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Money and Banking in the United States

A Guide to the Policy Landscape

By Lev Menand



About the Author

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Menand has written extensively on the US monetary framework, banking and central banking, financial regulation, corporate governance, and the law of networks, platforms, and utilities. In 2018, he coauthored <u>Central Banking for All: A Public Option for Bank Accounts</u> for Roosevelt's Great Democracy Initiative, which outlined a strategy for the Federal Reserve to offer the general public the option to hold digital currency accounts at the central bank.

In 2022, Menand published <u>The Fed Unbound: Central Banking in a Time of Crisis</u>, which recounts how the erosion of banking law and the rise of alternative forms of money have pushed the Fed to take on more and more responsibilities to keep the economy out of recession. He recently released, along with Morgan Ricks, Ganesh Sitaraman, and Shelley Welton, a new textbook on the law of <u>Networks, Platforms, and Utilities</u>—the first in the field in over 20 years.

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About the Roosevelt Institute

The Roosevelt Institute is a think tank, a student network, and the nonprofit partner to the Franklin D. Roosevelt Presidential Library and Museum that, together, are learning from the past and working to redefine the future of the American economy. Focusing on corporate and public power, labor and wages, and the economics of race and gender inequality, the Roosevelt Institute unifies experts, invests in young leaders, and advances progressive policies that bring the legacy of Franklin and Eleanor Roosevelt into the 21st century.



Introduction

In March and April 2023, the American system of money and banking teetered on the brink of collapse. Several large banks failed—including Silicon Valley Bank (SVB), Signature Bank, and First Republic Bank—but the real story was the extent of the ad hoc government interventions required to prevent a wider unraveling. Over just a few weeks, investors and depositors lost confidence in scores of financial institutions whose names never made the mainstream news, and businesses began to withdraw their deposit balances in search of alternative products issued outside the banking system. The Banking Crisis of 2023 subsided only after multiple federal regulators indicated their willingness to bypass the ordinary rules of bank resolution to insure most, if not all, of the system's nearly \$20 trillion of deposit balances (including those above the \$250,000 deposit insurance limit) and to open an emergency lending facility to support banks with unrealized losses on their securities portfolios (<u>FDIC 2023</u>). The latter facility, established by the Federal Reserve, drew on \$25 billion committed by the Secretary of the Treasury from a fund created by Congress to manage exchange rates with foreign currencies (a wholly unrelated endeavor) (Barbuscia 2023). The joint maneuver marked the fourth extraordinary government effort to stop a financial panic in 15 years.

The first such effort occurred in 2008 and was marred by the disorderly collapse of Lehman Brothers, one of the largest financial institutions in the world at the time and the largest debtor ever to seek protection from its creditors in US courts. The effects of Lehman's failure were severe. Although Lehman was not a depository bank like SVB or First Republic (it was a federally licensed broker dealer), its business model was very similar to that of a depository bank. It was a *shadow bank*: a financial firm that operates in similar ways to a bank but isn't regulated like one. (Shadow banks, like banks, fund long-term lending with short-term borrowings that people treat as cash equivalents.) Lehman's collapse set off a run on regulated banks and on other shadow banks just like the runs that we saw in March 2023 and that plagued the US financial system in the 19th century. In 2008, these runs precipitated a rapid contraction in the amount of money available in the economy for households and businesses to pay for things followed by an acute macroeconomic disaster—the same toxic two-step that followed the Panic of 1907 and that brought about the Great Depression in the 1930s (Ricks 2016; Gorton and Metrick 2012). Millions of people lost their jobs, their homes, or both.

The Great Recession, as it came to be known, shattered a bipartisan policy consensus that had prevailed in Washington for nearly 30 years. That consensus emphasized the benefits of Lehman's lightly regulated, bank-like structure. It heralded the deep and liquid capital markets that firms like Lehman enabled, and it championed the international linkages and dollar-based capital flows that Lehman-style trading desks facilitated. But none of the advocates of the monetary and financial liberalization that had allowed Lehman to assemble a balance sheet with hundreds of billions of dollars of



bank deposit-like liabilities predicted or even imagined its failure and the economic disaster that it precipitated.

Ever since Lehman's bankruptcy, academics and policymakers have been searching for answers. What was the root cause of the 2008 crisis? How much of the pre-2008 regulatory regime ought to be replaced? And with what?

Over the last 15 years, policymakers have made many changes to the legal framework for money and banking. In 2010, Congress enacted the most significant financial legislation since the 1930s, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank). In 2014, the Securities and Exchange Commission (SEC) revised regulations governing money market mutual funds (MMFs), prompting the decline of "prime" funds that, like Lehman Brothers, were shadow banks operating beyond the "regulatory perimeter" for banking. By 2017, the three primary banking regulators—the Federal Reserve, the Office of the Comptroller of the Currency (OCC), and the Federal Deposit Insurance Corporation (FDIC)—had finalized hundreds of new regulations, touching on many aspects of the banking business, from liquidity and capital to proprietary trading, derivatives dealing, and mortgage origination (US Government Accountability Office 2023).

Yet, despite these efforts, runs resembling the one on Lehman Brothers continue to threaten economic catastrophe. Each time a new run starts, a recession is avoided thanks primarily to massive government intervention—such as trillions of dollars of support during the early weeks of the pandemic in 2020 and the broad-reaching ad hoc programs in March 2023. These interventions have given new urgency to the inquiry that began 15 years ago and new momentum to efforts in Washington to build a better financial system. They have also resulted in scholarly progress in money and banking at the level of theory and ideas for reform that would further transform banking practice.

This report offers a guide to the policy landscape. It proceeds in three parts. Part I provides critical conceptual background on money—what it is and the role that banks and other financial organizations play in creating it. Part II reviews the history of the monetary system from the founding of the United States to the present with a focus on the 20th–century framework that eliminated disorderly monetary contractions and the subsequent liberalization that led to a return to what one might reasonably describe as "19th–century conditions." Part III turns to current debates, situating various proposals within the conceptual and historical framework outlined in Parts I and II.



Part I: Conceptual Background

The biggest problem with the pre-2008 policy consensus was conceptual: It conflated banking with other forms of financial intermediation. Financial intermediaries are firms that borrow money from savers and lend money to borrowers. Banking is a special type of financial intermediation because it involves expanding the total supply of money in the economy. When banks lend, they issue deposit account balances that serve as a medium of exchange and store of value. Banks, in other words, do not need existing money to lend; their deposits function as money and they create new ones when they originate new loans (Ricks 2018; Hockett and Omarova 2017).

Accordingly, the most important advance of the past 15 years has been conceptual: a growing recognition among scholars and policymakers that financial systems depend on deposit and deposit-like money and that some entities create deposit money or its near-equivalent while other entities use deposit money that the former entities have created. Any inquiry into financial policy must therefore begin with a solid understanding of money: what it is, how certain financial institutions create it, and why governments have been outsourcing control over the activity of money augmentation to investor-owned enterprises for several hundred years.

What Is Money?

Money is a social technology for facilitating the production, distribution, and exchange of goods and services. It improves economic coordination among a group of people. In a world without money, it is very expensive to trade one thing for another—transaction costs are high. For example, if you have hats and want an iced coffee, you have to find someone with an iced coffee who wants hats. Economists call this the "double coincidence of wants," and it dramatically reduces the amount of stuff that a group of people can create and enjoy (Jevons 1875).

Money offers a solution. Instead of trading hats for iced coffee, you can trade hats for money and money for iced coffee. Money is something which everyone, or almost everyone, wants. But just because a functioning money attains this status doesn't mean that money in and of itself is valuable. Money has just two essential components: a "unit of account"—such as the dollar, the euro, or the yen—and a fixed number of units, some of which can be transferred between people (<u>Ricks et al. 2022</u>).

Often units of money have no physical form: They are merely entries recorded on a list somewhere. For example, the first known money in history, the Babylonian shekel, was a ledger used by temple administrators to track tax debts on clay tablets (<u>Tyler 1999</u>). To find out how many shekels you had, you could ask the administrator to look up the number next to your name on the list. The cryptocurrency Bitcoin (an aspiring money)



uses a list in a very similar way—it digitally records exactly which wallet controls each unit of Bitcoin (<u>PwC n.d.</u>).

Other times there is no list. No one person knows where all of the units of money are at any given time. Such is the case with physical dollar bills, for example. Each dollar bill has a serial number, so the government knows exactly how *many* bills are outstanding. But the government doesn't keep track of who holds each bill, as individuals can transfer ownership without registering or recording the transfer anywhere.

Money has two further features that are particularly important. First: Anyone can try to create money—a government, a business, an individual, even a group of computer users who have never met each other. The hard part—as the economist Hyman Minsky once explained—is getting other people to accept a series of entries on a list (or physical manifestations of the same) in exchange for real things like iced coffee or hats (Minsky 1986).

