduce people's purchasing power by printing money indiscriminately.

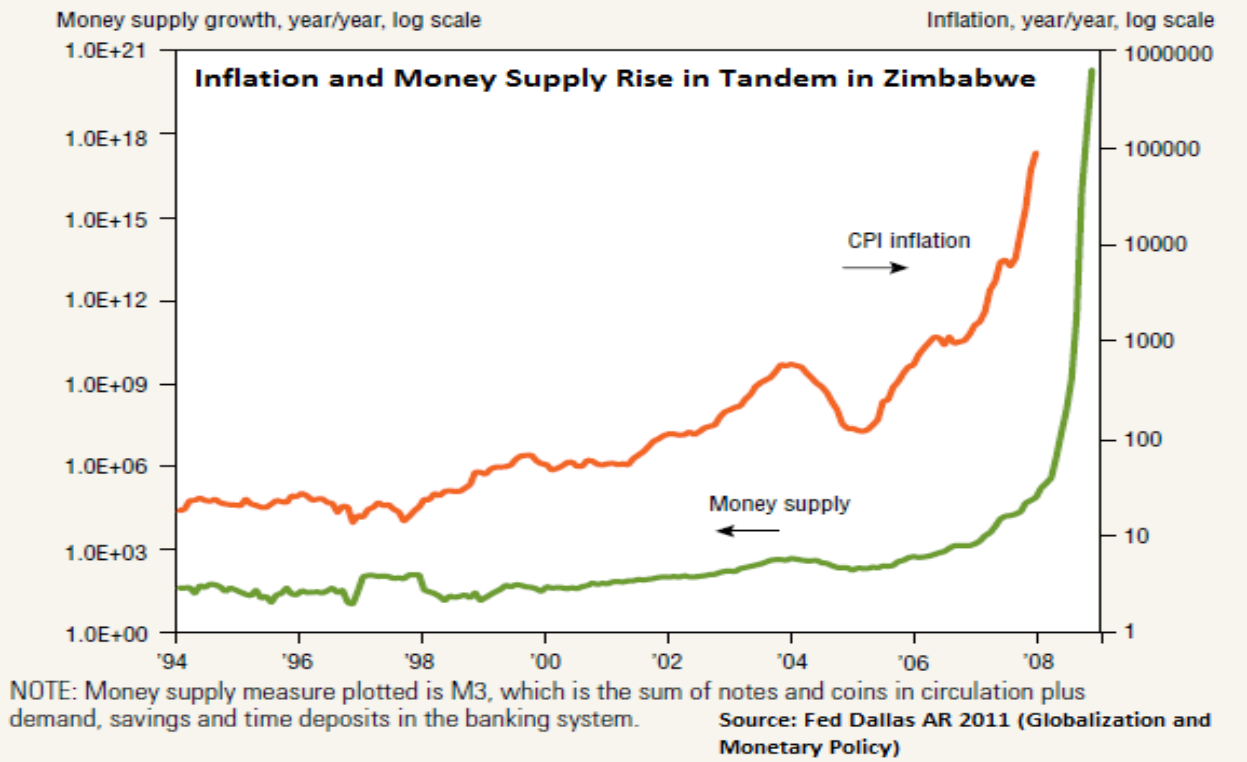

Figure 3. Zimbabwe money supply growth

For example, in the early 2000s, the people of Zimbabwe faced a very severe inflation due to the excessive printing of money by the government of this country, so that people had to carry money in large bags for their daily shopping because the Zimbabwean dollar was extremely worthless, each trillion Zimbabwe dollars was worth 40 US cents.

Banks started printing money because of the monopoly they had obtained, and this money printing directly affected people who were not involved in printing fiat money.

This weak people of the society were the reason for the appearance of cryptocurrencies and the transformation of the financial system and the reduction of banks' control over the people.

In 2008, the American financial crisis reached such an extent that many businesses and the lives of many people were destroyed, that is why Satoshi Nakamoto, the creator of Bitcoin, in the first block of the Bitcoin network that he mined, included a part of the Times newspaper as a reminder of this issue ("What is the main reason for the creation of Bitcoin?").

Figure 4. The American financial crisis

Other disadvantages of fiat money include the following:

- To transfer money from one person to another, there must always be a third party such as a bank
- Transferring money from one country to another takes a lot of time and costs too much
- Banks and big countries can easily sanction small countries or individuals

- The banking system is not transparent, and all the people of a society cannot get correct and complete information about the performance of a bank.
- Fiat money cannot be smart

These problems and other motivations have led cryptocurrency creators to create cryptocurrencies that they hope will remove the barriers posed by fiat money.

Cryptocurrency creation, following a brief history

Digital currencies can be considered a completely new form and type of money, which are becoming popular among people today. Digital currencies are not physical money and cannot be touched and can only be accessed using computers and electronic wallets.

Digital currency (virtual currency) has a broader concept and includes any currency that is digitally available, but cryptocurrency is a type of digital currency that uses cryptography for the security of its network and transactions.

Thinking about the flaws and shortcomings of fiat money, the new cryptocurrencies must cover these flaws so that they can be accepted as a new form of money.

Cryptocurrency is one of the types of virtual currencies that follows encryption technology and is usually managed in a decentralized manner. Blockchain technology was introduced for the first time in the 90s, and in 2009, after the great economic crisis in the world, the decentralized digital currency Bitcoin based on the blockchain was introduced by an unknown person named Satoshi Nakamoto. The identity of this person is unknown, and many institutions have tried to identify this person, but have not achieved any results.

Bitcoin security is provided by encrypted algorithms, and based on the algorithms, it has a specific and limited amount of production. Satoshi Nakomota's goal of this work was to prevent governments from printing money indiscriminately, also to build trust. Bitcoin was not very valuable at the time of its appearance and the public did not accept it, and over time, with the increase in trust and the purchase of Bitcoin, its price enhanced and today it has become one of the most valuable currencies in the world.

By hearing the name cryptocurrency, it comes to mind that cryptocurrencies became popular with the creation of Bitcoin, but the idea of cryptocurrencies first arose in the late 1980s.

In this idea, David Chaum implemented an anonymous cryptographic electronic money called DigiCash, which was an early idea of combining electronic money and cryptography.

After DigiCash in 1998, Bit Gold, which is referred to as the early forerunner of Bitcoin, was designed by Nick Szabo.

In BitGold, in order to solve a cryptographic puzzle, a person needed to devote their computer processing power to solving the puzzle, and if they solved this puzzle, they would receive a prize. But Sabo's plan had a problem, and that was the problem of spending again. Sabo could not solve this problem without a central core, but this central core would make the Bit Gold system centralized.

A decade later, this problem was solved by Satoshi Nakamoto and Bitcoin was born as a decentralized cryptocurrency.

Satoshi Nakamoto published the Bitcoin white paper on October 31, 2008, and in this white paper, he talked about a monetary system that works on a peer-to-peer basis. That is, people

could transfer money to each other directly without the intervention of banks; Satoshi created the first block on the Bitcoin network on January 3, 2009.

After that, the first Bitcoin exchange was created on February 6, 2010, by a person with the username Dwdollar on the online forum Bitcointalk.

Bitcoin did not have much value in the first few months of its release, but when Laszlo Hanyecz bought two pizzas worth 10,000 bitcoins in early November 2010, the value of each bitcoin unit reached 36 cents and then stabilized around 29 cents.

The price of this asset (Bitcoin) in 2011 was equal to one US dollar, but after publishing a story about the attractiveness of Bitcoin for selling drugs online by a person named Gawker, Bitcoin price grew 27 times and reached the price of $27.

In May 2011, BitPay was launched, and the company introduced new services such as smartphone wallets to Bitcoin holders.

In October 2011, the Litecoin cryptocurrency was created and as a new cryptocurrency, it was ranked second in the cryptocurrency market, and after that, other currencies emerged that may some of them no longer exist.

