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Financial crisis to digital revolution: Exploring the impact of cryptocurrencies and blockchain technology on finance and society

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Abstract

The global financial crisis of 2008-09 marked a pivotal moment in the history of finance, exposing vulnerabilities in the traditional banking system. It was during these tumultuous times that Satoshi Nakamoto introduced the world to Bitcoin, a revolutionary digital currency underpinned by blockchain technology. This paper explores the multifaceted impact of cryptocurrencies and blockchain, shedding light on their role in reshaping the financial landscape and addressing various societal challenges. The study begins by dissecting the roots of the financial crisis, emphasizing the role of centralization and opaque financial products in its genesis. It then delves into the birth of Bitcoin as an alternative monetary system and the ingenious solutions proposed by Nakamoto, notably the blockchain ledger. The blockchain, with its decentralized and transparent nature, promises to disrupt not only banking but also various industries and government processes. Furthermore, the paper examines the broader implications of cryptocurrencies, focusing on their potential to empower marginalized populations, facilitate cross-border remittances, and promote a cashless economy. It also discusses how blockchain technology is being adopted by major financial institutions and governments worldwide, paving the way for more efficient and secure transactions. However, the rise of cryptocurrencies has not been without challenges. The study explores the dark side of digital currencies, detailing how they have been exploited for illicit activities, particularly through privacy-centric cryptocurrencies like Zcash, Dash, and Monero. These cryptocurrencies offer anonymity that presents law enforcement agencies with significant challenges in tracing criminal activities, such as black-market transactions and ransomware payments.

Keywords: Bitcoin, blockchain, cryptocurrencies, Zcash, dash, Monero, counterfeiting, offshore banking, blockchain, cybersecurity, Darknet, ransomware

Introductions

Global Crisis and Bitcoins

Banks are earning huge revenue from Credit and Debit cards and also for transfer of money and thus they are inclined to preserve and strengthen the money churning business which tends to promote the centralization of power streams instead of removing the concentration of power in their hands. It's the bread and butter of these banks, and they have been looting the world and growing leaps and bounds. These giants, new banks embarked on hiring a large number of math geeks in successive years so as to get the maths right to earn more and more. This backfired as instead of making the financial system of the banks stronger and more efficient, their knowledge and innovations were used to plan financial products to extract excessive profits. The financial products were marketed to clients attractively who were confused by a pyramid of maths and thus ignorant about what they were buying.

How did the banks fail in the US? These math's experts took the giant pools of home loans shown on the balance sheet of these banks and converted securitized these lending and interest-earning securities. This security was sold to many insurance and pension funds as safe investments. Having bundled off these loans, they were flush with resource and offered more loans to even low-income household which started to fail. Once it was found that the underlying value of the mortgaged assets were not of the reliable quality as compared to the valuations at which they were marketed, the house of cards collapsed. The rest is history.

By this time the banks and financial insititutions around the world had grown very large and were interconnected within the global financial system.

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These banks were Centrally controlled by the governments around the world and the failure of these banks would mean the failure of economy and thus the Governments around the world were compelled to pump in trillions of Dollars, Pounds, and Euros of taxpayer into the banking system in a bid try not to cut down that whole framework. The ascent of Cryptographic forms of money can satisfactorily gauged as it were concerning the banking turbulent times. One day a prominent Investment banker, Lehman Brothers fell, the money in the Bank ATMs started to disappear. News spread fast as the fire. This led to an enormous panic. The Financial crisis took years to settle down, but the social scars were left behind People lost faith in banks and the stock exchanges. It was during this time that Satoshi Nakamoto placed before the world his project ^[1].

The collapse of Lehman and AIG shattered trust in the markets and securities. Nobody believed in the asset worth and valuations; the trust on price quotes and budgets were gone. The balance sheets of the banks about their assets and holding was doubted and there was no trust on the banks and NAV of the mutual funds. The global capital markets started to fall and came to a grinding halt. Markets were like a falling knife. No one wanted to buy any stocks even at beaten down rates. The shares of banks and financial institutions were reduced by less than half the confidence of the investors was shattered and monetary crisis loomed around the globe. There was no sale value of assets and value of properties came crashing down. In years to come an increasing number of people including those who burnt their hands would vote that perhaps Satoshi Nakamoto idea offered a better alternative to the Central Banking system.

