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A study on the effect of block-chain and cryptocurrency on the financial industry

Dr. Varsha Agarwal
varsha_a@cms.ac.in
Center for Management Studies, Jain (Deemed to be) University, Bangalore, Karnataka

Simran Singh
simran_s2017@cms.ac.in
Center for Management Studies, Jain (Deemed to be) University, Bangalore, Karnataka

Tanmoy Saha
tanmoy_s2017@cms.ac.in
Center for Management Studies, Jain (Deemed to be) University, Bangalore, Karnataka

Sofi Eshan Ahmad
sofi_ea2017@cms.ac.in
Center for Management Studies, Jain (Deemed to be) University, Bangalore, Karnataka

ABSTRACT

Blockchains and Cryptocurrencies have become what some may call a buzz words, however very few understand what the words mean. Individually, Bloch-chain is this new, upcoming and disrupting technology that at its most basic level, is literally just a chain of digital blocks. We all must have heard the continuous chants "block-chain is a distributed, decentralized, public ledger."- FORTNEY Jun 25, 2019. Investopedia. Luckily, it' just that. Nothing as complicated as you may have believed. Cryptocurrency, on the other hand, is this asset that runs on a blockchain, it is designed to work as a currency. Which is to say it uses cryptography to secure and verify transactions as well as to control the creation of new units of a particular cryptocurrency. Together, they can do anything from voting to insurance payments. We are already seeing multitudes of companies forming their own blockchains and cryptocurrencies. It is something people are willing to put a lot of money behind without a lot of surety of purpose, which is rare. –Fortney Investopedia. There are very few things that 100% of the people agree on, while this statement is true we must take into account how nothing has divided the financial industry quite so successfully. Some calling it a bubble. It has created overnight billionaires and as created a lot of employment over the years. It is also the cause of the loss of money and potentially millions of jobs in the future. - From Branson, Facebook Co-founders, Cuban to endorsing it to O'Leary, Dalio. In this research paper we aim to find out how these technologies have found such a strong foothold in the media, why it may seem scary (for the lack of a better word) to legalize these two purely disrupting and genius technologies, and how is it going to impact the industry in the coming years that truly runs the world, finance.

Keywords— *Blockchain and auditing, Impact of Cryptocurrencies and Blockchain*

1. INTRODUCTION

There is so much hype over the block-chain technology now that both private and public sector organizations have opened their eyes and seen the light. What block-chain technology can offer is not only never seen before, but will become life-changing for today's generation and be deemed as one of the greatest inventions of modern times. Block-chain has been touted as the golden egg for the financial system. One can only imagine the benefits of incorporating technology into the system. A decentralized ledger with appropriate levels of security and available across the respective peer-to-peer networks, and removing the intermediaries that add to the exorbitant costs faced by the financial system. – (Manson, 2018).

Blockchain technology has the potential to impact all recordkeeping processes, including the way transactions, are initiated, processed, authorized, recorded and reported. Changes in business models and business processes may impact back-office activities such as financial reporting and tax preparation. Independent auditors likewise will need to understand this technology as it is implemented at their clients. Both the role and skillsets of CPA auditors may change as new blockchain-based techniques and procedures emerge. For example, methods for obtaining sufficient appropriate audit evidence will need to consider both traditional stand-alone general ledgers as well as blockchain ledgers. Additionally, there is potential for greater standardization and transparency in reporting and accounting, which could enable more efficient data extraction and analysis. Blockchain technology could bring new challenges and opportunities to the audit and assurance profession. While traditional audit and assurance services

will remain important, a CPA auditor's approach may change. Just as the audit and assurance profession is evolving today, with audit innovations in automation and data analytics, blockchain technology may also have a significant impact on the way auditors execute their engagements. Moreover, CPAs may need to broaden their skill sets and knowledge to meet the anticipated demands of the business world as blockchain technology is more widely adopted. – (CPA Accountants Canada, 2018.)

More and more regulators are worried about criminals who are increasingly using cryptocurrencies for illegitimate activities like money laundering, terrorist financing, and tax evasion. The problem is significant: even though the full scale of misuse of virtual currencies is unknown, its market value has been reported to exceed EUR 7 billion worldwide. This research elaborates on this phenomenon, focusing on the use of cryptocurrencies for financial crime, money laundering, and tax evasion. The key issue that needs to be addressed is the anonymity surrounding cryptocurrencies. This anonymity, varying from complete anonymity to pseudo-anonymity, prevents cryptocurrency transactions from being adequately monitored, allowing shady transactions to occur outside of the regulatory perimeter and criminal organizations to use cryptocurrencies to obtain easy access to "clean cash". Anonymity is also a major issue when it comes to tax evasion. When a tax authority does not know who enters into the taxable transaction, because of the anonymity involved, it cannot detect nor sanction this tax evasion- (Dr. HOUBEN, 2018).

