

A STUDY ON ROLE OF BLOCKCHAIN TECHNOLOGY IN BANKING SECTOR

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ABSTRACT:

A blockchain is an ordered, decentralized and immutable ledger that allows a recording of transactions in a network. Over the recent years, blockchain has emerged to be a technology that can be applied in various sectors. It has promised to be the technology that will allow transactions simply, effectively, safely and cheaply. It is core, underlying technology with promising application prospects in the banking industry. With the increasing need for modernization in our lives, people are open to accepting new technologies. Blockchain technology can be described as data structure that holds transactional records a while ensuring security, transparency and decentralization, the chances of any fraudulent activity or duplication of transactions is eliminated without the need of third-party. Banks are among the most seasoned and great monetary middle people in India. A few huge Changes have happened in the working financial area. Banking in India has seen an extreme change from Regular banking to accommodation banking. The main objective my study is to understand and analyses of effectiveness of blockchain technology in banking sector along with its challenges and data privacy and security of customers in blockchain technology. The primary data has been collected for the study and descriptive research methodology has been used. This study mainly focuses on role of blockchain technology in banking sector.

Keywords: Blockchain, technology, decentralized and bank

INTRODUCTION

The 21st century is every about technology. With the greater than ever necessity for reconstruction in our day-to-day lives, population are frank to long-suffering new technologies. From by means of a small for calculating plans to by means of tone of voice interpretation for openhanded commands; novel technology has ended area in our expected lives. Technologies like better certainty and that maintain gained speed in the history decade and promptly there's a new addendum to the quantity i.e. Block chain Technology.

Block chain- The revolutionary technology impacting diverse industries inexplicably was introduced in the markets with its exceedingly fundamental avant-garde treatment Bitcoin. Bitcoin is zero but a start of digital currency (crypto currency) which preserve be old in the point of fiat currency for trading. And the underlying technology behind the triumph of

crypto currencies is termed as Block chain.

There's a for all fallacy along with relatives that Bitcoin and Block chain are one and the same, however, that is not the case. Creating crypto currencies is one of the applications of Block chain technology and other than Bitcoin, at hand are copious applications that are heart industrial on the core of the block chain technology.

TYPES OF BLOCKCHAIN

It is important for businesses to understand the different types of blockchain, before implementing it. The differences can be significant, and businesses should adapt the system that is best suitable for their business model. The three main types of blockchain are discussed below:

A public blockchain is a fully decentralized blockchain which can be used by anyone with a minimum resource. The main purpose of public blockchain is to remove the intermediaries and facilitate peer to peer transactions. The common example of public blockchain is Bitcoin, Ethereum, and other cryptocurrencies, which are openly available for anyone. Each transaction is verified by the network before it is recorded, so they are highly secured. Public blockchain is expensive and slow compared to private blockchain, but it still outperforms the current systems used for recording.

A Private Blockchain is a permissioned based type, meaning that participants need permission from central authority (to some level) to perform the task. It is not fully decentralized and is controlled by the intermediary. Each transaction is verified by authority before it is recorded. Private Blockchain is faster and cheaper compared to public blockchain. It is mostly suitable for corporate business and governance models. It has huge potential to increase the efficiency and decrease the operation costs. The use case of private blockchain can be online voting system. A sub-category of private blockchain is consortium blockchain which has same characteristics as private blockchain, except that it is owned by a group of entity.

As name suggests, a hybrid blockchain is a combination of private and public blockchain. It provides decentralized environment in a private network. It offers great flexibility and control over the data. It is mostly suitable for highly regulated companies. XinFin is an example of hybrid blockchain built by combining Ethereum (public) and Quorum (private). It provides solution for global trade, finance, and supply-chain.

DO BANKS NEED BLOCKCHAIN TECHNOLOGY?

Banking industry represents the major part of global economy. Banks are the biggest and oldest financial intermediaries around the world. Digitalization has shaped the banking industry and radically changed the banking system. The barter system was eradicated by commodity money which was then replaced by fiat money and now digital currency and digital payment are in place. Overtime, the technology facilitated Automated Teller Machine (ATM), electronic fund transfer, electronic clearing service, real-time gross settlement, online banking, debitcredit cards and mobile banking to the customers. Today, banking industry is

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reliant on the technology and therefore, blockchain could prove to be the game-changer in the industry. Blockchain technology allows recording of transaction in a block which are unchangeable. It removes third parties. Blockchain in a theory promises a big transformation in banking and finance sectors. It has the potential to disrupt the banking industry and bring a significant change.