Bitcoin was an amazing, detailed thought out and fool proof plan and till such time it was introduced before the world, no one could find out how to build one such system which could meet all the requirements that could dislodge the Central banks and Government. No plan was ever there to replace a centralized banking system which could provide a transaction in secured environment and which could be enforced voluntarily with the help of decentralized local area in which nobody is in control. Without a focal power how to get consistence in the organization and how to get their participation? And if there was no legal force or authority behind the system, how do you stop network partners and people from cheating the system or from spending Bitcoins that is owned by others? Satoshi Nakamoto came up with solution for the same. The main component and the most important gift to the world is Blockchain ledger. The Blockchain arranged transactions in chronologically arrayed blocks that allowed the network operators (also known as miners) the access to acknowledge and verify its contents ^[2].

The system completed the transaction by comparing the historical ledger of account balances. Once the system is satisfied, with the miner's acknowledgment and their approval, the system thereafter moves to verify the next transaction and create the next block. The new block is chained to the freshly approved and created block prior to the this one. The verification process includes the chaining of the new blocks together. An important system check is that the acceptance of new block forms a legitimate base for further blocks to be added. The blocks constitute a de facto consensus on the validity of any transactions. Since a large network of computers work round the clock to form new

blocks, the chances of hacking of system or stealing of coins becomes impossible.

Being a Digital currency, the chances of counterfeiting is ruled out. The second solution put forth by Satoshi Nakamoto is mining rewards algorithm. The mining process created a process of incentives provided to bring on board the owners of the networked computers to invest in computing process power and other inputs required to ensure the working and maintain the Blockchain ledger. Both these features of Blockchain and mining formed the foundation for a decentralized mechanism of trust.

After creating a decentralised trust sytem the problem of creating a purchasing power remained to be tackled. Who would buy a Bitcoin which was a new currency without the backing of any Government and which no one accepted. Many had not even heard of it in 2009. It required a creation of a balance between supply and demand ratio. There was supply but no demand and no demand meant no value. Nakamoto decided to create a sense of inherent value of Bitcoins. Satoshi addressed this issue by fiddling with the quantity of the number of coins to be released in its lifetime. Most of the countries around the world have started to accept Cryptocurrencies as currency and have permitted limited transactions using Bitcoins and other Cryptocurrencies. Most of the states are now junking gold standards while printing currencies and thus a new currency which has its intrinsic value is not seen as a bad idea by the Governments. Considering the amount of money saved in the cost of Printing and other safety features in the printing of the notes, the cost of transportation for the Government and the banks alike and the fear of a flood of counterfeit currency ruining the economy is done away by adopting digital currencies.

Blockchains - The Future of Technology

While Blockchains most popular, most utilized and most elevated influence application is Bitcoin, the likely effect of the innovation is definitely more huge and more extensive than virtual monetary forms. The notoriety of Blockchain innovation may likewise mirror an arising social pattern to needs straightforwardness of the framework over the current namelessness. Blockchains have a clean reputation as compared to the Bitcoins and have thus attracted attention of various financial institutions. Besides, the financial institution a lot of paper transactions are being done away using the digital platform of Blockchains which is based on secured environment. Big financial institutions such including J.P Morgan, State Bank of India, ICICI Bank etc has shown great interest in Blockchain technology by joining an alliance to implement it into banking practices. In addition to those significant financial players credit card companies' insurance forms and stock exchanges and others are adopting Blockchains into their system. For the banks to have their Blockchains will enable them to record all transactions made by the client. This will even do away with old technology that is being used currently. In India, the State Bank of India has already made first strides to adopt the Blockchain technology into its system.

Since the Blockchain is distributed ledger available on all nodes, the absence, connection problem, hardware failure or failure of any node does not affect its working like that of a Central server, and it can work 24x7. For every completed transaction on the Blockchain, the intermediary is done away, For example in a transfer of money the banks charge

account operating charges, cheque issuance charges for Demand draft or SWIFT, etc. and this all is saved, in cases of credit cards, the high transaction cost is saved. The technology is displacing these agents who have thrived off us in the past. Skeptics see this as an end of banks and financial institution to start with and spreading widespread unemployment in other social sectors like the Governments [3].