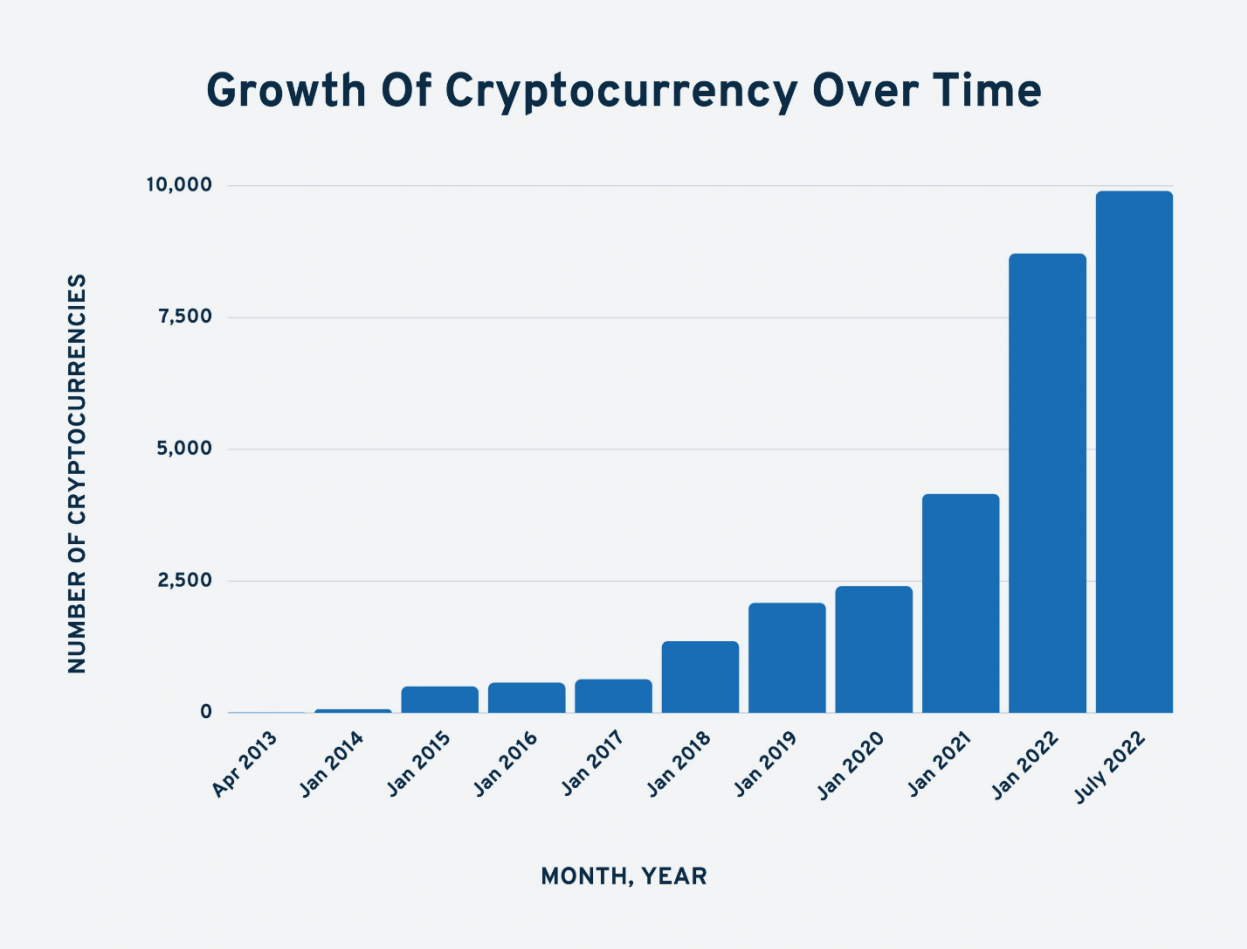

Figure 5. Growth of cryptocurrencies over time

In June 2011, the Mt. Gox exchange was hacked for the first time, and 2,000 bitcoins were stolen from the exchange, which at that time was worth $30,000.

In 2012, the price of Bitcoin continued to grow, so in September of the same year, the Bitcoin Foundation was established to promote and develop Bitcoin.

Although the Mt. Gox exchange was hit by hacking, but still managed to become the world's largest cryptocurrency exchange in 2013, by managing 70% of the entire Bitcoin network transactions. In 2014, the MT Gox exchange was hacked again, and 859,000 bitcoins were stolen in this hack, which became the first major hack in the history of cryptocurrencies. This amount of Bitcoin was worth 460 million dollars at the time and caused the bankruptcy of this exchange; After this big hack, the price of Bitcoin experienced a 50% drop, and the price did not reach its highest price level until 2016.

One of the important events of this period was the launch of the Ethereum network in July 2015; Ethereum brought smart contracts and decentralized finance to the blockchain world.

The price of Bitcoin grew continuously, reaching from $434 to $20,000. One of the reasons for the growth of Bitcoin during this period can be considered the update of Bitcoin to support the Lightning network in July 2017. Bitcoin reached its highest price of around $20,000 on December 17, 2017, and then fell sharply to the $3,200 range.

After the drop that Bitcoin had experienced, Bitcoin was able to reach the price of $10,000 again, but in 2020, with the spread of Corona, all markets experienced a sharp drop, and Bitcoin also returned to the $3,000 range. But this fall did not stop Bitcoin from growing again and within two years the price of each Bitcoin unit reached 64 thousand dollars.

In all these years, many cryptocurrencies have been introduced to the market and left, but Bitcoin is still the leader in this field and continues its way. For example, one of the most important cryptocurrencies was the Terra project with the Luna cryptocurrency, which faced a major failure and many investors suffered heavy losses when the value of Luna became zero.

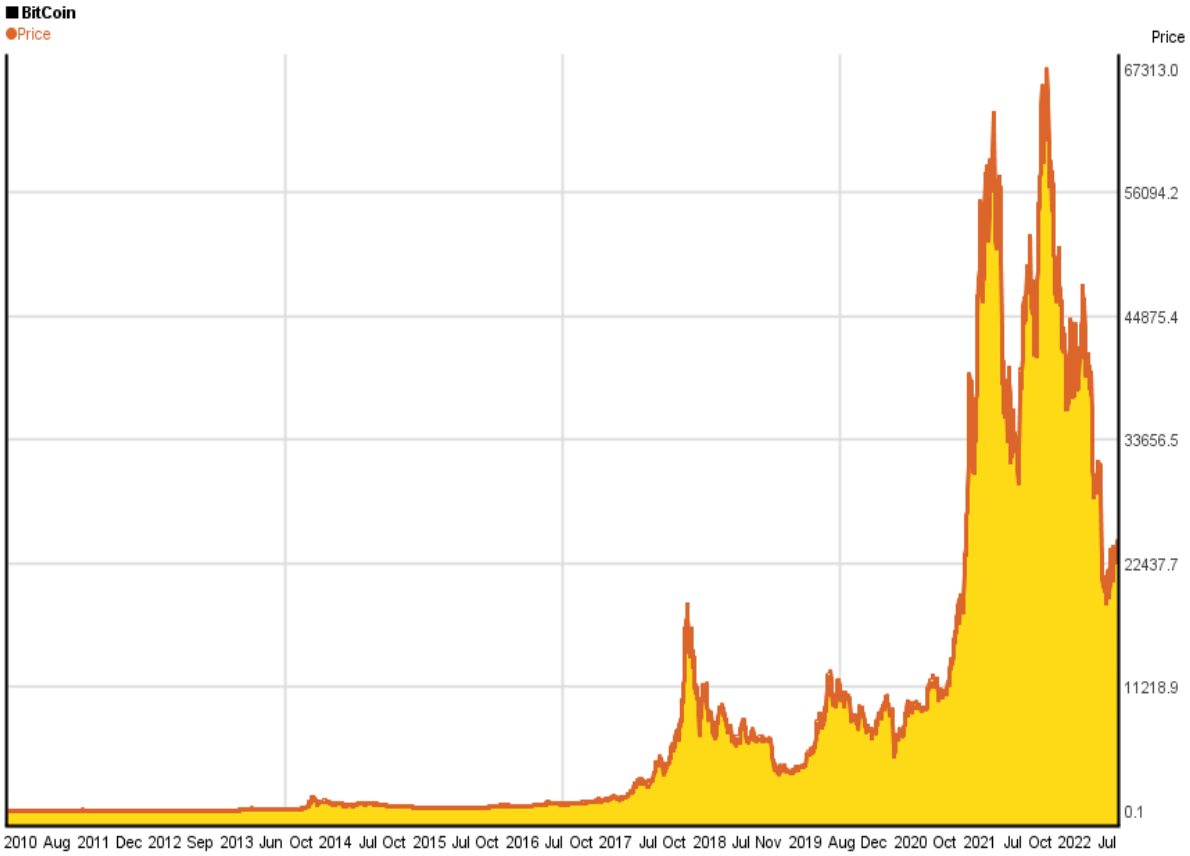

Figure 6. BTC/USD chart since 2009

Characteristics of cryptocurrencies

Cryptocurrencies, like fiat currencies, can be used to buy and sell goods or anything for which an amount must be paid. Cryptocurrencies have all the features and characteristics of physical currencies, and they can be used at any time without time and place limitations, and they do not need any intermediate to perform the transaction and the transaction is performed in the fastest time and with the lowest fee. Transactions carried out by cryptocurrencies are accurately recorded in the network, and one of the most important features of cryptocurrencies is the absence of any supervision over them by organizations and governments.

Transparency and easy access

All information about cryptocurrencies is recorded on the blockchain and all users can easily access this information.

This easy access to information and transparency along with the accuracy of the information makes it possible for people to easily transfer money to any other person anywhere in the world with high speed and low cost. Also, all people in the network are aware of the monetary policies within the network and can make necessary decisions according to the conditions.

Decentralization

By using blockchain and cryptocurrencies, the possibility of sanctioning individuals and countries is denied to powerful people and governments, because this system is not centralized and is scattered around the world in a decentralized manner.

Scarcity

In many cryptocurrencies, the number of tokens or coins offered to the market is limited, this means that the network cannot produce a large number of tokens and cause inflation and reduce people's purchasing power as a consequence. Of course, this is not true for all cryptocurrencies.

Smartization

Cryptocurrencies can be smart due to the fact that they can be combined with smart contracts, that is, the network can link cryptocurrency with smart contracts.

If someone has money and they intend to deposit this money in different parts to their children's account, in the current banking system, this action can only be done with the intervention of the bank.

But in the world of cryptocurrencies, this action can be done easily without the intervention of people or organizations, and owner just need to create a smart contract to do this for them.

Differences between Fiat and Cryptocurrencies

There are many differences between cryptocurrency and fiat money. Following are the most remarkable differences:

1. Fiat money is controlled by the government and the central bank, but no one controls or regulates cryptocurrencies. This means that anyone can trade cryptocurrency and transact it the way they want. They can even decide on the value of their money at the time of purchase.

2. The government prints fiat money through the central bank, on the contrary, these are individuals or personal identities who mine cryptocurrencies. The number of cryptocurrencies they mine is actually small, although the central banks of certain countries can print or mint any amount of money they want.

3. Cryptocurrencies can help hide one's wealth because no one knows the location of the wallets contained cryptocurrencies and its balance. On the other hand, fiat money is usually kept in the bank. This gives the government and banks access to information about one's wealth, which they can take away from people through taxes.

4. When someone makes payments with cryptocurrency and record complete transactions, transactions can never be easily reversed. But in the case of fiat money, the governments and banks can reverse all the transactions whenever they want.

5. Another prominent difference between cryptocurrency and fiat money is that cryptocurrency provides anonymous and digital transactions. This means that the name of the person sending and receiving the money remains unknown, and no one can see it. On the other hand, fiat money transactions are not anonymous and easily traceable.

6. No one, not even governments, can stop cryptocurrencies' transactions. Banks can easily stop fiat money transactions at any time and people cannot question them "WHY?". At least it is not easy!

Advantages and disadvantages of cryptocurrencies

Advantages

- **Cryptocurrencies are easily portable and transferable**

Transferring cryptocurrencies is easy and simple, no matter the amount. People can send a large amount of cryptocurrency in a second.

- **Cryptocurrencies ensure transparent transactions**

The biggest security feature that cryptocurrencies offer this generation, is the guarantee that all transactions are transparent and recorded. Open ledger i.e., blockchain ensures that a transaction is fully completed and recorded in the ledger. It is impossible to change and return this transaction.