So what do these technological developments mean for the various players in the sector and end-users? "Blockchains have the potential to displace any business activity built on transactions occurring on traditional corporate databases, which is what underlies nearly every financial service function. Any financial operation that has low transparency and limited traceability is vulnerable to disruption by block-chain applications. DLT is therefore both a great opportunity and also a disruptive threat," (according to Bruce Weber, 2019)

Kartik Hosanagar, a Wharton professor of marketing and operations, information and decisions, pointed out that the financial services sector is full of intermediaries such as banks that help create trust among transacting parties like lenders and borrowers. Block-chain, he said, is a mechanism to create trust without centralized control. "The power of eliminating intermediaries is the ability to lower transaction costs and take back control from powerful financial intermediaries."

Regarding cryptocurrencies or crypto-assets, the financial sector's interest is "less about recordkeeping and more about a new financial asset that it can make money off of."– (Walch, 2018).

"Cryptocurrencies are all the rage at the moment and are as much about blockchain as anything else but there could be an increasing desire for alternative medians of exchange in the years to come if we are correct."- (Reid, 2018).

2. REVIEW OF LITERATURE

The power of block-chains to solve the problem of various intermediaries in the financial sector, the power of eliminating intermediaries is the ability to lower transaction costs and take back control from powerful financial intermediaries (Wharton's study 2018).

The impact on auditing especially will be profound because of their ability to build databases from their own transaction history. He also says that with blockchain technology, the entire lifecycle of a trade – execution, clearing, and settlement – occurs at the trade stage. With a digital asset, trade is settlement, and the cryptographic keys and digital ownership they control can lower post-trade latency and counterparty risk (Bauerle2018).

When technology moves so quickly, it's dangerous to sit on the sidelines. We're w9atching blockchain move from a startup idea to an established technology in a tiny fraction of the time it took for the internet or even the PC to be accepted as a standard tool. Blockchain technology could result in a radically different competitive future for the financial services industry (PWC, 2018).

It would be too blunt to associate blockchain with money laundering, terrorist financing or tax evasion. It is just technology, on which a large number of cryptocurrencies run, but which is not designed to launder money, facilitate terrorist financing or evade taxes. Blockchain has numerous applications throughout the whole lawful economy. It would not be wise to discourage future innovations. (Prof. Dr. HOUBEN, 2018)

The realms of possibilities are endless and alongside corporations and the banking system, central banks are now exploring the possibilities and how blockchain technology can be incorporated into the financial system. The fact that central banks are exploring the technology suggests that there is an open mind to embrace blockchain technology. (Bob Mason, 2018).

There is this idea that from resolving financial inequality to providing IDs for refugees and enabling people to sell their homes without a real estate agent, blockchain technology has been proposed as a solution for a wide range of real-world challenges. (World Economic Forum, 2018).

One area of "ripe transformation," is reaching consensus on important benchmark prices or rates. At present, they point out, different proprietary indexes are used to determine interest rates and the price of many mainstream assets. Blockchain can transform this.This was in the swift institute study "How will blockchain impact the financial sector" Weber and Novocin.

Today, Bitcoin is not the only game in town, and while its value has increased by almost 100% since the beginning of 2016, its share of the digital currency pile is rapidly reducing owing to almost 700 different competitors. It is market share has reduced to 50% from 85% a year before, a sign of the times to come. (Software development.com, 2018).

Despite Bitcoin's recent issues, its success since its 2009 launch has inspired the creation of alternative cryptocurrencies such as Litecoin, Ripple, and MintChip. A cryptocurrency that aspires to become part of the mainstream financial system would have to satisfy very divergent criteria. While that possibility looks remote, there is little doubt that Bitcoin's success or failure in dealing with the challenges it faces may determine the fortunes of other cryptocurrencies in the years ahead. (Investopedia, 2019)

"Overwhelming sentiment" among crypto advocates is that the total "market capitalization of cryptocurrencies could explode over the next five years, rising to $5-10 [trillion]." The historic volatility of the asset class is "no reason to panic," he says. Still, he tempered his optimism and that of the "crypto evangelist" view of Bitcoin as digital gold, calling it "nutty," stating its long-term value is "more likely to be $100 than $100,000." Rogoff argues that unlike physical gold, Bitcoin's use is limited to transactions, which makes it more vulnerable to a bubble-like collapse. Additionally, the cryptocurrency's energy-intensive verification process is "vastly less efficient" than systems that rely on "a trusted central authority like a central bank."(Rogoff, 2017).

