

# Will the RBI-Issued Digital Rupee Based on Blockchain Technology Be a Big Boon For India?

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Along with the central banks of many other countries, the Reserve Bank of India is also planning to introduce a blockchain-based digital currency. This move has been pending for long, as central banks have watched, with some measure of alarm, the astounding growth in cryptocurrencies and their spread in various kinds of transactions. Open, "permission-less" cryptocurrencies, like Bitcoin, are generated, held, and transacted upon by people all over the world. No central bank has any control over it, cannot determine its exchange value, cannot "demonetise" it, cannot check its inflation or deflation, and cannot control its issuance. These are things central banks can do with "fiat" currencies, like the Indian rupee: they issue, own, distribute, fix the exchange rate, and determine the legitimacy of all rupee notes and coins.

With the introduction of a central bank digital currency (CBDC) in India, are we all likely to be better off? The question requires inquiry into the nature of these currencies and how they will disrupt our normal ways of dealing with currency.



A CBDC is the legal tender issued by a central bank in digital form.

As compared to cash, in addition to the decentralised nature discussed above, CBDCs have many differences. For one, they cannot be carried around like coins or notes in purses or pouches, they have to be held in sophisticated computing devices, like smartphones or tablets. There will be a cost associated with simply obtaining the device that will hold the currency and reasonable processing power of the devices (for mining, the technical term for processing cryptocurrencies), whereas cash notes and coins are available free of cost or technical requirements. Second, cash transactions are anonymous, nobody knows who gives or receives cash unless they are made through banks (by using cheques or electronic transfers), whereas CBDCs will be potentially traceable, though transactions can be pseudonymous. Third, when exchanged, cash requires physical contact, though CBDCs can be exchanged electronically.

Finally, today everybody understands cash holding and transacting well, though CBDCs are poorly understood, and will take some time for people to understand. Interestingly, many of these advantages of CBDCs are already offered by digital money through wallets and UPI, however, the basic underlying framework continues and the purpose remains divergent.

While mobile payment transactions are traceable too, like CDBC, the purpose of these payments is to perform a digital mirror of its physical counterpart – the cash in banks. The regulatory control for mobile payments is centralised and by the authorising bank or wallet, unlike the decentralised nature of any cryptocurrency where the regulatory control is not the only check but authentication is ensured by the participating nodes/users by design.



## CBDC

Yet, digital wallets provide the closest practice platform for CBDC to inexperienced citizens. Our work on digital wallets and payments systems, like Paytm and UPI, shows that people have been slow to adopt such payment methods, mainly because they are unsure of the risks involved, their fear of government scrutiny, the safety of these wallets, and also understanding the nature of the convenience that is enabled. These constraints and fears will emerge for CBDCs as well. Digital payment systems have seen a growth during times of crisis, for instance, when demonetisation was imposed in 2016, or when the pandemic forced lockdowns and people were unable to access cash. When forced in this manner, people adopted digital payments, but, as in the case of demonetisation, many reverted to cash as the situation eased. Though these systems offer convenience, they are also hard to use because they only work with smartphones, require a bank account, and require some level of sophisticated knowledge of technology.

With the undeniable overlap of the user-side experience of CBDC with digital wallets, we can expect similar conveniences and barriers to its future path. It is likely to cater to the educated and technology-savvy users, particularly modern corporations and businesses, but the replacement of extant modes like cash and traditional banking is questionable. RBI will do well to introduce a CBDC in India, but

for it to be adopted and widely used by citizens across the board will take some work and time.

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