- **Cryptocurrencies have the advantage of global reach**

Cryptocurrencies are becoming a vision for international trade. The decentralized nature of these currencies makes them accessible worldwide. Cryptocurrencies can give everyone, including ordinary people, autonomy, and financial independence, while fiat money is completely unable to do this.

- **Cryptocurrencies lower the barriers to entry in the banking world**

It is the right of every cryptocurrency user to have a private wallet to carry out cryptocurrency's transactions. Plus, no one can stop individuals from participating in a transaction. This reduces the barriers to entering the banking sub-group.

Disadvantages

- **Many people still doubt the sustainability of cryptocurrencies**

Many people do not know about cryptocurrencies and as a result even doubt about their existence and use. Also, only a few businesses accept cryptocurrency as a form of payment. This is one of the obstacles for people who want to use cryptocurrency for their daily fixed transactions. For this reason, the majority of people still prefer to use fiat money or other types of digital currencies.

- **Cryptocurrencies are great tools for criminals**

These currencies have provided an opportunity for criminals to commit criminal acts and escape easily. This is true because transactions made with cryptocurrencies are not easily traceable.

Bitcoin transactions are untraceable unless you have attached your identity to it. Therefore, criminals and fraudsters can use it to hide. This is one of the main reasons why several governments have declared cryptocurrency transactions illegal in their country.

- **The price of cryptocurrencies is extremely fluctuating**

The price of cryptocurrencies can change at any time (even every single second), making it a risky investment. Although people have a positive opinion about the future of cryptocurrencies, the cryptocurrency market is still in its infancy and the price of coins can fluctuate a lot for various reasons.

Discussion on the legislation of cryptocurrencies

Cryptocurrencies with their decentralized structure are not under the supervision and control of any bank or government. Due to the cryptocurrency's ever-increasing growth and increasing popularity of digital currencies, the discussion of cryptocurrency legislation has become more prominent, and governments are looking for appropriate methods to monitor these currencies.

Some people believe that cryptocurrencies are a type of currency that should be controlled by the government and therefore, their regulation is necessary. On the other hand, opponents believe that cryptocurrencies are decentralized and unrestricted, as a result, do not need to be regulated.

The discussion about the legalization of cryptocurrencies is not a new issue. The discussion on this topic has been going on for years, but recently this discussion has become more intense and serious. In fact, the main topic of debate is whether cryptocurrencies should be regulated or not. This debate has many reasons, some of which are mentioned here:

- Cryptocurrencies can create unprecedented disruptions in the financial system and economy.

- Cryptocurrency transactions are anonymous and untraceable, making them harder to regulate and control.

- No central bank or regulatory body controls cryptocurrency transactions.

The regulation of cryptocurrencies

Cryptocurrencies are a new phenomenon that has become very popular in the last few years. Along with the growth of cryptocurrencies, the need for laws to protect investors and consumers also increases. But cryptocurrencies do not fit into traditional legal schemes, and their decentralized structure makes it difficult to regulate crypto. Currently, 3 types of legislation can be considered for cryptocurrencies:

self-regulation or autonomous legislation, government legislation and market legislation.

Self-regulation is part of the cryptocurrency user community and is often managed by organizations such as the Bitcoin Foundation. Given that governments are still looking for ways to legislate cryptocurrencies, the future of cryptocurrencies is currently unknown. Some countries have banned cryptocurrencies, and some haven not made any decision about them.

At its core, cryptocurrency legislation, only determines how these currencies used in different situations.

Experts believe that crypto legislation can be considered a branch of securities legislation. Because according to the laws of the United States, cryptocurrencies become a type of security. Also, in the field of Initial Coin Offering (ICO) and other digital assets, cryptocurrency can be considered in the domain of the regulatory division of the US Securities and Exchange Commission (SEC).

The current state of cryptocurrency legislation varies from country to country. Some countries have banned cryptocurrencies and others have allowed people to use them by imposing restrictions. For example, China has generally banned the trading and mining of cryptocurrencies.

Some countries only allow a small number of currencies and restrict activities related to them. For example, South Korea only allows the use of Bitcoin and has set limits on its use.

The United States has adopted a much more serious and accurate legal framework for cryptocurrencies. For this reason, this country is known as the friendliest country towards cryptocurrencies. The US Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC) have introduced a regulatory framework for cryptocurrencies. The SEC has been involved in the regulation of cryptocurrencies since 2013. A list of rules has been introduced by the SEC that any ICO must follow before being listed on an exchange.

These laws are part of the Securities Law of 1933. The SEC has yet to pass an official rule on cryptocurrencies but has made it clear that it will crack down on fraud and scams.

Some countries believe that cryptocurrencies do not have the necessary legal value and formality and as a result do not recognize them as a currency.

According to the SEC, cryptocurrencies are securities and therefore regulated by securities laws. The SEC wants to regulate all transactions (buying, selling, and trading) involving the tokens or coins of an IPO. If a company wants to sell its cryptocurrency, it must file an application with the SEC before making the sale. The Securities and Exchange Commission of America announced in a statement about cryptocurrencies and initial coin offerings that cryptocurrencies, including Bitcoin and Ethereum, have the same characteristics as securities. So, to use these digital assets, companies must file with the SEC or qualify for an exemption from registration. In addition, companies that are not registered with the SEC must cease their activities and return investors' money.

The European Union has also established a set of rules for cryptocurrencies, whereby exchanges must be registered with the ESMA (European Securities and Markets Authority).

There are many doubts about the future of cryptocurrency regulation, but it seems that it will continue to grow and evolve.

Cryptocurrencies will definitely not disappear. They may outgrow or fail. But it can be said with certainty that cryptocurrencies are a revolutionary change in the financial world.

Accounting of cryptocurrency

It is possible that with the agreement of the sellers, cryptocurrencies can be used to buy goods and services, but they cannot be considered as money in the accounting discussion:

- Cryptocurrencies are not as accepted and widely used as official monetary units such as dollars, euros, etc.

- These currencies are not used as a monetary unit in the pricing of goods or services.

- These currencies are not used as the basis of measurement in financial reports.

Cryptocurrency is not equivalent to money but note that it has a high value and is increasingly important in the global market. These currencies are included in the group of intangible assets and are consistent with these assets.

Cryptocurrencies are separable and unlike physical entities, have an economic origin. Most of these currencies have an unlimited useful life and depreciation is not mentioned in their reports.

According to international laws, accounting for the holders and miners of these currencies is different.

If the purpose of holding cryptocurrencies is trading or business, sellers and brokers must follow International Accounting Standard 2.3 b and consider cryptocurrencies as a current asset and estimate it in the form of fair market value minus the cost of sales in reports.

If the purpose of cryptocurrencies is to save capital or increase its value, must follow the International Accounting Standard 38. Holders of cryptocurrencies in this case must use the cost method or asset revaluation for estimation and reporting.

Another accounting challenge for these currencies is their freshness and the need for further investigation.

The purposes of cryptocurrencies

Almost all the popular existing cryptocurrencies are pursuing a goal in the form of a project. The most popular projects and their goals are the following:

Bitcoin (BTC)

Bitcoin is a kind of virtual money that exists only in digital form and is used and traded in the Internet. Bitcoin has many goals for which was launched:

• One of the goals of Bitcoin is to provide freedom in shopping. It is better to know that BTC cryptocurrency is free from government control and imposition of costs.

• Another purpose of Bitcoin is to facilitate the transportation of value or money. Since Bitcoin is a digital currency, practically any amount of currency can be carried in just one flash disk, smart phone or in a cryptocurrency wallet. Also, BTC allow people to freely send or receive their own currencies through QR code or one click in online wallets.

• Another goal of Bitcoin is to allow users to control and manage their own transactions. No one can transfer or withdraw from any account without their owner's knowledge and consent, and no one can access their transaction information.

• Another aim of Bitcoin is to eliminate counterfeiting. It is better to know that hacking Bitcoin is a very difficult task, and this makes it to be welcomed by many countries and central banks, to be known and gain a lot of popularity.

Ethereum (ETH)

The main use and purpose of the creation of Ethereum should be heard one of its developers, Joseph Lubin, who said: "Ethereum was created so that we don't need a bank, company, or special institution to do our daily affairs".

Independence is the most important use and purpose of Ether. It is true that Bitcoin uses systems all over the world instead of needing centralized servers due to blockchain, and that is why it is independent and decentralized. But Ethereum is a step above Bitcoin, because with the goal of decentralized execution of computer code, it allows people to make the rest of the processes apart from money to this independence and decentralization.

Ethereum has various uses, but the most important ones are the following:

- Decentralized applications (DApps)

Programmers and web developers can implement decentralized applications (DApps). Decentralized in the sense that the authority of the program and the information of its users is not

in the hands of any person or organization, and there is no way to censor data in these applications. Not being in the possession of a person and not having a centralized institution has caused that the information of the users of this network is not stored on the server of any person or organization and they are safe from hacking and information theft.

When using applications such as YouTube, Twitter and other social networks, your personal information, records, photos, and videos are stored on the central server of that program. In this situation, with any security threat against this server, your information is also at risk.

Also, it has been seen many times that these programs have deleted content that they did not like or asked users to change it. Decentralization of information will also solve these problems for users.

- Implementation of smart contracts

Smart Contracts, which are carried out on the blockchain platform of Ethereum cryptocurrency, are actually a string of code. These codes include the conditions before and during the contract and all the provisions of this document and the conditions for its performance. These codes can be used to plan and determine the framework of various things such as stock exchange, currency, content, or anything else of value.

Smart contracts operate automatically and cannot be changed or stopped in any way after being concluded. In other words, these contracts have a complete and accurate performance guarantee. Also, it is not possible to have any intermediary as a third person in this type of contract. All network nodes also receive a copy of this contract on their system. These contracts are written in Solidity programming language.

Example for renting a house: blockchain is a real estate agency and an individual has entered it to rent a house. In this company, it is only the tenant and the landlord, and no one is present to register the transaction. With tenant's agreement, the landlord asks a programmer to record the complete conditions of the contract by codes on a system. If tenant accept all those conditions at the time of registering the codes, the contract will start fully and accurately. This contract cannot be terminated under any circumstances and at any time except for the designated time. Also, none of the parties to the contract will be able to make even a small change in this document after the start of implementation. Tenant should not pay any fees for registering it and transferring money between themselves and the landlord.