Money issuers have solved Minsky's problem—what I call the first problem of monetary system design—in various ways. Most famously, they have tied their units to something of value. They've offered *collateral*—something real to back up each unit of money. For example, around 600 BC, the kings of Lydia, who ruled a territory that is part of present day Turkey, issued the first coins (Heller 2023). Coins are tokenized money units. Like dollar bills or dimes, their physical form need not include anything of particular value. But often, coins are made of precious metals (Desan 2014). The Lydian kings incorporated gold and silver into their coins, incentivizing widespread use, as even if the Lydian state were to fall and Lydian money was to become obsolete, at least those people holding Lydian coins could melt them down and still have something other people valued.

Money issuers, of course, would prefer not to provide collateral. Another technique that money issuers employ for increasing adoption of their money (and perhaps the most important) is coercion. Most moneys are established by governments (including all successful moneys in human history) and most of the time (arguably, *all* of the time) governments create moneys first and foremost for fiscal purposes. Governments tax households and businesses within their jurisdictions, demanding the money that they've established to satisfy those debts. And with tax debts, if a person doesn't pay, the government can, and often will, resort to physical force, seizing their property or even liberty. Governments also tend to *spend* in the money that they've created, and they are typically the biggest spenders in their jurisdictions (<u>Desan 2014</u>).

Of course, once a group of people start to use a given money to buy and sell or to store value, Minsky's problem tends to fade into the background. It is no longer so important that money be tied to anything of real value or that a government requires its citizens to tender its money in payment of tax debts. The usefulness of dollars is also a product of the extent to which dollars are used by other people, and if dollars are widely used



that is enough to encourage their further use. When just about everyone in a certain community has some money in a certain unit of account and that money is used to exchange goods and services, then the resulting network effects take on a life of their own. Why accept dollars for your hat? Because you know that the store down the street accepts dollars for their iced coffees.

This brings us to a second important fact about money. Once a government has gotten its money off of the ground—say US dollars—it is very tempting for people to try to create their own US dollars and pass them off as, if not as equivalent, as an alternative to the already-existing dollars issued by the government. Anti-counterfeiting laws, of course, prohibit people from printing physical copies of government-issued dollars. But those laws do not prohibit something slightly different: Something that we've come to call banking.

What Is Banking?

Banks are organizations that create their own money, backed by a promise to pay another type of money already in circulation, usually money issued directly by the government. So-called "bank money" traditionally takes one of two forms: 1) notes, which are physical pieces of paper that circulate hand-to-hand and 2) deposits, which are ledger entries recorded in a list at the bank. Consider, for example, the Bank of Amsterdam founded in 1609 (Ricks et al. 2022). The Bank of Amsterdam printed pieces of paper denominated in guilders, which was the coin-based, precious metal-backed money issued by the Dutch Republic. If someone brought 10 guilder coins to the bank, the bank would tender a piece of paper promising to pay the bearer 10 guilders on demand. At first, for each piece of paper the bank handed out, it held a precious metal coin of equivalent value in its vaults, ensuring that it could always redeem its notes in government-issued money. But as people gained confidence that the bank's receipts were worth at least as much as the government's coins, they began to accept the notes and exchange them just like coins. Seeing how widely accepted the bank's receipts were, and how rarely people sought to exchange them for the precious metal coin, the Bank eventually printed more receipts than it had coins in its vaults. Now, instead of substituting paper for coin, the bank actually added to the total supply of guilder-denominated money instruments. The Bank of Amsterdam created its own money—using the same unit of account as the government—thus expanding the total supply of money in use in the Dutch Republic (Ricks et al. 2022).

Although we are not used to thinking about it this way, advanced economies like the US are like the Dutch Republic: They use *many different moneys* supplied by many different issuers. Governments supply a foundation or base (Ricks et al. 2022). They set up a mint that issues physical coins, typically using cheap metals. And they establish a "central bank" or "monetary authority," such as the Federal Reserve, which issues paper banknotes like dollar bills. And then they turn to other entities to augment the supply of coins and notes, the "root" money, with their own instruments. This "synthetic" money,



denominated in the same unit as government-issued money, circulates in parallel and often exceeds by many multiples the amount of root money in circulation.

Why Outsource?

The foundational issue in every financial system—and the starting point for every aspect of money and banking policy—is who should issue money and on what terms. Today, the US relies on a "hybrid" framework in which the government issues some money directly in the form of coins and paper currency and non-government enterprises—banks and nonbank financial companies—issue the rest (and the rest is the vast majority of overall total). Currently, in the US, the economy runs almost entirely on bank-issued money (US Department of the Treasury 2022; Hockett and Omarova 2017). Although there are \$50 billion of coins and \$2 trillion of Federal Reserve notes outstanding as of 2023, almost all transactions (measured by volume) rely on nearly \$20 trillion of deposit balances maintained by banks. In other words, when people pay their rent or when businesses make their payroll, they do so by transferring deposit balances: No government-issued money changes hands. Bank deposits in the US are not warehouse receipts for coins and notes—most coins and notes are in people's pockets, not in bank vaults—but US households and businesses still treat deposits as equivalent.¹

One question worth raising at the outset is why have multiple forms of money at all? Why not simply have one entity—say, the government—issue whatever amount of money people need to conduct their affairs and prohibit anyone else from augmenting the supply of money denominated in that unit with their own instruments? Governments have generally avoided this approach for several reasons. One concern has been that exclusive government issue could lead to excessive government spending, inflation, public corruption, or loss of confidence in the government's money (leading to the adoption of currencies issued by governments in other countries). Still, "insourcing" has its supporters, who think these potential pitfalls are better than the alternative and see money issue as "an essential government function on a par with the provision of a stable legal framework" (Friedman 1959).

Another question is, if the government is going to provide only a base of (and not all) money the economy requires, who should issue the rest of the money supply and what limits should there be on the people that do so? Should there be just one issuer adding to the money supply, such as one bank operating outside of the government (as some people hoped the Bank of the United States would be when Congress established it in 1791) (Federal Reserve of Minneapolis n.d.)? Or should there be thousands of money issuers, like the hundreds of government-chartered "national banks" currently

¹ Another \$10 trillion or more of deposit substitutes are created by nonbank financial institutions ("shadow banks"). These instruments include money market fund shares, repurchase agreements, Eurodollars, and stablecoins (<u>Federal Reserve 2024</u>; <u>Aldasoro, Mehrling, and Neilson 2023</u>).



8

operating today? And who should own and control these entities? Should they be owned and controlled by private investors and run for profit, like the Bank of the United States was during its years of operation (1791–1811 and 1816–1836) and as national banks are today? Or should they be owned by local governments (such as the Bank of North Dakota, established by North Dakota in 1919 and still operating today) (Bank of North Dakota n.d.), depositors (as with the country's "credit unions"), or no one at all (such as certain mutual savings banks organized as nonprofits)?

For most of American history, the US employed a particular type of "hybrid" system. It did not allow anyone to augment the money supply; it "outsourced" the power to issue dollar-denominated cash substitutes to depository institutions with special legal charters (including national banks, credit unions, and savings banks), and it prohibited anyone else from issuing money instruments without a charter (or otherwise restricted their ability to operate at scale) (Ricks et al. 2022). The result was that the government gave up some control over the total dollar-denominated money supply but retained a good deal of influence over the various people to whom it had delegated control. One reason why the government retained some influence was that it worried about the quality and quantity of money in circulation. Although governments themselves can sometimes collapse, businesses and nonprofit enterprises tend to close down much more frequently. Among other things, these organizations cannot rely on the power to tax to make good on their obligations. As a result, during bad economic times, people may doubt the promises investor-owned banks make to pay government-issued money in exchange for their notes and deposits and decide they would rather have government-issued money after all. Such "runs" can become self-fulfilling: People with a particular bank's money want to get rid of it because they expect other people will want to get rid of it. Because an advanced commercial society cannot function without a stable supply of money, the government often finds itself standing behind or supporting banks and their money instruments when times get tough. If that's inevitably going to happen at some point in the future, policymakers have decided that it would be best for the government to pick and choose who gets to enter the banking business in the first place.²

Another reason why the government might *outsource* the power to expand the money supply is to influence who benefits from the creation of new money. If the government is going to limit itself to issuing only a small base of money and rely on other actors to synthesize an additional supply, then the government is giving up a lot of power over the economy to these actors. If it allows anyone to enter this business, one or two investor-owned firms may emerge as dominant money issuers with huge sway over the sorts of economic activity that is financed. As the legal historian Christine Desan (2022) explains, the ability of banks and bank lending to effect the distribution of wealth in a society means that bankers perform "an essentially political role." Governments have generally been unwilling to allow this role to be performed by just a handful of private

² Relatedly, it's not clear that without ex ante government backing, money issued by private businesses would attract sufficient users, i.e., that these issuers would create enough money.



individuals. Instead, they have tended to charter multiple banks on specific terms and conditions in order to channel new money to particular classes of borrowers like merchants, farmers, and homeowners.

