



# Scenario of Digitalisation of Currencies

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## Abstract

Cryptocurrency is a vision as well as a currency. The decentralized nature of cryptocurrencies makes it accessible worldwide. A cryptocurrency refers to a digital medium of exchange (currency) that utilizes complex mathematical and scientific encryption and algorithms to generate and verify transactions that involve money. Some of the most common cryptocurrencies in use today include Bitcoins, Ethereum and Litecoins. Today, there are more than 1100 cryptocurrencies that can be traded online. Investing in cryptocurrencies doesn't come without risks, but neither does any other investment type. This rundown of the advantages and disadvantages of investing in cryptocurrency (which is by no means an exhaustive list) can help the potential investors better understand the risks and rewards.

## Introduction

Cryptocurrency is a digital currency that uses encryption to generate money and to verify transactions. Transactions are added to a public Ledger which is called a **Transaction Block Chain** and new coins are created through a process known as **Mining**. Cryptocurrency uses cryptography to create coins and secure transactions. Typically Cryptocurrencies are open source with public, but encrypted ledgers of all transactions. As of 2017, Cryptocurrency has been used as a decentralized alternative to traditional fiat currencies which are usually backed by some central government.

There are a number of Cryptocurrencies traded in markets, and the growing popularity means that despite volatile prices, market caps its values are growing every year. Popular Cryptocurrencies includes the Bitcoin, Ethereum's Ether. The first decentralized digital crypto currency can be traced back to "Bit Gold", which was worked on by Wick Szabo between 1998 and 2005". Bit Gold is considered the first precursor to bit coin (although another notable mention in the history of digital currency was e-gold, e-gold notable started in 1996 before Bit-Gold or Bit coin. Next in 2008, Satoshi (Nakamoto) and an anonymous person and / or group released a paper detailing, which became Bitcoin. Bitcoin became the first decentralized digital coin when it was created in 2008. It then went public in 2009. As of Jan. 2015, there were over 500 different types of Cryptocurrencies or Alt coins for trade in online markets. However, only few of them had market capitalizations over \$ 10 million.

As of 2017, Bitcoin is the most commonly known and used Cryptocurrency along with other coins like Ethereum and Litecoin. Given the popularity of Bit coin as well as its history, the term "alt coin" is sometimes used to describe alternative crypto currencies to bitcoin (especially coin with small market caps). There are now over 1,100 Cryptocurrencies and the total market capitalization of all Cryptocurrencies reached on all time high surpassing \$ 60 billion. Although their future is uncertain, Cryptocurrency seems to be more than just a fact. Here in early 2018 Cryptocurrency is shaping up to be a growing market.

## Main Cryptocurrencies available in the market **BITCOIN**

Bitcoin is a Cryptocurrency and world wide payment system. It is the first decentralized digital currency, as the system works without a Central Bank or single administration. The network is peer-to-peer and transactions take place between users directly, without an intermediary.

These transactions are verified by network nodes through the use of cryptography and recorded in public distributed ledger called a block chain. Bitcoin was invented by an unknown person or group of people under the name Satoshi Nakamoto. Bit coins are created as a reward for a process known as mining. They can be exchanged for other currencies, products and services. Over 1,00,000 merchants and vendors accepted bitcoin as payment worldwide.

### **LITECOIN (LTC)**

It is launched in the year 2011, was among the initial crypto currencies following bitcoin and was after referred to as 'silver to Bitcoin gold' It was created by Charlie Lee, a MIT graduate and former Google engineer. Litecoin is based on an open source global payment network that is not controlled by any central authority. Litecoin is same as Bitcoin in many ways. It has a faster block generation rate and hence offers a faster transaction confirmation. Other than, developers, there are a growing number of merchants, who accept Litecoin.

### **ETHEREUM (ETH)**

It was launched in 2015 (ETH) is a decentralized software platform that enables smart Contracts and Distributed Applications to be built and run without any downtime, fraud, control or interference from a third party. During 2014, Ethereum had launched a pre-sale for ether which has received an overwhelming response. The applications on Ethereum are run on its platform specific cryptographic token ether. Ether is like a vehicle for moving around on the Ethereum platform, and sought by mostly developers looking to develop and run applications inside Ethereum. According to (ETH) it can be used to codify, decentralize, secure and trade just about anything."

### **Z-Cash (ZEC)**

Z-Cash a decentralized and open-source crypto currency launched in the latter part of 2016, looks promising. Z-Cash offers privacy and selective transparency of transactions. Z-Cash provides extra security or privacy where all transactions are recorded and published on a block chain, but details such as the sender, recipient and amount remain private. Z-Cash offers its users the choice of 'shielded' transactions which allow for content to be encrypted using advanced cryptographic techniques.

### **DASH (DARK COIN)**

It is a more secretive version of Bitcoin. Dash offers more anonymity as it works on a decentralized master code network that makes transactions almost untraceable. Launched in Jan. 2014, and developed in very short span of time. This crypto currency was created & developed by Evan Duffield and can be mined using a CPU or GPU. In March 2015, it rebranded to Dash which stands for digital cash operates under the ticker-Dash.