Ripple (XRP)

Ripple is a platform. Its company is located in San Francisco, USA. Ripple is a structure that makes international financial transactions faster and cheaper and decentralized. Today, many banks and financial institutions use Ripple products to carry out their financial transactions.

The two concepts of Ripple and XRP are different. Ripple is the name of a company that has changed the traditional financial system to a great extent. The XRP cryptocurrency, created by

the Ripple company, is a digital asset. Currently only one of Ripple's products uses XRP. Also, high transaction speed and low fees are among the advantages of XRP.

It can be said that the two most important goals of Ripple are the reduction of fees and the time of international transactions.

How cryptocurrency affects global financial economy

The impact of cryptocurrencies on the economy of developing countries

Based on the analysis and research conducted by economists in developing countries, they have come to the conclusion that cryptocurrencies can greatly increase the speed of the development process. The use of Internet services in countries has expanded mainly because they accidentally got the right opportunity to connect to the world. So, Internet users can do business through cryptocurrencies. The increasing use of the Internet has led to the exchange of ideas and technology between developing and developed countries.

It is easier and cheaper to use cryptocurrencies and exchange money through these cryptocurrencies. Hence, various countries have realized that this method is affordable for people who live at the level of average living standards in developing countries.

Many businesses that seek to do various transactions do not have a bank account. They rely on small-scale industrial platforms and, therefore, can engage in small-scale international transactions. Traditional e-commerce methods and systems can now be abandoned as people can trade through cryptocurrencies exchanges.

They will benefit from greater financial capacity, as developing countries no longer have to spend huge amounts of money to build banking infrastructure. This situation reduces the risk of poverty. All exchanges and transactions are done through cryptocurrency and by means of an Internet connection, therefore, there is no need to increase infrastructure facilities.

A software wallet is required to use cryptocurrencies. Therefore, many of those who face multiple obstacles to create a bank account can turn to cryptocurrencies.

In a study conducted by the Pundi Institute (a platform that helps transform retail businesses through its facilities and blockchain-based sale terminal) nearly 100 people from different countries were given free crypto-assets. They were promised more coins if they could convince others to use the crypto-assets. The reaction of people in Indonesia and Russia was much more than in other countries. This proves that developing countries prioritize even a small amount of money in order to have more influence on cryptocurrencies.

According to data obtained from Statista's global consumer survey of 65 countries, Nigerians have the highest amount of cryptocurrency. This shows that developing countries tend to follow the path of cryptocurrencies.

According to the statistics of the World Bank, 1.7 billion people are deprived of having a bank account due to the lack of necessary documents or the presence of other obstacles. Such people mainly live in developing countries where the banking system is not so extensive and has

limitations. For this reason, developing countries have accepted cryptocurrencies before other countries.

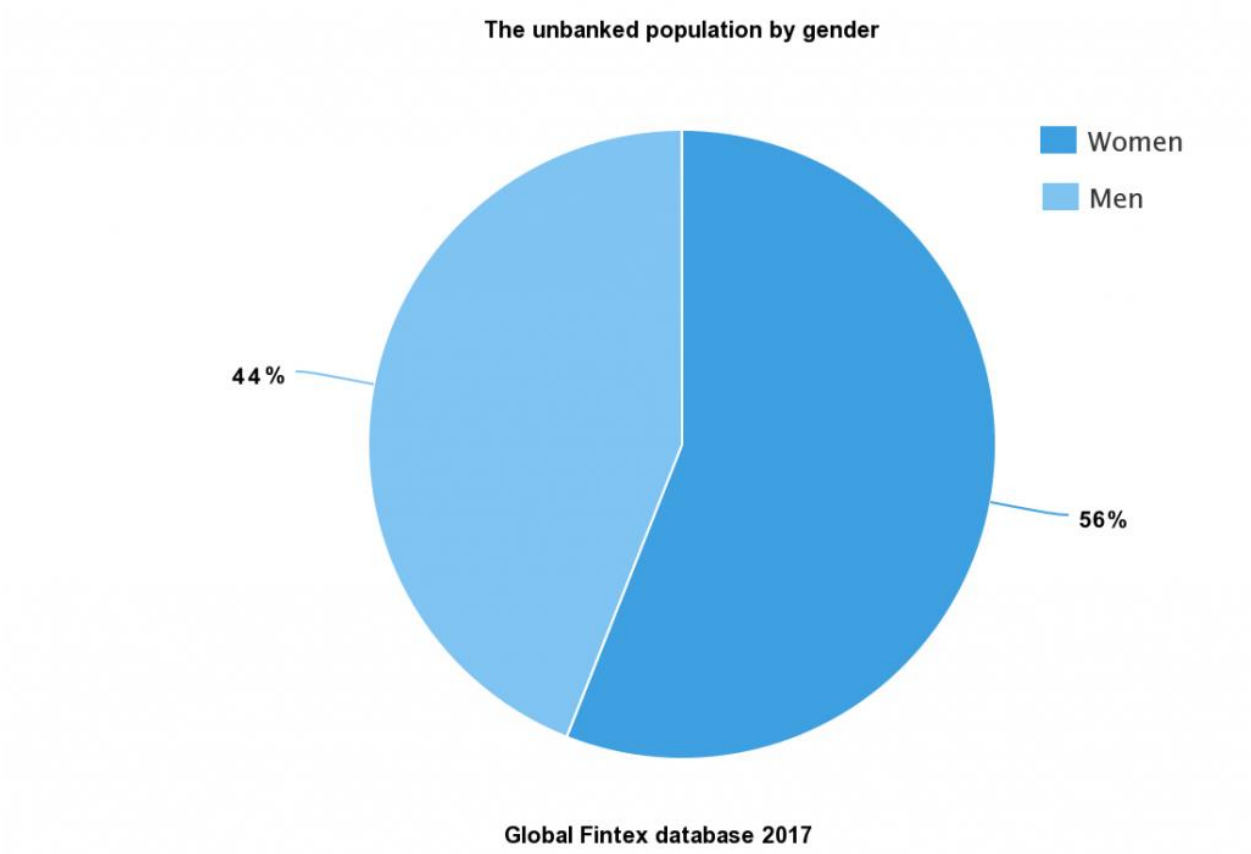

Figure 7. The unbanked population by gender in 2017

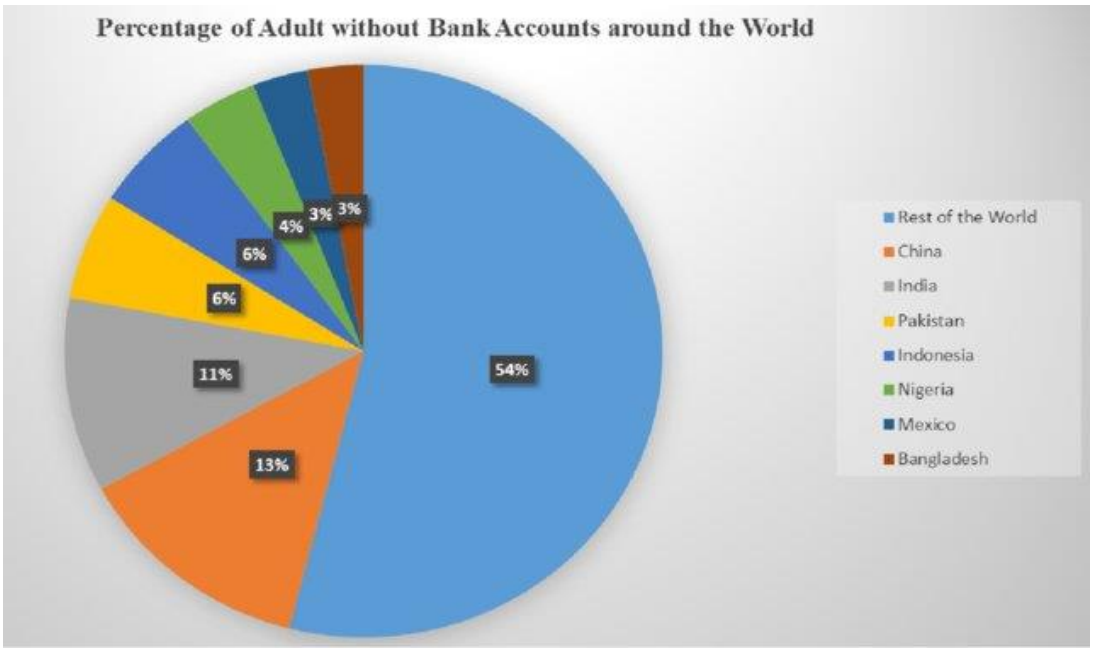

Figure 8. The global unbanked adult population

According to the Hackernoon website, Venezuela, Zimbabwe, and Iran are among the countries that have a significant number of Bitcoin (and other cryptocurrencies) users. The factor that is common among these three countries and the main reason for their widespread use of Bitcoin is the backwardness of the domestic market and the low value of their national currency.

Therefore, the data shows an increasing trend towards the adoption and use of cryptocurrencies in developing countries.

Platforms like PayPal are looking to add features that allow their users to pay their desired amounts through cryptocurrency in domestic transactions as well as for foreign trade.