The last two decade has seen the rapid advancement and innovation in technology sector. Almost every industry has been disrupted by advancement in technology. Banking sector was hard to break through due to the regulation and compliance but now, banks are facing a serious competition from Fintech. Fintech, a word made from Finance and Technology are companies which applies the latest technologies to provide financial services. They provide services such as payments, clearing and settlements, trading and investment, digital currencies, and other services. Fintech are rising and innovating a new way of delivering high quality financial services. Fintech focuses on a niche service so; they provide better solution than the banks. Fintech are a potential threat to banks because they are fast, cheap, reliable, and transparent. For a long time, banks have been at the forefront of the payment industry, but now Fintech companies are gaining significant share of payment industry. The cross-border payment with bank takes 1-5 days and average cost of \$40- \$50 (Transfer Wise). The payment is faster, cheaper, and easier with Fintech. Fintech also provides faster clearing and settlement 10 services than banks. Digital wallet and currencies are gaining in popularity. Moreover, companies like Apple provide its customer with a virtual wallet that can be used for any payment and loans. Facebook has proposed to launch Libra- a digital currency to facilitate payment in 2021. With growing interest and trust in Fintech, banks are likely to face high competition.

Blockchain along with AI, robotic process automation, big data etc. are considered as the future technologies. Blockchain has gained huge attention from banks, private equity firms, start-ups, and other financial institution. The big banks such as J.P Morgan, The Bank of America, Merrill Lynch, HSBC, and many others have already executed a transaction with blockchain and are looking forward to implement the technology in their business model. The feature of blockchain- the decentralized, and immutability ledger could bring the revolution in the record keeping system. The blockchain technology can be used in banks and almost every business. It has the potential to transform the backend of banking system and reduce large amount of operational cost. Blockchain would be critical in solving the current problems in banks. The main advantages of blockchains are efficiency, cost reduction, transparency, and elimination of third party. Firstly, blockchain improves the efficiency of a transaction as it eliminates the decision-making time. Record keeping and managing can be automated and be completed faster than the manpower. Secondly, it saves the transaction and operation cost. The payment and settlement can be done without the need of third party and hefty broker fees. Blockchain uses cryptography to provide the trust of third party. Finally, blockchains are distributed which allows both parties with the real time information of the transaction and thus leads to transparency.

REVIEW OF LITERATURE

- **Melanle Swan** explains that the Blockchain is a decentralized public ledger that can be used for the registration, inventory and the transfer of all assets in finances, property as well as in tangible assets such as votes, software, health data, and idea. He considered the theoretical, philosophical and societal impact of cryptocurrencies and blockchain technology.
- **Sveninoines** studied the potential use of the blockchain technology to enable governments to utilize the secure, open, distributed and inexpensive database technology. It was emphasised that bitcoin could be a promising technology for validating many types of persistent documents in the public sector.
- **J Leon Zhao, Shaokun Fan and Jiaqi Yan** gave an overview of blockchain technology research and development. The study showed that the widespread use of Bitcoin in the financial and business sector will open new ways for business innovations and research.

OBJECTIVES OF STUDY

- ❖ To understand the importance of blockchain technology in banks.
- ❖ To analyse the effectiveness of blockchain technology in banking sector.
- ❖ To study the challenges in adopting blockchain technology in banking sector.

METHODOLOGY

➤ **Sampling method:**

Simple random method has been used for this study.

