

SMALL INDUSTRIES DEVELOPMENT BANK OF INDIA PILOTS TOKENIZED COLLATERAL NETWORK ON BLOCKCHAIN

Small Industries Development Bank of India is a state-owned institution providing financial assistance to India's micro, small and medium enterprises, called MSMEs. SIDBI plays a vital role in developing the MSME sector in India, providing assistance through a range of financial products and services, including loans, guarantees and venture capital.

SIDBI and [Infosys](#), what I consider a global leader in blockchain services, have now partnered to develop a blockchain-based platform for the MSME sector in India. I recently spoke with Paramendra Tiwary, CTO at SIDBI, to receive an update on the project, which is still in the early stages but can potentially impact the Indian economy significantly.



Paramendra Tiwary,
CTO at SIDBI
Source: Infosys

DUPLICATE PLEDGING OF COLLATERAL INCREASED DRAMATICALLY IN RECENT YEARS

Since institutional lenders have a siloed view, a borrower can get away with duplicate pledging of the collateral that results in lender losses and a deterioration of trust. As we have seen in the United States, trust is an asset a bank can ill afford to lose.

The use of blockchain technology in banking, while not a panacea and still in its infancy, can potentially remove vulnerabilities and reduce credit risk.

Blockchain is a distributed ledger in which each transaction is updated simultaneously across all nodes as a new "block." All participants see the transactional record simultaneously across the chain. Each block in the chain has a timestamp and other identifying data to prove who made which changes and when. Verified transactions recorded on the chain are irreversible and immutable, making it impossible for anyone to tamper with data without leaving digital fingerprints.

Any new information added on a block can be easily reviewed and confirmed as accurate by all parties when compared to a previously confirmed version. The iterative trail of information on the blockchain, along with the ease of comparability, streamlines data requests and reviews and helps to combat fraud.

REDEFINING INSTITUTIONAL LENDING WITH BLOCKCHAIN

The [Infosys blockchain practice](#) has a strong track record, with extensive advisory and implementation experience across multiple industries. In particular, Infosys has a significant presence in the financial services sector, and is an industry leader in Blockchain implementations in Capital Markets. Infosys works with a variety of organizations, including investment banks, market infrastructure providers, custodians and institutional lenders.

The initial use case for SIDBI was the security interest information exchange on blockchain. Security interest is pool of collaterals that secures the lending. The platform is a multi-party platform, where the security interest details flow from the borrower to the lender, and the credit bureau furnishes the credit check details. The project aims to create a gold standard in institutional lending by establishing a single source of truth for collateral information among borrowers like non-banking financial companies, called NBFCs, institutional lenders and credit bureaus.

In case a loan between Lender and Borrower turns bad then Lender could recover the dues by liquidating those underlying loans in Security Interest. After storing the security interest information on the blockchain, it becomes tamper-proof and unchangeable. platform Lenders will have a comprehensive view of all loans being pledged by borrowers. Credit Checks details from Credit Bureau will act as an additional layer of due diligence on the pledged loans. When the lender approves collateral information relating to regulatory compliance, it is written to a block and becomes immutable. The record thus becomes the baseline for any future iterations.

BENEFITS OF ASSET TOKENIZATION

The project required Infosys to design a tokenized collateral network. Tokenization is becoming increasingly popular because it allows for greater liquidity and reduced ownership costs. The tokenization of assets involves the creation of digital tokens representing physical assets issued on the distributed ledger. The tokens carry the rights of the assets represented, acting as a store of value. The tangible assets continue to live in the real world and, in the case of physical assets, are placed in custody to

ensure that they constantly back the tokens. In line with this, there is an increasingly important role for the custodianship of assets in tokenization transactions.

Asset tokenization may also bring increased transparency for transactional data, issuer information and asset characteristics thanks to enhanced information recording and sharing.

TCNs represent each loan account as a NFT that allows tracking loan accounts across multiple Security interests during its life cycle & also provides proof of ownership of the loans to the lenders.