3. RESEARCH OBJECTIVES

The main objective of researching the impact of blockchain and cryptocurrency is really to understand where it stands in the global market. It aims to:

- Analyze the need for blockchains and cryptocurrencies
- Understand how blockchain and cryptocurrency really complement each other.
- To describe the true nature of these two recent innovations with the financial world.

4. STATEMENT OF PROBLEMS

The idea and of cryptocurrencies and block-chains are fairly new and the uses are many and not as yet, defined. A plethora of uses lies in the financial industry. This research aims to answer these following questions mainly:

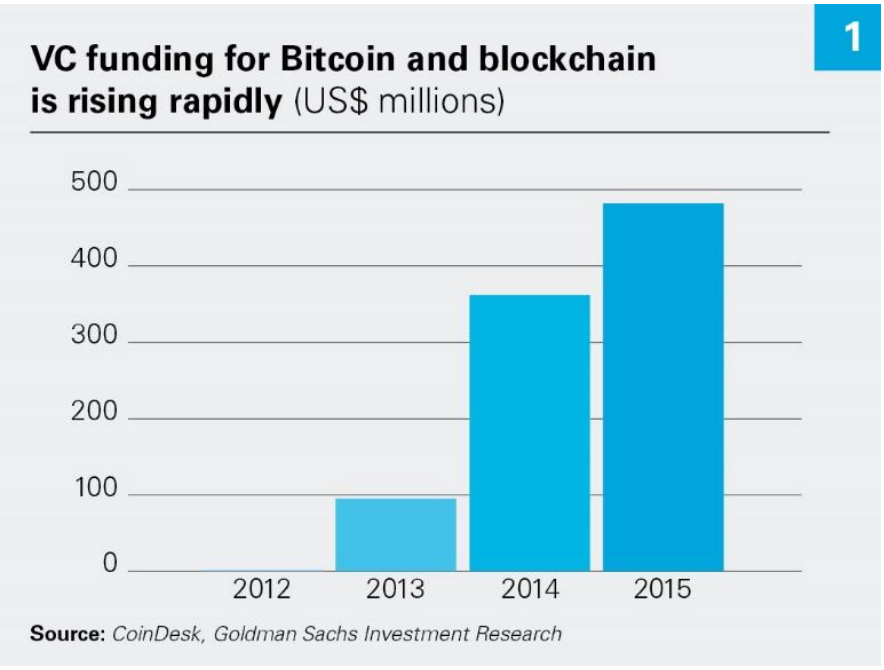
- Can cryptocurrency really be used as currency or is it just an asset class?
- How is the future for blockchain and cryptocurrency really different?
- Is it safe to back both or even either of them?
- How does blockchain affect auditing?
- Why are big banks making their own blockchains?

5. RESEARCH METHODOLOGY

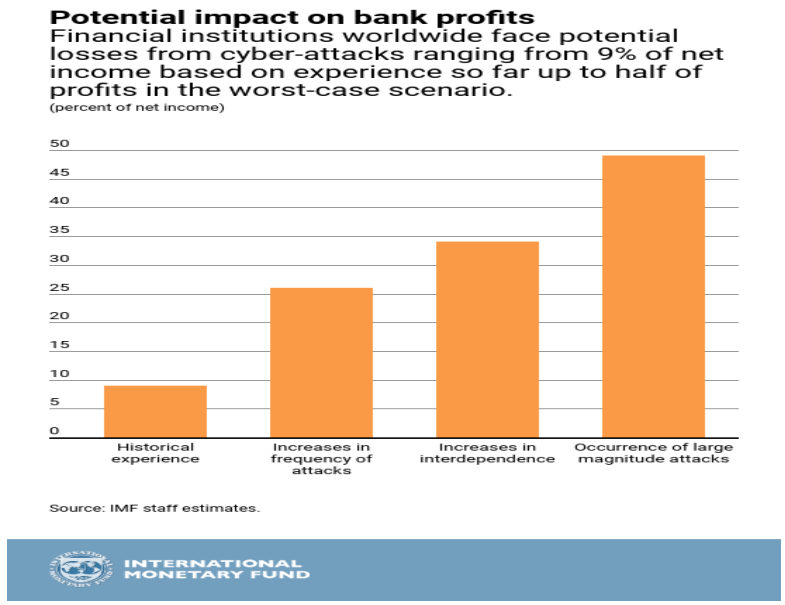
This study is primarily based on secondary data as primary data was not available to meet the necessary requirement of the study. A lot of research papers and articles were studied and conclusions were made. The data was collected from:

- Books on Blockchains and cryptocurrencies,
- Different research journals,
- Different articles,
- Different studies were done by a collection of central Banks, conventional commercial banks,
- Auditing firms and so on.