Part II: Historical Overview

The US has employed three different monetary systems since its founding—all hybrid: (A) the English Model first adopted in the 1790s, modified multiple times, and ultimately abandoned in the 1830s; (B) the American Monetary Settlement, first developed in various states beginning in the 1830s, later embraced at the federal level in the 1860s, and progressively strengthened through the 1970s; and (C) the Global Dollar System, an experiment with liberal entry into money creation by government-backstopped nonbank financial firms that started small in the 1950s, broke out into the open in 1974, consolidated in the 1980s and 1990s, and continues today. All three of these approaches involve strict limits on government provisioning of money. The third approach produced the 2008 crisis, and it is this approach that the 2010 Dodd-Frank reforms attempted to stabilize in the years since.

The English Model: 1791–1836

In the 1690s, the English Parliament adopted a strict metallic standard for government coins denominated in "pounds sterling" and established the Bank of England to expand the supply of money beyond coins through the issue of notes and deposit balances also denominated in pounds. Policymakers hoped to achieve an elastic money supply—one that expanded and contracted based on the needs of economic actors—without undermining public confidence that the pound sterling would retain its value over time. To that end, Parliament did not vest control over the Bank of England in the hands of government officials, it delegated oversight of the enterprise to private investors: It outsourced (Ricks et al. 2022).

To prevent the people who ran the Bank from becoming too powerful and abusing their position, the government limited the Bank's "powers." It barred the Bank from buying or selling goods. In this way, it separated the bank from ordinary commercial activity.

To encourage people to use the Bank's notes as a form of money, Parliament also pledged not to charter other banks, and in 1709 it prohibited partnerships and corporations from issuing circulating notes within 65 miles of London.

In the United States in the 1790s, the First Congress attempted to set up a similar system, and it succeeded for a time and to a certain extent. Alexander Hamilton, in his "Report on a National Bank," recommended that Congress charter a Bank of England–style institution for the new republic. In 1791, Congress obliged, and the Bank of the United States was established. In 1792, Congress passed the Coinage Act,



restricting the amount of money the US government would issue directly. US coins would be tied to a gold and silver standard. It would be up to the Bank to expand and contract this metal-backed supply with notes and deposits (<u>Ricks et al. 2022</u>).

The Bank of the United States never enjoyed a full monopoly on money augmentation, however. By the time it was established, state governments had chartered their own banks such as the Bank of New York. These banks were generally owned and controlled by people affiliated with the Federalist party and designed to support merchants rather than farmers. As the Democratic-Republican opposition to the Federalists grew, new state policymakers agitated for additional state-chartered banks to serve other economic interests. The election of 1800 was a watershed (Ricks et al. 2022). With Democratic Republicans gaining power in many states, dozens of state-chartered banks opened in cities and towns around the country. Although the Bank of the United States was by far the largest bank and its notes by far the most important dollar-denominated money, the Bank's share of the money supply fell steadily as more and more states set up competing money issuers.

The proliferation of state banking ultimately sunk the English Model in the US (Ricks et al. 2022). The problem was political. State banks were limited geographically during this period: Their charters permitted them to operate only within their states, more or less, and often only in a single city or physical location. As a result, the Bank of the United States, which operated across the national geography, dominated certain sorts of lending and payment businesses. The federal bank also sat at the apex of the banking "system"—a network of relationships between banks—and was the sole entity processing government payments and receipts. Over time, the Bank's power became more apparent and more noxious to state bankers, a group of people with quite a bit of clout and influence in American politics. Others were concerned that the federal bank's leaders had their own political agenda, which they promoted at both the state and federal levels. In the 1830s, President Andrew Jackson put an end to the Bank by vetoing legislation that would have extended its charter beyond 1836 (Wells 2023).

After the Bank's charter expired, the US banking system fragmented and deteriorated. A monetary contraction triggered one of the worst macroeconomic disasters in American history, a depression that lasted from 1837 to 1842 and that bankrupted state-chartered banks, businesses, and multiple state governments (Ricks et al. 2022). Subsequently, Americans found themselves relying on thousands of different dollar-denominated notes issued by thousands of different banks. People relied on guides and reports to determine which ones were worth their face value in gold and silver coins and which ones were issued by banks that were likely to ultimately fail. Interstate commerce was costly and cumbersome.



The American Monetary Settlement: 1863-1974

The Civil War ended the Jacksonian experiment with fragmented state-led banking. The fiscal demands of the conflict, and the decision by most state banks to stop paying out gold and silver coins on their notes and deposits (as promised), prompted Congress to reassert federal control over the money supply. Meanwhile, rapid economic development and financial upheaval laid bare the inadequacies of the heterogenous monetary system. But the 1860s did not bring about a revival of the English Model with a new monopolist national champion controlled by politically connected investors and managers. Instead, Congress established a system of "national banks" operating on public utility principles (Ricks et al. 2022; Menand and Ricks 2021).

These principles reflected aspects of both the English Model and the Jacksonian experiment. Congress retained the role played by private investors in both regimes, i.e., it limited the amount of money federal authorities issued directly and outsourced to investor-owned banks the power to expand and contract the money supply with notes and deposits. Congress also tempered this delegation by restricting the activities banks could engage in, separating them from ordinary commercial activity. Further, it diffused the power to expand and contract the money supply to thousands of different banks run by different people, a key concern animating the Jacksonian revolt against the Bank of the United States. And it established an administrative state bureaucracy, the Office of the Comptroller of the Currency, with special examiners charged with overseeing banks to ensure that their notes and deposits maintained their value and that bank managers followed the rules incorporated in bank charters (Menand 2022a).

Congress, however, did not eliminate state banking. And competition between state and federal regulators over the restrictions on bank balance sheets and the defaultable nature of bank deposits—which were not government backed—led to persistent instability and intermittent failures and economic recessions. In response, during the first 40 years of the 20th century, Congress made several enhancements that culminated in an unprecedented half century of monetary stability. First, in 1913, Congress established the Federal Reserve, a public board of control to administer the banking system—state and federal (Menand 2022b). Second, in 1933, Congress established the Federal Deposit Insurance Corporation (FDIC) to insure deposits up to a certain dollar limit and assert federal control over many aspects of state banks (which were induced to sign up for insurance and so subject themselves to federal authority). In 1935, Congress also created the Federal Open Market Committee to actively manage the size of bank balance sheets and the creation of bank money to align the credit policies of the banking system with the public interest (Ricks et al. 2022).

Under the utility-style system that emerged, state and federal law restricted entry into the business of issuing notes and deposits to state or federally regulated banks. Banks were chartered by both the states and the federal government based on public convenience and necessity, the standard for public utilities like gas and electric



companies. Deposit insurance, both de jure and de facto (since the FDIC generally protected deposits over the insurance limit through various maneuvers), meant that bank money was largely "public" in quality, with little risk of loss to its users. Access to potentially unlimited Federal Reserve lending support further put a government imprimatur on deposit balances. During this period, interest rates paid by banks on deposits were publicly regulated—checking account balances bore no interest and the Federal Reserve set a ceiling on the rate that banks could pay on savings accounts. As a result of these measures, as well as restrictions on bank branching and expansion, competition between banks was attenuated, reducing incentives for bankers to extend risky loans or seek out high leverage. Banks limited their activities to their immediate geographies and their asset allocation to ordinary lending and investing. Bank failures nearly disappeared.

The Global Dollar System: 1974-Present

Congress never fully dismantled the utility-style banking system, nor did it take the lead in degrading and replacing it. Instead, federal agencies, acting outside or on the edges of their statutory authority, loosened entry into money augmentation, permitting and ultimately facilitating the issuance of non-deposit money instruments by nonbank financial firms. The reasons for this liberalization are numerous and varied. The initial push was led by William McChesney Martin at the Federal Reserve in the 1950s (Menand and Younger 2023). His goal was to lower the funding costs for nonbank broker dealers and enhance liquidity in bond markets, especially the market for US government securities. In the 1960s, a second front was also opened by the Martin Fed to facilitate the use of the dollar as an international currency and address various pressures on foreign exchange rates (Menand 2022b). In 1974, a run on the new non-deposit moneys prompted a Federal Reserve effort to backstop their issuers—"shadow banks" (Menand 2022a). With such express state support for shadow banks, the American monetary system entered a new era, one in which chartered banks were still governed at least in part along public utility principles but also faced increasing pressure from competitors outside of the regulatory perimeter.