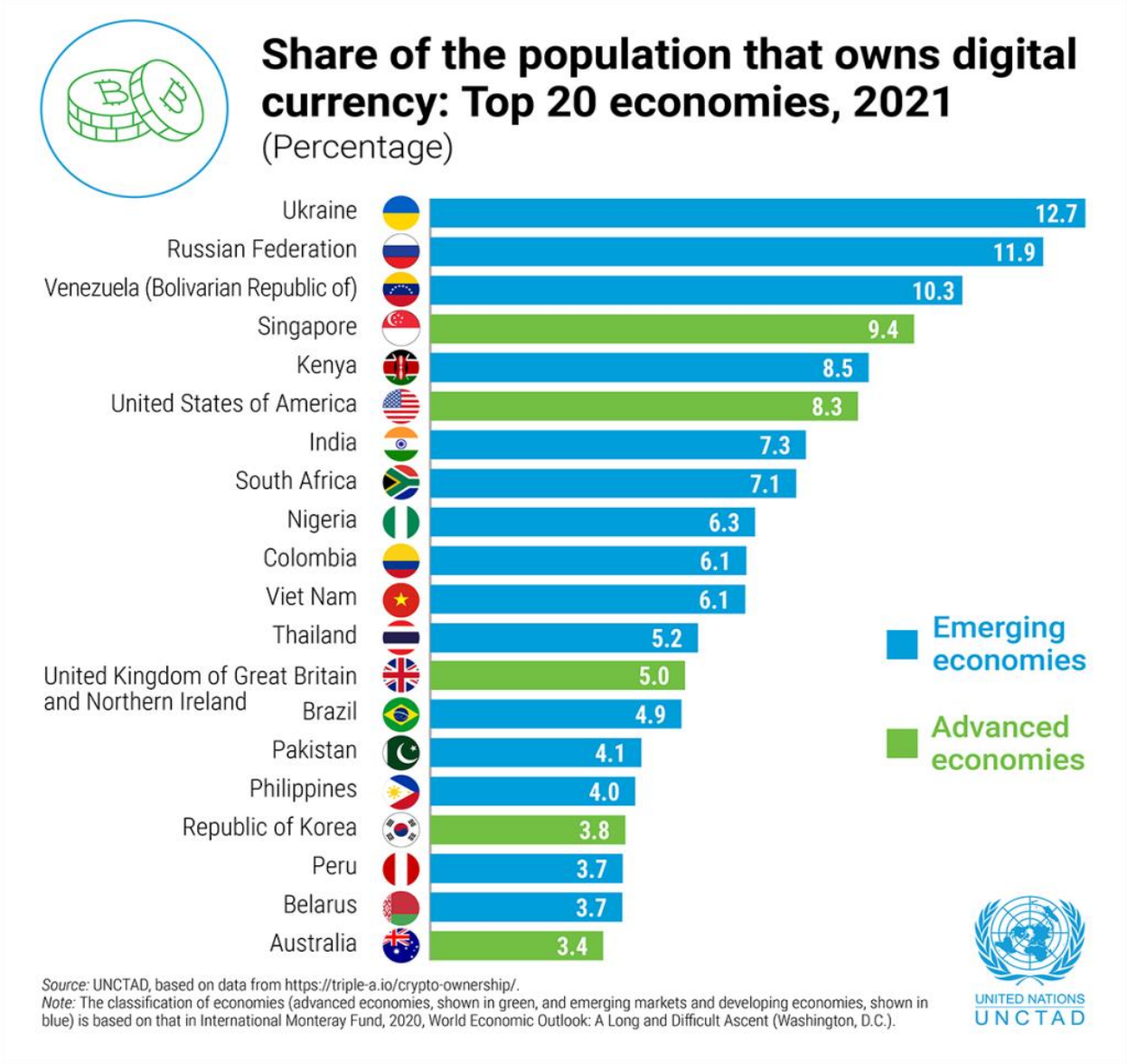

Figure 9. the global share of cryptocurrency

The impact of cryptocurrency on political and economic changes in the world

WAR

Now in the Ukraine war, millions of cryptocurrencies have poured in to support the Ukrainian military and hacker groups. The Ukraine's government is asking for donations digitally and has raised more than $50 million as of March 6. Some Ukrainians have also turned to

cryptocurrencies as an alternative for Ukrainian financial institutions which restricting people's access to bank accounts and foreign currency.

In a situation in which governments are in chaos, it is difficult to rely on banks and there is a fear of supervisions. So, a relatively anonymous system where no government is watching is attractive.

Now, in a war situation, exactly one of the features of cryptocurrency, which can be dangerous for the global economy in a normal situation, has the role of helping and humanitarian. The fact that it cannot be tracked and identified, and it cannot be limited, is extremely important in this situation, and proponents of cryptocurrency also emphasize that currencies like Bitcoin are an important humanitarian tool.

But how useful a crypto activity is for people in crisis or organizations in need of financial assistance is debatable. Because using cryptocurrency requires a fairly complex understanding of technology, and if people are not prepared to set it up, they will not be able to take advantage of it overnight when the war starts.

At the same time, all those features that make cryptocurrency attractive to the besieged also apply to those who do the besieging.

Russia can use cryptocurrencies to avoid sanctions, which are currently the main weapon of the US and its allies against Russia. Its prevalence in cyberwarfare also means that people with cryptographic activities can be targets of cyberattacks. For this reason, saying whether cryptocurrencies are a helpful platform for the people and the country of Ukraine or, on the contrary, is useful for Russia (and in general, whether it can always be considered beneficial for which of the parties to a conflict) is completely open to doubt and debate. It can be said that due to its characteristics, it has the capacity to bring both profit and loss to the parties of a conflict.

Cryptocurrencies also fluctuate. While proponents of the world of cryptocurrency often argue that Bitcoin and similar currencies are a form of digital gold, they have lost value amid global uncertainty, undermining the argument that they are a safe haven. For example, in a scenario, someone withdraws $1,000 from Ukraine with a cryptocurrency, but when they convert it into cash, it loses half of its value. Not ideal anymore. But if cryptocurrency is the easiest way to get money in a crisis, then the view of their usefulness will be different.

CBDC

What is a national or central bank digital currency (CBDC)?

The revolutionary developments that have been taking place in the world of financial services have changed the definitions of this field. These changes are not limited to platforms for providing monetary and financial services and have also changed the traditional view of financial processes. One of these achievements, which is based on blockchain technology, is called Central Bank Digital Currency (CBDC), which known as the national digital currency of a country.

The large and centralized financial institutions of the world do not have a good relationship with the concept of cryptocurrencies such as Bitcoin and Ethereum, but they welcome features that are the cornerstone of these digital assets.

Blockchain can be seen as the basis of this evolution, which has enabled flexible access to very safe, transparent, and fast financial services. Therefore, many central banks are trying to evaluate the conditions related to the supply of their own digital currencies, considering the different features of the blockchain.

In general, a CBDC is a form of electronic cash that, like traditional fiat currencies, allows holders to access central bank services. Businesses and individuals can make payments and transfers using this electronic money.

The central bank digital currency eliminates intermediaries such as commercial banks and allows the customer to establish a direct connection with the central bank. Thus, people can make their transactions directly with each other and not worry about risks such as bankruptcy of financial intermediaries.

What made central banks think about creating their own digital currencies was the fear of losing control over the money supply and payment systems after the popularity of digital currencies peaked. Undoubtedly, the expansion of payment types that are not under the supervision of any central or government institution can weaken the control of central banks over money supply and economic stability.

The idea of CBDC owes to blockchain technology in cryptocurrencies like Bitcoin. However, there are important differences between these digital assets.

Banks must keep track of financial records such as the amount of people's deposits and the history of transactions. The distributed ledger allows these entities to have multiple copies of the transaction history and ensure the accuracy of the data.

However, unlike public blockchains, blockchain versions of central bank digital currencies are only in the hands of individual financial institutions, which are ultimately managed by the central

bank. In fact, access to the blockchain used by central bank digital currencies requires a special license from the central bank.

Decentralized cryptocurrencies such as Bitcoin and Ethereum do not have specific legislation; Therefore, they have gained their value based on their applicability and the level of acceptance by investors, and they are always accompanied by severe fluctuations. On the other hand, CBDCs are dependent on the national currency of the country and are designed to have a stable and secure value. In addition, central bank digital currencies have a centralized database that is under the control of the central bank. This database provides a unique serial number for each "e-coin" so that it can be identified and tracked.

All in all, it seems that the unique capabilities of blockchain have attracted the attention of even centralized institutions. Kristalina Georgieva, Managing Director of the International Monetary Fund, said in her February 2022 speech at the Atlantic Council:

“The history of money is entering a new chapter. As countries try to experiment with new and digital forms of money, they seek to preserve important aspects of their traditional monetary and financial systems”.

The difference between the central bank digital currency and other cryptocurrencies

The basis of central bank digital currencies is similar to other distributed ledger based cryptocurrencies, but these two types of assets serve very different purposes.

What governments don not like about Bitcoin and other public blockchains like Ethereum is that no central entity or group of entities is responsible for these blockchains. However, distributed ledger technology allows governments to take control of some aspects while enjoying its benefits. Some of the most important differences between CBDCs and cryptocurrencies can be pointed out as the following:

Supply control:

Decentralized digital currencies such as Bitcoin have a specific supply ceiling that is institutionalized in its structure and protocol, and the change of this feature is not in the hands of a particular institution. On the other hand, the control of the supply of central bank digital currency is completely in the hands of the central bank. Just as the policies of removing or adding money in circulation are at the disposal of central banks to control the economy in times of crisis, the supply model of central bank digital currency is also completely at the disposal of central power institutions and dependent on governments.

Oversight and Management:

In a CBDC system, a central entity chooses which financial institutions are allowed to participate in the management of the distributed ledger. This method is different from the approach of blockchains such as Bitcoin, which allow any user to run the network software without permission.

Lower cost and greater efficiency:

Defenders of central bank digital currencies claim that due to special infrastructure, these relatively centralized assets can transfer money at a lower cost. The main idea is that a central bank digital currency can connect more financial institutions to make money move more smoothly by removing the current barriers and disjuncture of financial systems.

Track Payments:

A distributed ledger provides a complete history of all transactions. Some governments, such as China, which are known for having extensive surveillance apparatuses, potentially intend to use this financial information to further monitor their citizens.

Of course, should not forget that different governments have different approaches and policies in this field.

Advantages and risks of CBDC

A CBDC can offer benefits that other payment technologies, including stable coins, lack. It does not pose liquidity or credit risks to the central bank digital currency, and deposit insurance is not required to support this asset. Another point is that CBDC is more easily available to consumers, businesses, and government institutions, and it is possible to collect taxes or provide benefits to users.

Some of the advantages of the CBDC can be counted as the following:

Encouraging and facilitating innovation:

A central bank digital currency can set the stage for innovation in payment systems and provide a platform for private sector solutions to meet current and future demands for payment services. Also, central bank digital currency allows smaller players to create new financial services and

distribution models. In addition, since there is no programmability in common currencies, the central bank digital currency can be a low-cost option for making small, but numerous and high-volume payments.

