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CRYPTOCURRENCY: An Overview and Analysis on the Awareness

A Jaya Suriya , Beryl Sandrina and Shilpa R
Department of Computer Science (PG),
Kristu Jayanti College (Autonomous), Bengaluru, India.
arjunanumakamal@gmailcom, berylsandrina@gmail.com, shilpa57@gmail.com

Abstract

This paper analysis delves into a wide range of aspects of crypto currency, with the goal of giving answers to queries like "Can crypto-currency be the dominant money in future?" Is it financially advantageous to dabble in digital currencies? Is utilizing digital cash safe? It focuses mostly on how Crypto currency's function, making it easier to evaluate whether virtual currency exchanges are secure. It investigates crypto currency's effect on the world economy, as well as its potential future impact. It presents a concise review of the legislations in numerous countries that support and prohibit cryptocurrencies. Also, in this paper, we look at the risks and benefits of cryptocurrency. In addition, the results of a brief survey we performed on cryptocurrency and bitcoins provide insight into how well people are aware about the digital currencies.

Keywords *— Cryptocurrency, Digital Currency, Bitcoin, Online Transactions, Online investment.*

1. Introduction

The modern era of information and communication technologies has provided many excellent opportunities in a variety of ways. One subject that benefits from these technology and online connections is the financial and commercial sector. For many years physical tokens like bank notes, gold coins, etc., were being used as modes of payment, where immediate and final settlement is achieved between two parties. In a digital money system, neither party is physically present, nor is payment performed using a string of bits. It's impossible to prevent a consumer from repeatedly utilising the same bit string. The double-spending dilemma is what it's termed. This problem can be overcome by enlisting the services of a reputable third party who keeps a consolidated ledger and transfers payments between buyers by crediting and debiting their accounts. Using a trusted third party, on the other hand, is not always preferable. With an increasing number of internet users activating virtual world notions and establishing new economic phenomena, new sorts of trading, transactions, and currencies have emerged.

Cryptocurrency has been one of the most astonishing financial forms to emerge in recent years. The majority of digital currencies are based on blockchain technology [2], which is a distributed ledger maintained by a group of computers. Because cryptocurrencies are not issued by a government, they are theoretically immune to government intervention or manipulation. Cryptocurrency (CC) is any type of digital money that can be used in a variety of

virtual and real-world financial transactions. Cryptocurrencies are important valuable things that may be traded electronically or virtually [14] in a wide range of applications and networks, such as social media platforms, computer games, internet forums, and social ties [18]. On October 31, 2008, Satoshi Nakamoto, a 33-year-old Japanese man, published a paper on the internet [a peer-to-peer electronic cash system] that stated: "A sort of electronic cash that allows payments to be made directly from one party to another without passing through a banking institution.".Satoshi Nakamoto, a supposedly pseudonymous developer, established the first decentralized cryptocurrency bitcoin in 2009.To understand the history of cryptocurrency, first we need to understand the economic history. The study's goal is to look at Cryptocurrency's strengths, shortcomings, possibilities, and dangers, as well as its future potential.

2. Evolution

Although Bitcoin is the most well-known and widely used cryptocurrency[17], it isn't the first effort at a digital, decentralized currency. Bitcoin had existed for about a decade before the first lines of code were written in 2009[11].The cryptographer David Chaum who is also a computer scientist is recognized for laying foundations for Bitcoin. Chaum was the first person to employ the "blinding signature" procedure to encrypt data and information. In 1995, he founded the digital money startup DigiCash, which used his privacy-protecting formula to generate one of the earliest types of digital money.

Bitcoin was dubbed "The Granddaddy of Digital Assets" because it was the most valuable cryptocurrency at the time[4], with a market capitalization of around 700 billion dollars. Between 1998 and 2009, numerous attempts were made to construct online currencies with encrypted ledgers. Bitcoin is based on the blockchain, a ground-breaking technology created in 1991 by cryptographers Scott Stornetta and Stuart Haber. Bitcoin was developed to defend against inflation, ensure security, and give individuals sovereignty over their money The Bitcoin Foundation was established in 2012 to aid in the development and marketing of Bitcoin.