After 1974, the shift away from chartered banks accelerated (Ricks et al. 2022). Three alternatives to bank deposits came to dominate the money supply. The first are called repurchase agreements or repos. Repos allow corporations with large cash balances to "deposit" them with securities dealers and other nonbank financial firms. Rather than structure the arrangement as a deposit—which would be illegal for most nonbanks under federal law—the corporate "depositor" conditionally purchases financial securities from the securities dealer or nonbank financial firm (pursuant to a promise by the nonbank shadow banks to buy back the securities the next day), with the prices on both transactions set in advance at artificial levels in order to provide the "depositors" a return on their balances. (The prices are also set in such a way as to leave the shadow bank responsible for any change in the value of the securities or interest paid on the securities.)



The second type of shadow bank money is known as Eurodollars. Eurodollars are simply dollar-denominated deposit balances held at financial firms outside the US, including by the foreign branches of US banks. Financial firms in Europe and Asia have issued trillions of dollars of such deposits, which are not subject to oversight by US bank regulators. The rise of Eurodollars eventually made continued rate regulation of domestic deposits untenable. It also triggered a race to the bottom in regulatory standards in order to allow banks subject to US regulation to compete with entities based overseas conducting a similar business in the US without following US rules (Ricks et al. 2022).

The third major shadow bank money is issued by money market mutual funds (MMFs). MMF shares were designed to maintain a stable net asset value in terms of dollars so that institutional investors, corporations, and households could hold them as cash equivalents (i.e., in lieu of deposits). Money fund shares deposits out of the banking system, as they paid higher interest rates and were thought to offer better protection against loss given the cap on deposit insurance for bank deposits.

Chartered banks also began issuing deposit alternatives. They took on repo financing and they opened overseas branches and entered the Eurodollar market. They also provided support to MMFs. When Congress permitted banks to affiliate with broker dealers and insurance companies under a holding company umbrella, large conglomerates like Citigroup and Bank of America emerged with substantial shadow banking arms.

The 2008 financial crisis was a crisis of shadow bank money. A monetary system composed almost entirely of bank-issued deposits had become a system in which half of the money supply took the form of repos, Eurodollars, and MMFs (Ricks 2016). As these instruments were not insured or formally backstopped by the federal government, they were essentially private defaultable money. Uncertainty about the value of the assets on the balance sheets of their issuers triggered old fashioned runs. It was a 19th-century economic crisis at the dawn of the 21st century. Following the disorderly failure of Lehman Brothers, contagion crippled the financial system and subsequently tanked the economy—millions of people lost their jobs and growth contracted. To prevent a full-blown depression, the federal government intervened on a massive scale, rescuing countless financial institutions, injecting hundreds of billions of new equity capital into the banking system, and lending trillions of dollars to banks and nonbanks in the US and overseas.

The panic in 2020 was a redux—though different in scale and outcome. Once again, repo issuers, Eurodollar issuers, and money market mutual funds faced runs. Once again, the government intervened to rescue shadow banks. But this time, policymakers moved far faster and at an unprecedented scale. In a matter of weeks, the Federal Reserve expanded its balance sheet by nearly \$3 trillion dollars. The result was



excellent in terms of containment and macroeconomic stability: Disorderly failures were prevented, monetary contraction was averted, and the economy was saved from another panic-induced recession. But in terms of political economy, the consequences were dire: Large swathes of the financial system received public sector support ex post without following risk-reducing rules or government regulations ex ante (Menand 2022a).

In 2023, a series of runs at regional banks precipitated a panic that highlighted the weaknesses within the chartered banking system. Several banks failed, threatening to impose large losses on the FDIC insurance fund. But more importantly, the banks that survived benefited from significant additional government support without paying for it. and the current deposit insurance limit (now \$250,000 per account type) generated competitive imbalances and drove depositors to switch to money instruments created outside of the banking system. Today, almost all deposits are de facto insured, but banks don't pay accordingly and shadow banks continue to draw business from banks, a result of the legal ambiguity. With neither banks nor shadow banks able to operate through the economic cycle without ad hoc government assistance—with both vulnerable to regular, disruptive breakdowns and with both extracting significant rents from the public—policymakers have begun to consider fundamental reforms once again.

Part III: Policy Landscape

This Part reviews the current policy landscape and distinguishes between three types of reform. One type would harden the regime of monetary liberalism that has characterized US money and banking since the mid-1970s. Another type is structural and draws on public utility principles akin to those employed during most of the 20th century. A third category involves introducing public options for bank deposits and thereby reducing the country's dependence on investor-owned enterprises to augment the money supply.

Hardening Monetary Liberalism

The government's response to the 2008 financial crisis was predominately technocratic. Policymakers did not try to restructure the financial sector or prohibit shadow banking. Instead, they developed hundreds of complex regulations designed to put liberalized international finance on a more stable footing by redressing a variety of market failures. The centerpiece of the effort was a major new law, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank), signed by President Obama on July 21, 2010.

Dodd-Frank targeted shadow banking in three primary ways. First, it created a new administrative agency, the Financial Stability Oversight Council (FSOC), composed of



the heads of nine financial regulatory agencies (plus an individual with insurance expertise nominated by the President and confirmed by the Senate). Congress empowered the FSOC to extend Federal Reserve oversight to nonbanks on a case-by-case basis (entity designation) and to impose new rules on payment, clearing, and settlement activities that are, or are likely to become, systemically important.

Second, Dodd-Frank established an "Orderly Liquidation Authority" (OLA) for resolving nonbank financial companies in a bank-like manner. In 2008, no part of the federal government was capable of managing the resolution of a shadow bank outside of the bankruptcy process, the way that the FDIC guarantees depositors at failing banks can continue to access their account balances. By treating the holders of monetary liabilities issued by shadow banks as ordinary creditors, the legal regime added an incentive for these "depositors" to run. And once a shadow bank failed, its "depositors" were stuck with their collateral (in the case of bankruptcy-exempt repo contracts) or forced to wait out a potentially yearslong bankruptcy proceeding. Now, the FDIC can use OLA to bypass bankruptcy with the approval of the Fed's Board and the Treasury Secretary.

Third, Dodd-Frank amended the Federal Reserve Act to restrict the circumstances in which the Fed can lend to nonbank financial companies. Among other things, the Fed is no longer permitted to rescue insolvent companies or to extend bespoke loans. Instead, Fed emergency facilities must be available broadly and formally approved by the Treasury Secretary.

Dodd-Frank also reregulated the financial system more generally. For example, it directed the banking agencies to impose enhanced prudential standards on megabanks. It created the Consumer Financial Protection Bureau (CFPB), a new agency to combat predatory lending and other harm caused by financial products and services. And it enhanced transparency in derivatives markets, improving the ability of market participants to discipline risk taking by banks, shadow banks, and other financial institutions.

Even more changes were made by administrative agencies using existing authorities. The Federal Reserve created an annual stress testing program for the largest financial conglomerates, the Comprehensive Capital Assessment and Review (CCAR). The banking regulators, including the Federal Reserve, adopted new requirements governing bank capital, long-term debt, and liquidity (Basel III). The Federal Open Market Committee established a standing repo facility and standing swap lines with foreign central banks to provide more support to repo-financed and Eurodollar-financed shadow banks. The Securities and Exchange Commission (SEC) imposed liquidity requirements on money market mutual funds (reducing the maximum weighted average maturity of fund holdings) and adopted a floating net asset value for prime funds (those with credit risk in their portfolios) prompting many investors seeking deposit-like forms of cash to shift to other instruments (such as government



money market funds). Prime fund assets fell from over \$1.5 trillion to \$500 billion. And in July 2023, the SEC further increased liquidity requirements and required funds to impose liquidity fees when redemptions exceed 5 percent of net assets (SEC 2023).

Table 1: Post-crisis Reforms to Harden Monetary Liberalism

Reform	Primary Target ³	Mode
Financial Stability Oversight Council (FSOC)	Shadow Banks	Legislation
Orderly Liquidation Authority (OLA)	Shadow Banks	Legislation
Fed Emergency Lending	Shadow Banks	Legislation
Consumer Financial Protection Bureau (CFPB)	Financial System	Legislation
Swaps Clearing and Margin	Financial System	Legislation
Megabank Enhanced Prudential Standards	Banks	Legislation
Basel III: Capital and Liquidity	Banks	Regulation
Liquidity Requirements, Fees, and Floating Net Asset Value (NAV) for Money Market Mutual Funds (MMFs)	Shadow Banks	Regulation
Standing Repo Facility	Shadow Banks	Backstopping
Standing Swap Lines and the Foreign and International Monetary Authorities (FIMA) Repo Facility	Shadow Banks	Backstopping
Comprehensive Capital Assessment and Review (CCAR)	Banks	Supervision

³ Comprehensive Capital Assessment and Review (CCAR) and Basel III requirements also hardened aspects of the shadow banking system because they apply to bank holding companies and their nonbank affiliates, which today include many major shadow banks. For example, Goldman Sachs & Co. LLC is a broker dealer owned by The Goldman Sachs Group Inc., a bank holding company which also owns Goldman Sachs Bank USA. Merrill Lynch, Pierce, Fenner & Smith Incorporated is a broker dealer owned by Bank of America Corporation, a holding company which also owns Bank of America, N.A., a national bank.



