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Blockchain with Banking

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Abstract: Blockchain as a continuously growing list of records managed by peer-to-peer networks is widely used in various applications, So it can improve the protection of financial data privacy. The banking and the financial services has many advantages of blockchain technologies. With the help of blockchain we can optimize the global financial infrastructure, achieving sustainable development using more efficient system than a current. In fact, many bank of India focusing on distributed ledger technology for blockchain limited loan system. This is not only ensure traspovercy in credit disbursement. It also remove any communication handle among the different banks. With the help of this we could be able to handle financial processes in more efficient way than under the current system. Blockchain could potentially save banks cash by reducing processing cost. Implementing blockchain would be a step to making banks increasingly profitable and valuable. Blockchain technology is prompting impressive and a special interest across a massive range of industries in country (INDIA). The Blockchain technology is supervise for developing a evolution in the decentralized approach for build applications. As real-time, open source and trusted platform that securely transmit data and value they can help to reduce cost of processing payments, create new products and services that can generate important new revenue system.
Keywords: Applications of Blockchain, Banking Frauds, peer-to-peer network, smart contract, Loan, decentralized approach.

I. INTRODUCTION

Blockchain technology potential to be hugely disruptive and empowering in both public and private sector computing applications. As a way to order transaction in distributed ledgers that maintains a continuously growing list of data records on a transaction. Using a common protocol, it lets contracting parties dynamically track assets and agreement. This streamlining and even completely collapsing third party verification processes. A distributed ledger is a decentralized database. A decentralized database shared ,replicated and synchronized record of the transaction between two or more contructing parties and it is search by cryptographic scaling. All major banks are checking out blockchain which is beneficial for wire transfer(money), record keeping and other backend functions. The blockchain application changes the paper intensive international trade finance process to an electronic decentralized ledge which allows to track all documentation and validate ownership of assets digitally, as an un-alterable ledger in real-time. Blockchain disruption could be highly transformative in payment process. Which provides higher security with minimal lower cost for payments between clients, different organizations and banks itself. All intermediaries in payment process would be get rid by using blockchain. With blockchain based technology, there would be significant changes on our trading platforms with the risk of operational errors and highly reduced fraud. Applying blockchain successfully to payments will require fostering an uncommon co-ordinates among banks, which is vital to generating the positive network effects that make blockchain so compelling. Blockchain provides high level security for exchanging data, information and money. Users can take advantage of transparent network infrastructure with low operational cost with aid of decentralization. These characteristics make blockchain reliable , promising and in-demand solution for the banking and finance industry.

II. WHAT IS BLOCKCHAIN

A blockchain is timestamp series of immutable rewards of data that is managed by a cluster of computer not own by any single entity. A ledger that maintain a continuously growing list of data records or a transaction. In every blockchain there are parties, blocks, transactions, assets, consensus, miners. All parties are connected in network. Block is set of new transaction and it was chained with previous block by referring to its value. Connected parties verify that a transaction is valid as per the rules of governing and a smart constructs. Not every distributed ledgers are blockchains but all blockchains are distributed ledgers.

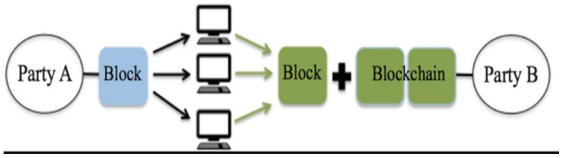

Figure-1flow of transaction

A smart contract can be a program that attempt to ensure that all transaction comply with the underlying legal agreements. A smart contract is a collection of rules that participants have collectively agreed to govern the evolution of 'fact' in the distributed ledgers. With the help of smart contract automated attributes of blockchain is implemented. It also have a potential to automate laws, which could significantly improve services, efficiency and transparency.

Several unique technologies are use in BlockChain development . This technology work collectively to create well organized ledger records called blocks. This blocks are linked via encryption to deliver frameworks for safe and secure transaction. To this end parties can carry out transaction without fear of fraud.

