THE CLUB FOR GROWTH FOUNDATION

Policy Brief

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The Case Against A U.S. Central Bank Digital Currency

New digital assets like Bitcoin allow people to make peer-to-peer transactions. The innovation created by Bitcoin is that it is an immutable ledger of transactions. It is immutable in the sense that updates to the ledger require the consensus of the nodes on the Bitcoin network. It cannot be changed by any single party and therefore does not require the trust of any particular intermediary.

Because of its speed and trustless nature, this technology has the potential to disrupt the monetary system and the payments system all over the world. It is this potential for disruption associated with the emergence of Bitcoin as well as other cryptocurrencies, including those proposed by companies like Facebook, that has played some part in provoking a discussion about whether or not central banks should offer their own digital currency.

In January of this year, the Federal Reserve published a paper, for public comment, that examines the pros and cons of a potential U.S. Central Bank Digital Currency ("CBDC"). Approximately 5,600 pages of public comments were received. On May 19, the Ranking Members of the U.S. House of Representatives Financial Services Committee on Oversight and Investigations and the Financial Services Committee, led all Committee Republicans in a letter to Federal Reserve (Fed) Chair Jerome Powell regarding this paper.

Indeed, the debate about CBDCs is raging not only in the U.S., but all across the world.

But, what precisely is meant by the term Central Bank Digital Currency (CBDC) is not always clear. For example, it is unclear whether this would be similar to Bitcoin or other cryptocurrencies and rely on blockchain technology or whether CBDCs would simply be an electronic database of account balances maintained by the central bank. Nonetheless, regardless

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of the underlying technology, advocates of CBDCs see several possible benefits. In particular, they argue that CBDCs can potentially bank the unbanked, offer faster payments, improve the effectiveness of monetary policy, and potentially hasten the decline in the use of currency.

In reality, however, CBDCs seem to be a solution in search of a problem. There is no obvious market failure that CBDCs correct. The idea that CBDCs could help to bank the unbanked without crowding out the services of private commercial banks seems dubious. The so-called improvements in monetary policy would consist of the ability of the central bank to circumvent the so-called zero lower bound on nominal interest rates, but it is not entirely clear that this is an actual constraint on monetary policy or that such a characteristic is desirable. And, finally, the possible elimination of physical currency would undoubtedly make people worse off relative to the status quo and is part of a bigger threat to privacy created by CBDCs.

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What is Meant by a CBDC?

Before discussing the purported benefits of a CBDC, it might be useful to define it. While discussions of CBDCs seem like a reaction to the emergence of popular cryptocurrencies like Bitcoin and Ether, it is not necessarily the case that a CBDC would operate in a similar way. Whereas the Bitcoin and Ethereum networks require consensus of nodes on the network to update a digital ledger known as a blockchain, it is unclear that a central bank would need to use any type of blockchain technology in administering a CBDC.

The desirability of blockchain technology is rooted in decentralization. Updates to the digital ledger require consensus of the network nodes. This eliminates the ability of any individual or authority to update the ledger. Users do not have to trust that a single party will update the ledger accurately. In fact, Ethereum came under severe criticism in 2016 when developers decided to effectively reverse a hack of a smart contract on their blockchain. Critics saw this as an abandonment of the principles of decentralization, trustlessness, and immutability.

Operating as a central authority, it is not immediately apparent why a central bank would have any need for such decentralization. Furthermore, there is no sense in which a central bank blockchain would be trustless since the central bank would determine the governance of the protocol and could therefore change the rules or reverse transactions. If the central bank could change the protocol and/or update the ledger as it sees fit, then a blockchain would be superfluous. The central bank could simply maintain its own digital account ledger without the need for a public blockchain or consensus mechanism.

Thus, one might wonder how this is different from the status quo. Checking and savings accounts in commercial banks are already in digital form. The Federal Reserve issues two types of money. The first is paper currency and the second are deposits for commercial banks and other depository institutions, the U.S. Treasury Department, and foreign agencies. Thus, with the exception of currency, most money is already held in digital form. If central banks stick with existing technology, the creation of a CBDC is likely equivalent to the Federal Reserve opening up its deposit accounts to retail customers.

