Review Analysis and perspectives of Cryptocurrency

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ABSTRACT

Cryptocurrency, which was developed in 2008, is an encrypted digital network that enables people to perform digital barter transactions. Its decentralized nature and its ability to serve as a secure and fast method of payment have garnered widespread acceptance. While cryptocurrencies are not expected to replace traditional fiat currencies, their decentralized nature could change the way global markets interact. The success of a technology depends on the market's reaction to its potential. Cryptocurrencies could create a free-flowing digital trade market by taking advantage of the existing inefficiencies. A comprehensive analysis of Bitcoin shows how it could contribute to a shift in economic paradigms.

Keywords: Cryptocurrency, Bitcoin,digital

INTRODUCTION:

Cryptocurrency is a new phenomenon compared to traditional fiat currencies and assets such as gold. Cryptocurrency is an alternative form of payment that enables users to exchange value without intermediaries (Jaag, C., & Bach, C. 2017). Its decentralized nature and its ability to secure transactions have become popular. With Bitcoin, users can easily exchange hashes as if they were buying physical currency (Crosby, M., Pattanayak, P., Verma, S., & Kalyanaraman, V. 2016). Its scarcity is ensured through a network of computers. Water, despite its scarcity, is considered free or less expensive. Its scarcity is also explained by the trust that its users have in the system. Since Bitcoin is a decentralized digital currency, its value can be anything (Evans, D. S. 2014). Bitcoin is not as valuable

as gold, as its value can be accepted and used to make physical objects (Velde, F. 2013). Its intrinsic value can still exist due to its trust and acceptance. Financial institutions are built on an older form of currency. Compared to the computing industry, they still rely on 1s and 0s for processing. Due to the technological limitations of today's system, cryptocurrencies could be the only alternative to the existing systems for global transactions (Giungato, P., Rana, R., Tarabella, A., & Tricase, C. 2017). This could disrupt the way we do business globally.

Bitcoin, which is the world's most popular cryptocurrency, has become more popular over the years (DeVries, P. D. 2016). Its decentralized nature and its relatively simple structure have become much more challenging to maintain due to the changes in the world market. Bitcoin is considered as a peer-to-peer cash system. It needs to be stable or government-supported to function as a currency. Bitcoin, the most well-known cryptocurrency, is designed as a peer-to-peer cash system and therefore has the characteristics of a currency. The works on Bitcoin is relatively latest and has grown speedily in current years (DeVries, P. D. 2016).High volatility as an obstacle to Bitcoin's reliable and efficient execution of all currency-related functions (medium of exchange, account units, and storage of value).

Unlike "classical" fiat currencies wherein valuable banks create cash in, theoretically, limitless amounts, the full quantity of Bitcoins is confined and capped at 21 million. This is one essential difference. Bitcoins are mined with the aid of using presenting community offerings like verifying and accumulating newly broadcast transactions which might be introduced to a block. In order for a block to be well-known withinside the community, miners should offer evidence of authenticity with the aid of using locating a particular quantity referred to as a nonce. A hash feature which maps the nonce again to a without difficulty verifiable bit string guarantees that the block is valid. As of August 31, 2020, there had been 18.476 million Bitcoins in circulation. They amounted to a complete marketplace cost of 216 billion USD. While the quantity of bitcoins has accelerated step by step considering the fact that its introduction, call for and, thus, marketplace cost, has additionally accelerated albeit much less step by step. The plot of MCAP truly indicates that the Bitcoin fee could be very volatile. For example, all through 2017 the fee for one Bitcoin accelerated from much less than 1,000 US greenbacks to greater than 19,000 US greenbacks and fell again to 8,000 US greenbacks with the aid of using mid of 2018. In mild of this excessive volatility, many human beings have puzzled whether or not Bitcoin can ever

satisfy the responsibilities of a currency. Aiming to keep away from the immoderate volatility of cryptocurrencies even as keeping the advantages of the blockchain generation caused the idea of low volatility stable coins like Tether or Libra.

