Application of Block chain in an Indian Banking Sector

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Abstract - The purpose of the research paper is to conduct research on the impact of the block chain on the banking sector with cryptocurrency. The purpose of the study is technological advancement and its economic exploitation. In order to find a platform, the first point of this study analyzes how technology works and how it operates thereafter in assessing business and economic benefits and subsequently the research deals with the impact of new technologies in the bank, above all financial services. The hypothesis that the block chain has made a significant impact on the banking sector, and has the potential to completely transform not only the financial and banking sector but also the way we buy and sell our communications with the authorities as a means of ensuring capture from scrutiny. Using available data and an information hypothesis from the technical, economic, financial and political fields, 4 conditions were set for the future of basic technology. The situation is combined with a practice analysis to prove the original hypothesis of high reliability, validity and accuracy. The conclusion of the study shows that the proposed technology is already having a significant impact on the banking sector that it is in the early stages of transforming many industries, with the possibility that they will automatically change over the next five to ten years.

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INTRODUCTION

Block chain is a digital, immovable, scattered digital log that transceeds transactions in real time. Block chain technology has the potential to completely transform the global financial industry by providing more opportunities for how people interact with money and values.

The essence of each subsequent transaction that will be associated with the ledger is the appropriate permission of the network participants commonly referred to as nodes, thus creating an ongoing control system in terms of fraud, errors, and data quality, control, control.

Regular copies of all information are distributed on Blockchain. Participants verify details separately without authorization. In fact, if one node fails, the remaining nodes continue to operate or operate, ensuring that there are no interruptions.

Transactions in Blockchain can only be achieved if all parties in the network agree to it. However, consensus-based rules can be tailored to suit most situations.

The built blocks are arranged in a concealed chain. This means that it becomes unreasonable to remove, edit or copy pre-existing blocks and add them to a network.

Digital assets and ensuring a strong level of resilience and trust. In addition, Blockchain-allocated storage is known for its high failure

Even in the event of the deficiency of a huge number of network participants, the Blockchain still remains accessible, eradicate the single point of failure. Data stored in a Blockchain is enduring.

Types of block chain: -

1.Public Block chain

The public block chain is an open source. Anyone who can participate in this block chain, means that anyone who can participate in block chain-assisted marketing, everyone involved can see which blocks are being installed and therefore anyone can participate in the consensus process i.e. the block chain process and what the current situation is simply.

2. Hybrid block chain

By staying in a unique place within the blockchain ecosystem because it is a hybrid blockchain, which means it incorporates social blockchain privacy benefits that give businesses significant flexibility in choosing which data they want to make public and transparent and

LITERATURE REVIEW

Blockchain technology is a new technology based on numerical and economic considerations for managing database among many members without the need for any central manager. It is a distributed database that is distributed, which is obviously valid, where the effectiveness of the transaction can be verified by the seller. Each group of these transactions is presented as a "block". Block records some or all of the current activity and enters the blockchain as a permanent record when completed. The advantage of Blockchain is that financial transactions no longer require any central authority and are instantly guaranteed, canceled and resolved. Blockchain technology emerges as a innovation that ensures major changes in major markets and other financial services. The blockchain will disrupt the banking industry in the years to come.

The World Economic Forum predicted that by the end of 2017, most banks would launch blockchain-related projects. A few years ago, Fintech's startup in Blockchain received more than $ 1.4 Billion in funding. At the same time, more than 2,500 patents have been registered and more than 90 Central Banks have now appeared on blockchain negotiations worldwide. In addition, current statistics show that 69-percent banks are experimenting with blockchain. The above figures allow for the emergence of technology their first figures described during the global financial crisis or subprime crisis in 2008.

BLOCKCHAIN IMPLEMENTATIONSIN BANKING: -

Corda based implementations

The forum was created by the banking union and is in line with the banking industry. Corda is more of a set badge platform than a standard blockchain platform.

Hyper ledger Fabric based implementations

 Fabric Hyper ledger is a well-known blockchain platform, optimized to support privacy requirements. It helps banks with security guarantees..

Quorum/EnterpriseEthereumimplementations

Ethereum is a standard blockchain operating platform. Quorum and Enterprise Ethereum projects are expected to increase efficiency in setting up a network allowed for increased "privacy" and "failure" skills. An extracted queue is available when Enterprise Ethereum is in continuous operation.

RESEARCH OBJECTIVE: -

To know the awareness about blockchain in banking sector.

A holistic view of blockchain technology and its benefits emphasizes the use of technology in the field of Indian Banking..

Finding the use of technology in the field of Indian Banking.

Study the understanding of the various challenges and the global perspective of blockchain technology in the Banking Sector.

To learn the impact of the blockchain on the banking industry with cryptocurrency.

RESEARCH METHODOLOGY

Research design

Descriptive Research:- Descriptive research is research done to describe the characteristics of a demographic or object study. In this project descriptive research to find the cause of the understanding of the various challenges and the global perspective of blockchain technology in the Banking Industry
Data collection: -

Secondary data

This research paper uses a second data collection method, data collected through books, journals, newspapers, magazines and online websites.

