COVID-19 crisis might accelerate the creation of digital fiat money (CBDC)

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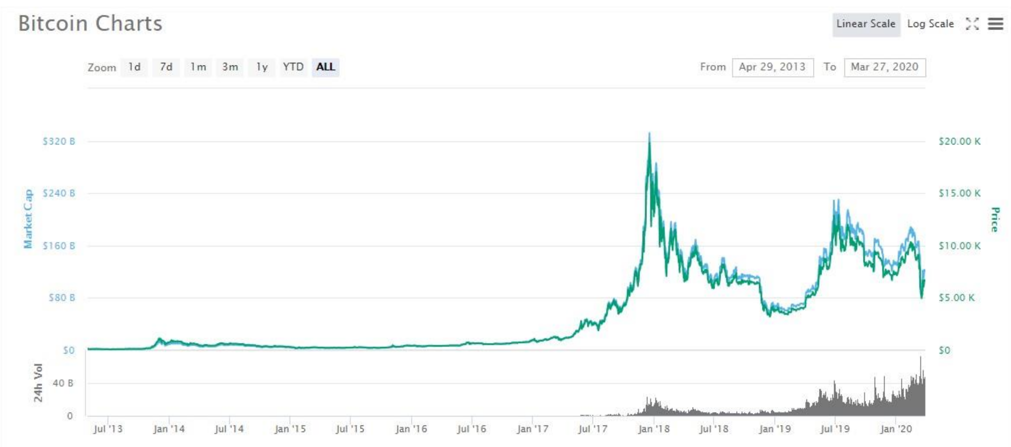
As COVID-19 crisis spreads and markets continue to drop, governments struggle to plan emergency measures to palliate the economic effects of the pandemic. The United States Democratic Party has surprised everyone with a transgressive proposal: the creation of a 'digital dollar' and the establishment of digital 'wallets' in dollars. This proposal inevitably becomes a shock wave through the cryptocurrency and blockchain industry, particularly for worldwide supporters of issuing central bank's digital fiat currencies. Central Bank digital currencies, or CBDC, are digital fiat currencies, which unlike bitcoin and other crypto assets, are issued by a central bank and backed by a government.

For a couple of years, CBDCs have been part of the monetary debate on the agenda at the Davos' World Economic Forum, where several central banks have expressed their interest in these digital currencies based on blockchain technology. As these are government-backed coins, their value would not be as volatile as that of bitcoin or other crypto assets (see Figure 1). The volatility of bitcoin has been the main obstacle to carrying out Satoshi Nakamonto's original idea of establishing an alternative payment system to the fiduciary and that does not depend on the arbitrariness of governments and prevailing economic interests.

Figure 1: Evolution of the bitcoin price



From the Latin "let it be done," the word fiat is a binding edict issued by a person in command. The fiat currency is a legal tender where the strength of its value depends on the authority, credibility and trust in the government that supports it. Previously, it was precious metals or other natural resources that constituted or supported the means of payment. Ludwig von Mises, Austrian economist (1881-1973) affirmed from the point of view of local economic conditions, the superiority of the gold standard reside in the circumstance that it keeps the purchasing power of the monetary unit free from the influence of the parties politicians and pressure groups. The failure of the entire fiat currency system is specifically that this pattern lends itself to arbitrary manipulation by the changing ideologies and policies of political parties. Under fiat money, we will always have selfish groups that will seek to gain an advantage from both the sea through investment and deflation. Mises believed it impossible to discover an indisputable principle that could succeed as an iron law to avoid manipulation of purchasing power. It is very likely that this same belief encouraged Shatoshi Nakamoto to publish in 2008 the White Paper on Bitcoin where he/they present a controlled and predetermined computer encoded monetary system outside the scope of arbitrariness and contamination. Currently, bitcoin fails to efficiently act as a means of payment due to its high volatility, it operates as store of value and it is mostly used for speculative reasons.

Therefore, if volatility represents the main barrier to generate an alternative payment system, the solution shows simple, to limit volatility. A first initiative is presented under the name of stablecoins. These crypto assets stabilize their price as these derivatives are at the value of another asset in the "real world". For example, USD Coin whose value is glued to the dollar in a 1: 1 ratio, or Facebook's Libra, not yet authorized for public use, anchors its value to a basket of non-digital assets.

An alternative initiative emerged from central banks is the aforementioned CBDC. The project that the Democratic Party in the United States has presented in the face of the current crisis and as a stimulus to the economy, establishes that a digital dollar is defined as '*a balance expressed as a dollar value consisting of digital ledger entries that are recorded as liabilities in the accounts of any Federal Reserve Bank or ... an electronic unit of value, redeemable by an eligible financial institution'.* Additionally, a digital dollar wallet is identified as *'a digital wallet or account, maintained by a Federal reserve bank on behalf of any person, that represents holdings in an electronic device or service that is used to store digital dollars that may be tied to a digital or physical identity*.'