After starting at roughly $13 in 2013, the price had increased to $770 by the beginning of 2014. Bitcoin's price remained in the mid-hundreds until the end of 2017, when it soared to nearly $20,000 in a frenzy of mainstream interest and speculative investment.Bitcoin's price fluctuated between $3,000 and $12,000 for the following three years, but its failure to reclaim its all-time high belied the surge of enthusiasm on Wall Street, where financial firms such as J.P. Morgan began laying the groundwork for a digital currency system. It masked the innovation in crypto circles, as exchanges such as Binance and Coinbase grew in popularity, making Bitcoin investing more accessible to the general public.

The virus outbreak acted as a catalyst for Bitcoin's breakout in 2021. Concerns about inflation were fueled by trillions of dollars in stimulus, making Bitcoin's inherent scarcity even more appealing. Bitcoin achieved an all-time high of approximately $63,000 in April 2021. Cathie Wood, a well-known investor, has set a price target for Bitcoin of $500,000, predicting that more people will begin purchasing the digital asset.

In the twelve years since Bitcoin's launch, many more cryptocurrencies have appeared. However, Bitcoin's position as the world's most popular cryptocurrency is more secure than

ever. Cryptocurrencies are becoming increasingly popular. Countries such as China, Ecuador, Venezuela, Sweden, Estonia, Singapore, and others have either produced or plan to launch their own national cryptocurrency. Furthermore, bitcoin and other popular digital currencies look to be gaining traction, with an increasing number of merchants and services accepting them as payment.

3. Working

It's essentially digital money that can be bought and exchanged over the internet. There are no bills or coins on the table. It isn't based on a different asset, such as gold. It also bypasses established financial organizations such as banks. Instead, these currencies function in a completely decentralized system that tracks transactions using Block-chain technology.

Assume; say person 1 wishes to purchase a bicycle from person 2 with bitcoin, her preferred cryptocurrency. Person 1 starts by entering a private key, which is a distinctive combination of characters and integers, into her Bitcoin wallet. A standard financial proceeding sends the transactions to banks on both sides, which notes down the money being deducted from one account and added to another. No banks or middlemen exist in this scenario. Instead, everyone in the bitcoin web sees person 1's transaction. Person 1's proceedings is added to a common list of recent proceedings or transaction called a block by these networked machines. Every ten minutes, all previous Blocks will be chained to the newly added Blocks. A section of the Bitcoin network enters a race to solve a tough math challenge to ensure that each transaction in the block on the chain is confirmed [7]. If they solve it as soon as possible, their transaction record (block) becomes the official record. They are paid with bitcoins, and the network is given a new block to add to the chain. Mining is the term for the entire procedure. Because there are so many computers trying to validate a block, no single computer can dominate the bitcoin market. When additional machines join in, the puzzle becomes harder to keep the competition fair and evenly timed.

Below are the three ways to invest in bitcoins:

3.1 Invest and hold (#1)

The first involves purchasing bitcoins and storing them in your own Bitcoin wallet. This is the most complex method of investing money into bitcoin, but also it is one the most suggested. This technique requires you to locate a bitcoin exchange, deposit funds there, and then convert the funds to bitcoin. After that, you'll need to purchase a bitcoin-wallet so you may transfer your coins from the exchange to your bitcoin wallet for safekeeping.

3.2 Investing in derivatives (#2)

You won't be purchasing actual coins with derivatives. Instead, you're purchasing a contract that mimics the behavior of the coin. If the coin's price rises, you can terminate the contract for a profit, but if the coin's price falls, you'll lose money. You don't need a bitcoin wallet with derivatives because you don't possess bitcoins. Simply open an account, make a deposit, and begin trading derivatives. Leveraged trading allows you to borrow money to enhance the

amount you want to trade. This alternative, on the other hand, is much riskier and is only suggested for novice traders.

3.3 ETF for Bitcoin (#3)

Finally, you can buy a Bitcoin Exchange Traded Fund, sometimes known as a Bitcoin ETF. When you invest in an ETF, you're buying a contract rather than a coin. ETFs are exchanged on a regulated stock exchange and attempt to replicate the price movements of bitcoin, albeit they may not. With total precision, the price of bitcoins is calculated. There are presently only a few bitcoin ETFs available today. The regular investor who does not want to deal with creating accounts or downloading wallets will benefit from ETF investment. You can invest in an ETF through your bank, a financial advisor, or a traditional trading platform, just like you would in the stock market.

Coins and tokens are the two types of cryptocurrency. Coins have their own blockchain and have value because they are utilized as a medium of exchange. Tokens, on the other hand, are based on a blockchain that already exists.

