

A Conceptual Framework on Block Chain

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Abstract: The block chain is recently introduced and revolutionizing the digital world bringing a new perspective to security, resiliency, and efficiency of system. The focus of the study is to understand how the blocks are created in the block chain and how the decentralized shared economy applications that allow the people to secure their things that was previously unattainable to create more wealth.

1. Introduction

Since Block chain was originally created by Satoshi Nakamoto in 2008 it is a core component for support transactions based on digital currency. Blockchain is a new concept that is created a buzz in the financial market. It is a decentralized system that is independent highly secure and transparent. Blockchain has been known to be the public ledger for all transactions .peer to peer technology with public key cryptography. It informs and registers the bitcoin transactions. There is a set of rules that govern that how to verify the validity of the block and make that the block will not be altered or disappear .transactions may be in a form of fund transfer, settling traders, voting or any other agreements etc

2. Review Of Literature

2015 Reviej.Leanzhao, Shaokunfan. In this paper, an overview on how the blockchain technology works in research and development in this special issue. it show that how blockchain has enabled Bitcoin, the most successful digital currency, its widespread adoption in all the sector specially finance and other business sectors will lead to different business innovations activity as well as many research opportunities.

2016 Ye Guo Chen Liang: Block Chain Applications And Outlook In Banking Industry, blockchains will revolutionize the underlying technology in the payment clearing and credit information systems in banks, thus upgrading and transforming by itself . Blockchain applications also promote the formation of “multi-center, weakly intermediated” scenarios, which will enhance ,efficiency of the banking industry. However, despite the permission less and self-governing nature of blockchains, the regulation and the actual implementation of a decentralized system are the main problems that remain to be resolved.**2017**

Kamaljit Rastogi Is Blockchain A Bane Or Boon For Banks: Banks need to exploit basic inertia and trust of the clients and quickly adopt Blockchain to provide instant and minimum cost services. They need to be realize that inherent capability of Blockchain and it is seriously evaluate how to remodel the current process. **2017 Roman Beck, Miche Avital, Matti Rossi: Blockchain Technology In Business And Information System Research** the paper represent how the technology holds a great potential for

facilitating the complex financial transactions and cross-border of all money transfers. Now, the block chain technology and platforms are making new way in business and society, it is a great time to start research programs on the implications and possibilities of this ground breaking new technology

3. Objectives of Study

- To analyse the concept of block chain creation and how it works
- To analyse how block chain implement in society and its security in internet
- To analyse about the advantages and disadvantages in blockchain
- To offer suggestions based on my findings

How does the block created in the blockchain

Any person can open an account in a block chain every person will get their own wallet number from that they can create their transaction. How a block will be created as follows :(each block contain 1 MB data of transactions)

- Block header hash is less than the target
- Block size is within the acceptable limits
- The first should be the coin based transactions
- The coin based transaction has a valid record
- All the transactions with in the block are valid

Any person can compute a block they are called as miners. In a language of cryptocurrency a block is record of new transactions. People who solve this cryptographic mathematical equation they rewarded with cryptocurrency in a process is called mining. Technically, the blockchain is a chain of blocks ordered in a network of some non-trusted peers. Each block will have references of the previous one and it contains the data, its own hash, and the hash of the previous block. Each block also has a hash number. This hash is a value generated from a string of text using some critical mathematical functions. A hash will be compared to a fingerprint, as each hash its own unique. Its role is to identify the block and the block's contents. Also, each block contains the hash of the previously created block. For instance, there are three blocks in a blockchain, the block 3 will contain the hash of block 2 and block 2 will contain the hash of block 1 .If anyone try to change the data in a single block, the hash number of that particular block changes, but it also makes the whole chain to be invalid. A hash is consider as the great tool for identifying attempts to change data in the blocks. However, a hash algorithm alone is not only enough to ensure the security of the blockchain. To mitigate the attempts to corrupt the blockchain and to ensure the security, blockchain technology also uses a process called as proof-of-work. It is a process of producing data that is hard to get but easy to verify. In the context of a blockchain, proof-of-work means solving mathematical critical problems. If the problem is successfully solved, then a new block will create that will be added to the blockchain. On average, performing proof-of-work calculations and adding a new block to the chain will takes about 10 minutes to finish the process.

