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Blockchain set to disrupt business as usual

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Technology is changing at an unprecedented rate. Not only will these changes affect the way we do business, but some changes – such as blockchain – will significantly affect the amount of time spent performing audits.

Growing public awareness with respect to blockchain technology has sparked interest from major governments, financial institutions and individuals around the world. First established through Bitcoin, blockchain technology continues to rapidly evolve and solve issues presented in today's world. While the potential uses of this technology appear boundless, only one thing is certain: blockchain is poised to socially revolutionize society's current means of exchange.

What is blockchain?

In its most simple form, blockchain technology is a means of exchange, whereby ownership of virtually anything can be transferred in a way that is distributed, decentralized, consensus based and immutable. These four characteristics significantly mitigate the risks associated with fraud and authenticity.

Distributed ledger technology

The distributed attribute of blockchain allows all participants of the blockchain to have access to the ledger where transactions are recorded at any time, whether the ledger is public or private. This transparency is crucial, as it ensures that fraudulent activities are identified and rejected.

Decentralization

Blockchain technology is decentralized, meaning that no one party owns the blockchain. Instead, participants in the network collaborate through the use of resources such as electricity and computing power to accept or reject transactions. By having

participants work together to accept and reject transactions, the need for many centralized intermediaries no longer exists.

Consensus based

As blockchain is decentralized with no single party in control, a system must be implemented to ensure that consensus amongst the community is achieved. This is crucial to ensure that fraudulent transactions are identified and rejected. The way in which consensus is achieved differs dependent on the type of blockchain. The current, most prevalent use of consensus would be through the use of "miners" (referred to as the Proof of Work protocol) who confirm transactions are valid by solving complex algorithms, which are then re-confirmed by the group of transactions making up that specific block. Emerging consensus protocols include Proof of Stake, Delegated Proof of Stake and Delegated Byzantine Fault Tolerance.

Immutable

Blockchain is immutable, which means a block is almost impossible to tamper with once it is added to a blockchain. This is achieved through two procedures: hashing and timestamping. These two concepts ensure that each block is added to the chain in chronological order, leaving a fully traceable audit trail.

Ethereum

Like many other technologies, blockchain has not remained static, but rather continues to evolve. Ethereum – a type of blockchain that has been built using the foundations of Bitcoin's blockchain

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– has developed a concept known as “smart contracts.” A smart contract is an arrangement between two parties that can facilitate, verify and enforce the performance of a contract by both parties without intervention by third parties. This revolutionary idea allows blockchain to be used far beyond the realm of currency, allowing virtually anything to be exchanged without the use of an intermediary.

Ethereum was developed with the understanding that applications, referred to as dApps, could be built on top of it. At the time of this writing, there are over 1,000 dApps built on top of the Ethereum blockchain with varying use cases from voting to data storage. Think of Ethereum as an operating system such as Android or iOS, with applications (dApps) such as Facebook and online banking built on top of it. Ethereum’s revolutionary platform is significantly changing the landscape of blockchain, by creating thousands of potential use cases that could be valuable in today’s advancing digital world.

VeChain

VeChain aims to use blockchain technology to accurately track items along the supply chain to allow more effective collaboration with vendors. VeChain aims to accomplish this by assigning identities to items in the form of QR codes and RFID tags. Once items are added to the blockchain, accompanied by their unique identity, any member along the supply chain is able to track its movement. As items are passed through more intermediaries, each transfer is added to the blockchain, essentially creating a “story” of each item’s life. This enforces the authenticity of each item, ultimately mitigating the risk of fraud. For example, Walmart trialed a blockchain (like VeChain) to track fruit along the supply chain during 2017, concluding that the time to trace the mangoes to its original source was reduced from 7 days to 2.2 seconds. Being able to interact with the blockchain throughout the process proves the sheer transparency of the system.

Auditing and blockchain

Audits provide an independent assessment of financial statements by assessing the credibility of management’s assessment of operations. Credibility is assessed, in part, by considering the risk that fraud may have upon the existence, accuracy and completeness of each material financial statement line item. If blockchain provides this credibility – by ensuring that transactions exist, are accurate and complete, while mitigating the risks associated with fraud and authenticity – how will audits evolve in the future?

Technology advances are not new to the auditing profession. For many years, the auditing profession has witnessed a trend toward computer assisted audit techniques (CAAT’s) to further enforce the integrity of client data. Blockchain can be viewed as an exponential improvement over CAAT’s, which are already seen as a tremendous improvement over traditional audit approaches. As audits focus heavily on data verification and validity, blockchain integration will drastically reduce the amount of reliance on humans to confirm this information. As all information is stored securely within the blockchain, assertions such as rights and obligations of assets or liabilities, existence of assets and completeness of liabilities can be confirmed immediately. While blockchain harnesses the power to automate many processes, human involvement (through professional judgement) can never be fully eliminated.

Based on this, we expect to see a significant reduction in the time spent performing audits, as the ability to confirm the existence, rights and obligations and completeness of transactions becomes easier. As a result, auditing firms will spend less time performing compliance services and more time being a trusted business advisor to their clients.

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Blockchain technology will prove extremely disruptive to many industries, as it harnesses the power to remove many intermediaries embedded within society. Be proactive, not reactive. Reach out to Collins Barrow today to see how blockchain technology could benefit you or your organization.

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