Trading and regulation

Bitcoin markets (Bitfinex, bitFlyer, BitStamp, BTCBOX, Kraken) and it is worth noting that the trading environment is not uniform among these markets. Also, even though all markets are trading the same item, integrated tapes are not available. The minimum tick size during the sample period is subject to change as the exchange adjusts according to the price of Bitcoin. Transaction fees are charged as a percentage of total transaction volume by various platforms. For example, BitStamp calculates between 0.1% and 0.25 Sed of the total transaction volume achieved in 30 days. Kraken also distinguishes between order types, sending market orders is slightly more expensive than sending limit orders. Additional fixed costs may apply to other services transferred or provided.

An important issue with the Bitcoin framework is the regulation of cryptocurrencies that are heterogeneous between countries. Bitcoin is completely banned in some jurisdictions (Bolivia, Morocco, Nepal, etc.). In other regions, use is unlimited (European countries, the United States and many other countries). Between these two extremes are countries like Bahrain and Qatar. These countries allow citizens to use Bitcoin abroad, but not domestically (Global Legal Research Center 2018). In addition to usage restrictions, the tax treatment of profits is also very different. Generally, Bitcoin transactions are exempt from VAT, but profits are taxable. Table 1 outlines the selected countries that we are referencing for exchange in our survey. It is interesting that even the definition varies from country to country and has changed over the years. B. Changed in the US (see Mandjee 2015 for an overview of US regulations and their implications).

Recently, Facebook, Inc. Cryptocurrency regulation has returned to the focus of legislators and central banks following a proposal to establish a unique cryptocurrency called Libra. Mersch (2019) and Adachi et al. (2020). Fiat currency eligibility for his shopping cart. They conclude that if the world-famous Stablecoin is disrupted, it could jeopardize financial stability. Similar concerns have been expressed by the Federal Reserve Board (Brainard 2019). In contrast, Baughman and Flemming (2020) conclude that the demand for global stablecoin is so low that there is no risk to the global financial system. Think again. Figure

1: Initially, Bitcoin was a very small niche product related to tech geeks. However, four years after its introduction, in 2013, global demand began to rise, and Bitcoin was recognized as the first and largest global cryptocurrency. Traditional money-related security issues such as bank robbery and forgery of physical banknotes are not cryptocurrency issues, but face similar issues to cyber-attacks (Dion Schwarz et al. 2019). For example, Kraken was the target of several distributed denial of service (DDoS) attacks (eg, October 31, 2015-November 4, 2015, Footnote 3 or November 9, 2019, Footnote 4).). Without binding regulations, it is unclear whether the exchange should be held liable in such situations if trading is not possible. After the July 10, 2015 attack, the China-based OKCoin platform compensated traders for the losses caused by DDoS. Like Vasek et al. (2014) Böhmeetal, showing that the number of attacks has increased. (2015) Claims that stolen Bitcoin is particularly attractive because it can be easily converted to cash. The risk of this type of risk can be reflected in the volatility of Bitcoin prices.

Table 1 Legal Status in Selected Country

Country	Holding	Mining
China	Legal	Prohibited
France	Legal	Legal
Germany	Legal	Legal
Japan	Legal	Legal
USA	Legal	Legal

Strengths

The Bitcoin market is a fully electronic market introduced by Satoshi Nakamoto (2008) on October 31, 2008 as a peer-to-peer network without central authorities. Therefore, the central bank (or other individual intermediary) is not involved and the transaction is checked by a network of nodes that use a register of total transactions called the blockchain to check the accuracy of the last transaction. The transaction is then added to the ledger and the information is redistributed to other nodes.

Bitcoin has a strong foundation that enables it to become a viable medium of exchange. Its fixed limit will remain at 21 million until it reaches its maximum. Due to the limited supply of Bitcoin, its value will never be inflated. Also, it's considered as a safe haven from government actions and restrictions. This concept also makes Bitcoin a safe haven for investors. Its value can fluctuate

wildly due to various factors such as supply and demand. The combination of Bitcoin's volatility and the strong demand for safety options allowed it to become the top-performing currency in 2015. It ended the year as the world's most valuable currency. In South America, the number of transactions using Bitcoin has increased significantly over the past couple of years. Argentina is a prime example of this. Since 2016, Argentina has restricted the number of US dollars its citizens can convert into pesos. This has caused a rise in the black market for buying USD.