However, a positive aspect of technology-driven jobs waits in the wings. Skeptics also fear the rise of global warming due to the heat released by these power guzzling supercomputers acknowledging the transactions on Blockchains. Technical experts are working on algorithms which would consume less power and supercomputers which will produce less heat in days to come. In the social sector, the growth of Blockchains is undeniable, and they will do away with the Government officer's inefficiency and corruption especially in case of maintenance of Land records, etc. Most of the banks are coming up with their private Blockchains, and this may sound an end to the hacking of bank records, customer's passwords or unauthorized access to the same. Cybercrimes may be on the way down with adoption of Blockchains.

Cybercrimes Using Bitcoins

The use of Cryptocurrencies by Criminals and users of illicit articles has attracted the attention of the world and given it a bad name. Investigating, law enforcement, financial regulators, media and the legislative bodies, have been concentrating on news related to the misuse of Cryptocurrencies. Several Premier investigation agencies have in the past raised a warning about possible abuse of Cryptocurrencies to aid the Crimes and undermining the law. Many types of exploration in regard of Bitcoins have been done, and they have pointed that the notoriety and development of Bitcoins have additionally been because of the installment for criminal operations and merchandise utilizing the Bitcoins. A great deal of organizations has presumed that for the fear exercises and's heinous acts, computerized monetary standards are favored method for receipts of assets. The development of Darknet, which assists in Cybercrimes with naming a couple of will be significant before we go the kinds of Cybercrimes as a comprehension of these Digital currencies will assist with understanding the simplicity with which the Cybercrimes utilizing them can be performed.

1. **Z-Cash:** Z Cash is untraceable Cryptocurrency and started by Zooko Wilcox. The transactions on this network are encrypted using ZK-SNARK and metadata within the trade itself is encrypted leading to difficulty tracing the transactions. This makes it attractive for criminal activities. Z cash payments are transacted on a public blockchain, but users have an option such as privacy feature which conceals the details of the sender, recipient, and also the amount being transacted. Z Cash was started in 2016 and has a total fixed supply of 21 million units like the Bitcoin. The popularity of Z Cash can be seen in the price rise from 0 to 799 dollars in 2017.
2. **Dash:** Also known as Darkcoin uses Darksend to encrypt data by mixing coins and thereby confusing the transaction. Dash was initially named as XCoin and released on the eighteenth January, 2014. It got the name changed to "Darkcoin" around the same time.

Again in 2015, it was rebranded as "Run. "It works on InstantX protocol and combines transactions from multiple users into single transactions with multiple outputs making it very confusing for the authorities. Dash offers Direct and Instant transactions without the details of the sender and recipient. A great demand for them by exists in the underworld.

3. **Monero:** It is the most anonymous Cryptocurrency and currently the darling of the underworld and illegal activities. It uses the CryptoNote technology which uses stealth address mixer and one-time ring signature and thus there is evident absences of any know your customer guidelines. This method is similar to group signature, and therefore the identity of the individual user remains hidden amongst the group of users. Monero is the most well known and sought-after money of the over three It had arrived at a lifetime exorbitant cost of \$475 in Jan 2018 and is less volatile as compared to other currencies. However, Edward Snowden, the noted whistleblower has in compared to Z Cash found Monero as amateur Cryptocurrency. It thus appears that Z Cash is on the way to take over the lead in near future for being the most untraceable transacting Cryptocurrency.

The above three Cryptocurrencies are difficult to trace in transactions. They openly declare themselves being anonymous to the core and thus they are an open test to the law masters to break them or stop them. The Federal Bureau of Investigation (FBI) has previously sounded a caution against the abuse utilizing these three monetary standards should be possible by Hoodlums. The greater part of the cash gathered as Ransomware has been changed over into Monero and have vanished from the paths. The cases have reached a conclusion as there is no path left after the change. No single case utilizing these Digital forms of money has been reserved up until this point and consequently shows how much in front of regulation their advancements are based.

Black Markets

Carnegie Mellon University conducted research in 2012, revealing that a significant portion of transactions on cryptocurrency exchanges, roughly 9%, was related to the illegal trade of items like drugs and arms, as well as illegal services such as contract killings, human trafficking, the sale of stolen data, and illicit pornography. Over the years, law enforcement agencies have periodically managed to shut down these illicit websites, with the Silk Road being a notable example, which was closed in 2013, leading to its owner receiving a life sentence in 2015. However, the darknet market landscape has proven resilient, as new platforms quickly emerge to fill the void left by these takedowns. Even after the demise of Silk Road, subsequent websites specializing in online drug sales have appeared, seemingly unaffected by law enforcement efforts, indicating the persistent nature of this illegal trade.

