Blockchain tech could help prevent frauds like at PNB

The adoption of blockchain by India's banks could help avert frauds such as the one at Punjab National Bank as the disaggregated and transparent nature of the technology, which updates information across all users simultaneously, would have ensured that various officials would have instantly been alerted to the creation of the letters of undertaking (LoUs), according to bankers and blockchain specialists.

'Immediate notification'

"Transaction reconciliation systems at present do not result in immediate notification," Mrutyunjay Mahapatra, Deputy Managing Director and Chief Information Officer at State Bank of India, told *The Hindu* . "Using blockchain, all parties on the chain will be immediately notified about a transaction."

Blockchain, a distributed ledger technology originally developed as an accounting system for the cryptocurrency Bitcoin, is being researched across the banking and financial services industries for the potential benefits it may offer in an increasingly digitised business environment.

Central banks including the U.S. Federal Reserve and the Reserve Bank of India have been examining the technology to understand the regulatory challenges it may pose.

"Blockchain potentially has far-reaching implications for the financial sector, and this is prompting more and more banks, insurers and other financial institutions to invest in research into potential applications of this technology," the RBI's Working Group on FinTech and Digital Banking said in a report. "Market participants in other securities markets are exploring the usage of blockchain or distributed database technology to provide various services such as clearing and settlement, trading," the report noted. "Indian securities market may also see such developments in the near future and, therefore, there is a need to understand the benefits, risks and challenges such developments may pose."

Implementation at SBI

SBI was convinced of blockchain's utility, especially its potential to improve internal fraud monitoring, and had already implemented it in its reconciliation systems and in several cross-country payment gateways, according to Mr. Mahapatra. "In blockchain, from the source system it will try to match the transactions, so one can immediately verify any transaction using blockchain."

Suveer Kumar Gupta, CEO of Shivalik Mercantile Cooperative Bank said blockchain would ensure easy tracking of entries."If the LoUs were on the blockhain, then they would have been there for everybody to see, and every entry into the chain leaves a clear record of who made that entry, and where."

Blockchains, Mr Gupta explained, are immutable and distributed ledgers, which means that anything recorded on them cannot be changed or deleted, and is instantly uploaded to all users on that blockchain.

"If my bank wants to lend to a borrower, I need to know what all he has borrowed from other institutions as well. For that, we have the CIBIL score at present, but that data is prone to human error."

However, Mr. Mahapatra pointed out that simply depending on technology to prevent frauds is

fraught, since they take place at the human level, where an official with the correct authentication can misuse the system.

"The modus operandi of the fraud as it appears right now is that somebody used all the authentication methods and it was compromised at the user level," Mr. Mahapatra said. "If that is the case, then any technology can be hoodwinked. Here, what was given into the system is not in doubt, the one who gave it into the system is in doubt."

Still, blockchain's technology is such that even human error can be greatly mitigated, Kartik Mandaville, CEO of SpringRole, a blockchain solutions company said. "Blockchain can fix this by having everything linked to the same database."