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IMPLEMENTATION AND REGULATORY CHALLENGES ON ADOPTION OF BLOCKCHAIN TECHNOLOGY IN ACCOUNTING AND AUDITING

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Abstract- Blockchain is a decentralized, immutable database that makes it easier to track assets and record transactions in a corporate network. An asset may be tangible (such as a house, car, cash, or land) or intangible (intellectual property, patents, copyrights, branding). A block chain network allows for the tracking and trading of practically anything of value, lowering risk and increasing efficiency for all parties. When blockchain was first developed in 2008, cryptocurrency (or crypto) transactions were its main application. Today, it is utilized in a wide range of businesses for a variety of purposes, including accounting, financial services, storage management, security, etc. In this paper an attempt is made to understand the implementation and regulatory challenges on adoption of blockchain technology in accounting and auditing.

Key words – Blockchain, Challenges, Accounting, Auditing

Introduction-:

What is blockchain Technology? A blockchain is a type of digital ledger designed to record transactions made between different participants in a network. It is a distributed ledger that is peer-to-peer and Internet-based which contains all transactions since it was first made. In a blockchain, every entry is a transaction that signifies an exchange of value among participants (i.e., a digital asset that represents rights, obligations or ownership). Many different kinds of blockchains are being created and tested in the real world. Though most blockchains follow this fundamental structure and methodology. When one participant send the value to another, the other nodes within the network communicate with each other using a predetermined procedure to verify that the new transaction is valid or not. This mechanism is known as consensus algorithm.

When a transaction is accepted by the network, all copies of the ledger are updated with the new information. Generally, multiple transactions are combined into a "block" which is added to the ledger. Every block in the chain links together in the distributed identical copies because each block carries information that relates back to earlier blocks. Participating nodes can add new, time-stamped transactions, but they cannot be changed or removed once they have been verified and approved by the network.

Implementation and Regulatory Challenges on Adoption of Blockchain Technology in Accounting-:

Blockchain technology is inextricably linked to the accounting profession. It enables users to produce value and authenticate information rapidly and accurately without fear of being corrupted. Despite having many advantages and use cases, there are some limitations and challenges. In this paper, some of the limitations and challenges are as follows:

Scalability-:

Scalability drastically restricts the use of the blockchain technology. The technology is currently too slow and complicated to be very functional. According to certain theories, blockchain technology can "record just seven transactions per second at most." A transaction's verification takes an average of 43 minutes on the bitcoin network. Due to this, it is clear that it would be impossible to manage the requirements of a single medium-sized firm, in contrast to a large-sized firm or even multiple firms.

Regulatory issue-:

Interest in regulating blockchain operations with an emphasis on virtual currencies has been expressed by a number of states, the federal government, and international organisations. It is impossible to conclude which agencies would look into particular blockchain activity due to the widespread adoption and relative newness of blockchain technology. Mostly because the regulatory authority in this area is still being defined, and blockchain operations may fall under the purview of multiple agencies jurisdiction. A regulator will probably look into any blockchain-related activity that is related to its core business.

Privacy leakage-:

The majority of blockchains are publicly accessible databases and massively distributed. Since public blockchains are designed to be used by everyone, maintaining privacy in them is nearly difficult. Attackers can easily use publicly available information to create a link between the sender and the receiver. As far as privacy is concern, blockchain users, such as bitcoin, are less private than traditional banking. Cryptographic techniques that can stop the disclosure of confidential and personally identifying information about parties to transactions are still being investigated.

No counterparty for adjustment entries-:

Blockchain technology was created to support cryptocurrency cash flows in which currency is traded for something in value. Blockchain technology was not created to support the adjustment entries necessary by

an accrual-based accounting system. With no counterparty for transactions, there is no triple-entry, resulting in a loss of verifiability, trust, and so on.

Financial and human capacity-:

Small accounting and financial firms typically have limited resources. These businesses must rely on their traditional accounting systems to run on a daily basis because they typically lack the financial resources to adopt new technologies. In contrast to Deloitte and PwC, Most businesses lack the financial resources to analyze the emerging trends. The organization's human resource capabilities is another worrying issue. Despite the advantages, employees are so ingrained in legacy business models that it is very challenging for their employer to change their attitude toward accepting new technology.