Malware

Malware is a type of software designed to illicitly acquire data, and in certain instances, it targets Bitcoin theft. Some forms of malware are even equipped with mining software that siphons off newly mined Bitcoins. Another form of malware is ransomware, which infects computers and

restricts access or locks the system until a ransom is paid, typically in the form of cryptocurrencies. One notable ransomware incident that garnered worldwide attention occurred in 2017, known as the WannaCry Ransomware attack.

Malware Stealing

Specialized malware are customized to take private keys from the wallets and accordingly lead to move or taking of something similar. Many occurrences of wallets losing Bitcoins have been seen as of late without the proprietor having done the exchange. Some malware denies the exchange to the objective location but inserts some other address automatically and thus lead to the loss that's because the operations on the Blockchain once confirmed is not reversible. Pony botnet, Bitvanity, and CoinThief are instances of such malware [4].

Ransomware

Ransomware is a Bitcoin-related malware utilized for gathering pay-off. Ransomware locks the PC and denies admittance to the proprietor or client except if a payoff is paid in Bitcoins or other Cryptographic forms of money. Cases of CryptoLocker which spread the word. Wannacry was one exceptionally popular Ransomware which contaminated the vast majority of the PCs all over the planet in August 2017 and requested a limited quantity of \$300 payable in Bitcoins from the people in question.

Unauthorized Mining

Botnets have been introduced by programmers which redirect the mined coins to the wallets claimed by them; Botnets typically takes help of thousands of Botnets to change the coins starting with one wallet then onto the next subsequently making following troublesome. These Botnets regardless of whether found are just slaves, and in this manner the genuine framework working them through a labyrinth of frameworks is extremely challenging to follow and bring to books. Plus, Botnets, trojanware are likewise used to redirect the mined coins to another wallet. Sefnit was one such programming which diverted the mined coins. It utilized Pinnacle to speak with the expert PC and gave data connected with the wallet secret word and different snippets of data and furthermore empowered the captives to follow up on the orders. Numerous commercial organizations were tricked to pay something else for notices by pay per view or per click or in light of traffic created as it was a misleading snap or traffic done by the Botnets utilizing the Sefnit malware. Microsoft and YouTube were unmistakable casualties of this trick.

Money Laundering

Bitcoins were considered the best bet for money laundering because all transactions are encrypted on the public ledgers, and the names of the transacting persons are not available easily. Internationally most of the enforcement and investigation agencies sounded alarms about the possible abuse of Bitcoins for aiding in money laundering. However, reports by the UK home office in 2015 placed money laundering using banks on top of the table as against Bitcoins including money laundering for terrorist activities. Thus contradictory reports are emerging leading to confusion. This report was anyway ready before the approach of oneself broadcasted very unknown monetary

standards viz Monero and Z-cash which are profoundly secretive and generally popular.

Ponzi Schemes

Many fly by night operators emerged as the demand for Bitcoins increased. People were lured to invest in mouth-watering plans of Bitcoins as they are unregulated and zero power over them by any organization. One such arrangement was of the Bitcoin Reserve funds and Trust guaranteed 7% week after week interest by exchanging the Bitcoins. It was such an alluring plan that it figured out how to get 700,000 Bitcoins from 2011 to 2012 in its wallet. The organization neglected to pay any interest and misrepresentation case was reserved. In 2013 the proprietor was fined \$40 million by the US Court. A couple of days prior, the Navi Mumbai Police busted a cross country trick by Ponzi scheme involving OneCoin. Unknown to the cheaters, plain-clothes officers of Mumbai police attended the sales seminar. According to the officers who attended the seminar, the scammers running the presentation boasted of huge earnings by indulging in Multi linked marketing and by bringing in more clients.

