Industrial Engineering Journal
ISSN: 0970-2555
Volume : 52, Issue 12, December : 2023

BLOCK CHAIN : A GAME CHANGER IN BANKING SERVICES

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ABSTRACT

The blockchain is a foundational, underlying technology with promising applications in the financial industry. Due to the increasing need of contemporary conveniences, people are open to adopting cutting-edge technologies. The use of a remote control to operate appliances and voice notes to provide orders are both examples of how modern technology has found a place in our daily life. By eliminating the need for a trusted third party and increasing security, transparency, and decentralization of financial transactions, block chain technology has the potential to revolutionize the industry. When it comes to financial intermediaries, banks in India are among the most seasoned and competent. Multiple substantial changes have been made to the functioning financial system since development. There has been a dramatic shift from "normal banking" to "accommodation banking" in India's financial institutions. An investigation of the veracity of money was conducted without bringing in any outside parties. This paper examines the financial sector through the lens of the block chain technological infrastructure. The financial sector plays a crucial role, but it also faces substantial challenges. Because of block chain technology, the future of banking is shifting.

Keywords: Block chain, Banking, Distributed ledger, Game changer.

Introduction

In the twenty-first century, technology has taken center stage. The increasing importance of convenience in everyday life has made people open to new technology. Whether it's a remote control for a piece of equipment or a voice note for a task, modern technology has made its way into our everyday lives. Over the last decade, we've seen the rise of technologies like augmented reality and the Internet of Things; now Blockchain Technology is here to compete. Simply said, Blockchain is a data format that maintains

security, transparency, and decentralization while storing records of transactions. It may also be thought of as a series of linked records maintained in the form of blocks and overseen by a decentralized network of administrators. A blockchain, a kind of distributed ledger, may be accessed by everyone on the network. Data on a blockchain is almost impossible to alter once it has been recorded. Every every transaction on a blockchain is secured by a cryptographic signature that guarantees its veracity. Due to encryption and digital signatures, the data stored on the blockchain is incorruptible and cannot be manipulated.The following are the main ways in which blockchain facilitates commercial transactions:Once the public and private keys have verified confirmation, the necessity for approval is clear in a blockchain system since they are used to generate an upgraded mark that provides security and permission.Participants in the blockchain system may do objective research and reach a consensus on a value thanks to the technology.The sender uses their private key and announces the exchange to the network when sending a message. The square contains information such as a digital signature, a timestamp, and the open key of the recipient.

Significance of the research

The purpose of this study is to investigate the potential usefulness of Block chain technology in the banking industry by assessing its potential to enhance the safety and traceability of the many daily transactions that financial institutions must process. A block chain does not have any central data storage. It ensures that the data can't be altered by any one user or group inside the system. By removing the need for a trusted third party or governing body to oversee or verify P2P exchanges, it also increases openness.

Literature Survey

- **Satoshi Nakamoto (2008)**"Online payments might be transmitted directly from one party to another without passing through a financial institution or third party using a peer-to-peer form of electronic currency. This became the basis for Bitcoin, the most widely used block chainapplication..
- **Melanie Swan (2015)** "Block chain is a distributed public ledger that may be used to record transactions involving money, real estate, and intangible assets like votes, computer code, medical records, and ideas. The theoretical, philosophical, and sociological effects of block chain and digital currency were

all things he examined..

- **SveinØlnes(2015)**"Governments may soon be able to employ block chain's secure, open, distributed, and low-cost database system.".

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Peer-to-peer electronic currency, the effect of crypto currencies and block chaintechnologies, the possibility of block chain's role in empowering governments, and block chain research and development were all uncovered in the aforementioned literature study. The benefits and drawbacks of using block-chain technology in the financial industry have not been the primary focus of any of the aforementioned research.

Study Coverage

The worldwide use of block chain technology in the banking industry and the many moving parts that make up this sector are the focus of this research. The current research narrows down on the banking industry's handling of block-chain technology, the benefits of block-chain technology in banking, and the difficulties inherent in deploying block-chain technology in the banking sector.

Aim oftheResearch

• Learn more about the Block chain Reference Model.

• Analyze how Block chain Technology is being used in the Financial Industry.

• To investigate the opportunities and threats posed by block chain technology in the financial sector.

ResearchMethodology

The study is totally relied on secondary data.

Block chain framework

A person or group using the moniker "Satoshi Nakamoto" is responsible for the invention of the block chain. Since then, though, it has developed into something much more significant. Simply said, a block chain is a distributed ledger in which data is stored and updated in a sequential fashion via a network of computers that does not belong to any central authority. Each of these data cubes is checked for accuracy and bonded together using cryptographic protocols. In a block chain, there is no fee for making a trade. (More accurately, a framework expense, but no foreign exchange loss.) The block chain is a simple but ingenious mechanism to securely transmit information

from point A to point B using just computers. One participant in a trade initiates the process by constructing a Block.

Distributed Ledger Technology

While many distributed ledgers may make use of squares or chain transactions, a block chain is only one kind of appropriated record. Despite the fact that the word "block chain" is used more often than "conveyed record" in conversations, a block chain is merely one of several types of information structures that allow for the safe and significant completion of a distributed agreement. The most publicly proved method of achieving transmitted agreement is the Bitcoin block chain, which employs a process called "Confirmation of-Work Mining."

