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Central Bank Cryptocurrency and Retail Bank Accounts:

Two Terrible Policy Ideas

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Coin Market Cap lists nearly 1,600 cryptocurrencies, with a total market capitalization of almost $250 billion as of June 28, 2018.[1] Given that the first successful cryptocurrency, Bitcoin, has only existed for one decade, these figures demonstrate rapid growth and interest in this new technology. Yet, the fact that just two cryptocurrencies—Bitcoin and Ethereum—account for nearly $150 billion of this total market value highlights that (1) the technology remains in its infancy, and (2) cryptocurrencies are not all the same.

Even Bitcoin remains far from being a *generally accepted* medium of exchange, but all cryptocurrencies can—and many do—function as a money substitute. Many large companies, such as Microsoft, Dell, DISH Network, and Overstock.com, now accept cryptocurrencies as payment, and Coinbase recently estimated that more than 10 million people worldwide hold a material amount of Bitcoin.[2] Thus, it is possible that Bitcoin (or other cryptocurrencies) eventually will be widely accepted and recognized as money. It is certainly difficult to imagine a cryptocurrency replacing the U.S. dollar as long as the Federal Reserve acts as a moderately good steward of the national currency, but it is for this very reason that Congress should eliminate barriers that impede people from using their preferred medium of exchange. Competitive market forces can improve the means of payment in the same way that market forces improve virtually all goods and services, and Congress should not protect the Federal Reserve from those competitive forces.

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[1]Coin Market Cap, https://coinmarketcap.com/all/views/all/ (accessed June 28, 2018).
[2]Kyle Torpey, "Report Estimates There Are More Than 10 Million Bitcoin Holders Worldwide," CoinJournal, January 11, 2017, https://coinjournal.net/report-estimates-10-million-bitcoin-holders-worldwide/ (accessed July 11, 2018).

Worldwide, government's overall record of currency debasement highlights the importance of preserving citizens' ability to use whichever form of money they choose, and the underlying technology that drives cryptocurrencies—a distributed ledger known as a blockchain—could have effects far beyond purchases of goods and services. Blockchain technology could ultimately improve all sorts of processes that rely on time-stamped electronic records, such as digital passports, real estate title records, or even stock trades. These new applications are also in their infant stages, and Congress should allow the competitive process to unfold so that people discover the best ways to use blockchain technologies. There is no inherent reason that government agencies, including central banks, should avoid using these technologies if they produce cost savings or efficiency gains for their operations.[3] However, no government-imposed mandate should force people to use any particular cryptocurrency—or any other form of money—in place of another medium of exchange.

Cryptocurrency: A Solid Competitor for Cash?

During the past few decades in the U.S., consumers have steadily shifted from using paper-based payments to electronic means of payment.[4] For instance, the percentage of U.S. consumer expenditures made with debit and credit cards (combined) was only 3 percent in 1986, but 25 percent in 2000.[5] In 1995, debit and credit cards (combined) accounted for less than 20 percent of all noncash payment transactions, but increased to more than 40 percent of this volume by 2003.[6] As of 2015, cards accounted for more than 65 percent of all noncash transactions.[7] More recently, smartphone-based payment services have rapidly gained importance as a noncash form of payment, "increasing from 0.3 billion payments in 2012 to 1.3 billion in 2015."[8]

The success of smartphone-based payment applications, credit and debit cards, and cryptocurrencies have led many to predict the demise of cash,[9] but Federal Reserve data shows that "consumers choose to use cash more frequently than any other payment instrument, including debit or credit cards," and that cash still plays "a dominant role for small-value transactions."[10] Furthermore, consumers, particularly lower-income consumers, still use cash frequently for relatively large transactions. Cash is the leading payment instrument for several expenditure categories, such as (1) person-to-person gift transfers, (2) food and personal care supplies, and (3)