The blockchain will also increase transparency regarding regulatory compliance and interactions with regulators. Automatic enforcement of programmed regulatory restrictions is possible, and the regulator is automatically notified through smart contracts whenever regulations are modified or turned off.

OUTCOMES OF THE SIDBI-INFOSYS PROJECT

The system has resulted in near real-time information exchange among the relevant parties. It has eliminated the possibility of duplicate use of an underlying loan for a security interest, and optimized administrative overheads for managing underlying loans. Reduced operational costs also came thanks to a reduction in manual verification using smart contracts. Smart contracts are self-executing computer codes with embedded transaction rules, such as interest rates, loan amount and contract expiry date, that are automatically executed when certain conditions are met.

Paramendra Tiwary, Chief Technology Officer, SIDBI was optimistic about the new blockchain solution that was jointly developed with Infosys. “The implementation has immense potential for the financial ecosystem. This solution will be a step forward in enabling real time security information sharing”.

WRAPPING UP

Could blockchain disrupt the banking industry like Netflix has disrupted cable television, or Airbnb has disrupted hospitality? Probably so, but not anytime soon, as banks are only just beginning to explore its potential. The SIDBI approach has been to conduct a modest pilot, create a basic blockchain infrastructure and generate interest and support from institutions and regulators.

In addition to the platform, SIDBI and Infosys are also planning together on several other blockchain-based initiatives. SIDBI is creating a buzz around the initial phase of the project. Even the regulatory body, the Reserve Bank of India, has shown keen interest in the potential of blockchain for the entire Indian financial ecosystem. For example, in Dec 2022 RBI launched the retail segment of a [Central Bank Digital Currency](#) pilot that has components of blockchain technology.

I look forward to a future update as SIDBI gets all the stakeholders onto the blockchain, which will then become a single source of truth, eliminating double pledging and other types of incumbent challenges.

IMPORTANT INFORMATION ABOUT THIS PAPER

CONTRIBUTOR

[Patrick Moorhead](#), CEO, Founder and Chief Analyst at [Moor Insights & Strategy](#)

PUBLISHER

[Patrick Moorhead](#), CEO, Founder and Chief Analyst at [Moor Insights & Strategy](#)

INQUIRIES

[Contact us](#) if you would like to discuss this report, and Moor Insights & Strategy will respond promptly.

CITATIONS

This paper can be cited by accredited press and analysts but must be cited in-context, displaying author's name, author's title, and "Moor Insights & Strategy". Non-press and non-analysts must receive prior written permission by Moor Insights & Strategy for any citations.

LICENSING

This document, including any supporting materials, is owned by Moor Insights & Strategy. This publication may not be reproduced, distributed, or shared in any form without Moor Insights & Strategy's prior written permission.

DISCLOSURES

Infosys acquired license to use this paper. Moor Insights & Strategy provides research, analysis, advising, and consulting to many high-tech companies mentioned in this paper. No employees at the firm hold any equity positions with any companies cited in this document.

DISCLAIMER

The information presented in this document is for informational purposes only and may contain technical inaccuracies, omissions, and typographical errors. Moor Insights & Strategy disclaims all warranties as to the accuracy, completeness, or adequacy of such information and shall have no liability for errors, omissions, or inadequacies in such information. This document consists of the opinions of Moor Insights & Strategy and should not be construed as statements of fact. The opinions expressed herein are subject to change without notice.

Moor Insights & Strategy provides forecasts and forward-looking statements as directional indicators and not as precise predictions of future events. While our forecasts and forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could cause actual results to differ materially. You are cautioned not to place undue reliance on these forecasts and forward-looking statements, which reflect our opinions only as of the date of publication for this document. Please keep in mind that we are not obligating ourselves to revise or publicly release the results of any revision to these forecasts and forward-looking statements in light of new information or future events.

©2023 Moor Insights & Strategy. Company and product names are used for informational purposes only and may be trademarks of their respective owners.