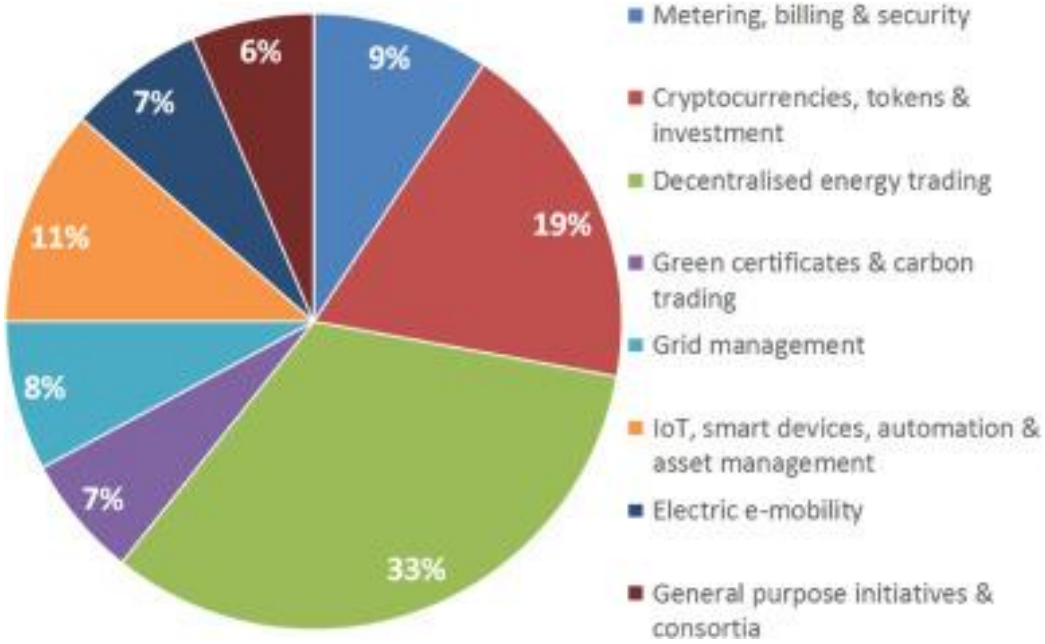
6. ANALYSIS AND INTERPRETATION



(Source: CoinDesk, Goldman Sachs Investment Research) The above picture shows the rising funding for blockchains and investment in Bitcoins from venture capitals.



(Source: The International Monetary Fund) The above image essentially shows how the Banking sector has seen its profits change over a period of time.



(Source: sciencedirect.com) The above image shows the different uses for the technology for blockchain and is already being put in use.

We see that the demand for cryptocurrencies and blockchains are only going up. We see increased trading of cryptocurrencies and an enormous increase in funding for blockchain, so it is not a farfetched dream to see them being used far and wide and even in a lot of financial sectors like auditing.

7. LIMITATIONS

There was a lack of equipment while conducting the study and the technology of blockchain is not easily accessible to students and same goes for the cryptocurrency, hence a more practical method could not be applied and reliance was more towards secondary data. The age of the data given in the paper is fairly new as the technology is new as well. So, the reliance of the data is mainly rooted in expertise and reputation of the people and institutions. There is also a lack of previous research studies on the topic which reduces the amount of data collection. There was also a lack of financial resources in terms having access to articles that need to be paid for. Renowned articles from pioneers in the industry could have been used.

8. CONCLUSION

The discussion makes it clear that cryptocurrency and blockchain is not a negligible or merely temporary phenomenon. They are here to stay and there are signs that they will continue to grow and expand. This is despite all the band because we see these technologies being adopted internationally so it is only fair to say that these bans will be lifted in less than a decade. Blockchains are already changing the auditing landscape and some countries are considering making their own cryptocurrencies.

9. FURTHER SCOPE OF STUDY

Looking at the above limitations of the study, the further scope of the study organically be the usage of better equipment by having access to blockchain technology and cryptocurrency, having better financial resources which includes paying for articles and research papers written by well renowned pioneers in the sector and better financial backing and also, having a well-aged set of data which could take a couple of years but would be beneficial.

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