International payments:

Central bank digital currencies can greatly help improve the international payment system, which is currently often slow and expensive. In addition, in many cases, international cooperation is needed to establish standards and appropriate infrastructure for these payments. Using CBDCs for international payments can make transactions legal, but cheaper.

Financial inclusion:

Central bank digital currency can reduce barriers to financial inclusion. Financial inclusion means accessibility and equal opportunities to receive financial services. The central bank digital currency can provide financial services to more people by reducing transaction costs.

Expand public access to safe central bank money:

Although physical currency (cash) is still an important means of payment in many countries around the world, its use is declining. The central bank digital currency can be a suitable digital substitute for cash; Because unlike cash, it does not face credit and liquidity risk.

Potential risks of CBDC

Although a central bank digital currency offers many potential advantages, it can also come with risks. Some risks and problems that may occur with the official entry of the central bank digital currency into the economy can be the following:

Changes in the current structure of the market:

The central bank digital currency can fundamentally change the structure of the financial system of countries. It is possible that with the increase in the use of central bank digital currency by individuals and businesses, the network of commercial bank users will become smaller. Eliminating financial intermediaries can reduce the volume of bank deposits and destroy the source of stable funding for these banks to grant loans. The result of this is an increase in the

interest rate of loans and a decrease in their credit, which increases the cost of businesses and governments in the long run.

Reduction of banking facilities:

With the introduction of central bank digital currencies, banks become direct competitors of payment service providers and lose part of their income. With the attraction of capital towards central bank digital currencies and the reduction of bank deposits, the provision of bank loans and facilities is disrupted, and economic growth becomes a problem.

Bankruptcy:

CBDCs may increase people's willingness to withdraw capital from banks in times of financial crisis. This problem can increase the probability of bank bankruptcy in macro and systematic dimensions.

Geographic restriction:

Most central bank digital currencies are accepted only in the issuing country or a specific region, which can make international exchanges face obstacles.

Price fluctuations:

Central bank digital currencies have a similar structure to public cryptocurrencies and since they do not have a direct relationship with fiat currencies, they may experience price fluctuations similar to their other digital counterparts.

Central bank digital currency in different countries

The approach of all countries to the central bank digital currency is not the same. Some have taken the lead in designing and offering this digital asset of the Central Bank, and some are doing preliminary tests, and some others have just started the development of these assets. Many countries are still skeptical about this technology and do not have a specific plan to present it yet.

Countries that have launched their central bank digital currency

Bahamas: Bahamas is the first country that was able to launch its central bank digital currency. This asset, which is called The Sand Dollar, was made available to the citizens of this country in October 2020. The geographic conditions of the Bahamas, which is in the form of an archipelago, has caused the distribution of business activities in this country to be uneven, and about 20% of the population does not have access to financial and banking services. Bahamian lawmakers hope that the Sand Dollar can help improve financial inclusion and fight money laundering and illegal economic activities.

Nigeria: Nigeria was the first African country to launch its central bank digital currency in October 2021. Citizens of this country can use eNaira (central bank of Nigeria-issued digital currency) for store payments and money transfers. Only in the first quarter of the release of this national digital asset, its special wallet was downloaded more than 700,000 times. However, the population of this African country is about 219 million people, of which only 10-20% of people use the smartphone that is necessary to use eNaira. For this reason, critics of the launch of eNaira claim that most unbanked people do not have access to a smartphone, and this asset cannot take an important step for citizens to benefit from financial services.

Eastern Caribbean Union: Eastern Caribbean countries have created a specific type of digital currency that helps speed up transactions and services for the unbanked people. This special asset, called DCash, is the first blockchain digital currency to be used within a specific geographic union and between multiple countries. Citizens of these countries can make transactions by scanning QR codes just by having a smartphone and downloading the DKash application.

Countries testing central bank digital currencies

Sweden: Sweden is testing a digital currency called e-krona. In this pilot program, simulated participants are used in a test environment. Sweden's Riksbank is trying to scrutinize this technology and its possible consequences. One of the important goals of this project is to ensure wide access to "Electronic Krona" in the future so that the elderly and people with special disabilities can use it.

China: China was the first major global economy to test its digital currency in April 2020. The People's Bank of China aimed to make widespread use of the digital yuan (e-CNY) in 2022. According to the International Monetary Fund, the Chinese yuan currently has hundreds of millions of users and has facilitated billions of yuan in transactions.

Jamaica: Jamaican Prime Minister Andrew Holness has confirmed that the Bank of Jamaica plans to launch the Jamaican digital dollar this year after successfully testing its central bank digital currency last year. Holness stated that this central bank digital currency will provide the infrastructure for Jamaica's digital payments architecture and increase financial inclusion. Also, according to the Prime Minister of Jamaica, this national digital currency can increase the speed of transactions and reduce the cost of banking for the people of Jamaica.

Ukraine: The National Bank of Ukraine has been considering the possibility of issuing a national digital currency since 2016, and its experimental preparation has not stopped even despite the recent war between Russia and Ukraine. According to Denelle Dixon, CEO of Stellar, which is working with Ukraine to design the central bank digital currency, Ukrainian President Volodymyr Zelenskyy plans to transform Ukraine into a "cashless society" before the end of 2022.

Countries that are developing their own national digital currency

India: This country is trying to introduce its central bank digital currency to the market by 2023. "Digital Rupee" is formed based on blockchain technology and backed by the Central Bank of India. According to Nirmala Sitharaman, India's finance minister, this digital currency will cause "significant growth" in the country's digital economy and can make the currency management system more efficient and less costly.

Eurozone: The ECB (European Central Bank) announced last July that it is strongly pursuing the creation of a digital version of the euro. According to Christine Lagarde, President of the European Central Bank, the purpose of launching the digital euro is to ensure that all citizens and

businesses have access to "the safest form of money, which is central bank money." The European Central Bank has announced that it will present a bill to operationalize the digital euro in 2023.

United States of America: In early March 2022, Joe Biden, the President of the United States of America, ordered the Treasury and Commerce departments of the country to prepare reports on the "future of money" with the aim of creating a digital dollar. Some of the goals of this executive order include helping the 5% of American citizens who are deprived of banking services and access to the technological infrastructure necessary to use the central bank digital currency of the United States. However, according to analysts in this field, the development and introduction of the American digital dollar may take years.

Iran: According to the latest reports from the statement of the head of the Central Bank of Iran, before the end of the 2022, the central bank digital currency will be tested in a limited way. The purpose of this digital currency, which is called "Digital Rial", is to "replace current physical banknotes". However, the idea of offering a central bank digital currency has been proposed for a long time, and only operational testing can show the capabilities of the Digital Rial.

CBDCs' Future

The future of central bank digital currencies depends on wide acceptance. If these government digital assets are intended to be accepted by the public, they cannot place the responsibility of the transfer of assets on the user and make transactions irreversible after settlement, as in other decentralized blockchains. In addition, these assets must be offered and operated under certain rules and frameworks. For this purpose, two basic points should be considered in designing the infrastructure of these assets:

- The central bank digital currency (CBDC) must have a proper management infrastructure to be able to validate transactions and then adapt to the geographical rules of that asset. Also, the central bank digital currency must have a dispute resolution system with security and compliance and audit processes.

- The CBDC must have a system for reporting the current situation, including account balances and transactions, to relevant regulatory bodies. The mentioned system should be able to access more information than transaction data, such as users' IP addresses or account IDs. This information is critical for resolving payment system disputes.

CBDCs can be in different types, the wholesale central bank digital currency is designed for bulk payments between users and larger institutions, and the retail central bank digital currency aims to facilitate transactions between users and smaller businesses.

Cryptocurrency can be considered as a threat to the financial sector

The Central Bank of Russia announced that digital currencies threaten the sovereignty of the national currency and financial stability.

In its annual report, the Central Bank of Russia noted that Russians' growing interest in cryptocurrencies, their significant investments in cryptocurrencies and the sector's high risks pose potential systemic threats. The Central Bank of Russia says that in such a situation, there is a risk of weakening the circulation of money and losing the sovereignty of the ruble as a national currency. The Central Bank of Russia has also warned that digital assets cause the transfer of funds from the traditional financial system to the digital currency market, and this transfer of funds threatens the financial stability of Russian banks.

Russia's top monetary authority also says it is concerned about Russian citizens due to the creation of an economic bubble as a result of the growth of the cryptocurrency market, and given the limited protection of cryptocurrency investors, citizens' capital in this sector may be lost due to price fluctuations or as a result of fraud and cyberthreats.

It can be said that by expanding the use of cryptocurrencies, probably fiat money is not popular anymore. According to the all the advantages which cryptocurrency brings to the people, individuals are willing to invest more and more in this sector every day. But the prices of cryptocurrencies fluctuate a lot and this issue brings a large risk to the market by which investors and users can loss all their property. There is no responsible and there is no insurance in the world of cryptocurrencies as a matter of fact in the shortage of any compensation by losing a large amount of cryptocurrencies it could be said that people loss their money and wealth so that by this volume of money and wealth financial sector bears a big damage in a specific country as it is possible that through the cryptocurrency buying transaction money goes out of the country (there is no location, name and any other information of the seller available!).

Different types of cryptocurrencies

The four main types are utility, payment, security and stablecoin. There are also DeFi tokens, NFTs and backed tokens. Among all cryptocurrencies, the most common are utility and payment tokens.

Cryptocurrencies are placed in different groups and categories according to their goals and the reason of their creations:

Bitcoin cryptocurrency

Perhaps there are few people who have not heard of Bitcoin as the best cryptocurrency. Bitcoin with the abbreviation BTC is the first cryptocurrency based on blockchain technology and one of the types of cryptocurrencies that was introduced in 2008 by Satoshi Nakamoto. The first Bitcoin was created in 2009.

The most interesting thing about Satoshi Nakamoto is that he is legendary. Because no information about his biography is available. Although there has been a lot of speculation about his true identity, but in reality, no one knows who the alias Satoshi Nakamoto's is.

Altcoin

Altcoins are cryptocurrencies that use blockchain technology to enable peer-to-peer transactions. Altcoins have been created with the support of Bitcoin's success and try to attract the attention of users by making changes in Bitcoin's rules and improving it. ADA (Cardano), ETH (Ethereum), BNB (Binance Coin) are the examples of Altcoins.