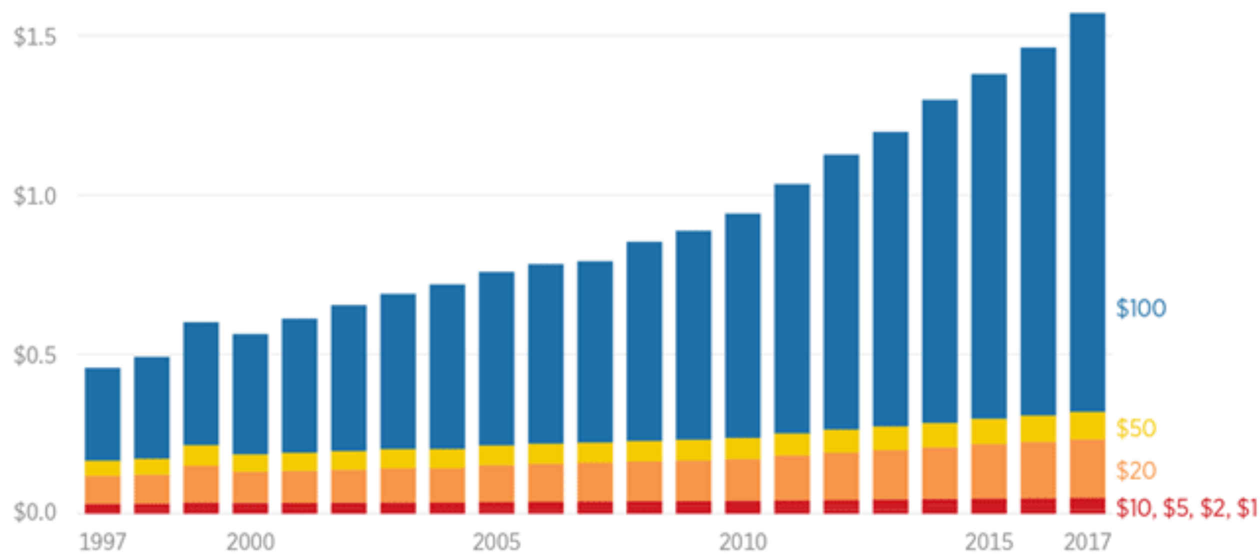
[3]The Fed's payment systems, for instance, could be improved via blockchain technology. Separately, blockchain technology could be used to implement a monetary policy rule. These possibilities are beyond the scope of this testimony. For more on blockchain and a monetary policy rule, see George Selgin, "Synthetic Commodity Money," April 10, 2013, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2000118 (accessed July 13, 2018).
[4]"The Federal Reserve Payments Study 2016: Recent Developments in Consumer and Business Payment Choices," June 30, 2017, https://www.federalreserve.gov/newsevents/pressreleases/files/2016-payments-study-recent-developments-20170630.pdf (accessed July 11, 2018).
[5]James Lyon, "The Interchange Fee Debate: Issues and Economics," Federal Reserve Bank of Minneapolis The Region, June 1, 2006, https://minneapolisfed.org/publications/the-region/the-interchange-fee-debate-issues-and-economics (accessed July 11, 2018).
[6]Ibid.
[7]Federal Reserve, 2016.
[8]Federal Reserve, 2016.
[9]David Wolman, "The Demise of Cash," *Huffington Post*, October 22, 2012, https://www.huffingtonpost.com/david-wolman/visa-demise-of-cash_b_2003284.html (accessed July 11, 2018), and Jon Norris, "The Disappearing Paper: Why Cash Is a Dying Payment Method," TransferWise, December 7, 2016, https://transferwise.com/us/blog/the-disappearing-paper-why-cash-is-a-dying-payment-method (accessed July 11, 2018).
[10]B. Bennett, D. Conover, S. O'Brien, and R. Advincula, "Cash Continues to Play a Key Role in Consumer Spending: Evidence from the Diary of Consumer Payment Choice," Federal Reserve Bank of San Francisco, April 2014, https://www.frbsf.org/cash/publications/fed-notes/2014/april/cash-consumer-spending-payment-diary/ (accessed July 11, 2018).

entertainment and transportation expenditures.[11] As of 2012, cash accounted for roughly 40 percent of U.S. consumer transactions by volume and approximately 14 percent by value.[12] As Charts 1 and 2 show, both the volume and value of currency in circulation—in denominations from $1 to $100—have steadily increased for years.