Today, in response to instability in 2020 and 2023, policymakers are considering further regulatory and legislative modifications along the lines of those adopted during the 2010s. Among the leading proposals are: 1) reviving the FSOC's designation tools to target risks in the repo market; 2) enhancing executive accountability at large bank holding companies; 3) reducing leverage in repo markets, especially those that rely on Treasury securities as collateral; 4) further enhancing capital requirements (Basel III Endgame); and 5) adopting new regulatory or legislative rules to govern stablecoins.

<u>Using Financial Stability Oversight Council (FSOC) Designation in the Repo</u> <u>Market</u>

In November of 2023, the FSOC dropped extra statutory hurdles added in 2019, clearing the way to pursue entity designation as a primary regulatory tool to redress instability in the nonbank sector. One area where the FSOC might employ its designation powers is the repo market by extending oversight to nonbank firms whose material financial distress poses a threat to the financial stability of the United States. Relatedly, the Council restored its Hedge Fund Working Group (first established during the Obama administration). Legislators and outside groups are now calling for the FSOC to investigate certain hedge funds that operate as shadow banks by drawing on overnight repo funding to generate high leverage.

Enhancing Executive Accountability at Bank Holding Companies

Following the failure of Silicon Valley Bank in March 2023, legislators and administrators have mooted ways to enhance executive accountability at banks and bank holding companies. On the legislative side, Congress is now considering the RECOUP Act, which would strengthen the ability of bank regulators to remove senior bank executives who do not appropriately manage their banks and authorize the FDIC to claw back certain compensation from senior executives of failed banks. The RECOUP Act would also increase the penalties for senior executives found to recklessly violate the law, engage in unsafe or unsound practices, or breach their fiduciary duties (RECOUP Act 2023; Lin and Menand 2022).

⁴ In the years immediately following Dodd-Frank's adoption, the FSOC extended Federal Reserve oversight to three insurance companies (MetLife, Prudential, and AIG) and one nonbank finance company (GE Capital). AIG and GE Capital subsequently reduced their leverage, spun off high-risk business lines, simplified their activities, and were de-designated by the FSOC. MetLife sued. After President Trump took office, FSOC dropped an appeal against an adverse district court judgment vacating the designation of MetLife and de-designated Prudential. In 2019, FSOC issued new guidance adding extrastatutory hurdles to the designation process, including a requirement that the Council attempt to address threats to financial stability posed by nonbank financial companies through generally applicable regulations before considering entity designation, conduct a cost-benefit analysis prior to designating a nonbank financial company, and assess the likelihood of a company's material financial distress before determining whether such distress might threaten financial stability (Labonte 2018).



On the administrative side, some are calling for financial regulators to complete executive compensation rules authorized by Section 956 of Dodd-Frank. Section 956 directs five agencies to jointly prescribe regulations prohibiting types of incentive-based payment arrangements that encourage inappropriate risk taking by covered financial institutions. These arrangements arise due to a conflict of interest between the executives of large financial institutions and the creditors and employees of those institutions as well as the general public. The regulators proposed rules in 2011 and again in 2016 to mitigate this conflict but were unable to align on a single proposal and accordingly neither effort resulted in a final rule. The 2011 proposal would have required large entities to defer 50 percent of incentive-based compensation for senior executive officers for at least three years and to secure board approval of incentive-based compensation for people with the ability to expose the institution to possible losses that are substantial in relation to the institution's characteristics. The 2016 proposal expanded on the 2011 proposal by, among other things, requiring deferral for significant risk takers as well as senior officers, requiring deferral of up to 60 percent of incentive-based compensation, and requiring deferral for up to four years. The 2016 proposal also included downward adjustment, forfeiture, and clawback requirements that would allow firms to recover incentive-based compensation for up to seven years after it vests in certain circumstances. Further, each covered entity would be required to form a board-level compensation committee composed only of directors who are not senior executive officers.

In 2023, the SEC placed Section 956 rules on its short-term agenda. A new proposal might draw on ideas circulated over the past decade in addition to the 2011 and 2016 proposal provisions. For example, Bill Dudley, as president of the Federal Reserve Bank of New York, argued that regulators should consider requiring that most deferred compensation take the form of debt rather than equity (Dudley 2013). Debt-based compensation would likely reduce management's risk appetite and change their attitude toward dividends, share buybacks, and capital raises. One of the problems that led to the collapse of Silicon Valley Bank, for example, was the reluctance of management to issue more shares in 2022, when it was clear that the bank was facing a capital hole. If managers stood to gain rather than to lose from such equity offerings, then many disorderly and costly failures in the banking system could potentially be avoided.

Reducing Leverage in Repo Markets

One of the most run-prone sectors of the US financial system is the repo market. Repo issuers outside of the banking perimeter are subject to significant outflows during periods of economic uncertainty and following drops in asset prices. A variety of approaches drawing on existing statutory authority might be employed to reduce the leverage that repo issuers maintain, reducing the risks of runs and disorderly deleveraging.



In 2021, Andrew Metrick and Dan Tarullo proposed that regulators align standards governing repo financing of government securities across banks and nonbanks (Metrick and Tarullo 2021). Their proposal turns on the Treasury Department's authority under the Government Securities Act of 1986 to set rules governing the market for its own debt. Metrick and Tarullo suggest that the Treasury work with the market and banking regulators to develop initial margin requirements and minimum haircuts for all Treasury repo market participants regardless of whether they are part of bank holding companies or hedge funds. Ultimately, the rules would have to bind both central counterparties and bilateral arrangements, which would require the Treasury to use its statutory authority to reach persons engaged in the business of buying and selling government securities in a new way.

Basel III Endgame

The banking agencies are currently working on updating the post-2008 capital and liquidity framework known as Basel III. These requirements are designed to force bank managers and shareholders to internalize the costs that bank failure poses to other stakeholders, the insurance fund, and the larger economy. They also reduce the likelihood that the government will have to bail out individual firms or recapitalize the banking system during an extended economic downturn. The updates, known as Basel III Endgame, would increase the amount of capital banks have to maintain by an estimated 16 percent. This change would result from lowering the threshold for the strictest capital rules from \$700 billion in total assets to \$100 billion, limiting the ability of banks to use "internal models" for calculating their required capital levels, and increasing the amount of capital banks have to maintain to address operational risks including potential losses from fraud, rogue traders, and external disruptions to a bank's business.

Stabilizing Stablecoins and Money Transmitters

One area of heightened concern in the nonbank ecosystem is stablecoins and state-chartered money transmitters. Stablecoins are a type of deposit alternative structured as a cryptocurrency "coin." Certain state-chartered money transmitters offer a similar product in the form of a "wallet" with ongoing balances (McAndrews and Menand 2020; Awrey 2020). Stablecoins and money transmitter wallets are denominated in existing currencies like US dollars. They are designed to trade at par value with US dollar bank deposits and US dollar physical currency (meaning a person who holds a one dollar stablecoin or a one dollar venmo balance should be able to exchange it for one dollar in a bank account). Many of these stablecoins are used as a means of payment, primarily for the purchase of non-dollar denominated digital currencies such as Bitcoin (Gorton and Zhang 2023). Wallets are also used for payments. US dollar stablecoin and wallet issuers are therefore shadow banks: They create ledger money and expand the US dollar money supply. The largest US dollar stablecoin issuer is Tether Limited and the largest wallet is Venmo. Tether and Venmo



are fractionally reserved: They hold non-monetary risk assets that can lose value, meaning that holders of Tether stablecoins and Venmo wallets have incentives to run on Tether and Venmo (i.e., seek to exchange their coins for bank deposit dollars) when asset prices fall. As of December 2023, the supply of Tether "coins" topped \$90 billion, making Tether Limited one of the largest shadow banks in the world.

Stablecoin issuers, including Tether, have already faced multiple runs that have threatened to impose losses on holders of Tether coins as well as to destabilize financial markets by precipitating fire sales of US dollar financial assets. One stablecoin issuer, Terraform Labs, which issued Terra USD, collapsed in May 2022, causing substantial disruptions to crypto asset markets and triggering events that ultimately led to the failure of multiple nonbank financial firms (Gorton and Zhang 2023)

Regulators have proposed a variety of responses to the emergence of stablecoin issuers (less attention has gone to money transmitter wallets). In 2021, the President's Working Group on Financial Markets, along with the Federal Deposit Insurance Corporation and the Office of the Comptroller of the Currency, released a report recommending that Congress enact new laws regulating the stablecoin market (<u>US Department of the Treasury 2021</u>). The report argued that Congress should ensure that only FDIC-insured banks issue stablecoins. It also suggested that the Department of Justice examine whether existing law, specifically Section 21 of the Banking Act of 1933, prohibits certain stablecoin arrangements. In subsequent writing, Professors Howell Jackson and Morgan Ricks argued that Section 21 does apply to stablecoin issuers, and that the Department of Justice should use its authority to shut down issuers on the grounds that issuing stablecoins is a form of deposit banking under the Banking Act of 1933 (<u>Jackson and Ricks 2021</u>).

