

# A Study on Risk and Return on Bitcoin

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## **Abstract.**

Satoshi Nakamoto introduced the first cutting-edge currency in 2009, which combines a "proof of work" algorithm to keep track of who owns coins with the fundamentals of ownership management using public key crypto. The version of P2P electronic currency may make it possible to send money directly from one person to another without having to go through a bank, institution, or other third party. Work on blockchain technology or web 3.0 (bitcoin) digital signatures provide a portion of the solution; however, the main benefits are lost when a dependable external company is still required to prevent double spending. By rapidly accelerating a continuous series of hash-based work, the network alters the timestamp, creating an irreplaceable record without resuming proof of performance. More importantly, a fundamental blockchain technology as a distributed consensus tool is part of the Bitcoin test, and attention immediately shifts to this additional aspect of Bitcoin. The use of digital assets in the blockchain to represent custom currencies and financial tools is another application of blockchain technology that is frequently mentioned.

## **I. INTRODUCTION**

Bitcoin is a relatively new technology that uses money and innovation, seizing technological opportunities in the digital age of the solution problem.

Bitcoin refers to a digital currency which operates free central control over bank and government which is launched in January 2009. Bitcoin is world's largest cryptocurrency by its market capitalisation. Now, it follows the idea of Satoshi Nakamoto's temporary white paper obscure and anonymous, who or who created the technology is still a mystery. and unlike government funds, it is used by state authorities.

Bitcoin is known as a form of cryptocurrency because it uses cryptography to keep it secure. Bitcoin is not present at a physical term it is only present digitally that's why it is known as digital currency. only balances stored in the public Ledger everyone has clear access to. Although each record is encrypted, all Bitcoin transactions are approved with a large quantity of computer system, this process is known as mining. Bitcoin is not issued or supported by any banks or governments, and each Bitcoin is not as valuable as assets. Despite not being a legal tender in many parts of the world, Bitcoin is very popular and has led to the launch of hundreds of other cryptocurrencies combined called altcoins. Bitcoin is often abbreviated as BTC when traded.

The renaming of Bitcoin does not conflict with the status quo. The current fiat financial system does not end soon, and this book does not aim to predict the future when bitcoin becomes a global currency. On the other hand, I do not consider that to be a possibility, either. Bitcoin offers an alternative to the free market value of the store of value and fixed assets, and that is its strength. It provides "check and balance," figuratively speaking, from the frequent spending of large banks by monetary policy. As people begin to lose the growing belief that their fiat du jour money cannot keep its purchasing power, they will look for alternatives, especially when their money bonds are not producing money. Bitcoin is a digital asset. Assets are defined as "something useful or valuable." It is a digital asset because it is produced and used in the digital world. Just as gold miners need to use labor, resources, and energy to produce gold, bitcoin miners need to use labor, equipment and energy to produce bitcoin. Bitcoin is not just a series of coins - a guaranteed operation needs to be completed in order for bitcoin to be implemented. There are production costs, such as gold or any other precious metal; and unlike fiat currencies, bitcoin is not an attempt to create value out of a small amount. Production costs are present in market prices at the time each bitcoin is made, and in central banks, there are no actual cost of producing

fiat currency. Big banks print money on a small scale. This is the main difference - bitcoin has real production costs. Also, if you think a suitable cryptocurrency could be a goldbased cryptocurrency in the future, I recommend you read this section again.

## II. TRANSACTION LITERATURE

Bitcoin uses public key cryptography to verify the integrity of network-created activities. To transfer Bitcoin, each participant has a pair of public keys and secret keys that control their own bitcoin pieces. A public key is a series of letters and numbers that a user must share in order to earn money. Conversely, the private key must be kept confidential as it authorizes the use of any funds received by the related public key.

