

Blockchain technology for corporate reporting:

AN INVESTOR PERSPECTIVE

When many parties think about the impact of digitalization on corporate reporting, they think about the production of information. We at CFA Institute are also interested in how this information becomes easier for our members and analysts to consume. We are the consumers of information. This article discusses what a blockchain is and how it could be used in financial reporting. It assesses whether blockchain technology could result in information being more efficiently and effectively consumed by analysts and investors.

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A blockchain (also called a distributed ledger) is a type of shared database that creates a permanent record of transactions. The “blocks” in blockchain contain records of information:

- transactions (e.g., the date, time, and amount of a purchase),
- the digital signature of the buyer and seller of the transaction, and
- a unique identifier (called a “hash”) that allows us to tell it apart from every other block.

Each block is linked to the previous block by the hash or piece of cryptographic code that verifies it has not been changed since it was created and sets its position in the chain. The “chain” in blockchain includes the links between all the blocks. Each time a new transaction occurs, it is added as a permanent block to the chain.

A blockchain is distributed across a number of participants in a network and not under the control of a single participant. Any changes made to the data are clear to all participants. It is different from a traditional database because of the way it creates trust among the parties. Provided it has been designed and implemented correctly, the blockchain ensures that both the data and the network are resilient because it cannot be tampered with.

When used as an accounting ledger, every transaction in a company’s ledger is instantaneously available to all participants in the network. A change made by a participant in this network would be validated and reflected in everyone’s view of the ledger in one shared record. As a result, information does not have to be entered into and reconciled in multiple databases. This not only increases the speed

of transactions but also reduces human error and fraud. Such a trustworthy network ensures data security, thus improving the quality of information. Information is more timely, transparent, and accurate. This process may result in real-time updates of accounting information. Blockchain not only could be used to record and process transactions but also could increase the speed of consolidation within groups.

For privacy reasons though, companies may find private blockchains more desirable as accounting ledgers. As private blockchains are not distributed, companies don’t have to publicize their transaction ledgers. The problem with this is that while it affords privacy, it also makes private blockchains more of a sophisticated transactional database rather than the blockchains used for cryptocurrencies. A blockchain achieves maximum benefit when it is widely adopted because sufficient participants are required to ensure the security of the ledger, provide reliable verification of transactions, and prevent illicit collusions.

Furthermore, a single entity blockchain may not appear to be useful for investors. The system needs to be set up to connect with audit and regulatory users to communicate assurance. Such a system offers little benefit unless it is adopted widely. For widespread use to occur, however, we need standardization.

Currently, there is no standardized blockchain. Different chains are set up and operate differently. This is not efficient for investors. Investors need compatibility because they will not try to figure out how different blockchains work.

Blockchains need to be standardized. What do we mean by this? Consider a blockchain to be an envelope. There are contents within the envelope. Those contents need to be standardized—for example, by using XBRL. To be of real value, content and nomenclature must be consistent. For this to happen, regulators need to continue to work with industry and initiatives, such as XBRL and Legal Entity Identifier, to develop consistent naming, taxonomy, and identification for companies and company filings.

The lack of standardization leads to issues of interoperability. With an increasing number of companies and suppliers using blockchain, no standard allows them to interact with each other. It is not efficient, for example, for a supplier to interact

with a different chain for each group of customers with multiple chains, which causes issues for those seeking compatibility between the blockchains and their accounting systems, as this may limit any cost savings.

The need for privacy by companies and the lack of standardization stand in the way of widespread adoption of blockchain for financial reporting. But there are other unresolved issues. Blockchain relies on intensive computing power — and hence a lot of electricity — to run. It is also a complex technology and it takes quite some education to understand how blockchains work. The scalability issues of blockchain include the limited rate at which the network can process transactions. Since consensus is needed among the participants on the network that the transaction is valid for it to go through, blockchain is slow.

Finally, the lack of regulation created a risky environment. According to Paul Brody, blockchain leader at EY Global, regulatory approval is going to be required for any major implementation of blockchain in company accounts and reporting, which means that we won’t see a rapid adoption of the technology.

Until these issues can be addressed, the use of blockchain technology is not the most efficient way for investors and analysts to consume information.

Of course, the use of blockchain in accounting is in its infancy. It is important to monitor the progress of blockchain implementation in companies to see how companies determine whether to place data in a distributed ledger or choose to encrypt some data to balance the needs for both transparency and privacy. We also need to monitor any developments in standardization as well as where blockchain creates the most efficiencies, such as preventing fraud.

For the moment, blockchain is well suited for tracking diamonds and other goods for which the buyers want to know the provenance — that is, the origins and previous owners — but it is not best suited for financial reporting.



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