CHART 1

Currency in Circulation by Value

VALUE OF CURRENCY IN CIRCULATION, IN TRILLIONS OF DOLLARS AS OF DECEMBER 31 OF EACH YEAR



NOTES: Includes Federal Reserve notes, U.S. notes, and currency no longer issued, but does not include denominations larger than $100.
SOURCE: U.S. Federal Reserve, "Currency in Circulation: Value," https://www.federalreserve.gov/paymentsystems/coin_currcircvalue.htm (accessed June 6, 2018).

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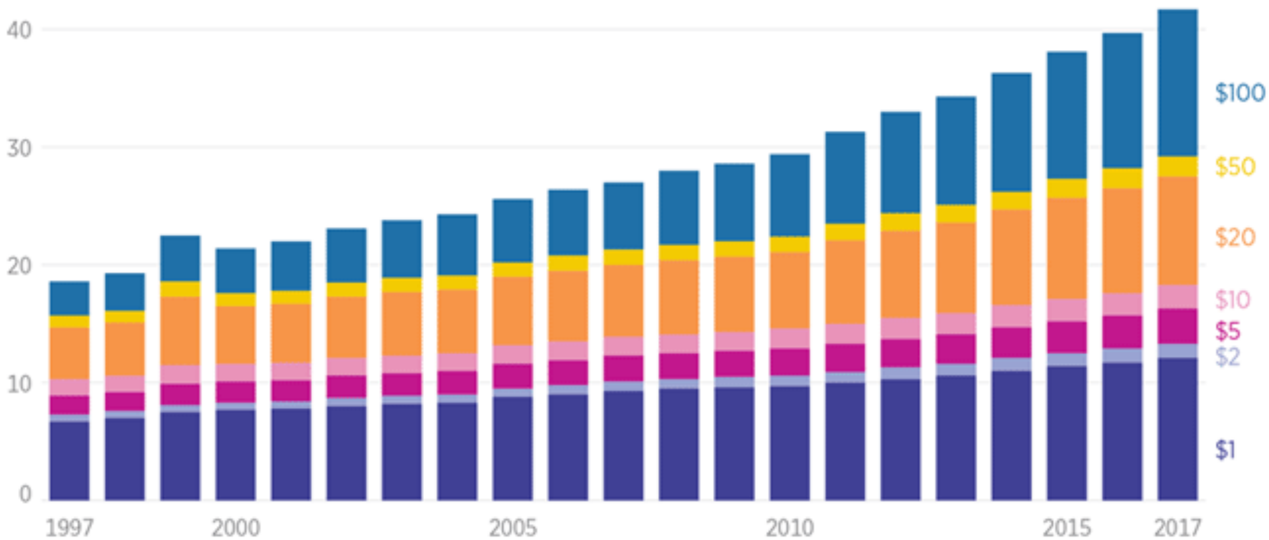
[11] Ibid.
[12] Ibid.

CHART 2

Volume of Currency in Circulation

IN BILLIONS OF NOTES, BY DENOMINATION, AS OF DECEMBER 31 OF EACH YEAR



NOTES: Includes Federal Reserve notes, U.S. notes, and currency no longer issued, but does not include denominations larger than $100.
SOURCE: U.S. Federal Reserve, "Currency in Circulation: Volume," https://www.federalreserve.gov/paymentsystems/coin_currcircvolume.htm (accessed June 6, 2018).

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These statistics reveal healthy competition among various forms of money as technologies have changed through time. Policymakers should not mandate which forms of money consumers use, and they should remove all barriers that hinder these—and other—forms of monetary competition. Mutually beneficial exchange is a central element of economic freedom, and this centrality extends to the right to choose a preferred medium of exchange. Many people, even many economists, now assume that economic progress requires government provision of money, but economic theory and a wealth of experience indicate otherwise. It is easily forgotten, but money—and, more broadly, payment systems—often developed in private markets only to later be monopolized by government authorities.[13]