III. CURRENT USE OF BLOCKCHAIN IN BANKING

Blockchain holds the potential to transform the finance and banking sectors by reducing potential labour saving. According to PwC reports 24% of financial executives from all around the globe are very familiar with blockchain technology[4]. Operating on the basis of highly dependent manual network, the banking and finance sector is prone to errors and frauds that could lead to a crippled money-management. According to Global Fintech Report 2017, 77% of Fintech institutes expect to adopt blockchain as a part of an in the production system.[4]

IV. NEED OF BLOCKCHAIN

Blockchain is seen as shield against cyber crime. It brings trust to transactional system. As blockchain provides higher security it is useful in banking factor that they use blockchain technology for transaction so that the ratio of fraud may decrease. All transaction that exist on blockchain is secure because it uses peer-to-peer networks on computer.

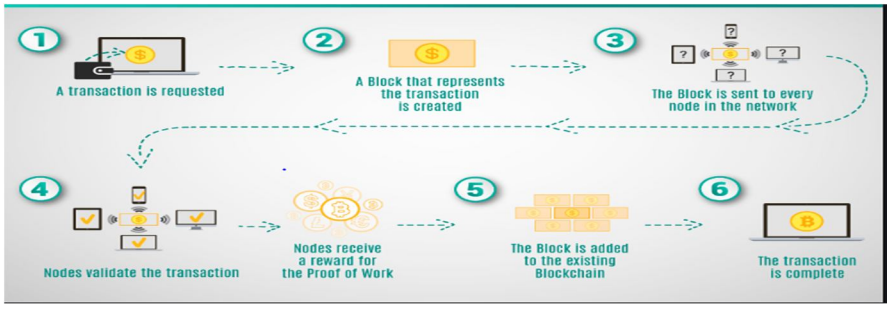

Figure 2: Blockchain architecture for bank transaction

A. Smart Contracts

Blockchain provide smart contracts facilitate. As smart contract facilitate, it can storage of any kind of digital information, as well as computer code that can be executed once two or more parties enter their keys. Contracts could created and financial transactions executed when this code is programmed. There are potential security threats, vulnerabilities and various other issues are associated with smart contracts. It's very challenging and difficult task to writing secure and safe smart contract due to various business logic, including vulnerabilities and limitations.

B. Clearing And Settlement

Banks invest billions of dollars to run the messy web that record loans and security costs. Today this is managed by message and manual reconciliation. One of the best known example of this is the Australian Security Exchange, which aims to transfer a lot of its post-trade clearing and settlement on to a blockchain system.

C. Trade Finance

Trade finance is based on bills or letters of credit, being sent by fax or post around the world. When several parties need access to same information that time Blockchain gives conspicuous solution. Blockchain can offer a vast amount elements in this area. Blockchain technology has the potential to be "genuinely game changing".[2]

D. Loans And Credits

Traditional bank and lenders underwrite loans based on a system of credit reporting. Blockchain technology opens up the possibility of peer-to-peer loans, faster and more secure loan process in general. When you fill out application for a bank loan they evaluate your home ownership, income ratio, credit score etc. Alternative lending using blockchain technology offers, a cheaper, more efficient, and more secure way of making personal loans to consumers.

E. Know Your Customer

Financial institution spends upto 60 million dollars for KYC[1] .To reduce terrorism activities by having requirement for businesses to verify and identify this regulation is used. Blockchain would allow organization to verify its client by another organization, thus avoid repetition of KYC process.

V. BENEFITS FROM BLOCKCHAIN

Blockchain brings in a lot of transparency in processing and there by reduces the need for manual verifications and authorization. The main key features of the Blockchain is following:

A. Fast-paced financial transaction: Majority of third party financial transaction in banking industry consumes time around few days or even a week. With use of blockchain this transaction performs even in minutes or seconds. Hence, this eliminates third party payment gateways and results in fast-paced financial transaction.

B. Lower cost of financial transaction: The use of blockchain technology in banking sector will lower the cost of financial transaction. High monetary cost may occur if it requires more time to complete transaction. Fast-paced transaction and eliminating payment gateways will result in low financial transaction cost.

C. Reduction of fraud: Blockchain offers hope because 45% of financial intermediaries are prone to economic crime. Banking systems are designed to function via centralized database across the globe, so they are vulnerable to serious cyber attacks. Blockchain companies can help design blockchain system to mitigate financial fraud. It is distributed ledger system where each transaction block has its timestamp. This technology links each block of transactions of past transaction, so it cutdown crimes in online financial transactions.

D. Establish Smart Contract: Blockchain technology has ability to store numerous digital information. It establish smart contract in a given transaction once parties involved insert their unique keys.