In 2022, the Systemic Risk Council (SRC) endorsed the report's recommendations and proposed other ways that financial regulators could use their existing authorities to address risks posed by stablecoin issuers. Specifically, the SRC recommended that the FSOC designate stablecoins as systemically important payment, clearing, and settlement activities and that it work with its member agencies to use their authorities to limit or eliminate the use of fractional reserve stablecoins (those not backed one-for-one with insured bank deposits or short-term US government debt) (SRC 2022).

Congress is also considering a variety of legislative responses to the emergence of large stablecoin issuers. In 2020, three representatives in the House introduced the Stablecoin Tethering and Bank Licensing Enforcement (STABLE) Act, which would require issuers to obtain bank charters and to maintain reserves sufficient to ensure that all stablecoins could be converted to US dollar deposits on demand (Stablecoin Classification and Regulation Act of 2020). More recently, the chairman and ranking members of the House Financial Services Committee have circulated competing bills. Chairman Patrick McHenry's (R-NC) bill, the Clarity for Payment Stablecoins Act of



2023, would require all stablecoin issuers to obtain a new type of permit and subject them to bank-like regulation and supervision by state authorities (<u>Clarity for Payment Stablecoins Act of 2023</u>). Issuers would be required to fully back their coins with legal tender, US currency, insured bank deposits, Treasury securities with maturities of 90 days or less, repurchase agreements backed by short-term treasuries, or central bank reserve deposits and to disclose their holdings. A bill (<u>2023</u>) proposed by Ranking Member Maxine Waters (D-CA) would also require 100 percent reserves and disclosure as well as one-day redemption for all coins, priority for stablecoin holders over other creditors, and prohibition on affiliations between issuers and commercial entities.

State chartered money transmitters have not received the same level of attention in Washington. Scholars such as Dan Awrey, however, have carefully analyzed the problems they present and developed potential policy solutions (Awrey 2020; Awrey 2020; Awrey 2024). Most recently, Awrey has outlined a "maximally" federal approach, which would involve a new federal charter for money transmitters, entirely preempting the state regulatory regime that has given rise to wallet products like Venmo. He has also offered a "tailored" approach that would retain a role for the states in chartering money transmitters but level the playing field by imposing a baseline set of standards across the board, including potentially a full-reserve banking rule, which would prevent money transmitters from augmenting the money supply (Awrey 2024).

Reversing Monetary Liberalism: Structural Reforms

A variety of structural reform proposals would depart from the regime of monetary liberalism and build, in part or in whole, a public utility legal framework to govern US money and banking. Such reforms would target not just financial stability and consumer protection but also rent extraction, the size of the financial sector, and access to credit for small and regional businesses. Among the leading structural modifications are 1) re-separating banking and certain capital markets activities; 2) restoring entry restriction in banking, which would eliminate the shadow banking problem at its roots; 3) increasing scrutiny of bank mergers and conglomeration; and 4) transforming deposit insurance to cover all demandable deposit instruments while adding royalty payments that would limit shareholders to a fair return on their investments.

21st-Century Glass-Steagall

In 2013, Elizabeth Warren introduced draft legislation, co-sponsored by John McCain and others, titled the "21st-Century Glass-Steagall Act" (2013). Warren's bill would have restored the separation between deposit banking and capital markets activities and reduced the size of the largest financial institutions. Specifically, it would have required bank holding companies to divest ownership in broker dealers, hedge funds, private equity funds, and insurance companies. Such legislation could also close the bank



powers loophole, by which bank regulators defined outwards the meaning of the "business of banking" and "incidental powers" of banks, in order to permit a wide array of non-monetary activities within banks (Omarova 2009). More recently, scholars have proposed restoring a "swaps push-out" rule, which would require banks to desist from acting as swap dealers and to "push out" such activities to their nonbank affiliates (if they have them). Such a rule was included in Dodd-Frank but later repealed. Another possibility would be new rules regulating the commodities activities of financial conglomerates (Omarova 2013). Congress could go even further than the mid-century model and expressly require that bank investments consist of diversified portfolios of loans and bonds representing senior claims on domestic US borrowers, supporting the real economy (Menand and Ricks 2023b).

Entry Restriction and Shadow Banking

Another structural reform would redress the breakdown of the regulatory perimeter for banking. Section 21 of the Banking Act of 1933 expressly limits to banks and bank-regulated entities the business of receiving deposits subject to repayment upon request of the depositor. But the Act does not define deposit, leaving the Department of Justice to interpret the term in the first instance. In 2016, Professor Morgan Ricks drafted legislative text that would clarify the regulatory perimeter and the nature of the banking franchise. Under Ricks' proposal, banks would recover a monopoly on money augmentation and nonbanks would have to term out their funding, which would mean the end of shadow banking within the dollar-based monetary system (Ricks 2016). Instruments like repos could still exist, but only within the banking system. Foreign financial institutions would have to fully reserve against their deposit-like dollar liabilities or apply for and receive a US bank charter. Prime money funds would be shut down as would dollar-denominated stablecoins (Gorton and Zhang 2024).

Restoring entry restriction would greatly reduce the need for FSOC designation and other Dodd-Frank tools like Orderly Liquidation Authority. Under modified monetary liberalism, the government is forced to monitor and attempt to contain risks that build up in the underregulated shadow banking system. Were all banking activity confined to the banking system, where bank regulations already apply, the government would no longer need to engage in this difficult and time-consuming task. Moreover, the terms and conditions governing the banking franchise would become easier to sustain over time as banks would no longer face competition in their core monetary role from less regulated shadow banks. Similarly, pressure on the Federal Reserve balance sheet would be substantially alleviated as the need for large ad hoc rescue programs would dissipate if not entirely disappear.



Redress Bank Concentration

Decentralization was a byword of American monetary system design from the 1830s through the 1980s (Menand 2021). Diffusing control over monetary expansion was structural antitrust law: It diffused American industry (Menand and Ricks 2024; Omarova and Steele 2024). Recently, scholars have focused on how the banking regulators and antitrust enforcers might revive existing legal strictures governing bank conglomeration to prevent further concentration of money and credit resources (Kress 2020; Kress 2022; Omarova and Steele 2024). These measures include some being pursued in antitrust more generally, such as shifting from a narrow focus on consumer prices to a more comprehensive analysis of the costs of concentration on society (Kress 2022). They also include some that are banking-specific such as reviving tools that would allow regulators to break up large banking entities that prove too-big-to-manage or do not comply adequately with regulatory requirements (Omarova and Steele 2024).

Expand Deposit Insurance and Assess Royalties

The banking turmoil in March 2023 opened a new front in the structural reform debate: the role of deposit insurance and fees charged by the government for backing bank deposit liabilities (DiVito 2023). The statutory cap on deposit insurance of \$250,000 per account means that 43 percent of domestic deposit balances totaling \$7.7 trillion are formally uninsured. The result is a chaotic dynamic in which banks with large amounts of putatively uninsured deposits are subject to disorderly runs and contractions while the government combats these pressures with ad hoc attempts to extend insurance to uninsured depositors through creative resolution tactics or by invoking the "systemic risk exemption," which overrides the \$250,000 cap. One downside of this arrangement is that large depositors have an incentive to hold deposits at large banks whose failures would almost certainly trigger the systemic risk exception. Midsize and community banks are disadvantaged. Meanwhile, the assessment scheme associated with deposit insurance limits the government to charging banks only the amounts needed to sustain the deposit insurance fund. In theory, were the FDIC to avoid ever drawing on the fund, banks would pay nothing for the government backstop.

One response would be to extend deposit insurance on a de jure basis to match the deposit losses that in fact policymakers are willing to tolerate when banks come under pressure. Such an extension could eliminate the use of aggressive resolution tactics and discretionary legal exceptions as well as the disorderly runs that trigger the collapse of banks that otherwise are solvent and viable over the medium to long term. Such an extension could be paired with changes to the assessment provisions of the Federal Deposit Insurance Act. For example, Congress could require the FDIC to charge assessments even when the insurance fund is fully funded, converting surplus fees into fiscal revenue as "royalties." Were the fees calibrated so as to cause member banks to earn no more than a fair return on capital, it would treat banks as public utilities by preventing them from earning supracompetitive profits. It would also restore to the



federal government the "seigniorage"—the fiscal revenue generated by money issuance—produced not just by the Federal Reserve, the central bank, but also by its franchised banks (Menand and Ricks 2023a).

