

BLOCKCHAIN: WHAT YOU NEED TO KNOW

Northern Trust believes blockchain has the potential to drive major industry-wide improvements and opportunities. This is supported by a wider industry view that blockchain technology could significantly change how we interact and conduct financial transactions.

HOW MIGHT IT HELP YOU?

In the context of financial services, blockchain could bring about a range of positive improvements for you.

- Blockchain could improve transactional efficiency, reduce reconciliations, shorten settlement cycles and make it easier for you to manage liquidity.
- Combined with smart contracts – self-executing computer programs that only run if certain conditions have been met – blockchain has the ability to create standard business processes, contract execution and electronic documentation.
- Blockchain can add another line of defense to combat fraudulent activity through transaction encryption and improved identity validation (e.g., “know your customer”/anti-money laundering) on top of existing security measures.
- Through a shared ledger containing commonly validated, unalterable records, blockchain can enable more accurate and timely reporting for business and regulatory purposes.

Northern Trust is helping drive the blockchain conversation, contributing to efforts in multiple areas.

- Academia – Engagements with Turing Institute, Harvard Law
- Associations – Chair of the Association for Financial Markets in Europe’s Future Technologies Working Group, Vice Chair of the Post Trade Executive Committee; Chair of the SWIFT UK Securities Group; advisor to the International Securities Services Association’s FinTech Committee
- Regulators/Governments/Central Banks – Working with multiple jurisdictions in both advisory and project capacities
- Consortia – Leadership roles in both large (R3 Consortium) and more focused groups.

BLOCKCHAIN IN BRIEF

The Context

Over the past three years the financial services industry has shown increasing interest in blockchain, a new technology that might help overhaul and reshape traditional banking and securities activities. Blockchain’s seamless capabilities support the secure updating and sharing of ledgers across a trusted network of parties. It also offers the potential to improve efficiency, liquidity management and settlement cycles while reducing financial risk and compliance costs.

The Challenge

Blockchain technology developments are progressing at an unprecedented pace. But blockchain still needs to reach a level of maturity where the industry and regulators are confident safe, low-risk implementations can be delivered. Industry adoption will require significant collaboration, new technical and security standards, as well as legal and regulatory adaptation.

Our Take

Northern Trust believes blockchain has the potential to drive industry-wide changes to current operating models. As confidence grows in the technology, we expect to see adoption across larger-scale implementations. The increasing industry collaboration required for these developments also will lead to wider-reaching business change. Our participation in industry, regulatory and technology initiatives around blockchain will help us explore how we can better serve clients using this new technology.

WHAT DOES BLOCKCHAIN DO?

The excitement around blockchain comes from its seamless, simultaneous integration of transactions, settlements and ledger updates directly between multiple parties. It creates a secure way to share information and conduct transactions without the need for a single, central party to approve them. Only authorized network members have the ability to see details of their own transactions, providing confidentiality and privacy. All updates to the shared ledger are validated and recorded on all participants' shared ledgers, which drives security and accuracy. Because all updates to the ledger are unchangeable and auditable, network members can accurately trace their past activity.

WHAT CAN IT DO FOR FINANCIAL SERVICES?

Many leading financial services firms now recognize blockchain technology has evolved to the stage where it could help overhaul and reshape traditional industry structures and operating models. The industry sees potential value in its unique combination of distributed shared ledgers, permissioned trusted networks, immutable encrypted records, privacy, confidentiality and real-time transaction settlement.

Because many of its benefits and opportunities can only be realized through collaboration, blockchain has triggered an unprecedented level of financial services industry cooperation involving investment banks, global custodians, asset managers, exchanges, clearing houses, central banks and regulators.

These institutions – together with industry bodies, consortia and trade associations – are actively studying how to leverage blockchain technology. Through our participation among these groups, Northern Trust is helping drive research, experiments and prototypes in the areas of:

- digital identities
- central clearing
- security and governance
- collateral management
- real-time data and reporting
- asset safety
- account structures
- ledger interoperability
- peer-to-peer transactions
- settlement efficiency

For good reason, regulators in many leading jurisdictions have taken notice of blockchain's potential impact. They have invested in blockchain innovation laboratories and an increasing number are establishing information-sharing agreements to build knowledge and practical expertise. Northern Trust is taking a leading role alongside these regulators to examine how the regulatory landscape should evolve using new technologies to increase efficiencies and streamline regulators' oversight and supervision.

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WHAT MORE CAN WE EXPECT TO SEE?

Blockchain's impact is not solely limited to financial services – a variety of uses are being developed by many industries (e.g., insurance, shipping, manufacturing, legal) and national agencies. Because the technology is rapidly evolving, Northern Trust has adopted a considered approach as we critically evaluate its practical uses and implementation. We are engaging with a number of firms and institutions to thoroughly examine blockchain and provide a greater level of understanding around the technology, its applicability and the value for our clients. For this to be successful in financial services it will be important to establish common standards, protocols and integration with traditional infrastructures. Cross-industry efforts to define and establish these necessary global standards are already underway.

At Northern Trust we will continue to research, evaluate and influence how blockchain and other new technologies can be embraced and change not only financial services but how we serve you. We remain committed to actively engaging with the industry, regulators and financial technology innovators and will continue to communicate further developments.

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A number of small-scale blockchain implementations have been launched over the past two years involving:

- proxy voting
- international payments
- asset issuance
- precious metals settlements
- company registrations
- private equity
- digital identities

Several central banks, central clearing and settlement infrastructures have committed sizeable research and development investments to evaluate the technical feasibility and business cases for major platform replacements.

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