# Blockchain – what does it mean for the audit?

Blockchain, the buzz word lighting up boardrooms and headlining technology conventions across the globe. From blockchain-based vaccine passports and background vetting programmes, real-time tracking of goods from origin to consumption and companies across the world now accepting payment in cryptocurrency1 – blockchain seems to have unlimited use cases and is quickly revolutionising many industries and aspects of daily life.

But what does it mean for auditors? Does the availability of unchangeable, verified information reduce the need for auditing – or just shift the focus of the auditor's responsibilities?

## What is blockchain?

First, let us quickly summarise what blockchain is. For the purposes of this article, we are confining the analysis of blockchain to its use for financial and operational information.

Blockchain is a technology that can provide real-time, permanent, and unchangeable verification for financial and operational transactions. The blockchain is a shared, digital record of transactions or information of any value between two or more parties. It is a decentralised, distributed ledger, meaning transactions are shared and replicated in real time on a wide network of computers located at every node (point in the network), providing a verifiable independent sole source of truth. Transactions are stored inside 'blocks' that

become part of a contiguous 'chain', with each block 'time-stamped' and continuously verified by the blocks that precede and follow it. This makes the ledger permanent and virtually tamper-proof — a shared source of truth that uses public and private cryptography to sign transactions digitally.

If an organisation runs their own blockchain to record financial or operational transactions, it is 'private' — meaning that the organization can write its own code for the blockchain and control who has access to it.

Blockchain provides a form of assurance through independent distribution and segregated validation using complex encryption and validation protocols where independent consensus under defined parameters is obtained, thereby validating the integrity of the records kept.

## What are the implications of blockchain for an audit?

On the face of it, blockchain could have major implications for an audit. Blockchain and other decentralised ledger technologies, if designed appropriately, could provide a permanent and immutable record of transactions. It has significant potential to boost the confidence and trust that a user has in the data.

A company's management would be responsible for developing the smart contract as part of the implementation of a blockchain-distributed ledger system and need to be able to demonstrate the controls around their use, as well as any changes and updates.

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1 Read all about the current blockchain news: [Latest Blockchain News - Cryptopolitan](). Accessed on 23 July 2021.

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No matter what system for financial reporting is used, an audit requires an auditor to obtain appropriate audit evidence over the financial statements, including accounts and transactions. Several considerations regarding the use of blockchain technology for financial reporting will remain, including:

— Identification of all relevant blockchains

— Establishing the reliability of any blockchain used. This will be influenced by several factors such as:

  – the complexity of transactions and the accuracy of the blocks used to record them

  – the methods of consensus validation used

  – the wide distribution of the network or nodes

  – the controls over change management and access to the blockchain to prevent unauthorised or inappropriate transactions

  – the design of interfaces between the blockchain and other systems used for financial reporting.

Verifying the application of blockchain consensus mechanisms or protocols may be accomplished through 'triple entry accounting' where existing double entry accounting systems are retained while blockchain ledger entries would be a 'third' entry — the result being a mutual confirmation of transaction integrity. Blockchain's ability to bring additional reliability and scalability will help to engender trust in large scale financial accounting and reporting systems.

## What impact could blockchain have on audit quality?

Blockchain has the potential to provide an unchangeable and accurate record of transactions, both financial and operational. If auditors have access to the blockchain and the reliability of the blockchain itself has been established, audit quality could be bolstered significantly using blockchain technology.

Having continual access to the chain could also move us closer to real-time auditing and continuous assurance. For example, companies will maintain a control environment around their financial systems by continuously monitoring the blockchain and identifying when a control is circumvented.

## Where do we go from here?

For blockchain to proliferate, the technology will need be taken up widely by businesses – together with a willingness to potentially share a higher level of information than is common today. It remains to be seen how companies worldwide will view this required level of transparency and adopt blockchain technology in their everyday operations – but we are already seeing some global organisations leading the pack and moving blockchain squarely beyond the hype phase. It will not be long before others follow suit.

Frequent and regular discussion among standard setters, practitioners, regulators, and other interested parties, both globally and nationally, would be well suited to monitor and develop a consensus on realising the benefits of using more advanced technologies such as blockchain in the audit.

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In short – blockchain holds exciting potential for auditors and audit firms should actively be participating in discussions with clients, regulators, and other stakeholders as more organisations adopt the technology.

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