Implementation and Regulatory Challenges on Adoption of Blockchain Technology in Auditing-:

Blockchain technology could bring new challenges to the audit profession. While traditional audit services will continue to be relevant, the methodology of auditors may change. Blockchain technology may also have a substantial impact on how auditors carry out their engagements. Furthermore, if blockchain technology becomes more extensively implemented, auditors may need to increase their skill sets and knowledge to meet the anticipated expectations of the business world. In this paper, some of the limitations and challenges are as follows:

No reversal of erroneous transaction-:

If an entity's employee transmits bitcoin to an incorrect or unauthorized address (receiver), there is currently no method to reverse such transaction. Therefore, it is necessary for auditors to evaluate whether efficient automated controls are in place to verify transactions before they are carried out.

No central authority to report cyberattack-:

As there is no central administration in blockchain, if an entity is the victim of a phishing attempt, there is no fraud department to whom to report the incident. This circumstance can also lead to the possibility of fraud. When confronted with such risk, auditors will be required to assess whether internal controls to stop and identify phishing attacks are genuinely in place and functioning as expected.

No centralized authority to verify the existence, ownership, and measurement of items recorded on blockchain-:

During an audit, it is determined whether the documentation of recorded transactions is accurate, relevant, objective, and verifiable. The acceptance of a transaction into a trustworthy blockchain may constitute adequate audit evidence for some financial statement assertions such as the transaction's occurence (e.g., that an asset recorded on the blockchain has transferred from a seller to a buyer). For instance, in a bitcoin transaction for a product, the exchange of bitcoin is recorded on the blockchain. However, the auditor might or might not be able to identify the delivered item by purely analyzing data from the Bitcoin blockchain. As

a result, recording a transaction in a blockchain may or may not provide adequate audit proof regarding the nature of the transaction. In other words, a blockchain transaction may still be:

• Unauthorized, fraudulent, or illegal

• Executed between related parties

• Incorrectly classified in the financial statements.

Data retrieval due to clients loss of private keys-:

Any virtual currency (like bitcoin) linked to a private key is inaccessible to the entity if the private key is lost. These bitcoins are effectively no longer in circulation and no longer accessible to anyone on the bitcoin network. Effective disaster recovery methods, as well as backup and restoration protocols, would help to avoid such situations. The auditor is also anticipated to evaluate such loss mitigation measures to see whether controls that address the risks connected with blockchain can be trusted.

Need to be proficient in various blockchain technologies-:

Users of blockchain technologies require an independent assessment of the risk of unidentified faults or vulnerabilities. As a result, auditors will need to learn new skills, such as technical programming languages and blockchain operations. Auditors should be aware that blockchain technology is a different type of database and that each implementation of the technology may have certain features that set it apart from others. In spite of the fact that the technology is still in its early stages, there remains a chance that a particular blockchain implementation will fall short of expectations. There are two main categories of blockchain networks in the current ecosystem: permissionless and permissioned. The most significant distinction is in determining which parties have access to the network. A blockchain can be shared publicly with anybody who has Internet connection is permissionless or public blockchain, or privately with only specified individuals i.e. permissioned or private blockchain.

Conclusion-:

Blockchain is an opportunity, not a threat, and it is likely that future accounting and auditing services will take blockchain into consideration. The introduction of blockchain technology is not only assisting businesses in transforming their day-to-day operations, but it is also significantly enhancing the efficacy of their procedures. Given that this technology is at its early stages of development, there are several challenges.The scalability of this technology is one of the significant technological issue that is preventing its progress. Without a question, blockchain benefits the accounting profession by lowering the costs of maintaining and reconciling ledgers. Reconciliation, on the other hand, can be viewed as a threat to accounting experts since blockchain is viewed as a replacement for bookkeeping. Given that blockchain technology is still in its early stages of development, it is reasonable to assume that there are still many questions about how it will affect the audit and assurance profession, particularly how quickly it will do so. Furthermore, regulatory uncertainty around the technology has contributed negatively towards its

acceptance. If this technology is fully adopted, the paradigm of the accounting and auditing model will undoubtedly change drastically.

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