Theft

Examples of the third individual getting to the secret word of Bitcoins wallets have additionally come to see, in such cases, the whole wallets have been exhausted, and without guideline, it becomes testing to recover the coins back. The greatest Burglary of Bitcoins was seen on the Mt Gox trade. It was the main Bitcoin trade on the planet and dealt with around 80% of the exchanges. Accounts were hacked, and wallets became vacant. The fact that Bitcoins of approx makes it evaluated. \$ 750 million was taken and sold. The Mt Gox trades in this way went into liquidation by petitioning for financial protection application. One more robbery occurred on commercial center sheep where the Guilty party was captured in Walk 2015. Trades, for example, Flexcoin of Canada lost Bitcoins worth \$6, 50,000 and shut down in 2014. Different Trades like Poloniexchange (\$50,000/= lost), Bitstamp (\$ 5 million lost) and BTER (\$ 2 million lost). In the past Silk Street, 2.0 likewise revealed a deficiency of Bitcoins esteemed at \$2.7 million at the significant time from its escrow accounts in 2014.

Gambling

After the Darknet commercial centers like the Silk Street, the following most critical use for Digital currencies is in web based betting. Starting around 2014, Bitcoin-based internet betting is an extravagant industry. Any betting you can envision, from sports, wagering to poker, can be found in the web-based Bitcoin gambling clubs. In 2012 the legitimate worldwide gaming market net of prizes was \$ 430 billion. In 2013 simply in America alone, players lost \$ 119 billion remembering the \$ 140 billion for unlawful betting overall every year, the worldwide betting business sector finishes out at over a portion of a trillion bucks each year. At present, just \$ 35 billion of this half trillion-dollar market is directed on the web. This leaves colossal space for development in web based betting. Dissimilar to tranquilize commercial centers, web based betting sites can be situated in purviews where betting is lawful and can be moderately sure that they will be resistant from arraignment from different states. While most web-based Digital money

betting is right now directed in Bitcoins, given the benefits of unknown Digital forms of money to gamers to shield themselves from capture by their administration, almost certainly, a significant part of the internet betting exchange will move away from Bitcoins and towards mysterious Digital currencies. This would appear to be exceptionally bullish for the drawn out valuation of these monetary standards. No big surprise the cost of Altcoins, for example, Run and Monero have seen a gigantic ascent in 2016-17.

Offshore Banking

Because of severe financial mystery regulations in many seaward financial focuses, it was somewhat simple for anybody to hinder up an unknown seaward partnership in the 1980's and 1990's. These seaward organizations could hold a financial balance and put resources into organizations or property. The Panama Papers is one unmistakable model where's who of the world had put their cash in the seaward business to legitimize them in future. No big surprise, the Watchman has promoted the Set of experiences' Greatest Information spill as extremely large names on the planet are connected. For somebody expecting to keep their abundance untaxed, it was feasible to move their cash somewhat namelessly to one of these seaward organizations and develop their savings without paying any capital additions charge. Since 9/11, nonetheless, the US government has been compelling seaward financial focuses to obliterate their financial mystery regulations all the while intending to mislead and misdirect." Today, practically every financial focus, from Switzerland to Belize, expects individuals to introduce recognizable proof while setting up a seaward partnership. Notwithstanding this consistence, the Indian specialists are attempting to extricate data about the Indian record holders having accounts with them.

The Hindu conveyed an article that Indian Cash in Swiss bank has contacted down to Rs 8392 Crores and it is in this manner expected that the cash has been put resources into different types of speculations including Cryptographic forms of money and taken back to India. In a large portion of the nations, seaward banking has ended up being a curse to the economy. As of late, the Swiss bank has concocted plans where the clients will be encouraged to put resources into the Bitcoins by the master group of experts, and the Bitcoins will be held at the Banks wallet and not the wallet of the client. This is another way the seaward banking are working with dark cash.

Security

The Bitcoin protocol protects the user from hacking attacks and also attacks related to double spending, but instances of double spending have been noticed in a few cases.

Unauthorized spending

Unapproved spending is forestalled in Bitcoins convention because it carries out a system of public-private key cryptography. Taking a situation when An exchange a Bitcoin to B, B turns into the new proprietor on affirmation of the exchange. C might be noticing the exchange on the blockchain and might need to get hang on the bitcoin on the way to spend something similar or may attempt to hack the framework to move similar in his wallet yet is kept from doing as such as C can't set an exchange doing without the Knowing the confidential key of wallet of B.

Double spending

Twofold spending has been as of late seen when under exceptional framework disappointment a client moves similar coin to two unique wallets or address. This occurs in matter of seconds as it requires investment to affirm the exchange

Deanonymisation of Clients

Not only this even if Tor network is there is a way to separate the user from Tor network Scammers believe that they are safe behind the anonymity feature of the Cryptocurrency and also the fact that unlike cash no physical contact to collect the money is required. They, however, fail to understand that law enforcing agencies have already initiated steps to trace back the sender and recipient of this transaction.