It has always been a matter of theory to produce goods with a predictable substance at a constant or low rate of supply growth in order to maintain its financial role, but reality, as always, has proved to be more complex than theory. Governments would do whatever it takes to withdraw their private funds and overruns in the primary way in which the government supports itself and grows. So the government will always seek to dominate the production of money and deal with the most powerful at the temptation to get involved in money laundering. But by establishment of Bitcoin, the world had already come to the four coin transactions Ironclad guarantee that controls its low level of supply growth. Bitcoin takes over great economists, politicians, presidents, revolutionaries, soldiers, dictators, and TV experts out of total monetary policy. Fundraising growth is determined by planned work accepted by all members of the network. There may be a time at the beginning of this type of money when this inflation schedule could have been imagined, but that time has gone well passed. For all practical purposes and objectives, the Bitcoin inflation schedule, as well performance record, unchanged. During the first few years of Bitcoin the existence of the growth of the supply was very high, as well as the assurance that the supply The schedule could not be changed was completely unreliable, as time went on the level of supply growth has decreased and network reliability has maintained this. The supply schedule has increased and continues to rise with each passing day which no major changes are made to the network. Bitcoin blocks were added to the shared ledger every ten minutes. In with the birth of the network, the reward for the block was set to be 50 bitcoins per block. Every four years, about, or after the removal of 210,000 blocks, the block reward is reduced by half. The first episode took place on November 28, 2012, after which the issuance of new bitcoins dropped to 25 per block. July 9, 2016, it dropped to 12.5 coins per block, and will drop to 6.25 by 2020. According to the plan, supply will continue to increase steadily average, by contrast approaches 21 million coins at some point during the year.

2140, at which time no more bitcoins will be issued.

Bitcoin, as a form of currency, is not very difficult to understand. For example, if you own bitcoin, you can use your crypto wallet to send small portions of that bitcoin as payment for goods or services. However, it becomes more difficult when you try to understand how it works.

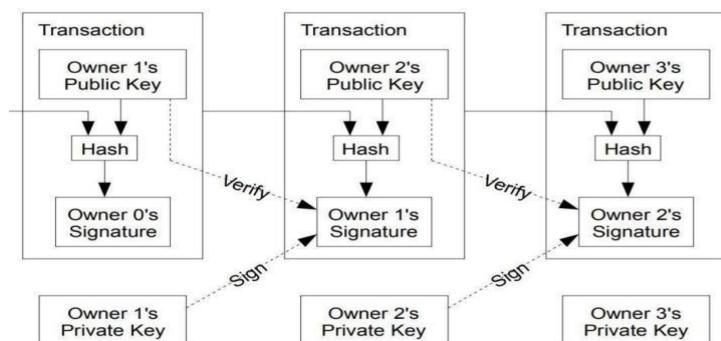


Fig 2.1 show transaction approve by buyer and seller.