The U.S. government has a partial monopoly on the U.S. dollar, the world's reserve currency, and relatively few U.S. citizens use any other form of money to buy goods and services. The U.S. monetary system consists of two types of money: (1) *base money*, often referred to as outside money, is the ultimate means of payment in the economy, and it comes from outside the private sector (i.e., the government); and (2) *inside money*, often called credit money, consists of claims to the underlying base money, and it comes from inside the private sector. Private financial firms compete to provide various types of inside money, such as checkable deposits with bankcards, money market accounts, and travelers' checks. Few policymakers question whether they should actually provide money. However, the Federal Reserve is the monopoly provider of outside money, so the U.S. government ultimately determines the total amount—and type—of money that private

[13]For an overview of the international experience, see Benn Steil and Manuel Hinds, *Money, Markets, and Sovereignty* (New Haven, CT: Yale University Press, 2009), pp. 67–106.

firms can create.[14] Very few policymakers question whether anyone *other than* the federal government should provide this outside money, despite its fundamental economic importance. Broadly, few policymakers ever think about improving the quality of money with the same competitive market forces that improve other goods and services. Nonetheless, these forces push entrepreneurs to innovate and improve products to satisfy customers, and they expose weaknesses and inefficiencies in existing products, thus improving people's lives.

Economists generally acknowledge that private competitive markets produce such benefits but generally believe that these competitive forces do not (or should not) apply to money. Still, the federal government's existing monopoly on money necessarily limits the extent to which competitive processes can strengthen money, and exposes the means of payment for all goods and services to the mistakes of a single government entity. Ironically, even some of the scholars that argue for *increased* centralization and government control of money acknowledge that the "biggest threat to the value of the currency is often the government itself."[15] Such conflicting views are surprising because the government's actual record of monetary stewardship is so poor. That historical record, including recent monetary policy failures, highlights the importance of preserving citizens' ability to use whichever form of money they choose.[16] Nothing can provide as powerful a check on the government's ability to diminish the quality of money as allowing competitive private markets to provide it. Suppressing such competition, if history is any guide, only deprives citizens of beneficial innovations in the means of payments. Ultimately, the competitive process is the optimal approach to discovering what people view as the best means of payment.

Policymakers and those operating in the marketplace are likely to be able to make more informed decisions in a competitive currency environment. In a competitive currency environment, the relative price of the competing currencies will rapidly incorporate information about current market conditions and about the supply of, and demand for, the various currencies available for exchange.[17] Unsuccessful currencies will affect a few people a little, whereas successful ones—vetted by competitive processes—can affect many people in a more powerful manner. Government policy should, therefore, treat all forms of money in a neutral manner, ensuring that legal barriers do not hinder the development of alternative currencies or unduly influence the development of any single alternative. Congress should even consider allowing the U.S. Postal Service and other government agencies to accept cryptocurrencies and other alternative forms of payment. At a minimum, Congress should address the following anti-competitive issues:[18]

- **Legal tender laws.** Congress should amend legal tender laws because they allow courts to force acceptance of a certain amount of official currency to satisfy debts even if a contract calls for delivery in another means of payment.[19]
- **Capital gains taxes.** Since the Internal Revenue Service treats (effectively all) alternative currencies as assets, every such transaction is a taxable event and is reportable on Schedule D

[14]The Federal Reserve has control over the total amount of base money (currency plus reserves) because only it can change the total amount of reserves in the banking system. All Fed open-market purchases, for example, either increase the amount of reserves or U.S. currency in circulation.

[15]Kenneth Rogoff, *The Curse of Cash* (Princeton, NJ: Princeton University Press, 2016), p. 19.

[16]See Norbert J. Michel, "Improving Money Through Competition," Heritage Foundation *Issue Brief* No. 4730, July 7, 2017, http://www.heritage.org/monetary-policy/report/improving-money-through-competition, and Norbert J. Michel, "Monetary Policy Reforms for Main Street," Heritage Foundation *Backgrounder* No. 3237, July 27, 2017, http://www.heritage.org/monetary-policy/report/monetary-policy-reforms-main-street.

[17]Demand for a currency would be based on characteristics that make it more or less useful, expectations about future supply and its value, or other factors.

[18]For more on ensuring a level playing field, See Dwyer and Michel, "Bits and Pieces."