LIMITATION: -

 The limitations of the research are those design features or practices that affect the interpretation of the research findings. Sample size may not complete representative the entire population.

1. Sample size may not be complete to represent all people.
2. Rely entirely on data provided by books and online websites with secondary research data.
3. Less geographical ability.
4. Limit of Human Power.
5. Lack of direct communication with an individual's perspective.
6. Lack of time to learn the concept

Key features of the blockchain:

Near real-time updates:

Based on formation policies, the information on the blockchain nodes are renovate in close to real-time. The transactions can be globally legaliz in once they are part of the chain.

Chronological and time-stamped:

Blockchain as the name implies is a series of blocks each is a repository that stores information that connects to the transaction and connects to the previous block. These connected blocks form a series of channels that provide the distribution of basic transactions. In addition, a block chain can be created to store information about the chains made, which can establish (I) the source of the input, or (ii) the link between multiple hops in the business process outside of organizations.

Distributed ledger:

The same text of information is shared on the blockchain. Participants independently agreed to the information without a centralized authority. Even if one node is dissolved, the remaining nodes continue to operate, ensuring that there is no downstream / disruption in the business. In addition, the storage allocated to the blockchain is known as a failure and failure. In the event of a failure of a large number of network participants, the blockchain remains accessible, eliminating one point of failure.

Cryptographically sealed:

Blocks are cryptographically fixed in the chain, which means that it becomes impossible to delete, edit ,reedit or copy already conceive blocks and put it on the network, through creating true digital assets. This ensures high level of durability and trust. Data stored on blockchain are immutable, inevitable and auditable.

Programmable and enforceable contracts:

A transaction on the blockchain can be accomplished only if all the anxious parties' consent – consensus rules can bedesignedto suitvarious business scenarios.

The salient features discussed above can enable

the banking network to exploit blockchain technology for:

Guaranteeing Results of Business Processes:

Distributed shared ledger along with programmable and accomplishable contracts in blockchain provide this feature.

Improving Data Integrity and Finality:

Cryptographically fixed ledger with chronological and time-stamped transactions in blockchain provide this feature.

Based on the above-mentioned issue of what are the current issues of the Banking Industry and blockchain

Providing a Shared View:

Near real-time updates connected with distributed ledger provides shared view.

Validating Business Rules:

Programmable and enforceable contracts provide the system to enforceandvalidatethesharedbusiness rules.

Assessment framework in banking sector: -

Banks across the countryhave successfully entered collaboration with particularfirms (Fintech) and/orconsulting firms to create proof-of-concepts and scrutinize various potential use-cases. This involves the sincerityof banks towards the Blockchain technology and its excitement to understand how Blockchain can directs andresolve few problem points in the current state process of banking sector.

1. Major issues that banks face today

Today the Indian banking industry is facing problems and problems such as rising operating costs, which increase the tendency for fraudulent central servers and challenges in ensuring transparency. All of this, first and foremost because most banking services come from open customer accounts to make it payable globally may require manual processing and documentation, including costly mediators and time management as these transactions need to be verified by various stakeholders at various stages of delays.

2. What are banks looking for?

Banks are constantly exploring new ways of doing business in the past with the aim of providing better customer service, while ensuring cost-effectiveness in their operations and ensuring transparency to customers and regulators. transaction log also facilitates real-time transaction processing. This could reduce TAT through banking transactions, reduce labor costs, and lead to expansion.

3. The Blockchain Fit Assessment Framework

advantages, the Blockchain Assessment Framework is designed or developed to assess whether a particular process or use case can be properly evaluated with a Blockchain-based solution. With a process or case of use of segregation as a blockchain-fit, most of the questions generated in the framework need to be answered with consent. As we can see in the blockchain framework, each interpretation raises a point of pain in the current phase process, which can put a battery in the Blockchain solution feature. The resulting effect of implementing a complete solution.

Banks follow the Check Truncation System for derecognition. The Indian Banking system has also received extensive approval for Online Banking, Mobile Banking, Debit cards, Credit Cards, Prepaid cards, etc`.

The key innovations that will rebuild the future of the banking sector by 2020 are artificial intelligence, blockchain technology, the use of robotic and cyber-security equipment and business intelligence. Banks are expanding into digitalization using blockchain application technology, which is the most innovative and considered global disruptive power. Blockchain technology will bring out the fourth industrial revolution in the world.

Use of Blockchain technology Blockchain technology can be used in various industries in India and industry leaders who are reshaping blockchain use as a priority in their industry.

Others use cases of blockchain technology and their merits in relation to the banking sector are discussed below:

Digital Currency:

Cryptocurrency serves as an exchange channel using cryptography to make transactions more secure and secure and regulate the creation of additional currency units. Some of the most popular cryptographic currencies are Bitcoin, Ethereum, Ripple, Litecoin, etc. Cryptocurrensets help to defeat identity theft as users have control over their transactions. It protects operators from the risk of fraud and misrepresentation as transactions cannot be reversed once completed and do not disclose personal information to them. It also allows you to send and receive money anywhere in the world at any time without the concern of the central authorities. Activity is guaranteed immediately and is visible to all participants. The transaction costs involved in converting legal currency are very low. However, digital money has some drawbacks. The demand for digital currency is growing steadily. This will lead to high exchange rates, fraud and risk with digital currency.