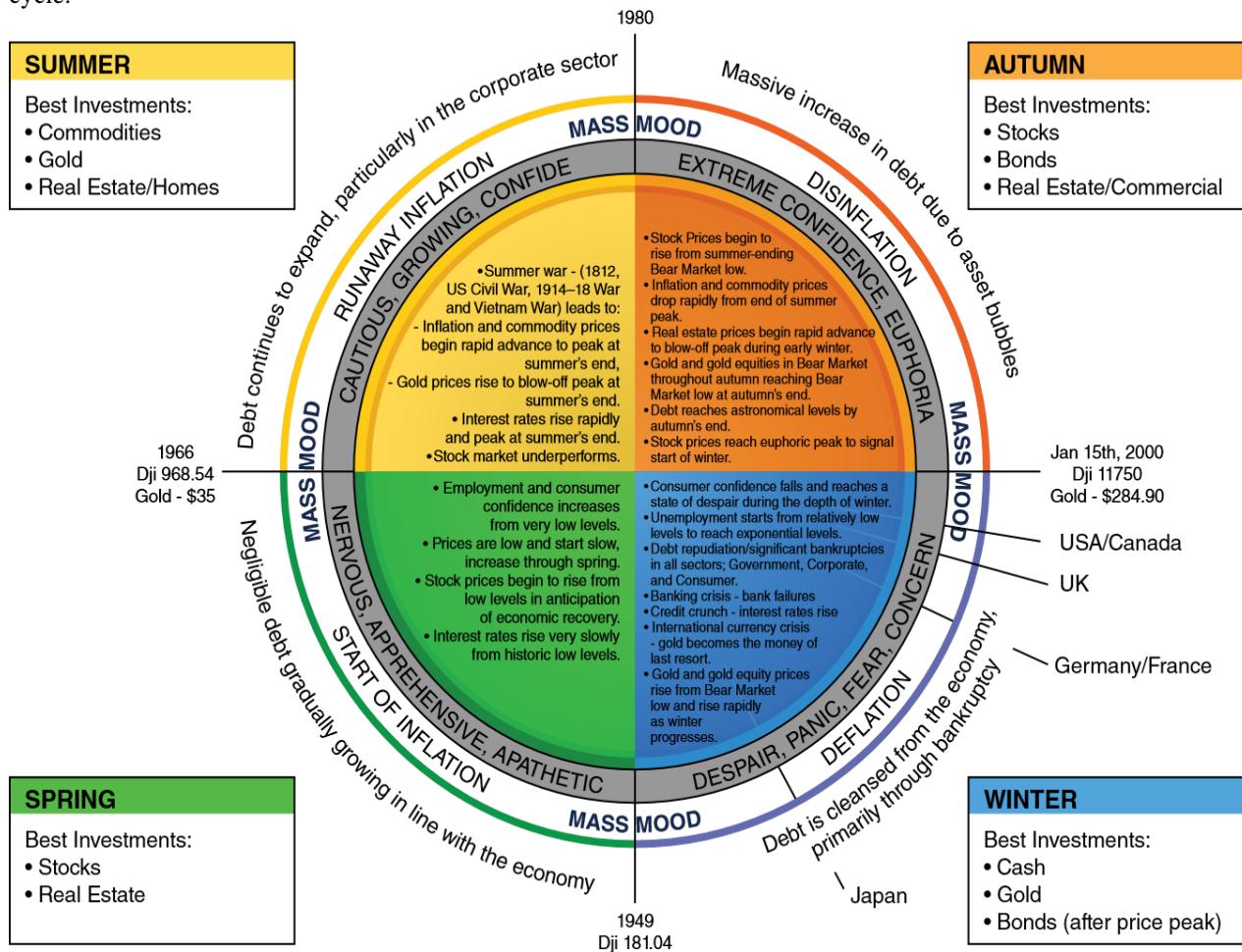
## III. THE LONG TERM WAVE OF ECONOMIC CYCLE

Have you heard the saying "Luck loves courage"? It also reaps what is fixed. Cycles are important information structures because they help to provide an indication of what is happening and what will happen. The cycles provide the first step for compelling the entire investment space. Combined with other layers, they can provide the fixed investor valuable information that most people do not include in investing decisions. This gives the investor a chance.

An investor needs to know where the markets are headed based on the various factors that affect them. Between the short-term debt cycle, which is about 5-10 years, and the long-term credit cycle, which is about 75-100 years, there is the long-term economic cycle. This was invented by Russian economist Nicolai Kondratiev in the 1920's and developed by Joseph Schumpeter in the 1930's and later by Carlota Perez in the early millennium.

Kondratiev discovered a long-wave structure and explained that it has four stages. Schumpeter then developed on it that the long-wave cycle was driven by business and innovation. He also showed how this long-wave cycle interacts with several other cycles.

Finally, Perez expanded on it further by showing that the long-wave cycle was directly driven by technological change and marked five cycles over 200 years ago. Describes structures that contain more details of what happens during a cycle.



**Figure 3.1 The Kondratieff Cycle** Source: Longwave Group

#### IV. BITCOIN RISK & RETURN

The RBI issued its 3rd warning about trading in a virtual and digital currency like bitcoin, on Tuesday. On Wednesday, the charge of one bitcoin raised upto \$ 12,000 in the US.

It is not that anyone was expecting RBI cautioning to trigger a desire to consume bitcoins. China advanced and restricted cryptocurrency trading anterior this year, but the trade proceeded to over the counter platforms, and the restrictions only created a temporary glitch in the bitcoin circle.

Ironically, when there are a lot of bitcoin circles, it attracts a lot of people to this circle.

At the moment, many hacks, robberies and scams are still out of the business of bitcoins. In Indian trading platforms, the number of end users doubles every 3 months. In actual fact, the speed of bitcoins has surpassed the broad margin, in India. As a result, there is an estimated 1520% increase in international value; the value of one bitcoin was around Rs Nine lakhs at the Coin secure platform on Wednesday .

Mentioned the dramatic hike in bitcoin prices in the present year — less than \$ 1,000 earlier this year , "Only invest that you can afford." In other words,

A crypto investor, Nitin Sharma says "There are a few different reasons why the average investor should not expose himself to cryptocurrencies. to inform the basic technology and the basic need for such tokens or funds. As the saying goes, one should not invest in something you do not understand, at least at a basic level. " Sharma, who officially founded the big company says it took him approximately four months to learn and create that understanding before investing. On the contrary the majority of new freshmem are simply chasing inflation, which is a very old feature of the bubble.

The sole fact that the regulation is unclear is the other danger. The buying as well as selling of Bitcoin in India is done on the basis of the permission because it is not vehemently prohibited.