Stablecoin

Stablecoin is one of the types of cryptocurrency that does not fluctuate in the price like other cryptocurrencies. This type of cryptocurrency is a simple and safe way to make financial transactions. The value of a stablecoin depends on a stable asset or commodity, and the value of this coin is always tied to its backing. USDT (Tether), USDC (USD coin), DAI (Dai), BUSD (Binance USD) are the examples of stablecoins.

meme coin

Meme Coin, as the name suggests, is a type of cryptocurrency that originates from a meme or an internet joke and has humorous features. Often, they are inspired by Internet jokes and high-profile events. The nature of this type of cryptocurrency makes the influence of influencers in creating and increasing or decreasing their value much stronger than other cryptocurrencies. DOGE (Dogecoin), SHIB (Shiba Inu) are the examples of meme coins.

Shitcoin

This term is usually said to coins that do not have much value in the market. The validity of these coins is usually not known, and they are bought and sold only based on the emotions of the market. Shitcoin does not have a clear development process, and in some cases even its founders are unknown. ELON (Dogelon Mars), MIM (Magic Internet Money) are the examples of shitcoins as well as DOGE and SHIB.

Financial cryptocurrency

A large part of the cryptocurrency world is financial cryptocurrency. One of the common problems of buying and selling shares in the financial markets was the presence of intermediaries and the difficulty of the transaction. Financial cryptocurrencies are one of the types of cryptocurrency that have entered the market with the aim of eliminating intermediaries in transactions. Financial cryptocurrencies have created a better option for investors by solving this problem and facilitating buying and selling like a stable coin.

Paid cryptocurrency

cryptocurrency payments are actually payment platforms through cryptocurrency. The mechanism of these platforms is such that users buy and sell or transfer their cryptocurrency through wallets built into the platform. In these platforms, buying and selling cryptocurrencies is done easily by removing intermediaries.

cryptocurrency loans

Cryptocurrency lending system is one of the popular options of decentralized financial exchange and services. Along with these activities, loan cryptocurrency also operates on the platform of Metaverse.

Investment cryptocurrency

The main activity of cryptocurrency is investing in the blockchain platform, and their main goal is to facilitate the process of decentralized transactions. Many of these currencies serve to increase the security factor of their own blockchain and increase privacy in the blockchain.

Exchange cryptocurrency

Big exchanges, in addition to providing services for buying and selling and transferring cryptocurrencies, sometimes form their own networks and help the development of the cryptocurrency field. Exchanges are divided into two types, centralized and decentralized, each of which has its own characteristics. Centralized exchanges usually operate under the supervision of a specific institution or organization, while decentralized exchanges are not under the supervision of a specific organization.

Privacy Coin

According to the claim of the developers of privacy coin, they are supposed to maintain the security of the user and their transactions in the cryptocurrency world. For example, consider a situation where it is not easy to find out which user sent what to whom, that is, all their financial activity remains highly anonymous. Although it is not a widely heard feature of privacy coin, but this is what privacy coin does.

Cryptocurrency loan

What is Crypto Lending and what are its benefits?

The banking facility system and its ups and downs is well known, and people know the difficulties of getting a loan from banks. But in today's world where blockchain technology and cryptocurrencies are available, it is a bit strange to stay behind the barrier of centralized systems like banks. Because people can easily get a loan away from time-consuming administrative processes and in the least amount of time, using the Crypto Lending system.

Getting a loan in the world of cryptocurrency is much easier and faster than getting bank facilities, and these days it has many fans in all corners of the world.

How does the crypto lending system work?

To receive a cryptocurrency loan, individuals pledge their cryptocurrency assets (Bitcoin, Ethereum, Tether, and other cryptocurrencies) and receive a loan from other users' assets (the loan can be Bitcoin, Ethereum, Tether, etc.).

This process is done peer-to-peer (P2P), on the platform of online crypto lending platforms, and there are no intermediaries. When settling, in addition to the loan amount, the borrower must also deposit the amount of interest determined when registering the contract to the lender's account.

People who bought some cryptocurrency for investment and they do not intend to sell it, if after this investment, they have financial problems, in this situation, they should definitely convert their cryptocurrencies to fiat currency and stop investing. But the second way is to use the crypto lending system. With this method, they can meet their financial needs without losing their cryptocurrency capital.

Who are the lenders?

The lenders of this system are generally people who have bought some cryptocurrency for investment purposes and earn money from their capital by lending out their cryptocurrency assets and receiving interest.

What is the guarantee that borrower will return the loan received?

The amount deposit as collateral, which is generally several times the amount of the loan received, transferred to the lender's account. If borrower refuse to pay interest and the principal amount of cryptocurrencies, the collateral will remain in lender’s account and borrower will no longer have access to their cryptocurrency assets. (The lender will not be able to sell this asset and only the amount will be blocked in his account until the loan is fully settled).

Differences between crypto lending system and bank loans

1. To get a loan from the bank, the first step is to provide accurate identification documents and authentication in the bank. On the other hand, in order to get a cryptocurrency loan, there is no need to authenticate and provide identification documents.

2. Banks ask for guarantees such as house ownership documents or a valid pay slip, and if someone does not have such guarantees, they will not be granted a loan. But in crypto lending, people can easily use their crypto assets as collateral.

3. Banks do not offer facilities to people under 18 years old and those who do not have a permanent job with a certain amount of income. But there are not such restrictions for getting a crypto loan, and everyone who has cryptocurrency assets can use this network's loans.

4. When borrow from banks, individuals have to wait for a while for the money to be deposited into their account. But in the crypto lending system, the loan amount is deposited into the wallet account right after the contract is approved.

What are the advantages of using the crypto lending system?

- Cryptocurrency loan is really practical. It means that the borrower does not need to explain the reason for the loan request when they receive it and only use this amount in the same context.

- The crypto loan amount is determined based on the specified collateral and is not related to the borrower's transaction and payment records.

- No long-term investment is required to qualify for a crypto loan.

- Due to the universal nature of blockchains, crypto lending also knows no borders and geography, and from any corner of the world, people can communicate with each other to receive or grant loans.

- Changing the tax process is another benefit of crypto loans. The amount received and repayments of the borrower are not recorded in any centralized financial center, and this exempts them from answering to the tax office in relation to the loan they have taken.

- Determining the amount of the loan by the borrower and the absence of restrictions on the requested amount are the other features of crypto loans.

What are the disadvantages of using crypto lending system?

The crypto lending system, like all other digital systems, has disadvantages and may cause problems for those who use it.

The first point that may cause problems for the borrower or the lender in this system is the error in the written codes of the smart contract. Crypto lending is done through smart contracts, and if there is a small error in its coding, the parties will suffer irreparable losses.

Another problem is the heavy collateral that the system determines for the borrower. When receiving a loan from banks, the guarantee usually is not several times the amount of the requested loan, and according to the conditions, the person in charge of the facility specifies the amount and the amount of the guarantee. But cryptocurrency online loan platforms, according to certain codes, specify a heavy amount as collateral, which is sometimes several times the amount of the loan received.

The main reason for the heavy collaterals is the numerous fluctuations of the cryptocurrency market. The system plans to receive the collateral so that if the value of the cryptocurrency to be used as collateral drops sharply, it will still have a value greater than or equal to the loan

received. But if the value of the collateral's cryptocurrency falls to such an extent that it becomes less than the loan amount, the system automatically auctions the collateral to cover the loss.

This is called liquidation of the cryptocurrency asset, which is a very rare but possible occurrence in the crypto lending system. In this situation, the borrower must immediately increase the amount of the loan collateral before his property is liquidated. Another way in such a situation is quick settlement of the received loan.

Figure 10. Crypto Complex Erased $480 Billion in 'Cascade of Liquidations'

Centralized crypto lending systems

In addition to DeFi or decentralized systems, some organizations and companies grant cryptocurrency loans to applicants with different rules. The applicant for a loan in this system, unlike decentralized systems, must be authenticated and be a known person to the group. These institutions generally use the margin lending system; Most of the time, they provide such services to launch different projects and thus participate in new projects.

Binance cryptocurrency exchange, Hodlnaut lending platform, BlockFi lending platform, Celsius lending platform and Nexo lending platform are some of the centralized systems that are run in a completely traditional way and now also grant digital currency loans.

The future of Money

Until a few decades ago, no one imagined that money would change so much that people could hold large amounts of it on a small card the size of half a palm. Since the day when man started minting gold and silver coins, the process of buying and selling goods and services underwent various changes. With coinage, the term money found a standard framework and people were able to solve their transaction problems for years. Of course, the process of changing money did not end there, and a few decades later, the era of digital money began.

There are many different views on the future of money. Some predict the future as promising, while another group is pessimistic about the money outlook and its possible changes. Some hope for the growth of the price of cryptocurrencies, but some do not believe so. Meanwhile, some people paint a world that is very different from what we know today.

Balaji Srinivasan, Chief Technology Officer of the Coinbase exchange, believes that in the near future, the concept of DeFi Matrix will be a powerful measure to check the dominance and influence of central bank money.

Some envision a world where everything is tokenized or, as Chief Investment Officer of Arca, Jeff Dorman predicts, in the not-too-distant future, every company will have a token in its financial structure.

Erik Voorhees, one of the staunch supporters of Bitcoin, believes that fiat currencies have suffered self-immolation and will eventually disappear.

Marcelo Prates, a researcher and employee of the Central Bank of Brazil, also believes that in the future six major companies active in the field of cryptocurrency technology will form a new powerful cryptocurrency that swallows the world’s economy.

Therefore, it is better to measure its different dimensions before choosing the new generation of money, because the new money definitely affects different parts of our lives. The world is somehow at the beginning of these changes and this process has its own supporters and opponents.

20 different predictions about the future of money:

1. Dollar alternative stablecoins

In the past, countries that were faced with the collapse and fall in the value of the national currency due to economic problems, dollarized their economy, and after that, the dollar replaced the national currency. This approach will be completely abandoned in the next 10 years.

Haseeb Qureishi, one of the senior managers of Dragonfly Capital

2. Coexistence of cryptocurrencies and fiat money

In the future, cryptocurrencies and fiat money will continue to coexist. It is possible that in the future, in addition to easier access for people to the dollar, due to the blockchain technology, some small and little-known fiat currencies will also be merged with each other to maintain their power and position.