### **RIPPLE (XRP)**

Ripple is a real-time global settlement network that offers instant certain and low-cost international payments. Ripple "enables banks to settle cross-border payments in real time with end-to-end transparency, and at lower costs." It released in 2012, has market capitalization of \$ 1.26 billion. Ripple consensus ledger – It's method of confirmation doesn't need mining, a feature that deviates from bitcoin and altcoins. Since Ripple's structure doesn't require mining, it reduces usage of computing power and minimizes network latency. Ripple believes that distributing value is a powerful way to incentivize certain behaviours' and thus currently plans to distribute XRP primarily "through business development deals, incentives to liquidity providers who offer tighter spreads for payment.

**Monero (XMR)**

It is secure, private and untraceable currency. This crypto currency launched in April 2014 and soon spiked great interest among the cryptography community and enthusiasts. The development of this crypto currency is completely donation based and community driven. It has been launched with a strong focus on decentralization and scalability and enables complete privacy by using a special technique called 'ring signature'. With this technique, there appears a group of cryptographic signature including at least one real participant but since they all appear valid, real one can not be isolated.

**NEM**

NEM is a block chain project that is looking to help companies and industries improve things like payments and logistics. It is trying to differentiate itself by making its block chain highly customizable.

**STELLAR**

It is eyeing the way people, banks and payments network move money. It's co-founder Jed McCaleb a Veteran in a still nascent industry. He built and sold Mt. Gox, the first bit coin exchange and went on to co-found Ripple.

**NEO**

It is all about creating the framework for the smart economy. One where digital assets are easily moved, where digital identity is safe and where smart contracts.

**IOTA**

It is a popular coin with a large supply. It has one of the highest market cap due to the technique behind it being embraced by some big-name companies like Volkswagen and Samsung group. Any coin in the top 10 by Mkt. Cap is worth keeping an eye on IOTA is no exception.

**TETHER**

It is meant to reflect the price of US dollar. There are some criticisms to consider. But Tether tends to be a good choice on a temporary basis. It isn't an investment. It is a place to park your value in crypto when you are in-between coins.

**NXT**

NXT is like a name coin. It had a super cool code but didn't though perform at the same level as other cryptos (until late 2017) where it saw a notable price hike. It is still priced very low. It uses a proof-of-stake system.

**PEER-COIN**

Like NXT, Peer-Coin uses a proof-of-stake system, in fact, it was the first proof-of-stake coin. It has a market cap of almost ten million. This coin has everything going for it and may be a smart bet as far as crypto currency goes. As an added bonus to confidence and quality behind the coin. Peer Coin was developed by Sunny King. It is hard to tell as the culture of crypto currency puts importance on peer-to-peer code and coin over developers. Still he is important, and like it or not little things like this could be a deciding factor in whether a coin sinks or swims in the new market.

**DOGE COIN**

It had the 7<sup>th</sup> highest market capitalisation. In 2017 it was still a contender although it was more of one early in 2017 individual coins aren't worth as much as other coins on the list, but its value and popularity have remained relatively steady despite notable highs and lows. Doge coin uses the same essential technology as Bitcoin with a few important technical distinctions. It's a lot like coin – a fairly priced coin with some degree of consumer confidence.

## Benefits of Cryptocurrencies

There are many advantages of cryptocurrency over the traditional currency technology

### Massive Potential for Returns

According to statistics, if you invested \$1,000 in bitcoin in 2013, it would be worth over \$400k today. **Initial Coin Offerings (ICO)** have allowed investors to get huge returns in a short amount of time. Stratis, that raised \$600k during their **initial coin offerings** in 2016, has seen a rise of 63,000 percent in the price.

So it's not difficult to start thinking of investing in cryptocurrency when you see such return on small investment this quickly.

### Fraud Proof

One of the biggest advantages of cryptocurrency over real currency is that it is totally fraud-proof. Cryptocurrencies such as bitcoin operate on the **blockchain technology** which is basically a decentralized global record of every bitcoin transaction ever made. Because of its decentralized nature, cryptocurrency cannot be reversed or counterfeited randomly by the sender, which is the case with credit card charge-backs.

### No Identity Theft

If for some reasons you give your credit card to a merchant, you are actually giving him/her access to all your credit line, even if the transaction being made is for a small amount. Credit cards work on a "pull" mechanism, where the seller initiates the payment and takes out (pulls) the designated amount from the account. Whereas cryptocurrency operates on a "push" basis that allows the user to send the exact amount they want to send to the recipient without any additional information about the user.

This is why, credit cards often results in fraud, especially when you hand over your credit card to make transactions. You basically have zero control over the whole payment process. But when we talk about cryptocurrency, the user controls everything. Users can send the required amount to the recipient without revealing additional information about themselves.