What Are the Purported Benefits and Are They Real?

Advocates of a CBDC argue that opening deposit accounts for retail customers would create several key benefits. In particular, there are four primary benefits used by advocates. First, a CBDC would help to bank the unbanked. Second, CBDCs would facilitate faster payment processing. Third, CBDCs would allow for more flexible monetary policy. And fourth, CBDCs would hasten the elimination of physical currency. With the possible exception of hastening the demise of physical currency, it is not clear that a CBDC would be the optimal policy solution to achieving any of these objectives. And in the case of eliminating currency, it is not clear that this is even a desirable objective.

Banking the Unbanked

Some advocates of a CBDC argue that one of the primary benefits would be to provide better financial inclusion. One proposal, known as FedAccounts, would have the Federal Reserve offer accounts to retail customers that would have no minimum balance requirements, pay interest on deposits, and offer real-time payment processing through these accounts. The idea is that this would allow those who are "unbanked" and "underbanked" to have access to typical banking services that they currently lack. The advocates of this plan argue that one of the main reasons that these people remain unbanked or underbanked is because banks find it prohibitively costly to service customers with low balances. The Federal Reserve's ability to provide these accounts at a low cost would therefore open up the financial system to a greater number of people.

There are a few problems with this proposal. First, as Fed Governor Christopher Waller recently pointed out, a survey done by the Federal Deposit Insurance Corporation (FDIC) found that only around 5% of households in the U.S. were unbanked and, of these households, around 75% said they did not want a bank account. It is not obvious that the unbanked would be any more interested in CBDC.

Another issue with the proposal is that it has the potential to crowd out digital money that is provided by private commercial banks. If a CBDC can offer no minimum balance requirements or fees, pay interest, and offer real-time payments, why would the typical deposit holder with a commercial bank want to continue using the bank that potentially doesn't offer the same services? Some advocates of a CBDC acknowledge that there would be some crowding out. However, they point out that crowding out could be avoided if the CBDC paid an interest rate slightly below the rate of interest paid on reserves to banks.

One might argue that the creation of a CBDC results in competitive forces that produce higher interest payments and a reduction in minimum balances and fees for depositors. However, this begs the question as to why some entrepreneurs don't simply try the same thing. In fact, the answer is that they have, and the Federal Reserve won't let them. Just a few years ago, an entity called TNB, or The Narrow Bank, was created with the purpose to accept deposits from consumers and, in turn, deposit that money directly with the Federal Reserve. TNB would then earn interest on its reserves with the Federal Reserve and pay a slightly lower interest on its deposits than it earns on reserves. This is effectively no different than the CBDC proposal in which the interest rate on CBDC is held slightly below the interest rate on reserves. Yet, TNB was denied access to an account with the Federal Reserve. One is left to wonder why the competitive forces of a CBDC are preferable to those brought about by TNB's proposal.

Faster Payment Processing

Payment processing in the U.S. is quite slow. Both

Fedwire and the National Settlement Service, which are used to move funds between banks, have limited hours of operation and are closed on weekends and holidays. Direct deposits and direct payments are handled through the Automated Clearing House, which also relies on Fedwire and the National Settlement Service for payment finality. However, the ACH only has access to these services during particular time windows each day. These payments can take days to settle. Advocates of a CBDC argue that CBDC adoption would speed up payment processing.

While it is true that payment systems are slow in the U.S., there are several points to consider. First, to argue that payments would be faster with a CBDC is in some sense no different from arguing that payments would process faster if everyone had an account at JP Morgan Chase or Bank of America. Payments on one centralized ledger do not need to go through an intermediary and therefore can process as quickly as one can update their own ledger.

This payment argument also does not answer the questions as to why a CBDC is the particular solution necessary to speed up payments. The faster speed of payments observed in other developed countries is not due to the fact that these countries have CBDCs, but rather is due to superior, existing digital payment technology. In addition, in economic theory, government intervention or the provision of services by the government is justified by some type of market failure. However, it is not obvious what the market failure is in this case or why the market would not produce a private solution to this problem.

