SBT FINTECH MONTHLY NEWSLETTER

Editor's Note

BY DR. ABENA PRIMO

Dear Reader,

As you know by now, blockchains have been proposed as the solution to many applications requiring accountability and security. Auditing is a field that requires both accountability and security for its applications and, hence, blockchain applications could be suitable for use in this field.

In this article, Dr. Bonyuet explores the potential uses of blockchain for auditors. He considers how blockchain can be an ally for the auditor and as well as threat to the auditor.

After reading his article, what do you think? Send him an email (dbonyuet1@htu.edu) to discuss your ideas further.

Best wishes,

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Newsletter Highlights

BLOCKCHAIN: A THREAT OR AN ALLY TO THE AUDITOR?

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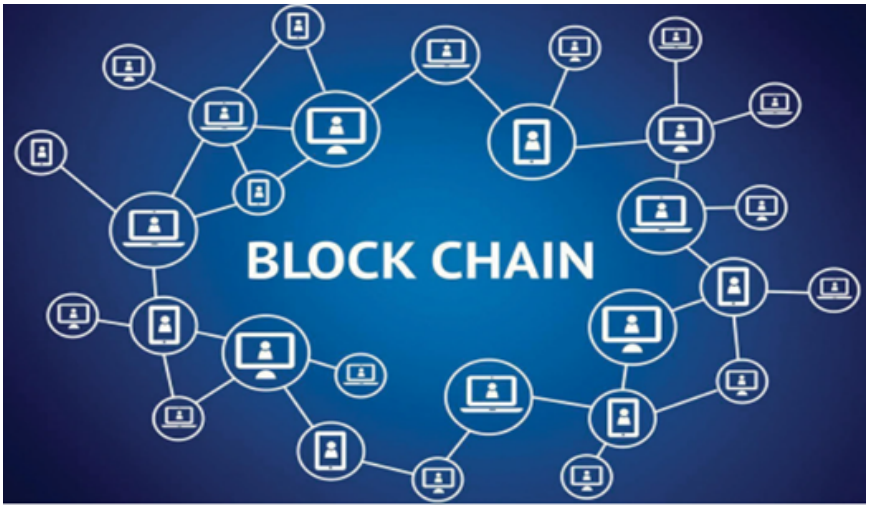
BLOCKCHAIN: A THREAT OR AN ALLY TO THE AUDITOR?

BY DERRICK BONYUET, PH.D, CFA, CFP, CPA

Blockchain has become one of the most widely hyped technologies since its inception in 2008.According to International Data Corporation (IDC), a market intelligence firm, companies are expected to invest close to $19 billion in blockchain related technologies in 2024 (Global Spending on Blockchain Solutions, 2021). Questions? Email the author at dbonyuet1@htu.edu.



OVERVIEW:
Blockchain can be defined as a digital ledger that captures transactions conducted among several parties in real-time and serves as a decentralized database where each participant keeps an identical copy of the ledger. Given the nature of the Blockchain, no intermediaries are needed to settle transactions and validation is performed by multiple users. Once a transaction has been accepted by the network, all copies of the ledger are updated. Multiple transactions are combined into “blocks” which are then chained (thus, the name of blockchain) and cannot be altered or deleted. See Figure 1 for a representation of a Blockchain structure (image on next page).

As a result, blockchain provides several benefits, including authentication of peer-to-peer transactions and automated, encrypted and real-time registry of such transactions (Blockchain technology, 2017).

RISKS TO THE AUDITOR:
Because transactions in blockchain are recorded automatically, encrypted and immutable, it is expected to become the “single source of truth” (Appelbaum & Smith, 2018). A detailed audit trail may be available along with the ability to review exceptions from an entire population rather than a sample and conduct audits on a continuous basis based on trusted data (Kokina, Mancha & Pachamanova, 2017).

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Blockchain: Threat or Ally Continued

Therefore, tasks such as reconciliations and confirmations may no longer be needed. As a result, concerns have surfaced about the need for financial audits. However, the occurrence of a transaction is one of the many assertions auditors must attest. After all, an audit requires evidence that must be relevant, reliable, objective, accurate, and verifiable. A Deloitte report (Bible, Raphael, Riviello & Taylor, 2017) reveals the following issues may still impact this transaction:

- unauthorized, fraudulent or illegal
- executed between related parties
- linked to a side agreement that is "off-chain"
- incorrectly classified in the financial statements.

In addition, because financial statements are subjected to management's estimates, auditors are still needed to perform audit procedures on such estimates. Even though the role of an auditor conducting accuracy and verification tasks may be reduced, the judgement, oversight and insight will be more critical. Thus, the focus of an audit will shift from record tracing and verification to complex analysis, such as systemic evaluation, risk assessment,

Figure 1: Representation of a Blockchain structure

predictive audits, and fraud detection. Blockchain adoption may result in increased efficiencies during the audit process as there will be a higher level of auditability on the information. For instance, as transactions are continuously recorded in blockchain, a complete track and history of items for such transactions can be generated. Even documents could be shared among related parties for cross-validation (Dai & Vasarhelyi, 2017). One of the greatest benefits from blockchain is the enablement of smart contracts. Smart contracts are computer code stored on blockchain that executes actions under certain conditions and/or criteria. Such protocols that may serve to facilitate, verify, execute and enforce the terms of a contract are not specific to blockchain.

OPPORTUNITIES FOR THE AUDITOR:

Auditors must embrace the challenges blockchain may bring in as new technologies often represent future opportunities. A Deloitte report sponsored by AICPA, CPA Canada and the University of Waterloo (Bible, Raphael, Riviello, Taylor & Valiente, 2017) reveals potential new roles for accountants as blockchain systems are standardized across industries:

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Blockchain: Threat or Ally Continued

1. Auditor of Smart Contracts and Oracles: Contracting parties may want to engage an assurance provider to verify that smart contracts are implemented with the correct business logic.

2. Service Auditor of Consortium Blockchains: Users of a blockchain system may require an independent party who can attest the stability and robustness of its architecture.

3. Administrator Function: A central access-granting administrator is required with permissioned blockchains. This function requires a trusted, independent and unbiased third party who could be responsible for verification of identity or a further vetting process to be completed by a participant before they are granted access to a blockchain.

4. Arbitration Function: Disputes are common during business arrangements and the creation of an arbitration function might not only help settle disputes among the consortium-blockchain participants efficiently but also enforce contract terms.

CONCLUSIONS

As the business world becomes more complex, auditors need to understand how Blockchain can enable effective and reliable tools to support their assurance responsibility. In addition, auditors are seen as business consultants and therefore, are expected to be well versed in all these new technologies.

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