[19]See 31 U.S. Code § 5103.

of the taxpayers' Form 1040 (or, if a business, the analogous business tax form).[20] Congress should amend the Internal Revenue Code to provide that gains or losses attributable to the purchase or sale of alternative currencies are not taxable.[21]

- **Private coinage.** Congress should modify statutes concerning coinage to clarify that they do not prohibit the honest production of alternative monies for use in private transactions.[22]
- **Bank secrecy and anti-money laundering rules.** Congress should address bank secrecy and anti-money-laundering laws so that producers of alternative monies are not held to higher or lower standards than traditional financial companies.[23]

Central Bank Cyrptocurrency: An Idea Counter to Basic Economic Freedom

Few policymakers have approached monetary competition in the manner described above. Instead, many have sought to either phase out or (at least partially) ban the use of paper currency and force consumers into a digital-currency-only means of payment.[24] One aspect of this campaign to phase out cash is to force all citizens to use some form of digital money—including, but not necessarily limited to, cryptocurrency—in an account at a central bank. Several versions of such a plan exist, and Sweden recently held (a failed) referendum to give its central bank exclusive control over money, thus removing the private sector's ability to create money.[25] A recent article in *The Economist* noted:

> The main difficulty central banks face is how to facilitate the circulation of digital currency without routing everything through banks, as happens today. Blockchain technology, which underpins crypto-currencies, could be one way to avoid the banks. In such systems, balances and transactions are tracked on a distributed public ledger, secured with cryptography.[26]

It is true that blockchain technology could drastically change the banking industry—the technology provides an efficient/low-cost method of verifying financial transactions, a function that banks currently provide. Still, whether the technology actually helps to restructure the industry because banks' existing third-party verification function is inferior to blockchain technology is something which must be determined in a competitive process, one that has yet to unfold. There is no valid economic justification for a government agency to dictate that payments *must* be re-routed through a

[20]U.S. Department of the Treasury, Internal Revenue Service, "Schedule D (Form 1040) Capital Gains and Losses," http://www.irs.gov/pub/irs-pdf/f1040sd.pdf (accessed July 6, 2014).
[21]David R. Burton and Norbert J. Michel, "Removing Tax Barriers to Competitive Currencies," Heritage Foundation *Issue Brief* No. 4761, September 13, 2017, https://www.heritage.org/sites/default/files/2017-09/IB4761.pdf.
[22]See, for example, 18 U.S. Code, §§ 485, 486, 489, and 490.
[23]See Norbert J. Michel and David Burton, "Financial Privacy in a Free Society," Heritage Foundation *Backgrounder* No. 3157, September 23, 2016, http://www.heritage.org/markets-and-finance/report/financial-privacy-free-society.
[24]See William D. Lastrapes, "The Costs and Benefits of Eliminating Currency," *Cato Journal*, Vol. 38, No. 2 (Spring/Summer 2018), https://object.cato.org/sites/cato.org/files/serials/files/cato-journal/2018/5/cj-v38n2-14.pdf (accessed July 11, 2018); Norbert J. Michel, "Special Interest Politics Could Save Cash or Kill It," *Cato Journal*, Vol. 38, No. 2 (Spring/Summer 2018), https://object.cato.org/sites/cato.org/files/serials/files/cato-journal/2018/5/cj-v38n2-13.pdf (accessed July 11, 2018); and Lawrence H. White, "The Curse of the War on Cash," *Cato Journal*, Vol. 38, No. 2 (Spring/Summer 2018), https://object.cato.org/sites/cato.org/files/serials/files/cato-journal/2018/5/cj-v38n2-12.pdf (accessed July 11, 2018).
[25]Sam Meredith, "Switzerland Is Set To Vote on a Radical 'Sovereign Money' Plan: Here's What You Need To Know," CNBC, June 5, 2018, https://www.cnbc.com/2018/06/05/switzerlands-sovereign-money-referendum-heres-what-you-need-to-know.html (accessed July 13, 2018).
[26]"Central Banks Should Consider Offering Accounts to Everyone," *The Economist*, May 26, 2018, https://www.economist.com/finance-and-economics/2018/05/26/central-banks-should-consider-offering-accounts-to-everyone (accessed July 13, 2018).

different system, thus undertaking a complete redesign of a major portion of the economy.[27] Indeed, there is every reason to fear such a government redesign of the payment/financial system.