Supply Chain Financing:

 Small and medium enterprises (SMEs) face many difficulties in obtaining credit due to the lack of collateral and credit history. Blockchain can increase funding by providing greater protection, security, efficiency and better decision-making. According to the Global Trade Review, several institutions including Standard Chartered Bank, DBS Bank, and InfoComm Development Authority of Singapore are establishing a platform for trading low-level invoices. Monitoring of Bank sector transactions.

The most important applications of blockchain technology are to prevent money laundering. Expenditure is not tracked by the lender as the borrower makes many transactions to transfer money from one bank to another. Blockchain technology helps control the ultimate use of a bank-sponsored borrower's finances. It will lead to a reduction in non-performing assets (NPA) as banks are able to monitor their eventual spending. Information relating to remittances is made available to all team members and also helps to strengthen the monitoring structure.

Know Your Customer (KYC):

 Banks are very concerned about the rising costs they have to bear in compliance with the terms and conditions of Anti-Money Laundering (AML) and Know Your Customer (KYC). The KYC process must be done individually by each bank and financial institution. More recently, banks have had to transfer KYC details to central authorities that can be obtained by banks to facilitate the diligence of existing or new customers. Repetition of attempts will disappear with blockchain technology. All customer updates will be available at all banks near real-time. It will help reduce fraud, risk and Inactive Assets (NPA) that the Indian Banking Sector has been demanding for some time. Top Indian banks such as ICICI Bank, Yes Bank, Kotak Mahindra Bank and Axis Bank arecontinuum recognizing the great power of Blockchain.

Impact of covid-19 on Indian banks in digitization: -

Indian banks (public and private) are already online with some of the main functions of banks that will focus on the complete evolution of digital transaction in all their operations, processes and systems. Indian banks and financial institutions will also look to meet new entrants and fintech. The demand-driven partnership will drive new approaches and jointly gains the benefits of major banking customers and new fintech technologies.

The COVID-19 situation will not only stimulate the adoption of technology, but will revive focus on the following four areas of banking:

Embracing neo technologies – In the face of the epidemic and economic uncertainty, development technologies will play a key role in accelerating transactions and reducing banking costs. The Indian banking sector has already played a technological role in achieving access and growth. These technologies will play a key role in the digital transformation of Banks and Financial Institutions and reorganize digital service delivery.

Channels of digitization – Findex's 2017 World Bank report states that India is home to the world's second-largest unregistered population of 190 million adults without a connection to a bank account. With the advent of mobile and Internet access, the primary focus will be to accelerate technology allowing digital financial engagement.

The focus of the business will be to create a continuous shift in customer preferences from visiting bank branches to using digital channels. Banks will enable their customers to interact with multiple computer and digital channels to provide the best mix for the channel. Banks will look at key factors such as census, internet access, end-to-end communication, customer banking ethics etc. .

Security, privacy and customer trust – According to the RBI, in the 2017-18 financial year, the Indian banking sector had a large amount of fraud in cyber fraud and corrected losses to $ 13.7 million. With the greater use of the financial and digital economy, it will be more important for banks to use secure structures and systems. Some of the most obvious cyber threats include financial fraud, money laundering, data loss, identity theft and privacy breach.

Banks need to take strong measures to identify internal and external system trends. They should be technically enhanced by accurate KYC, robust customer authentication (SCA), financial level APIs, firewalls, smart networks, etc., for secure and sensible transactions. Powerful banking solutions and cyber security actions help protect against malicious attacks.

Policy and compliance – The focus should be on the expansion of digital payment infrastructure, only in rural India, with the aim of creating a financial environment for the unpaid and disadvantaged.

From a security and privacy perspective, India is already in the process of launching a personal data protection (PDP) bill on the outskirts of the EU GDPR. The bill protects consumer information including financial information. It would be best to apply strict penalties on the wrong companies found to be in breach of the bill.

The impact of COVID-19 on the global and Indian financial systems will be impressive and abundant. It is important to take a long view and choose accordingly. For Indian banks in particular, flexibility, driven by digital sharpness, is a way to achieve the goal and success on the other side of COVID-19.

CONCLUSION: -

Banks have successfully traded the Bajaj Electricals blockchain to buy merchant funds. The State Bank of India (SBI) has become India's first bank to formulate a Blockchain financial agreement for ten commercial banks, IBM, Microsoft and KPMG in 2017. Infosys and TCS are developing blockchain solutions in areas such as anti-money asset registry andloansyndication. The blockchain will revolutionize Banking

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Sector. It has the power to disrupt traditional business models and make existing systems ineffective and ineffective. Secure, distributed customer information should be created and shared with various banks that will lead to a reduction in time, effort and cost in banking transactions. In an effort to grow towards a poorer society, this is the right time to start a decent effort to integrate Indian Rupee into computer with blockchain technology.

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