Reversing Monetary Liberalism: Public Options

Another policy frontier that has opened in recent years would introduce public options and greater public provisioning of money (Sitaraman and Alstott 2019). Such options would shift the composition of the money supply away from liabilities issued by investor-owned banks to more public instruments. Although these proposals would also address some of the financial stability and economic governance issues posed by shadow banking, for example, by reducing the demand for shadow bank issued deposit alternatives, they would directly combat long-standing service deficiencies within the regulated banking system. Maintaining checking accounts costs banks money, somewhere between \$50 and \$400 per account (Klein 2018). Accordingly, banks have little incentive to supply account services to tens of millions of low-income households. These households are concentrated in neighborhoods with high unemployment and are often majority Black (Del Rio 2020). In an effort to earn profits, banks also tend to charge a wide range of expected and unexpected fees to households least able to pay them. Public options would force investor-owned money and payments providers to compete with government-owned providers, pushing down fees and improving service. Two leading public option proposals are 1) public banking and 2) central bank digital currency.

Public Banking

In over a dozen states, groups have organized to lobby state legislatures to charter publicly owned banks. Since the early 20th century, North Dakota has operated a public bank, the Bank of North Dakota. In 2019, California adopted a framework for public banks, authorizing municipal authorities to stand up candidates (DiVito 2022). Other states, including New Jersey, New York, Ohio, and Massachusetts, are considering public banking proposals. These banks could serve a variety of potential needs including managing the government's own payments, financing local infrastructure projects, and supporting community development and small businesses. They could also offer state residents a fee-free public option for checking account services. Depending on how these banks are structured, they might need ongoing financial support from the state legislature. They could also be more or less independent of the state government and more or less dependent on partnerships with investor-owned banks (Omarova 2024). One significant challenge is developing governance arrangements that satisfy federal regulators, such as the FDIC, which are likely to play some role in regulating any new publicly owned entrants.



Central Bank Digital Currency (CBDC)

The federal government could also create a public option for deposit money, such as a "central bank digital currency" (CBDC) issued by the Federal Reserve. A CBDC would be a type of non-defaultable ledger money that is transferable electronically. It could take a range of forms with a variety of possible features (Hughes 2022). A "FedAccounts" approach would mimic a traditional bank account, with fraud protection and customer service. It would have no fees and instant payment between accounts (Crawford et al.2018). To limit uptake of such a public option, some have proposed building in limits. One would be a cap on the total balance any account holder could maintain—which would limit the use case for businesses. Another would be to design the ledger to function more as a bearer instrument akin to physical currency or cryptocurrencies like Bitcoin. Such a CBDC would lack fraud protection and customer service: Transfers could not be reversed. As a result, users would likely demand intermediary services from an investor-owned financial institution to hold such bearer digital dollars, reducing their appeal and impact while also sparing the public sector of carrying certain money laundering compliance obligations.

A CBDC would not necessarily involve the government in any lending activities. Instead, it could be a money and payments option only. (For approaches that involve public credit provisioning, see Omarova 2021; Baradaran 2014). One advantage of a CBDC over public banking is that the Federal Reserve is in a much stronger position to cross subsidize low income households and service larger accounts. A CBDC would also offer something state-chartered banks cannot: non-defaultable money no matter how large the balance. In this way, CBDC would redress a problem with the existing deposit banking system: that large account holders have no way to hold non-defaultable money. These users, mostly businesses, turn to shadow banking products like repos and money market mutual funds. CBDC, therefore, offers a path to shrinking the shadow banking sector while simultaneously improving service within the banking sector, accelerating payment speed, reducing fees and rent extraction, and expanding access to underserved households and regions.

Conclusion

The 2008 financial crisis marked a decisive shift in the conversation around money and banking policy in the United States. The liberalized monetary ecosystem, characterized by highly leveraged broker dealers and foreign financial institutions, i.e., shadow banks, faced an existential crisis. Massive government intervention preserved aspects of the ecosystem, including the repo market, Eurodollar market, and money market mutual fund business, while subsequent policy changes including the Dodd-Frank Act attempted to stabilize these alternative monetary instruments and reduce the likelihood of another system-wide meltdown. Subsequent instability, especially in 2019, 2020, and 2023, has triggered generous government backstopping, prompting renewed



policy debates about ways to further modify monetary liberalism, replace it with a more regulated alternative, or introduce direct public provisioning of digital money. These debates implicate not just the future stability of the financial system but also the distribution of wealth, shape of economic activity, level of financial profits, and balance between public and private power in American society.



References

- Aldasoro, Iñaki, Perry Mehrling, Daniel H. Neilson. 2023. "On Par: A Money View of Stablecoins." BIS Working Paper no. 1146. Basel, Switzerland: Bank for International Settlements. https://www.bis.org/publ/work1146.pdf.
- Awrey, Daniel. 2020. "Bad Money," *Cornell Law Review* 106, no. 1 (December). https://www.cornelllawreview.org/2020/12/01/bad-money/.
- _____ 2022. "Unbundling Money, Banking, and Payments," *Georgetown Law Journal* 110, no. 4: 715–84. https://www.law.georgetown.edu/georgetown-law-journal/in-print/volume-110/6016-2/unbundling-banking-money-and-payments/.
- _____ 2024. "Money and Federalism," Cornell Legal Studies Research Paper. Forthcoming. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4848952.
- Barbuscia, Davide. 2023. "As Banking Sector Confidence Falters, Central Banks Called on to Do More." Reuters, March 26, 2023.
 - https://www.reuters.com/business/finance/banking-sector-confidence-falters-central-banks-called-do-more-2023-03-26/.
- Bank of North Dakota. n.d. "History of BND." Last accessed May 17, 2024. https://bnd.nd.gov/about-bnd/history-of-bnd/.
- Clarity for Payment Stablecoins Act of 2023, H.R.4766, 118th Cong. (2024). https://www.congress.gov/bill/118th-congress/house-bill/4766/text.
- 21st Century Glass-Steagall Act of 2013, S. 1282, 113th Cong. (2013). https://www.congress.gov/bill/113th-congress/senate-bill/1282/text.
- Crawford, John, Morgan Ricks, and Lev Menand. 2018. Central Banking for All: Public Option for Bank Accounts. New York: Roosevelt Institute.

 https://rooseveltinstitute.org/publications/central-banking-for-all-a-public-option-for-bank-accounts/.
- Del Rio, Deyanira. 2020. Is Cash Still King? Reviewing the Rise of Mobile Payments, before the US House Committee on Financial Services, 116th Cong. (2020) (statement of Deyanira Del Rio, New Economy Project).
 - https://www.neweconomynyc.org/resource/testimony-before-the-u-s-house-committee-on-fin ancial-services-task-force-on-financial-technology/.
- Desan, Christine A. 2014. Making Money: Coin, Currency, and the Coming of Capitalism. Oxford: Oxford University Press. https://academic.oup.com/book/10464.
- 2022. "Money's Design Elements: Debt, Liquidity, and the Pledge of Value from Medieval Coin to Modern 'Repo" Review of Banking and Financial Law 38. https://ssrn.com/abstract=3897399.
- DiVito, Emily. 2022. "Banking for the People: Lessons from California on the Failures of the Banking Status Quo." Roosevelt Institute, September 8, 2022.
 - https://rooseveltinstitute.org/publications/banking-for-the-people/.



- _____ 2023. "Options for Deposit Insurance Reform to Stabilize Our Banking System and Protect Depositors." Roosevelt Institute, June 28, 2023. https://rooseveltinstitute.org/publications/options-for-deposit-insurance/.
- Dudley, William C. 2013. "Ending Too Big to Fail." Speech at the Global Economic Policy Forum, November 7, 2013. https://www.newyorkfed.org/newsevents/speeches/2013/dud131107.html.
- Federal Deposit Insurance Corporation. 2023. "Joint Statement by the Department of the Treasury, Federal Reserve, and FDIC." Press release, March 12, 2023. https://www.fdic.gov/news/press-releases/2023/pr23017.html.
- Federal Reserve. 2024. Financial Stability Report: April 2024. Washington, DC: Federal Reserve. https://www.federalreserve.gov/publications/financial-stability-report.htm.
- Federal Reserve Bank of Minneapolis. n.d. "A History of Central Banking in the United States." Our History. Last accessed May 17, 2024. https://www.minneapolisfed.org/about-us/our-history/history-of-central-banking.
- Financial Stability Board (FSB). 2022. "The FSB Endorses an Improved Framework for the Assessment and Mitigation of Systemic Risk in the Insurance Sector and Discontinues Annual Identification of Global Systemically Important Insurers (G-SIIs)." Press release, December 9, 2022.
- https://www.fsb.org/2022/12/the-fsb-endorses-an-improved-framework-for-the-assessment-and-mit igation-of-systemic-risk-in-the-insurance-sector-and-discontinues-annual-identification-of-glob al-systemically-important-insurers/.
- Friedman, Milton. 1959. A *Program for Monetary Stability*. New York, New York: Fordham University Press. https://lawcat.berkeley.edu/record/1097649?ln=en.
- Gorton, Gary, and Andrew Metrick. 2012. "Securitized Banking and the Run on Repo," *Journal of Financial Economics* 104, no. 3 (June): 425–451. https://doi.org/10.1016/j.ifineco.2011.03.016.
- Gorton, Gary, and Jeffery Zhang. 2023. "Taming Wildcat Stablecoins," *University of Chicago Law Review* 90, no. 3: 909–71 https://lawreview.uchicago.edu/print-archive/taming-wildcat-stablecoins.
- _____ 2024. "Protecting the Sovereign's Money Monopoly," Alabama Law Review. Forthcoming. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4162884.
- Heller, Patrick A. "Why Did Coins Debut in Lydia?" *Numismatic News*, November 9, 2023. https://www.numismaticnews.net/world-coins/why-did-coins-debut-in-lydia.
- Hockett, Robert, and Saule Omarova. 2017. "The Finance Franchise," *Cornell Law Review* 102, no. 5: 1143–218. https://scholarship.law.cornell.edu/clr/vol102/iss5/1/.
- Hughes, Chris. 2022. "Digital Dollars: Critical Design Choices and Effects of a Central Bank Digital Currency." Roosevelt Institute.