E. Help Eliminate frauds in trading platforms: Blockchain technology can drastically reduce operational error and fraud on these platforms. Thus, makes trading on these platforms safe and secure for exchangers.

VI. CONCLUSION

Although the potential of Blockchain is widely claimed to be at par with early commercial Internet, banking firms needs to understand the key features of the technology and how it can clear up the current business issues as on one hand, internet enabled exchange of data while on other, the Blockchain can involve exchange of value. Banks need to identify window, determine utility and effect, and test proof of concepts.

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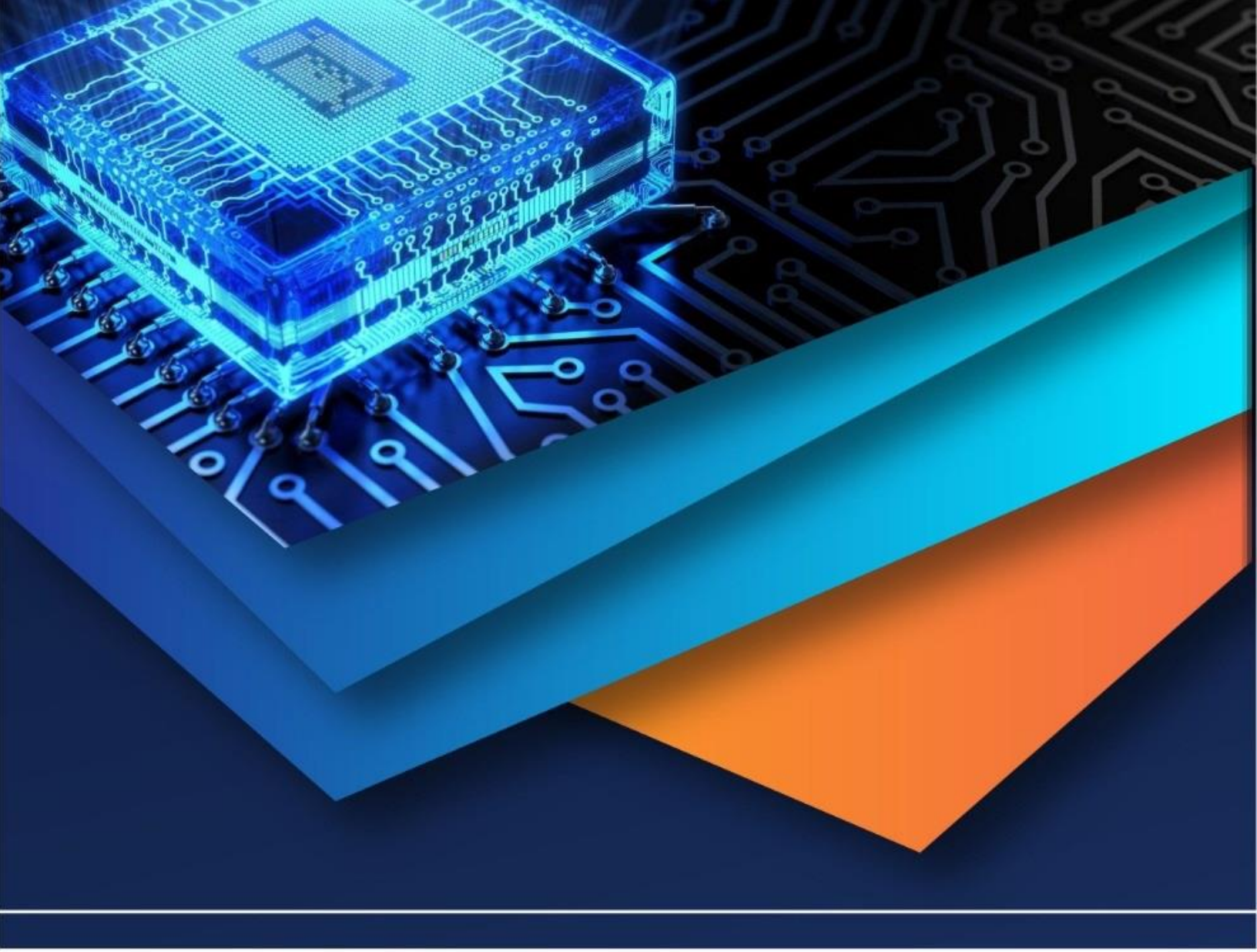

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