

# CENTRAL BANK DIGITAL CURRENCY AS A POTENTIAL SOURCE OF FINANCIAL INSTABILITY

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Various proposals for a central bank digital currency (CBDC) involve different technical solutions to as many distinct problems. My concern is with the monetary policy implications of those (e.g., Bordo and Levin 2019; Ricks 2020) that would allow anyone to place deposits in a Fed Master Account, directly or using ordinary banks as brokers.

A decade ago, I published a paper on “Central Banks as Sources of Financial Instability” (Selgin 2010) in which I argued that, notwithstanding conventional wisdom, central bank monopolization of paper money has been an important historical cause of financial instability. Here I wish to argue that central bank provision of *digital* money, and particularly of retail deposits, may also prove destabilizing.

## “Old-Fashioned” Bank Runs

How could individual Fed accounts be destabilizing? Consider the case of a “classic” systemic financial crisis. This consists of a run, not on one or a small number of banks, but out of bank deposits and into central bank currency.

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As every money and banking student learns, in a fractional-reserve system, every dollar of paper currency withdrawn from the banking system can lead to a much larger reduction in bank deposits and, hence, the total money stock. In principle, aggressive central bank expansion can keep the money stock from shrinking. But because central banks generally don't lend to private-sector borrowers, the substitution of central-bank-supplied paper money for bank deposits can't preserve the private credit that collapses along with the stock of commercial bank deposits. A serious "credit channel" bust can still occur.

Because stockpiling and transacting with paper currency is both inconvenient and risky, most bank runs have been runs from banks suspected of being unsound to others people still trusted. That's especially true in banking systems with nationwide branch networks, because most sizable communities in such systems have access to more than one commercial bank. Despite their notoriety, systemic runs have been rare. Indeed, they were so even in the pre-FDIC United States, which saw more than its fair share of panics (Schwartz 1987: 271–88). Even the nearly systemic run of February and March 1933 wasn't an exception, for it was not so much a banking panic as one informed by growing fears that FDR was planning to devalue the dollar (Wigmore 1987: 739–55). In other words, what looked like a general loss of confidence in U.S. banks was in fact a loss of confidence in the government's willingness to stick to the established dollar standard.<sup>1</sup>

## Allowing for Fed Account Balances

Now let's consider the case in which, instead of facing two options—holding liquid claims against private intermediaries, or holding paper currency—people have a third option: they can place funds in their personal Fed accounts.

According to many of their advocates, private Fed accounts, besides being perfectly safe, will offer many of the advantages of ordinary bank accounts, and will be even cheaper to maintain.

<sup>1</sup>The problem here was not devaluation per se, but the fact that it was anticipated. On the bank runs of the 1930s, see Selgin (2020).

For example, in recent congressional testimony, Morgan Ricks (2020: 4) observes that, under his “FedAccount” proposal,

The Fed would charge no fees and would not impose any minimum balance requirements. FedAccounts would also have all the special features that banks currently enjoy on their central bank accounts: real-time payments, high interest compared with ordinary bank accounts, and full government backing with no need for deposit insurance.

The FedAccount plan would, however, not allow depositors to overdraw their Fed accounts. That provision is necessary if the Fed is to avoid serving as a “lender of last resort” not just for banks but for anyone who can’t balance a checking account. In normal times, this limitation might make personal Fed accounts seem less attractive to those who can afford to keep accounts at ordinary banks, and to incur occasional overdraft fees. But it needn’t make them unattractive to those who might otherwise remain unbanked.

Ricks, Bordo and Levin, and many other proponents of individual Fed accounts assume that the Fed would pay interest on such accounts at approximately the same rate it pays on bank reserves. According to Bordo and Levin (2019: 15), for example, under their proposal,

Consumers and businesses would be able to receive essentially the same interest on checkable deposits and other current accounts that commercial banks receive on reserves held at the central bank, that is, the interest rate on reserves (IOR) less a very small margin to cover operating costs.

Even if personal Fed account balances didn’t bear interest, they would be much closer substitutes for private liquid dollar assets than paper Federal Reserve notes are. But I will follow the majority of proposals in assuming that individuals’ Fed balances yield interest at the interest on reserves (IOR) rate.