Legal Status of Cryptocurrency

Money is cryptocurrency

Advocates of this view note that certain crypto-monetary functions are identical to currency media. Cryptocurrency is a payment method for goods and services and, for example, the legislation provides that it is possible to be a payment unit for payment of wages.

Cryptocurrency has become, in some nations, a settlement unit that different business subjects understand and embrace.

The etc. The "Financial Crimes Enforcement Network (FinCen)" argues that the cryptocurrency "exchange for fiat money" transactions should be supervised "in the same way" that the fiat money exchange operations alone. Licenses must be obtained from legal bodies engaged in fund flow for cryptocurrencies.

Japan has accepted "Bitcoin fiat money" cryptocurrency as functioning "the same as money. The government" therefore agreed to create a regulatory structure for complete cryptocurrency incorporation into Japan's banking system. National Cryptocurrency Regulator is the Japanese "Financial Services Agency which regulates issues" related to national currency emissions.

Money Substitute Cryptocurrency

The opponents of defining crypto-currency as being equivalent to the ordinary money bill claim that crypto-monetary notes are "not a monetary instrument" since it isn't given by the state. In by far most of wards, digital currency isn't viewed as an authority method for installment and alludes not to cash. "For instance, the Dutch expense administration" considers cryptographic money not to be a lawful installment device. In 2014, the "Central Bank of Denmark announced that Bitcoin" does not constitute "a currency". From the Danish regulation authority's point of view, this crypto-monetary has no genuine commercial value in relation to gold or silver.

Cryptocurrency is Electronic Money

In 1998, an electronic cash report by the European National Bank on electronic cash was portrayed international law("eCB). Electronic cash" is by and large described as the electronic stockpiling of money esteem by an innovative framework, normally utilized not just for making installments to the backer, yet additionally to different organizations, and not for the mandatory utilization of

exchange "financial balances, yet as a prepaid instrument for a conveyer".

Backers of digital currency's status as a sort of electronic cash express "that cryptographic money has no guarantor as an electronic installment strategy. It can, without opening a ledger" to fulfill "financial commitments", be viewed as money that is typically given by one person for another.

Electronic cash is a financial worth "as per the Electronic Money related Order (2009/110/eC) following the circumstances submitted to backers: it ought to be handled "electronically, electronic cash" ought to be given in light of a legitimate concern for getting reserves itself.

Cryptocurrency is a financial instrument

A security or its derivatives are a financial instrument. In addition, a derivative is a contract providing for the fulfilment of a purchase or sale duty of shares, currencies or commodities, as one of the options.

Currency, codes "or securities, as well as various statistical indicators, indices and proportions, can be the underlying asset of a derivative financial instrument". As needs be, the fundamental resource for a subordinate monetary instrument will not be digital money on the off chance that it's anything but a product or security.

The German Finance Ministry took the view that cryptocurrency can be a financial tool. The decree on recognition of cryptocurrency as a formal settlement instrument was published in 2013. At the same time, this status is specifically defined in the law by the status of legal means of payment - in German such status has not yet been given to cryptocurrency.

Cryptocurrency is an asset

A good is an item that can be used economically or non-materially. Cryptocurrency is considered a good or product in a variety of countries and is taxed. Cryptocurrency is described "as an inexhaustible non" materiel product specific any given point in the legal systems of the countries concerned.

Cryptocurrency is not considered capital or foreign currency by the Australian tax service, equating activities with the involvement in trade agreements (barter arrangement).

Cryptocurrency is a Security

In its report on the state of the blockchain start-up "The DAO" the "Securities and Exchange Commission (seC)" pointed out that the iCo issuance of toks ("a token is a value unit issued by a private organization in a blockchain system") regarded as investors invested.

The opponents contend that crypto-monetary law contains no rights of responsibility and is not a monetary duty. It is based on the assumption that the relationships found in the cryptocurrency's transaction are of the most similar kind to the trade agreement.

Cryptocurrency emissions are decentralized on the Internet so that they do not comply with the notion of securities pollution. As a new block of the transaction chain is formed, the issuer is every payment system member. Digital money on this premise doesn't follow the protections' attributes and doesn't comprise security itself.

