

Fraud , Payments , Technology

Could Blockchain Help Boost Cashless Transactions in India?

RBI Appoints Group to Study the Role the Technology Could Play

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The Reserve Bank of India is forming an expert committee under the Hyderabad-based Institute for Development and Research in Banking Technology to study the merits of using a blockchain approach - referring to the distributed ledger technology that supports cryptocurrencies such as bitcoin - to help support a shift to more cashless transactions.

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Dr. A.S. Ramasastry, director of IDRBT, says blockchain could play a role in a more decentralized financial system. "It's too preliminary to discuss how it ensures a secure transaction; we're just conducting a study and [creating] a research centre on payment systems to be set up at IDRBT," he says.

Some security leaders contend that blockchain will, indeed, prove essential to transforming the Indian financial system as part of the effort to move away from heavy reliance on cash-based transactions.

"Bank transfers and settlement of payments normally take three days to weeks; blockchain-based payment verification systems secured by multisignature technology take less than 10 minutes, while guaranteeing top-tier security," says Ashok K. Agarwal, head of IT auditing at DBS Bank.

But others say that several issues, including data security concerns, scalability issues and regulatory oversight, would need to be addressed before blockchain is widely implemented in the Indian financial system.

Relevance of Blockchain to Indian Banks

Blockchain is a shared transaction register available as a publicly shared database with a sequential record of transactions and "can serve as an effective tool for transaction processing, settlement and coordination among different parties in the payment chain," says Sriram Natarajan, chief risk officer for cards and payments at Quattro Global Services, which offers business processing services.

Blockchain technology eliminates the need for a transaction intermediary, such as a clearinghouse or financial establishment, thus facilitating quick, secure and inexpensive exchanges, Natarajan says.

Seven banks - Bank of America, Barclays, Citigroup, Goldman Sachs, JP Morgan Chase, Santander and UBS - are already using blockchain to support certain cross-border transactions, *Fortune* reports.

Meanwhile, India's ICICI Bank is establishing a digital division to harness blockchain technology, according to news reports. The bank reportedly will create the new position of chief technology and digital officer.

This new officer "will report directly to me and be in charge of a newly created team called the Technology and Digital Group that will work solely on improving the bank's digital reach and the technology it offers to its customers and employees," Chanda Kochhar, CEO of ICICI, said in a recent interview with Mint.

Agarwal at DBS contends that blockchain technology "will assist banking, providing a lower-cost platform, with more transaction security and scalability. For example, in imports/exports, the bank can create a link from the point where exports get made and certificates received to the point of confirmation, while another group of banks provide funding."

H.R. Khan, RBI's deputy governor, said at a recent presentation: "Blockchain technology has a significant role to play because it focuses on a decentralised financial system."

Khan notes that Indian consumers lack incentives to use card transactions rather than cash. So RBI will implement a customer liability framework to ease concerns about the risks of using non-cash transactions. "It would define the liability of customers as well as the banker for unauthorised use of debit and credit cards, which will encourage customers to make card based transactions," Khan says.

Mumbai-based Dinesh Bareja, COO of Open Security Alliance and founder of India Watch, says, "I am sure the risk of fraud is substantially controlled with the use of this technology as there is more transparency in transactions," says Bareja.

Constraints of Using Blockchain

Some blockchain critics, however, question whether the technology is ready for widespread adoption and whether it truly offers upsides that cannot be achieved using more conventional means. And Quattrro's Natarajan says it remains unclear how the financial services industry would shift from the present regulatory regime to a quasi-autonomous setup that takes full advantage of blockchain.

Other issues, Natarajan says, include:

- **Updates:** For the blockchain to be perceived as a strong alternative system, the current technology will require modifications and improvements in design to address fundamental concerns.
- **Borders:** Cross-border legal issues and lack of consistent application of rules will need to be addressed.
- **Third parties:** Third parties operating blockchain infrastructure will need to tackle legal and regulatory issues.
- **Scalability:** The scalability limitations of the blockchain will need to be reviewed.
- **Crime:** Blockchain will need to incorporate controls to address money laundering, illegal financing and all the risks associated with the Dark Web.

"Support of research, design and development teams will be the biggest challenge for adoption and growth of blockchain technology," says Bareja of the Open Security Alliance.