In fact, there are private solutions that have emerged in recent years, albeit outside of the traditional financial system. For example, in recent years, there has been a rise in the use of stablecoins. These stablecoins are digital assets that are pegged one-for-one with the dollar and live on some type of blockchain. People with digital wallets tied to a particular blockchain can send payments peer-to-peer and have their payment settled in minutes, if not seconds. Those uncomfortable with their own cryptocurrency wallet can still make and receive these payments via third-party custodians like Coinbase. Other apps like Venmo and the Cash App let people deposit money from their traditional bank accounts to the app. The user can then make and receive payments from other users of the app. Although transferring back to the traditional banking system can still take days to settle, the app balances update almost instantly. Similarly, apps like Strike work similar to Venmo or the Cash App in the sense that they allow one to deposit dollar-denominated balances into the app. However, Strike makes transfers using the Lightning Network, a second layer built on top of the Bitcoin blockchain. As a result, payments between Strike accounts settle almost instantly.
Each of these payment mechanisms has its costs and benefits, but there is no way in which a CBDC provides an obvious, superior alternative.

Greater Flexibility for Monetary Policy

Another purported benefit of a CBDC is that it would create greater flexibility for countercyclical monetary policy. For example, the Federal Reserve and other central banks typically discuss monetary policy in terms of the expected future path of some nominal interest rate. When the economy slows, the central bank will adjust the path of the nominal interest rate to attempt to shorten or reduce the severity of an economic downturn. Practically speaking, they do this by reducing the nominal interest rate. Since prices are slow to adjust, this reduces the real interest rate. The lower real interest rate increases both consumption and investment. This increase in economic activity hastens the end of the downturn.

Nonetheless, the use of interest rates as the primary

tool of monetary policy is limited (at least in theory) by the existence of physical currency. When people have the option of holding physical currency, there is a lower bound on the nominal interest rate. Since physical currency always earns a nominal interest rate of 0%, the central bank is unable to reduce the short-term nominal interest rate below zero. The reason is that those holding the interest-bearing assets with negative nominal returns could always convert those assets to physical currency. If the short-term nominal interest rate is used as a tool of countercyclical policy and there is a lower bound on this interest rate, then policy is constrained. During particularly bad downturns or downturns that start when nominal interest rates are already low, this constraint becomes binding and the central bank's ability to conduct countercyclical policy is limited.

The introduction of a CBDC has the potential to remove the lower bound on nominal interest rates by eliminating the use of physical currency. By paying interest on CBDC balances and instituting fees for converting CBDC balances to physical currency, the use of physical currency could potentially be eliminated. Even if physical currency continues to circulate, the fees for exchanging CBDC for physical currency would allow central banks to impose negative nominal interest rates. By removing the constraint of a lower bound, advocates argue that this would give the central bank greater flexibility with regard to monetary policy.

There are several reasons to be skeptical of this supposed benefit. The first reason is that it is unclear that the lower bound on nominal interest rates represents a meaningful constraint on monetary policy. The Federal Reserve has used large-scale asset purchases as a means of conducting countercyclical monetary policy both during the financial crisis that began in 2008 and during the Covid-19 pandemic. If the lower bound on nominal interest rates is a binding constraint on policy, then one is left to wonder what the Federal Reserve was trying to accomplish with these large-scale asset purchases. In fact, these purchases are actually much more consistent with the way in which the Federal Reserve conducted policy prior to the financial crisis. Although the Federal Reserve communicated its policy changes through the path of the short-term nominal interest rate, they targeted this short-term rate through open market operations (the buying and selling of assets on the open market). Thus, while the large-scale asset purchases of the last decade are often referred to as unconventional monetary policy, the only thing that is unconventional is the magnitude of the purchases. Open market operations have long been a conventional tool of the Federal Reserve.

All of this also leaves aside the issue of whether the central bank should be involved in countercyclical policy at all. Perhaps countercyclical policy should be left to fiscal policy, or perhaps countercyclical policy is a folly to be avoided altogether. One of the things that Milton Friedman is known for is his call for a constant money growth rule. Under his proposed rule, the only requirement of the central bank would be to grow the money supply at a constant rate over time. In fact, monetary policy could be conducted by a computer. This idea was not based on Friedman's belief that a constant rate of money growth was optimal, but rather stemmed from his own empirical work that showed the Federal Reserve's attempts to conduct countercyclical policy had often made things worse. Friedman's proposal was a "do no harm" approach.