It is also clear that centralizing the control of a blockchain directly negates the benefits a distributed ledger offers over centrally controlled databases, and the pseudo anonymity of decentralized blockchains is completely counter to the U.S. governments' current treatment of all financial transactions. There is no apparent reason that a central bank—should it wish to offer digital accounts to the public—would better serve any of its constituents by offering a centrally controlled blockchain instead of offering more traditional digital accounts.[28] The vitally important policy question, though, is whether a central bank should offer the general public any type of digital bank account in the first place.[29] Scholars such as Morgan Ricks argue that central banks should provide retail accounts to the general public based on the notion that money is a public good and that providing such accounts would improve central banks' ability to conduct monetary policy.[30]

A major flaw in this reasoning is that private markets have clearly not failed to produce money, an unsurprising fact given that money does not fit the standard definition of a public good.[31] Regardless, the existence of a public good does not justify the government suppression of alternative forms of that good, even if that good is money or a money substitute. Furthermore, it is far from clear that modern monetary policy, conducted by central banks, has improved financial stability compared to the pre-central-bank era. For instance, though it is widely believed that the Federal Reserve's monetary policies have tamed business cycles and lowered macroeconomic volatility, a close look at the evidence suggests that the conventional view should be re-evaluated. Several studies suggest that data deficiencies caused key pre-Fed-era data to appear more volatile than their

[27]The Fed has already intervened to redesign/centralize large portions of the retail and wholesale payment systems in the U.S., but it is far from clear that any sort of market failure (or other valid economic justification) necessitated such interventions. See Jeffrey M. Lacker, Jeffrey D. Walker, and John A. Weinberg, "The Fed's Entry into Check Clearing Reconsidered," Federal Reserve Bank of Richmond *Economic Quarterly*, Vol. 85 No. 2 (Spring 1999), https://www.richmondfed.org/~/media/richmondfedorg/publications/research/economic_quarterly/1999/spring/pdf/lacker.pdf (accessed July 13, 2018), and George Selgin, "Wholesale Payments: Questioning the Market-Failure Hypothesis," *International Review of Law and Economics*, Vol. 24 (2004), pp. 333–350.

[28]J. P. Koning, "Fedcoin: A Central Bank-Issued Cryptocurrency," November 15, 2016, pp. 25–36, https://static1.squarespace.com/static/55f73743e4b051cfcc0b02cf/t/58c7f80c2e69cf24220d335e/1489500174018/R3+Report-+Fedcoin.pdf (accessed July 13, 2018).

[29]The experience in Ecuador provides a lesson in the limits of a government's ability to launch new forms of money when the public prefers existing forms and distrusts the government: Ecuador started the worlds' first central bank digital money in 2014 and officially ended the experiment in 2018. See Lawrence H. White, "The World's First Central Bank Electronic Money Has Come – And Gone: Ecuador, 2014–2018," Alt-M, March 29, 2018, https://www.alt-m.org/2018/03/29/the-worlds-first-central-bank-electronic-money-has-come-and-gone-ecuador-2014-2018/ (accessed July 13, 2018).

[30]Morgan Ricks, John Crawford, and Lev Menand, "Central Banking for All: A Public Option for Bank Accounts," Great Democracy Initiative, June 2018, https://greatdemocracyinitiative.org/wp-content/uploads/2018/06/FedAccountsGDI.pdf (accessed July 13, 2018).

[31]The question of whether the monetary standard is a public good is separate from the question of whether actual hand-to-hand currency (including digital currency) is a public good. Similarly, the question of whether there should be a single monetary standard is separate from whether the production of money is a natural monopoly. See Lawrence H. White, "Competitive Money, Inside and Out," *Cato Journal*, Vol. 3, No. 1 (1983), pp. 289–298, https://object.cato.org/sites/cato.org/files/serials/files/cato-journal/1983/5/cj3n1-16.pdf (accessed July 13, 2018), and George Selgin, *The Theory of Free Banking: Money Supply under Competitive Note Issue* (Lanham, MD: Rowman & Littlefield, 1988), pp. 120–135, http://oll.libertyfund.org/titles/selgin-the-theory-of-free-banking-money-supply-under-competitive-note-issue (accessed July 13, 2018).

