BLOCKCHAIN: AN EMERGING TECHNOLOGY THAT EVERY BUSINESS LEADER SHOULD KNOW

Within one quarter of the current year, millions have already been invested by large organizations in Blockchain technology development and adoption. The market is expected to grow to $20 billion globally in next 7 years.

But, what is Blockchain? How does it work? Why has it gained popularity so fast? What does it have to do with businesses? Why are companies adopting it? How does it impact your business? These are some of the questions that you may have as a leader. We are going to answer these questions in this article.

Before understanding Blockchain, let us take a look at something we call a cryptocurrency like Bitcoin. Bitcoin is a digital currency that is globally traded for carrying out financial transactions in huge numbers. In June 2017, 16.42 million bitcoins were in circulation across globe when its index value reached a mark of 2,873.83 U.S. dollars as per the report of Statistica.

Now, you may like to understand what is blockchain and how is it related to bitcoins?

Blockchain is nothing but a chronological way of organizing and structuring data. Blockchain maintains a digital ledger that records "blocks" of cryptocurrency transactions such as bitcoin exchanges. Blockchain is an open source system that work through peer-to-peer and distributed network and has no central authority governing it. In simple words, Blockchain can be understood as an open source distributed ledger that can record details of transactions happening between two parties without the need of any intermediary. The record would include every agreement, task, process, and payment involved in a transaction. All these records are validated, stored and shared directly in the blockchain.

The advantages of using blockchain in management of transactional data come with a real time visibility gained for all activities involved in transactions. When blockchain is used with bitcoin currency, transaction blocks are recorded chronologically such that the system can be made transparent in a scenario where no central party is controlling transactions.

How does a Blockchain work?

Blockchains work on 5 key principles:

- Everyone in the network must have the access to same information
- Distribution of data must be decentralized which eliminates the possibility of complete data loss
- The records must remain permanent and never deleted
- Every node must have 30+ character alphanumeric address allowing users to remain anonymous if they want
- Ledgers must be used for automation of transactions between different nodes

To understand how it works, we can explore an example:

A person has asked you to give bitcoins as a payment for the work done by the person for you.

So, you place a request for a transaction.

This request gets broadcasted to the bitcoin network that consists of many nodes.

These nodes validate your transaction request and a verified transaction takes place.

The verification is done on the basis of three checkpoints -

1. The transaction does not have an intrinsic value that cannot be redeemed using other currency or its equivalent such as gold
2. The currency used in transaction should not have any physical presence but should only be digital
3. The supply of the currency used must not be determined by any bank but should be decentralized.

Once the transaction is completed and verified, a new block of transaction data is created and is added to an existing Blockchain of transactional data. This Blockchain cannot be altered but the data can only be added to it. As the transactions keep on happening, this Blockchain keeps on growing in a chronological order.

Why is it so popular?

Blockchain has brought a kind of disruption in the financial industry by allowing transmission of value between transacting parties directly without the need of an intermediary. This allows users to have a control over economy. However, Blockchain is not limited to financial domain as there are more industries that have already adopted it within a short span of time such as healthcare and utility sector.

The popularity of Blockchain can be attributed to the benefits that are received through this technology such as transparency of transactions, blockage of any alteration eliminating probability of corruption, permanent recording of all transactions not missing out on any activity, automatic downloading of Blockchain in nodes after transaction, disintermediation reducing counterparty risks, high quality of data, high speed of transaction, lower costs of transaction, automatic updating of ledger copies, reduction in accountability issues, and reduction in complications of maintaining ledgers.

Adoption of Blockchain by Organizations

Companies use blockchain technology for a variety of reasons like increasing data safety, allowing decentralization, and making processes more transparent. Some online platforms and IT companies that are using blockchain today include Circle, Brave, Storj, and Factum. Many organizations adopting blockchain are using the technology for tracking their supply chain transactions. With the use of blockchain, stock transactions can be completed within microseconds because of absence of intermediaries and availability of ledgers to both parties for verification of assets. Moreover, the transactions are completed more securely with this verification.

For financial organizations, Distributed Ledger Technology (DLT) or Blockchain gives huge saving in transaction, infrastructure, and administration. It has been estimated that the infrastructure costs of banks would reduce by 20 billion USD annually by the year 2022 with the use of Blockchain. These costs are currently incurred in securities trading, regulatory compliances, and other country transactions that would be eliminated with the digital currency exchanges. There are some more benefits of Blockchain usage for financial organizations such as improvement in data accuracy and resilience of the financial ecosystem.

The Blockchain is used in the financial ecosystems for a number of different applications such as exchanges, merchants, brokerage, payments, wallets, retail banks, trading, money services, ATMs, investments, capital markets, micro transactions, payrolls, insurance, and financial data. Some middleware services such as APIs, smart contracts, software development, and platforms also use Blockchain technology.

Some examples of the use of Blockchain in financial organizations include syndicated lending, personal finance management, risk auditing, identity theft presentation, regulatory process optimization, sanctions enforcements, and so on. Some payment systems that make use of Blockchain ledgers include BTC Jam and BitBond for P2P payments, CoinBase and BitPay for payment processing, BitReserve and Bitpesa for wallets and exchanges, and Ripple and Kraken for currency exchanges.

The future of the financial system is set to be dominated by Blockchain technologies and we can expect an increased adoption of this traceable global currency by other industries as well.