CBDC advocates who promote the enhanced ability to conduct countercyclical policy simply take for granted that:

1. The central bank should be involved in countercyclical policy,
2. The central bank is effective at countercyclical policy, and

3. The lower bound on nominal interest rates is a binding constraint that limits the ability and/or the effectiveness of countercyclical monetary policy.

Furthermore, an assessment of any benefits from having more flexibility in terms of monetary policy must be balanced against the costs. The implications of negative nominal interest rates are not well-understood. In theory, negative nominal interest rates would help to stimulate spending and shorten and/or weaken the severity of a recession. However, it is unclear what distortions this would bring about. In addition, the greater flexibility of policymakers comes at the expense of the loss of option value associated with physical currency. Since physical currency has a fixed nominal rate of return of 0%, one can always sell an asset with a negative nominal interest rate for physical currency. The option to do so provides value. If CBDC eliminates physical currency in the way that advocates desire, then people would lose this option value. While some might see the zero lower bound as a constraint on the central bank, this lower bound is a benefit to those hoping to preserve the value of their savings.

Of course, advocates of a CBDC see the elimination of physical currency as a benefit since it "would be helpful in discouraging tax evasion, money laundering, and other illegal activities." Again, there are several flaws with this argument. While physical currency might be used for the purposes just described, it is not exclusively used for these purposes. The people who are lawfully using physical currency would be harmed just the same as those who are using it for unlawful purposes. While those engaged in unlawful activity might have no choice other than to use physical currency for anonymity, those who are using it for lawful purposes have the option to use alternative means of payment, including digital money issued by commercial banks in the form of bank deposits. The fact that these people choose physical currency over this digital alternative suggests that they prefer physical currency and that its elimination would necessarily make them worse off.

The issue of anonymity and privacy is important. Consumers might not want their bank (or the central bank) to know about every purchase. The value of such privacy will naturally differ across individuals. Nonetheless, the elimination of physical currency will eliminate choice in the matter. A CBDC and the removal of physical currency eliminates any anonymity and the privacy of transactions.

It is also not hard to imagine that producers of certain types of goods and services or particular people might be denied access to a CBDC. This need not only apply to illicit goods and services. What goods and services are not permitted to be traded using a CBDC and which people are denied access to a CBDC account could be chosen at the whims of political leaders. What is the limiting principle? Who decides who can use CBDC and what CBDC can be used to purchase? While it is true that governments can make laws and otherwise threaten commercial banks to limit particular use cases and users from their services, these banks often have recourse through the legal system and an incentive to do what is best for customers. Would a central bank take similar steps?

The threats to privacy through surveillance seems to be universally recognized when it comes to the introduction of digital currency by the likes of the Chinese Communist Party. However, the same cautions are often absent in the West. Advocates of a CBDC often argue that "a CBDC could be designed in a manner that directly addresses the concerns people and businesses have over data privacy and ownership." Some even argue that CBDCs could be used to limit the amount of information that is shared between buyers and sellers. However, as these authors acknowledge, restricting information to sellers might

be desirable, but this information would be available to central banks instead. Similarly, it is true that one could design a CBDC to address concerns. However, the relevant question is whether the actual CBDC would accord with such designs and whether it would be possible to continue to limit surveillance and provide privacy independent of who has access to it. In designing societal institutions, it is best to imagine what might be done with those institutions in the hands of one's political opponents or enemies rather than the benevolence of one's friends and allies.

In addition, while it is possible to imagine a CBDC designed to provide some level of privacy and anonymity, it is also possible to imagine dystopian scenarios in which the digitalization of nearly every part of one's life is accessible to the central bank and/or the government. Digital identification could be tied to digital medical records, loan balances, one's internet-connected car, and a CBDC account. In such a world, it is not hard to imagine governments using all of this information as a form of digital surveillance and even designing tax policy that might be conducted through complex algorithms that take into account all of one's digital information and automatically assess these taxes through debits of one's CBDC balance.