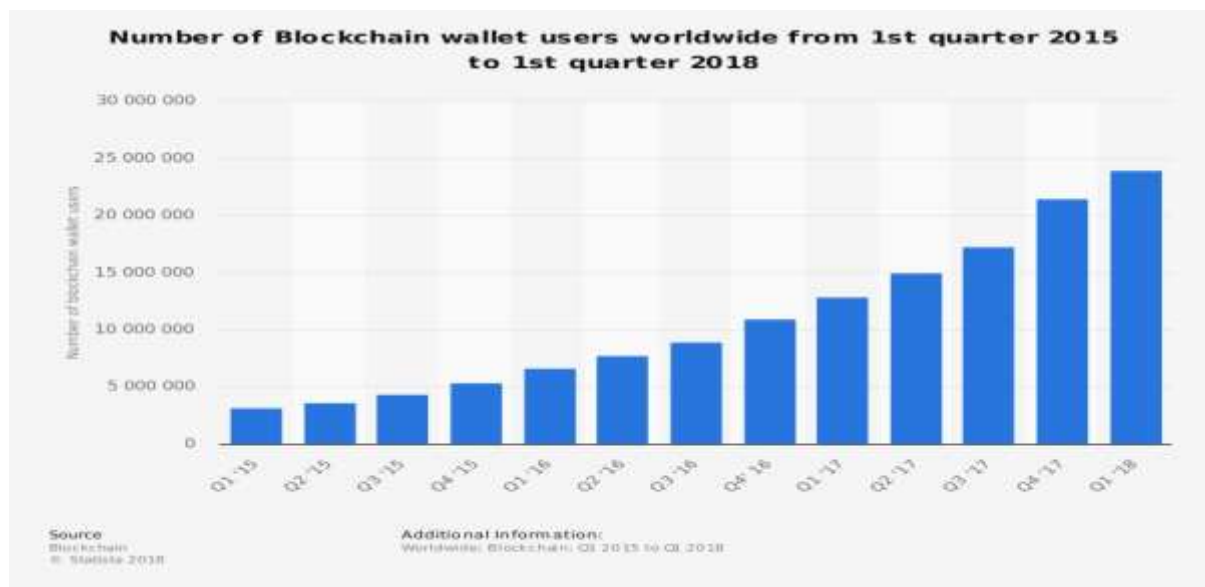
The blockchain security model

blockchain creates a proper secure, democratized platform independent of all the parties involved in it . The risk is totally eliminated by distributing the transactions across multiple sources, thereby it limits the possibility of hacker attack damage. In the blockchain system, there is no single person will hold the records, and no one can delete from it. Each identity is registered and secured with the device public key and private key. The public key in the blockchain use computers connected to the public internet to validate the transactions and bundle them in to the blocks. The private blockchains are commonly design around the principle of inconspicuousness. It is use to identify to confirm the membership. So the members in the network know exactly who are all dealing with them. Smart contracts will come to generate true business representations. Humans, machines, and the internet will communicate by respecting contractual obligations and deliverables. Smart contracts eliminate violations, confusion, and fraud amongst from devices. Even more crucially, the human job of the contractual conditions audit will be replaced by these digital contracts. Blockchain presents sufficient opportunities in IoT. It will changes the current state of things by giving it more transparency and making it fully secure.

The societal implications of blockchain technology

The recent sources in financial services makes the high number of people without access the banking system. Such as digital wallets, debitcard, ATMs etc .some has been additionally permit micropayments& microloan. The blockchain technology is straighten out a complete new form of advantage in the present world economy. Social enterprise where in lack of trust is one of the specific issue , especially in the international aid campaigns many organisations tried in different ways to eliminate the corruption but facilities are often poor and the corruption are extensive. The block chain technology offer a originalmeans to finding a way around the challenge for corruption. It has some specific advantage for the social entrepreneurs operating in different places where the dependence third parties are tricky to find out. It is very important to understand that the blockchain technology does apply to a validly broad choice of social concerns. Most of the appeal towards the blockchain technology are revolves around the main four themes associated with its key features they are

1. **Lower transfer and limited interaction fees:**
2. **high degree of security and trust:**
3. **high degree of frankness, transparency and dependability**
4. **Amalgamate the digital and physical world**



The biggest advantage

Disintermediation: Because the database are still a tangible thing even though it just bits and bytes. If the contents of the database are stored in the memory and the disk of a particular computer system run by a third parties even if it is a trusted organization like banks and governments, anyone who will got access to that system can be easily corrupt the data within.

therefore the third-party organizations especially those who control important databases need to hire many people and to design many processes and to prevent that database being interfere with. Unavoidably, all this will takes the great amount of time and money

High Quality Data: blockchain data is complete,consistent timely,accurate,and widely available

Durability,Reliability,And Longevity: due to the decentralized networks, blockchain does not have a central point of failure and is better able to withstand malicious attacks

Transparency and Immutability: changes to public blockchains are publicly viewable by all parties creating transparency, and all transactions are immutable, meaning they cannot be altered or deleted.

Ecosystem Implications: all transactions being added to a single public ledger, it reduces the clutter and complications of multiple ledgers.

Faster Transactions: interbank transactions can potentially take days for clearing and final settlement, especially outside of working hours, blockchain transactions can reduce transactions times to minutes and are processed 24/7

The Biggest Disadvantage

- In the centralized database there is no need to individually verify the transactions.
- Whether the profit of the particular person or concern determine in cryptocurrency or in authorized currency
- There is no middleman in the transactions means there will be unemployment arises

- Many federal security analysts stated that terrorist organizations have been using bitcoin to fund their activities
- The bitcoin blockchain networks miners are attempting 450 thousand trillion solutions per second in efforts to validate transactions using substantial amounts of computer power.
- High initial capital costs

4. Findings and Suggestions

By this I analyse the blockchain technology is going to become a buster in the future internet and it will change the world the way we trade opening new opportunities in the business. to rectify the disadvantages some regulations should implement in it to make gurantee for the cryptocurrency in the future.

Proper tax should implement in blockchain (For earning of bitcoin automatic certain percentage of tax should reach to the tax authorities).

5. Conclusion

Blockchain technology is not just a more efficient way to settle securities. It will fundamentally change market structures and may be even the architecture of the internet itself.

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