➤ **Tools for data collection:**

The data is collected through primary and secondary sources

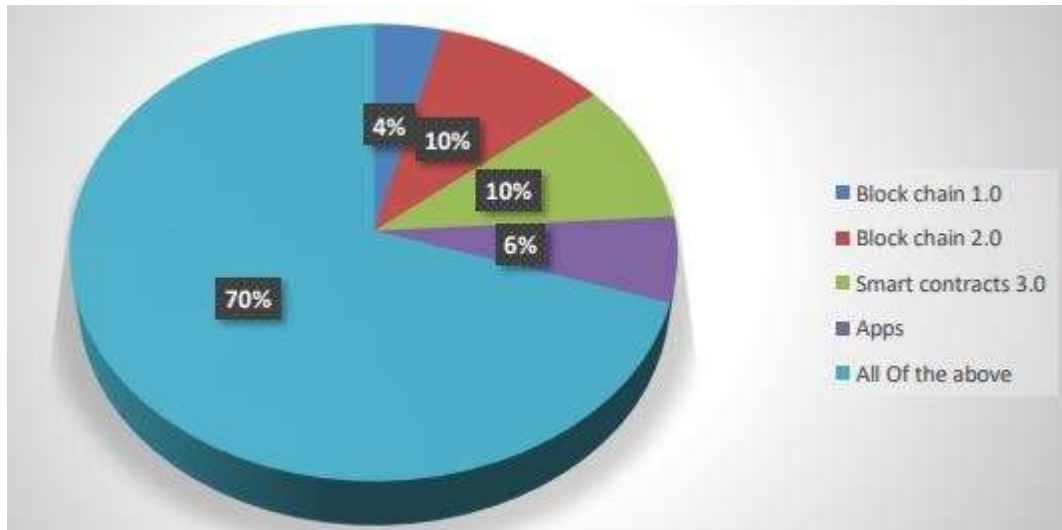
- **Primary source:**
Under primary source the data has been collected from bankers, IT professionals and users of blockchain technology.
- **Secondary source:**
Under the secondary source the data is collected through published journals, magazines, newspapers, books and websites.

ANALYSIS

This survey was conducted through an online medium using Google form.

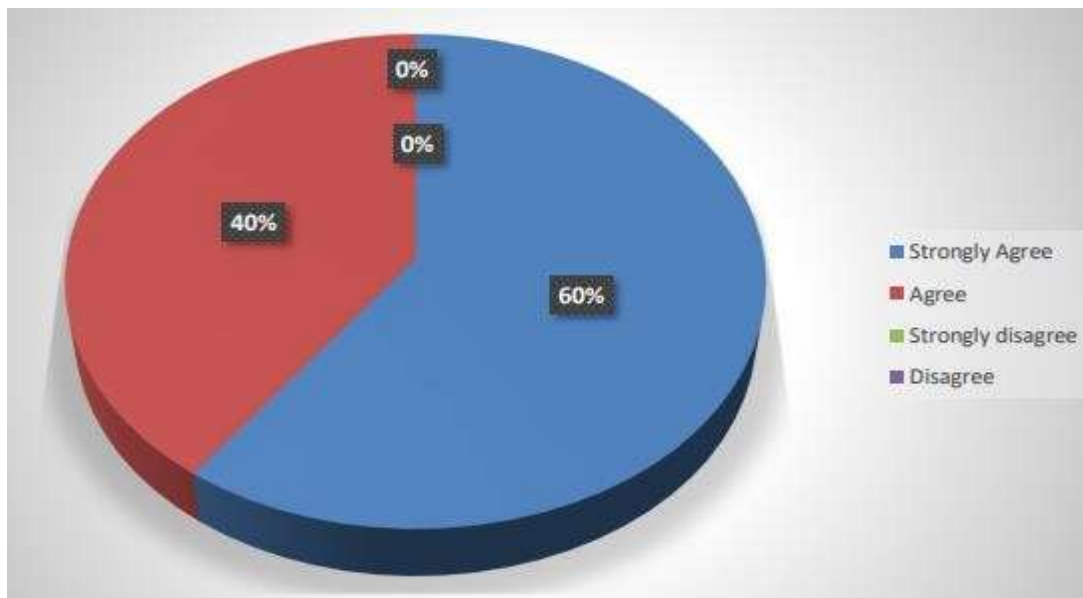
<https://forms.gle/K3cpteZBKGiAwYuv6>

BLOCKCHAIN VERSIONS USED IN BANKING SECTOR



There are many versions are there in blockchain technology out of that few versions are used in banking sector. It may be like Smart contracts3.0 it is one of the advanced vision which is user friendly and supportive and majority of respondents accepted above mentioned all versions of blockchain will be used in banking sectors.