Finally, since the desirability of the elimination of physical currency seems to be driven by the desire to eliminate things like illegal activity and tax evasion, it seems important to note that the elimination of physical currency only eliminates physical currency. It will make tax evasion and illegal activities more costly, but it won't eliminate these activities. Instead, people engaged in these activities are likely to look for alternatives. These might come in the form of cryptocurrencies, but it is important to recall that all transactions using cryptocurrencies are recorded on a public blockchain and therefore lack some degree of anonymity. Nonetheless, the elimination of physical currency might encourage the creation of cryptocurrencies designed to provide some level of privacy and anonymity or speed up efforts within the ecosystem of existing cryptocurrencies to provide greater privacy and anonymity. In short, attempts to eliminate particular activities by attacking the means of conducting those activities rather than the activities themselves is likely to lead to a whack-a-mole policy in which policymakers are constantly attempting to stop the latest means of facilitating the activity they do not like.

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CBDCs, Limited Government, and Free Market Principles

Not only does a CBDC fail to deliver the benefits claimed by its advocates, but the introduction of a CBDC violates the principles of limited government and the free market. A CBDC would put the Federal Reserve in direct competition with private, commercial banks for depositors. These private banks serve as intermediaries between borrowers and lenders. The banking system therefore serves an important role in the allocation of capital. The profit motive will tend to push capital towards its most valued use. To the extent to which a CBDC crowds out deposits at a

particular bank, this poses important questions about the allocation of capital. Will the central bank also start lending? Or will deposits to a CBDC account facilitate more purchases of government debt? Furthermore, if a CBDC crowds out commercial bank deposits, this will tend to increase interest rates for private borrowers.

As discussed earlier, there also privacy concerns associated with the introduction of a CBDC. Accounts at the central bank will centralize a great deal of personal and financial information with the central bank. This poses several problems. First, it increases the likelihood of hacks or other attacks on the central bank in order to gain access to this centralized source of information. It seems extremely unlikely that an institution that takes days to process a check is the best or most technologically-equipped institution to deal with such threats.

Second, the use of a CBDC would also mean that the central bank has access to a user's transaction history. It is not hard to imagine that the government might choose to limit the number of transactions allowed at a bakery per month or the number of purchases of soft drinks or any other type of transaction the government determines should be limited. Attempts to stimulate the economy might come in the form of negative interest rates on CBDC balances or expiration dates on a particular CBDC balance such that it must be spent within a particular period of time. Even worse, ***the CBDC could be used as a tool to punish people with particular political views by freezing their accounts.***

Third, one is left to wonder what this means for the protections under the Fourth Amendment to the U.S. Constitution. To what extent will the Federal Reserve stand up and push back on behalf of its customers (as a commercial bank would) in the face of unreasonable requests and legal actions taken by agencies within the federal government?

Finally, it is also possible that CBDCs actually create greater risk in the financial system by making bank runs more likely. During uncertain times people tend to flock to the safest asset. If a large number of people move their deposits from commercial banks to CBDCs, this results in a wave of withdrawals in the financial system, significant financial disintermediation, and an ultimate decline in the money supply greater than the magnitude of withdrawals. Rather than promoting financial stability, this would lead to greater uncertainty and less financial stability.

Overall, this interjection of the central bank into the ordinary business of banking seems to undermine the principles of free markets and limited government by altering the allocation of capital, opening up the possibility of preventing particular types of transactions or transactions by particular groups of people, eliminating transaction privacy, and potentially reducing financial stability.

Concluding Thoughts

Advocates argue that CBDCs would provide significant benefits in the form of greater financial inclusion, faster payment processing, greater flexibility for monetary policy, and reductions in tax evasion and illegal activity conducted using physical currency. Even taking all of these objectives as given, there is little reason to think that a CBDC is the optimal policy solution to bring about these changes. Private solutions would undoubtedly provide a better means of making the payment system more efficient. It is not obvious that monetary policy needs additional flexibility, and any benefits from eliminating physical currency must be balanced against the costs of digital surveillance and the loss of privacy. If a CBDC is the answer, what is the question?