Suppose then that, when they are first introduced, Fed accounts are available, but are mostly used by persons who were previously unbanked. Such a state of affairs conforms with the outcome envisioned by many personal Fed account proponents. It’s easy, however, to imagine a general increase in rates that could widen the gap between private intermediary rates and the IOR rate enough to

promote a general “run” out of private-sector intermediaries and into Fed accounts.<sup>2</sup> Indeed, any substantial move from near-zero to positive yields might suffice, given (1) private intermediaries’ need to fully cover their noninterest intermediation expenses by paying depositors less than their return on assets, and (2) the fact that the Fed’s IOR rate is typically greater than yields on short-term Treasury securities and other low-risk, liquid assets.

The danger of a systemic run on private-sector intermediaries becomes all the more serious if Fed accounts are able, as some of their advocates claim, of “crowding out” not just ordinary bank deposits but repurchase agreements, eurodollars, and money market mutual fund shares. According to Ricks (2020: 5),

FedAccounts would likely reduce the probability of future financial crises by “crowding out” unstable deposit substitutes, such repurchase agreements or “repo,” Eurodollars, and money market mutual fund shares, which are a major source of financial instability.

Ricks’ observation begs the question: If private Fed accounts can crowd out these other private bank deposit substitutes, what’s to keep them from doing so only occasionally, and perhaps suddenly?

By providing a new harbor for funds that’s not only safe but relatively remunerative, Fed accounts could end up raising instead of lowering money market volatility, making short-term money hotter than ever. As long as private deposit substitutes are *sometimes* more attractive than Fed balances, the danger can only be ruled out by disallowing those private substitutes altogether—that is, by allowing the Fed alone to compete with banks and credit unions for depositors’ funds. And even that extreme step wouldn’t prevent banks and credit unions from falling victim to occasional, systemic transfers of funds from them to the Fed.

In commenting on this argument, David Andolfatto suggests that the Fed could rule out the sort of private disintermediation crisis I’ve

<sup>2</sup>As the IOR rate was lifted above its near-zero level after the Great Recession, private intermediary rates rose relatively little. Indeed, as Bordo and Levin (2019: 15) noted in January 2019, when the IOR rate was 2.4 percent, “most checkable deposits earn little or no interest, and even short-term savings accounts accrue interest at a rate far below that of IOR.” Bordo and Levin assert that the lower rates paid by banks are “noncompetitive.” Bill Conerly (2017) offers a different perspective.

described by fine-tuning the return it pays on individual accounts to prevent them from ever being attractive enough to beggar sound private-sector intermediaries. He's right in principle; and the Fed has already entertained the possibility of paying a lower rate on Fed balances held by private "pass-through investment entities" (PTIEs) than it pays on bank reserve balances, with the express aim of preventing them from undermining financial stability (Board of Governors 2019).

There are good reasons, however, for doubting that the procedure Andolfatto recommends would work in practice. For one thing, it would appear to handicap Fed account holders, and especially the already disadvantaged persons that Fed accounts are particularly supposed to attract, by having them settle for less favorable returns than are available to those who can afford private-market substitutes. For that reason, although prudence might recommend paying holders of personal Fed account balances less than what banks earn on their reserve balances, politics might forbid it.

### The Postal Savings Precedent

The concerns I've expressed here have their historical counterpart in the experience of the Postal Savings System introduced in 1911. In their recent working paper, Jaremski, Fleitus, and Schuster (2020) report that, during the 1930s, the relatively high, bureaucratically set rates on postal savings accounts "drew desperately needed funds away from private lenders, prolonging the effects of the Depression." The Postal Savings experience is highly pertinent, as many proponents of Fed accounts would have the U.S. Postal Service partner with the Fed so as to supply it with a ready-made network of brick-and-mortar retail banking facilities. Jaremski and his coauthors conclude:

Reintroducing postal savings could have unintended consequences by drawing customers away from private lenders and reducing funds available for community lending and investment. Policymakers can learn from these lessons learned during the Great Depression by considering the broader economic effects of programs like postal savings.