 https://rooseveltinstitute.org/publications/central-bank-digital-currency/.
- Jackson, Howell, and Morgan Ricks. 2021. "Locating Stablecoins within the Regulatory Perimeter." The Harvard Law School Forum on Corporate Governance (blog). August 5, 2021. https://corpgov.law.harvard.edu/2021/08/05/locating-stablecoins-within-the-regulatory-perimeter/.



- Jevons, W. Stanley. 1875. Money and the Mechanism of Exchange. New York: D. Appleton and Co. https://oll.libertyfund.org/titles/jevons-money-and-the-mechanism-of-exchange.
- Klein, Aaron. 2018. "America's Poor Subsidize Wealthier Consumers in a Vicious Income Inequality Cycle." Brookings. February 6, 2018. https://www.brookings.edu/articles/americas-poor-subsidize-wealthier-consumers-in-a-vicious-income-inequality-cycle/.
- Kress, Jeremy. 2022. "Reviving Bank Antitrust," Duke Law Journal 72, no. 3 (December): 519–98. https://scholarship.law.duke.edu/dlj/vol72/iss3/1/.
- Kress, Jeremy. 2020. "Modernizing Bank Merger Review," Yale Journal on Regulation 37: 435–98. https://openyls.law.yale.edu/handle/20.500.13051/8305.
- Labonte, Marc. 2018. Systemically Important or "Too Big to Fail" Financial Institutions. R42150. Washington DC: Congressional Research Service. https://crsreports.congress.gov/product/pdf/R/R42150/22.
- Lin, Da, and Lev Menand. 2022. "The Banker Removal Power," *Virginia Law Review* 108, no. 1 (March). https://virginialawreview.org/articles/the-banker-removal-power/.
- McAndrews, Jamie, and Lev Menand. 2020. "Shadow Digital Money," Working paper, SSRN, April 8, 2020. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3554006.
- Menand, Lev, and Morgan Ricks. 2021. "Federal Corporate Law and the Business of Banking," *University of Chicago Law Review* 88, no. 6. https://lawreview.uchicago.edu/print-archive/federal-corporate-law-and-business-banking.
- Menand, Lev. 2022a. "The Logic and Limits of the Federal Reserve Act." SSRN, February 16, 2022. https://doi.org/10.2139/ssrn.4031875.
- _____ 2022b. The Fed Unbound: Central Banking in a Time of Crisis. New York: Columbia Global Reports.
- Menand, Lev, and Morgan Ricks. 2023a. "A Ten-Point Plan for Making Banking a Public Utility." SSRN Electronic Journal. https://doi.org/10.2139/ssrn.4571475.
- _____ 2023b. "Rebuilding Banking Law: Banks as Public Utilities." Yale Journal on Regulation, forthcoming; European Corporate Governance Institute, Law Working Paper no. 732/2023. https://ssrn.com/abstract=4568656.
- Menand, Lev, and Joshua Younger. 2023. "Money and the Public Debt: Treasury Market Liquidity as a Legal Phenomenon." *Columbia Business Law Review* 224. https://doi.org/10.52214/cblr.v2023i1.11900.
- Metrick, Andrew, and Daniel Tarullo. 2021. "Congruent Financial Regulation." Brookings Papers on Economic Activity, no. 1 (Spring), 143–96. https://www.brookings.edu/articles/congruent-financial-regulation/.
- Minsky, Hyman. 1986. "Stabilizing an Unstable Economy." Hyman P. Minsky Archive, 144. https://digitalcommons.bard.edu/hm_archive/144.
- Omarova, Saule. 2009. "The Quiet Metamorphosis: How Derivatives Changed the 'Business of Banking," *Miami Law Review* 63, no. 4 (July). https://scholarship.law.cornell.edu/facpub/1021/.



- 2013. "The Merchants of Wall Street: Banking, Commerce, and Commodities," Minnesota Law Review 98, no. 1 (November). https://scholarship.law.cornell.edu/facpub/1013/.
 2021. "The People's Ledger: How to Democratize Money and Finance the Economy," Vanderbilt Law Review 74. https://scholarship.law.vanderbilt.edu/vlr/vol74/iss5/1/.
 2024. "Public Banking as an Institutional Design Project," Yale Journal on Regulation, forthcoming.
- Omarova, Saule, and Margaret E. Tahyar. 2012. "That Which We Call a Bank: Revisiting the History of Bank Holding Company Regulation in the United States," Review of Banking & Financial Law 31. https://scholarship.law.cornell.edu/facpub/1012/.
- PricewaterhouseCoopers (PwC) International Limited. n.d. "Making Sense of Bitcoin, Cryptocurrency, and Blockchain." Last accessed May 17, 2024.

 https://www.pwc.com/us/en/industries/financial-services/fintech/bitcoin-blockchain-cryptocurrency.html.
- RECOUP Act of 2023, S.B. 2190, 118th Cong. (2023). https://www.congress.gov/bill/118th-congress/senate-bill/2190.
- Ricks, Morgan, Ganesh Sitaraman, Shelley Welton, and Lev Menand. 2022. Networks, Platforms, and Utilities: Law and Policy. New York, New York: Columbia Law School. https://scholarship.law.columbia.edu/books/349/.
- Ricks, Morgan. 2016. The Money Problem: Rethinking Financial Regulation. Chicago: University of Chicago Press.
- _____2018. "Money as Infrastructure," Columbia Business Law Review 2018, no. 3. https://journals.library.columbia.edu/index.php/CBLR/article/view/1707.
- Schroeder, Pete, and Nupur Anand. 2023. "US Regulators Clamp Down in Bid to Prevent More Bank Failures." Reuters, December 6, 2023. https://www.reuters.com/markets/us/us-regulators-clamp-down-bid-prevent-more-bank-failures-2023-12-06/.
- Sitaraman, Ganesh, and Anne Alstott. 2019. The Public Option: How to Expand Freedom, Increase Opportunity, and Promote Equality. Cambridge: Harvard University Press. https://www.hup.harvard.edu/books/9780674987333.

Stablecoin Classification and Regulation Act of 2020, H.R.8827, 116th Cong. (2020) https://www.congress.gov/bill/116th-congress/house-bill/8827/text.

- Tyler, Christina. 1999. "Clay Tablets Reveal Accounting Answers." The Gazette 10, no. 36 (October). https://www.loc.gov/collections/cuneiform-tablets/articles-and-essays/clay-tablets-reveal-accounting-answers/.
- US Government Accountability Office (GAO). 2023. Money Market Mutual Funds: Pandemic Revealed Unresolved Vulnerabilities. GAO-23-105535. A Report to Congressional Committees. Washington, DC: GAO. https://www.gao.gov/products/gao-23-105535.
- US Securities and Exchange Commission (SEC). 2023. "SEC Adopts Money Market Fund Reforms and Amendments to Form PF Reporting Requirements for Large Liquidity Fund Advisers." Press Release, July 12, 2023. https://www.sec.gov/news/press-release/2023-129.



US Department of the Treasury. 2021. "President's Working Group on Financial Markets Releases Report and Recommendations on Stablecoins." Press release, November 1, 2021. https://home.treasury.gov/news/press-releases/jy0454.

_____ 2022. The Future of Money and Payments: Report Pursuant to Section 4(b) of Executive Order 14067. Washington, DC: Department of the Treasury. https://home.treasury.gov/system/files/136/Future-of-Money-and-Payments.pdf.

Wells, Matthew. 2023. "The Bank War." Federal Reserve Bank of Richmond, 2023. https://www.richmondfed.org/publications/research/econ_focus/2023/q2_economic_history.