4. Benefits And Risks Of Cryptocurrency

4.1 Benefits

With all traditional systems, sometimes our bank information may become available to certain third parties when we perform certain transactions, while Cryptocurrencies work on a push system, meaning that when a cryptocurrency user is making a payment or doing a transfer, he/she only push out the information that is relevant to that specific transaction, no other information is sent out, thereby making the users less prone to fraud/ identity theft.

With traditional systems, sometimes there’s fees , there’s paperwork, there’s legalise which is quite hectic, on the other side, with cryptocurrency apps or services you use to maintain your cryptocurrency wallet, you’re directly dealing with the person you’re conducting your transaction, that is one-on-one or peer-to-peer network structure that makes for a smoother transaction.

Because bitcoin is a decentralised system, it does not require third-party clearance for transactions to be completed. As a result, cryptocurrency transactions are extremely fast, and in many cases instantaneous.

When compared to the old system, where you typically have to pay extra costs, transaction fees are less expensive when making financial transactions. You are cutting out the middleman in the crypto world[10], which means no additional fees.

Because technology is continuously improving, there are plethoras of ways that identities might be compromised. Cryptocurrency's blockchain ledger is based on a series of

challenging mathematical riddles that hackers can't solve easily, making crypto more secure than a standard electronic transaction. Furthermore, cryptocurrencies use pseudonyms that are not tied to the user's account.

Every cryptocurrency is released with a predetermined amount at the time of its inception[9]. The value or amount of the coin is specified in the source code of the behind it. There are only twenty-one million Bitcoins available in the world right now, so as demand grows, so will the value, which will keep the market stable and safeguard it from inflation.

Finally, the tremendous potential for profits is the primary reason why most individuals contemplate investing in cryptocurrencies. For example, if you had invested a thousand dollars in bitcoin in 2013, you would now be worth more than a hundred thousand dollars, as the value has risen fast since its inception.

4.2 Risks

Everything that has benefits also has risks in it. The risks of Cryptocurrency are as follows:

As transactions involving cryptocurrency are highly secure it is hard for governments to track down a particular user by their wallet address. It has been discovered that Bitcoins were used as a means of transferring money in a number of illicit activities.

The amount of some currencies in the market is still controlled by their creators and their respective organizations[5]. These holders can manipulate the coin for large swings in its price.

The creators of the digital currency wanted to create source code that was almost untraceable, as well as sophisticated hacking defences and unbreakable authentication systems. It would be safer to invest in bitcoin rather than cash or bank vaults. There is no method to recover a user's wallet private key if they lose it. The wallet will be kept safe, as will the number of coins within. As a result, the user will incur a financial loss.

Some cryptocurrencies can only be bought and sold in a limited no of flat currencies. This forces the user to first convert theses currencies into one of the major currencies such as Bitcoin or Ethereum and then into their desired currency via other exchanges. This adds extra transaction cost to the process costing you some unwanted money.

The coin cannot be reclaimed by the sender if there is a dispute between the parties involved, or if payments are accidentally sent to the wrong wallet address. Many people can take advantage of this to defraud others. Because refunds are not available, one can simply be produced for a transaction for which they never received the product or services.

5. Impact Of Cryptocurrency On World Economy

The growth of cryptocurrencies in the past few years has drawn the attention of the public and policymakers in recent months[6]. There is still much opposition to cryptocurrencies, in many countries around the world[15]. But the increase in popularity makes

many economists and small investors wonder what will be the impact on our global economy if cryptocurrency is implemented in our world. Governments, businesses, and other large corporations have started to learn about cryptocurrency market[8] and how can they get profited with that. Analysts compare cryptocurrency and gold to see the safer and more beneficial investment opportunities. Economists, on the other hand, are concerned about how a cryptocurrency-based financial system compares to a gold-standard financial system. The major distinction between cryptocurrencies and gold-standard currencies is their divergent supply and demand, which gives them variable degrees of buying power consistency. "Among adults in the richest 60% of households with economies, 74 percent of them have an account," the World Bank reported in 2017. However, just 61 percent of those in the lowest 40% do not have an account, leaving a 13 percent disparity overall,which comes to around 19 million of the adult population without an account. Cryptocurrency offers an alternative, by not allowing any government or any financial organization to freeze our assets, Providing an opportunity to use cryptocurrency as a financial service[17].