Argentinas financial crisis is not an isolated case. Throughout history, investors have experienced various political and financial crises, and they've seen crypto currencies gain value and usage. After the UK voted to leave the European Union, the value of the pound went up significantly. This caused a drop in global markets. Cryptocurrency is the only form of payment that can be used globally and is the only alternative to fiat currencies. Transactions usually require a physical money exchange. An American could not quickly purchase Japanese Yen using USD. Instead, they would have to go to a local currency exchange. Once they have the currency, they would no longer be able to use it due to its untraceable origin. To purchase bitcoin, one only need to create an online account and complete the transaction in minutes. After doing so, they would be able to transact with thousands of merchants worldwide. For people who are looking to avoid sinking global markets, Bitcoin is the more practical option. Its digital currency is more secure and can gain faster value than competing fiat currencies. An increase in Bitcoin flow will encourage more companies to accept it as their preferred method of payment.

Weaknesses

Bitcoin has many internal weaknesses that cannot be easily modified. Its public ledger is one of the most critical components of its design. Although it is semi-anonymous, the public block chain is secure and can be easily accessed by anyone. This is due to its decentralized nature. Bitcoin has been through multiple tests that were designed to prove how it can handle high transaction rates. These tests were carried out in order to demonstrate how it can't handle large amounts of transactions. The mere fact that people can participate in Bitcoins operation is an unfortunate design feature. Its adoption by reluctant users is required to be accepted. Bitcoin's reputation has been tarnished due to various negative stories. One example is the Silk Road, an online marketplace that was used by drug dealers and illegal users. Bitcoin was the main means of transferring money to

people in the US. It was used for almost a billion dollars in sales in 2013. Due to the number of people who use cryptocurrencies, the semi-anonymity of Bitcoin seems to be a negative attribute for users.

Cryptocurrencies have developed a reputation for having questionable security. One of the most notable cases was the Mt Gox scandal, which happened in 2011. Mark Karpeles, the CEO, was not using version control. He also allowed security issues to fester for weeks, which allowed hackers to steal from the exchange. Due to the breach, the value of Bitcoin dropped significantly. Another form of digital currency, Etherium, suffered a similar incident in 2016. Attacks on large holders of cryptocurrency are the main reason why the value of these coins' plummet. The stability of Bitcoin has begun to stabilize, which means that mining it is becoming more difficult. This is a throttling event, which means that it will take half of the Bitcoin network to generate a return. It could push out 25% of the miners' hard-earned money. The reduction in the number of miners could make Bitcoin's network more vulnerable to attack. It also affects the profitability of mining.

Cryptocurrencies' ability to be traded like commodities can be a weakness. An unforeseen event could cause losses to an investor, and this could affect their confidence in the market. A lot of people who use Bitcoin for money are prone to getting into a buy low, sell high mentality. Price volatility can discourage people from holding cryptocurrencies for long periods of time. Bitcoin is also at risk due to its scarcity.

An individual wanting to buy large amounts of Bitcoin would have to do so in order to affect the current price. Cryptocurrencies are not yet mature enough to be considered a form of payment. Further growth would help solve this issue.

Opportunities

Cryptocurrency is a promising technology that can provide new solutions to existing financial problems. Its unique characteristics make it a forerunner of new financial systems. Peer-to-peer systems like Napster have been successfully transforming industries. For instance, cryptocurrencies can help unbanked consumers in developing countries. Bitcoins decentralized technology enables individuals to convert their currencies without relying on a bank or a trusted third party. Its robust ad-hoc network allows users to trade Bitcoin without having to store and manage their funds. The demand for more robust and secure cryptocurrency networks will grow as the number of users increases. Due to the potential impact of cryptocurrencies on industries that rely on third-party clearing