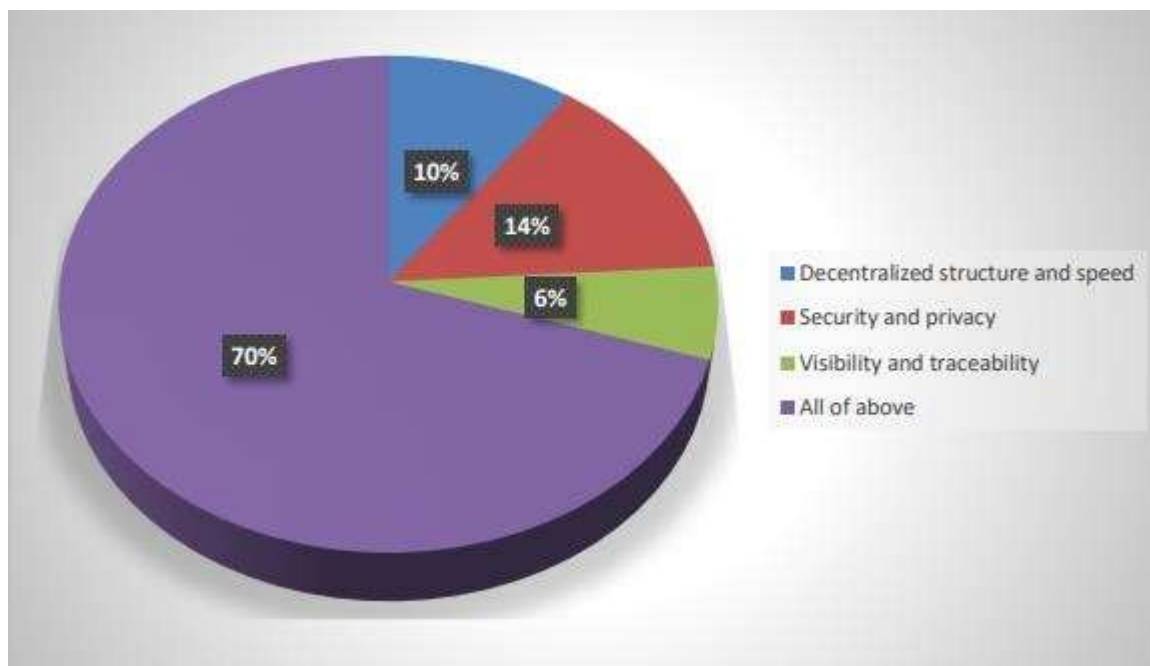
BLOCKCHAIN TECHNOLOGY HELPS IN DEVELOPMENT OF DIGITAL BANKING SECTOR



Majority of respondents strongly agree that blockchain technology helps for the development of digital banking sector. Blockchain technology will help connecting the potential benefits

of blockchain with real world use cases and take the information profession one step closer to its wider testing and adoption this may help especially in banking sector.

BENEFITS OF ADOPTION OF BLOCKCHAIN TECNOLOGY IN BANKING SECTOR



By adopting blockchain technology in banking sector the bankers and customer can enjoy many benefits such as decentralized structure, high security and privacy, high speed transactions and highly traceability and visibility.

FINDINGS

Blockchain the revolutionary technology impacting different industries miraculously was introduced in the markets with its very first modern application bitcoin. Blockchain can be described as a data structure that holds transactional records and while ensuing security, transparency and decentralization. Blockchain innovation is another innovation which depends on numerical and financial standards for keeping up a database between different members without the prerequisite of any outsider or focal specialist.

Banks used blockchain to smart contracts. These are performing cryptographic transactions, transparency without intermediaries because of the decentralized ledger in blockchain. Blockchain is never again restricted to digital currencies like bitcoin; it is a changeless record with solitary adaptations of reality of every exchange. Banks are among the most seasoned

and greatest money related middle people in India. Since financial standards for keeping up a database between different members without the prerequisite of any outside or focal specialist.

CONCLUSION

Blockchain is an application of the bank has very vital and smooth operation. It is vast subject and very difficult to cover all the aspects within a short period. However, every effort has been made to cover most of the important aspects which have use of encryption and digital signatures, the data stored on the blockchain is tamper-proof and cannot be changed. Banks are among the most seasoned and greatest monetary middle people in India. Blockchain innovation could enormously affect the methods for directing and affirming exchanges, improving resources, overseeing money and an assortment of different organisation.

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