



# Blockchain technology: Transparency and traceability as the cornerstones of trust

## Audit insights

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Today's audit is driven by automation and technology. Whether we are dealing with workflow automation, transaction flow, or data and analytics, by auditing technology with technology, you provide businesses with greater insights and comfort into your processes. Technology helps manage risk and quality by helping to provide a more holistic view of the audit environment. The pace of technology adoption for reporting and accounting is rapidly advancing, and at the [forefront](#) of this advancement is Digital Ledger Technology (DLT) also known as Blockchain.

According to survey findings from [Enterprise Reboot: Scale digital technologies to grow and thrive in the new reality](#), from KPMG International and HFS International, "more than half of business executives surveyed are investing in blockchain because of its ability to facilitate trust through transparency and traceability."<sup>1</sup> Blockchain technologies hold great promise for organizations from both a quantitative and a qualitative perspective: they increase efficiency from transparent records with a single source, enhance data integrity, reduce loss, improve customer experience with faster processing, and offer the potential for higher availability of capital and lower costs of doing business.<sup>2</sup>

## Blockchain 101

Blockchain allows transactions to be recorded in a shared ledger in a secure, immutable, and unalterable record. Blockchain technology enables secure transactions because they are encrypted. The recording of transactions into the blockchain first requires a consensus of the affiliated members or systems as to the validity of the transaction, and each blockchain has a defined consensus model.<sup>3</sup>

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<sup>1</sup> KPMG International and HFS Research, *Enterprise Reboot: Scale Digital Technologies to Grow and Thrive in the New Reality*, August 2020, <https://assets.kpmg/content/dam/kpmg/xx/pdf/2020/08/enterprise-reboot.pdf>.

<sup>2</sup> KPMG International, *Getting Practical: Real Use Cases for Blockchain and Distributed Ledger Technologies in the Asset Management Sector*, July 2017, <https://assets.kpmg/content/dam/kpmg/xx/pdf/2017/07/blockchain-brochure.pdf>.

<sup>3</sup> KPMG LLP, *Consensus: Immutable Agreement for the Internet of Value*, June 2016, <https://assets.kpmg/content/dam/kpmg/pdf/2016/06/kpmg-blockchain-consensus-mechanism.pdf>.

While it is most frequently thought of in concert with cryptocurrency, that is just one application of blockchain technology applicable for business applications. Cryptocurrency in the currently understood sense is a public application of blockchain; everyone can see it and participate. You can see the blockchain and transactions that have occurred and are occurring. However, private blockchains are also becoming more prevalent in use between businesses and within industries. In a private blockchain, businesses are permissioned by the business to participate. This allows businesses to take automation between companies and within industries to the next level.

For businesses, blockchain can provide multiple organizations with a private space to interact in a secure environment. The basic blockchain technology can be viewed as a series of secure if/then statements – "Smart contracts" allow companies to set up a series of agreements, formalized in if/then statements, that execute when information is presented, which allows transactions between the participants to occur automatically.

## Accelerating adoption across industries

Blockchain is being implemented across industries. For example, in the insurance industry, businesses with certain insurance coverage can use blockchain for seamless integration across insurance and reinsurance policies to ensure instantaneous payments between claims. Executing "smart contracts" and automating the related series of transactions without human intervention reduces the cost to the company, and the transactions can run uninterrupted.

Blockchain is also being used to track supply chains and increase food safety. With the ability to know where and when a product was harvested, what warehouses it went through, and where it was distributed, if there is a safety concern, the organization will be better equipped to quickly and accurately assess where the issue occurred. Implementing this technology enables more targeted assessment of what specific products may need to be recalled, as well as reduction in cost by not recalling inventory not affected by the food safety concern.

## Risk assessment and mitigation

Organizations looking to adopt blockchain technology should make sure they have mature control frameworks in place. The technology creates a number of new risks and can even help to mitigate those risks, whether it's by promoting accountability in those transactions or enhancing record integrity. Blockchain can also provide controls around a given transaction.

Organizations need to understand the risks and how they will approach them as they adopt blockchain technology within their processes. Consider:

- Do you trust your transactions are accurate, complete, and valid?
- Do you trust the data being fed into the blockchain, which drives automated transactions?
- How will you ensure scalability and interoperability of these new blockchain-enabled processes with your existing processes?

Open communication is key to addressing the challenges of building agreements with other companies and partners around the execution rules within a blockchain application.

## Looking ahead

More and more, organizations are evaluating how technology such as blockchain can be used to increase trust and transparency across their businesses. Current and existing financial systems are likely to become blockchain-enabled, and some business processes may be replaced. While blockchain integration across the world is growing, the regulatory environment around blockchain, including cryptocurrencies, continues to evolve and remains a grey space. In fact, there are country-by-country and state-by-state differences in [blockchain regulation](#).<sup>4</sup> It is crucial that finance leaders understand the technology opportunities of blockchain<sup>5</sup> and the related risks associated with it. Both will be critical to successfully leveraging blockchain to achieve greater insights and accountability.

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<sup>4</sup> Louis Myers, "United States Blockchain and Cryptocurrency Resources," *In Custodia Legis: Law Librarians of Congress* (blog), October 22, 2020, <https://blogs.loc.gov/law/2020/10/united-states-blockchain-and-cryptocurrency-resources/>.

<sup>5</sup> KPMG LLP, *Cracking Crypto Custody: Custody Businesses Founded on Four Key Building Blocks Will Be Poised for Growth in the Expanding Crypto Ecosystem*, 2020, <https://advisory.kpmg.us/content/dam/advisory/en/pdfs/2020/kpmg-cracking-crypto-currency.pdf>.