systems, developers are urged to create their own apps. Developers can make Bitcoin more usable by improving the way they interact with the digital currency. Cryptocurrency is becoming more prevalent in international transactions. Cryptocurrency is the sole solution to solve the global money problem. Its fast and secure nature enables people to send and receive money internationally. The complexity of international transactions can make them hard to understand and send to another business. An example of this is when a company is experiencing a denial-of-service attack. Due to the complexity of international transactions, downtime is a common issue that can affect a company's profits. With the advent of digital currencies, businesses have an advantage over traditional ones. The rise of online marketplaces has become a real threat to brick-and-mortar stores. Amazon.com, for instance, has started hiring drivers to deliver standard packages. With the rise of e-commerce, companies are looking to improve their logistical efficiency. One example is Ebay.com, which already uses a payment system similar to Bitcoin. Silk Road, an online marketplace that accepts Bitcoin, was an example of how digital currencies can work seamlessly. Despite its illegal nature, it still managed to thrive. Due to the steady growth of online shopping, Bitcoin is expected to reach more mainstream acceptance. In 2015, about 23 % of transactions were made using Bitpay. Due to the regulations concerning taxation of cryptocurrencies, it has been widely considered as a mainstream form of transactions. However, this is not yet considered a valid form of transactions. In 2015, the European Union's Court of Justice governed that Bitcoin dealings are exempt from value-added taxation.

Some people would refuse to use Bitcoin due to its potential tax implications. Its biggest opportunity is that it could be used as a commodity. The value of gold spiked when the markets became uncertain about the impact of the UK's vote to leave the European Union. It was used as a safe haven.

Commodity markets are a widely accepted form of trade around the world, and cryptocurrencies are clearly beginning to mimic the properties of gold. Gold has long been a valuable asset and is based on universal acceptance and trust in its value. Cryptocurrencies have the potential to become big players in the commodity market. It has the unique property of being able to purchase through a direct online mechanism that is easily accessible to the buyer. If Bitcoin continues to be a valid haven for inflationary currencies, it will become more important to investors and go deeper into the mainstream.

Threats

Bitcoin has some hurdles that must be overcome in order to spread user adoption. The fluctuations in value that plague cryptocurrencies are questioning both users and investors. Ultimately, the limiting factor for cryptocurrencies is general acceptance. [PWC]. Fluctuations in value reduce the confidence that consumers will maintain their value in their daily lives and reduce their confidence in the overall value of the currency. In a survey conducted by PwC, 83% of those asked were little or no familiar with Bitcoin (PwC, 2015). The lack of central ownership of cryptocurrencies means that attempts to address this marketing issue through advertising could, in theory, help compete with investment companies. This is not an ideal situation for marketing planning. Cryptocurrencies have also experienced fraud and theft, typically due to incorrect system settings by exchange companies. These hacks generally make news and can easily convince laymen that they are a dangerous place to invest their money. There are also major loopholes in the law covering the use of cryptocurrencies. As long as cryptocurrencies remain in areas that are not generally covered

The law limits the acceptance of users. Users must trust that all transactions that use cryptocurrencies are legal and binding. Markets and governments are slow to respond to new technologies. Ultimately, all these factors limit consumer confidence in Bitcoin and cryptocurrencies. This lack of trust also causes problems for investors. The deadpool of failed startups has increased to 24, and "security" is cited as the main reason for shutdown (Hileman, 2016). This indicator can be seen as a watermark that future investors need to consider before investing in Bitcoin. Hacking of Mt Gox and DAO shows that careless organizations can not only lose millions of dollars' worth of digital currencies, but also significantly reduce their value. New startups know that random and unplanned startups are at best unwise and new market entry is limited. This can ultimately harm Bitcoin, as it is important to develop better software to improve security and user recruitment. Although it may seem like a concern, implementing and fixing security generally takes time to adapt to new technologies. Even DAO hacking exploits were documented as potential issues weeks before the attack (Price, 2016).

One of the security issues is that its decentralized nature hinders a unified attempt to fully protect all servers on which code runs. Before peer-to-peer networks are actually protected, it may be necessary to create a unified front in the field of cryptocurrencies. For cryptocurrencies, it may be necessary to set up a standards

committee similar to ANSI (American National Standards Institute) to develop security standards that exceed the requirements of Bitcoin applications. This type of regulation can only be enforced at the expense of the freedom of peer-to-peer networks and can lead to independent miners leaving the market. There are also cryptocurrency competitors looking to provide alternatives to digital currencies. Apple is one of the major competitors to Apple Pay products. Leverage your infrastructure and hardware to allow users to use their phone to charge their debit or credit cards linked to their iTunes account. Traditional credit card companies such as Visa and MasterCard are happy to join the Apple Pay infrastructure because they can maintain their rates (Gerber, 2015). Bitcoin always struggles to compete with these household names. PayPal has been very successful as an eBay exchange system and may possibly succeed.