Cryptocurrency is Property: The United States' "internal revenue service (irs)" has provided guidelines in taxing

Bitcoin and other cryptocurrencies transactions according to the following:

1. Currency.
2. Property.
3. Investment instruments (long-term investment in shares).

For the purpose of federal tax payments, the property is considered as Bitcoin, when sold by the purchaser, the profits from capital gains are not paid by variations, but by the exchange rate differences.

At the same time, payroll tax and compensation taxes are applied for the payment of salaries in cryptocurrencies, and the application of the self-employed tax is charged for payments in cryptocurrencies to independent contractors [5].

Why States Choose to Ban Virtual Currencies

This section recognizes five normal motivations behind why states could choose to boycott digital currencies after examination of accessible writing. While there are certainly different clarifications for the prohibition on virtual monetary standards, this part restricts its discussion to the five most often referred to factors in the review. The five incitements that a state could boycott encryption are.

1. The proceeded with utilization of bitcoin in criminal organizations for of installment
2. Debilitating, locally and worldwide, state ability to oversee capital streams in decentralized exchanges cryptographic money
3. Limit the capacity of residents to energize against the State and decrease individuals' social equality
4. Eliminating contending virtual monetary standards in anticipation of distribution of an administration upheld emergency. The elimination of significant tax and infrastructure drains caused by state energy grid miners [6].

Bitcoin and Crime

One potential explanation a state might smother digital currencies is to take out or possibly lessen the payout for violations. The decision of the cryptographic money as the most loved cash in the darknet, was one of the principal motivations behind why Bitcoin acquired consideration - and the eye of the US government. Fifteen For instance, the Silk Street, the most notorious Darknet commercial center for researchers, acknowledged only Bitcoins for unlawful medications and administrations. For sure, notwithstanding the public authority information on the site, the Silk Street worked unsettled for more than two years, before at last the Government Department of Examination (FBI) recognized and captured a pioneer behind the dim site in October 2013. Fifteen furthermore, Bitcoin transactors are connected to a scope of Darknet's unlawful cases by means of Lawrence Trautman's Record, including paid killings, attack on firms, kid dealing and erotic entertainment, corporate spying, drugs, bogus character reports and identifications, venture plans, sexual double-dealing and taken Mastercards. Fifteen There are a few clarifications why unlawful entertainers decided to manage cryptographic forms of money over traditional fiat. In the examination did by Trautman, he uncovers five motivations behind why the US Secret Assistance thinks about virtual monetary standards a danger and pronounces that they give crooks.

1. The most mysterious degree for clients and exchanges.

2. The capacity to move unlawful incomes starting with one country then onto the next effectively and secretly.
 3. Low volatility, which reduces exchanges risk, increases the ability of the digital currency to transfer and store wealth efficiently.
 4. Broad acceptance in the subterranean of crime.
 5. Confidence.
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The international community has not been unaware that Bitcoin is linked to illegal activity, and some governments, as mentioned later in this chapter, blame Bitcoin for the connection between criminal enterprise and virtual currency prohibition [7].

Conclusion

The global financial crisis of 2008-09 exposed the fragility of traditional financial systems, raising critical questions about the concentration of power within centralized institutions. Bitcoin, introduced by Satoshi Nakamoto during the depths of the financial crisis, presented a groundbreaking vision of a decentralized and transparent monetary system. Its underlying innovation, the blockchain ledger, offered not only a secure and efficient method of transaction validation but also the potential to disrupt a multitude of industries beyond finance.

As cryptocurrencies continue to gain traction, their impact is felt not only in the world of finance but also in empowering individuals and communities worldwide. Cryptocurrencies provide a lifeline for those excluded from the traditional banking system, offering a means to engage in cross-border transactions and secure their financial futures. Furthermore, blockchain technology's promise of transparency and trust has led to its adoption by governments and financial institutions, ushering in an era of greater efficiency and security. Nevertheless, the rise of cryptocurrencies has not been without challenges. Privacy-centric cryptocurrencies like Zcash, Dash, and Monero have raised concerns about their potential misuse in criminal activities. The anonymity they provide poses significant challenges to law enforcement agencies seeking to combat black-market transactions and cybercrimes.

In navigating the evolving landscape of cryptocurrencies and blockchain, it is essential to strike a balance between innovation and regulation. Regulatory frameworks must evolve to address the risks associated with digital currencies while fostering an environment that encourages responsible adoption and innovation.

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