The impact of cryptocurrency on today's commercial world is immense[13]. It's amazing to see on how cryptocurrency can change one's life within just some years, it was just a few hundreds of dollars which has now become one million or more in just few years. It's not impossible to see a future in which cryptocurrencies emerge as a useful and popular platform for businesses and individuals to connect with on a daily basis.

6. Analysis on Future of Cryptocurrency

Advancement in technology can help the loss of crypto portfolios that might happen due to computer crash, which erases all the information including our crypto wallet. Technological advancement can also help from hackers who can wipe our information in just a blink. Advancement makes it easily understandable and easily accessible for all category of people. Although digital currency concept has existed since 1980s, cryptocurrency was only utilized with the launching of Bitcoin as a decentralized cryptocurrency in 2009 using the Blockchain technology[12].

Many firms have begun to learn about cryptocurrencies and are following suit. As more and more businesses will start accepting this new system, then this will drive more and more people to use it, and this leads us to walk hand in hand with the new way of life.

Cryptocurrency is very much secure as it uses blockchain, it is an open source and has never been hacked until now. This shows the level of security it has. It can be hacked only if we provide the information anywhere which can be used for hacking the wallet, otherwise it is one of the best in terms of security. We can guess on what price cryptocurrency may have in the coming days and months, but the fact is, it's still a new and speculative investment for some people, with little history on which to base any predictions. That's why it's said, it's very important to put what you are ready to lose.

Bitcoin's Future Outlook:

Bitcoin is a clear indicator of cryptocurrency market in general[3], because it was the first cryptocurrency to come into existence and the largest also. As of March 18 2018 there are 1564 Cryptocurrencies available & traded in about 9422 exchanges[1]. Bitcoin holds a market cap of $907 billion which is the largest among all cryptocurrencies. Bitcoins had a high fluctuation over the year 2021, from its value recaching to $60,000 in April 2021 to less than $30,000 recently in July 2021. Bitcoin has recently re-entered the $60,000 range. Because of these price volatility, experts advise that we maintain our crypto investments to less than 5% of our total assets. Bitcoin's price will continue to rise in the coming months and years.

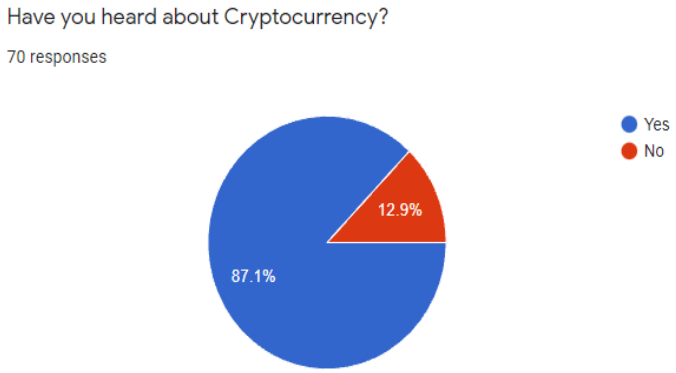
Future of cryptocurrency in Developing countries:

As we know cryptocurrency is growing drastically day by day and it’s not so far that the world will start accepting cryptocurrency as a new way of currency. But what about the developing countries, especially the countries like India which has a huge population and a high demand of jobs. If cryptocurrency takes over the traditional way of currency, then according to the survey it says around 600,000 people will be jobless in India, this which will add up to the 31 million jobless people in the country.

The average wage of labourers in India is 372.33/day and only 54 percent of the adult population doesn’t have a smartphone and there are many who are still not exposed to smartphones in India. This shows how difficult will be for the people in India (rural people) to adjust with the new system of currency with their present economy. Cryptocurrency is a wonderful technology which has many positive sides, but it will become a huge matter of concern in the developing countries.

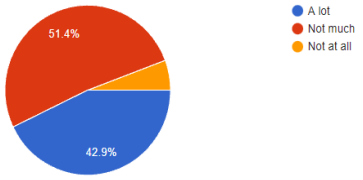
7. Analysis Of Survey Conducted

A survey was conducted by us on a group of people about their knowledge on cryptocurrency. Seventy people participated, out of which 87.1% of people have heard about cryptocurrency and 12.9% have not.