The great novelty of this new form of money is that it allows depositors to have a direct relationship with a central bank. "*The Federal Reserve banks themselves would also make a digital dollar wallet available to anyone in the US In addition, the US Postal Service intermediates to help people with bank exclusion or without proper identification establish their identity to provide them with a digital dollar account and establish ATMs for customers to access these funds. "*

This initiative is aimed to provide fast and secure access to the economic stimulus payments planned by the government and to give access to the population in bank exclusion. EMTECH, a central bank technology and service company, has started a new initiative in the United States called the "New Down" Project to ensure that the unbanked receive economic stimulus payments. According to a 2017 FDIC report, there are 63 million people in the US who are excluded or with low inclusion in the banking system. In a Forbes article dated March 24, 2020, Carmelle Cadet, founder and CEO of EMTECH points out that "*If checks are the form of payment the stimulus will not reach many of them. That would be approximately $ 100B of under stimulus for low-income households*."

However, implementation of CBDC does not come free of risks. This closer relationship between depositors and central banks threatens the functionality of commercial banks, as it reduce their main source of funds. The preeminent role of central banks, which is to supervise and monitor the activities of commercial banks, will be hindered by this new form of deposits, transforming the central bank into a direct competitor of commercial banks. In a January 2020 study, the European Central Bank (ECB) warns of the risks of implementing CBDCs: "*In a systemic banking crisis, CBDCs (risk-free) issued by a central bank could be much more attractive than bank deposits. There could be a leakage of bank deposits throughout the sector, magnifying the effects of the crisis. Even in the absence of a crisis, easily convertible CBDCs could completely displace bank deposits, jeopardizing the existence of the banking system at all levels. In this situation, the efficient flow of credit to the economy would probably be affected*. " The report highlights that "*the introduction of CBDC would pose fundamental problems that go far beyond payment systems and monetary policy. CBDCs could lead to further instability in deposit financing from commercial banks. Even if they are primarily designed for payment purposes, in times of stress, leakage to the central bank can occur on a large scale and quickly, posing a challenge for commercial banks and the central bank in managing such situations*".

The report shows the fragility of these deposits in the 2008 crisis. In Figure 2, we can see the leaks of deposits in the period 2008 and 2011. The table captures the importance of the three types of leaks; from deposit to cash, from weak banks to strong banks and the flight to non-bank deposits. We note that the leakage from bank deposits to cash (R2) is lower than the other two factors, the largest leakage occurs between weak and strong banks. In the case at hand, central banks is indisputably stronger than commercial banks.

Figure 2: Indicators of bank deposit leaks, 2008 and 2011, Eurosystem

	Δ in % of stock at beginning of period			Δ in % of Eurosystem balance sheet at beginning of the period		
Comparison between December averages of:	Banknotes ("R2")	Excess reserves of banks	Excess reserves of non-bank depositors ("R3")	Banknotes ("R2")	Excess reserves of banks	Excess reserves of non-bank depositors ("R3")
2008 vs 2007	+13%	+3675%	+ 321%	+7%	+32%	+23%
2012 vs. 2010	+8%	+580%	+151%	+4%	+38%	+10%

As the ECB warns, the implementation of CBDC goes beyond a payment system and monetary policy, the role and viability of commercial banks are at stake. The new relationship between the depositary and the central bank puts high pressure on commercial banks, causing an increase in their operating costs and forcing them to reduce their lending activities. At the same time, we must not ignore the risk of transferring so much power and control capacity to central banks. Paradoxically, Nakamoto's efforts, probably in line of Mises's request of a less dubious monetary system than the fiduciary, may end up reinforcing the same system that he was trying to resist.

The implementation of a digital currency by a central bank may not have the effects hunted by blockchain adherents. Distributed Ledger Technologies (DLT), whose most representative example is blockchain, originally sought to decentralize the economic system by reducing the concentration of power as well as increasing privacy and anonymity. On the contrary, we can find ourselves in a scenario where centralization is greater, control is more exhaustive and privacy is, at least, questionable. I would not like to be pessimistic, so I am inclined to think that we still have time to develop a more efficient, more democratic system, with better managed privacy and also capable of distributing economic stimuli to combat the COVID-19 crisis quickly, efficiently and with greater universality. CBDC might perfectly be part of the solution; however, we must not disregard the risks.

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