Fed-era counterparts, and there is even some evidence that the Fed era has included *more* economic instability than before the Fed's creation.[32]

Even granting the possibility that monetary policy could improve public welfare, giving the federal government a complete, iron-clad monopoly over money runs counter to the very principle of economic freedom. Any such proposal exhibits a common distrust of free markets and a desire to give bureaucrats more control over people. The main idea behind improving the central bank's ability to conduct monetary policy is simple: prevent people from escaping government-imposed fees on their idle money balances. In other words, force everyone to have retail accounts at a central bank—and eliminate the use of any other form of money—so that people are left with no way to stop the government from imposing taxes to induce more spending. If, for example, the Fed decided that aggregate spending was too low, the central bank could threaten to take individuals' money as a way to incentivize more spending. In central banking terms, the Fed would be able to impose negative interest rates on deposits as a penalty for holding too much cash rather than spending it. This extreme policy—a complete government monopoly of money—would leave all people wholly dependent on a government-controlled electronic network for conducting all transactions. It would endanger law-abiding citizens' privacy and subject them to the whims of both elected and unelected government officials.

Conclusion

Globally, there has been a steady shift away from paper-based payments during the past few decades, but cash remains a widely preferred option. This shift has occurred as technology changed, thus making it easier to facilitate consumer exchanges electronically. If the federal government would simply allow these changes to take place, there would be no particularly unique problem—the trends toward a less-cash society would likely continue, and consumers would likely use various forms of money, including cash and cryptocurrencies. Criminals may find it more expedient to transfer money anonymously via the Internet, but they have surely found it easier to commit crimes with the advent of better automobiles, computers, and communication devices. None of these items should be criminalized.

The U.S. government should treat all forms of currency, even cryptocurrencies, in a neutral manner. It should remove legal barriers to using alternative forms of money, and it should avoid providing any single form of money with a legal advantage, thus allowing competitive market forces to expose weaknesses and inefficiencies in existing alternatives. The competitive process is the optimal approach to discovering what people view as the best means of payment, and allowing people to access such alternative means of payment is the best way to provide a powerful check on the government's ability to diminish the quality of money. The same concept—allowing competitive processes to work—applies equally to new applications of blockchain technologies: The federal government should not impose regulations that unduly hinder the development of these applications. Congress should work diligently to eliminate tax and other legal impediments to the development of alternative currencies as well as new applications for blockchain technologies.

The federal government currently has a partial monopoly on the production of money, and this monopoly necessarily limits the extent to which competitive processes can strengthen money. It

[32]George Selgin, William Lastrapes, and Lawrence White, "Has the Fed Been a Failure?" *Journal of Macroeconomics*, Vol. 34 (2012), pp. 569–596; Norbert J. Michel, "Federal Reserve Performance: Have Business Cycles Really Been Tamed?," Heritage Foundation *Backgrounder* No. 2965, October 24, 2014, http://thf_media.s3.amazonaws.com/2014/pdf/BG2965.pdf; and Norbert J. Michel, "Federal Reserve Performance: What Is the Fed's Track Record on Inflation?," Heritage Foundation *Backgrounder* No. 2968, October 27, 2014, http://thf_media.s3.amazonaws.com/2014/pdf/BG2968.pdf.

also exposes the means of payment for all goods and services to the mistakes of a single government entity. Congress should ensure that this monopoly is not extended via the use of federally mandated digital money, especially via retail digital accounts at the Federal Reserve (including a central-bank-backed cryptocurrency). Implementing any such policy would effectively nationalize private credit markets because no private company (or individual) would be able to compete with the federal government. Because people are so vulnerable to the abuse of money (including modern monetary policy errors), Congress should not interfere with citizens' ability to opt out of official currency.

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