I switched to mobile payment. Companies like Apple, Google, and Amazon have an overall marketing budget that is gaining a foothold in the mobile application market, with significant advantages over Bitcoin's relatively short-time players. Mobile consumers want to be able to buy things directly over the phone, and Bitcoin will have a hard time uniting as a community to beat its competitors. Another serious threat to cryptocurrencies is the US regulatory maze that mainstream users must go through before they can adopt it. The US government doesn't even have to classify what Bitcoin is. This will prevent most market participants from adopting a cryptocurrency-based business model (PwC, 2015). Cryptocurrencies can be referred to as either security, investment, commodities, or currencies, each of which has a different impact on Bitcoin adoption. International opinions of bitcoin differ by nation, but looks to be observed positively based on Bitpay's valuation of transactions.

In Europe, transactions reached a record high of 102,221 per quarter (Patterson, 2015). This may be the reason behind the adoption of Bitcoin and cryptocurrency regulations. Bitcoin transactions are exempt from VAT by the European Court of Justice and are effectively recognized as a legitimate payment method in Europe (Perez, 2015). This simply means that Bitcoin transactions are not taxed in Europe. This is great news for Bitcoin users in Europe, but there are still no significant Bitcoin tax laws in other major markets. US law affects the processing of Bitcoin transactions and can have a serious impact on their currency legitimacy.

Table 2 Top 10 Cryptocurrencies in the world

Top 10 Cryptocurrencies in January 2022		
Sno.	Cryptocurrency	Market cap
1	Bitcoin (BTC)	Over $882 billion
2	Ethereum (ETH)	Over $447 billion
3	Binance Coin (BNB)	Over $86 billion
4	Tether (USDT)	Over $78 billion
5	Solana (SOL)	Over $52 billion
6	Cardano (ADA)	Over $44 billion
7	U.S. Dollar Coin (USDC)	Over $42 billion
8	XRP (XRP)	Over $39 billion
9	Terra (LUNA)	Over $33 billion
10	Polkadot (DOT)	Over $29 billion

Source-https://www.forbes.com/advisor/investing/top-10-cryptocurrencies/

CONCLUSIONS

Cryptocurrencies seem to have gone through the early adoption stages experienced by the new technology. Cars have also experienced this phenomenon. Bitcoin has begun to open up niche markets that could help make cryptocurrencies more mainstream. Or it is the main cause of failure. Cryptocurrencies are still in their infancy and it is difficult to see if they can find a true mainstream presence in the global market. The Bitcoin community aims to enter the mainstream by innovating and solving old problems. Other forms of cryptocurrencies have already emerged and have gained their own followers. Each is slightly different from Bitcoin and is almost certainly considered valid. Some countries like Iceland have begun to launch their own domestic cryptocurrencies (Hofman, 2014). The future of cryptocurrencies may occupy a position as a major currency solution, and Bitcoin will help pave the way for these currencies to thrive. The European and Latin American markets are exploding with Bitcoin trading. This means true validity. There are many other topics to explore in relation to Bitcoin and cryptocurrencies. Extensive research needs to be done on the economic impact of Bitcoin's impact on the long-term performance of fiat currencies and the results compared to countries that have begun to adopt government-sponsored cryptocurrencies. Cryptocurrency's ability

to micro transactions could make it possible to fill the economic gap that the traditional government-backed currencies could not solve, but much deeper markets and economies to determine. Analysis is needed. Blockchain technology, which acts as the backbone of Bitcoin, could be used in other ways, such as smart contracts (Hileman, 2016). These contracts are programmed payments that occur when the set conditions are met. This is a very interesting topic for further transformation, as predefined payment contracts are usually executed by the entire accounting department of the company. After all, cryptocurrencies are the product of using cryptography to create digital properties. The digital ownership frontier has become popular as the music industry moves to cloud-based infrastructure. This frontier is still relatively new and unexplored, and there are mainly different types of media. Other forms of digital properties are as popular as music and cryptocurrencies. Eight years ago, digital money was completely unknown, and the creators of Bitcoin changed it on their own. Cryptography, the underlying science behind Bitcoin and all cryptocurrencies, could be the mechanism behind the frontier of new and exciting digital inventions.

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