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WHY ARE CENTRAL BANKS AND GOVERNMENTS LOOKING AT ISSUING STATE-BACKED CRYPTO-CURRENCIES?

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Fiat currencies are already digital

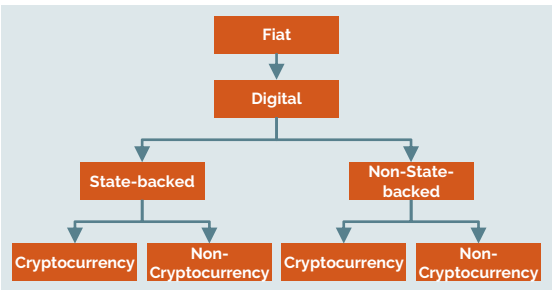
Contrary to cryptocurrency, which is a virtual currency with cryptography and based on blockchain technology, fiat currency is "legal tender" backed by a "central government." It can take the form of physical dollars – for example paper Federal Reserve notes, or it can be represented electronically, such as with bank credit. The government controls the supply, you can pay your taxes with it and almost every country today issues fiat currency.

With the growth of electronic commerce, electronic payments and online applications, we pay more and more with card or wire transfer, we have very limited cash in our pockets and online payments – such as Paypal and Venmo – are getting market shares. That's why we say that fiat currencies are digital already. Plus, as a digital currency is the digital version of a fiat currency, USD, EUR etc. are digital currencies already.

Same as for fiat currencies, those digital currencies are different from virtual currencies, which are not backed by a state. Digital fiat currency exists in every bank transaction or credit card purchase today and is tied to physical fiat currency and thus controlled by governments.

In a growing cashless world where your deposits in commercial banks are already digital and where fiat currencies are already digital, why are Central Banks and governments looking at issuing state-backed crypto-currencies?

Already signs in store windows read "cash not accepted", so should central banks issue a new digital form of money 3.0? Should we consider a state-backed token, or perhaps an account held directly at the central bank, available to people and firms for retail payments? A digital currency would be a liability of the state, like cash today, not of a private firm. It could satisfy public policy goals, such as (i) financial inclusion, and (ii) security and consumer protection; and to provide what the private sector cannot: (iii) privacy in payments.



Note that private currency projects like Facebook's Libra differ from fiat digital currencies development projects.

State-backed crypto-currencies – October 2019

While some politicians such as Germany's federal finance minister supports the digitization of euro as a good opportunity for the European financial center and its integration in the world financial system, lots of economists are against private blockchain digital currency projects like Facebook's Libra. The main argument is that the power of currency issuance should reside in the hands of the state and that Governments issuing a state-backed crypto-currency would prevent from leaving the field to China, Russia, the U.S. or any private companies.

Fiat digital currency functionalities are valuable for Governments

Crypto-fiat currency brings lots of value for governments, such as providing a highest degree of security and enhancing trust in digital ecosystem. Plus, it addresses the need for legal features to be used with confidence in payments.

Fiat currency	Digital currency	Crypto-currency
Legal tender backed by governments	Liability of the States – tied to physical fiat currency	Not State-backed
Fungible	Nun-fungible	Nun-fungible
x	Transparency	Transparency
Privacy in payments	Privacy in payments	x
x	Programmable money	Programmable money
x	Financial inclusion	x
x	Smart regulation	x
x	Security / consumer protection	Security

Instant Payment

Instant payments result in immediate or close-to-immediate interbank clearing of transaction; and crediting of payee's account with confirmation to payer within seconds. Central banks and industry associations to implement instant payments infrastructure have launched several initiatives already to compete with non-banks for existing market share. Multiple benefits derive from Instant Payment: receive funds faster (immediate credit), better cash management, reduced processing fees, drop in fraud (certainty of fate), improved security (irrevocability).

750 billion Euros in annual retail expenditure are expected to switch to instant payments by end of 2027. Banking institutions and payment companies are more and more partnering to install instant payment infrastructures, in order to provide better digital customer experience.

Programmable money

Escrow services build off from the blockchain's multisig feature. Let us take an example of one buyer and one seller. In the case of a standard multisig transaction, the seller will sign the transaction when sending the good, and the buyer will sign the transaction once it has received the good. An escrow is relevant in a disputed case whereby one of the parties does not sign the transaction.

Smart contracts are distinguished from simple multisig transactions, as they are fundamentally conditional transactions that reflect the "if then" logic. For example, in an equity option smart contract, payment could be contingent on a strike price being met. If the condition happens, the blockchain would execute the payment automatically. Ethereum has been explicitly designed to allow the specification and execution of arbitrarily complex smart contracts. Smart contracts can be programmed to manage loan and grant applications, dispense loans, and track compliance with the terms and conditions.

Smart regulation also designed regulatory engine that can create and execute legal agreements with tamper-proof blockchain based smart contracts. Smart contracts can also streamline tax collection process by matching tax data with income transactions and calculating tax and social security deductions.

Governments paying benefits and making sure the money is spent for specific purpose

Contrary to traditional fiat currency, fiat digital currency (e.g. cryptocurrency) is non-fungible. It means that it is not interchangeable with other equal units of same good, and each of its parts is distinguishable from one another.

FDC ensures privacy of all parties involved in transactions and uses numerical addresses to give users anonymity. Each coin is unique item that can't be exchanged for same amount of same kind and users have access to all past transactions of each coin. E.g. Bitcoin Network broadcasts details with each transaction on its blockchain to everyone in ecosystem.

However, note that regulations of non-fungible digital currency still need to be determined. Also, they are still a few limitations to address: Advanced chain-analysis has made it possible to trace transaction history of fiat digital currency and identity of individuals who use them.

Digitization and non-fungibility preserves coins from counterfeit or abuse, it can be used to verify identity legally, through birth certificates, licenses, academic credentials, etc. Financial documents can also be turned into non-fungible coins and traded with them. Alternative uses are ticketing, KYC procedures, product supply chain tracking.

Fraud prevention and black market blocked by governments

The technology behind FDC enables citizens to register identity, send and request credentials, authorize transactions and securely manage data.

It uses distributed ledge platform to model and facilitate government processes, track public sector assets and reconcile government transactions immediately and transparently. Automation of performance tracking can enable real-time data and increase the transparency as well as compliance and security. Plus, the blockchain based system can automatically transfer net salary and tax payments to respective recipients, making tax collection faster, more transparent, efficient and secure.

Conclusion

The rise of digital currencies made the central banks very alert and the underlying blockchain – as well as the distribution ledger technology – have attracted significant interest. We are convinced that Fiat Digital Currency could assist in accelerating the digital transformation plans that are currently on the agendas of many countries across the globe in this new financial landscape - especially in providing digital currency.

Over the past few years, public authorities and central banks around the world have been monitoring developments of digital currencies and studying their implications. Think of the new specialized payment providers that offer e-money—from AliPay and WeChat in China, to PayTM in India, to M-Pesa in Kenya.

These forms of money are designed with the digital economy in mind. They respond to what people demand, and what the economy requires.

As a reminder innovation in finance always came out where regulation was not quite in place yet. The development of Bitcoin - first decentralized cryptocurrency that was based on blockchain technology – met a huge success precisely because it used innovation where the former online credit cards payments and regulated paypal-like solutions did not suit consumer's needs. Similarly, Facebook's Libra project urged governments to take measure, to get into blockchain and look a the potential of crypto-fiat currency. As an example, digital currency offers great promise with financial inclusion, through its ability to reach people and businesses in remote and marginalized regions.

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