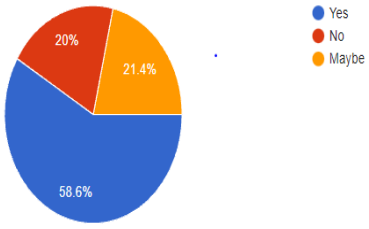
How much, if at all you heard or read about Cryptocurrencies such as Bitcoin or Ethereum?

70 responses



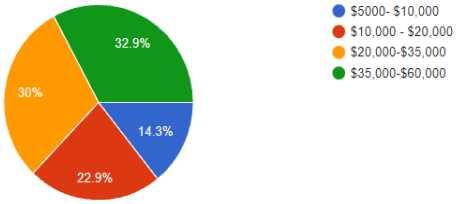
Have you seen any advertisements promoting Cryptocurrencies or its types like Bitcoins?

70 responses



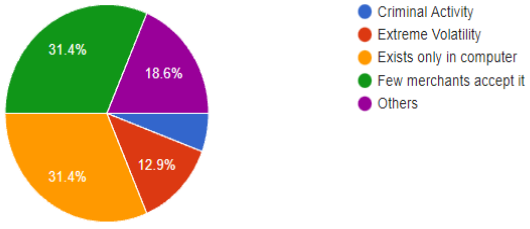
How much do you think will be the current value of Bitcoin in the market?

70 responses



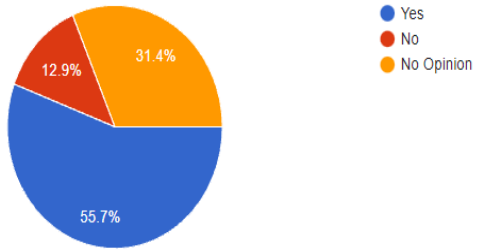
What is in your opinion Bitcoin/Cryptocurrencies main constraint as a mean of currency?

70 responses



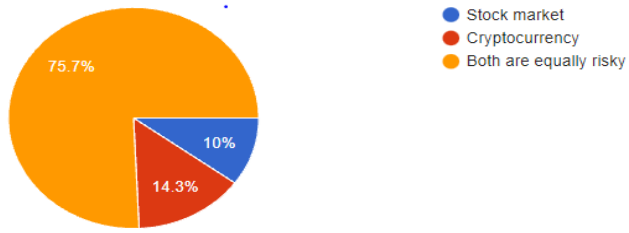
Do you think Bitcoin will be in the dominant currency in future?

70 responses



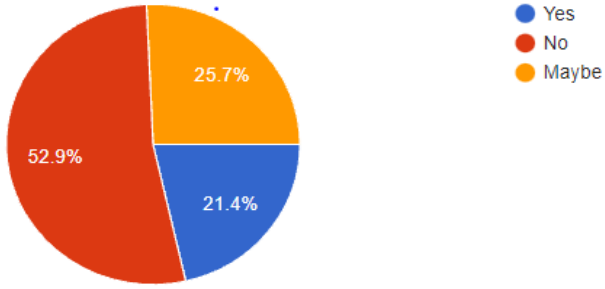
In your opinion, which is more risky, investing in the stock market or investing in Cryptocurrency?