Whether they actually involve the U.S. Postal Service or not, plans for having the Fed offer retail deposit accounts clearly qualify as "programs like postal savings."

## The Fed Knows It

The Fed is itself aware of the risk nonbank Fed accounts pose to financial stability. The issue came up, not in connection with proposals to allow anyone to have a Fed account, but in response to the Narrow Bank's 2016 request for such an account (Selgin 2018). In their "advance notice of proposed rulemaking" (ANPR) regarding accounts for such PTIEs, Fed officials explained that they would "have the potential to complicate the implementation of monetary policy," especially by having "a negative effect on financial stability" (Board of Governors 2019). In particular,

Deposits at PTIEs could significantly reduce financial stability by providing a nearly unlimited supply of very attractive safe-haven assets during periods of financial market stress. PTIE deposits could be seen as more attractive than Treasury bills, because they would provide instantaneous liquidity, could be available in very large quantities, and would earn interest at an administered rate that would not necessarily fall as demand surges. As a result, in times of stress, investors that would otherwise provide short-term funding to nonfinancial firms, financial institutions, and state and local governments could rapidly withdraw that funding from those borrowers and instead deposit those funds at PTIEs. The sudden withdrawal of funding from these borrowers could greatly amplify systemic stress [p. 8831].

What goes for PTIEs would of course go as well for any plan to grant *all* "individuals, businesses, and institutions" the right to hold accounts at the Fed (Ricks 2020). Indeed, the case for limiting individual Fed accounts is actually much stronger than that for ruling out PTIEs: although PTIEs might pose a threat to other private intermediaries, unlike private Fed accounts, their presence would not risk altogether undermining private money markets.

## The Fintech Alternative

Some proponents of individual Fed accounts may say that if my concerns are valid, one solution is to simply outlaw private monies and near monies—and as much private credit intermediation. (After hearing Martin Chorzempa speak at Cato's 2020 Monetary Conference, I'm tempted to call this the "1984" solution.)

With all due respect to those who might favor that solution, I think a more logical, and certainly a less draconian, solution is to have the Fed cooperate with both banks and nonbank (“fintech”) payment service providers so as to take the fullest possible advantage of high-tech *private* alternatives *specifically* designed to replace paper money—what Neha Nerula has called “Digital Cash”—and especially ones designed to serve the financial needs of the unbanked and underbanked. Unlike PTIEs, instead of seeking deposits by paying attractive rates, many fintech payment service providers specialize in offering low-cost, convenient and rapid payment services, including P2P payment services, which, despite offering low pecuniary returns, can be very effective in “banking” the unbanked. Such services needn’t expose established intermediaries to any serious disintermediation risk (see Kaminska 2012).

Putting out a welcome mat for private digital cash providers is essentially what the Bank of England (BOE) did in 2017, when it invited hundreds of fintechs, including many offering prepaid cash cards and prepaid online and mobile accounts, to open settlement accounts with it (Bank of England 2017). The BOE’s express aim was to allow fintechs to compete more effectively with banks and building societies that previously had exclusive access to such accounts. But the BOE’s policy also makes it easier for fintechs to more effectively compete with the BOE itself, by supplying “smart” prepaid cards and other superior digital substitutes for its paper currency, credits to and debits from which can glide along the BOE’s settlement rails.

Given our topic, it’s especially worth noting how, in announcing the BOE’s decision, Governor Mark Carney observed that, far from posing greater risks, he believed it would “support financial stability through greater diversity and risk-reducing payment technologies.” More specifically, the BOE said that its new policy will promote stability by

- creating more diverse payment arrangements with fewer single points of failure;
- identifying and developing new risk-reducing technologies; and
- expanding the range of transactions that can take place electronically and be settled in central bank money.

Note the importance the BOE assigns to promoting ongoing innovation: that’s something a central bank monopoly of *all* payments media is hardly likely to promote. Consider how long-standing central bank monopolies of hand-to-hand currency limited innovation in

that space until nonbank private market innovators finally prompted them to consider embracing alternative technologies.

Time alone will tell whether the BOE's optimistic expectations are fulfilled. But its approach seems, to me at least, a reasonable compromise between the status quo and the option of making the Fed our only source of payments media.

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