



# Supply chain finance based on block chain technology

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## DESCRIPTION

With the emergence and development of block chain technology, due to its innovation in the underlying technology, many potential innovations have been created in the financial aspects of different industries, and even disruptive changes have occurred. Especially mature applications in supply chain are more extensive, and at an equivalent time, the technology also effectively promotes the event of finance-related technology. We proposed a block chain-based framework and used an adjunct technology, namely smart contracts. The credit mechanism are often reformed to market the flow of credit value and make it highly including financial scenarios to get the feasibility of supply chain process design (Gupta, 2011).

The purpose of block chain is to permit virtual statistics to be recorded and allotted, however now no longer edited. In this way, a block chain is the inspiration for immutable ledgers, or facts of transactions that cannot be altered, deleted, or destroyed. This is why block chains also are referred to as a allotted ledger era (DLT)(Mishra,2020).

Block chain is right for handing over that statistics as it offers immediate, shared and absolutely obvious statistics saved on an immutable ledger that may be accessed most effective through permissioned community members. First proposed as a studies assignment in 1991, the block chain idea predated its first massive software in use: Bit coin, in 2009. In the years since, using block chains has exploded through the advent of numerous crypto currencies, decentralized finance applications, non-fungible tokens (NFTs), and clever contracts(Nurul,2012).

Block chain era changed into first mentioned in 1991 through Stuart Haber and W. Scott Stornetta, researchers who desired to put in force a machine wherein report time stamps couldn't be tampered with. But it wasn't till nearly many years later, with the release of Bit coin in January 2009, that block chain had its first real-international software. Block chain paperwork the bedrock for crypto

currencies like Bit coin. The U.S. greenback is managedthrough the Federal Reserve. Under this vital authority machine, a user's records and foreign money are technically on the whim in their financial institution or government.

Government - Facilitated transactions can taken up to 3 days to complete. Block chain era can energy new fashions for change, advancing information and assisting social groups create shared structures of file that reply to company donors` requirements. Block chain era produces a shape of records with inherent safety qualities. It's primarily based totally on concepts of cryptography, decentralization and consensus, which make sure agree with in transactions. In maximum block chains or allotted ledger technologies (DLT), the records are based into blocks and every block consists of a transaction or package deal of transactions. Public block chain networks generally permit all and sundry to enrol in and for individuals to stay anonymous. Private block chains use identification to affirm club and get right of entry to privileges and generally most effective allow recognized groups to enrol in. While block chain era produces a tamper-evidence ledger of transactions, block chain networks aren't proof against cyber-attacks and fraud (Sucky,2005).

Bit coin is a perfect case study for possible block chain inefficiencies. Bit coin`s Prow system takes about 10 minutes to add a new block to the block chain. To implement a block chain solution security model, administrators must develop a risk model that can address all business, governance, technology and process risks. Next, they must evaluate the threats to the block chain solution and create a threat model. Then, administrators must define the security controls (Yi,2019).

Private block chains use identities to confirm membership and access privileges and typically only allow known organizations to participate. Together, the organizations form a private, member only "business network". A private block chain in a network is allowed to reach consensus

through a process known as "selective approval," in which known users verify transactions. Only members with special access and permissions can manage the transaction log. This type of network requires more identity and access control. While block chain technology creates an untraceable record of transactions, block chain networks are not immune to cyber-attacks and fraud. People with bad intentions can manipulate known vulnerabilities in the block chain infrastructure and have done numerous hacks and frauds over the years.

Block chain-based smart contracts are powered contracts that can be partially or fully executed or executed without human interaction. One of the main purposes of smart contracts is to send money automatically. This can reduce conflicts between entities when transferring value and can then open the door to a higher degree of transaction automation. A 2018 IMF staff discussion pointed out that smart contracts based on block chain technology can reduce moral hazard and optimize the use of contracts in general. But "no viable smart contract system has emerged yet." Due to their lack of widespread use, their legal status is unclear.

## REFERENCES

- Gupta D P (2011). Development of an integrated model for process planning and parameter selection for machining processes. *Int. J. Prod. Res.*, 49(21) 6301-6319.
- Mishra R A, Kalla A, Singh N A and Liyanage M, (2020) Implementation and Analysis of Block chain Based DApp for Secure Sharing of Students Credentials "IEEE 17th Annual Consumer Communications and Networking Conference (CCNC), Las Vegas, NV, USA .
- Nurul Hayati Abdul Halim (2012). Gravity Flow Rack's Material Handling System for Just-In-Time (JIT) Production. *Procedia Eng.*, 41(4) 1714-1720.
- Sucky E (2005). Inventory management in supply chains: A bargaining problem. *Int. J. Prod. Econ.*, 93(94)253-262.
- Yi H, (2019) Securing e-voting based on Block chain in P2P network, *Eurasip J. Wirel. Commun. Netw.*, 137(1)