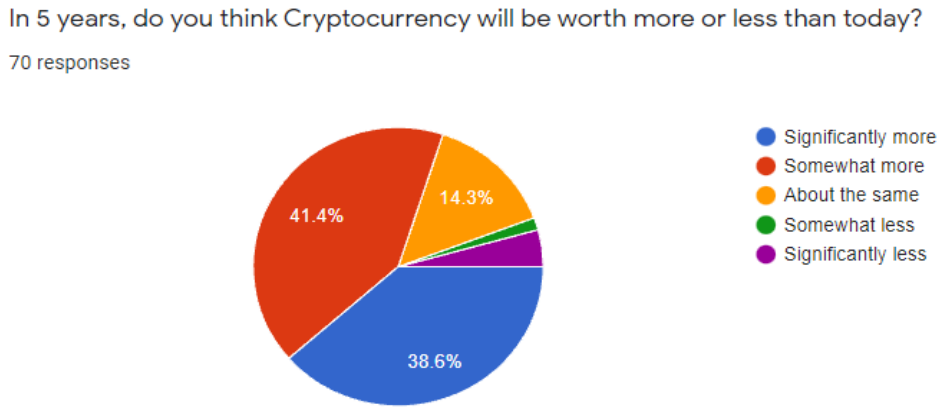
70 responses

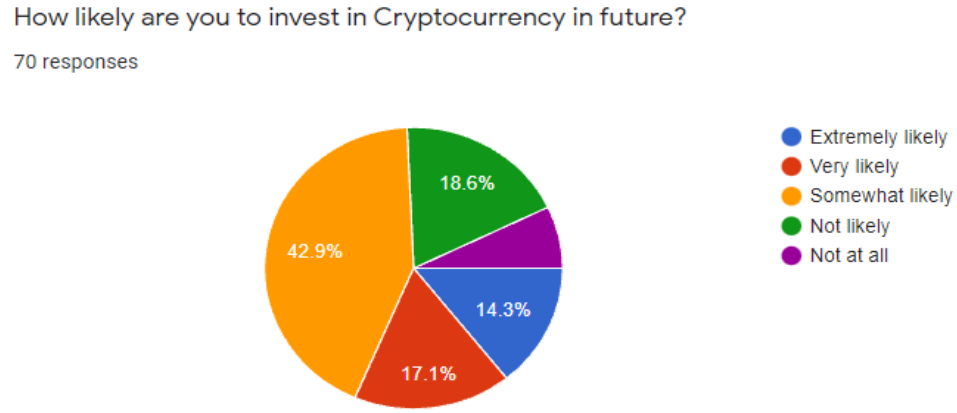


Do you or any of your peer group own Cryptocurrency?

70 responses







From the above graph analysis we can conclude the following :

- 51.4% of the people have not heard much about Bitcoins or Ethereum, 42.9 % have heard a lot and only 5.7% have never heard or read about them
- 58.6% of the people have seen advertisements promoting bitcoins and other cryptocurrencies and 20% have not , the rest may or may not have.
- 32.9% of the people estimated the current value of bitcoin currently which is $35,000 - $60,000
- 31.1% of people believe that bitcoins/cryptocurrencies are accepted by few merchants and another 31.1% its main constraint as a mean of currency exists only in computers,18.6% for others,12.9% for extreme volatility and only 5.7% for criminal activity.
- Majority of the people think that bitcoin will be the dominant currency in future.
- Majority of the people believe that investing in both cryptocurrency and in stock markets are equally risky.

- 41.4% of the people believe that in 5 years, cryptocurrency will be worth somewhat more and 38.6% that it will be worth significantly more.
- 52.9% of the people do not own cryptocurrency currently.
- 42.9% are somewhat likely to invest in cryptocurrency in the future, 14.3% are very likely , only 17.1% are likely and the rest are not likely to invest in the future.

Our analysis shows that cryptocurrency may be the next currency platform but currently users have not fully grasped the implications of utilising cryptocurrencies, and forms do not have level of trust. Several issues continue to exist in many cryptocurrency platforms and users need to be cautious while utilising cryptocurrencies until it is properly regulated and monitored.

8. Conclusion

Cryptocurrency provides a fresh, efficient, and appealing payment option that can help businesses and operators increase their revenue. It also offers an alternative payment mechanism to actual money, making financial transactions such as buying, selling, transferring, and exchanging simple for consumers. Some businesses have adopted crypto as a means of payment, increasing its acceptance; as more businesses accept it, more people will use it, and as new technologies emerge, it will become easier to use. The study looked into cryptocurrency platforms and found plenty of issues and obstacles that put the financial system in danger. In cryptocurrency systems, the lack of legislation is regarded as the primary source of risk.Governments, on the other hand, have begun to develop their own cryptocurrency as a way to participate in the technological revolution, and several nations have issued legislation to regulate its usage, giving it more validity as a currency to be used by businesses and individuals. More rules will emerge, hastening the adoption of cryptocurrency in everyday life. The security of a money is an important aspect, and cryptocurrency is extremely secure. Because blockchain has never been hacked and is open source, it has a high level of security.

Our analysis reveals that cryptocurrency is quite likely to be the future currency platform, owing to the massive volume of bitcoin that is flowing through many systems, the massive surge in using and implementing cryptocurrencies, and the potential that cryptocurrency systems provide. Users, on the other hand, are still learning about the ramifications of using cryptocurrency, and forms do not yet deserve that kind of trust. Many bitcoin platforms continue to have challenges, impediments, and issues, as stated in the sections above. Users should use cryptocurrencies with extreme caution until they are adequately regulated and supervised.

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