Evolution of block chain technology

Block chain technology's foundational concepts first surfaced in the late 1980s and early 1990s. The Paxos protocol was created by Leslie Lamport in 1989, and the article describing it, The Part-time Parliament, was submitted to ACM Transactions on Computer Systems in 1990. It wasn't published until 1998. In this research, we provide a consensus model for achieving consensus in a distributed computing environment where individual nodes or the whole network may be unreliable. Digital signatures have been around since 1991, but it wasn't until recently that a signed chain of information could be utilized as an electronic ledger that could simply prove that none of the signed papers in a collection had been altered. Combining these ideas led to the creation of the Bit coincrypto currencyblock chain network in 2009, and the article Bit coin: A Peer to Peer Electronic Cash System was released in 2008 under the alias of Satoshi Nakamoto.

Challenges in faced by banking industry

Problems such as rising costs of tasks, growing susceptibility to bogus attacks on centralized computers, and challenges in maintaining transparency plague today's Indian financial sector. Because opening customer accounts and making international payments may require extensive manual preparation and documentation, costly delegates, and considerable time and effort because each transaction must be approved by a different

set of members at a different set of times, there is essentially no extortion proof ongoing arrangement.

Banks Adopting Block Chain System

The banking industry is always looking for new ways to improve the speed and efficiency of its transactions to better serve its customers; all while maintaining a transparent and cost-effective business model. Block chain may be a solution for financial institutions in this regard since it eliminates the need for intermediaries, maintains a permanent record of all trades, and actively promotes the continuous execution of trades. This has the potential to shorten the transaction costs for banking transactions by reducing the costs of human labor and leading to enhanced customer service and satisfaction. Banks may get the most out of Block chain just like any other sector if they choose the correct 'use case.

Block Chain and banking services

In India, banks are some of the best and oldest financial go-betweens available. There have been some significant changes in how the finance department operates since the upgrade. A dramatic shift from "traditional banking" to "accommodation banking" has taken place in India's financial institutions. In 1988, RBI appointed Dr. C. Rangarajan to lead a computerization team. Artificial intelligence, distributed ledger technology (block chain), robotics in the financial sector, and electronic safety will be the game-changers in the banking industry by 2020. Banks are leading the charge toward digitization by using block chain technology, the most cutting-edge invention of late and a potential global disrupting force. The block chain technology advancement will initiate the fourth worldwide Modern Upheaval.In 2017, the craze for virtual currencies really took off. Everything indicates that Bit coin is continuing to reach new heights as time goes on. Traditional methods of raising money are being flipped on their heads by initial coin offerings (ICOs). And perhaps most importantly, block chain technology is beginning to influence the world in profoundly novel ways. In theory, the global economic system stands to gain the most from adopting this cutting-edge distributed ledger technology. Block chain’s key properties of decentralization, immutability, efficiency, cost-viability, and security are prompting a

growing tune of support for the innovation's reception across the entire range of money related services; consequently, the industry is currently expected to experience substantial disruption over the coming years.

The banking industry is also banding together to design a block chain-based digital currency for a 2018 release. Alongside existing members Deutsche Bank, Banco Santander, Bank of New York Mellon, and NEX, Swiss financial behemoth UBS has recently enlisted six of the world's leading loan specialists—Barclays, Credit Suisse, Canadian Royal Bank of Trade, HSBC, MUFG (Mitsubishi UFJ Money related Gathering), and State Road—to create the utility repayment coin, an advanced currency primarily used to rapidly clear and settle monetary exchanges.

Reengineering baking services with block chain

The banking section is well-managed citywide, and its delegates are well-known for their conservative attitudes. The administration of many banks and monetary organizations never again exclude the possibilities from secure block chain technology, thanks to its widespread use in recent years, the skyrocketing popularity of digital forms of money, and the ICO boom. Large financial institutions are at the forefront of using block chain technology and experimenting with decentralized resource innovation. Financial institutions continue to invest in a wide variety of block chain-based projects and startups.

The safekeeping of funds is an essential part of any banking or monetary activity. Even in developed countries, many of these financial resources are stigmatized as troublesome and powerless. Traditional monetary reserves held by private banks are protected by state regulators. A distributed architecture based on record technology for credits and stores is immune to failure since no one organization has control over the stores.

Future of banking in block chain era

The banking sector has always been relied upon to provide economic stability, but it is now experiencing unprecedented levels of disruption. Innovation is expanding administrative capacity and redefining client needs, which are driving a sea shift in financial resources. Traditional banks still see themselves as distribution points for client funds, and they may equate the open holding of money with lower levels of safety. In contrast, upstart nonbanks that use cutting-edge technologies will emerge on top; these

institutions will have built-in protections for their customers' personal data. As a result of these developments on the supply side of banking services, traditional financial institutions and less conventional fin-tech firms are beginning to realize that collaboration could be the key to achieving sustainable growth.

Conclusion

This research has been very beneficial in learning about the applications of Block chain Technology in the Banking Industry. When used to the banking industry, block chain can ensure the continuity and safety of all transactions. It's a broad topic, and it'll be tough to go into every facet in a single sitting. The data recorded on the block chain is tamper-proof and cannot be modified, but every effort has been taken to cover most of the crucial features, such as the use of encryption and digital signatures. Last but not least, I've come to this conclusion after researching how banks are using block chain technology. In terms of India's monetary infrastructure, banks are among the oldest and largest players. The introduction of block chain technology has the potential to drastically alter the ways in which businesses manage their finances, resources, and more.

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