### Fast Processing

When buying real property, you have to deal with different parties (lawyers, notary), payment, and delays. In many ways, cryptocurrency is like a large property rights directory. Cryptocurrency like bitcoin can be designed and enforced to add or remove third-party approvals or be completed in a given time for a fraction of the cost and time needed to complete a traditional asset transfer.

Since most cryptocurrency operates with **blockchain technology**, it allows you to create virtual contacts and eliminate third party approvals that can make the transaction time longer.

### Lower Transactions Fees

There are no transaction fees in **cryptocurrency exchanges** since the miners are paid for it by the network. Sending and receiving payment in cryptocurrency is much more affordable than real currency. Even though there isn't any transaction fee, some **cryptocurrency exchanges** like Coinbase charge some fee but they are much lower than the normal currency transaction charges. This scenario is similar to what PayPal does for credit card users; these third-party services provide online exchange system for cryptocurrency and they are likely to charge for it. However, it is interesting to see that PayPal doesn't allow bitcoin transactions.

### Access to Everyone

Cryptocurrency is unregulated and decentralized, giving access to the whole world. Since it is more accessible to us than fiat currency, more and more users are now using cryptocurrency to make payments, including those who don't have online access to the traditional payment system. A great example of this is that of Kenya's M-PESA system, a mobile-based money transfer that recently announced a bitcoin device, resulting in every one Kenyan out of three now owning a bitcoin wallet.

## Demerits of Cryptocurrency

Although cryptocurrency has so many benefits for a normal person, it comes with a number of disadvantages as well. However, these disadvantages don't look threatening, they still need to be addressed in order to make a better understanding of what is there in cryptocurrency for all of us. So here are a few drawbacks to cryptocurrency that we found while knowing it:

### Lack of Knowledge

Since cryptocurrency is totally driven by technology, many people don't have any idea of how it works. Due to the lack of knowledge in cryptocurrency, there is a great level of skepticism and doubt in everyone's mind about it.

### Lack of Security

There is no perfect way to protect your bitcoins from basic human errors, technical faults, or fiduciary fraud. According to statistics, 25 out of 50 web-based businesses that offered to exchange bitcoins into other regular currencies have gone bankrupt. The report also states that the average lifespan of a bitcoin exchange is a little over a year, with 30% chance of a new exchange closing within a year from opening. Since these cryptocurrencies aren't regulated by any financial association, there is no security for the money, and there is nothing you can do if you lose your money.

### Limited Scaling

The design of the cryptocurrency system limits the speed and number of transactions that can be processed. This means it is unlikely that cryptocurrency will be replacing the **traditional credit card transactions** any time soon. Currently, Ethereum is the only network that handles a little over half a million transactions per day, whereas bitcoin handles just over half of them. These numbers will eventually grow as the cryptocurrency continues to grow in popularity in the coming years. As its popularity increases, they will need to "scale" in order to meet the needs of their growing user base. Without scaling, more and more users will come and the system will become crowded and expensive to use. Right now, scaling has become a very important matter for cryptocurrency which needs to be resolved as soon as possible.

### Lack of Applications

While it's really surprising to see cryptocurrency's use for illegal transactions, it's critical for us to know how useful cryptocurrency really is. It may be troubling for the traditional currencies and online payment systems, but cryptocurrency will need applications for creating complex electronic contacts, inexpensive **international money transfers**, or use micropayment transfers or fundraising campaigns.

### Increased Regulation

While only basic guidelines are currently being given, law enforcement agencies are already labeling cryptocurrency as a huge money laundering scheme' and are passing some strict regulations that would decrease the currency's value. Due to such strict regulations, investors and traders must invest in cryptocurrency more cautiously. Being cautious about what crypto activities you perform or participate in, will allow you to protect yourself and others, and inspiring a much more trustworthy ecosystem.

### Uncertainty

Just like any new technology, there is a lot of uncertainty around cryptocurrency. And since banks and government organizations are totally against such currency, people also fear using it. Then there is the fear of the whole system exploding and people losing all their money. When we talk about bitcoin, it has also faced a lot of security issues in regards to wallet encryption and backup. However, the **best bitcoin security** option for wallet backup and encryption is using a reliable VPN. VPN is not just the best tool for **internet privacy** but it is also one of the **most advanced encryption techniques** for cryptocurrencies like bitcoin. In order to invest in cryptocurrencies like bitcoin in the right way, you will need to learn a little about what bitcoin is, where it is used, and how you can get it.

## Future of Cryptocurrency

Cryptocurrency is an innovative but amateur concept that can potentially disrupt the whole **financial market**. Although it has a long road to cover, it is true that cryptocurrency has grabbed everyone's attention in a short time span. There are always benefits and drawbacks to every new innovation. To be able to make the best use of it, we need to look into both sides before we make any decisions. With cryptocurrency, it's not just the technology, but the global acceptance of it that has made the difference. Only the time will tell what the future hold for this innovation.

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