Do the norms of the RBI's FEMA (Foreign Exchange Management Act) apply to overseas purchased bitcoin and later traded on the coast? Probably not, some lawyers are arguing, because FEMA is not talking about real money. In short, everything is gray. As long as Indian policymakers are concerned, as does The Great Republic of China, about the many Ponzi schemes that have emerged alongside the bitcoin convention, and restrict the trading of bitcoins platforms, traders may be in trouble.

## V. COMPARISON OF BITCOIN, S&P , GOLD.

Gold is typically regarded as a deterrent to speculative investments. The price of Bitcoin is currently highly correlated with stock and gold prices. For what reason is BTC great for bulls and bears simultaneously?

Hard commodities, which are those that are mined or extracted, have become popular investments for both experts and amateurs who fear a possible loss of their purchasing power as governments struggle to revitalize their economies and stop the spread of the coronavirus.

Gold, obviously, is the ware second to none with regards to putting away worth. In point of fact, the price of the precious metal reached an all-time high during the coronavirus pandemic and continues to rise. Its exchanging action has been expanding since last year, yet the huge printing of cash by the US government has broadened the cost spike.

As a matter of fact, throughout the course of recent months, gold and Bitcoin cost connection has expanded to a record high, and that implies their cost developments have become more unclear

The S&P 500 means that how well American top organizations are performing. A variety of factors, including economic trends and geopolitics, have an impact on market balances.

Eventually, outlines are just lines of depictions of the past. As both charts indicate, the relationship only grew in the past, resulting in a return to the wrong place. And no one can predict the future, no matter how well the analysis is done. Notwithstanding, as time passes, it appears to be protected to say that Bitcoin will be a part of it for financial backers.

important distinction: Bitcoin, also known as "Digital Gold," has recently surged in value. However, real gold's price did not. Over the last past days the price of Bitcoin has risen by about 12% ahead of the next half-day event. It hit \$10,000 several times in the past two days before down to its actual price, \$ 9,600.

According to market the gold price rising from 1,700 dollar per ounce to 1,718 dollar.

The difference is even greater when you look back over the past month. Gold inflation was slow but steady, bringing in just over 4% profit over the course of the month, while Bitcoin increased by about 34% during that period.

t is important to understand that in order for the financial system to remain intact a fixed value does not occur conceptually or can be specified. Goods and Purchasing services will change over time as new technologies introducing new goods to replace old ones, and as conditions of provision once the demand for different goods will vary over time. One of the main functions of the monetary unit will serve as the unit of measurement for economic assets,to whom the value is constantly changing.

## VI. REGULATION AND FUTURE OF BITCOIN

El Salvador made an official tender for Bitcoin on June 9, 2021. It was the first country to do so, and it can be used for any transaction that businesses accept.

Bitcoin is not regulated as a legal tender, but you can invest in Bitcoin. You can also trade in bitcoins. You cannot exchange money as a payment, in my opinion in my research. In 20 years 2022. The new financial bill has passed. Our RBI Finance Minister said that you can Invest in Bitcoin by giving 30% of tax to the government. And soon, India will launch their own digital currencies. Maybe. It will be regulated as a legal payment in future when India's announced there. their own digital currency.

The future of Bitcoin is available on the Chicago Mercantile Exchange (CME). There are futures contracts that allow the investor to purchase a single contract, equivalent to five bitcoins. Currently, there is only one future contraction regulated and that of bitcoin. This product does not allow the investor to use force. There are also plans in the ether futures contract work although it is not available from this writing. Investing in futures contracts requires that the investor be authorized and able to obtain an asset account and has the same risks that are often associated with the asset.

## VII. CONCLUSION

We have made a proposal for an electronic transactions system without relying on reliability. We started with a standard framework for digital signatures, which provides strict patent control, but is not complete without a double check. To address this, we have developed a peer-to-peer network using work credentials to record a public history of quickly statistically significant activity so that the attacker changes when reliable nodes control most of the CPU power. The network is strong with its uncomplicated simplicity. Nodes work simultaneously with minimal communication. They do not need to be identified, as messages are not transmitted anywhere and need to be delivered with the best possible effort. We are in a new wave of long waves of this technological change and we are ahead of time. As the famous investor Mark Yusko puts it, "The greatest wealth is created by being the fastest investor in innovation. To make that investment requires belief in something before most people can understand it. You will be laughed at, ridiculed, and criticized for your disagreement. And, it really is worth it!"