Hasu, one of the researchers of Paradigm company

3. Passion for programming

In the future, the use of digital assets will become as common as email among the people, and programming will become as common as reading and writing. It is expected that hundreds of tokens will be created every year, and all of them will have their own price and at the same time provide users with various financial features.

Learning and using smart contracts makes all predictions possible and causes more people to participate. Thus, instead of being considered a rigid concept, money is more closely tied to digital activities than in the past.

Lex Sokolin, Chief Economist and Head of DeFi/FinTech at Consensys

4. DeFi matrix on the way to globalization

DeFi matrix can be considered similar to social graph or online communication in the last decade; A subject that has slowly become an inseparable part of our lives today. This is a point in history where almost all assets in the world can be held in a digital wallet. Not only Bitcoin and Ethereum, but also Central Bank Digital Currencies (CBDC), stocks of various companies,

bonds and loans also have this feature, and billions of dollars of these assets are exchanged around the world every day.

The table named DeFi matrix consists of exchangeable pairs of assets. Some sectors of this table, such as Bitcoin/US Dollar (BTC/USD), have acquired huge liquidity in the various order books. However, other sectors such as NFT (non-fungible token) or new currency will only have as much liquidity as the Automated Market Maker will provide them with liquidity.

Accordingly, all financial markets can be considered a sub-matrix or subset of this matrix. In the coming years, the traditional stock markets will become a competitive market between banking and non-banking digital currencies. Forex will also become a battleground between banking digital currency and finally, trading markets based on fiat currency and cryptocurrencies will give way to Bitcoin transactions with stablecoins.

Balaji Srinivasan, investor and former Chief Technology Officer of Coinbase and shareholder of A16z

5. DeFi matrix is a criterion for banks' activity

From Balaji Srinivasan's point of view, in the future, the DeFi matrix will be used as an indicator to measure and check the strength of banking digital currencies. Just as Google News increased the level of competition among local newspapers, the expansion of digital wallets also causes the central bank digital currency of different countries, and public and private digital assets to compete with each other.

Governments can only control the spread and adoption of decentralized digital assets within their borders. This is a situation where people are reluctance to accept government digital currencies and try to keep the minimum amount of these types of assets.

In the future, people will use currencies that benefit from flexibility, greater privacy, and predictable financial policies. Meanwhile, government digital currencies do not provide any of these features, therefore, people will not seek to use them either. Thus, the world will enter a new era of global competition between different currencies.

Balaji Srinivasan

6. Collapse of fiat currencies

In the next decade, fiat currencies will end their lives due to declining demand and the existence of credible alternatives.

Eric Voorhees, founder of ShapeShift

7. Cash remains

The collapse of fiat money is a common theme among futurists.

Of course, in a world where climate change is getting worse day by day and the possibility of natural disasters is increasing, there is always the possibility of destroying digital infrastructure.

Only based on this hypothesis, it can be said that fiat money (cash) is much more flexible than digital money and will last longer in the future economy.

Digital technologies extremely in the spotlight.

Brett Scott, author of "The Heretic's Guide to Global Finance: Hacking the Future of Money"

8. Cryptocurrency cannot defeat the monetary system

Considering that digital assets such as Bitcoin are dependent on the current monetary system for pricing and value determination, it can be said that they do not have the ability to compete with this system. It is the pricing and monetary system that allows cryptocurrencies to be exchanged. A new era for trading is emerging, but cryptocurrency enthusiasts have confused it with the "new age of money".

Brett Scott

9. A new wave of IOU begins

A new wave of IOU (I OWE YOU, kind of debt document) and credit cards are on the way. The mainstreaming of digital currencies by consolidating these assets as commodities has perpetuated some regressive ideas about money. However, the most interesting part of this new experience is finding new ways to build sequential networks of debt based on commitments!

Brett Scott

10. The future can be seen now

Bitcoin is the future of money.

Alex Gladstein, Chief Strategy Officer at the Human Rights Foundation

11. Everything is tokenized

The process of "tokenization of everything" has changed the concept of understanding of money and wealth and has led to the formation of micro-economies. NFT token is the first stamp of approval on this issue.

The battle for the future of money has begun, and it is certain that the future is in the hands of Web 3.0 innovations, the technology that provides countless opportunities to users.

Sandra Ro, CEO of Global Blockchain Business Council

12. Programmable money increases resource efficiency

Money represents the world's assets, and its future depends on our use of the planet's vast resources. Investing in blockchain technology and making it smart and interacting with other services and assets are tools that give us the power and authority to use our money in the right direction.

Whether investing in solar energy production farms or paying for education, there are many projects around the world that have been abandoned due to lack of capital and half-finished investors, but with programmable money based on blockchain technology, people can take control of their assets and use them for the benefit of all.

Paul Brody, Head of Blockchain department at Ernst & Young

13. Companies are engaged in tokenization

All companies in the world will include at least one token in their financial and capital structure in the next 5 to 10 years. These tokens are hybrid securities, part of which programs are related to membership and rewards for users, and the other part is dedicated to equity. These tokens are used in the financial ecosystem of companies as a reward, and as income increases, these digital assets also become more valuable.

All businesses that deal directly with consumers, such as Starbucks, Delta Airlines, Netflix, Disney, and even small businesses such as barbershops, gyms, and local stores, all benefit from customer interaction with Tokens are profitable.

Jeff Dorman, Chief Investment Officer at Arca

14. The dominance of technology giants

By 2031, more than 6 million people in their daily transactions will use the currencies offered by the six major technology companies known as the Six Sisters. These currencies are unbacked and are offered in a global network that will be built by three powerful central banks by 2024.

With the widespread adoption of these assets, only 21 of the 200 sovereign currencies that emerged in the last decade remain. Of course, should not forget that these properties were able to survive only for a small reason.

Marcelo Prates, central bank lawyer and CoinDesk columnist

15. The exchange will increase through tokens

New economies will be formed in the future, and each will benefit from unique exchanges and trades. Such as ETH and SLP (Smooth Love Potion) tokens, which are used to exchange various items in blockchain games. These new tokens are also directly accepted as means of exchange.

Different simple and blockchain based software will be offered to facilitate the custody and exchange of all kinds of tokenized money.

Tokens used for exchange transactions will gain a higher status than currencies like Ethereum and Bitcoin, and at that time, they slowly move away from monetary units like the US dollar.

Beryl Li, one of the founders of Yield Guild Games

16. With fiat currencies, confiscation of property becomes easier

The policies associated with programmable fiat money and central bank digital currencies make it possible to arbitrarily and irreversibly confiscate other people's property with just a few lines of codes.

Dovey Wan, founder of Primitive Crypto

17. Cryptocurrencies help the redistribution of wealth

The current system of central banks does not create wealth at all, but they only make people feel rich. The massive concentration of wealth from fiat currencies and redistribution through Cryptocurrencies will be the parallel events in the coming years.

Dovey Wan

18. Money no longer represents human value

Today, it is said that money has three main functions:

- store of value

- A tool of exchange

- As a bank account unit

Most of all, however, money is used as a reflection of how much individuals are worth to the world, or how much a cup of coffee is worth to people. Money is actually the concept of value, but the more look carefully, the more see that the close connection between money and value is breaking every day.

Taylor Monahan, founder and CEO of MyCrypto

19. Decentralized services are a bridge to centralized services

This interesting quote about the future of money takes both the pros and cons into account:

“Let me describe to you a future that might become reality. In this hypothetical future, you will face with several centralized departments and services that are connected to each other by means of blockchain rails. I think that in the future many services should still be managed separately and centrally, because this method of managing services is much more computationally efficient. However, the entire network can be managed decentralized.

In the future, you will be able to easily move between various services through these standardized blockchain pathways. Currently, outside of the cryptocurrency world, there is no way to easily transfer assets from one platform to another within 30 seconds, and this is a huge hurdle.

The payment process can be done effectively and instantly on the path created by blockchains. This feature is possible for tokenized money and assets, and payment software, and many of these processes are likely to be performed dynamically.

I think that this feature is in many ways more efficient and scalable and easier to grow than the financial system that is used today. I am very excited to see such a future."

Sam Bankman-Fried, CEO of FTX exchange

20. Money gets stranger

It is predicted that money connections will become much stranger in the future, and that money will be more tied to our individual identity and nature than ever before. Another important point is that money becomes a reflection of our physical and digital relationships.

This new form of money accelerates the process of "globalization" and brings together people with shared values from around the world and binds them together through financial and identity incentives. All these changes cause the transformation of the traditional world, governments, different jurisdictions, and national currencies.

Laura Shin, host of The Unchained podcast

Finally, it should be said that since the emergence of money in human society until today, this concept has undergone many changes.

At the beginning of the emergence of money, the problem was only minting or keeping paper money, but today the world has reached a point where there are bigger problems such as decentralization. The new form of money changes not only financial issues and economic relations, but also social, political, etc. sectors all over the world.

In general, the future of money is divided into several categories from the specialists' perspectives:

- Some believe that stable cryptocurrencies will replace current money.
- Another group believes that cryptocurrencies will continue to exist alongside fiat money.
- Others believe that current currencies will disappear in the next few years.
- A group also believes that cryptocurrencies are not sustainable and sooner or later they will leave the scene.

Conclusion

As a conclusion, it can be said that after the appearance of the first type of money, human has always sought to improve the pace and accuracy of money transfer without any negligible error and with the least cost. The emergence of cryptocurrencies can be an acknowledgement of this theory.

Now, according to the high speed of progress of the projects in the cryptocurrency market, it can be said that maybe in few years these currencies can take the place of the existing fiat currencies, speeding up and expanding financial transactions, and as a result they can ease business globalization. All kinds of transactions become global, as a result these currencies can also redistribute wealth and cause financial inclusion.

However, these currencies are at the beginning of their journey and still have a long way to reach their goals. Obviously, they have various problems and shortcomings which caused doubts about them.

Of course, nothing is certain yet and it is possible that governments and central banks by making changes in the laws of national currencies and taking into account the needs of users of these currencies, can make national currencies flourish again and this could be the end of cryptocurrencies existence.

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